

The participation of citizens to achieve smart people's case study: Analyzing the use of online-based community complaint channels in Sleman regency

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Abstract

The concept of a smart city according to several studies is very feasible to be adopted and developed as a solution to urban problems so far. Six smart city concepts can be adopted by adjusting the conditions of each city. The six concepts are a smart economy, smart mobility, smart environment, smart government, smart living, and smart infrastructure. After all, the most important element of a city area is the citizens of the city itself. The concept of a smart city was born to answer the problems faced by citizens. The concept of a smart city can be realized if coupled with efforts to make smart city residents (Smart Citizen). Intelligence is not just talking about improving the level of academic education, but increasing awareness and awareness of citizens to be directly involved in the process of formulating government policies and programs in their cities. Through the use of current information technology advances, it is very possible to do and be initiated by the government. Therefore, this paper will analyze the participation of the community in Sleman Regency to achieve the smart peoples. The method used in this study is qualitative and quantitative in which qualitative in-depth interviews are conducted with various sources, namely the government and the community and quantitative is done by distributing 100 questionnaires. The results of this study indicate that people are happy with the government's efforts to realize the concept of smart cities and districts. Besides, although the government has made various kinds of complaints channels to be closer to the community, several factors influence the community to use these channels, such as because of education, and inclusion. In the other hand, another factor that the most influence the use of public complaints is the response from the government.

Keywords: Smart Citizens, Smart Regency, Online Complainant, Government, Lapor Sleman.

1. Introduction

Based on world urbanization data, it is estimated that in 2050 there are approximately 66% of the world's population living in urban areas. With this large number of urban residents, of course, cities must be able to provide a variety of basic needs such as healthy food, clean water, to sufficient energy [1]. In addition, it also requires guarantees of economic, social, and environmental sustainability [2]. This is what makes cities competing to create smart cities. Smart city is the dream of all major cities throughout the world. Smart city planning is a global agenda as a conceptual and practical response to various urban crises in the world that are increasingly worrying, to restore relations between people, fostered space, and natural spaces that are more harmonious. Smart city is the concept of providing information on the state of a city in a comprehensive and real time manner [3]. This information can be accessed through the controlling room. Smart city is a concept of urban planning by utilizing technological developments that will make a younger and healthier life with a high level of efficiency and effectiveness. Smart city has several specifications

such as smart government, smart mobility, smart living, smart economy, smart people, smart live, and smart health [4].

Many cities in Indonesia have implemented this smart city concept, including one of them being Sleman Regency. As it is known that in 2017 Sleman was awarded as a District committed to continue to support the implementation of smart cities and 24 other cities/districts in Indonesia [5]. Moreover, in 2017 Sleman has completed 5 quick wins in one data from SMEs, smart rooms, Sleman Report, Sleman Creative House, and Sleman Creative Space [5]. Sri Purnomo as Regent of Sleman Regency is fully committed to make Sleman as Smart Regency in 2021. Based on the application of smart regency in Sleman is that application of integrated information and communication technology. Strategy and road map of smart city implementation is found in the regional medium term development plan (RPJMD) of Sleman 2016-2021. The implementation of good information technology will ultimately support the process of determining the direction and policy of an organization, as well as the Sleman regency. In accordance with the vision of Sleman Regency that is "The realization of a more prosperous Sleman community, Independent, Cultured and Integrated system to the Smart Regency in 2021 (RPJMD Sleman 2016-2021).

The direction of Smart Regency development in Sleman Regency Government is focused on several aspects (RPJMD Sleman, 2016-2021), namely:

- Service, emphasis on technology utilization and improvement of human resource commitment to realize excellent service toward Sleman Smart Regency.
- Internal efficiency, simplifying procedures, standardization, emphasis on time efficiency and cost of unnecessary pruning/bureaucratic procedures, as well as standard setting.
- Networks/inter-governmental institutions, emphasis on establishing connections between government institutions for resource sharing, particularly related to data resources.

