

Public Participation in Rapid Response Services for the Sustainability of Jakarta Smart City

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Public participation plays a vital role in developing fast response services to support Jakarta Smart City's sustainability. This study explores and analyses public participa-

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tion levels in utilising and developing these services, and their impact on urban sustainability. A qualitative case study approach was used, including in-depth interviews and document analysis. Findings reveal varying levels of public participation, influenced by accessibility, trust, and awareness. Active participants benefit more, while inactive ones experience service gaps. Public participation positively impacts service efficiency and quality of life, but barriers like low awareness, limited accessibility, and digital literacy persist. Efforts such as education, training, and improving IT infrastructure are essential to foster sustainable participation. In conclusion, public participation is key to Jakarta Smart City's sustainability, enhancing service efficiency, community involvement, and urban development. Continuous efforts are needed to manage and improve participation for long-term success.

Keywords: public participation, Jakarta Smart City, rapid response services, smart city sustainability

1. Introduction

The development of digital governance has resulted in several concepts in city management and governance, such as the concept of smart city governance. Smart city governance emerged in the 2000s and has been popularised by several experts. There is high hope for the smart city concept, which is seen as an effective way to solve various urban issues such as unemployment, inequality, poverty, traffic congestion, pollution, waste, crime, slum areas, global warming, public services, and other problems (Chourabi et al., 2012; Nam & Pardo, 2011; Giffinger et al., 2007).

Several experts have been paying attention to smart cities, but not only in terms of implementation and their impact on various large cities around the world. We can see the initial concept of smart cities starting from Giffinger and colleagues (2007), who measured several indicators of smart cities, such as smart economy, smart governance, smart living, smart environment, smart people, and smart mobility. Building on this, other experts have tried to approach it by developing various smart city study frameworks, such as the one established by Chourabi and colleagues. They also developed a framework that emphasises the need for technolog-

ical infrastructure, institutional infrastructure, and human infrastructure (Chourabi et al., 2012; Nam & Pardo, 2011).

Smart cities also integrate information and communication technology to improve the quality of life of their citizens with greater efficiency and sustainability. One important aspect of a smart city are rapid response public services, which are designed to provide quick responses to problems reported by the public (Kencono & Ahsany, 2023). This service not only increases the operational efficiency of the government in responding to citizens' needs, but also strengthens the active involvement of the community in the decision-making process and public services (Rifaid et al., 2023). By utilising technology to manage people's complaints quickly and effectively, smart cities can create environments that are more inclusive and responsive to the needs of their citizens, maintaining long-term urban sustainability (Issa Zadeh & Garay-Rondero, 2023).

The purpose of this article is to respond to the problem of community participation in smart city sustainability. The success of a smart city, especially in fast response public services such as providing a complaint channel, requires a high level of community participation. If community participation is low, the benefits of the services will not be maximised. Another problem is low participation due to accessibility and knowledge of information related to fast response services. Similarly, the completeness of citizen reports is hampered by some fast response managers who do not fundamentally understand their duties and functions, leading to weaknesses in coordination and follow-up.

This study maps out several research questions: What is the level of public participation in the use and development of rapid response services in Jakarta Smart City? What are the factors that influence the level of public participation? What are the obstacles that hinder public participation? The implications of the findings from this study include an in-depth understanding of the level of public participation in the use and development of rapid response services in Jakarta Smart City, identification of crucial factors that influence public participation, as well as identification of the main obstacles that inhibit public participation.

2. Literature Review

The smart city concept refers to the use of information and communication technology to improve the quality of life and efficiency of city man-

agement (Mora, Bolici & Deakin, 2017; Pereira et al., 2017). In general, smart cities focus on the integration of systems that collect and analyse data from various sources, including physical infrastructure, transportation, energy, and public services (Guevara & Cheein, 2020; C. Liu & Ke, 2023; Ramu et al., 2022). The main goal of smart cities is to improve city services such as transportation, education, health, and security more efficiently and sustainably (Rifaidd et al., 2023). Key aspects of smart cities include the use of technology to improve connectivity between city services, facilitate faster and more informed decision-making by governments, and empower citizens to participate actively in city management processes (Axelsson, Melin & Granath, 2024; Wang, 2024). In addition, smart cities also seek to optimise resource use with a data-driven approach, reduce environmental impacts, and improve the quality of life of citizens (Guo, Zeng & Lee, 2023; Wu, Xie & Lyu, 2023). By adopting advanced technologies such as the Internet of Things (IoT), big data analytics, and geographic information systems (GIS), smart cities create an integrated ecosystem to face the challenges of urbanisation and improve overall city sustainability (Liu et al., 2024; Shariatpour, Behzadfar & Zareei, 2024).

