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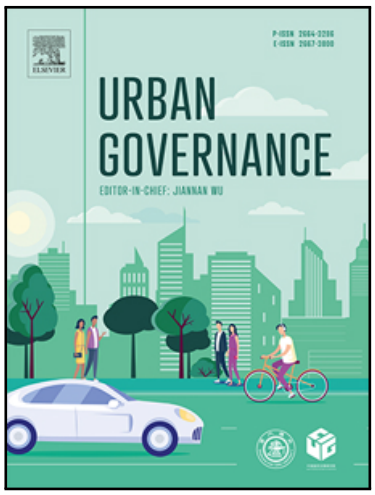

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PII: S2664-3286(22)00048-1
DOI: https://doi.org/10.1016/j.ugj.2022.09.005
Reference: UGJ 39

To appear in: *Urban Governance*

Received date: 14 September 2021
Revised date: 28 September 2022
Accepted date: 30 September 2022

Please cite this article as: Mila Gasco-Hernandez , Greta Nasi , Maria Cucciniello , Alexander M. Hiedemann , The role of organizational capacity to foster digital transformation in local governments: The case of three European smart cities, *Urban Governance* (2022), doi: https://doi.org/10.1016/j.ugj.2022.09.005

The role of organizational capacity to foster digital transformation in local governments: The case of three European smart cities

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Abstract

Organizational capacity is required to explain what it takes for local governments to succeed in their digital transformation. However, the current literature largely ignores how local governments are adapting their organizational dynamics in order to change. This paper aims to contribute to better understanding how local governments enhance their organizational capacity to achieve digital transformation. We conduct a comparative case study that includes three cases of digital transformation through smart city initiatives in Milan, Barcelona, and Munich. Our findings show that these cities made decisions to enhance specific attributes of their organizational capacity mainly related to the dimensions of management (having a strategy, leadership, and a dedicated unit) and collaboration (public-private partnerships, collaboration with citizens, collaboration with other levels of government).

Keywords

Organizational capacity; digital transformation; smart cities; management; strategy; leadership; collaboration

1. Introduction

Over the few past decades, public organizations have undertaken digital transformation processes as a result of the external pressure coming from the change in technology in the environment, the demands made by private sector organizations on public organizations to change, and citizens' demands who expect public organizations to adapt to the technological change they are experiencing in their life and work (Mergel et al., 2019).

In general, digital transformation in the public sector is understood as the continuous process of using technology by public organizations to enhance service delivery, making it more efficient and accessible to citizens; change organizational processes, structure, and culture; and increase value creation by enabling co-production and engaging citizens and stakeholders (Gong et al., 2020; Mergel et al., 2019; Cordella and Paletti, 2018; Meijer and Bekkers, 2015; Dunleavy et al., 2006). Despite the high interest of scholars in digital transformation, previous research on the topic has mainly focused on the use of technology and, therefore, on the perspective that technology is the means to support change (Mergel et al., 2019; Meijer and Bekkers, 2015). However, effective digital transformation requires integrated approaches that take into account the context in which the transformation occurs, governments' organizational dynamics, and their capacity to successfully accomplish digital transformation. Different literatures have acknowledged this phenomenon. For example, in their systematic review of the literature on digital transformation in the private sector, Hanelt et al. (2021) conclude that digital transformation can no longer be explained using established theoretical models often connected to the topic of organizational change. Instead, change processes in the course of digital transformation seem to be driven by a confluence of organizational, technological and environmental forces. Similarly, the

literature on digital transformation in the public sector, that often intertwines digital government and public administration/management perspectives, also highlights the need for integrated approaches that go beyond technology. For example, Manoharan & Ingrams (2018) list external enablers, internal enablers and barriers as the most important factors that influence technology adoption at the local level. Among others, they refer to lack of financial resources, lack of support from elected officials, and poor planning and execution. Comparably, da Cruz and colleagues (2018) argue that the key challenges public managers have to face to adopt technology in a new urban governance context are related to the approaches to digital transformation, the resources they have, their decision-making processes and the leadership of urban managers. Further, Wang & Feeney (2016) also stress the importance of understanding the dynamics by which different information and communication technologies are adopted by local governments as well as the influence of external stakeholders.

Despite the recognition that successful digital transformation requires more than investments in technology, current literature has mainly focused on a limited selection of attributes that influence the digital transformation of public organizations, missing a more comprehensive approach that understands digital transformation from a whole organization perspective that acknowledges that technology is not the means to support change. Rather, as Mergel et al. (2019) state, "processes, people, policies, and especially leadership need to be fundamentally changed to accomplish digital transformation in the public sector" (p. 2).

We argue that using the concept of organizational capacity in the study of digital transformation in public organizations could help fill this gap. Therefore, in this paper, we draw upon the literature on organizational capacity to assess how governments handle a set of organizational and managerial attributes in their digital transformation

processes. Although organizational capacity is desirable at all levels of governments, local governments are more likely to be targeted as having insufficient organizational capacity to perform their tasks (Piña and Avellaneda, 2017; Brown and Potoski, 2003), particularly in the framework of digital transformation, which requires a long-term vision and adequate resources.

Our study is guided by the following research question: how do local governments enhance their organizational capacity to successfully achieve digital transformation? To answer it, we conduct a comparative case study that includes three cases of digital transformation through smart city initiatives in three European cities: Milan (Italy), Barcelona (Spain), and Munich (Germany). We address this question taking context into account and therefore the role of local characteristics in the definition of the vision of digital transformation as well as in the decision-making processes related to the implementation of digital transformation.

This article contributes to the currently limited body of research on the role of organizational capacity in digital transformation in the public sector. It does so by addressing three specific research needs. First, this study defines and assesses practices to enhance organizational capacity to successfully achieve digital transformation through smart city initiatives, contributing to the scarce set of works that analyze digital transformation, smart cities, and urban innovation from an organization theory perspective (Arellano-Gault et al., 2013). Second, contrary to what previous studies do, our research approaches organizational capacity from an integrative perspective. That is, we do not consider the isolated role of each category (and its specific attributes), but we acknowledge (and our findings indicate) that it is in conjunction that several attributes of several categories contribute to the organizational capacity that is needed in digital transformation processes. This has important practical implications, given that it

seems not to be enough to invest in a specific category/attribute to guarantee success. Further, decisions made regarding one category/attribute need to take into account impact on categories/attributes. Finally, this study shifts the research focus on organizational capacity from US states and English local governments to a continental Europe setting, where local governments have heavily invested in becoming smart.

The remainder of this article is organized as follows: we start by examining existing literature on digital transformation and smart cities and by presenting our analytical framework on organizational capacity, which is mainly based on that of Kolar Bryan's (2011). Next, we explain our research design. Subsequently, we present and discuss the results of the fieldwork. Finally, we describe the theoretical and practical implications of our findings and answer our main research question. The article ends with a brief conclusion and a proposal of future research directions.

