KYBERNOLOGY : Journal of Government Studies
Vol.3 No.2 2023
Available Online at https://journal.unismuh.ac.id/index.php/kybernology
ISSN (Online) : 2807-758X

JOURNEY TO SMART CITY: THE CASE OF SMART CITY DEVELOPMENT IN KARANGANYAR REGENCY

Muhammad Nurul Huda[1*], Muhammad Samsuri[2], Rauhulloh Ayatulloh Khomeini Noor Bintang[3]

Universitas Muhammadiyah Karanganyar[1,2,3]
*E-mail: muhammadnurulhuda1995@gmail.com

ABSTRACT

A smart city is a modern and advanced city that is integrated with digital systems that support convenience and comfort for its residents. Initially, the smart city concept was aimed at developed countries that have adequate infrastructure, but in Indonesia, district or city governments can improvise in its implementation according to the needs and capabilities of local governments. The aim of this research is to analyze the obstacles and strategies for implementing smart cities that are adapted based on the conditions of the Karanganyar Regency area. The research method uses descriptive-qualitative research, which is linked to empirical reality with applicable theory. Data is obtained from journal references, regional regulations, the Karanganyar Regency smart city master plan book, etc. The results show that the journey towards a smart city in Karanganyar Regency has been documented in the 2018–2023 RPJMD, but its implementation is faced with infrastructure (technology), structural (HR and budget), and superstructure (institution and policy) problems.

Keywords: *smart city; digital transformation; local government; Karanganyar regency.*

INTRODUCTION

The demand to improve the quality of excellent public services is increasing, but the reality is not all in line with public expectations. The issue at hand is not novel within the context of Indonesia, as a multitude of places within the country encounter comparable circumstances pertaining to the substandard nature of public services. (Yanuartanti et al., 2019). The bureaucratic reform policy provides ample opportunities for all state institutions and agencies to innovate in order to improve the quality of public services (Hayat, 2020; Cahyono et al., 2022; Huda, Purwaningsih, et al., 2021).

Digital-based governance innovations have proven to be able to answer the demands of increasingly quality public services in various local governments

(Wibawa &; Antarini, 2020). For example, public services with the Government Resources Management System (GRMS) system and the complaint report service system *LaporGub!* which is implemented in the Central Java Provincial Government (Huda, 2020). Then the innovation of *Mall Pelayanan Publik (MPP)* in Kulon Progo Regency, Yogyakarta Special Region Province, in Bojonegoro Regency, East Java Province, and in Sumedang Regency, West Java Province (Lestari et al., 2020; Yanuartanti et al., 2019; Ristiani, 2020).

Advances in technology, information, and telecommunications (ICT), along with the demands of fast and responsive public services, encourage cities around the world to carry out digital transformation and develop the concept of smart cities (Congge et al., 2023). The development of the smart city movement is experiencing a significant growth trend throughout the world (Indrawati et al., 2019). In Indonesia, since 2014, the DKI Jakarta Provincial Government has introduced the Jakarta Smart City program. Using applications on smartphones and the installation of CCTV cameras, the city government aims to provide a faster response to various aspects of daily life, such as floods, crime, fires, or waste-related problems (Martinez &; Masron, 2020).

The progress of digital transformation in Indonesia is currently focused on the sustainable development of smart cities, as evidenced by the policy implemented by the Ministry of Communication and Information Technology of the Republic of Indonesia. (KOMINFO RI) in 2017 and 2018, initiating the 100 Smart City Indonesia Movement (Mahesa et al., 2019). A report from the IMD Word Competitiveness Center shows that three cities in Indonesia (Jakarta, Medan, and Makassar) are included in the Smart City Index (SCI) 2023 (IMD World Competitiveness Center, 2023) list.

The smart city concept was originally formulated for cities in developed countries with established institutions and infrastructure, but in Indonesia, as a developing country, the implementation process is improvised and adapted according to the context of the local conditions of each city in Indonesia (Offenhuber, 2019). Smart city innovation in its application requires a long process; smart city projects are phased from short to medium term that can

KYBERNOLOGY : Journal of Government Studies
Vol.3 No.2 2023
Available Online at https://journal.unismuh.ac.id/index.php/kybernology
ISSN (Online) : 2807-758X

complement each other and require collaboration between sectors; and the experimental practice is very dynamic according to the capabilities of each city (Mora et al., 2023).

