

## Formulation of Smart City Policy Instruments (Study Jogja Smart Service Program in Yogyakarta City)

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### ABSTRACT

This study aims to provide an overview of the formulation of policy instruments in improving public services of the Yogyakarta City. Therefore, this study describes the effectiveness that has been achieved and also describes the problems that arise in the Jogja Smart Service Program (JSS) in the context of the formulation of policy making. This can then be useful for developing alternative policy instruments that are similar. In the perspective of public administration, a program of policy can be seen part of the management of decisions in public policy, where the resources and actors are organized and coordinated. This gives consequences about how the process of making instrument formulation at the time of making the policy. Thus, it becomes interesting to see how the process of formulation of policies in the Jogja Smart Service Program (JSS). By using descriptive qualitative research methods, the stages of the method in this research are collecting data related to the policy formulation process of the Jogja Smart Service Program (JSS), in the form of interviews and documentation of regulations and related policies. The result of the research is the formulation of Jogja Smart Service (JSS) policies in Yogyakarta City which still has various challenges, so a combined instrument is needed, namely synergy and collaboration between the government, private sector, community and other stakeholders to support the effectiveness of the program.

Keywords: Electronic-based public services, Quality of public services, Jogja Smart Service Program.

### Introduction

This study aims to provide an overview of the formulation of policy instruments in improving public services for the Yogyakarta City. Therefore, this study aims to describe the effectiveness that has been achieved and also to describe the problems that arise in the Jogja Smart Service (JSS) program in the context of the formulation of the policy making. This can then be useful for developing similar alternative policy instruments. This means that this research adds to the knowledge and understanding of the Jogja Smart Service (JSS) program and also provides input and considerations for policies to improve the quality of public services based on digitalization.

The problem of the Jogja Smart Service Program is interesting to study because there are several obstacles in implementing the program. In the perspective of public administration, a program of policy can be seen as part of the management of decisions in public policy, in which these resources and actors are organized and coordinated. This has a consequence on how the process of formulating the instrument at the time of making the policy. Therefore, there is a process of formulation, implementation, and monitoring and evaluation in the cycle of a policy. Thus, it becomes interesting to see how the policy formulation process is in the Jogja Smart Service (JSS) program.

By using descriptive qualitative research methods, the stages of the method in this study

are collecting data related to the process of formulating the Jogja Smart Service (JSS) program policies, in the form of interviews and documentation of related regulations and policies. The next process is to reduce data from the data that has been found. Furthermore, the data reduction is then confirmed with data on the implementation of the Jogja Smart Service (JSS) program so that the suitability and accuracy of the data can be seen. In addition, this process can also provide input regarding the completeness of drawing conclusions for the research being carried out. Thus, research into instrument formulation can provide an overview of emerging problems and alternative policy instruments in the Jogja Smart Service (JSS) program.

The most important thing in the public policy process is the formulation of policy, where the basic thing that needs to be learned in the policy formulation process is how policy analysts can identify public problems that are distinguished from private problems. The study of policy formulation pays great attention to the nature (formulation) of public problems. There are phases that must be carried out carefully in formulating problems, so that the final results of the policies that are set at a minimum can solve the problems at hand. This phase consists of finding the problem, defining the problem, specifying the problem, and identifying the problem. There are strategic steps that must be considered in formulating the policy agenda, which is seen from the event itself, group organization, ease of access, and the policy process.

However, before starting with the practice of public policy formulation, we start from a simple rational model of policy formulation as described by Carl Patton and David Savicky (Nugroho, 2009). This model is the most classic model used by most policy makers. In making decisions, we must first identify the problem, followed by selecting criteria to evaluate the problem to lead to problem-solving options that we call policy options or alternatives. The next step is to assess all of these alternatives, including giving weight and ranking of each alternative. This assessment produces one alternative that is best compared to the others to be selected as a decision or policy.

