

Smart Governance: The First Experience of the Two Metropolitan Cities in Indonesia

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Abstract

Smart governance is one of the main dimensions of a smart city. Its implementation is realized in a variety of ways. This study continues to develop the concept and practice of smart governance based on the characteristics of the city. In Indonesia, Bandung and Makassar cities have prominent experiences compared to other cities. The experiences of the cities were studied using the classical qualitative methods for theory and empirical orientation. The statement is based on field data obtained through interviewing informants, expert discussions, direct observation, and review of relevant documents as well as articles. Data were analyzed in accordance with the study's focus theme. This study finds the main aspects of smart governance. They are policy arrangements, bureaucratic management, and public service. All the aspects are associated with the use of information and communication technology. Smart governance refers to enhancing the technological and human resources that drive cities.

Keywords: smart governance, metropolitan city

Research Background

In Indonesia, smart governance is one of the dimensions of smart city program formulated by the central government and implemented by local governments. The program is called "Moving Towards 100 Smart Cities." It was launched in 2017 and is still running up to 2023. Regarding the program design, it is similar to the national movement in India, which also declared 100 smart cities earlier on. India's smart city plans are, perhaps, unprecedented in scale and ambition worldwide (Bunnell 2015). Datta (2015) noted "100 smart cities, 100 utopias in India." In the case of Indonesia, it is worthwhile to take note of their argument. Indonesia's national movement towards 100 smart cities is between an ambition and a utopia. To understand it, a particular study is accomplished on the cities that claim smart governance in the smart city context. This study is essential because research related to smart cities improves and

develops modern urban management (Carvalho 2015; Glasmeier and Christopherson 2015). Practitioners and academics are required to know how smart governance is understood and implemented in cities.

Smart governance is a concern in this study because it is a key aspect (Bolívar and Meijer 2016; Scholl and AlAwadhi 2016), a key issue (Viale Pereira et al. 2017), and the core of smart city initiation (Chourabi et al. 2012). Smart governance can be positioned as a determinant factor in the smart city. Smart governance is, among others, participation in decision-making and public service (Giffinger et al. 2007; Kar et al. 2017). Camero and Alba (2019) emphasized further that smart governance is concerned with using information technology to improve public services (e-government) and to support decision-making. Nevertheless, smart governance is understood in many ways, both in practice and in concept. According to Meijer (2016), "there is no one-size-fits-all approach to smart city governance." The experience of smart governance in several Indonesian cities can, therefore, provide suitable arrangements for their urban environment. The analysis uses a local perspective. The best practice is a lesson for other cities. It can be a lesson learned for cities in Indonesia and cities in developing countries alike Indonesia.

This study specifically analyzes the smart governance experiences of two municipalities in Indonesia, namely Bandung City and Makassar City. Both are the 25 cities designated in the first phase of the Movement Towards 100 Smart Cities in 2017. The experiences of the two cities associated with the national movement towards smart cities are studied to answer two research questions. The first question is how smart governance is addressed in smart city practices in Indonesia. The national design and its implementation in the local governments of the cities of Bandung and Makassar were analyzed to find answers to the first question. This question means understanding smart governance based on an Indonesian perspective. The second question is how the two municipalities embed and work smart governance in structure as well as process towards a smart city. This question emphasizes the ways or approaches of smart governance based on the local perspective in Indonesia. Both questions are answered in an integrated manner as an interrelated part of this study.

Research Methodology

Selecting Research Object

This study was conducted in Bandung and Makassar City in 2021. The cities were selected as research locations based on certain considerations related to Indonesia's smart city national movement. A special emphasis is placed that there are four reasons for choosing the research object, namely (1) the two cities participated in the first stage of smart city national movement in 2017; (2) their improvement and performance index in smart city context were appreciated positively by the central government; (3) their geographical location is different, Bandung City in western Indonesia and Makassar City in eastern Indonesia; and (4) both cities have their own characteristics in smart governance before and after the national movement of smart city. Further description of the two cities can be seen in Table 1.

Table 1. Descriptions of Bandung City and Makassar City

Elements	Bandung City	Makassar City
Location	Java Island	Sulawesi Island
Total Population	2.461.000 people (2022)	1.427.000 people (2022)
Total Area	167,31 km ²	175,77 km ²
City Status	Capital city of West Java Province	Capital city of South Sulawesi Province
Municipality Status	Main city of a metropolitan area	Main city of a metropolitan area
Administrative Division	30 districts	15 districts
Smart City National Movement	Participated in 2017	Participated in 2017
Local Smart City Initiative	Started from 2013	Started from 2014
Smart Governance Principle	Based on local community and innovation	Based on local wisdom and useful technology

Source: Tabulated by authors from various sources as described in the text.

Apart from formal considerations through the documents of the smart city national movement and the documents of the two local governments, selection of the cities was also strengthened by tracing their achievements of smart city governance in local, national, and international news. We conducted a search on Google using English and Indonesian languages with the keywords "smart city," "smart governance," "Indonesia," "Bandung," "Makassar," "achievement," and "excellence." Researchers conclude that Bandung City and Makassar City are imperative and strategic cities in Indonesia with various achievements in smart city issues. More information can be accessed at <https://www.bandung.go.id/> about Bandung City and at <https://makassarkota.go.id/> about Makassar City. Integrated study in two different case cities provides reinforcement for data and information. The two cities were the subject of more extensive research, resulting in more data and information. From these experiences, the concept and practice framework of smart governance can be designed for the cities in developing countries that want to be smart. Especially the cities categorized as big cities or metropolitan areas.

Collecting Data and Its Analysis

Researchers collected data in parallel through empirical studies, tracking-related documents, and reviewing the literature. This step is called the data triangulation process. Triangulation importantly helps to ensure the reliability of data (Ahmmed 2022) and is used for cross-checking and cross-validating information for accuracy (Thomas 2021). Through empirical studies, researchers knew the real situations and conditions implemented in the cities of Bandung and Makassar. Tracking various print and online documents related to the smart city theme to provide a review. The documents add data resulting from empirical studies. Because of various smart city concepts and practices, researchers conducted literature research as part of data collection. It supports theme selection. The literature review process encompasses much more than just reviewing current research. It was done to complement the empirical studies and document sources. This study analyzed and synthesized a variety of

literature supporting the smart governance context in Indonesia. The diverse understanding of practitioners and academics about smart governance has encouraged researchers to strengthen the triangulation method in this study. To ensure the robustness of the data triangulation process, Table 2 delineates the research data and their sources.

Table 2. Research data and sources

Data	Source
Empirical Process	In-depth interviews with employees at local government agencies and partner organizations in Bandung City and Makassar City
	Observation of service innovations developed by the Bandung City and Makassar City Governments
	Focused expert discussion on smart governance related to Bandung City and Makassar City
Documentation Materials	Materials of the smart city presented by academics and practitioners at formal meetings
	Various books and activity reports on smart cities in Bandung and Makassar City
	Various news in online and print media related to smart cities in Bandung and Makassar City
	Regulations of the central government and the local government of Bandung and Makassar associated with smart cities
Reference Materials	Scientific articles from reputable international journals on the theme of smart governance
	Scientific articles from reputable international books that are relevant to the theme of smart governance
	Research reports published by reputable international institutions

Source: Author's tabulation

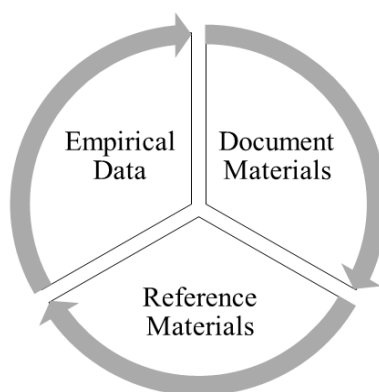
In the empirical process, there are five informants from civil servants in Bandung City and ten in Makassar City. In addition, there are two informants from the private sector in Makassar City. All the formal interviews were held in their office. More than formal meetings, informal interviews were conducted with several residents in both cities. The interviews were done in service offices, restaurants, and public transportation. The interviews were in Makassar, and next in Bandung. Likewise, with direct observation, researchers ran in Makassar City first and continued in Bandung City. Several public service points were visited directly in the two cities. Main visit was in Bandung Command Center (BCC) and Makassar City War Room (MCWR). Researchers established supplementary interviews and focused discussions with two experts in smart cities. They are from public and private universities. The experts have empirical experience in smart governance across several cities in Indonesia.