Public participation refers to the active involvement of the community in the public decision-making process and implementation of policies that affect their lives (Bai et al., 2022; Muthomi, 2024). This concept includes various forms of participation, from providing input in public forums and attending community meetings, to using online platforms to voice opinions (Jones & McKelvey, 2024; Szilard, 2016). In the context of smart cities, public participation is important because it allows citizens to contribute to the formation and evaluation of policies that influence the quality of their daily lives (Hsieh, Hou & Chou, 2015). Public participation in smart cities can be implemented through various initiatives, such as mobile applications, online surveys to assess citizen satisfaction with city services, or open meetings to discuss development plans (Gu, Hao & Zhang, 2024; Kashem, Bin & Gallo, 2023; Lim & Yigitcanlar, 2022). By encouraging active participation from diverse societal groups, smart cities can ensure that the resulting solutions are more inclusive and relevant to the needs of the society as a whole. However, challenges in implementing public participation include ensuring accessibility, providing clear and easy-to-understand information, and building trust between the government and citizens so that collaboration can run effectively.

Sustainability in the context of smart cities refers to efforts to integrate sustainable practices in more efficient, inclusive, and environmentally friendly city management (da Silva Tomadon et al., 2024; Okonta & Vuk-

ovic, 2024). Smart cities aim not only to improve the quality of life today but also to prepare cities to withstand long-term social, economic, and environmental challenges. One of the main ways smart cities contribute to sustainability is through the use of technology to efficiently manage resources, such as energy, water, and transportation (El-Taie & Kraidi, 2023; Naguib & Ragheb, 2022). By leveraging data and information technology, smart cities can identify sustainable usage patterns and reduce carbon footprints and other environmental impacts.

However, the relationship between smart cities and sustainability is often complex, and the context varies depending on each city's priorities and implementation. Smart city sustainability also includes aspects such as social justice, equality of access, and improving the overall quality of life for all its citizens (Chen, 2022). Challenges in achieving sustainability include managing rapid urban growth, ensuring inclusivity in community participation, and navigating tensions between economic and environmental needs. By developing smart city models that are both technologically efficient and socially and ecologically sustainable, a solid foundation can be built for a sustainable urban future.

3. Materials and Methods

This research is a case study that uses a qualitative approach to achieve in-depth understanding of participation and sustainability in the implementation of smart cities, especially in the aspects of smart governance related to Community Rapid Response Services in the Special Capital Region of Jakarta, Indonesia. Data collection maximises the results of interviews with informants and documentation. The main informants in this study involved three managers at the Jakarta Smart City agency, heads of sub-bureaus in the Jakarta provincial government, one resource person at the Jakarta Environmental Service, six resource persons in six sub-districts who are part of the smart city implementation, and eight resource persons from communities that are actively involved in reporting problems. This case study was conducted from February 2022 to March 2023 in the Special Capital Region of Jakarta.

The informants in this case study were chosen because they have a key role and direct experience in the implementation of smart cities and Community Rapid Response Services in Jakarta. Managers at the Jakarta Smart City agency have in-depth knowledge of smart city policies and

operations. At the same time, sub-bureau heads in the Jakarta provincial government are involved in cross-sectoral coordination that is crucial to the success of this initiative. Resource persons from the Jakarta Environmental Service provided perspectives on the integration of environmental aspects in smart governance. Six resource persons from the sub-districts participating in smart city implementation provided insight into the implementation of the programme at the local level and the specific challenges faced. Finally, eight sources from the community who actively reported problems were selected because they represent the voices of residents who interact directly with the system, thereby providing insight into the effectiveness and impact of community participation in the programme.

On the other hand, the documentation for this research features data obtained from the official government website, which can be accessed at <https://crm.jakarta.go.id/perjalanan-crm>. This site provides the latest and relevant information regarding the Citizen Relationship Management (CRM) journey in Jakarta, including policy, implementation, and impact on city management. By relying on credible and trustworthy data sources, this research ensures the validity and accuracy of the information used in the analysis. In addition, the use of official government websites as the main reference strengthens the arguments and findings presented in this study.