In connection with research on the formulation of smart city policy instruments, namely the Jogja Smart Service (JSS) program, the author makes the Patton-Savicky model an ideal model, with a theoretical analogy such as:

- a. Define The Problem. The research assumption at this stage is that the researcher finds and determines the problems contained in the Jogja Smart Service program in Yogyakarta City.
- b. Determine Evaluation. At this stage the researcher determines an evaluation of the predetermined problem by considering input or learning from the shortcomings of the previous program. Researchers used Ernest R. House's model to evaluate the problems faced with an evaluation taxonomy approach that divides the evaluation model (Nugroho, 2009), namely:
  - 1) System model, with the main indicator is efficiency.
  - 2) Behavioral model, with the main indicators being productivity and accountability.
  - 3) Decision formulation model, with the main indicators being effectiveness and quality preservation.
  - 4) The model of goal free with the main indicators are user choice and social benefits.
  - 5) The model of art criticism with main indicators is of an increasingly better standard and an ever increasing awareness.

- 6) Professional review model, with the main indicator being professional acceptance
  - 7) Quasi-legal model with the main indicator being resolution.
  - 8) Case study model, with the main indicator being an understanding of diversity.
- c. Identify Alternative. From the evaluation results obtained, the researcher will determine the right alternative in answering the problems of the existing Jogja Smart Service (JSS) program.
  - d. Evaluate Alternative Policies. After determining several alternatives, the researcher will evaluate which alternatives are suitable to be used in answering the problems that exist in the Jogja Smart Service (JSS) program.
  - e. Select Preferred policy. Next is to choose policies or alternatives that are possible to carry out and benefit more than the risks to be faced.
  - f. Implement The Preferred Policy. The last stage is to implement the policies that have been set. At this stage, it will be synchronized in the selection of the right policy instruments, so that there is no wrong placement, whether later using mandatory, voluntary, or mixed instruments. Therefore, the policy of the Jogja Smart Service (JSS) program in Yogyakarta City which was implemented was well accepted by the target community and was effective.

Thus, the researchers evaluated the Jogja Smart Service (JSS) program only from several models, namely:

- a. Behavioral models that look at the extent of productivity generated by the Jogja Smart Service program in Yogyakarta City and how accountability for the implementation of activities in the field.
- b. Decision formulation model, which looks at whether economic, infrastructure, and social activities are effective or right on target in their implementation and whether the quality such as development has been maintained.
- c. The free objective model, at this evaluation stage it becomes important because the researcher will see whether the Jogja Smart Service (JSS) program in Yogyakarta City is really the choice of the community.
- d. Art criticality model, an evaluation model used by researchers to see whether access to public services is running well through smart digital.

In this study, the researcher will try to explain the extent to which the Jogja Smart Service program is effective, what problems arise in its implementation, and what instruments are appropriate in answering the problems faced by the Jogja Smart Service program. In Patton and Savicky's simple model cycle, the researcher makes this cycle a flow of answering the objectives of this research. Even though in this cycle, the researcher put Define The Problem or problems that emerged as the initial cycle, and Determine Evaluation as a study of the effectiveness of the second cycle. Furthermore, to answer what instruments are appropriate in the implementation of the Jogja Smart Service program in Yogyakarta City, the researcher makes the Implement The Preferred Policy stage a stage where the formulation of policy instruments must be formulated or included before the policy is generally launched. Therefore, in this model, the researcher makes a cycle in assessing the effectiveness, problems, and appropriate policy instruments for the Jogja Smart Service program in Yogyakarta City.

Furthermore, policy decisions include actions taken by several officials or a body to

approve/decide, change, or reject the alternative policy chosen. It should be recalled that there is a clear separation in the public policy formulation process between public policy decisions that have a significant impact on the content of public policies, and routine decisions that involve daily application of policies. According to Irfan Islamy (Agustino, 2008), the formulation of good and comprehensive policy proposals will be greatly influenced by the success of policy analysts in formulating these policy problems. In an effort to solve public problems, Deborah Stone (Lester and Stewart, 2000) suggests that there are five types of solutions that need to be formulated in policy, namely:

- a. Inducement. Policy steps that are persuading or pressing on certain issues.
- b. Rules. Policy steps that emphasize the formation of rules in the form of regulations that must be obeyed by the public.
- c. Fact. The policy measure is to use information channels to persuade the target group to do something that is considered to solve the problem.
- d. Rights. Policy measures take the form of granting rights or duties to society.
- e. Power. Policy efforts are in the form of increasing the weight of power due to certain demands.