About print documents, the materials are presentation slides referring to smart city themes, program books of Movement Towards 100 Smart Cities published by the central government, and activity reports of smart cities published by the two local governments and other research institutions. Online documents sourced from the Ministry of Communication and Information official portal, various websites and official digital media belonging to the Bandung City Government, various websites and official digital media belonging to the Makassar City Government, and various online news portals. Other documents include laws, regulations,

and decisions on national development planning, spatial planning, electronic information and transactions, public information disclosure, public services, local government, regional apparatus, electronic government system, and e-government. Video recordings and posts on social media sourced from the Bandung and Makassar City Governments are an integral part of online documents.

Regarding reference materials, articles were downloaded from reputable journal databases and publishers, namely Scopus, Springer, Wiley Online Library, and Taylor & Francis. All articles themed on general smart cities and smart governance were traced serially or step by step. The keywords are smart city governance and smart governance. These articles were read directly by scanning and skimming procedures. Articles cited have similar keywords for smart city and smart governance practices in Indonesia, both in the form of literature reviews and field studies. Themes in the articles were related to the results of field research and documents. However, determining the themes as a research finding does not start or end with the literature review. Themes were identified through a round process that rotates, such as a wheel. The researchers called it a circular approach. The authors use the final theme as the findings after there is an appropriate synthesis between empirical results, relevant documents, and selected references. It has been necessary to conduct research and analysis in a circular manner to ensure that the data are accurate and reliable. The circular approach analysis is intended to solve empirical gap issues and the abstract concept of smart governance. Figure 1 below provides a concise description of the analysis process, as informed by the data delineated in Table 2.

Figure 1. Circular approach data analysis



Source: Authors' conceptualization

Smart Governance in Literature Review

In searching references, many experts often interchangeably use the terms smart governance and smart city governance. Occasionally, those words are used in conjunction with smart urban governance. Literature review and empirical analysis conducted by Bolívar and Meijer (2016), the term used is smart governance. In another literature review, Meijer and Bolívar (2016) use the term smart urban governance. Smart urban governance is used by Jiang (2021) in various writings about smart cities. A systematic literature review conducted by Ruhlandt

(2018) uses the term smart city governance. Other articles use smart city governance, for example, Hammad and Ludlow (2016) and Nesti (2020). The term smart governance is the most popular one based on the searches carried out, among others (Dameri and Benevolo 2016, Scholl and AlAwadhi 2016, Ranchod 2020). Various articles in the book chapter edited by Lopes (2020) and Estevez et al. (2022) use smart governance terms. One of the sources of writing about the smart governance concept and practice comes from Giffinger et al. (2007) who studied cities in Europe.

All articles that use the terms smart governance, smart city governance, and smart urban governance are included in this study. This research uses references that support smart governance cases in Makassar and Bandung City. References emphasize the aspects of governance in smart cities. Governance focuses on the interactions between various stakeholders in the smart city. Governance is not only the government but more than government organization. This study uses the term smart governance because the national program of smart cities in Indonesia uses smart governance as one of the dimensions. Dameri and Benevolo (2016) explain that smart city governance should be driven by both institutional and noninstitutional actors. Smart city governance is the same term for governing a smart city or governance of smart cities (Meijer and Bolívar 2016). According to Meijer and Bolívar (2016), smart city governance is a new form of human collaboration using ICTs to obtain better outcomes and more open governance processes. Castelnovo et al. (2016) said smart city governance is all smart city processes, from deciding to services. Smart city governance focuses on policymaking (Ehwi et al. 2022). Some authors indicate that smart city governance is about decision-making (Meijer et al. 2016). Smart city governance can also be understood as a governance model for smart cities (Meijer et al. 2016).

There are many articles that also provide specific limitations on the word smart governance. Smart governance refers to a style of the governing process (Dameri and Benevolo 2016). Conforming to Nesti (2020), smart governance entails adopting a new approach based on experimentation, collaboration with all local stakeholders, and reorganizing existing government structures. Smart governance aims to improve urban management through enhanced data-informed decision-making and civic actors' commensurate inclusion and participation (Ranchod 2020). Smart governance comprises aspects of political participation and services for citizens as well as the functioning of the administration (Muñoz et al. 2022). Smart governance is understood to include more than administrative efficacy and instrumental benefits derived from technology (Giuliodori et al. 2022). Smart governance is one of the smart city dimensions addressed by the initiatives from the research literature and EUROCITIES Network (Cortés-Cediel et al. 2021). Smart governance includes a three-step process: diagnosing the situation, developing a strategic plan, and acting (Jiang et al. 2020). Smart governance entails a closer, more efficient, and effective way for citizens to relate to government, for government to engage citizens and for how cities are governed (Ho 2017).

To define the concept of smart governance, this study provides a certain understanding as an insight base associated with various perceptions of smart governance and other related terms. The first is that smart governance is a public affairs process and structure involving the government and non-governmental organizations, including the community. The structure can be formal or non-formal form. It is formed by government or non-government organizations where the policy is implemented. The process starts from decision-making to performance

appraisal. The process includes feedback from performance appraisal to decision-making. Second, smart governance emphasizes innovation in public services effectively and efficiently. Innovation consists of the use of information systems and communication technology. Innovation also covers all solutive actions run by stakeholders to solve problems. The most important thing, smart governance depends on the intervention in society (Giuliodori et al. 2022), management of city infrastructures and human resources (Castelnovo et al. 2016).

Due to the necessity of analysing the themes of smart governance in practice, two literature reviews shown Table 3 are used to develop insight. The following article is considered to represent the pillars, components, dimensions, and other terms written by various authors regarding smart governance aspects.

Table 3. Relevant aspects of smart governance

Aspect	Sub-aspect	Author
Strategy for Implementing	- Ideas (integrated vision) - Action (legislation, policy, organizational transformation)	Bolívar and Meijer (2016)
Arrangement	- Connected organizational process (collaboration and participation, internal coordination, decision-making, e-administration) - Use of technology Innovation capacity	
Outcomes	- First outcomes - Second outcomes - Third outcomes	
Components	- Stakeholders - Structure and organization - Processes - Roles and responsibilities - Technology and data - Legislation and policies - Exchange arrangements	Ruhlandt (2018)
Contextual factor	- Degree of autonomy - Local conditions	
Measurements	- Aggregate-based measures - Component-based measures	
Outcomes	- Substantive outputs - Procedural changes	

Source: Authors' tabulation

Table 3 indicates that smart governance focuses on government processes and outcomes regularly. It includes policy actions, organizational processes, structural arrangements, and technologies. These issues are always relevant in formulating, evaluating, and implementing public policy. Moreover, these aspects and sub-aspects on the table are fundamentally related to public services. It is all related to the functions and affairs of local government. Therefore, smart governance is a general government process involving non-governmental organizations and individuals. This study considers smart governance within the smart city program. Smart governance within smart cities is easier to understand. It is at least related to the institutions involved in the smart city program and to the various innovations implemented

as a result. Aside from the context of the smart city program, the smart governance term is not included in this study. The scope of this limitation distinguishes government activities in general and specific programs of smart cities. Aspects and sub-aspects in Table 3 allow the author to differentiate between smart governance studies and non-smart governance studies.

