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## **IMPLEMENTING THE SMART CITY POLICY IN PALU: GOVERNMENT CHALLENGES AND EFFORTS**

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### **Abstract**

*Palu City is one of the cities in Indonesia that implements smart city initiatives. The quality of the Electronic Based Government System (EBGS) index is a crucial aspect of implementing a smart city. According to the 2021 EBGS index results, Palu City was classified as deficient. This study seeks to provide an overview and analyze the implementation of smart city strategies in Palu City. The research methodology employed is qualitative, utilizing data collection approaches such as semi-structured interviews, observation, and documentation. The findings indicate that the smart city concept has yet to be implemented in Palu City. Numerous aspects have yet to be accomplished, including the infrastructure required for implementing the smart city concept. The smart city strategy in Palu City is facilitated by issuing a decree that establishes the smart city implementation team and the smart city development council. These entities involve all regional offices and organizations in Palu City. Overall, implementing smart city policies in Palu City has been poorly coordinated and needs improvement in several areas, including communication, resources, attitudes, and bureaucratic structure.*

**Keywords:** *Implementation Policy, Public Policy, Smart City.*

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### **Abstrak**

Salah satu kota di Indonesia yang menyelenggarakan smart city adalah Kota Palu. Salah satu faktor dalam terwujudnya smart city ialah kualitas indeks Sistem Pemerintahan Berbasis Elektronik. Namun, berdasarkan hasil indeks Sistem Pemerintahan Berbasis Elektronik pada tahun 2021, Kota Palu memperoleh kategori kurang. Untuk itu penelitian ini bertujuan memperoleh gambaran umum dan menganalisis implementasi kebijakan smart city di Kota Palu. Metode penelitian adalah kualitatif dengan teknik pengumpulan data menggunakan wawancara semi terstruktur, observasi, dan dokumentasi. Hasil penelitian menunjukkan bahwa konsep dari smart city belum terimplementasi di Kota Palu masih banyak yang belum

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tercapai, khususnya aspek infrastruktur dalam menyelenggarakan konsep smart city tersebut. Namun, implementasi kebijakan smart city di Kota Palu didukung oleh pembuatan Surat Keputusan terkait tim pelaksana Palu Kota cerdas dan dewan pengembangan pelaksana Palu Kota cerdas yang melibatkan seluruh dinas/badan daerah di Kota Palu. Kesimpulannya, implementasi kebijakan smart city di Kota Palu belum terselenggara dengan baik, dan membutuhkan peningkatan dari berbagai aspek yang terdapat pada dimensi komunikasi, sumber daya, sikap, dan struktur birokrasi.

**Kata Kunci:** Impelementasi Kebijakan, Kebijakan Publik, Smart city

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## INTRODUCTION

Indonesia has embraced the smart city concept in several locations, with 25 cities and districts leading. These include Bandung City, Surabaya City, Jakarta City, and Jambi City (Azra, 2023). For an area to be considered a smart city, it must meet many aspects of the smart city concept. These aspects can be classified into six dimensions: smart people, smart living, smart economics, smart mobility, smart environment, and smart government. Naturally, the presence of regions that have successfully implemented the smart city concept is a model and inspiration for other regions to adopt this approach in their areas. Indonesian regions are enhancing the quality of electronic-based government systems, known as EBGs, due to their role in the realization of smart cities, which is a peculiar effort (Fatoni, 2022).

Moreover, numerous cities in Indonesia have been recognized as

successful smart cities. These cities can serve as exemplary models in various aspects of smart city development, providing valuable insights for imitation, adoption, and further improvement. The 2023 Smart City Index (SCI) released by the IMD World Competitiveness Centre via The Smart City Observatory ranks Jakarta at 102nd place, Medan at 112th place, and Makassar at 114th place. The cities of Jakarta and Medan offer several advantages, including providing basic sanitation in impoverished regions, efficient public transit services, well-equipped recycling facilities, convenient access to local government information services, and excellent public health services. The areas that require improvement in these two cities include air pollution, congestion, and corruption. Meanwhile, Makassar City can organize timetables for virtual medical consultations and online sales of public transport tickets. Conversely, the

homework for this city focuses on the topics of unemployment, corruption, and poverty. In addition, the cities of Zurich in Switzerland and Oslo in Norway have consistently held the second position for four years in a row (Salsabila, 2023).