4. Results

4.1. Rapid Response Service

Various public services have been provided by the Jakarta regional government to overcome various complex public problems. One of the service programmes provided is Jakarta Smart City, which includes Rapid Community Response (RCR), a rapid response service. The service programme in RCR aims to improve the performance of government services. In its implementation, the governance of public complaint services on the Rapid Community Response channel has experienced various dynamics which can be seen from the problems that arise when it is implemented. The following are the dynamics that occur in the governance of public complaint services on the Rapid Community Response channel.

There are 13 official complaint channels provided by DKI Jakarta (*Daerah Khusus Ibukota Jakarta*) through Jakarta Smart City, divided into two types of complaint and reporting systems: geotagged and non-geotagged.

The geotagged complaint channel is a real-time application that can track the process and stages of resolving complaints or reported problems. The types of complaints that are geotagged include the *Qlue* and *JaKi* applications, while other reporting methods such as via Twitter, Facebook, email, and others are non-geotagged. The 13 official geotag- and non-geotag-based complaint channels that can be used are JAKI (*Jakarta Kini*) (geotagged), *Qlue* (geotagged), Twitter @DKIJakarta (non-geotagged), Facebook Pemprov DKI Jakarta, Electronic Mail dki@jakarta.go.id, Jakarta Community Centre, Media Sosial Gubernur DKI Jakarta, SMS LAPOR 1708, SMS 08111272206, District Office, Mayor’s Office, City Hall, and Inspectorate Office. More details can be seen in Tables 1 and 2 below.

Table 1: *Geotagged complaint channels*

No.	Complaint Channels	Description
1	JAKI (Jakarta Kini)	Real-time application for tracking the complaint process and resolution stages.
2	Qlue	Mobile app for reporting issues with geotagging features.

Source: Authors, based on Jaki Jakarta, 2019.

In Jakarta, geotagging-based complaint channels such as JAKI (Jakarta Kini) and *Qlue* play an important role in increasing citizen engagement and government transparency. JAKI functions as a real-time mobile application that allows residents to report various problems while tracking the entire complaint process and stages of resolution (Jaki Jakarta, 2019). This platform uses geotagging to mark precise locations, facilitating monitoring by authorities and timely response to problems reported by the public. Similarly, *Qlue* serves as another mobile application for geotagging-based reporting, allowing users to pinpoint specific locations of problems such as infrastructure deficiencies or service gaps. These technologies not only empower citizens with a direct channel to raise their concerns, but also promote accountability and responsiveness in public services through transparent and publicly accessible reporting mechanisms.

Table 2: *Non-geotagged complaint channels*

No.	Complaint Channels	Description
1	Twitter @DKIJakarta	Twitter account for public complaints
2	Facebook Pemprov DKI Jakarta	Official Facebook page for public complaints
3	Electronic Mail dki@jakarta.go.id	Email for submitting complaints
4	Jakarta Community Center	Physical location for public complaints
5	Media Sosial Gubernur DKI Jakarta	Social media platforms managed by the Jakarta Governor's Office
6	SMS LAPOR 1708	SMS service for public complaints
7	SMS 08111272206	SMS service for public complaints
8	Kantor Kecamatan	District Office for public complaints
9	Kantor Walikota	Mayor's Office for public complaints
10	Balai Kota	Jakarta City Hall for public complaints
11	Kantor Inspektorat	Inspectorate Office for public complaints

Source: Authors.

In Jakarta, various non-geotagged complaint channels are important for the public to convey problems and complaints related to government services. For example, Twitter @DKIJakarta and the official DKI Jakarta Provincial Government Facebook page are widely used as platforms to interact directly with citizens and receive complaints and input from them. Apart from that, email dki@jakarta.go.id is also an effective means for residents who prefer to send complaints in writing. The Jakarta Community Centre offers a physical location where residents can submit complaints directly, providing easy access for those who are unfamiliar or need help with the use online channels.

Apart from digital platforms, the District Office, Mayor's Office, and Jakarta City Hall are also options for people who want to submit complaints directly to the local government. This provides options for Jakarta residents to choose the most convenient and effective way to convey their

complaints. SMS (Short Message Service) services such as LAPOR 1708 and SMS 08111272206 are also very useful for people who prefer to use short messages to convey their complaints directly to the government. With this variety of channel options, the DKI Jakarta government seeks to provide broad access for the community to participate in developing and improving public services in the city.