2. Literature review

2.1. Framing digital transformation in local governments

Although the digital transformation literature so far has not produced a shared definition of the term, there seems to be some agreement on what digital transformation processes entail. For example, after conducting forty interviews with experts of digital transformation in public administration across Europe, Mergel et al. (2019) conclude that digital transformation is an ongoing comprehensive organizational approach that heavily relies on technology to improve relationships between public organizations and their stakeholders, increase citizen satisfaction, and, most importantly, change their bureaucratic and organizational culture. Similarly, Gong et al. (2020) state that digital transformation involves "a fundamental change in the structures, processes, and/or culture of public sector organizations, which may involve the organizational structures

of agencies, the administrative relationships between citizens using public services and the organizations providing them, or changes in the bureaucratic culture and external relationships between agencies" (p. 2).

Despite the increasing number of articles on digital transformation in public settings, the exiting literature predominantly focus on national agencies and public organizations (Kuhlman & Heuberger, 2021; Bousdekis & Kardaras, 2020). Yet, local governments are closer to citizens and, in this respect, they are one of the leading actors in public service delivery. In addition, the studies that have analyzed digital transformation in local governments have identified important differences among them and have concluded that the adoption of technology at the local level is uneven (e.g., Manoharan & Ingrams, 2018; Norris & Reddick, 2013). For example, D'Agostino et al. (2019) find that largest cities in the US tend to have ample financial resources as well as larger technological capacity that results in faster and more efficient digital transformation processes that upscale to the whole organization. Styrin et al. (2022) also conclude that the large and metropolitan governments are generally at the forefront in the adoption of e-government. In contrast, local authorities in isolated rural regions usually address more challenges. Yet, why such wide differences persist in the digital transformation of local governments remains an ongoing debate (Manoharan & Ingrams, 2018).

Further, previous research has also shown that local governments apply and use different technologies for different purposes, which results in digital transformation processes that follow different patterns and that may also face different challenges (Li & Feeney, 2014). For example, Maultasch Oliveira & Welch (2013) show that local governments use social media for a range of different tasks and actively blend them into their idiosyncratic organizational processes in a variety of ways. Similarly Jun et al.

(2014), indicate that many Chinese local governments intensively use websites to implement service-oriented governmental reforms aimed at improving administrative efficiency and bi-lateral communication with citizens.

In general, the literature on digital transformation in local governments has focused on electronic government initiatives and, therefore, on the digitization of existing offline processes (Mergel et al., 2019), on the one hand, and on social media use (Cho et al., 2020; Feeney & Brown, 2017; Mossberger et al., 2013), on the other. However, although digitization efforts and social media use represent important improvements for local governments to become more effective and efficient in their processes and outputs as well as to improve interactions with citizens, "it is increasingly necessary not to simply focus on the advances of available technology" (Mergel et al., 2019: 2).

The studies that specifically address digital transformation in local governments from a comprehensive perspective that transcends technology adoption mainly refer to challenges and related success factors. For example, Bousdekis & Kardaras (2020), identify four important obstacles: a lack of a citizen-centered approach, a lack of timeless and clear vision for digital transformation, a limited technological infrastructure, and low level of employees' digital skills. Kuhlmann & Heuberger (2021) provide complementary explanations for the limited success of digital transformation in German local governments and refer to governance, legal, technological and usability, and resource-related constrains. In this respect, the authors pay particular attention to the limited political support and leadership, which results in hardly any pressure to act and a general lack of strategic orientation or targets regarding digital transformation.

Pittaway & Montazemi (2020) also discuss leadership, but they highlight the role of city managers and their lack of know-how skills, understood as the tacit knowledge that enables coordination and use of resources to achieve digital transformation. The authors conclude digital transformation requires leaders that encourage organizational change by, among other, formulating a strategy, promulgating a shared innovation vision among departments, restructuring the organization around technologically integrated organizational processes, and creating a collaborative environment among different stakeholders. Other authors, such as Hansen & Nørup (2017), also highlight the role of leadership in mobilizing initial support for digital transformation, involving employees, providing adequate information and timely technical support, and locally adapting implementation processes for successful digital transformation.

The works reviewed suggest that, despite a lack of consensus on digital transformation, scholars agree it goes beyond merely making forms available online or transitioning from analog to digital public service delivery (Mergel et al., 2019). Further, they indicate that failures in transforming local governments in recent years point to a lack of understanding of the complexity of digital transformation and the relationships among technologies, organizational attributes, and institutional arrangements. These attributes are associated with organizational capacity of governments as a key enabler for the success of digital transformation processes (Gong et al., 2020; Tassabehji et al., 2016).

2.2. Smart cities and their contribution to digital transformation

~~of~~ Digital transformation in local government has also been linked to the concept of smart city (Viale Pereira et al., 2020; Meijer, 2018) which is addressed using different definitions and frameworks (Meijer & Rodríguez-Bolívar, 2016), which converge in a

few important characteristics (Gasco-Hernandez, 2015). First, smart cities operate under a global/integral perspective, which materializes in different types of initiatives, from waste management to traffic control or water management. Second, smart cities, adopt a double approach, technological and human, which means that technology is key in the development of the smart city (and, therefore, it is the tool par excellence) but that, at the same time, the smart city has to be developed for, by, and with citizens. As a result, urban governance and participation processes as well as investments in human and social capital are inherent attributes of a smart city. Third, smart cities have a triple goal: to improve the efficiency of urban operations, to improve citizens' quality of life, and to promote the local economy, having as a common background environmental sustainability.

The literature also acknowledges that "smart city" is a construct in which to frame local government transformation by using innovative technologies aimed at more efficient delivery of public services, improved urban governance, increased competitiveness, and sustainable growth (e.g., Viale Pereira et al., 2020; Gasco-Hernandez, 2018, Gasco-Hernandez et al., 2016; Gil-Garcia et al., 2016; Meijer & Rodriguez Bolivar, 2016). In this respect, a smart city is one with a strong commitment to innovation in technology but, also, in management and policy (Nam & Pardo, 2011).

The literature on smart cities has discussed the links between the idea of a smart city and digital transformation through three levels of conceptualization of smart city governance, summarized by Meijer & Rodriguez Bolivar (2016): smart decision-making, smart administration, and smart urban collaboration. Through smart decision-making, the lowest level of transformation, organizations re-structure decision-making processes by collecting and processing all sorts of data and information using technology. Through smart administration, organizations integrate information,

processes, institutions, and physical infrastructure to better serve citizens and communities, which leads to the re-structure of the internal organization of government. Finally, through smart urban collaboration, the highest level of transformation, organizations promote collaboration "across departments and with communities, helping to promote economic growth and at the most important level making operations and services truly citizen-centric" (Bataga, 2011: 85), which results in the transformation of both the internal and the external organization. That is, in the context of the smart city, new forms of governance and collaboration are necessary to create value to citizens (Viale Pereira et al., 2020). Together, these three different conceptualizations of smart city governance actually show that making a city smarter is about finding better ways to do the basic tasks of government (Meijer & Rodriguez Bolivar, 2016), and therefore about transforming government by heavily relying on technology (Mergel et al., 2019).