Smart Governance in Indonesian Case

Overview of National Paradigm

The Movement Towards 100 Smart Cities program was initiated and controlled by the Ministry of Communication and Informatics. In its development, several relevant ministries fully support it, namely the Ministry of Home Affairs, Ministry of Public Works and Housing, Ministry of State Apparatus Utilization and Bureaucratic Reform, Ministry of National Development Planning, Ministry of Finance, Coordinating Ministry for Economic Affairs and Executive Office of the President. A total of 100 cities in city and regency governments have been involved in three stages. There were 25 cities in 2017, 50 in 2018, and 25 in 2019. In the following year, until 2023, the Ministry of Communication and Informatics and related parties conducted regular monitoring and evaluation in these 100 cities while continuing the initiation of cooperation with other cities. Currently, smart city has become an admirable national program. In the 2020–2024 National Medium-Term Development Plan, the smart city program is one of the strategic agendas for urban development. Its target, the city towards smart, increases every year.

Since the beginning of the national movement, all local governments have followed the national smart city guidelines developed for 100 smart cities, especially the 100 cities already part of the program. The 100 city and regency governments have signed a Memorandum of Understanding (MoU) with the central government for program implementation during the years 2017, 2018, and 2019. MoU is an action symbol and participative commitment. The central government and local governments have established and developed the six dimensions of smart cities as a national movement in various cities in Indonesia. Smart governance is addressed at the top of the list of the six dimensions developed. In practice, it acts as an engine to drive the entire dimensions. Implementing smart city dimensions is based on a national guidebook for smart city master plans. The guidebook was printed by the Ministry of Communication and Informatics. The dimensions and their sub-dimensions mentioned in the book are mentioned in Table 4.

Table 4. Smart city dimensions in Indonesia

Smart Governance	Smart Branding	Smart Economy	Smart Living	Smart Society	Smart Environment
▪ Public Policy ▪ Bureaucracy ▪ Public Service	▪ Tourism ▪ Business ▪ Appearance	▪ Industry ▪ Welfare ▪ Transaction	▪ Harmony ▪ Health ▪ Mobility	▪ Community ▪ Learning ▪ Security	▪ Protection ▪ Waste ▪ Energy

Source: Ministry of Communication and Informatics (2017).

There are six dimensions of a smart city as well as its subdimensions, which are developed by the central government as guidelines for local governments to follow. Among these dimensions, there are three subdimensions under each of them. Public policy, bureaucracy, and public service are all components of the smart governance sub-dimension. As stated in the 2017 Smart City National Guidebook, provided by the Citiasia Center for Smart Nation (CCSN), the concept of public policy leads to impact, leadership, and initiative. Bureaucracy is about fairness, accountability, and transparency. Furthermore, public service incorporates aspects of subdimensionality, administration, service, and goods. In practice, these three subdimensions are oriented towards the use of technology and information systems such as websites or apps. In the same way, things are the same for the subdimensions of any of the other dimensions, and all of these are directed towards the use of technology as well as the use of information systems as well. Generally, the smart city movement in Indonesia has been designed with a variety of concepts that have then been combined with information and communication technologies (ICTs).

Annually, the central government and local governments provide performance index and improvement index to measure achievement. The performance index describes the level of smart city development of each city. This index calculates the average baseline value, output, outcome, and impact. The improvement index describes the level of improvement that occurs after participating in the program. This index calculates the difference in values between the average output, outcome, and impact on the baseline. Each item in the baseline, output, outcome, and impact indicators is given a point to provide a mapping of performance achievements. The results of measuring the performance and improvement index are the basis for seeing progress towards smart cities. According to the characteristics and needs of each city, one or more of these dimensions may be given priority. As an example, there are some cities whose performance index in smart economy is high, but whose performance index in smart branding is low. For smart governance, optimal performance and continuous improvement are mandatory. Smart governance means smart in public policy, bureaucracy, and public service.

Nevertheless, the performance index and improvement index are only determined in the context of innovation in each dimension of the smart city. Judging smart governance and other dimensions (smart branding, economy, living, society, and environment) focuses on its innovation processes, specifically the use of technology and information systems. The innovation created is called quick wins. The quick wins intend an easy and quick initiative that starts a big program. It is a simple way and solution. At least, the information system as quick wins can be accessed directly through a web browser and or can be downloaded and installed on smartphones. It leads to the strengthening of government affairs and public services. Associated with determining the score of the index, most government practitioners in Indonesia understand smart governance as a technology and information system development in bureaucratic management and public services. Nonetheless, a few interpret smart governance as a formal policy process, including institutions, budgeting, and its publication. These views are based on empirical studies and the annual reports of the smart city national movement in 2017, 2018, and 2019. The reports provide a detailed description of the development of various cities. Generally, the smart city indexes of a city are still limited to the results of a quick wins assessment that emphasizes information system-based innovation.

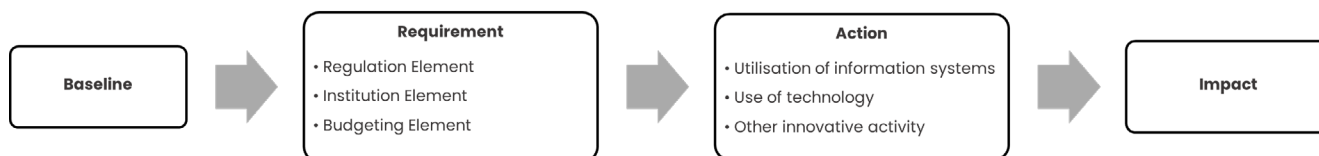
The smart city indexes, which are based solely on information system-based innovation or quick wins, indicate that smart governance in all cities in Indonesia is at the initiation stage of smart capacity. Information systems are one part of the initial process in the effort towards smart governance. Technology and information systems support various government tasks and functions. Furthermore, assessment of performance output is limited to answering the question of whether it is implemented or not. The question expresses a stage of initiation. The most important question in smart governance is whether the community participates or not. If the community participates, the next question is about the participation form. The question of participation has not been emphasized in the implementation of the "quick wins", even though smart governance substance is related to aspects of participation. Participation in the smart governance concept is part of the implementation process. Participation is an activator. Participation is an activity that drives something to happen. Participation is not the impact of a process. Other substantial aspects of smart governance have not been the main concern in determining the index score, among them leadership, impact, initiative, accountability, and transparency.

Legitimately, the smart city national guidebook and regulations explain many aspects of public policy, bureaucratic management, and public services towards smart cities. Aspects that are considered as other assessments should not be limited to the use of ICTs. The policy process focuses on efficiency, transparency, and cooperation. Bureaucratic management is about accountability and integrity. The public service includes accessibility and easiness. Furthermore, there are other things that have not been maximized in the planning and implementation of the assessment. The number of keywords explained in the aspect of smart governance makes it unclear between smart governance and other smarts in the smart city program. To reduce overlap in implementation, the central government encourages local governments to divide local apparatus organizations or local government agencies in each smart city dimension relevant to their main tasks and functions. The categorization of smart governance was determined based on the tasks and functions of local government agencies. The policy process is associated with the planning, research, and development agencies. Bureaucratic is associated with finance, staffing, education, training, control, and secretariat agencies. Subsequently, public service is associated with communication and informatics, population and civil registration, and investment permit agencies.