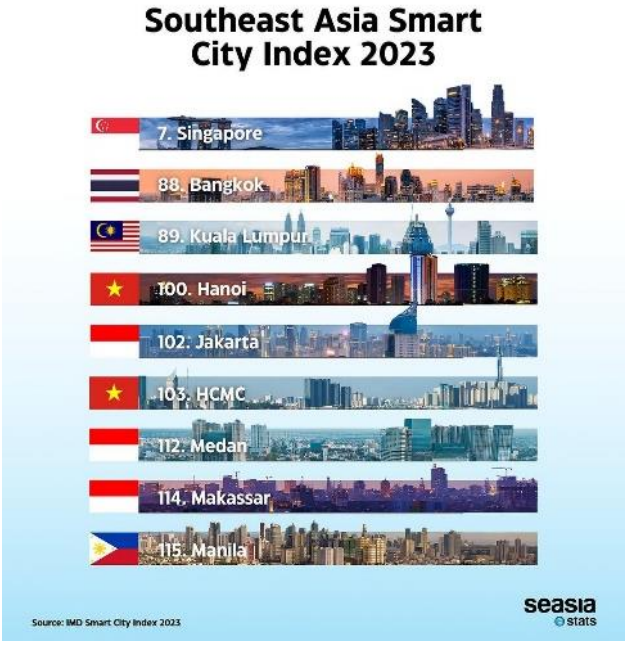

Figure 1. List of Smart City Index (SCI) 2023 Cities in ASEAN
Source : seasia stats

The official document of the Regional Medium-Term Development Plan (RPJMD) 2018–2023 programme in Karanganyar Regency highlights the local government's dedication to addressing the challenges posed by globalisation and digitization. The utilisation of big data is crucial for integrated decision-making in response to the demands posed by technological advancements and global concerns. Furthermore, local governments demonstrate a strong dedication to optimising the provision of public services and properly managing available resources through the implementation of the smart city idea (RPJMD Karanganyar, 2019).

Although the 2018–2023 RPJMD of the Regional Government of Karanganyar Regency has encouraged the implementation of smart cities, for 5 years it has not reflected the implementation of the smart city concept as expected. There are several factors that become obstacles to the implementation of smart

cities in various cities and regions in Indonesia, including the problem of low technical human resource capacity, uneven digital technology infrastructure, and the minimal commitment of regional leaders (Wahyudi et al., 2022). In addition, the problem of population readiness and the condition of existing urban infrastructure facilities (Fefta et al., 2023).

This study aims to find out the smart city road map in Karanganyar Regency by analyzing smart city theories and their applications, which are adapted and improvised according to the needs and capabilities of local governments. The novelty of this study is to explain the strategies and obstacles to implementing smart cities, which have not been found in previous research journal references.

RESEARCH METHODS

The research utilised a descriptive qualitative methodology that was consistent with empirical observations and the prevailing theoretical framework. The dataset included in this study consisted of both primary and secondary data sources. The primary data were obtained from direct observation and retrieved from original sources, while the secondary data were acquired through an extensive examination of scholarly papers, published research, legal documents, and local government laws. (Huda, Hammam, et al., 2021). From the data found, the next step is to analyze the theory and implementation of the smart city concept applied by the Regional Government of Karanganyar Regency.

RESULTS AND DISCUSSION

Smart City: Dimensions and Instruments

A smart city is defined as a sophisticated city that utilizes modern technology to connect people, information, and elements of the city, creating sustainable, environmentally friendly, competitive, and creative trade. Smart cities focus on three main areas: the use of technology, services everywhere, and various urban functions. The concept of a smart city is closely related to the impact of information and communication technology on our lives in the 21st century, with the ultimate goal being sustainability (Afriani et al., 2022).

Based on the definition above, the essence of the smart city concept is that the city and all its elements are able to manage available resources effectively and efficiently to support and maintain ecosystem sustainability (Mahesa et al., 2019). In Indonesia, not all local governments are ready to adopt the smart city concept, and before starting a smart city project, the government needs to assess the readiness of each city or region (Indrawati et al., 2019).