We argue that in order to achieve this transformation local governments should have adequate organizational capacity.

3. An analytical framework to understand organizational capacity

Organizational capacity, mainly discussed in organizational theory, is still an elusive concept that has, generally speaking, been defined very broadly (Bernet et al., 2019). For example, Eisinger (2002) and later on other authors, such as Sun et al. (2015) and Koerner & Johnston (2021), define it as a set of attributes that help or enable an organization to fulfil its missions. Similarly, some public administration scholars, such as Igalla et al. (2020), Andrews et al (2016), and Melton et al., (2017), argue that organizational capacity is about the extent to which a government has the right resources, mainly financial and human, in the right place at the right moment. These

vague definitions have also resulted in the use of different terms to discuss organizational capacity, such as "administrative capacity" (e.g., McCrea, 2020; Wimpy et al., 2017; Lee & Clerkin, 2017) and "management capacity" (e.g., Wang et al., 2015; Andrews & Brewer, 2013; Andrews & Boyne, 2010).

Piña and Avellaneda (2017), building on the work of Kolar Bryan (2011), identify three different approaches scholars have used to define organizational capacity, which combine the perspectives of resource-based and strategic management theories: 1) organizational capacity as resources, 2) organizational capacity as capabilities, and 3) organizational capacity as competencies. Under the first perspective, organizational capacity is understood as the capacity of an organization to obtain resources. These resources can be tangible (financial, physical, technological, and informational) or intangible (i.e., related to human capital: reputation, experience, expertise, knowledge, connections). Under the second perspective, having the resources is not enough and, therefore, organizational capacity is understood as the ability to absorb and manage those resources effectively. For some authors, this "know how" constitutes the managerial capacity of an organization, which makes them recognize and "emphasize the key role of strategic management in adapting, integrating, and reconfiguring internal and external skills, resources, and functional competences to match requirements with the changing environment" (Harvey et al., 2010: 83). Having a strategy, and therefore deploying a strategic management process, contributes to the achievement of the organization's objectives, declaring its mission and goals as well as the approaches that it will adopt to achieve them (Andrews et al., 2016; Andrews & Boyne, 2010; Bryson et al., 2007). For others, organizational capacity is associated with structural configurations (e.g., Andrews et al., 2016) and the management of intergovernmental cooperation/collaboration (e.g., McCrea, 2020; Kolar Bryan & Isett, 2013).

Finally, under the third perspective, organizational capacity is the ability to achieve goals or solve problems and, therefore, to do something well (Kolar Bryan, 2011). This perspective links organizational capacity with organizational performance and therefore understands organizational capacity as resources and capabilities that are related to organizational effectiveness (Andrews et al., 2016). According to Piña & Avellaneda (2017) and Avellaneda (2016), under this approach, organizational capacity reflects in a combination of knowledge, skills, abilities, and behaviors that an employee shows in carrying out his/her work. Further, the literature that uses this perspective discusses the role of experts, but also of dedicated staff whose main task is to coordinate and manage certain efforts and strategies (e.g. Wang et al., 2015).

In this paper, we adopt a combination of the three perspectives. We argue that organizations need to be able to obtain resources to achieve digital transformation. Yet, resources alone as inputs do not guarantee results and they may only make contributions to organizational capacity if they are managed or leveraged. In addition, understanding organizational capacity requires determining which resources and capabilities will effectively result in digital transformation. We therefore focus on resource-based and strategic management theories and acknowledge the role of 1) availability of multiple types of resources, 2) strategy as the manifestation of the organization's orientation to pursue its digital transformation-related goals, 3) organizational attributes as the model of allocation of roles and responsibilities and the role of leadership, and 4) the governance put in place to manage resources and collaborate with different stakeholders and actors involved in the implementation of digital transformation.

In order to assess these elements of organizational capacity, we adopt the analytical framework of Kolar Bryan's (2011). Based on an extensive narrative literature review, the author proposes four broad categories of organizational capacity:

1) infrastructure, 2) management, 3) knowledge and learning, and 4) collaboration (see Table 1). First, we understand infrastructure as available resources, that is, any assets an organization may draw on to help it perform tasks and achieve its goals (Bryson et al., 2007). Second, management refers to the ability of an organization to effectively utilize available organizational resources to achieve organizational goals. The literature acknowledges the importance of leadership in building organizational capacity: the quality of leaders as well as their managerial expertise is associated with higher organizational capacity and performance (e.g., Piña & Avellaneda, 2017; Andrews & Boyne, 2010). Third, knowledge and learning have to do with the ability to learn to do things differently and to embed those new policies and practices within existing organizational processes. Finally, collaboration refers to the ability of organizations to effectively collaborate with other organizations to achieve organizational and programmatic goals. The literature has addressed collaborative capacity in three different ways: 1) the collaborative competencies of individual leaders and public managers that participate in collaborative processes (e.g., McGuire & Silvia, 2010; Weber and Khademian, 2008), 2) the inter-organizational context of the collaboration, including trust, level of stakeholder engagement, and network governance dynamics (e.g., Bryson et al., 2015), and 3) the impact of participation and involvement in collaborative efforts on the capacity of the organization (e.g., Diaz-Kope & Morris, 2019; Sandfort and Milward, 2008), which has particularly emphasized the motivations of organizations to engage in collaborative efforts (among other, access to increased financial resources; access to non-financial organizational resources; increased reputation, legitimacy, and credibility).

Table 1. Four dimensions of organizational capacity

Category	Examples of attributes
Infrastructure	Personnel/human resources Property Information Financial resources
Management	Leadership (both executive and political) Existence of a strategy Management processes Organizational structure
Knowledge and learning	Organizational processes that support training in new practices Culture of innovation Learning processes from past experiences Communication strategies of management
Collaboration	Motivation to collaborate Inter-organizational collaboration (e.g. public-private partnerships) Collaboration with citizens Network governance mechanisms

4. Research design

To answer our research question, we use a comparative case study, comprising the cities of Barcelona, Milan, and Munich. Qualitative case studies are well suited to respond to 'how' and 'why' questions (Yin, 2013), and are useful to address descriptive or explanatory research (Marshall and Rossman, 2011). In addition, case studies show how particular practices are developed in particular organizations and, therefore, help refine theory (Scapens, 1990). Qualitative case studies also allow studying the research question in depth while leaving room for unexpected interesting findings that can form the basis for concrete hypotheses to be tested in future research (Yin, 2013; Marshall and Rossman, 2011). This is particularly useful when there is little existing research on the topic (Yin, 2013), as is the case here. More specifically, comparative case studies provide a more solid base for theory building (Yin, 2013), compared to single case studies that may describe a phenomenon well but are usually less supported by various empirical evidences (Siggelkow, 2007). Further, comparative case studies have been

recognized as productive research approaches to understand digital transformation (Chen et al., 2009).