Furthermore, public service is a complex and multidimensional problem that involves almost all aspects of life, especially the problem of the ability to meet needs. Therefore, the Jogja Smart Service (JSS) program was chosen as an alternative effort to solve problems with easy access to public services. In this regard, of the five types of solutions above, the one that feels most appropriate in this case is the Inducement type of solution, which requires policy steps to persuade or suppress certain issues. The choice of Inducement as a solution that feels right to solve this problem is not without deep thought. Of the five existing solutions, inducement offers the wisest way in the case by focusing on the persuasive aspect of the community, besides that this solution is also bottom-up, so that people can explore themselves in the government according to their existing capabilities. This is very appropriate when linked to the Jogja Smart Service (JSS) program, which makes the principle of ease and speed of access to public services a parameter of the success of this program.

In policy instruments, policy instruments are also called policy instruments in which the government seeks to place policies in effect (Howlet and Ramesh, 1995). This is the actual method or tool that the government has in implementing policies, and from which the government must choose the right target in implementing the policy. So the government does not just decide whether or not to implement a policy. In the voluntary instrument, the emphasis is on the small role of the government in a policy (Howlet and Ramesh, 1995). The government in this case only non-decisions on general matters that are enforced. Therefore, the government's perspective believes that such policies can and can best be carried out by the market, or by families or voluntary organizations. This organization is a non-governmental organization operating on a voluntary basis. When the government does something that serves public policy purposes, it is for reasons of self-interest, ethics, or emotional gratification. In addition, government involvement is limited, namely non-decisions to identify public problems. Furthermore, there are mandatory instruments which compel or direct the actions of individuals and companies, on the basis of discretion (Howlet and Ramesh, 1995). In the exercise of its sovereign authority, the government can order its citizens to carry out certain activities, can establish companies controlled by the government to carry out any function it chooses, or directly provide the goods and services concerned through the bureaucracy. It is a very compelling instrument because it allows the

government to do whatever it chooses within broad constitutional boundaries and leave its policies little to the target of individuals, groups or organizations. Furthermore, there are mixed instruments that are instruments that combine the features of both voluntary and mandatory instruments (Howlet and Ramesh, 1995). These instruments allow governments to varying degrees of involvement in shaping the decisions of non-state actors, while leaving the final say to private actors. Government involvement only ranges from spreading information, punishment, taxation to an unwanted activity. This instrument offers several measures of the benefits of both voluntary and mandatory instruments.

Thus, this policy model sees policy as a process of formulating collective decisions of individuals with an interest in these decisions. The principle is buyer meet seller supply meet demand. In principle, every public policy made by the government must be the choice of the public who becomes the user. The public choice model is usually used by policies that are public economic in nature, or even if it is not used for policies that are public economic in nature, the majority of policy analysts, or the “taste” of power are economists or economists. This is because the public choice model is a model that sees policy as a process of formulating collective decisions of individuals with an interest in these decisions. This means that all decisions will be left to the community, the government is required to be independent in making decisions that will have an impact on the community itself. Therefore, the choice of the right model and in line with the context of public services is a model of public choice.

## **METHOD**

The researcher used descriptive research, to be precise qualitative descriptive research because the researcher intended to describe descriptively how the Smart City policy instrument formulation in the Jogja Smart Service (JSS) program in the Yogyakarta City. Descriptive research is generally carried out with the main objective, namely to describe systematically the facts and characteristics of the object or subject under study accurately. In its development, descriptive research methods are also widely used by researchers because descriptive methods are very useful for obtaining a variety of problems related to education and human behavior (Sukardi, 2003).