Governance of the service itself is focused on response time and is regulated by the following mechanism. First, the complaint channel administrator has a maximum of six hours to respond by pressing the “process” and/or “disposition” button on the Citizen Relations Management Application to follow up on the complaint and/or coordinate with the relevant regional apparatus or work unit under their authority. Second, the complaint channel administrator must confirm the details of the complaint (not only looking at the complaint category but also looking at the photo, description, and/or contacting the complainant if necessary) before following up or coordinating with the relevant regional apparatus or work unit under their authority. Third, the person in charge of the location-based feature complaint channel (geotagging) is obliged to inspect the location no later than 6 hours after the complaint is received to determine whether it can be followed up or coordinated with other regional apparatus or work units under their authority.

The fourth element, the regional apparatus that receives a complaint from the complaint channel administrator which it deems is not within their authority, can utilise the “ticket/miscoordination” feature in the Citizen Relations Management Application, and the Regional Government Bureau of the Jakarta Regional Secretariat will decide which regional apparatus should follow up on the complaint. The fifth element, villages that receive location-based complaints which are not within their jurisdiction, can utilise the “ticket/wrong location” feature in the Citizen Relations Management Application, and the Regional Government Bureau of the Jakarta Regional Secretariat will decide which regional apparatus should follow up on the complaint. The fifth element, village and/or regional officials who receive unclear complaints, can utilise the “unclear ticket/report” feature in the Citizen Relations Management Application, and the Jakarta Provincial Government Bureau will check the complainant.

The sources of information available to the public include television, word of mouth, online media, newspapers or magazines, social media (Facebook, Twitter, etc.), outdoor media, and radio. Even though television is the source of information most widely used by the people of Jakarta,

this is not the case for the people of the Seribu Islands. The information sources that are most widely used by the people of Jakarta based on the administrative city area are seen as a form of favouritism towards ordinary people and are trusted by people throughout the Jakarta area. The people of North Jakarta even believe that the service programmes provided by the Provincial Government help the community in terms of the economy. This is of course related to the main issue that the society wants to resolve immediately, namely the problem of poverty.

DKI Jakarta provides 13 different complaint channels as a means for the public to convey their complaints. Each of these channels is designed to accommodate people's different preferences and needs. For example, applications such as JAKI and Qlue use geotagging features that allow users to report problems by including real-time location information. Meanwhile, other channels such as Twitter, Facebook, email, and SMS serve to submit complaints without using geotagging. This diversity of channels aims to provide wider access for the people of Jakarta to convey their complaints, with the hope that these various methods can cover various preferences and levels of technological skills.

Response coordination from these 13 complaint channels is carried out through the Citizen Relations Management Application, where the complaint channel administrator is responsible for responding and following up on every incoming complaint. Regulated mechanisms, such as maximum response time of six hours and confirmation of complaint details before follow-up, aim to ensure that each complaint is treated quickly and efficiently. Regional apparatus and village officials are also involved in this coordination, using features such as "ticket/miscoordination" and "ticket/wrong location" to respond to complaints that are not within their jurisdiction. Although various parties may manage these channels, the aim is to provide a coordinated and effective response to every complaint submitted by the people of Jakarta.

The elements of governance mechanisms in rapid response services in Jakarta, as described above, can be justified by the concept of smart governance and public participation in the context of a smart city. The concept of smart governance emphasises the use of information technology to increase efficiency, transparency, and accountability in city management (Aldegheishem, 2024; Bokhari & Seunghwan, 2024; Zhu et al., 2024). In this case, the mechanisms described, such as maximum response time limits, confirmation of complaint details, and coordination between work units, demonstrate efforts to ensure a fast and coordinated response to

problems reported by the public. This concept also supports active public participation by providing a platform for citizens to report problems through various available information channels, such as social media and citizen relationship management applications.

4.2. Community Participation and Sustainability

In terms of the factors influencing community participation, the Qlue application has been used by the community since 2014, but in 2020 cooperation with the Jakarta provincial government was discontinued. This is because the Jakarta provincial government has created a similar application, JaKI (Jakarta Kini). This means that the complaint channels provided by Jakarta Smart City are their own. This certainly reduces the smart city concept, which involves various parties in solving urban problems. According to the results of interviews, some people still have hope for the Qlue application. There is a perception based on experience that using this application provides convenience and different features, such as the feature to report problems again if one is not satisfied with the report. Meanwhile, in the Jaki application there is no feature for repeated reports, and after complaint submission, the responsible party provides the settlement status through the government bureau.