Toward be Sleman Smart Regency many components that are necessary. Based on the Nam & Pardo [4] a comprehensive view of smart city present emphasizes smart city as commitment to innovation in technology, management and policy. All components in smart city are indeed important, but the most important thing is of course how people accept change and want to participate in this smart city agenda. The government has tried its best to create various applications to facilitate the community. It is already mentioned above that smart city is about how synergy between technology and its citizens, without smart people, smart city development will not run well. Intelligent societies are urgently needed as the main driving force of the digital economy which is expected to produce a change in the future of the economy. A citizen or community who often uses the internet will most likely be more productive. The more connectivity a person has, the more information they can get. This is what causes wireless technology is very important in building intelligent people. Smart Citizen is a platform to generate participatory processes of people in the cities. Connecting data, people and knowledge, the objective of the platform is to serve as a node for building productive and open indicators, and distributed tools, and thereafter the collective construction of the city for its own inhabitants. With the participation of the

community in utilizing applications that have been provided by the government in Sleman Regency, it is expected that residents will know the latest information in their area and will continue to raise awareness among residents in the same environment. One way is to be actively involved in online-based community complaints called Sleman Report. The application that often to use the people in Sleman is Report Sleman (Sleman Report) based on the interview with Arifianto [5] staff of the department of communication and information in Sleman.

Every year there are about 1500 complaints coming into government through the Sleman Report. Regarding the functionality of the Sleman Report itself is certainly very much and varied. But in general, this application is used as a connector of the community tongue associated with various problems or dynamics that occurred in the region of Sleman. The things that can be reported, among others, ranging from the condition of damaged roads, public infrastructure, problems of handling waste, licensing, crime and so forth [6]. Surely, this will encourage Sleman Regency to one of the areas with high tech adaptation, and can be a pilot for other districts in the Yogyakarta. In addition to, Report Sleman not only can be accessed on smart android but also can be accessed on the website www.lapor.slemankab.go.id. On the website of the Sleman Report it is stated that the Sleman Report is aimed at having government collaboration with the community for development in Sleman Regency as Sleman Smart Regency initiative. This means that the Sleman Report application is built to support the vision and mission of the Sleman Regency Government in 2016-2021 [5]. The Report Sleman application is included in the Smart Digital Public Connectivity program. With the application of Sleman Report to be a means of liaison between the community and the government.

The step of services to see the report to be followed up with Sleman application that is through Lapor Sleman application by logging in or register using e-mail. Then the report received by the operator (main admin) which is the public communications section and complaint, the field of information and public communication Sleman Regency Office of Communication and Informatics reports that can be answered will be directly answered by the moderator. But if the report is the authority of other SKPD, the report will be disaggregated by category [7]. Report received by moderator (each department in government admin), report will be filtered by SKPD (Work unit) admin to be distributed to field or section or need handling up to head of service. There will be a report analysis and follow-up then the report's response from the respective is notified to the moderator for later answer via the response column in the report in question. If the answer is considered to have completed the status of the report is changed to be resolved [6].

The applications that have been created and updated in such a way by the government in order to realize the smart regency will not be meaningless if not supported by the people that conscious about the using technology for support the smart regency in Sleman. It would be very useless if the applications implemented by the government to facilitate the community actually even complicate the community considering the most important component of the success of smart city is support from citizen that one of them is using the technology. With the success of Sleman regency slight by slight to realize the smart regency with many elements that have been successfully applied, it is interesting if the study of

Analyzing the participation of citizens to use online-based community complaint channels in Sleman Regency then whether it is made the smart people or not.

2. Research method

The research method is basically a scientific way to get the data with a specific purpose and its usefulness. This study uses a mixed method between qualitative and quantitative. The type of this research is quantitative approach based on the philosophy of positivism, used to examine in a particular population or sample, data collection using research instruments, quantitative/statistical data analysis, with the aim to test the predefined hypothesis [8]. However, for qualitative research using interview with several respondents from government and the society. The qualitative research is a scientific method of observation to gather non-numerical data. Based on, Sugiyono [8] the type of qualitative research refers to the meanings, concepts definitions, characteristics, metaphors, symbol, and description of the things and not to their counts or measure. Where to qualitatively use in-depth interviews with all parties, namely the government and the wider community. Then, for the quantitative distribution of questionnaires as many as 100 questionnaires, and processed using descriptive quantitative.