The national planning book was well-designed for smart cities, particularly smart governance. The assessment, however, does not cover all the information presented in the planning book. In the end, smart governance appears ideal in its design, whereas performance evaluations focus solely on technical and administrative issues. An assessment of smart governance that is based solely on practice innovations and summarized in the quick wins program needs to be upgraded into a more substantive assessment. For example, the main assessment of the policy design aspect is based on cooperation and participation. Bureaucratic is based on integrity, and public service is based on accessibility. In principle, it is necessary to have keywords that are clear in substance, administrative, and technical. The planning and assessment guidebook is integrated item by item. There must be a clear synergy between the smart city planning book and the smart city assessment book. It is not enough to say that a city has successful smart governance if the foundation is only on technical innovations developed by the local government. Certainly, the distinction between smart governance and other smarts needs to be clarified. Smart governance should have a few keywords

associated with it, clear and measurable. As such, assessing and monitoring the progress of smart governance will be easy to learn. Figure 2 below depicts the interrelationships among the various stages of the assessment process.

Figure 2. The Logic of Smart City Assessment



Source: Author's elaboration

The components assessed on smart governance and all other smart city dimensions are in the action box. The logic of smart cities in Indonesia places smart governance as one of the dimensions of a smart city, making it equal to other dimensions in the assessment. In a broad view, the items in the requirements box are the substance of smart governance. These three components are attached to the public policy process. In the smart city planning document, public policy is a part of smart governance. In a broader view, all of the boxes above are part of smart governance if the understanding is governance in a smart city. In conclusion, based on various sources, this study understands that the requirements box is a part that needs to be considered in the concept of smart governance. That is the essence of the public policy process. Smart governance is not only an action but also a requirement in a smart city.

Review of Local Government

Smart Governance in Bandung City (SGBC)

The Bandung City Government has established a smart city as the main agenda in the 2013–2018 Regional Medium–Term Development Plan, led by Mochamad Ridwan Kamil's Mayor and Oded Muhammad Danial's Vice Mayor. As a serious step for the government, the Bandung City Government established the Bandung Smart City Development Council through a Mayor's Decree in 2014. The Smart City Development Council involves local government agencies, state-owned enterprises, regional-owned enterprises, privately owned enterprises, universities, public associations, media, communities, academics, and practitioners. The main tasks and functions of the smart city council are (1) directing the development of smart city Bandung; (2) monitoring the development of smart city Bandung; (3) controlling all processes related to the development of smart city Bandung; (4) carry out coordination in the development of smart city Bandung with related regional apparatus; and (5) submit activity reports periodically or at any time if requested to the Mayor of Bandung through the Regional Secretary of the City of Bandung.

In 2017, as a term and condition of the Movement Towards 100 Smart Cities, the Bandung City Government formed a Smart City Implementor Team that only involved local

government agencies. Non-local government agency organizations were not involved in the implementation team. The smart city implementor team has the main tasks of (1) make a schedule and teamwork plan; (2) coordinate with the Bandung Smart City Development Council; (3) follow the technical guidance for the preparation of the Bandung City Smart City Masterplan; (3) follow the technical guidance on the preparation of a quick win; (4) follow the technical guidance for the preparation of the I Road Map; (5) carry out data exchange and Legal Software using Free and Open Source Software (FOSS); (6) participate in the socialization and Focus Group Discussion (FGD) of the Bandung City Smart City Movement; (7) implement data integration between regional apparatuses; (8) play an active role in increasing small and medium-sized businesses by using electronic systems, especially digital marketing; (9) monitor and evaluate the implementation of the Bandung City Smart City Movement; and (10) submit reports periodically and/or at any time if requested to the Mayor of Bandung through the Regional Secretary.

Currently, the Bandung City Government also has a Bandung Smart City Forum. It is an online platform that can be accessed at <https://badami.bandung.go.id/>. Badami is an acronym for "Bandung Discussion and Innovation Monitoring." The forum encourages the community to be involved in the development of a smart city in Bandung. Bandung City's people can provide comments and information sharing anytime and anywhere. This forum provides an open space for individuals while still prioritizing ethical and moral values. The forum is for collaboration, socialization, and monitoring of innovation by using technology. The forum supports various communities to participate actively in urban development. The forum maintains the relationship with all stakeholders in the smart city context. Ideas or innovations that are created by the community are accommodated and facilitated by the local government. The number of local innovations that have not been integrated is also the reason for the initiation of the online participation forum. All communities that have ideas and innovations are expected to submit them to the forum. Likewise, proposed solutions to various urban problems can be submitted in the online forum.

From 2013 to 2022, bureaucratic management and public service innovations in Bandung were developed and managed with the following approaches:

- **Interactive Services**

The leading information technology-based service in Bandung is called the BCC. BCC is an innovation based on supervision and control by using communication and information technology. The driving forces are the Internet of Things (IoT) and Artificial Intelligence (AI). BCC is in the form of an integrated room with modern facilities. In order to monitor urban conditions, hardware is supported by software and other infrastructure. Many Closed-Circuit Television (CCTV) are installed at various points. The footage from the CCTV can be analyzed in more detail to bring up notifications as needed. BCC is integrated with emergency 112 calls for criminal, health, natural disasters, riots, fire, violence, accidents and security or order services. BCC also provides information services such as weather data, maps, video feeds, and special vehicle locations. This room is also a centre for government information and coordination with related institutions. In its operation, several operators manage BCC. Its operation is for 24 hours and is connected to various government agencies. The BCC's main functions include a policy support system, monitoring the urban situation and access to fast services.

- **Integrated Services**

Integrated public services in the city of Bandung are called Public Service Outlets, such as a shopping centre. The Bandung City Government provides special building services in partnership with the private sector. The goal is to facilitate and expand access to services. Local government organizations that have the task and authority to provide licensing, administration, and consulting services open service rooms in the public service outlets. Other government organizations, such as the police and the prosecutor's office, also provide services free of charge. Service rooms are provided for other public service organizations in partnership with the Bandung City Government. In the building, there are several types of services provided. People can manage many services at one time. The service combines online and offline approaches. The public can register online for an appointment. The service time will be informed by the operator through the information system. Furthermore, the public can come to the location or communicate by telephone.

- **Website or Mobile Application based Services**

In this case, information system-based public services are those that utilize websites or applications as means of providing public services. The service can be accessed through a web browser (Google Chrome and Mozilla Firefox) and can be accessed through an application that can be downloaded on the Play Store or App Store. All local apparatus organizations widely use this information system-based public service as an innovation. An information system is also developed in terms of internal service in the government bureaucracy. Information system-based public service innovations made by the Bandung City Government are categorized as smart governance, including e-planning, e-budgeting, e-reporting, e-procurement, tax service information system, personnel management information system, and administration service system. Some of these information systems are developed and integrated by relevant ministries and agencies within the central government. Bandung City Government only acts as an admin and operator on information systems controlled by the central government. In the end, the Bandung City Government can no longer innovate some service items. Previously, services such as e-planning, e-budgeting, and licensing services were developed independently.

Smart Governance in Makassar City (SGMC)

The Makassar City Government, led by Mayor of Mohammad Ramdhan Pomanto and Vice Mayor of Syamsu Rizal Marzuki Ibrahim, carried out the *sombere* and smart city development agenda in the 2014–2019 Regional Medium–Term Development Plan. In Indonesia, the general targets in the planning documents are always based on the Mayor's and Vice Mayor's vision and mission as elected local leaders. For Makassar City, the periodization of the Mayor and Vice Mayor who was elected at that time started from 2014 to 2019. The smart city became the development vision of the Makassar City Government from 2014 to 2019. Local government organizations are encouraged to carry out smart city-based annual work programs, ranging from sectoral to regional organizations. All local government organizations work together to create public service innovations as a smart city identity. Each local agency carries

out the procurement of communication and information technology equipment and its supporting facilities based on their respective budget allocations set out in the local revenue and expenditure budgets. Nevertheless, the largest portion of the budget remains with the Communications and Informatics Agency, which is responsible for procuring the main equipment needed, such as servers, internet networks, and maintenance of communication network systems.