Palu City in Indonesia is set to apply the smart city concept. Palu City is located in Central Sulawesi and shares borders with Donggala Regency to the

north, Sigi Regency to the south, and Parigi Mouton Regency to the east. Palu metropolis is a metropolis that encompasses five different dimensions, including rivers, valleys, bays, oceans, and mountains. The Palu City Government offers a website, PaluKota.go.id, which provides many services to the community. This website is equipped with several functions, including:



**Figure 1. 1 Features on the Palu City government website**

As mentioned above, an intriguing aspect of the website is its Online Report functionality. This function is designed to offer complaint services through a website. The general public can provide recommendations, inquiries, and critiques to the government of Palu City using this

platform. The website is named [reportwaliKota.PaluKota.go.id](http://reportwaliKota.PaluKota.go.id) and it includes the website application form. In addition, Palu City has introduced many digital technologies, including the mypertamina application. Mypertamina is a user-friendly program that offers

numerous advantages and allows consumers to accumulate points that can be redeemed for various rewards. Palu City has adopted an electronic parking system in 50 locations, accumulating 50 points. Presently, the Palu City government, in collaboration with the Palu City Department of Trade and Industry, is making efforts to enable the utilization of QRIS as a payment system in markets across Palu City. Moreover, implementing QRIS will also extend to hospitals in Palu City. The City of Palu is seeing rapid digitization growth as it adopts the Smart City initiative (Sahrir, 2022). The Smart City program is a prioritized initiative among the 53 city development themes in the RPMJD.

The governor of Central Sulawesi has issued regulation number 34 of 2018, which outlines the implementation of e-government by regional officials. This regulation aims to establish a legal framework and provide guidelines for managing various aspects of e-government, including governance, websites, social media, ICT infrastructure,

and information security and sustainability. Regional regulatory framework. The government has implemented a strategy to facilitate the development of a Smart City in the City of Palu. This has been done by issuing Mayor Regulation Number 15 of 2021, which outlines the Palu Smart City Master Plan for 2021-2024.

The quality of the EBSGS index is crucial in achieving a smart city. The EBSGS assessment encompasses multiple domains, including the EBSGS internal policy domain, the EBSGS governance domain, the EBSGS management domain, and the EBSGS service domain. Nevertheless, the City government's score on the EBSGS index remains poor. As per the Ministry of State Apparatus Utilization and Bureaucratic Reform Decree No. 1503 of 2021, the EBSGS index value for the Palu City government is 1.06, corresponding to a predicate of less than 24. The capital city, Palu, is assessed to have a relatively low worth. The following figure provided is the EBSGS index for the government sector in Central Sulawesi:

**Table 1. Central Sulawesi Government EBSGS Index Value**

No.	Institution Name	EBSGS index	Grade
1	Central Sulawesi Provincial Government	1,38	Poor
2	Poso Regency Government	1,97	Acceptable
3	Buol Regency Government	1,93	Acceptable
4	Morowali Regency Government	1,53	Poor
5	Banggai Archipelago Regency Government	1,45	Poor
6	Sigi Regency Government	1,61	Poor
7	Palu City Government	1,06	Poor

Source: Minister of Administrative and Bureaucratic Reform Decree Number 1503 of 2021

The data presented above demonstrates that the Palu City administration has a significantly low EBSGS index value. Despite numerous initiatives to promote the development of smart cities in Palu City, the assessment index from the central government still categorizes it as bad. Consequently, researchers are endeavouring to obtain a comprehensive overview and scrutinize the execution of intelligent urban policies in Palu City, located in the Central Sulawesi Province.

There have been four prior studies that examined the smart city initiative in

Palu City. Erdiyansyah & Afandi's (2024) research examined the unique Palu City Government website using qualitative methodologies. Similarly, Wiyarni et al. (2024) investigated the Mayor's Report website by applying DeLone and McLean's concepts. Ikhwan & Sutriadi (2018) examined the many elements of smart cities within the urban development framework. Rajaguni (2018) explored the feasibility of using Sanitary Landfill management practices in Palu City. Based on the three preceding studies, the researcher can affirm that this research is novel as it adopts a distinct approach, namely examining the smart city concept

in Palu City via the lens of executing public policy. The objective of this study is to acquire a comprehensive understanding and evaluate the execution of intelligent urban policies in Palu City, located in the Central Sulawesi Province.

## **METHOD**

This research falls within the qualitative category as its objective is to comprehensively comprehend of individual social reality, encompassing attitudes, beliefs, and motivations. The investigation was conducted during January and February 2023. This study employs and utilizes inductive data collection methods. In his 2010 article, Santrock defined inductive reasoning as deriving general conclusions from specific observations (Santrock, 2010). The researcher employed a purposive sample methodology to select the informants. This method was chosen because it identifies key individuals who play crucial roles in the research area with a high level of assurance. Consequently, the researchers conducted semi-structured interviews with several key individuals, including the Mayor of Palu, the Head of Bappeda, the Head of the Palu City Communication and Information Department, the Head of the Applications and Informatics Division, the

Head of the Information Application Development Section, the Head of the Resource Capacity Building and Information Access Services Section, and community leaders. The informants seek to gather information related to study questions about theory and its derivatives, specifically in terms of existing dimensions and indicators. The informants gathered by the researchers are individuals who hold positions as policy organizers, policy implementers, and policy enforcers. Subsequently, the researchers conducted observations and systematically recorded them. Data analysis approaches involve the processes of reduction, data display, and generating conclusions ((Miles, M.B., & Huberman, 1984).