3. Theoretical review

Smart City

Smart city or literally means smart city, is a concept of development, application, and implementation of technology that is applied in an area as a complex interaction between various systems in it [9]. The goal of the smart city approach is to achieve integrated city information and management. This integration can be through digital geographic urban network management, resources, environment, economy, social and others. The concept of smart city was introduced since 1994 [10] and developed by international organizations of the EU, OECD etc. currently understanding comes in various approaches to developing a smart city concept. Hollands defined smart city as a "city labeling" phenomenon. The forming of what smart city concept is not always consistent or the single definition of smart city [11].

In other hands, Smart City is a broad, integrated approach in improving the efficiency of a city's operations, improving the quality of life of its inhabitants, and growing the economy of the region. Cohen further defines Smart City by weighting environmental aspects as: Smart City uses ICT smartly and efficiently in using various resources, resulting in cost and energy savings, improving services and quality of life, and reducing the environmental footprint, all of which support innovation and the economy. environmentally friendly [12].

Few studies have attempted to address Holler (2014) the factors that are influencing the development of a smart city such as public governance, information technology, and e-governance and following six components such as (1) social, (2) management, (3) Economy, (4) Legal, (5) technology, (6) sustainability. D'Aniello, Gaeta, and Orciuoli (2017) address approached smart cities with different components such as interconnection among actors, key performance indicators, and standards of public organizations. Besides, Baldascino and Mosca introduce the main indicators of smart city aspects such as; economy people, government (the administration), mobility, the environment and quality of life [13].

The term was interpreted into different fields of activity; smart economy (competitiveness); smart people (social and human capital); smart governance (participation); smart mobility (mobility and ICT); smart environment (natural resource); and smart living (quality of life).

Kourtit & Nijkamp revealed that Smart City has become a landmark in city planning. Smart City is the result of the development of intensive knowledge and creative strategies in improving the socio-economic, ecological, and competitive quality of the city [14]. The emergence of Smart City is the result of a combination of human capital (for example, an educated workforce), infrastructure capital (for example high-tech communication facilities), social capital (for example open community networks) and entrepreneurial capital (for example creative business activities). Strong and trustworthy government accompanied by creative and open-minded people will increase local productivity and accelerate the economic growth of a city. In essence, the Smart City concept is how to connect physical infrastructure, social infrastructure, and economic infrastructure using ICT technology, which can integrate all elements in these aspects and make cities more efficient and livable [15].

Citizens

The idea of smart citizens is an important, contributing to the urgent debate about the future of the city. An industry is developing around the vision of 'Smart City', estimated to be worth more than that \$ 20 billions of annual market value by 2020 [15]. Smart society (creativity and social capital): Development always requires capital, both economic capital, human capital and social capital. Easy access to capital and training for MSMEs can improve their abilities and skills in developing their businesses. Social capital including its elements such as trust, mutual cooperation, tolerance, appreciation, mutual give and take and social collaboration have a great influence on economic growth through various mechanisms such as increasing sense of responsibility towards the public interest, expanding participation in the democratic process, strengthening harmony society and decreasing crime rates [16]. Then Development always requires capital, both economic capital, human capital and social capital. Smart people can be said as the main objectives that must be met in realizing smart city. In this section there are criteria for the process of creativity in human beings and social capital. The following evaluation criteria are as follows; (1) the existence of formal education levels in the form of schools and tertiary institutions that is evenly distributed to the community and based on IT such as the application of e-learning, utilization of school/college information systems, learning by computer facilities, provision of internet access for information/learning resources, and etc; (2) the existence of the IT community and other communities relating to the use of information technology; and (3) the role of the community in the use of information technology. In more detail, the requirements of smart citizens according to Griffinger (2007) include inclusivity, education, and creativity.