In 2017, the Makassar City Government formed the Makassar *Sombere* and Smart City Council and the Makassar City Implementors towards *Sombere* and Smart City Makassar. *Sombere* is local wisdom that is also used as a development vision attached to the smart city concept. *Sombere* means humble. All public services must always be humble to everyone. Humble is always present in the interactions between government and government and non-government interactions. Kindness and interest are emphasized as a view in every public service and public space. The board and the implementing team have a synergy of duties and responsibilities. In the same manner, as a company, the council is similar to the role of commissioners, and the implementor team is similar to the duties of directors. The two new institutions were formed when Makassar City became a part of the first phase of the Movement Towards 100 Smart Cities. The Makassar Smart City Council involves local government organizations, state-owned enterprises, regional-owned enterprises, privately owned enterprises, universities, public associations, media, communities, academics, and practitioners. The Smart City Implementator Team, in addition to involving local government agencies in general, particularly central government and public organizations, as well as several academics and practitioners, are also appropriate to be part of the team. In Makassar, both the council structure and the implementor team involve non-governmental organizations.

The Council has the duties and responsibilities of (1) compiling, discussing, and refining the initial draft of the Makassar smart city development plan and agreeing it to be a development plan that must remain in synergy with regional development plans; (2) agreeing on the division of roles and implementation commitments between the government, academia, the community, and the business sector, to achieve the goals of developing Makassar's *sombere* and smart city; (3) monitoring and evaluating the achievement of performance for the purpose of improvement in the next planning and implementation cycle; and (4) providing advice to the government and other parties to improve the quality of planning and implementation of the Smart City Development Plan. The implementation team is tasked and responsible for (1) formulating policies related to realising Makassar towards *sombere* and smart city; (2) providing direction, recommendations and integrating the concept of development and transfer of knowledge of Communication and Information Technology between local government agencies and other related elements by considering the principles of effectiveness, efficiency, transparency, and accountability; and (3) reporting and coordinating the implementation of tasks, monitoring and evaluation results on a regular basis to the smart city council.

Makassar City does not have an active online platform specifically designed by the government to develop a smart city agenda. During 2021, the online forum was developing but was not running maximally. Individual community involvement is carried out using official social media such as Facebook, Instagram, and Twitter. In general, these social media were created

by each local apparatus to respond to suggestions and complaints from the public based on their respective duties and responsibilities. Each local apparatus that provides public services responds to suggestions and complaints from the public. Technical errors or administrative affairs are corrected immediately. Strategic issues are used as input for planning activities for the following year. The pattern of active citizen involvement carried out by the Makassar City Government is similar to the e-government-based development movement that began to develop in 2003. Citizen involvement is not specifically designed for active interaction in general and integrated smart city development. Apart from using social media, residents still have space for interaction in various interactive activities in the form of annual formal dialogues held by the government.

From 2014 to 2022, bureaucratic management and public service innovations in Makassar were developed and managed with the following approaches:

- **Interactive Services**

Makassar City has an operation room called the War Room. The War Room is a place for controlling various kinds of problems and monitoring public services in the city. The room is integrated with emergency services or call centre 112, which can be contacted free of charge for 24 hours. The call centre serves security, fire, health, and other emergency matters. The work system relates to relevant government agencies such as hospital service units, firefighters, and police. The system is connected to several non-government agencies in partnership with the local government. The facilities available in the room include a widescreen, data centre, computer equipment, as well as other information and communication technologies. The screen is connected to CCTV which is installed at various locations to display real-time shows. There is also a modern CCTV installed at one location with a certain height and can move 36° to reach the city area up to 4 km. The War Room integrates and manages not only security, but also population data, weather data, GPS tracking of government vehicles, and other data. Skilled personnel manage these interactive services specially recruited by the Makassar City Government.

- **Alley-based Administrative Services**

There are thousands of alleys in Makassar. In each alley, many communities are established. The Makassar City Government has a special team that provides administrative support directly to those communities. The public may not visit government service offices, both sectoral and regional services. The sectoral services include issuing business licenses by the Local Office of Investment and OneDoor Integrated Service in Makassar City. A team was formed in the alley that went directly to the community. This effort is taken to maximize the licensing of all businesses owned by the community. The regional services in question are sub-districts or urban villages. Certain sub-districts or urban villages visit the community in the hallway to produce various population documents. This pattern is devoted to administrative services to strengthen public data regarding licensing and population. In Makassar City, alleys have become local wisdom and public spaces for residents. There is a lot of interaction between residents in this place every day. Some alleys even become alternative tourist areas. The purpose of alley-based services is to bring public services closer to the community. It does not require the residents to visit an official government office to receive service.

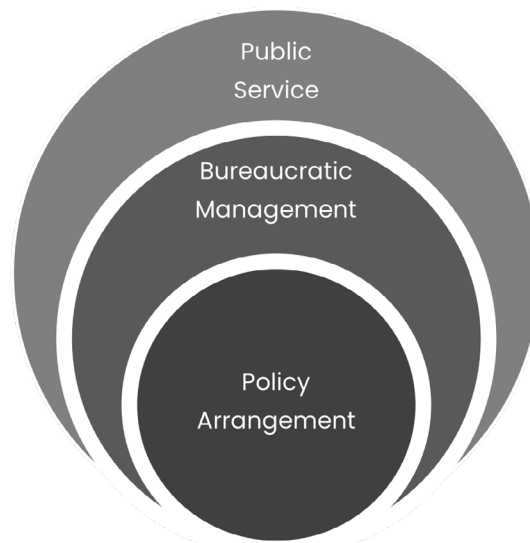
- **Website or Mobile Application-based Services**

To create a smart city, this service is often provided by all local government agencies. There are website-based services and self-developed applications. The central government also develops those, and the Makassar City Government acts as an operator. For services such as planning, budgeting, reporting, procurement, population administration, and certain administration, use a system developed by the central government. The latest administrative service created by the central government and operated by the Makassar city government according to its authority is called Online Single Submission (OSS). Thousands of types of services are recorded through the system, dozens of website-based service information systems, and smartphone applications have been developed. Well-known services include electronic-based population reports and electronic-based local tax checks and payments. All government staffing services are based on information systems, from daily attendance to payroll. In general, almost all service types use information systems. Some of these may be in the form of a website that can be accessed through a web browser. Others may be in the form of an application that can be downloaded from the Play Store or App Store.

Findings and Discussion

Based on the findings of the research, three themes are identified that address the concept of smart governance in Indonesia. Policy arrangement, bureaucratic management, and public services are the three themes. These three themes are elaborated from formal documents on smart cities and empirical studies. This theme is supported by various experts in smart governance studies. According to Bolívar and Meijer (2016) and Ruhlandt (2018), smart governance explains policies and legislation. In addition, they considered organizational structure and processes as aspects of smart governance. In this study, organizational issues are addressed in the context of bureaucratic management. Government organizations at the local level play an important role in the practice of smart governance. Giffinger et al. (2007) and Kar et al. (2017) explained that smart governance is related to public services. The three themes of policy arrangements, bureaucratic management, and public services are important elements of smart governance, but they hold unequal positions within it. In this position, policy arrangements play a major role. This aspect is a condition for the other two aspects. In other words, a policy arrangement is essential to achieving the goals of smart governance in terms of bureaucratic management and public services. The next stage is to complete bureaucratic management before addressing public service issues. Bureaucratic management supports public services. The relationship between three themes or aspects of smart governance can be seen in Figure 3.