There are three important key elements that support smart city readiness. *First,* the use of information and communication technology (ICT) as part of smart city supporting infrastructure. *Second,* the application of structural aspects (human resources and budgeting). *Third,* the superstructure (institutions and policies) that support smart city policies (Rachmawati, 2019).

According to research by Mahesa et al., (2019) readiness assessment is based on three main factors. *First,* structural aspects include human resources, financial resources, and governance. *Second,* the infrastructure aspect consists of physical, digital, and social components. *Third,* the superstructure aspect involves regional regulations (statutes), institutions, and implementation development oriented to the smart city concept.

Furthermore, there are six main dimensions to smart city development (Offenhuber, 2019; Rachmawati, 2019; Rachmawati et al., 2021) :

a. Smart governance includes public services, bureaucracy, and public policy.
b. Smart branding includes tourism brands, business brands, and city facial appearance brands.
c. Smart economy, encompassing competitive industries, welfare, and transactions.
d. Smart living includes harmonization of spatial planning, health facilities, and mobility access.
e. Smart society, including community interaction, learning ecosystems, and safety and security.
f. Smart environment, including environmental protection, waste management, and energy responsibility.

KYBERNOLOGY : Journal of Government Studies
Vol.3 No.2 2023
Available Online at https://journal.unismuh.ac.id/index.php/kybernology
ISSN (Online) : 2807-758X

Smart City Concept of the Local Government of Karanganyar Regency

The concept of a smart city in practice can vary in each district or city area, this is inseparable because of the infrastructure gap and uneven access between the city center and remote areas. Therefore, the implementation of smart cities requires improvisation and adaptation according to the needs and capabilities of each district or city government (Offenhuber, 2019; Mora et al., 2023).

In its implementation, the Karanganyar Regency Government compiled the smart city concept in a smart city masterplan book of four series. In the book, improvise and adapt the concept of a smart city according to local uniqueness and the conditions of the problems faced, including the limited resources owned.

No	Title	Year	Source
1	Book I: Strategic Analysis of Regional Smart City Karanganyar Regency 2022-2031	2021	(Masterplan Smart City Karanganyar, 2021)
2	Book II: Regional Smart City Masterplan of Karanganyar Regency 2022-2031	2021	(Masterplan Smart City Karanganyar, 2021)
3	Book III: Executive Summary of Karanganyar Regency Smart City Masterplan 2022-2031	2021	(Masterplan Smart City Karanganyar, 2021)
4	Book IV: Karanganyar Regency Smart City Quickwins 2022	2021	(Masterplan Smart City Karanganyar, 2021)

Table 1. Smart City Masterplan Table of Karanganyar Regency

a. Smart Governance

The smart governance dimension refers to smart governance in a city, which mainly focuses on the management of local government as an entity that controls various aspects of life in the city. In the context of the Smart City dimension, Smart Governance describes the principles of smart governance, where the government is able to change the traditional paradigm in public

administration so that it can produce business processes that are faster, effective, efficient, communicative, and always oriented to improvement.

The main goal of smart governance is to achieve effectiveness, efficiency, good communication, and improved bureaucratic performance in regional government management by utilizing innovation and technological integration. In the context of smart governance in Karanganyar Regency, several key targets to be achieved include increasing the capacity and quality of government at the village level, increasing regional connectivity and accessibility, improving the quality of infrastructure in rural areas, improving good governance, and improving the quality of development that takes into account aspects of gender and child protection.

b. Smart Branding

The second dimension in the Smart City concept is smart branding, which includes smart branding efforts for specific regions. Smart branding refers to the ability of a region to market itself in an innovative way to increase its competitiveness. It involves three main elements, namely tourism, business, and the image of the city.

The concept of smart branding becomes relevant in the context of smart cities because, in an information age like now, a city not only needs to rely on its local potential to meet its needs but also needs to attract the participation of the community, business people, and investors from inside and outside the region to contribute to the acceleration of regional development. The goal of smart branding is to increase regional competitiveness by improving the physical appearance of the city as well as packaging the potential of the region well at various levels, including local, national, and international.