## **RESULT AND DISCUSSION**

### **Implementation of Smart City Policy in Palu City**

This study aimed to obtain a comprehensive understanding and evaluate the execution of smart city policies in Palu City. The researchers employ Edward III's (1984) policy implementation theory, which comprises four dimensions. The first dimension is communication, which encompasses transmission, clarity, and consistency indicators. The second dimension refers to

the availability of resources, which can be measured through indicators such as the presence of staff, access to information, decision-making authority, and the availability of facilities. The third component, attitude, encompasses several indications, such as disposition effects, bureaucratic personnel, and incentives in the form of prizes. The fourth dimension refers to the bureaucratic framework characterized by indicators such as standard operational procedures (SOP) and fragmentation.

### **1.1 Communication**

Three factors are used to assess interaction and communication in the implementation of smart city initiatives: transmission, clarity, and consistency in policy implementation.

#### **A) Transmission**

Based on the findings of an interview conducted on January 16, 2023, with a proficient senior computer specialist in the field of informatics application creation at the Palu City Communication and Information Department in the Command Center room, he stated:

“Currently, there is no special socializing strategy for the smart

city. However, if we focus on a specific application, one example is the mayor's report, where the government conducts socialization efforts to educate people about the usage of the application. This application is designed to facilitate the people in expressing their desires to the government. The Ministry of Communication and Information will organize a Focus Group Discussion (FGD) this year, which will include government officials, academics, communities, and corporate players. The purpose of this event is to provide a platform for discussion and to communicate the aspirations of the different stakeholders involved. However, based on the events of the previous year, this was not made known to the general public. However, the government organizers have put it into effect.”

The results of an interview with the village head from Petobo Sub-district at the South Palu sub-district office said the following: "So for the public, frankly, maybe not everyone knows about smart cities, we as the government has socialized to the public how specifically Petobo is planning an agro area, this includes agriculture is in this liquefaction area, and this is included in the smart city."

Upon careful examination, there has been a dissemination of information regarding intelligent governance through

the implementation of the Mayor's Report application. From the interview results, it can be inferred that the government has not effectively informed the people of Palu City about smart cities. However, the Palu City government as a whole has conducted awareness campaigns about the implementation of smart governance through the LaporwaliKota application. This initiative aims to facilitate the community in expressing their opinions and desires. At the sub-district level, there is a lack of awareness among many individuals regarding this smart city.

Issues about uneven socialization arise in implementing smart city policies in Palu City. However, academics assert that this is a common problem in the implementation of smart cities throughout several towns in Indonesia. The Bandung City Government had similar challenges when adopting smart city initiatives during the early phases (Mursalim, 2017). Moreover, Indriasari & Satlita (2023) asserted that the absence of adequate dissemination of information on smart city policies would result in the exclusion of certain segments of society from reaping the advantages of smart cities. The socialization process will guarantee that all relevant implementing parties at the

municipal government level fully comprehend the smart city policy (Rahmadanita et al., 2019). Therefore, researchers believe that the Palu City Government should implement a systematic and ongoing process of informing and educating the public by effectively leveraging and maximizing social media platforms that promote smart cities in Palu City.

#### B) Clarity

The outcomes of an interview conducted on January 16, 2023, with proficient senior computer specialists in the informatics application development division at the Palu City Communication and Information Department, specifically in the Command Center room, revealed their insights on the clarity of smart city regulations as follows:

“The realization of Smart Cities requires the active participation of all stakeholders, including the government, private sector, and community. The community needs to contribute if the government intends to explore initiatives such as E-government or EBSGS. However, it is worth noting that the community may not always be prepared for such involvement. Despite prior efforts to inform the public, many individuals were unprepared when the



transportation agency introduced E-Parking. However, the government believed people needed further time to adapt to these technological advancements. Returning to the Mayor's Report application. Only a minority of individuals are adept at utilizing the Internet to express their ambitions. Some opt to do so through social media platforms, while others voice their grievances directly.”

The researchers interviewed the Petobo Village Head in Palu City at the South Palu sub-district office to gain an understanding of the concept of smart cities: "If the term 'smart city' refers to a city that is technologically advanced and efficient, then it is indeed a positive development. The Palu City government will prioritize the residents of Palu City in their efforts to transform it into a smart city. Education will be enhanced in this scenario, as its primary objective is to provide knowledge and instruction.” The researchers conducted an interview with RW in Palu City at Huntap Duyu regarding clarity regarding smart cities, that: "This is actually possible but needs to be socialized with residents and given as detailed an explanation as possible. And don't let the residents hear it from word of mouth; if necessary, they will present it. "Just a small example in this Huntap: if there is a