Even though the Qlue application partnership with the Jakarta government has not continued since 2020, other public complaint channels continue to be encouraged to increase participation in rapid response services for the community. Efforts are being made to encourage massive use of JAKI so that it can truly become a brand for rapid response services for the community. This is also corroborated by the activities of the Governor of Jakarta, who often wears a vest with the JAKI logo. This seems to be done to reaffirm to the people of Jakarta the benefits of the JAKI application, which includes the JakLapor feature as a rapid response service for the community. The Jakarta government has made efforts to familiarise the community with various service programmes.

However, it seems that some programmes are not optimally known to the public. There are several forms of services to citizens that are widely known and deemed to be useful by Jakarta residents. The results of a survey conducted by the DKI Jakarta Provincial Government in 2019 showed that the service programmes most widely known to the public were those related to health (97.08%), education (96.82%), and transportation via MRT and LRT (90.90%) (Central Bureau of Statistics, 2019).

Meanwhile, citizen complaint services rank 19th with a score of 36.34%. This data shows that familiarity with the services in the community is still relatively low. Of the 36 services provided, citizen complaint services still rank very low.

Based on data from the Central Bureau of Statistics, a strong cellular signal covers the entire area of Jakarta Province. 96.69% of households have mobile phones, and 93.33% of households have internet access. However, this fact is not always linear with increasing public access to online public services. For example, the JAKI application has been downloaded by more than one million users, while Qlue has been downloaded by more than 500,000 users (as of 6 August 2021). Compared to the population of Jakarta Province of 10.56 million people (Central Bureau of Statistics, 2020), the number of JAKI and Qlue downloads is still relatively low. However, both are the most popular channels for online participation, especially for reporting complaints. Although Qlue is no longer available, we must consider the reasons why it is no longer used despite having high community participation and being a popular complaint hotline app at the time.

If we look further at the number of citizen reports received through several official complaint channels of the Jakarta Provincial Government, the number is even lower. On the RCR portal, there were 428,894 reports recorded as of 6 August 2021. This number is less than half of JAKI users. The 2019 Public Complaints Service Evaluation Survey released by Diskominfotik showed a similar trend, with only 5.6% of respondents (out of 410 samples) admitting to having submitted a complaint through the official channels of the Jakarta Provincial Government. This indicates a gap: the high number of internet users has not been utilised optimally in terms of access to public services. In addition, gaps in access, especially for vulnerable groups such as the poor, are still a challenge. Findings from the Indonesian Internet Service Providers Association (APJII) in 2018 showed that internet users were much more common among those with higher education. Likewise, findings of the Central Bureau of Statistics in 2019 show that in Jakarta, only 7.35% of people without a diploma have internet access, and only 0.28% of people who cannot read have internet access. Even in the education sector, 39% of students do not have devices despite the distance learning policy (Central Bureau of Statistics, 2020). Poor and vulnerable people with limited internet access tend to have difficulty accessing online services.

By looking at this data, it can be ascertained that the public is not reporting through the rapid response services, even though 13 complaint

channels have been provided. Table 3 below lists the reasons why people do not report complaints through the rapid response services provided:

Table 3: *Reasons why people do not report complaints*

Reasons for Not Reporting	Share (%)
Did not know the service existed	58.49
Difficult to access	12.66
Difficult to understand	12.07
The identity of the reporter is considered unsafe	2.57

Source: Authors, based on the Central Bureau of Statistics, 2019.

The findings in Table 3 shows that the majority of people in Jakarta Province do not report their complaints about the rapid response services provided by the government, mainly because they are not aware of their existence (58.49%). In addition, around 12.66% of respondents stated that it was difficult to access the service, while 12.07% thought it was difficult to understand. A small portion, namely 2.57%, felt worried about the security of the reporter's identity (Central Bureau of Statistics, 2019). These findings highlight the importance of more effective outreach by the government to ensure that available public services can be accessed and utilised optimally by the people of Jakarta.