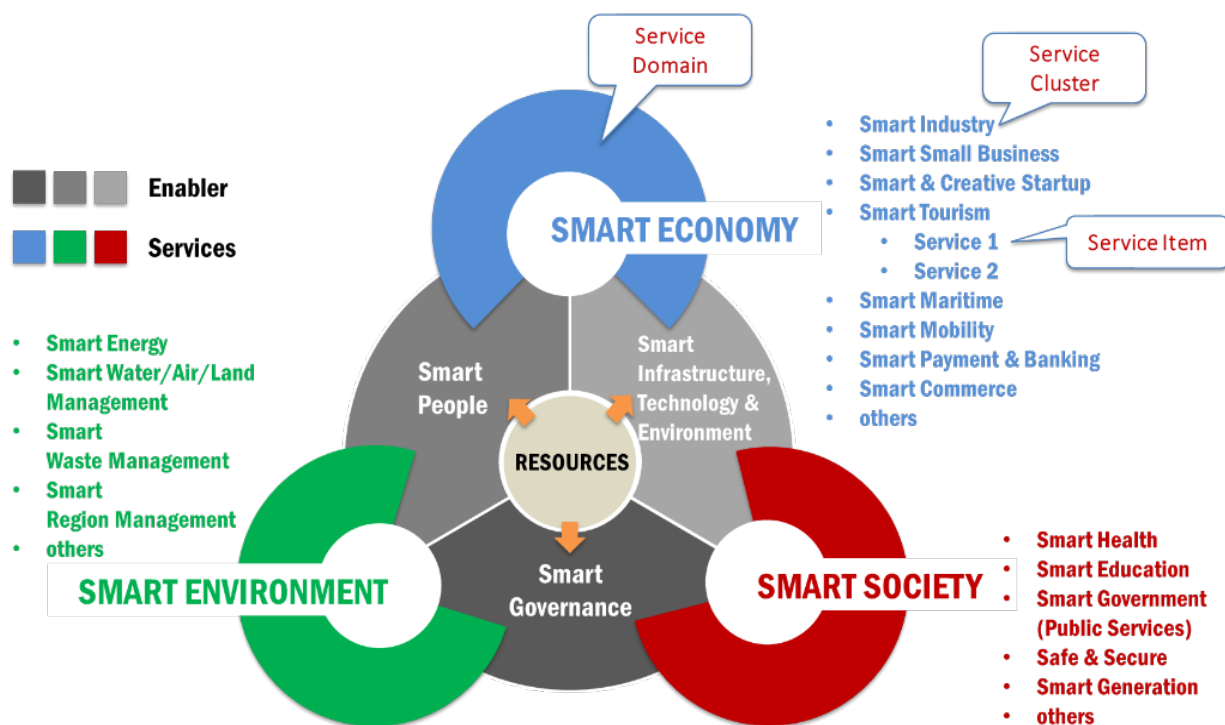
Figure 3. Correlation Between Aspects in Smart Governance (Author's conceptualization)



It is important to note that the aspect of policy arrangement is based on the understanding that the main foundation of a smart city program is its supporting policies or regulations, its management organization, and its budget. This is at least a condition for action. To accomplish all of these things, it is necessary to set them. If these conditions are met, bureaucratic management and public services can be implemented. This process is interpreted as a policy arrangement. Particularly in bureaucratic management, this aspect serves as an intermediary between policy arrangements and public service. Local government needs to strengthen its public service function and mission through bureaucratic management. The government cannot provide maximum public services if it does not have good internal bureaucratic management. Bureaucratic management includes planning, budgeting, monitoring, reporting, and staffing. This process can be categorized as government-to-government (G2G) and government-to-employee (G2E). Goods, services, and administration are all included in public services. There are multiple stakeholders involved in the service process. It is part of both government-to-citizen (G2C) and government-to-business (G2B). Bureaucratic management focuses primarily on internal government affairs. Public services contribute to local government affairs from an external perspective.

The correlation between various aspects of smart governance depicted in Figure 3 is pertinent to the Garuda Smart City Model (GSCM) developed by Smart City and Community Innovation Center (SCCIC) Bandung Institute of Technology. The GSCM model can be seen Figure 4.

Figure 4. Garuda Smart City Model (GSCM)



Source: SCCIC ITB (<https://citylab.itb.ac.id/sccic2/>)

GSCM explains that smart governance, smart people, and smart infrastructure-technology-environment are enablers. All three are enablers of all government services, which can be divided into three service domains: smart environment, smart economy, and smart society. Furthermore, each service domain is developed into a service cluster comprising several service items. Between service domains, service clusters and service items are adjusted according to their relationship. Services and innovations are carried out optimally if smart governance, smart people, and smart infrastructure-technology-environment have been maximized. The enabler needs to be supported by various related resources. Smart governance includes policies and regulations. Smart people include the behaviour and skills of human resources. Smart infrastructure, technology, and environment are part of all business processes in a city that turn data and information into action. Smart innovation and creativity in the service domain cannot be implemented without policies and regulations as the basis. Efforts cannot be made without human resources. Everything can be carried out effectively and efficiently if there is attention and a support system that includes infrastructure, technology, and environment.

All dimensions are not in the same position as smart cities, as the GSCM emphasizes. Some smart city dimensions become enablers, and some become service domains. This division is based on the understanding that, basically, local government duties and functions are public services. There are many types of public services because these services cover all government affairs. The most significant thing is that public services must be supported by various resources and powers. These resources and powers are called enablers. Based on the empirical facts of the national smart city movement and the GSCM model, this study concludes that smart governance is both an enabler and a service domain. However, the

service domain is restricted to certain clusters, namely administration, communication, and information services. Smart governance does not encompass all types of public services provided by local governments. There are a wide variety of public services available. This domain service limitation is based on the division of local government agencies' main tasks and functions, which are always associated with quick wins in smart governance. In this way, the policy arrangement is an enabler. Bureaucratic management is a linker. Bureaucratic management links enablers and domain services. Domain services are limited to administration, communication, and information matters.

Policy Arrangement

Public policy is a smart governance aspect developed nationally and locally in Bandung City and Makassar City. Policies for promoting smart city initiatives and projects are seen as crucial to smart city implementation (Bolívar and Meijer 2016). In this context, policy design or policy arrangement becomes the main discussion. There are three determinants, namely regulation, institution, and budget. In this study, the analysis focuses on regulations and institutions. Budget is a sensitive issue that is not specifically explained in this study. Data on planning and use of the budget is difficult to obtain. Regulation is a new variable in smart governance (Madakam et al. 2019). Regulations are addressed to policy products in the form of laws and decrees made by the central government and the governments of Bandung and Makassar. Institutions are related to organizational structures and processes in the smart city program. Structure, process, and mechanism are important to recognize that it is contingent upon a variety of sometimes conflicting internal and external factors in IT governance (Grembergen and Haes 2008). According to Nesti (2020), smart cities are, in fact, managed with new structures and tools that are usually placed outside the politico-administrative system without being part of ordinary urban governance. Especially, in the city of Bandung, a community participation forum is formally formed through an online platform that can be accessed at any time. In Makassar City, community participation forums are still carried out non-formally with the use of social media such as Facebook, Instagram, and YouTube.

Furthermore, Table 5 below delineates the key components of the policy arrangement found in this study.