The goal of smart branding in Karanganyar Regency is to create a smart tourism brand that can improve the quality of human resources and competitiveness, increase productivity in the agricultural and tourism sectors, develop the economy in rural areas, improve social and cultural infrastructure that reflects local identity, and increase appreciation for local culture in various

aspects such as social behavior, work culture, the development of art, and the management of cultural heritage in Karanganyar Regency.

The tourism sector in Karanganyar Regency has great potential to be developed. Although tourism in Karanganyar Regency has been around for a long time, it has not been fully optimized by all stakeholders. The Karanganyar Regency Government is slowly starting to focus on managing existing tourism. The development of tourism activities is carried out in an integrated manner so that tourists can more easily find out the right time to visit Karanganyar Regency. The smart promotion approach by utilizing information technology is considered one way to promote tourism potential in Karanganyar Regency, which is manifested in the concept of smart tourism branding.

c. Smart Economy

The third dimension in the Smart City concept is the Smart Economy, which refers to efforts to manage the economy in a smart way. Smart Economy in Smart City aims to create an economic ecosystem that is able to face the challenges of the fast-paced and disruptive information age like today. The goal of the Smart Economy dimension in Smart City is to create an ecosystem that supports community economic activities in accordance with the leading economic sectors of the region, which are able to adapt to changes that occur in the current information age. In addition, this dimension also aims to improve people's financial literacy through various programs, including the creation of a less-cash society.

The targets of Smart Economy Karanganyar Regency include a number of important aspects of efforts to advance the regional economy. These include efforts to increase industrial competitiveness through increasing productivity in the agricultural and tourism sectors, increasing the number of small and medium enterprises (SMEs), and achieving food self-sufficiency in order to achieve better food security. Apart from that, this program also aims to increase economic capacity in rural areas, create more jobs, and improve the quality of development by paying attention to gender aspects and child protection, which is measured through women's economic participation. Efforts to increase

village economic capacity are also a priority by expanding the number of village-owned enterprises (BUMDes). Apart from that, this program also focuses on reducing the unemployment rate in the village and, ultimately, improving social welfare in Karanganyar Regency.

The small and medium enterprises (SMEs) sector is expected to be a driver of the community's economy if developed together with the large trade sector, which has long been a leading sector in Karanganyar Regency. The Karanganyar Regency Government also pays special attention to providing and managing platforms to support SMEs. Going forward, small and medium enterprises (SMEs) are expected to provide strong economic and financial support for this region.

d. Smart Living

The smart living dimension is one of the important aspects of the smart city concept, which aims to ensure a decent quality of life for the people in it. This quality of life can be assessed based on three main elements: a good lifestyle, a high quality of health, and a transportation system that supports the mobility of people and goods within the Smart City environment. The goal of the smart living dimension in Smart City is to create a comfortable, feasible, and efficient living environment.

The targets of the Karanganyar Regency Smart Living program include three main aspects aimed at creating a smart and sustainable quality of life. First, this program seeks to improve the quality of settlements and public facilities by focusing on human values, justice, and maintaining the sustainability of a healthy environment while improving the quality of human resources and community competitiveness.

Second, this program aims to increase the accessibility and quality of health services while encouraging healthy living behavior among the community and improving village conditions by increasing the number of villages that meet the criteria for healthy villages. Apart from that, this program also seeks to improve regional connectivity and accessibility.

Third, this program focuses its attention on improving the quality of rural infrastructure, focusing on the percentage of village infrastructure that is in good condition, including roads, bridges, irrigation, and information technology networks. By focusing on these three main aspects, Smart Living Karanganyar Regency aims to achieve a better and more sustainable quality of life for the residents of Karanganyar Regency.

e. Smart Society

The Smart Society dimension, as an integral part of the Smart City concept, discusses the role of humans as a key element in the development of the city. In smart cities, interactions between individuals are increasingly intensively integrated, both in physical and virtual contexts, where technology plays an important role in facilitating such interactions.