Case selection was guided by a combination of opportunity, feasibility and theoretical sampling. In particular, the latter played an important role because we aimed at providing preliminary insights and developing conceptual ideas rather than amassing general information. We therefore looked intentionally into cities in different contexts, which were needed to help the authors clarify understanding of the influence of organizational capacity in the implementation of smart cities initiatives (Patton, 2002; Strauss and Corbin, 1998).

The search for cases resulted in three metropolitan European cities. We chose the European context to assess cities with a common overarching digital strategy: the EU eGovernment action plan. We selected the following cities: Milan in Italy, Barcelona in Spain, and Munich in Germany. The cities were selected as a result of a combination of their role in supporting European competitiveness and having distinctive approaches to their urban and digital transformation strategy. In particular, not only these metropolitan cities represent the "transnational growth region" triangle (Hettne, 1997) as regards cross-border economic interaction over the last twenty years, but they are comparable in size, they have a similar pivotal role within the macro-area in which they are located, and the heterogeneity of their strategies facilitates the process of theory building.

We undertook methodological triangulation in order to obtain more solid results, depicting the use of multiple data sources in the same study to capture different dimensions of the same phenomenon (Denzin, 2017; Cohen et al., 2000). Data collection proceeded in two waves and included two major information gathering activities: document analysis and in-depth interviews.

First, to assure comprehensive coverage of publicly available information, between 2015 and 2016, we conducted targeted searches of content available on the Internet using Google.com that directed us to several sources of information, including the cities' websites, news media, government reports, and city publications. We were particularly interested in collecting information about smart city policies as well as smart city strategic and operational plans between 2012 and 2016. These years marked the initial stage of smart city development in Europe. In the history of smart cities, 2009 seems to be an important moment in time with the unveil of $50m Smarter Cities campaign by IBM to help cities run more efficiently, the approval of the American Recovery and Reinvestment Act (ARRA) that provided funding for US smart grid projects, and the European Union (EU) Electricity Directive that required EU states to roll out smart meters to 80% of consumers by 2020[1]. After that year, and particularly after 2011, cities all over the world started to invest in smart city initiatives. Many of them attended the first Smart City Expo World Congress that took place in Barcelona. Following this trend, between 2012 and 2016, the three cities of our study designed and implemented their first explicit and sound smart city strategy. We believe that analyzing the role of organizational capacity in these three cities in their initial stage of smart city development may be insightful for other cities that may find themselves in an early stage and, therefore, needing to assess how prepared their city governments are to undertake these processes.

Second, during the spring of 2016, we conducted semi-structured, in-depth interviews with public managers in the three cities. A minimum of five interviews were carried out in each municipality, including the city manager or the chief operation officer (or equivalent) as well as senior managers in charge of organization, financial

[1] See https://www.verdict.co.uk/smart-cities-timeline/.

resources, and technologies. These individual interviews aimed at deepening the understanding of the role the local governments' organizational capacity played in the implementation of smart city initiatives, thus collecting and consolidating information, data, and evidence emerged during the conducted targeted searches. In order to guarantee a homogeneous collection of information in the three cities, we designed a common protocol, with the goal of better interpreting the accounts of the smart city design and implementation processes they had been involved in (Blaikie, 2010). Thus, the interviews focused on four main topics: the smart city strategy, the planning process, the use and management of resources during the implementation process, and the governance of the smart city strategy (that is, the network of actors and their role in the design and implementation of the smart city strategy). Nevertheless, further questions were asked during the individual interviews in order to further investigate and drill-down specific information that was relevant to the understanding of the specific peculiarities of each city. The interviews lasted between one and a half and two hours, were recorded, and subsequently transcribed.

The resulting data was hand-coded using the pre-defined codes from the existing digital transformation and smart city literature as well as from public administration, strategic management, and organizational studies. Additional codes emerged during the coding process, were categorized and their meaning evaluated, following a grounded theory approach (Glaser and Strauss, 2017).

5. Case vignettes

As noted, three metropolitan European cities were selected to conduct our study: Milan in Italy, Barcelona in Spain, and Munich in Germany. This section briefly describes the

cities, their smart city strategy, and the governance model, which are summarized in Table 2.

Table 2. A summary of features in Barcelona, Milan, and Munich

	Milan	**Barcelona**	**Munich**
Context	The smart city as part of a model of innovative urban planning that does not have a specific focus on ICT but that has technology as a main component of some of its projects European Union's Smart Cities and Communities as a driver that sparks the interest on smartness	The smart city as part of a wider and longer modernization process with ICT at its core that takes a totally new direction after the government change in 2015	The smart city as a result of the need to implement creative solutions to address urban development challenges Institutionalised practices as a consequence of long-term political stability
Smart city strategy	Clear and explicit smart city vision and strategy aimed at being intelligent, attractive, inclusive, and green and sustainable Overall focus on social innovation	Clear and explicit smart city vision and strategy aimed at improving the well-being and quality of life of city residents and at fostering economic growth Clear political and executive leadership	The smart city strategy as a transversal element of Perspective Munich Main focus on improving sustainability
Actors and governance model	Collaborative governance model materialized in the public-private partnership Milano Smart City Bottom-up design of the strategy, with a diversity of actors involved	Top-down governance model, led by the city government and based on inter-organizational cooperation Diversity of actors involved in the implementation of the programs and	Citizen-centred governance model, led by the city government Diversity of actors, part of a long-term innovation ecosystem, involved in the design and implementation of

	External funding support from regional, national, and European public organizations Consideration of citizens' input, particularly through NGOs and community-based organizations, during the design phase	projects, with particular importance of public-private partnerships and external funding support from regional and European public organizations Scarce participation of citizens	the strategy Long-time tradition of citizen participation in urban planning and development

5.1. *Milan*

With a population of 1,366,037 inhabitants (ISTAT, 2017), Milan is the second most populous city in Italy and the capital of the Lombardy region. The city area covers about 181.7 square kilometers, the income per capita was €49,921, twice the national (€25,453) (http://www.investinlombardyblog.com/en/2017/03/milan-bids-to-become-the-european-capital-of-finance-as-the-uk-is-set-to-leave-the-eu/). While Milan is well-known internationally as the capital of fashion and design, it has in fact highly diversified industrial and services sectors and become an active, economic driving force. Thus, the city is an important manufacturing center, especially for the automotive industry, it is home to a large number of media and advertising agencies as well as the headquarters of numerous insurance companies and banking groups.