meeting where only the RW RT is gathered, this could result in different delivery to other parties." Based on the interview results, the researchers conclude that a lack of readiness among people hinders the comprehension of smart cities despite the government's efforts to promote awareness about an application or program. Nevertheless, the government believes that society needs to adjust to accommodate these technological advancements. The conclusions of this study align with the findings of Kurniawan & Andiyan (2021), who contend that the development of a smart city necessitates a balance between human and technological aspects rather than relying solely on technology. Smart cities aim to facilitate the integration and acceptance of technology in delivering public services, to enable society to adapt to these advancements. The populace can enhance their knowledge and comprehension through intelligent educational initiatives, thereby equipping the community, as directed by the municipal administration, to effectively adjust and thrive in the forthcoming era of competition (Sadjati, 2017). Hence, scholars assert that the Palu City Government should establish a prioritized strategy for addressing

community needs, encompassing both technological advancements and the preparedness of the community to embrace such technology. The Palu City Government can enhance the knowledge and comprehension of the residents of Palu City by implementing progressive and ongoing initiatives focused on digital literacy and digital education. The implementation of digital literacy programs is expected to enhance the community's proficiency and utilization of technology (Evita & Mukhaer, 2022). Through digital education, the Palu City Government, namely the Palu City Communication and Information Department, can create a user-friendly website that offers convenient services, enabling education to be delivered through community leaders. This convenience can significantly decrease the duration of service and digital education can be conducted at any location and at any moment (Ayuningtyas et al., 2022). Thus, researchers urge the Palu City Communication and Information Department to provide transparent information and carry out smart education programs by increasing the intensity of digital literacy and digital education

activities, especially for the people of Palu City.

### C) Consistency

The results of an interview with the Mayor of Palu on January 20, 2023, at the Palu Mayor's office regarding consistency regarding smart city policy said: "The target in 2023, the Palu City government hopes that smart city implementation will reach 50% and currently smart city implementation has reached around 40%." The results of an interview with a senior computer specialist in the informatics application development section on January 16, 2023, at the Palu City Communication and Information Service in the Command Center room regarding consistency regarding smart city policy said: "There have been changes in policy formation due to adapting to community needs, the City government has not can equalize the characteristics and needs of people in the city center and areas on the outskirts of the city, for example, the quality of infrastructure is different."

The development and implementation of smart cities are consistent due to the inclusion of the smart city program in the Regional Head's Vision/Mission/Work Program and its

integration into the strategic plan of the Palu City Communication and Information Department (as stated in the Decree of the Head of the Palu City Communication and Information Department Number: 870/0290/Diskominfo/2021). This decree establishes the team responsible for preparing the Palu City Communication and Information Department's strategic plan for 2021-2026. Based on the interview results, the government can conclude that it aims to achieve 50% implementation of smart cities by 2023, with the current progress standing at 40%. Regional governments implement policy adjustments to accommodate the specific requirements of their communities, as it is not feasible for the government to cater to the needs of society at large. However, Rahmadanita et al. (2019) argue that the effectiveness of smart city policies is equally dependent on the role of policymakers in ensuring uniformity in their implementation.

Furthermore, it was asserted that the coherence of the smart city policy would be evident if it garnered endorsement from local leaders and all components of regional agencies within a city. Researchers have found that the Palu City Government has been steadfast in

their efforts to establish a smart city in Palu. This is mostly due to their support from the Mayor of Palu, particularly regarding clear legislation.

## **1.2 Resources**

Existing resources are evaluated to comprehend the implementation of this policy. The following are observations regarding the resources required for implementing a smart city in Palu City: operative staff, information, authority, and existing facilities.

### **A) Operative Staff**

The interview with a senior computer specialist in the informatics application development section on January 16, 2023, in the Command Center room of the Palu City Communication and Information Department, revealed the following regarding the implementation of personnel in accordance with the smart city policy:

“From a government perspective, resources in implementing smart cities can be said to be lacking; technically, there are still employees who do not understand the existing applications. From the job analysis, only half or insufficient of the required formation is required. This is almost the case with the Regional

Apparatus Organizations (RAO) in Palu City. Even though they can be trained, the lack of employees is an obstacle in implementing smart cities.”

During an interview on January 16, 2023, with the Head of the Section for Capacity Building of Resources and Information Access Services at the Palu City Communication and Information Service, the senior computer specialist discussed the implementation of staff in relation to the smart city policy as follows: “There is now a scarcity of employees in the field of applications and informatics. Certain parts inside this area are currently unstaffed. However, we will provide training for each RAO.”

The Strategic Plan of the Palu City Communication and Information Service, specifically in point 3.5, addresses the challenge of insufficient capacity among staff members in effectively managing technology-based information (Decree of the Head of the Palu City Communication and Information Service Number: 870/0290/Diskominfo/2021, which pertains to the Strategic Plan Drafting Team for the Palu City Communication and Information Service from 2021 to 2026). The researchers might infer from the interview results that government

employees still lack comprehension of the implementing smart cities concerning government resources. This is the situation in most ROAs in Palu City, while it is possible to enhance and refine it through training.