Within the Smart Society framework, there are three main aspects that are the focus, namely increasing the efficiency of community interaction, improving aspects of community security (security), and building an efficient learning ecosystem (learning). The targets of this program include several objectives, including increasing achievement in the fields of youth and sports, increasing access and quality of inclusive and sustainable education, improving the quality of human resources and competitiveness, increasing regional preparedness for disaster risks, improving religious quality by paying attention to diversity, increasing connectivity and interaction at the village level, and improving the quality of development by paying attention to gender aspects and child protection. The Smart Society program aims to achieve holistic development in various aspects of community life so that society can grow and develop sustainably.

f. Smart Environment

The Smart Environment dimension refers to smart environmental management, with emphasis on the need to pay attention to the environment parallel to physical development and facilities for city residents. The main goal of the smart environment is to create sustainable development, which should

not be ignored even in the smart city concept, which is very technology-focused.

The goal of smart environments is to achieve good, responsible, and sustainable environmental governance. To achieve this, three main indicators are used: environmental protection (protection), waste and waste management (waste), and sustainable energy management (energy).

Within the Karanganyar Regency Smart Environment framework, a number of important targets have been set to achieve improvements in the environmental quality and sustainability of the region. First, this program aims to improve the quality of human resources and competitiveness by focusing on increasing the percentage of irrigation networks that are in good condition. Second, this program seeks to equalize the quality of infrastructure in rural areas by focusing on increasing the percentage of village infrastructure that is in good condition, including roads, bridges, irrigation, and information technology networks. Third, this program also targets improving wastewater management, solid waste handling, environmental issues, and climate change mitigation efforts. Fourth, the Karanganyar Regency Smart Environment program aims to increase efficiency in managing energy resources as a sustainable effort to maintain and protect the surrounding natural environment.

Obstacles and Smart City Strategies of the Local Government of Karanganyar Regency

The implementation of smart cities in various cities and regencies in Indonesia faces several obstacles, including low technical human resource capacity, uneven digital technology infrastructure, and a lack of commitment from regional leaders. In addition, community readiness and basic conditions of internet access are also problems (Fefta et al., 2023; Wahyudi et al., 2022).

The city government is not enough just to create information technology *blueprints* and conduct socialization but also to optimize the provision of technological capabilities that include human resources, organizational and

management capabilities, facilities, processes, and products produced (Istambul &; Abinowi, 2019).

The Karanganyar Regency Government conducts an analysis of obstacles and smart city strategies as follows:

Dimension	**Obstacles**	**Strategy**
Smart Governance	Low human resources who master the ICT field	Adding HR that dominates TIK and does construction
	Does not have a *government data* backup application system	Create a government data *backup* application system to prevent data loss
	Not integrated Regional Development Information System (SIPD)	Integrate SIPD with budgeting and financial administration
	Does not have smart city SOPs	Develop smart city SOPs accompanied by experts
Smart Branding	The level of tourist visits to Karanganyar Regency is still relatively low when compared to the national tourism strategic area (KSPN) in Borobudur.	Efforts to remain competitive with other tourism regions can involve improving transportation and accommodation facilities and infrastructure, as well as improving the quality of tourist destinations.
Smart Economy	Karanganyar residents have a low level of education; more than 50% are only junior high school graduates, making it difficult to be competitive.	The government encourages the success of compulsory 12-year education and facilitates access to education for all levels of society.

	Budget resources for smart city development funding only come from the Regional Revenue and Expenditure Budget (APBD).	The government prepares several funding alternatives outside the APBD.
Smart Living	Road infrastructure and street lighting are not all in good condition; the percentage is only around 70–80%.	Periodic repairs and maintenance are carried out for the ease and comfort of residents' mobility as well as the safety of the community.
Smart Society	Only have one digital startup.	Collaborating with the public and private sectors encourages the growth of digital startups.
	The crime rate and violations of order are relatively high, averaging more than 150 cases in one year.	Together with community leaders to reduce crime rates and provide firm action for criminals.
	It has only one public library run by the local government.	Libraries are important as educational and learning spaces, so the entire community should ideally be able to easily access them. Therefore, the government can add regional libraries.
	Only six public spaces are available with WiFi.	Internet access is the basic thing of smart city development, so it needs

		massive addition.
Smart Environment	The condition of public open space (RTP) is poorly maintained; a percentage of 20% is not maintained.	Improving public open space as a serana and public socializing infrastructure
	Waste at Sukosari landfill has exceeded capacity.	Waste production is increasing every year; it is necessary to carry out waste management at the village and sub-district levels, and a circular samah system is carried out.
	The use of developed land has reached 70% of the total area.	Land control is carried out so that the land is built not beyond its carrying capacity.