Although Milan's use of innovative urban planning tools dates back to the 1980s (Trivellato, Cavenago, and Gasco-Hernandez, 2016), it was not until 2011, when the first Local Government Plan was approved, that the city adopted a more strategic and participatory approach to urban governance. One smart city initiative (Public Hearing towards Milano Smart City) was aimed at engaging citizens in the decision-making process. The smart governance strategy embraced issues such as greening,

infrastructures, and public services, the plan aimed at simplifying access to public services, and promoting the contribution of the private and non-profit sectors in the pursuit of public sector interests. The smart city lab of sustainable mobility was aimed at reorganizing the demand for mobility from citizens, tourists and business actors to facilitate an integrated digital governance of public transportation, parking service and traffic. Although the plan had no specific focus on technology, all programs aimed at enhancing citizens' quality of life, services' provision, business support, and local development had technology as a key attribute (Gasco-Hernandez, Trivellato, and Cavenago, 2015). The lab for energy sustainability aimed at optimizing the use of electricity of public lighting through technology as well as at enhancing coordinated waste management and smart buildings for a greener city. The city main source of financial resources for investments was the internal budget, but after 2011 they started to seek for external sources of funds, particularly those related to sustainability and energy. As a result, the city government submitted project proposals to the European Union's Smart Cities and Communities Initiatives. It was then when the city government devised a strategy for the development of a smart city.

The development of the smart city strategy took particularly into account the established city model, based on supporting development dynamics and livability in the municipal area by integrating the spheres of urban planning, economy, governance and delivering public services using non-traditional solutions. Since the very beginning, the municipality process of defining the smart city strategy was formally collaborative with other public agencies, including the Milan Chamber of Commerce. Following a public-private partnership model, they defined the vision: Milan aimed at being intelligent (in terms of allowing dialogue with the citizens), inclusive, attractive to human capital, and green and sustainable. Seven strategic goals were then formulated: 1) Milan as a global

city and national and European lab, 2) sustainable urban mobility, 3) environmental and energy policies, 4) promotion of social inclusion and diversity, 5) urban wellbeing, 6) simplification of administrative procedures, and 7) business start-up. Social innovation was at the core of the strategy: the city intended to go beyond the technological dimension and to turn it into a tool capable of contributing to the development of new methods to tackle socially relevant problems (Sgaragli and Montanari, 2017).

The governance appeared to be more formal than aimed at delivering results. On the one hand, the city did not have a clear organizational unit in charge of digital transformation or smart city implementation. Rather, it had several competences allocated within different departments (including the Department of Commerce, Economic Development, University, and Research and, in particular, the Unit of Economic Innovation, Smart City, and University). The many initiatives and the difficulties of involving different departments challenged intra and inter-organizational coordination in the adoption of the smart city strategy despite the existence of some transversal work under the "cross-sectional" theme of the smart city (Gasco-Hernandez, Trivellato and Cavenago, 2015).

On the other hand, in addition to the city government, a public-private partnership initiative, Milano Smart City, aimed at designing and deploying digital transformation through smart city initiatives, which reflected a polycentric governance with multiple centers of semiautonomous decision making that could have resulted in redundancies of activities and a lack of clear ownership of responsibilities.

A further step in terms of governance was the mapping of stakeholders in order to identify potential partners in the implementation of specific projects. The analysis resulted in the identification of public organizations, university and research centers, companies, banks and financial organizations, citizens and third sector organizations,

and international partners. However, the actors were invited to join without a clear pivotal governance ownership and incentives to contribute. In turn, despite the plurality of actors, their role in contributing to a balanced mix of external and internal financial resources to support smart city initiatives was very small and resulted in the inability of creating effective collaboration initiatives. In the end, most of the smart city projects were highly dependent on the city's regular operating budget.

5.2. Barcelona

With a population of 1,620,809 inhabitants (INE 2017), Barcelona is the second most populous city in Spain and the capital of the Autonomous Community of Catalonia. The city area covers about 102.15 square kilometers. In 2016, the income per capita in the city of Barcelona was €47,600 (http://www.bcn.cat/estadistica/castella/dades/anuari/cap11/C1101010.htm and https://www.idescat.cat/pub/?id=aec&n=356).

Barcelona has always been known by its pioneering efforts in adopting and implementing information and communication technologies (ICT), which go back to 1967, when the Municipal Computer Centre (later on the Municipal Informatics Institute) opened its doors. Since then, and particularly after the 1980s, when its economy was near collapse with stagnation and widespread unemployment (Gasco-Hernandez, 2018), ICT have been at the core of Barcelona's modernization processes, first based on promoting e-government and, over time, on investing in smart city initiatives (Gasco-Hernandez, 2018; Gasco-Hernandez, Trivellato, and Cavenago, 2015).

The first references to the smart city were the result of the 2008 ICT Master Plan whose goals were to 1) improve urban operations and services by focusing on citizens and quality, 2) reinforce proximity by developing a new territorial model based on 73

neighborhoods instead of ten districts, 3) innovate by intensively using new technologies, and 4) evaluate performance management (Gasco-Hernandez, Trivellato, and Cavenago, 2015). As the plan stated, the ultimate goal was to make Barcelona a smart city by investing in a simple and effective, closer to citizens, connected, ubiquitous, and innovative city government. As a result, three main areas were prioritized: infrastructures, smart services, and citizens' interaction.

The efforts to make Barcelona smarter became particularly strong after 2011, a year that witnessed a change of government in the city (Gasco-Hernandez, 2018). The new government stated its will to reinforce the smart city brand of Barcelona as a promoter of a new economy of urban services. The goal was to show Barcelona as an essential reference for all those cities which sought to redirect its economy and its external promotion following this paradigm (Gavalda and Ribera-Fumaz, 2012). The Smart City Expo and World Congress, held for the very first time in 2011, was the starting point of this new perspective.