The results of the literature review above proves that smart city is important to realize a prosperous society. Many studies in several countries including Indonesia which states that ICT is very influential on the realization of smart city. Besides that, government, environment, and life also influence the realization of smart city. Quality and special attention to the city environment, education level, multimodal accessibility, and using ICT

for public services correlate with the wealth of the city, this encourages to achieve sustainable urban development and a better city. The presence of ICT supports the realization of smart city and sustainable development.

Therefore, to realize the concept of smart city, need to evolve not only the concept of ICT and government but also includes the concept of Smart Citizen. Such as disseminating new technology which will be used in city problem so that can give solution in the problem. The existence of intelligent citizens will be easier to realize the smart city.

4. Result and discussion

Nowadays, the community is with complaints services that use technology, information and communication are important. So, that people can participate to improve public services. Complaint services have been applied in Indonesia at the national to regional levels. The national level is the People's Online Aspirations and Complaints Service (LAPOR!) Developed by the presidential staff office. The purpose of LAPOR development! By the Office of the President's Staff is increasing public participation in supervision of development, government programs, and implementation of public services. Regional levels are found in the City of Yogyakarta with the Information and Complaints Service Unit (UPIK) from 2004 developed by the Public Relations and Information Section (Anggini, 2016). Surabaya City has a Media Center. Media Center is a program that is shown to receive complaints, suggestions, questions, information, appreciation from the community to support Surabaya as a Smart City [6].