Table 2. Table of Barriers and Smart City Strategies of Karanganyar Regency

CONCLUSION

A smart city is a state-of-the-art city that uses modern technology to connect people, information, and elements of the city, creating a sustainable, environmentally friendly, competitive, and creative trade. Smart cities focus on the use of technology, accessible services, and urban management functions. In Indonesia, not all local governments are ready to adopt the smart city concept. To ensure readiness, three main elements are needed: the use of ICT infrastructure, structural aspects (human resources and budgeting), and the superstructure (institutions and policies).

The implementation of smart cities in Karanganyar is still hampered by human resource problems, both workers who master digital technology in local governments and the readiness of the community to switch from conventional

methods to all-digital, considering that more than 50% of the population graduates below junior high school degrees. In addition, the infrastructure that supports the implementation of smart cities is not evenly distributed. For example, if the technological infrastructure and digital systems of local governments are not fully ready, then the basic infrastructure in the form of internet services is not evenly distributed throughout villages, and a small number still have blank internet spot areas. The above problems are in line with the results of previous studies (Fefta et al., 2023; Wahyudi et al., 2022; Istambul & Abinowi, 2019).

Despite many obstacles, the positive side can be seen from its strategic policy in the official document of the Regional Medium-Term Development Plan (RPJMD) of Karanganyar Regency for 2018–2023, which has encouraged the implementation of smart cities to answer the challenges of technological progress and the need for fast and responsive public services. The policy was followed up by the preparation of a smart city master plan book for the Karanganyar Regency area.

REFERENSI

Afriani, L., Wahyuddin, Y., & Perdana, R. (2022). The Development of Smart Cities and Environment-Related Domain: A Case Study In Indonesia And France. *PLANNING MALAYSIA: Journal of the Malaysian Institute of Planners*, *20*(1), 125–142.

Cahyono, A. S., Zauhar, S., & Domai, T. (2022). Inovasi Pelayanan Publik Berbasis E-Government Pada Pengadilan Agama Kelas I A Tulungagung E-Government-Based Public Service Innovation in Class I A Tulungagung Religious Court. *PUBLICIANA*, *15*(02), 82–97.

Congge, U., Guillamón, M. D., Nurmandi, A., Salahudin, & Sihidi, I. T. (2023). Digital democracy: A systematic literature review. *Frontiers in Political Science*, *5*. https://doi.org/10.3389/fpos.2023.972802

Fefta, A., Usman, F., Wicaksono, A. D., Utomo, D. M., & Murakami, K. (2023). *International Journal of Sustainable Development and Planning Public Policy Management in Determining the Feasibility of the Smart City Project in*. *18*(3), 677–682.

Hayat. (2020). Paradigm to Shared Governance Good Governance Through Political System Indonesia. *Jurnal Aristo (Social, Politic, Humaniora)*, *08*(1), 1–23. https://journal.umpo.ac.id/index.php/aristo/article/view/HH/1190

Huda, M. N. (2020). Inovasi Manajemen Pelayanan Publik Melalui Government Resources Management System (GRMS) di Provinsi Jawa Tengah. *JPW (Jurnal Politik Walisongo)*, *2*(2), 67–82.

https://doi.org/10.21580/jpw.v2i2.6658

Huda, M. N., Hammam, H., Suranto, S., & Saputra, H. A. (2021). Muhammadiyah constitution jihad movement: a case study of the Omnibus Law on job creation. *Ijtihad : Jurnal Wacana Hukum Islam Dan Kemanusiaan*, *21*(2), 177–196. https://doi.org/10.18326/ijtihad.v21i2.177-196

Huda, M. N., Purwaningsih, T., & Hammam. (2021). Nonalam Disaster Management Policy for The Spread of Covid-19 in The Framework of Regional Autonomy (Central Java Provincial Government Case Study). *JKMP (Jurnal Kebijakan Dan Manajemen Publik)*, *9*(2), 71–82. https://doi.org/10.21070/jkmp.v9i2.1578

IMD World Competitiveness Center. (2023). *IMD Smart City Index Report 2023*.