It should be noted that there are two forms of popularisation carried out. The first is for managers or RCR service providers (government), as mentioned above, and the second is for service users, in this case the public. Regarding data on the method of popularisation carried out by service providers, it can be seen on the official East Jakarta government website that popularisation has been carried out at the East Jakarta Mayor's Office regarding Jakarta Smart City (JSC), Jak Lingko, and RCR in Block B2, 1st floor, Jakarta Mayor's Office East. Residents visiting the East Jakarta Mayor's Office and surrounding areas can obtain information on the use of public transportation and Jak Lingko cards, as well as RCR applications, by directly visiting the JSC booth. However, so far, outreach has been carried out in several government agencies. Therefore, there are limitations to residents' learning about existing service products. Based on some of the information provided, it can be seen that on average popularisation is carried out quite well in local government offices. However,

when compared with some preliminary data, the level of familiarity with the existence of complaint services is still very low, ranking 19th out of 32 service programmes provided by Jakarta. This is of course a personal note for managers and providers of Rapid Community Response (RCR) services.

To make it easier for users of the JAKI application, it can be downloaded via the Google Play Store which is Jakarta's main application channel. When you open the Google Play Store, you can see that more than a million people have downloaded this app. According to data from the Jakarta Central Statistics Agency, the population of Jakarta is around 10 million people. Compared to the total population of Jakarta, around 10% of the population has successfully downloaded this application. However, the number of successful registrations cannot be seen on this page. This figure is quite good when compared with several other public service applications, including the LAPOR application which is quite popular and existed before JAKI, but based on existing data, the number of people who have downloaded it is still very small compared to JAKI.

Considering that the LAPOR application is also a national application, more people should be using it compared to JAKI. The authors compare these two applications because they both focus on aspects of public complaint channels developed by the government, both central and regional. Although the authors will not discuss further data on problem solving and resolution in the LAPOR application, the mention of it at least provides an indication of several online services that are openly provided by the government. These two applications also illustrate that several complaint reporting applications provided by the government are still problematic.

5. Discussion

This section is dedicated to discussing the low level of public participation. One of the reasons is the lack of knowledge about rapid response channels that can be used to convey complaints, as many people are not aware of those that are available and therefore cannot use them. Similarly, there is a lack of trust in the government – many people feel distrustful or sceptical of the government and are not sure that their complaints will be responded to or addressed by the authorities. Another aspect is technical incapacity – some people may not be able to use or access rapid response channels due to technical limitations, such as not having internet access

or not knowing how to operate the required applications or websites to send complaints. The lack of response from authorities or RCR managers, if people feel that their complaints are not responded to quickly or are not considered important by the authorities, can reduce their motivation to use rapid response channels.

The reason for the low level of public participation in rapid response services can be justified by the concept of public participation and the factors that influence it in the context of smart cities. According to the literature, public participation is influenced by various factors, including the level of knowledge, trust, and technical ability of the community to use available communication channels (Cao & Kang, 2024; Cardullo, 2020; Senior et al., 2023). This also highlights that the successful implementation of fast response services, such as those used in smart cities, is very dependent on public awareness of the existence of these channels and the ability to access them. Apart from that, the factor of trust in the government and confidence that their complaints will be responded to also has a significant impact on people's motivation in using public participation channels. By understanding these barriers, governments can develop more effective strategies for increasing public participation and ensuring inclusivity in the future smart city development process.

Therefore, there is a need for technology literacy to explain that the lack of ability to use internet technology prevents individuals or groups from participating in online services. Several strategies have been developed by the Provincial Government of DKI Jakarta together with the community to address these two challenges. Access is expanded by providing facilities, such as Jak Wifi that can be accessed for free in residential areas, through a collaboration of the Department of Education with various sectors to provide devices for students and optimising direct (offline) complaint channels in government offices. Not only that, involvement of the community (persons, organisations, and others) in conveying policy information and reporting the needs of residents is also still present.

Technological literacy is very important in modern society because it allows individuals to interact and utilise digital technology effectively (Kaluarachchi, 2022; Masucci, Pearsall & Wiig, 2020; Sanjaya & Darma, 2023). The ability to understand and use online platforms, applications, and digital services is key to participation in contemporary life, including involvement in public affairs and access to public services (Isabella et al., 2024). From a theoretical perspective, technological literacy is included in the concept of digital inclusion, which strives for equal access to dig-

ital technology and proficiency in its application at all levels of society (Gómez, 2020). Without adequate technological literacy, individuals or groups may experience barriers to accessing online services and participating in digital platforms, which can increase digital communication and widen social inequality.