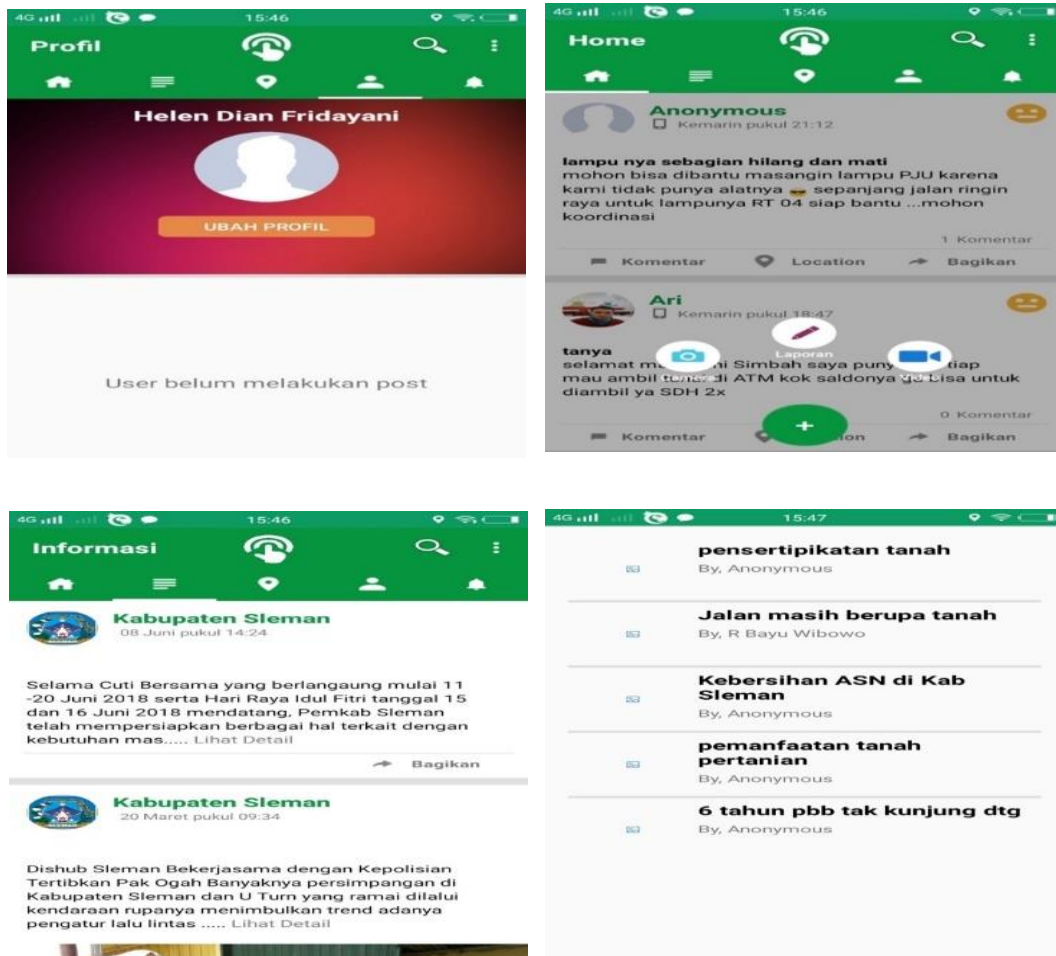


Fig. 1. The Step to Use Applications of *Lapor Sleman*
 Source: The figure was added by the *Lapor Sleman* Mobile Application on Android, 2019.

Sleman Regency already has several complaints services. Sleman complaint services include e-mail to LAPOR@slemankab.go.id, access to the website www.slemankab.go.id/surat-warga, text complaint to 0811295000, telephone number 0274-868045 with extension 7124, channel Twitter with tweets to @LAPORSleman, went directly to or made a letter to the Information and Public Communication Communication and Information Service Office, and the Andorid smartphone by downloading the Google Play which is *Lapor Sleman* application. This complaint channel was not formed in the same year. The latest channel owned by Sleman Regency is the Sleman Report Report Android channel. *Lapor Sleman* can also be accessed on the website www.lapor.slemankab.go.id. The *Lapor Sleman* website listed the purpose of Sleman Report so that there is collaboration between the government and the community for development in Sleman Regency as the Sleman Smart Regency initiative. This means that the *Lapor Sleman* application was built to support the vision and mission of the Sleman

Regency Government in 2016-2021. Lapor Sleman application is included in the Smart Digital Public Connectivity program towards smart regency. With the *Lapor Sleman* application being a means of connecting between the community and the government.

Complaint services are formed so that people can participate and improve public services and development in an area. Complaint services can be provided with various access channels. Access channel is a facility or facility provided by the government to be used by the community so that there is interaction between the two [3]. The background of the formation of the *Lapor Sleman* application indirectly relates to Law Number 25 of 2009 which is written about the implementation of public services including the implementation of services, management of community complaints, information management, internal supervision, counseling to the public, and consultation services. Complaint services serve as supervision of the implementation of external public services. In addition, the background of the establishment of the *Lapor Sleman* application is to keep up with the times of technology. Today many people already have Android-based smart phones.

The purpose of the channel development is that the *Lapor Sleman* application is to facilitate the public in providing complaints. The *Lapor Sleman* that was developed can be accessed through this website or Android smartphone can be used anywhere and anytime. This facilitates the delivery of information and complaints from the public to the Sleman Regency government [5]. The *Lapor Sleman* application development has become more effective and efficient, namely all reports are directly connected to the relevant agencies.

The *Lapor Sleman* application is managed and developed by the public communication and complaints section, the information and public communication sector of the Sleman Communication and Information Agency as the operator of the *Lapor Sleman* application. In addition to the *Lapor Sleman* application the operator also holds other complaints services such as sms, telephone, twitter, facebook, letters and e-mail. In addition to operators, there are moderators in each SKPD (work unit) in Sleman Regency, which amounts to 50 moderators. They become representatives of each SKPD. The moderator is divided into moderators of Regional Device Organizations totaling 33 and location moderators totaling 17 according to sub-districts in Sleman Regency. In the *Lapor Sleman* application implementation in collaboration with Smart Online Reporting and Observation Tools (SOROT) for the provision of applications on android smartphones and websites. SOROT is a reporting system that is easy to use because it provides media to report opinions from problems around users through a website or application on android. SOROT was chosen because it was considered to have adequate human resources for the provision of applications so it was chosen by the Sleman Regency government. *Lapor Sleman* application also collaborates with LAPOR! From the Presidential Staff Office through an integrated report.