Indrawati, Dayarani, T., & Amani, H. (2019). SMART SECURITY AND SAFETY INDEX MEASUREMENT : A CASE STUDY. *Humanities & Social Sciences Reviews*, *7*(5), 141–149.

Istambul, M. R., & Abinowi, E. (2019). *Evaluation of Information Technology Governance in the Application of Smart City in Bandung City*. *7*, 14–18. https://doi.org/10.13189/cea.2019.071303

Karanganyar, P. K. (2019). *Peraturan Daerah Kabupaten Karanganyar Nomor 10 Tahun 2019 Tentang Rencana Pembangunan Jangka Menengah Daerah Tahun 2018-2023*.

Karanganyar, P. K. (2021a). *Buku I: Analisis Strategis Smart City Daerah Kabupaten Karanganyar 2022-2031*.

Karanganyar, P. K. (2021b). *Buku II: Masterplan Smart City Daerah Kabupaten Karanganyar 2022-2031*.

Karanganyar, P. K. (2021c). *Buku III: Executive Summary Masterplan Smart City Daerah Kabupaten Karanganyar 2022-2031*.

Karanganyar, P. K. (2021d). *Buku IV: Quickwins Smart City Daerah Kabupaten Karanganyar 2022*.

Lestari, R. P., Mutiarin, D., & Nurmandi, A. (2020). Inovasi Mall Pelayanan Publik untuk Peningkatan Kualitas Pelayanan Publik di Kabupaten Kulon Progo. *Jurnal Ilmiah Tata Sejuta STIA Mataram*, *6*(2), 506–529. https://doi.org/10.32666/tatasejuta.v6i2.138

Mahesa, R., Yudoko, G., & Anggoro, Y. (2019). Data in brief Dataset on the sustainable smart city development in Indonesia. *Data in Brief*, *25*, 104098. https://doi.org/10.1016/j.dib.2019.104098

Martinez, R., & Masron, I. N. (2020). Jakarta: A city of cities. *Cities*, *106*(May). https://doi.org/10.1016/j.cities.2020.102868

Mora, L., Gerli, P., Ardito, L., & Messeni Petruzzelli, A. (2023). Smart city governance from an innovation management perspective: Theoretical framing, review of current practices, and future research agenda. *Technovation*, *123*(January), 102717. https://doi.org/10.1016/j.technovation.2023.102717

Offenhuber, D. (2019). The platform and the bricoleur — Improvisation and smart city initiatives in Indonesia. *EPB: Urban Analytics and City Science*, *46*(8), 1565–1580. https://doi.org/10.1177/2399808319865749

Rachmawati, R. (2019). Toward better city management through smart city implementation. *Human Geographies*, *13*(2), 209–218. https://doi.org/10.5719/hgeo.2019.132.6

Rachmawati, R., Mei, E. T. W., Nurani, I. W., Ghiffari, R. A., Rohmah, A. A., & Sejati, M. A. (2021). Innovation in coping with the covid-19 pandemic: The best practices from five smart cities in Indonesia. *Sustainability (Switzerland)*, *13*(21). https://doi.org/10.3390/su132112072

Ristiani, I. Y. (2020). Manajemen Pelayanan Publik Pada Mall Pelayanan Publik di Kabupaten Sumedang Provinsi Jawa Barat. *Coopetition: Jurnal Ilmiah Manajemn*, *11*(2), 165–178.

Wahyudi, A. A., Widowati, Y. R., & Nugroho, A. A. (2022). Strategi Implementasi Smart City Kota Bandung. *Jurnal Good Governance*. https://doi.org/10.32834/gg.v18i1.460

Wibawa, I. G. A., & Antarini, L. (2020). Sistem Digital Tata Kelola Pemerintahan Daerah (Digital Local Government) I Gede Agus Wibawa dan Lilik Antarini. *Public Inspiration: Jurnal Administrasi Publik*, *5*(1), 57–71. https://ejournal.warmadewa.ac.id/index.php/public-inspiration

Yanuartanti, S., Saleh, C., & Amin, F. (2019). Evaluasi Penyelenggaraan Mall Pelayanan Publik Kabupaten Bojonegoro dalam rangka menuju Pelayanan Publik Prima. *Jurnal Administrasi Publik (JAP)*, *5*(6), 420–426.