The city government established then a city vision, a smart city mantra, and a smart city strategy. First, the vision was to evolve towards a Barcelona 5.0 city model, characterized by being inclusive, productive, self-sufficient, and smart and innovative, as well as by making Barcelona a city of communities and public spaces. Second, as a result, the city government developed a city mantra: "a self-sufficient city of productive neighborhoods at human speed, inside a hyper-connected zero emissions metropolitan area." Finally, the objective of the strategy was to use the new technologies to 1) improve the well-being and quality of life of city residents and 2) to foster economic growth. The strategy included three axes, international positioning, international cooperation, and 22 smart local programs, which led to the implementation of more than 200 projects (Ferrer, 2015), which pursued digital transformation in the city through

smart decision making (for example, Intelligent Data, a system based on sensors that allowed for the collection of data about air pollution, noise, traffic, and crowds that enabled an evidence-based decision making approach), smart administration (for example, the Citizen Virtual Offices, which combined a new online services website with the deployment of kiosks equipped with a videoconference screen, a printer, and a scanner, where the citizen could interact in real time with the city council, and Barcelona Vincles, a transversal initiative that provided proximity information mobile services to senior citizens), and smart urban collaboration (for example, the Network of Fab Athenaeums, a space where citizens, but also local associations and groups, universities and businesses, could join together to develop social innovation initiatives with the support of a laboratory devoted to digital fabrication, and Smart City App Hack, a global network of cities that helped developers to create and build apps and develop businesses that could contribute to a smarter city).

Leadership was a key attribute in the implementation of the smart city strategy. Politically, a former mayor actively promoted the city technology-driven strategy to transform Barcelona and address the city's main challenges, facilitating the organizational changes that were needed.

Such changes followed a broader new public management model, based on service externalization and the adoption of managerial tools. Of particular importance was the creation of the Department of Urban Habitat, which had the responsibility of maintaining the city and improving the urban space (which included urban transformation and regeneration). Within the department, the unit in charge of overseeing the smart city development as well as of promoting the city internationally was the Directorate for ICT Strategy and Smart Cities. It was led by the Director of Smart City Barcelona, who steered the implementation of the smart city and developed

the operational plan. Interestingly enough, his role in deploying the city governance methodology was also key: he developed public-private partnerships, particularly with big companies, which strengthened city-industry collaboration and resulted in new financial models as well as negotiated several agreements with multilateral organizations to promote the Barcelona smart city brand.

In addition, Barcelona developed a specific governance methodology, based on inter-organizational cooperation and led by the Director of Smart City Barcelona, which involved several local, regional, national, and international stakeholders in the definition and implementation of its smart city strategy. First, public-private partnerships played a key role in the diversification of financial resources. Most of the 22 programs were implemented with the support of both global and local companies.

In addition, collaboration with other public administrations proved highly effective in the implementation of the various local programs. In particular, a lot of support came from the Autonomous Government of Catalonia, predominantly in relation to wider projects that included other areas in Catalonia in the areas of education, health, tourism, industry and logistics, and safety.

Other type of actors were also important. Multilateral organizations played a specific role in the implementation of a few projects (for example, the United Nations Economic Commission for Europe participated in the urban resilience program or the World Bank was a partner in the intelligent data one), but were particularly relevant in promoting Barcelona internationally. Non-profit organizations, supported citizen-oriented programs (or smart citizens' programs, as the strategy read) and civic crowdfunding and collaboration. Partnerships with education institutions, but also with cities worldwide, facilitated the exchange of good practices and experiences but also promoted the international positioning of Barcelona.

Despite the big network of stakeholders, their involvement essentially took place by adopting a top-down perspective, with the Barcelona City Council leading efforts in the city and adopting centralized coordination mechanisms. Thus, although several actors were key in the implementation of different initiatives, the city government provided explicit direction, clearly aligned with its smart city vision and strategy.

5.3. Munich

With a population of 1,464,301 inhabitants (Wikipedia, 2017), Munich is the capital and most populous city in the state of Baviera and the third most populous city in Germany. The city area covers about 310.43 square kilometers. The income per capita in the city of Munich was €66,868, significantly higher than the regional (€42,950).

Munich is considered to have the strongest economy of any German city and the lowest unemployment rate. It is the headquarters of important companies, such as Siemens AG, BMW, MAN AG, Linde, and Allianz. It is also the largest publishing city in Europe and has significance as a financial center (only second to Frankfurt). In 2014, the European Commission decided that Munich was Europe's top technology hub, mainly because of a high investment in research and development activities, the ability to take knowledge to market (innovation), and to building an intense business activity around this innovation (De Prato and Nepelski, 2014).

Despite this recognition, Munich is considered a latecomer in digital transformation. Its development as a smart city is more recent. It dates back to 2014 and it is mainly the result of the need to implement creative solutions to address the urban development challenges the city was facing, such as limited potential area for inner urban development, increasing demand of space and changing mobility in the city, high demand for housing, and climate change. It can be therefore said that, in Munich, smart city efforts are embedded in the need to rethink the urban development model, a

recurring theme in the history of the city. Of particular importance in this process has been Perspective Munich, a strategic tool drafted back in 1998 and constantly updated with the input of citizens and other city stakeholders, which is still nowadays a flexible framework for the urban development of the city.

Perspective Munich's leitmotiv is to have a "city in balance" and, therefore, a livable dynamic balance among city attractiveness, diversity, and social wellbeing. In order to realize this vision, back in 2014, Perspective Munich included four strategic guidelines (steering based on dialogue and cooperation, openness and attractiveness, solidly and committed urban society, and high-quality and distinctive urban areas) and 16 thematic guidelines. One of those thematic guidelines was Smart City Munich, which envisioned Munich as a city that would systematically apply ICT as well as resource efficient technologies to 1) lead to a post-carbon economy, 2) reduce the consumption of (carbon-based) energy, 3) develop a more independent economy from resource turnover, 4) ensure citizens' quality of life, and 5) enhance the competitiveness of the economy. Thus, the smart city strategy was mainly concerned with improving the sustainability of the city. The seminal smart city initiative in Munich was launched in 2007 under the title of "MIT-KonkreT" which stands for Munich Information technology concrete and it lasted for about a decade. The scope was to set up the foundations for building the city government's information infrastructure and technology as part of a smart administration initiative. In addition, within the city government, two were the departments in charge of the implementation of the smart city strategy: the Department of Labor and Economic Affairs (and, in particular, its Unit of European Affairs) and the Department of Urban Planning. Yet, the role of the so-called German Innovation Roundtable, which brought together several German cities and businesses, was key, particularly in relation to European Union's Horizon 2020 tenders

on Smart Cities and Communities. As Barcelona and Milan, Munich also relied on the funds provided by European projects. This sustained collaboration among Munich's universities, institutes, corporate research and development departments, trade unions, and different tiers of government, also known as Munich's innovation ecosystem, created a unique institutional thickness for more than 60 years. In particular, Munich was noted for the strong alignment of private and public sector interests and the empowerment of firms and knowledge institutions to shape policy. This equilibrium was also made possible by political stability. For years the city was governed almost continuously by the social democrats, and the state government by conservatives, with strong collaboration between the two (Clark, Moonen and Couturier, 2016).

Smart city initiatives were set up as engaging and participatory projects (Smarter Together). The governance of Munich smart environment initiative was set up as a lighthouse city. They were implemented in the new urban area Neuaubing-West Kreus; and in Freiham. Their scope was to build low-energy districts and holistic rehabilitation of housing stock, facilitating the participation of citizens through district laboratories.