The information displayed in the *Lapor Sleman* application is in the form of a home that can see the report as a whole, an information menu in the form of news obtained from Sleman Regency Public Relations and www.slemankab.go.id website, maps because reports can use GPS location points, personal profile, and report notification. The appearance of the Sleman Report application and the www.lapor.slemankab.go.id website

are slightly different. On the website, you can view reports based on the categories selected and when inputting reports, you can choose the category that corresponds to the report. Whereas in the application can not see and choose based on reports.

To measure how smart citizens realize Smart Regency in Sleman using the theory of Smart people from Giffinger [16], first, education is seen from the education level, and secondly, inclusiveness is measured by the use of the internet and smartphones.

The Result of Respondents

Table 1.1. A Total of Respondents

No	Respondents	Number	Percentage
1.	Male	56	56%
2.	Female	44	44%
TOTAL		100	100%

Source : The data is compiled by primary data, 2019.

Table 1.2. A Characteristics of Respondents by Age

No	Respondents (Age)	Number	Percentage
1.	< 20	7	7%
2.	20-30	60	60%
3.	31-40	19	19%
4.	41-50	8	8%
5.	>50	6	6%
TOTAL		100	100%

Source : The data is compiled by primary data, 2019.

Table 1.3. A Characteristics of Respondents by Occupation

No	Respondents (Occupation)	Number	Percentage
1.	Students (Undergraduate and Graduate)	32	34%
2.	Civil Servants	35	33%
3.	Teachers/Lecturers	17	17%
4.	Entrepreneurs	7	7%
5.	Private Employees and Labours	9	9%
TOTAL		100	100%

Source : The data is compiled by primary data, 2019.

Table 1.3. Respondents' Answers to The Question Of Inclusiveness

I. Background of Education

No	Respondents (Education)	Number	Percentage
1.	Graduate (D3,S1,S2,S3)	63	63%
2.	Senior High School	22	22%
3.	Junior High School	9	9%
4.	Elementary school	6	6%
TOTAL		100	100%

Source : The data is compiled by primary data, 2019.

2. In the Use of The Lapor Sleman Application There Is Socialization and Education, also The Environment Supports Using The Application

No	Respondents	Number	Percentage
1.	Socialized and educated by the government including village apparatus	23	23%
2.	socialized and educated by people around (family, neighbors, friends)	43	43%
3.	No Socialization and education	34	34%
TOTAL		100	100%

Source : The data is compiled by primary data, 2019.

Table 1.4. Respondents' Answers to The Question Of Inclusiveness

I. Smartphone usage in everyday life

No	Respondents	Use everyday	Percentage	Not Use Everyday	Percentage	TOTAL
1.	Male (56)	50	89%	6	11%	100%
2.	Female (44)	41	93%	3	17%	100%

Source : The data is compiled by primary data, 2019.

2.The intensity of the use of social media such as Facebook, Twitter and Instagram, also online-based applications (Lapor Sleman), and the most frequent

No	Respondents (Intensity)	Number	Percentage
1.	Per day (1-5 hours)	11	11%
2.	Per day (6-10 hours)	73	73%
3.	Per day (>10 hours)	16	16%
TOTAL		100	100%

Source : The data is compiled by primary data, 2019.

From the data above shows that of the 100 respondents obtained the results of 56% male respondents and 44% female respondents. Then seen from the age of the most respondents were at the age of 20-30 years which is as much as 60%. Then, at ages 31-40 there are 19% the most. Which means that the productive age is the most widely used the application. Furthermore, judging from the work of the respondents using the application most

frequently were 32% students and 35% government employees or civil servants. This still shows that the government still dominates the use of the sleman report application.

In terms of Education, many users of the sleman report application have taken Education to tertiary institutions. This shows that the higher education will affect the use of applications to facilitate services provided to the government for the community. Then, people with their higher education will tend to accept and understand quickly the technological changes that exist today. This is supported by research from Dwiningrum, 2012; Martono, 2015; Rini [17].