Table 5. Policy arrangement

Determinant	Actors	Note
Regulation	Central Government	Ministry of Communication and Informatics, a leading sector of the central government, has a decree about the smart city in Indonesia. In action, there is a Memorandum of Understanding (MoU) with the local governments of Bandung and Makassar.
	Local Government	The local government of Bandung and Makassar has decreed all aspects of smart governance. There is local regulation for agreement and tendering about goods and services that support smart governance.
Institution	Smart City Council	Smart city council consists of local government agencies, non-governmental organizations, private sector, and university
	Smart City Implementor	Smart city implementor is all local government agency
	Smart City Forum	Smart city forum is a public sphere formed online for society to participate in decision-making and public service feedback.
Budget	Central Government	The Ministry of Communication and Informatics allocates a budget for mentoring and performance appraisal
	Local Government	The local government allocates a budget for the implementation of activities and supporting equipment

Source: Author's tabulation

Few national governments have thus far issued laws or regulations regarding a national policy for smart cities (Dameri and Benevolo 2016). Unfortunately, the laws made by the central and local governments, government bodies, and legislatures, specifically about smart cities, do not yet exist. The rules are still in the form of decrees. Smart cities are only based on central government laws that are relevant to smart cities, namely regulations on (1) national development planning; (2) spatial arrangement; (3) information and electronic transactions; (4) public information disclosure; (5) public services; (6) local government; (7) regional apparatus; (8) electronic government system; and (9) e-government. The provincial government has no regional regulations, even though the provincial government supervises the city government. Sources of regulation are only from the central government and local governments. In the city governments of Bandung and Makassar, there is no local law as a special legal basis for smart cities. Smart cities are only listed in the annual work and plan of the local government agencies. Smart city plans, councils, and implementers are based on the local government decrees. The decrees do not involve the local legislature. This is different from local laws, which must be made by the executive and legislature as a policy product. Ideally, the governments of the cities of Bandung and Makassar have local laws regarding smart cities so that their status is stronger. This is very important because a policy, a vision, use of ICTs, and collaboration are needed to successfully implement smart governance (Bolívar and Meijer 2016).

The cities of Bandung and Makassar have smart city councils and smart city implementors. The council oversees creation of regulations and supervision. Meanwhile, smart city implementors focus on operational management. Non-government parties are involved in the structure of smart city councils and community forums. In smart city institutions, local

government agencies play the main role. A smart city government should include not only government institutions but also other stakeholders. For this reason, a governance framework is essential (Dameri and Benevolo 2016). Government and non-government (individuals and organizations) are expected to be active in many ways, in particular decision-making process (Castelnovo et al. 2016). In accord with Giuliadori et al. (2022), smart governance seeks a balanced interrelation of the state, civil society, and the market to achieve stable economic, social, and institutional development. The collaborative work leads to easier planning and constitution of new urban spaces (Madakam et al. 2019). In fact, smart city councils in Bandung and Makassar are less active in communicating. Various matters are more on technical decisions. Smart city implementors tend to be the most active in smart city institutions. The city opted in favour of a comprehensive institutional architecture that encompassed most city departments and agencies (Scholl and AlAwadhi 2016). The action of cross-sectoral coordination of local government agencies is more dominant than cross-sectoral collaboration with stakeholders in decision-making. The citizen forum is more of a decision supporter in making improvements in accordance with suggestions and input.

Smart governance is dominantly controlled by government organizations according to the direction of the Mayor and Vice Mayor. Smart city projects are often promoted by political leaders for electoral purposes (Nesti 2020). The most important parties in smart governance are the Mayors and Vice Mayors as politicians and city government leaders. Mayor and Vice Mayor tend to set of underlying, multiscalar, and contingent motivations that influence both the desire to become smart and the mechanisms of becoming smart (Dowling et al. 2021). The motivation is part of the previous political promise. They can be referred to as a priori drivers (Dowling et al. 2021). Politics in the context of smart governance in the cities of Bandung and Makassar is addressed to the local leaders. The governance approaches a city adopts are determined by the goals set by political actors (Nesti 2020). Government structures are more dominant in the process of smart governance. It is an approach to maximizing implementation in Bandung and Makassar. It is the success of new governance arrangements relatively (Nesti 2020). Some authors focus on strengthening the legitimacy of policies, whereas others focus on the strengthening of citizen participation and open forms of collaboration (Meijer and Bolívar 2016). Based on the experiences of Bandung and Makassar, the government remains the main driver of smart governance, both in regulations and institutions. Collaboration, coordination, and participation of non-government parties are a complement. At least, the classification of smart city governance studies is related to politics, policy, public-private partnerships, and city-citizen relationships (Nesti 2020).

Bureaucracy Management

Bureaucracy management in this context is understood as the implementation of electronic administration processes within the internal local government, including electronic planning, budgeting, staffing, monitoring and evaluation, and research and development. Smart governance in Bandung and Makassar emphasizes attention to some of these management functions that are related to technology. Governance related to technology also focuses on internal bureaucracy (Bloomfield and Hayes 2009). The administrative process of planning, budgeting, staffing, monitoring, and evaluation, as well as research and development in

Bandung and Makassar, uses an information system that facilitates various bureaucratic affairs. Bureaucracy includes the written file and the material implements of civil servants (Kornberger et al. 2017). In simple terms, it can be understood as electronic organization refers to the integration of technologies for horizontal and vertical communication between agencies and departments via the Internet (Carrizales 2008). The use of technology is very helpful for local governments in internal organization. Data and information are stored in a system that is easy to measure and manage. According to Ranchod (2020), data and technology were important in supporting city operations and the challenges of bureaucratic management. In the end, it is easy for drivers to produce their own products.

Furthermore, Table 6 below delineates the key components of the bureaucracy management found in this study.

Table 6. Bureaucracy management

Determinant	Driver	Product	Parameter
Planning	Local Government Agency for Development Planning	Annual Work Plan	Information system of development planning forum is available and can be accessed by both government and society admin.
Budgeting	Local Government Agency for Asset and Financial Management	Annual Budget Plan	Information system of local annual budget is open access for all stakeholders
Staffing	Local Government Agency for Employee Affairs and Development of Human Resource	Performance Report	Information system of all public servants is effective and efficient.
Monitoring dan Evaluation	Local Government Agency for Inspectorate	Accountability Report	Information system of government control is accountable.
Research and Development	Local Government Agency for Research and Development	Innovation Study	Information systems support innovation and development.

Source: Author's tabulation

The community is involved in the process of planning and budgeting. Bureaucrats carry out other processes in accordance with their respective duties. The community is involved in the community consultation process for local development planning. The results of the community deliberation process become input for the next stage to produce an annual work plan for the sub-district or urban village. The local agencies for development planning, research and development, asset and financial management are the government agencies that control it. Planning (Madakam et al. 2019), public budgeting, and spending (Scholl and AlAwadhi 2016) require a form of collaboration. Meijer and Bolívar (2016) confirm that smart governance is about implementing these in an effective and efficient manner. According to them, good administration may result in strong interactions at the urban level. Smart governance comprises aspects of functioning of the administration (Muñoz et al. 2022). ICTs support bureaucratic administration functions (Cordella 2007). All the determinants in bureaucracy management are part of the instruments and processes of governance. The exercise of governance requires not only subjects and actors but also mechanisms, instruments, and processes (Dameri and Benevolo 2016). They add that administrative bodies

also manage technical and economic management in the urban context. Smart governance is very dependent on administrative bodies in Bandung and Makassar as the main driver in moving local activities towards smart cities.

In Law Number 23 of 2014 concerning local government, the processes, among them planning, budgeting, staffing, monitoring and evaluation, research, and development, are called the supporting functions of government affairs. Local government agencies that perform these functions are responsible for delivering non-sectoral public services. It means they are not included in the category of basic and optional public service affairs. Basic and optional public service affairs consist of education, health, housing, transportation, etc. Drivers or local government agencies support all processes in Bandung and Makassar governments. Some authors said local government bodies are the core components of smart city government (Dameri and Benevolo 2016). This is intended to facilitate the assessment of institutional settings (Castelnovo et al. 2016). Support functions in the bureaucracy are technocratic stream. Practice shows that many technologies are implemented via government policies in which governments consider "smart" ways of governing cities as just a management issue that can be handled in technological and technocratic ways (Jiang et al. 2020). Through technology, the process after the technocratic process becomes easy. Technological development and its relation to bureaucratization play a significant role (Kornberger et al. 2017). Brown (2005) stated several years ago that networking has also given a new emphasis to working group collaboration and information sharing, typically cutting across the vertical division of labor that is characteristic of classic bureaucracy. Technology provides a space for collaboration between government bodies in Bandung and Makassar. The implementation of government support functions is greatly assisted by the use of information and communication technologies (ICTs).