The participation of citizens in the design and implementation of different projects and initiatives also proved relevant. Although this citizen-centered approach was a key element in urban planning and, therefore, in the implementation of the smart city strategy, it was also one of the main challenges the city faced, given the need to meet quite heterogeneous demands.

6. Comparison and discussion

Our findings show that the three cities made decisions to enhance their organizational capacity to undertake smart city initiatives by mainly focusing on the dimensions of management and collaboration. In general, Barcelona, Milan, and Munich already had

several resources that were managed effectively as a result of developing a sound strategy and clear organizational structure within the city government. Yet, smart city initiatives are not cheap and require the investment of big amounts of money that city governments cannot afford, which explains the involvement in collaborative efforts with different types of organizations.

6.1.Management: The importance of having a strategy

In line with strategic management theories, our findings show that having a clear and explicit strategy is the first step to show the organization's commitment and positive attitude towards a smart city approach and, therefore, towards strategically managing the internal and external organizational, human, technological, and financial resources that are needed to develop and guarantee the development of smart cities (Harvey et al., 2010). Further, the strategy sets the vision for a smart city, which is different in each case, by setting priorities and providing direction (Andrews et al., 2016; Andrews & Boyne, 2010; Bryson et al., 2007), and therefore identifying the type of projects that are important for each city.

Interestingly enough, our results also show that there is no single strategy to develop a smart city (Gasco-Hernandez, 2018; Gasco-Hernandez et al., 2015), and thus no single vision for a smart city. The three cities of our study designed different strategies with different emphases, often, building on the city's tradition. In Barcelona, for example, a pioneering city in the adoption of technology, the development of the smart city strategy was the natural evolution from e-government and the concept of the digital city to a city providing better quality of life to its residents. Given the technological tradition of Barcelona, as in the earliest definitions of a smart city, technology played a key role in the design of the smart city strategy, programs and projects, but also did international positioning. Quite different are the cases of Milan

and Munich, embedded in an urban development and planning tradition, which goes back to the 1980s and 1990s respectively and which did not necessarily have technology as a key tool. In these two cities, more important than using technology was to address the urban challenges: social problems in the case of Milan (thus, the focus on social innovation) and energy inefficiency in the case of Munich (thus, the focus on environmental sustainability).

Yet, the three strategies seemed to have thrown positive results. The report delivered by IESE (2017) shows that in 2017 the three cities were among the 25% smarter cities in the world (Munich was 21st, Barcelona was 33rd, and Milan was 44th in a list of 181 cities). Each of the cities exceled at the main component/s of their respective strategy: in the ranking, Munich was only number third when it comes to the environment, Barcelona was number sixth in relation to international outreach, and Milan was number eleventh regarding urban planning.

The existence of different strategies in each of the cities, all valid and successful in the development of a smart city, partly explains the difficulty of both academics and practitioners in agreeing on a shared definition of a smart city (Meijer and Rodriguez-Bolivar, 2016). Our results may contribute to that discussion for they indicate that, as advanced by Gasco-Hernandez (2018) and Giffinger et al. (2007) among others, improving the residents' quality of life is the ultimate goal of a smart city and that technology seems to play an important role in reaching this goal, as several of the smart city frameworks have underlined (e.g. Giffinger et al., 2007; Chourabi et al., 2012; Gil-Garcia, Zhang, and Puron-Cid, 2016). Yet, the specific programs and projects as well as the strategic significance given to technology reflect the needs and challenges of each of the cities and therefore show the importance of context in the development of smart

cities (Hu & Zheng, 2021). As Nam and Pardo (2011) already stated, the unique context of each of the three cities shaped their own smart city strategies.

Political and managerial leadership seems to have been key in the implementation of the strategy, although the intensity of such leadership is different in each of the cities (Kuhlmann & Heuberger, 2021; Pittaway & Montazemi, 2020; Piña & Avellaneda, 2017; Andrews & Boyne, 2010). In Barcelona, for example, both political and managerial leadership were present over the years, while in Milan there seemed to be a transition from managerial to political leadership that took place in 2016. In Munich, the city government, as discussed below, led the process. Yet, there were no clear individual leaderships within the city government. Having a dedicated unit in charge of implementing the smart city strategy was also relevant. In the three cities, more than one city department or unit was involved in the development of the strategy, which as previous studies show (e.g. Piña & Avellaneda, 2017; Avellaneda, 2016; Wang et al., 2015), points to the value of having dedicated staff tasked with coordinating and managing specific smart city initiatives.

6.2.Collaboration: Motivations to collaborate and the importance of network governance mechanisms

Our results also show that efforts to collaborate with different partners were key in the three cities, where an important network of different stakeholders enabled the implementation of several smart city initiatives: public organizations, small and big companies, start-ups, universities and research centers, citizens, non-profits, and community-based organizations were all part of the efforts to design and implement the smart city strategy. In the three cases, motivations to collaborate were clearly aimed at increasing access to resources, mainly, financial resources (Diaz-Kope & Morris, 2019). In this respect, getting support from the European Union by means of grants and awards

proved key. In the three cities, getting European funded projects enabled the implementation of the strategy by contributing to the mix of internal and external financial resources that were needed. Therefore, our results support those of previous works that had already identified the relevant role of the European Union in the development of smart cities in Europe (Manville et al., 2014; Russo et al., 2014). In addition, they show that European funded projects have also be significant in setting up a network of stakeholders, both nationally and internationally, given the consortia composition requirements. Yet, increasing financial resources was not the only motivation to engage in collaborative initiatives. Following Sandfort and Milward (2008), obtaining non-financial resources was also important. For example, by involving citizens, particularly in the case of Milan and Munich, the cities also pursued increased legitimacy and credibility. In Barcelona, partnerships with other cities were aimed at improving the international positioning of the city and, therefore, its reputation.

As a result of the motivations above, we argue that efforts to increase collaborative capacity mainly took place at the organizational level, following the conclusions of previous studies that state that this is the most useful level of analysis in exploring how collaboration impacts the capacity of the organizations that participate in the collaborative effort (Kolar Bryan, 2011).

Our results also shed light on the inter-organizational context of the collaboration and give additional details on the mechanisms and governance dynamics of the collaboration, which contributes to opening the black box of what actually works in inter-organizational collaboration. First, our analysis indicates that public-private partnerships were a key tool. This arrangement was important in relation to the implementation of the strategy, except in the case of Milan where they were also the

first step to actually start building the smart city. Further, public-private partnerships were not new to the cities. In particular, Barcelona and Milan had a long tradition of public-private collaboration, which shows, once more, the importance of context not only in the definition of the smart city strategy but, also, regarding the choice of mechanisms to implement the strategy (Nam and Pardo, 2011). Finally, these public-private partnerships went beyond the traditional procurement agreements between public and private organizations: especially in the case of Barcelona, companies and other private organizations were often in charge of implementing the projects and, more important, of funding them.