Meanwhile, strategies to increase public knowledge about accessing online public services have been implemented through several breakthroughs. First, expanding the reach of official channels in an attractive way, such as JAKI being used in the vaccination registration process; this step indirectly brings JAKI closer to the public, making it aware of the benefits of JAKI in daily life. Second, maintaining information transparency through the information and documentation management (PPID) institution. This is important considering that public participation and information transparency are two interrelated aspects. Third, optimising the reliability of procedures and response speed in the RCR complaint system. With easy-to-use procedures and clear deadlines for follow-up actions, there is potential to increase public trust in the RCR and encourage more participation through complaints.

Lack of promotion and outreach is an important factor in increasing public participation. According to public communication theory, effective promotion and popularisation can increase public awareness and involvement in various public initiatives (Fienitz et al., 2022; Jia, 2022). This theory emphasises that intensive promotional efforts and comprehensive popularisation can influence people's perceptions of the importance and ways of quickly accessing complaint channels. By increasing promotion and outreach, the government can improve public participation by conveying clear information and educating the public about the benefits of these channels and how to use them. In this context, increasing the responsiveness of authorities to public complaints and increasing the community's technical knowledge in accessing rapid complaint channels are also important to ensure more active and effective public participation in governance and community development processes.

Trust and motivation are theoretically important because they are the main factors influencing individual participation in online services (Abdulkareem & Mohd Ramli, 2022; Ibrahim, Baharuddin & Wance, 2023). Trust is the foundation of effective and collaborative social interactions; with trust, individuals are willing to interact or participate in activities that involve risk or their interests (Mensah & Adams, 2020). Meanwhile, motivation refers to the internal drive that encourages individuals to act or behave in a certain way (Ross, 2024). In the context of online services,

trust in the security and reliability of the service and the motivation to use the service influence how actively individuals will participate in the use of online technology and services. Therefore, building strong trust and generating sufficient motivation is the key to increasing public participation in online services.

Another problem in this area is accessibility of the rapid response service for the community. Every service provided by the government should have high accessibility so as to be easily accessed by the public. Therefore, the government believes that, in line with the advancement of information technology, a service based on its online use should be designed. However, not all people can use online services, especially in the case of geotagging services.

Accessibility of services is very important because it creates equality in access to public services for all people, without exception. With high accessibility, every individual has the same opportunity to utilise services provided by the government, which in turn can increase social inclusion and participation in community life (Jordanoski & Meyerhoff Nielsen, 2023; Salvio, 2020). When services are designed with broad accessibility in mind, this also strengthens the principles of fair and effective public services, reducing gaps in access to information and services between various groups in society.

This research has answered the previously formulated problem, where it was found that community participation in the use and development of rapid response services in Jakarta Smart City is still low, even though 13 official complaint channels are provided. Factors influencing participation include a lack of public knowledge regarding the existence of services, difficulty accessing them, and difficulty understanding the services. Although applications such as JAKI and Qlue offer advanced features such as geotagging, the number of users is still relatively small compared to Jakarta's population. The data also shows that although there are various complaint channels, ignorance and difficulty in accessing them are the main obstacles for the public to use these services optimally. Therefore, the government needs to increase outreach and accessibility of services to improve public service performance and meet community needs more effectively.

6. Conclusion

The level of public participation in the use and development of rapid response services in the Jakarta Smart City represents a significant challenge despite major efforts to provide modern infrastructure and communication channels. The main factors influencing this low participation include the low level of public knowledge about the existence of these services, difficulties in accessing technology, especially for vulnerable groups such as those who lack internet access, and low trust in the responsiveness and security of data when using online services. The many complaint channels provided by Jakarta Smart City, even though there are 13 of them, have not effectively overcome these obstacles because most people are not aware of them or have difficulty using them.

Other obstacles hindering public participation include the need for more effective promotion and outreach about these services, as well as the lack of technological education necessary to use available online applications and platforms. Apart from that, low trust in the local government in responding to community complaints is also an inhibiting factor, where some communities feel that the complaints or aspirations they convey will not be responded to seriously or promptly. To increase public participation in rapid response services in Jakarta Smart City, a more comprehensive strategy is needed to increase public awareness, increase technological accessibility, improve government responsiveness to community complaints, and increase security and trust in the use of online services. In this way, Jakarta Smart City can be more effective in bridging community needs with responsive and inclusive public services.