The Palu City Government faces challenges regarding insufficient human resources (HR), both in terms of quantity and quality, which affect the implementation of smart city plans. Previous studies have elucidated that smart city program services suffer from a deficiency in the management of human resources (Prasetyo et al., 2023). The availability of skilled human resources, particularly in technology, is crucial in determining the successful implementation of smart city initiatives (Maluwu et al., 2021). However, high-quality human resources are believed to generate innovative public services of good quality (Saharuddin, 2017). Researchers believe that employees within the Palu City Government should receive Technical Guidance or Education and Training activities to enhance their proficiency in using technology and applications. This will enable them to implement smart city policies in Palu City effectively.

## B) Information

The interview conducted on January 20, 2023, at the Palu Mayor's office with the Mayor of Palu yielded information about smart city policies: "The Palu City government has prioritized the development of smart infrastructures aligned with digitalization. As a result, limited publicity has been conducted to allow for the completion of the necessary infrastructure. This approach ensures that the public can witness the progress and efforts made in a comprehensive and balanced manner."

According to the results of an interview with the head of the Regional Development Planning of Palu City on January 16, 2023, at the Regional Development Planning Palu City office regarding information about smart cities, he said: "The entire community has been informed about the City of Palu's intention to construct a smart city through socialization. This was communicated due to the inclusion of smart cities in municipal planning documents, including RPJMD regional regulation number 4 of 2021. Additionally, smart cities are incorporated into the Communication and Information Department strategic and work plans." The Palu City Communication and Information

Department's strategic strategy includes implementing smart cities. The Smart City program has been incorporated into the vision, mission, and work program of the regional head, as well as the policy direction funding strategy of the Palu City Communication and Information Department strategic plan (Decision of the Head of the Communication and Information Department of Palu City Number: 870 / 0290/Diskominfo/2021 Regarding the Strategic Plan Drafting Team for the Palu City Communication and Information Department for the years 2021-2026, 2021).

Based on the interview results, the researchers conclude that the Palu City Government has prioritized infrastructure development over publicizing their efforts to create a smart city. The government's approach is to showcase the city's physical transformation as evidence of progress. However, it should be noted that the Palu City Government has officially announced its intention to build a smart city through RPJMD Number 4 of 2021 and through the Strategic Plan and Work Plan of the Palu City Communication and Information Service.

Researchers assert that it is crucial to widely provide written documents containing comprehensive information about smart city rules to the people in Palu City. Social media is a medium that can enhance publicity. According to Destanti et al. (2021), the municipal administration can attract and enhance the participation of local inhabitants by frequently creating instructive content with appealing designs on social media. The Palu City Communication and Information Department can collaborate with the Public Relations (PR) Department of the Palu City Government to communicate smart city policies to the community. According to Ristanto (2015), city public relations play a crucial role in addressing the requirements of a smart city, which is strongly linked to technology and information. Alternatively, publicity can be enhanced by allocating budgets to regional agencies and fostering collaboration with diverse sectors such as the private sector, mass media, academia, and the community (Oktriasra, 2020).

### C) Authority

According to the results of an interview with the Head of the Informatics Applications Division regarding the authority of smart city policy

implementers, he said: “The authority of each Regional Apparatus Organization in implementing smart city can be observed by ensuring compliance with their roles and obligations as outlined in the smart city council ordinance. Currently, we are in the process of preparing paperwork to establish a comprehensive master plan.” The results of an interview with a senior computer specialist in the informatics application development section on January 16, 2023 at the Palu City Communication and Information Department in the Command Center room regarding the authority regarding smart city policy, he said:

“It is certain that the basis for this is derived from either regulation set by the supervisory board of the Communication and Information Department or regulations established by the ministry. There are certain constraints and the influence of society plays a crucial role. The Ministry of Communication and Information is responsible for tasks related to Information and Communication Technology (ICT). When exercising this power, it is done in line with the specific jurisdiction, whether it is at the sub-district, district, or Ministry of Communication and Information level.”

The researchers conclude that the authority to create smart cities should be

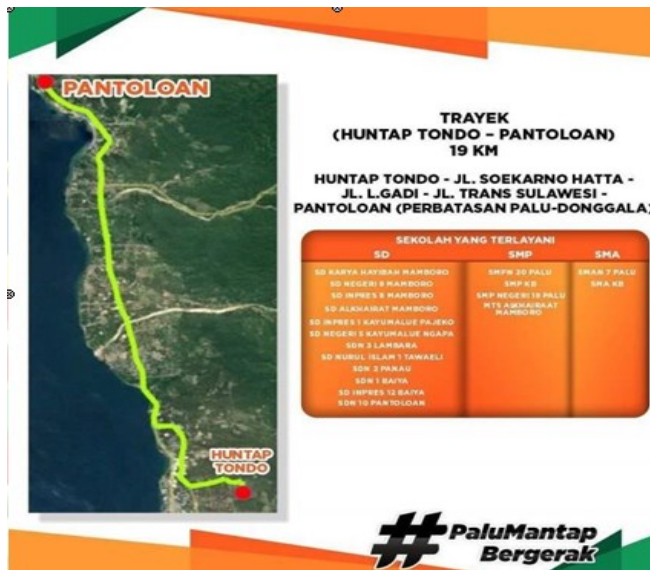
based on the specified fields. The Mayor has established a Palu Smart City Preparation and Implementation Team to execute the smart city project according to the assigned areas and responsibilities. responsibilities.