The phenomenon observed in this study is the formulation of the Smart City policy instrument in the Jogja Smart Service (JSS) program of the Yogyakarta City. In this research, the researcher will try to explain the effectiveness of the Jogja Smart Service (JSS) program, what problems arise in its implementation, and what instruments are appropriate in answering the problems faced by the Jogja Smart Service (JSS) program. In Patton and Savicky's simple model cycle, the researcher makes this cycle a flow of answering the objectives of this research. However, in this cycle the researcher put Define The Problem or problems that emerged as the initial cycle and Determine Evaluation as a study of effectiveness in the second cycle, as well as to answer what instruments were appropriate in the implementation of the Jogja Smart Service (JSS) program, the researcher made the Implement The Preferred stage. Policy is the stage where the formulation of a policy instrument must be formulated or included before the policy is generally launched. Therefore, in this model, the researcher makes a cycle in assessing the effectiveness, problems, and appropriate policy instruments for the Jogja Smart Service (JSS) program. The data collection techniques used interviews, observation and documentation study.

## **RESULTS AND DISCUSSION**

A strategic choice from a plan can be in the form of planning at the project level, at the corporate level, or at the level of other plans, including plans that are in the public interest. In the process of determining a strategic choice, there is also pressure and pressure that pushes an option to respond to an issue to be taken immediately given the competition and complexity of public problems. Therefore, it takes the capacity to make formulations that can provide benefits for the development and development of a city in the future. Thus, to solve problems in the Yogyakarta City ecosystem, a knowledge capacity is needed which becomes a reference for values for stakeholders in identifying, analyzing, formulating and selecting formulations. Later, this will be a response to the solution to the problems of the Yogyakarta City. The consequence that emerged was the Jogja Smart Service (JSS) program to answer all public problems.

Cities are inseparable from the social subsystem which at least considers behavior, institutions and technology. Smart city development promotes an established, interconnected and sustainable urban system (Kumar et al., 2019). Therefore, an effective smart city application must consider technology challenges and policies that are optimally beneficial for the city; and not only in the function of a narrow application area during normal circumstances, but also the usefulness of these systems and data in disasters and emergencies (Soyata et al., 2019). The key features of urban development that allow to differentiate between smart cities and conventional cities are also considering these features to enhance existing policy instruments for smart cities (Sokolov et al., 2019). Thus, a legally and politically binding long-term policy architecture is required (Contreras & Platania, 2019).

An interesting future challenge in research and smart cities is policy development (Borsekova et al., 2018). Therefore, in various arenas where policy actors meet each other and are expected to exchange resources and formulate policies (Lu et al., 2018). The emphasis is on exploring how the integration of smart city plans and unifying visions of a smart city with comprehensive urban development goals can more effectively support urban transformation and local innovation (Praharaj et al., 2018).

Thus, the emphasis on process quality influences the Smart City strategy, which can trigger broader governance and institutional transformations locally rather than primarily seeing the technical product features of the Smart City arrangement as it progresses (Fromhold-Eisebith & Eisebith, 2019). This can be seen in several smart cities that are ready to significantly improve health services, transportation services, utilities, safety and environmental health (Habibzadeh et al., 2019). Furthermore, the Smart City policy has a positive impact on urban economic growth (Caragliu & Del Bo, 2019). In addition, the development of e-government and corruption control (Vu & Hartley, 2018).

### **1. Yogyakarta Smart City**

The main goal of Yogyakarta Smart City can be achieved if the achievement indicators from the dimensions of smart culture, smart tourism, and smart education are met. Smart culture has the main achievement indicator, namely the preservation of the cultural values of Yogyakarta. Meanwhile, smart tourism has 3 (three) indicators to be achieved, namely the number of tourists,

length of stay, and the amount of money spent. The last one is smart education with 3 (three) main achievement indicators, namely quality, access, and infrastructure related to education. In addition, the development of a Smart City in Yogyakarta City includes 6 (six) elements, namely smart governance, smart branding, smart economy, smart society, smart living and smart environment.