Public Service

Public service is the essential context of smart governance based on the experiences of Bandung and Makassar. Government bodies developed dozens of mobile apps and websites. Lee et al. (2015) suggested that the aim of web services in the public sector is to provide benefits to government agencies and citizens. The range of government web services and their innovation are indicators of some cities in smart city (Giuliodori et al. 2022). Information system development is carried out because public services are those provided by local governments to people living in the cities (Sánchez-Corcuera et al. 2019). Public service is a basic responsibility of any democratic nation that is equitable, transparent, and efficient to its citizens (Malhotra et al. 2020). The main task and functions of the local government provide public services. Service one of the assessments on the local government (Castelnovo et al. 2016), among others, e-administration (Bolívar and Meijer 2016), emergency help (Madakam et al. 2019), online procurement (Scholl and AlAwadhi 2016), and tax efficiency (Lee et al. 2015). In the classification of smart city-based services in both Bandung and Makassar, smart governance focuses on procurement, taxing, administration, and emergency services. Especially in administrative services, the drivers are in several related government institutions. Administrative services are categorized into three affairs, namely licensing or permits, population registration, and national certificate.

Furthermore, Table 7 below delineates the key components of the public service found in this study.

Table 7. Public service

Determinant	Driver	Product	Parameter
Procurement	Regional Agency for Procurement	Service Activity	Information system of procurement is easy to use by the public
Taxing	Regional Agency of Regional Revenue	Service Activity	Information system of taxing is easy to use by the public
Administration	Regional Agency for National Unity and Politics	Service Activity	Information system of administration is easily accessible to the public
	Regional Office of Investment and One-Door Integrated Service	Service Activity	
	Regional Office of Citizenship and Civil Registration	Service Activity	
Emergency	Regional Office of Communication and Information	Service Activity	Information system of administration is easily called by the public

Source: Author's elaboration

All service activities are carried out online by using communication and information technology devices. Sánchez-Corcuera et al. (2019) said ICTs are crucial for the development of a smart city. According to Sánchez-Corcuera et al. (2019), e-government era describes the use of electronic communications devices, computers, and the Internet to provide public services to citizens and other people in a country or a region. The fact that the use of information technology helps governments to provide public sector services (Bolívar and Meijer 2016). One of the questions of smart connectivity is application and service technologies (de Falco et al. 2019). de Falco et al. (2019) added that local government targeted the strengthening of citizenship services through innovative technologies. Using technology improves the provision of service (Cortés-Cediel et al. 2021). The community, as most service users, feel helped by the online service facilities provided. Service information and complaints are also openly available. By Zhang et al. (2022), open data for citizens is better access to government services. Although, in general, the service is done online, offline service still exists in both cities. Electronic public services do not have the interpersonal immediacy of face-to-face contact between the service provider and the service user (Osborne et al. 2013). Some of the checks of certain files and their retrieval are still in the form of face-to-face. The combination of online and offline is part of a strategy for existing situations and conditions. This is done because of complex service in the metropolitan cities of Bandung and Makassar. Singh (2020) has confirmed that providing for the daily needs and service requirements becomes a challenge for metropolitan areas. Therefore, a process through which cities are becoming smart is through ad hoc initiatives (Dowling et al. 2021).

The good quality of service to the community reflects the level of smart governance in local governments. Smart governance comprises aspects of services for citizens (Muñoz et al. 2022). Most services classified as part of smart governance place the public only

as users. All initiatives and innovations come from government bodies as their products. Local government bodies are service providers. However, the technologies and information systems are developed by individual consultants or companies as a third party. Governance of public services is not merely being distributed to cross-sector actors such as think tanks, policy labs, and innovation intermediaries, but dispersed among a wider set of technical actors, including databases, algorithms, and software (Williamson 2014). The residents only participate in complaint services. Their suggestions and inputs are used for improvement and service delivery by the government and third parties. Even though the development of new services and technologies needs to co-evolve with public engagement, according to Baykurt and Raetzsch (2020), citizens must be at the nuclei, the start point and the endpoint of all public services (Malhotra et al. 2020). Public services must involve many parties in their creation and development, including the community as users. The quality of all services that use communication and information technology tools is determined by the community as the main user. An in-depth and ongoing study that has been carried out for a long time by Osborne et al. (2013) said the performance of public service is not (solely) about its effectual design in relation to its purpose. However, it is, at least, equally about the subjective experience of that service by its users. In conclusion, community participation needs to be involved in making an information system with certain strategies and tactics. Residents and communities are not only users but also providers. They are driven to serve themselves in the digital age.

Conclusion and Implication

Based on the theoretical views, smart governance is a strategic concept but diverse. Generally, the emphasis is on managing communication, information technology use, and stakeholder interaction in public affairs. Specifically in the Indonesian context, smart governance includes policy arrangement, bureaucratic management, and public service. In practice, all of them are integrated with the use of technology and information systems. The position of the three aspects of smart governance is different from each other. The roles are not the same, so they need to be interpreted differently. Nonetheless, they are an integrated whole in terms of smart governance. Policy arrangement is an enabler. Bureaucratic management is a linker between policy arrangement and public service. Public service is a service category. In terms of smart governance, public service includes administration, communication, and information service. Further research is needed to review related to smart governance as an enabler of service and service activities. The two are different but difficult to separate. Service activity encompasses innovation practice, whether technology or not. Meanwhile, enabler of service describes participation and collaboration in decision-making. It is important to emphasize that smart governance is an enabler, or at the same time, a service domain.

In the cases of Bandung and Makassar city, the policy arrangement consists of regulations, institutions, and budgeting. Regulation becomes the formal basis for actions. Regulations can strengthen the existence of community involvement and non-governmental organizations, and vice versa. Institutions are related to the existing structure of the program. Institutions have structural form and minus interactions. It is more symbolic, not substantive. The budget is about supporting factors that determine if an action can be carried out. The policy arrangement is highly dependent on the political will of the Mayor and Deputy Mayor.

Bureaucratic management is understood as the implementation of administrative functions in the internal local government organization. These functions include planning, budgeting, staffing, monitoring and evaluation, research, and development. This function is the driving force for the government process as service provider. Public services cover specifically administration, emergency, taxing, and procurement affairs. Utilization of communication and information technology in bureaucratic management and public service uses both hardware and software. Innovation activities are more on information systems in the form of websites and mobile apps developed by third parties. There are parameters to say smart or not. Smart governance assessment is still based on technical and administrative aspects related to ICTs-based innovations rather than processes and interactions between parties to these innovations. Smart governance should emphasize the assessment of coordination, participation, and collaboration issues.

This study implies that the use of ICTs in smart city governance encourages government information systems to look centralized. The central government developed many information systems that are centralized in the sense of data integration on the same system. The local government only acts as an admin on the system being developed. The national movement towards smart cities held by the central government makes local governments unable to be creative in smart governance. The technical guidelines and regulations have the central government set all. In the end, the local government can be creative in a few services. From the experience of Bandung and Makassar, smart governance should be understood as a comprehensive process that continues. Smart governance solves many problems and supports the existence of local government innovations. It is essential to place the values forward at every stage of the decision-making process and in public services as well.

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