#### D) Facilities

The Head of the Informatics Applications Division at the Palu City Communication and Information Service, in an interview conducted in the Command Center room, stated that the infrastructure in Palu City is not yet optimal. He said, "When we visited the field, one of the ICT networks was operational, but it is not yet optimal due to the ongoing issues. It is still not there if you wish to implement a smart city regarding ICT and its supporters and support." Page 65 of the Strategic Plan of the Palu City Communications and Information Services Department explains that the ICT network infrastructure is not yet optimal, and coordinate points are not yet fixed in the Palu City area. This is due

to the lack of good infrastructure, particularly networks, and ICT (Decree of the Head of the Palu City Communications and Information Department Number: 870 /0290/Diskominfo/2021 Concerning the Team for Preparing the Strategic Plan for the Palu City Communication and Information Service for 2021-2026, 2021). Additionally, the following are additions from senior computer specialists in the field of infrastructure and facilities:

“Smart City attempts to make urban living more convenient for individuals. We can observe that there are still insufficient roads for individuals with disabilities, and bicycle lanes are not yet present. Smart mobility, specifically the school bus transportation route, is being processed. However, the school bus route continues to converge with the public route. Additionally, CCTV remains inadequate in areas that require safeguarding. Therefore, it can be concluded that infrastructure facilities are still deficient.”



**Figure 2. Smart Mobility Infrastructure: School Bus Transportation Routes**

As a result of the interview results, the researchers can infer that there are still numerous deficiencies in infrastructure facilities that facilitate the lives of the residents of Palu City. There is still a significant amount of content that must be incorporated in to bolster smart city policies. According to Santoso & Rahmadanita (2020), it is feasible to develop a requirements planning map in order to enhance the likelihood of the successful implementation of smart city policies. Therefore, researchers believe that the Palu City Government should be capable of developing an infrastructure design specifically designed to accommodate the implementation of smart city policies. The addition of infrastructure, including fiber optics, data center servers, hardware, and software,

can be implemented in stages under budgetary constraints from year to year.

### 1.3 Attitude

The attitudes of those who implement smart city policies are the factors that make the policy a reality. The party will execute the agreement effectively if it consents. Numerous challenges will plague implementing smart cities if the converse is the case. Disposition effects, staffing work, and incentives in the form of awards provided to smart city policy implementers are all indicators of attitudes or dispositions in the implementation of policies.

#### A) Disposition Effect

After interviewing with the Head of the Informatics Applications Division



on January 19, 2023, in the Command Center room of the Palu City Communication and Information Service, regarding the disposition effect of the smart city policy, he stated that:

“I can confirm that you have exhibited a positive attitude, as I observed yesterday, numerous RAO were invited to participate. Each RAO submitted their proposals, which included their innovations in the implementation of the smart city, such as the development of applications like dukcapil, which has numerous innovations. However, they are generally supportive and enthusiastic about the smart city.”

After conducting interviews with senior computer specialists in the informatics application development section, the findings regarding the impact of disposition on smart cities were as follows: “The attitude is considered favorable from the internal perspective of the Communication and Information Department, particularly in the field of Aptics, as it is a component of their daily responsibilities and obligations as employees. It is an integral component of the smart city; the implementers and the daily duties are conducted in this manner.” Several department directors from the Palu city government attended a meeting to

discuss the acceleration of the Smart City program. They alternated between presenting programs from their respective OPDs in accordance with TUSI and engaging in discussions with the Smart City team (Gerry, 2022). The researchers’ conclusion from this interview is that all parties involved exhibit a high level of enthusiasm for implementing smart city policies, as evidenced by the attitudes of employees during meetings or discussions about smart cities.

#### B) Bureaucratic Staffing

The following is the outcome of an interview with the Mayor of Palu on January 20, 2023, at the Palu Mayor's office, regarding bureaucratic personnel about smart city policies: “The Palu City administration is currently in the process of preparing for the implementation of smart cities, despite the fact that this concept is relatively new. Regardless of whether or not the government is directly involved in the implementation of smart cities, it will consistently assess and promote this initiative.” The Head of the Informatics Applications Division stated in an interview conducted on January 19, 2023, at the Palu City Communication and Information Service in the Command Center room regarding bureaucratic

staffing in smart city policy, "The implementers of smart city implementation are prepared to operate a smart city in Palu City. This is due to the fact that the implementers have conducted numerous training sessions, such as

becoming operators in sub-districts or RAOs who have received training at the Communication and Information Department to be prepared to confront the smart city."