The road map for regional Smart City development is the steps that must be taken by the Yogyakarta City in realizing the Smart City Master Plan into the implementation of development which is divided into 3 (three) stages, namely:

- a. Short term goals. Within 1 year after the implementation of the implementation team, the Government of Yogyakarta City will carry out 2 work programs, namely the preparation of the Jogja Smart City Master Plan and the Quick Win Work Program. Quick Win is an activity that can be done quickly with a high success rate and whose benefits are significant enough for regional progress in preparing for a larger or longer term work program. The targets to be achieved from the quick win work program are to get positive initial momentum to further do something heavier/bigger (long-term program), increase the trust of internal parties (local governments) and the community so that there will be increased support and participation from many parties.
- b. Medium Term Objectives. The goals of Yogyakarta Smart City in the medium term aim to achieve the indicators set out in the RPJMD, namely:
  - 1) Improve the welfare and empowerment of the community
  - 2) Strengthening the people's economy and competitiveness of Yogyakarta City
  - 3) Strengthening the morals, ethics and culture of the people of Yogyakarta City
  - 4) Improve the quality of education, health, social and culture
  - 5) Strengthening urban planning and environmental sustainability
  - 6) Build public infrastructure and settlements
  - 7) Improve good and clean government governance
- c. Long term goals. The long-term goals of Jogja Smart City are to achieve the indicators set out in the RPJPD, namely:
  - 1) Yogyakarta City as a city of quality education
  - 2) Yogyakarta as a city of tourism, city of culture and city of struggle
  - 3) Competitiveness of the city of Yogyakarta which is superior in services
  - 4) The city of Yogyakarta is nayan and environmentally friendly
  - 5) The people of Yogyakarta are moral, ethical, civilized and cultured
  - 6) Yogyakarta City which is good governance, clean government, just, democratic and based on law
  - 7) Yogyakarta City that is safe, orderly, united and peaceful
  - 8) Development of quality facilities and infrastructure

9) Yogyakarta City is healthy

## **2. Jogja Smart Service Policy Formulation**

Researchers see the problem of Jogja Smart Service through several aspects. First, the Smart City program will not be successful if Smart People has not been realized. Smart People, in this case, is society as the subject and object of a Yogyakarta City government policy. The consequences that arise are people who access public services and various other government policy products. If the level of community participation is minimal, a government policy and program will be biased in the success rate. Whether with the Jogja Smart Service, face-to-face manual and direct services are reduced or not. Therefore, the Jogja Smart Service (JSS) program is expected to facilitate public services. Therefore, in implementing the Jogja Smart Service (JSS) program since 2018, it can be said that the most significant challenge is the community. Second, Smart City Yogyakarta has been relatively successful even though the rhythm of the flow of development cannot be said to be perfect. This means that the initial phase has passed with the realization of a physical infrastructure for information technology and communication networks, which consists of fiber optic and wireless networks. Within the Government of Yogyakarta City, this infrastructure has also been connected, integrated, and uses central data. The stages of building connectivity between all work processes or Regional Apparatus Organizations, as well as building portal access between services provided by the government and the community as the main user can also be said to have been functionally integrated. The next stage is internalization for both government apparatus as service providers and the community as beneficiaries.

In seeing the determinants of the Jogja Smart Service (JSS) program in Yogyakarta, the authors used a behavioral model, a decision formulation model, a free-purpose model, and a model of art criticism.

- a. Behavioral models. In terms of public services regulated in the RPJMD, the use of information technology is not limited to the internal scope of the Government of Yogyakarta City, but will be implemented more broadly in accordance with the concept of Yogyakarta Smart City. The Yogyakarta Smart City Ecosystem refers to various smart and innovative programs that were born from the synergy of the City, Corporate, Community, Village and Campus, to realize the development vision of the City of Yogyakarta through effective, efficient, transparent, accountable, and participatory services. These programs are managed in an integrated and sustainable manner with technology support for community empowerment. Recognizing the identity of Yogyakarta as a city of culture, a city of education, a city of tourism and a city of struggle, the Master Plan for Smart City Daerah - Yogyakarta City is structured without leaving the local characteristics and values that will give color and characteristics to the Yogyakarta Smart City development programs. It is hoped that this concern and attention to local wisdom can leave understanding, acceptance, and support from all levels of society in Yogyakarta City.