Then, seen from the side of socialization it turns out that the most socialization is given from neighbors, friends, and also the environment around 43%. Then socialization from the government was only 23%, and there was no socialization as much as 34%. The government, in this case, does not really take the role of socialization. The results of the survey were clarified by the government, that in fact socialization had been carried out in every village in the Sleman district (Prihantoro, 2019). However, according to data obtained from interviews and survey results, the application has not been disseminated evenly, even though it has been running for 2 years. The weakness of the government in relation to the socialization, needs to be a concern, so that later what is created by the government can become a wider public concern, and provide benefits to many people.

Judging from the use of smartphones for the public, there is no doubt that smartphones are an important electronic device today. Almost all people interviewed and through the 91% survey they always use smartphones for their daily lives. From the survey results it was also proven that at least once a day they reported incidents in the community, especially in Sleman through the sleman report application, with the hope that the government would respond responsively and seriously.



Fig. 2. Complaints Handling Procedure Flowchart
Source: Sleman Communication and Informatics Agency.

Lapor Sleman complaints handling procedure start from the citizen deliver their complaints, suggestion or question through Lapor Sleman's channels. Then the report is received by the operator (main admin) which is the public communication and complaints section, Sleman Communication and Informatics Agency. Reports that can be answered will be answered directly by the operator. But, if the report is the authority of another SKPD, the report will be disposed according to category. The report is received by the SKPD admin, then the report will be filtered by the SKPD admin to be distributed to the field or section or needed handling to the head of the agency. There will be an analysis of the report and subsequent follow-up of the report requested to be told to the moderator (main admin) for later answers.

The *Lapor Sleman* complaint service aims to be able to facilitate the community in providing criticism and suggestions to the Government of Sleman Regency.



Fig. 3 The Number of Incoming Complaints
Source: (Dewi, N.R, Thesis publication, 2019).

Based on the graph above, the number of incoming complaints has increased every year. Since, the community can easily deliver their complaint through Lapor Sleman channels. The community do not have to come to the related agency for asking question or give criticism and suggestion.

Table 1.4. Ten categories of Lapor Sleman Complaints with the highest number in 2018

No	Categorized	Amounts
1.	Infrastructure	18,0%
2.	Population (certificate, citizen's identity card, family card)	13,9%
3.	Public Lighting	5,9%
4.	Traffic and Parking	5,1%
5.	General	4,3%
6.	Employment	4,2%
7.	Excavation and Drainage	4,0%
8.	Waste, Environmental Permits, and Greening	3,7%
9.	Public Service Information	3,6%
10.	Licensing	3,2%

Source: (Dewi, N.R, Thesis publication, 2019).

All the reports are received by the operator (main admin) which is the public communication and complaints section, in Sleman Communication and Informatics Agency. Reports that can be answered will be answered directly by the operator. But, if the report is the authority of another SKPD, the report will be disposed according to category. the service with the most reports is the Public Works and Housing Agency which is responsible for the categories of infrastructure, hollow roads, excavations, building permits, and drainage. Department of Population and Civil Registration that handles population categories (certificate, Citizen's Identity Card, Family Card) [18].

This shows that the community welcomes the application because it can facilitate the community in terms of their relationship with complaints. However, the results of interviews obtained from some communities the government's response has not been considered responsive in solving problems through the complaint application. In fact, there are also complaints that have not been responded to until 1 month. Another obstacle he experienced when reporting something sensitive. In the application there is an option to not display the identity or identity raised [12]. In addition, in responding to complaints or complaints, sometimes it is not clear. This certainly must be an evaluation of the government in improving the quality of public services in order to achieve its goal of becoming a smart regency in 2021.

5. Conclusion

The results of the study show that the people of Sleman Regency are smart enough to use the online-based application. Judging from the level of education shows that the Sleman community has a high enough qualified education so that they can receive technological changes quickly and can participate in the success of the government program to become Sleman Smart Regency in 2021. Then, another thing is the use of smartphone for the community has become a habit, making it easier the public to get updates from the government related to applications created by the government. However, the response given by the government related to the complaint problem is still a problem. This needs government commitment to be able to provide good services to its citizens.

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