Second, citizen participation was also shaped by context and tradition in involving citizens in policy-making and public sector decision-making processes. For example, Barcelona did not carry out participatory processes at all, which was coherent with the participation culture in the city, one that relied on consultations with big civic organizations instead of individual citizens (Gasco-Hernandez, 2018). At the opposite end lies Munich, which built on its tradition of citizen participation in urban planning and development (PlanTreff) and involved citizens not only in decision-making processes but, also, in the implementation of the initiatives and, therefore, in the co-production of the strategy.

Third, the mechanisms of network governance were different in each city. Barcelona, for example, adopted a top-down governance model that reflected the clear leadership (and also ownership and control) of the mayor, as well as the visible collaborative competencies of the top public managers (McGuire & Silvia, 2010; Weber and Khademian, 2008). The strategic process was top-down and "telescopic", enabling coherence between the smart city vision, the 22 programs, and the more than 200 projects as well as facilitating the allocation of resources and the choice of partners. In

Munich, the city government also led the first steps of the planning process, embedded in Perspective Munich, but given its citizen-centered approach, enabled the participation of citizens in the design and implementation of the content of the Smart City Munich transversal strategic guideline, resulting in the co-production of a smart city strategy aligned with the overall vision of the city ("a city in balance"). Finally, in Milan, the strategic planning process was bottom-up and the strategy was the result of the interaction with citizens and, mainly, with organizational stakeholders. Interestingly enough, this wide active participation was limited to the stage of identification of priorities. During the implementation stage, only certain actors, such as private companies and universities, played a significant role and Milano Smart City seemed to take control and organizational ownership as well as centralize operational management planning, resulting in a misalignment between the strategic priorities and the specific initiatives.

7. Conclusions

The main objective of this article was to assess how local governments enhance their organizational capacity to implement digital transformation. We focused our work on the adoption of smart city initiatives in three European cities. We conclude that organizational capacity matters in the development of smart cities and, therefore, in the achievement of digital transformation through smart decision-making, smart administration, and smart urban collaboration (Meijer & Rodriguez Bolivar, 2016).

We also conclude that adopting a comprehensive approach to the study of organizational capacity that combines the perspectives of resources, capabilities, and capacities expands our understanding of how the different dimensions of organizational capacity enable digital transformation. In this respect, in our study, management and

collaboration seem to be particularly important. Although availability of resources is key, our findings show that it is not enough to have (or get more) resources. These need to be effectively managed to successfully implement digital transformation. In doing so, the role of leadership within the local government is key. Our study indicates that both political and executive leadership drive digital transformation by setting the vision and the priorities through the definition of a digital transformation strategy and by enabling the implementation of such strategy through the establishment of dedicated units, and therefore financial and human resources. In this respect, as the literature on strategic management also indicates, the combination of knowledge, skills, abilities, and behaviors that leaders display enable both the configuration of resources in strategic ways as well as the promotion of a collaborative environment among internal and external stakeholders that result in the success of digital transformation processes.

Our findings also indicate that organizational capacity is highly determined by context, given that there is no single digital transformation strategy nor a single way to implement it. Despite some common characteristics, the three cities of our study had different strategies to become smart, followed different processes to define them, and set up different collaborative arrangements to implement them. However, the three of them were considered to be among the smartest cities in the world. Further, both the content of the strategy and the collaborative arrangements put in place were shaped by the unique features of the city, showing that digital transformation is context-dependent and cannot rely on mimetic isomorphism practices but, also, that leadership is contextual as well and that opportunities for digital transformation emerge when environmental factors and individual action come together (Burak, 2018).

Finally, our findings also suggest that the role of organizational capacity dimensions and attributes may be different for different types of digital transformation

initiatives. In the specific case of smart cities, our study reveals that, given the broad understanding of smartness, that ranges from sustainability to a wide array of quality of life issues, as well as the needed long-term vision of these type of initiatives, management (having a strategy, leadership, and a dedicated unit) specially matters. In addition, our study also suggests that smart city initiatives require a lot of cross-sectoral collaboration as well as dealing with a diversity of actors, which highlights the role of collaboration (public-private partnerships, collaboration with citizens, collaboration with other levels of government). In sum, the specific features of different digital transformation initiatives may require a different combination of organizational capacity dimensions and specific attributes that may differ from what is needed for the particular case of smart city initiates, which may be interesting to investigate in future research.

By studying organizational capacity in three cities, our research also draws some practical implications. First, context matters and each local government should assess their priorities and the status of their resources to boost their right organizational capacity for engaging in smart city and digital transformation initiatives. Some key attributes of organizational capacity are particularly important. First, having a clear strategy is key to set long- and short-term goals and priorities, but it is also essential to stimulate internal consensus around it. Second, building ownership of the digital transformation processes and smart city initiatives (for example, through a dedicated department or project manager) is also relevant to guarantee alignment between the vision, the strategic priorities, and the operational plans. Too often, local governments tend to set priorities by emergencies. Innovation does not occur if there is no dedicated effort.

As a final point, the local government and the digital transformation owners may play a key role in the development of partnerships with different stakeholders and, therefore,

in identifying collaborative approaches leading to the convergence of different actors' expectations, objectives and resources. Further, in the specific case of digital transformation through smart city initiatives, there are two additional implications. On the one hand, given their size and implementation complexity, they cannot only rely on the city budget. Therefore, having a mix of public (such as the internal resources and the European funds) and private (such as the ones provided by companies participating in public-private partnership) financial resources contributes to increasing the organizational capacity of cities. On the other hand, despite the time and resources that participation involves, engaging citizens, as well as other stakeholders, in the different stages of the planning and implementation processes may result in better meeting the expectations and needs of the different actors, in strengthening their commitment with the development of the smart city and, also, in legitimating government action, therefore increasing trust and, ultimately, reinforcing the city government's organizational capacity to implement the smart city strategy.

In the light of these conclusions, we argue that more systematic research from an organization theory perspective is needed, particularly to further explore certain topics, such as the role of specific collaborative arrangements in the digital transformation of local governments. Also, quantitative and qualitative studies could expand the sample of local governments horizontally to better understand practices to increase organizational capacity in different contexts and, therefore, to also further explore the particular ways in which context impacts local governments' digital transformation. In addition, future research could look into the combination of categories and attributes that are needed to effectively increase organizational capacity within local governments that aim to design and implement digital transformation processes through a different array of initiatives and projects.

As digital transformation continue to evolve, understanding the impact of organizational capacity in their success as well as increasing it are critical to unlocking their full potential public value.

Declaration of Competing Interest

None.

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