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LAMPIRAN  
KEPUTUSAN WALI KOTA PALU  
NOMOR 535/202 /K-01M/10/2023  
TENTANG  
TIM PELAKSANA KOTA CERDAS  
(SMART CITY)

I. Pengarah I	: Wali Kota Palu
II. Pengarah II	: Wakil Wali Kota Palu
III. Penanggung Jawab	: Sekretaris Daerah Kota Palu
IV. Ketua	: Kepala Badan Perencanaan Pembangunan Daerah Kota Palu
V. Wakil Ketua	: Kepala Dinas Komunikasi dan Informatika Kota Palu
VI. Sekretaris I	: Sekretaris pada Badan Perencanaan Pembangunan Daerah Kota Palu
VII. Sekretaris II	: Sekretaris pada Dinas Komunikasi dan Informatika Kota Palu
VIII. Anggota	: 1. Kepala Bidang Perencanaan pada Badan Perencanaan Pembangunan Daerah Kota Palu 2. Kepala Bidang Monitoring dan Evaluasi pada Badan Perencanaan Pembangunan Daerah Kota Palu 3. Kepala Bidang Data dan Informasi pada Badan Perencanaan Pembangunan Daerah Kota Palu 4. Kepala Bidang Pengelolaan Informasi dan Komunikasi Publik pada Dinas Komunikasi dan Informatika Kota Palu 5. Kepala Bidang Aplikasi Informatika pada Dinas Komunikasi dan Informatika Kota Palu 6. Kepala Bidang Persandian pada Dinas Komunikasi dan Informatika Kota Palu 7. Kepala Bidang Statistik pada Dinas Komunikasi dan Informatika Kota Palu 8. Kepala Bidang Pembinaan Ketenagaaan pada Dinas Pendidikan dan Kebudayaan Kota Palu

**Figure 3. Decree regarding the Smart City Implementation Team**

The interview above has led to the conclusion that the Palu City administration will consistently evaluate and promote the realization of a smart city in Palu City, and the implementers of smart city implementation have received numerous training sessions. This is consistent with the findings of Oktriastra (2020), which asserts that the existence of

human resource education and training is one of the developments in the implementation of electronic-based government governance. In order to facilitate the implementation of smart city policies, regional agencies/agencies must enhance their human resources (Harlina & Mustafa, 2018). Human resources are believed to adapt and innovate when their

quality is enhanced through education and training (Amarullah et al., 2022). Consequently, researchers believe that the Palu City Government has the capacity to develop plans for educational and/or training activities that smart city implementers can adhere to. Training activities are conducted continuously and staged, encompassing all employees, not just a few. Furthermore, the Palu City Government must optimize and assess the training activities that have been undertaken in order to modify the type of training that is most appropriate for the employees responsible for the smart city's implementation.

#### C) Awards as incentives

The Head of Informatics Applications stated in an interview regarding the authority of smart city policy implementers, "Not yet, as we are still in the process of transitioning to a smart city." The interviews with senior computer specialists in the informatics application development section regarding the authority regarding incentives in the form of smart city awards revealed the following:

“if it is not explicitly specified in the service policy. The incentive is considered a compensation if it is

associated with implementing a smart city. Is there a reward? Although it has not yet been established, Palu City is among the top 50 cities that are facilitating the implementation of smart cities. The Ministry of Communication and Information is responsible for all financing. Currently, no incentives are available to encourage the implementation of smart cities. Employee rewards are comparable to civil servant idols' performance; however, there are currently no incentives for smart city implementers.”

The research findings indicate no provisions for morning incentives to organizers. The researchers in the above interview concluded that the government has not yet provided incentives in the form of awards to smart city implementers. These research results are consistent with Hadiwijaya's (2015) assertion that incentives provided to employees can directly impact their performance. Marom (2015) elucidates that organizations can foster motivation, while individuals can help develop incentives. Consequently, researchers reward employees of the Palu City Government who innovate in implementing smart city policies through the civil servant Idols program

## 1.4 Bureaucratic Structure

The implementation of policies is influenced by the bureaucratic structure. The bureaucracy's structure is crucial because it is responsible for multiple activities that involve numerous individuals. In a bureaucratic structure, behavior undergoes modification in order to accommodate the requirements. SOP and fragmentation are indicators of bureaucratic structure.

### A) Standard Operational Procedures (SOP)

Based on an interview with the Head of the communications and Information Department at the Palu City communications and information services office regarding SOP for smart city, he stated:

“Please consult Mr. Yan Sen for the standard operating procedures (SOPs) for smart cities, as they are not yet functioning as anticipated. Our endeavors are concentrated in the communications and information sector, where smart communities are the most critical component. We may conduct a focus group discussion (FGD) with the Ministry of Communication and Information this year. A document regarding smart cities will be distributed to all OPDs later. Palu was chosen as one of 50

regencies/cities that will implement a smart city.”