The limitation of this study is that it does not analyse participation quantitatively by taking many samples, and it can therefore provide merely general information about public satisfaction in support of the sustainability of public services. It would be much better for further studies to conduct quantitative research with an approach of carrying out a survey of public service users, especially those who use the Jakarta Kini (Jaki) application service.

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PUBLIC PARTICIPATION IN RAPID RESPONSE SERVICES FOR THE SUSTAINABILITY OF JAKARTA SMART CITY

Summary

Public participation plays an important role in the development of rapid response services to support the sustainability of Jakarta Smart City. This study aims to explore and analyse the level of public participation in utilising and developing these services, and their impact on urban sustainability. The research method used is a qualitative case study through in-depth interviews and document analysis. The results of the study indicate that the level of public participation in rapid response services in Jakarta Smart City varies greatly. Factors such as accessibility, trust, and awareness are the main determinants of the level of public participation. Citizens who actively participate tend to feel greater benefits from these services, while those who are inactive tend to experience gaps in services. Public participation also has a positive effect on service efficiency and the quality of life of city residents. However, this study also found several obstacles that hinder public participation. Low awareness of the importance of the role of individuals in developing smart cities, limited accessibility, and low digital literacy are the main challenges. To increase sustainable public participation, efforts are needed that involve education, training, and strengthening of information technology infrastructure. In conclusion, public participation has a crucial role in the sustainability of Jakarta Smart City through rapid response services. Effective management of public participation can improve service efficiency, strengthen community engagement, and support sustainable urban development. Therefore, continuous efforts are needed to improve and manage public participation for long-term success. With education, training, and improved technological infrastructure, broader and more equitable participation can be realised, supporting the growth of inclusive and sustainable smart cities in the future.

Keywords: public participation, Jakarta Smart City, rapid response services, smart city sustainability

SUDJELOVANJE JAVNOSTI U „SLUŽBAMA BRZOG ODGOVORA” ZA ODRŽIVOST JAKARTE KAO PAMETNOG GRADA

Sažetak

Sudjelovanje javnosti ima važnu ulogu u razvoju „službi brzog odgovora” (rapid response services) za podršku održivosti pametnog grada Jakarte. Ova studija ima za cilj istražiti i analizirati razinu sudjelovanja javnosti u korištenju i razvoju tih usluga i njihov utjecaj na urbanu održivost. Korištena je metoda istraživanja kvalitativna studija slučaja kroz dubinske intervjue i analizu dokumenata. Rezultati studije pokazuju da razina sudjelovanja javnosti u uslugama brzog odgovora u pametnom gradu Jakarti uvelike varira. Čimbenici kao što su pristupačnost, povjerenje i osviještenost glavne su odrednice razine sudjelovanja javnosti. Građani koji aktivno sudjeluju osjećaju veće koristi od tih usluga, dok su oni neaktivni skloniji percipirati nedostatke u uslugama. Sudjelovanje javnosti također ima pozitivan utjecaj na učinkovitost usluga i kvalitetu života stanovnika grada. Međutim, ova je studija također otkrila nekoliko zapreka koje ograničavaju javnu participaciju. Niska razina svijesti o važnosti uloge pojedinca u razvoju pametnih gradova, ograničena dostupnost i niska razina digitalne pismenosti glavni su izazovi. Kako bi se povećalo održivo sudjelovanje javnosti, potrebni su napor koji uključuju obrazovanje, obuku i jačanje infrastrukture za informacijske tehnologije. Zaključno, sudjelovanje javnosti ima ključnu ulogu u održivosti pametnog grada Jakarte preko usluga brzog odgovora. Učinkovito upravljanje sudjelovanjem javnosti može poboljšati učinkovitost usluga, ojačati angažman zajednice i poduprijeti održivi urbani razvoj. Stoga su potrebni stalni napor za poboljšanje i upravljanje sudjelovanjem javnosti za dugoročni uspjeh. Uz obrazovanje, osposobljavanje i poboljšanu tehnološku infrastrukturu, može se ostvariti šire i ravnopravnije sudjelovanje koje bi podupiralo rast uključivih i održivih pametnih gradova u budućnosti.

Ključne riječi: sudjelovanje javnosti, Jakarta pametni grad, službe brzog odgovora, održivost pametnih gradova