The Head of the Informatics Applications Division stated in an interview conducted on January 19, 2023, at the Palu City Communication and Information Department in the Command Center room regarding SOPs in smart city policies that "We have not yet created any SOPs. There are SOPs for tasks, but not yet the function of the Communication and Information Department as a whole."

Mr. Yan Sen, a young computer expert in the informatics application development section, was interviewed by the Head of the Palu City Communication and Information Service on January 16, 2023, in the Command Center room regarding SOP regarding smart city policies. He stated, "Communication and Information are closely related to statistics and coding. Therefore, the Communication and Information Department has several things in common, namely, the fields of IKP, APTIKA, Coding, and Statistics. Nevertheless, the present structure has not yet been adjusted to the current circumstances; it is still based on 2017. This must be reconditioned and adjusted to the current situation." As indicated in the interview results above,

there is no standard operating procedure (SOP) for the implementation of Smart City policies.

The researchers conclude that the communications and Information Department is consistent with statistics and coding; however, the current structure is not yet adjusted to the current situation, as it is still founded on 2017. This must be reconditioned and adjusted to the current situation. There is currently no such thing as an overall SOP that discusses smart cities. The significance of SOP is that they can oversee the execution of public services based on smart cities, from their conception to their evaluation (Esferansa, 2021). One of the SOPs crucial for the implementation of smart city policies in a city is the information security SOP (Santoso & Rahmadanita, 2020b). Additionally, the SOP for the smart city supporting information system must be ratified (Santoso & Rahmadanita, 2020a). Consequently, the researcher suggests that the Palu City Government facilitate the flow of public services by ratifying SOPs that support smart cities.

#### B) Fragmentation

The Head of the Informatics Applications Division stated in an

interview conducted on January 19, 2023, at the Palu City Communication and Information Service in the Command Center chamber, regarding Fragmentation in smart city policies:

“Smart city implementers are composed of numerous existing ROAs, each of which plays a unique function in the realization of this smart city. The implementing team's decree includes all ROAs to ensure that they are aware of their respective responsibilities and roles in the Decree. Subsequently, a meeting will be convened to solicit the input of each ROA regarding their subsequent actions, and a comprehensive strategy will be devised. Additionally, academics and business actors will be incorporated, including micro, small, and medium-sized enterprises (MSMEs).”

A joint interview was conducted with a senior computer specialist in the informatics application development section regarding the authority regarding the fragmentation of smart cities. The individual stated, “A smart city development council and implementation team were established yesterday. The division is evident in the decree. The division is consistent with the responsibilities of the respective ROA. For instance, what is the objective of wise living in ROA, and what are the social and

health dimensions? The distribution has been organized through this decree.”

The parties concerned with the implementation of the smart city in Palu City are specified in the Smart City Implementation Team Decree and the Smart City Council Decree. The smart city council is responsible for developing general and strategic policies in the field of smart cities. Based on the results of the aforementioned interview, the researchers conclude that the Decree of the Palu Smart City Development Council and the Decree of the Implementation Team for the preparation and implementation of the Palu Smart City have established the division of responsibilities for the smart city's implementation.

## **CONCLUSION**

The execution of the Smart City Policy in Palu City has been subpar. Communication is currently inadequate, as there has been no extensive dissemination of information. The government has not yet implemented a cohesive approach to educate the public about smart governance through an application called the Mayor's Report. The challenge in comprehending smart cities lies in the lack of preparedness among the general people. The Palu City

government aims to achieve a 50% implementation of smart city initiatives by 2023. The division of the Palu Smart City Preparation Implementation Team and the Smart City Palu Development Council have organized resources related to the implementation of smart cities. However, certain government personnel in each Palu City RAO still lack understanding of technology. The City Government has yet to disseminate comprehensive information and promote awareness regarding smart cities. However, it has been announced that the Palu City government intends to construct a smart city as part of the Regional Medium-Term Development Plan number 4 of 2021, as well as through the strategic plans and initiatives of the Palu City Communications and Information Office. This research provides insight into the mentality of the individuals responsible for carrying out the task. All stakeholders exhibit strong excitement in implementing smart city initiatives. The implementers of smart city initiatives have undergone multiple training sessions, and the Palu City Government will consistently conduct evaluations. The Palu City Government has not yet offered any incentives, such as rewards, to those who have implemented smart city initiatives.

There is a lack of Standardized Operating Procedures (SOPs) for the bureaucratic implementation of smart cities. The allocation of responsibilities in implementing the smart city has been outlined in the Decree of the Palu Smart City Development Council and the Decree of the Palu Smart City Preparation and Implementation Team.

## RECOMMENDATION

The research findings suggest implementing extensive public outreach programs to educate the community about smart cities and the various dimensions they encompass. Additionally, it is recommended that additional facilities and infrastructure be developed in Palu City to enhance the quality of life for its residents. These improvements should not be limited to network-related infrastructure but should also include environmental, education, and transportation initiatives. Furthermore, training programs should be conducted for regional officials lacking technological understanding, enabling them to adapt to smart city policies effectively.

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