- b. Decision formulation model. The Jogja Smart Service policy is contained in Mayor Regulation Number 100 of 2018 concerning the Master Plan for Smart City Development for Yogyakarta City for 2018-2022. The stages of developing a regional smart city road map are evaluated at least once a year. Regional smart city road maps can be changed according to the results of evaluation and organizational development. In the economic sector it is supported through the Cooperate Gendong program. Collaborating with Gendong is a community empowerment program based on the local culture of the City of Yogyakarta, namely by promoting a spirit of participation and community cooperation. Hand holding is a representation of a smart economy, where the government carries out activities to improve the welfare of the community through various MSME trainings, facilitation of individual/group businesses, communities and even villages. From the getuk tular method, the tentors provide training for free. As in the city of Yogyakarta, it already has catering with the label Gendong Cooperative. The catering is managed by villages in the city of Yogyakarta. The women became more independent and productive after the program was started. In the infrastructure sector, information and communication technology is an important part of realizing an integrated service system in Yogyakarta smart city. Development of information and communication technology infrastructure in support of smart cities is used to support the management of city resources such as water resources, energy resources, communication and transportation which are managed in an integrated manner and can be accessed from various platforms, supported by competent human resources and laws and regulations. which is relevant. In the future, the physical infrastructure development of Yogyakarta Smart City information and communication technology includes data centers, servers, networks and workstations.
- c. Free-purpose model. At the initial stage, innovation programs that are packaged in quick wins include the Jogja Smart Service (JSS) program which is the main portal for the smart city of Yogyakarta City. Jogja Smart Service provides integrated services related to online services, administration, data and information through applications with the concept of single ID, single sign on and single windows which aim to simplify and accelerate services to the public as well as coordination of implementers and policy makers. Later, Jogja Smart Service will be used to realize the innovation of "one account for all applications and services in the city of Yogyakarta" (it can be called SAKUNTALA).
- d. Art criticality model. Connectivity between regional apparatus organizations and service portal access can be said to be functionally integrated. Furthermore, internalization is carried out between the officials as service providers and the

community as service recipients. Through this openness of information and public communication, it is hoped that the residents of Yogyakarta City can streamline information and make it easier for community involvement in development.

Furthermore, there are several policy alternatives based on the problems that arise in the Jogja Smart Service program, namely:

- a. Development of policies and institutions for regional smart cities. Institutional development is prioritized on strengthening collaboration between the government, the private sector and the community as well as the regular monitoring and evaluation of the Jogja Smart Service from the sub-district, sub-district level, to the synergy of Regional Government Organizations (OPD). The transformation of digital government is not necessarily about voice and access, but rather, control over the implementation of these activities is more important so that it runs effectively and sustainably.
- b. Development of supporting infrastructure for smart city. Supporting infrastructure for Smart City is prioritized on the development of fiber optic and wifi networks along tourist points of Yogyakarta City. This is done so that the number of tourists who come to Yogyakarta City will increase. This development at least increases access to information disclosure in the city of Yogyakarta.
- c. Development of applications and supporting software for smart city. The development of applications and supporting software for Smart City is carried out through a single in on the Jogja Smart Service portal. When downloading the application, residents can enjoy various services available in the city of Yogyakarta. All complete sectors are integrated in the application in terms of health, economy, licensing, security, job seeker services, and so on. Each sector has been integrated with the relevant Regional Apparatus Organization (OPD) that handles its field.
- d. Strengthening Regional Smart City Literacy. Strengthening the Smart City of Yogyakarta City is carried out through increasing community literacy as active users and increasing the capacity of human resources. The public must understand and be able to operationalize the Jogja Smart Service application. Jogja Smart Service was created to facilitate quick access to public services. If there are public problems faced, residents do not have to be present in person but can access via the application. There is also a need to increase the capacity of human resources, because there are still many government officials at the kelurahan, sub-district and regional level organizations who are not ready to accept rapidly developing technological changes.

Meanwhile, the researchers evaluated suitable alternatives to be used in answering the problems in the Jogja Smart Service (JSS) program after determining several alternatives, namely:

- a. Strengthening Regional Smart City Literacy. First, strengthening community

literacy. Socialization through community information groups, forums and other existing information networks. Conducting campaigns through content in the mass media, either online or offline, which includes the Smart City program and implementation stages. It is hoped that this will increase community participation. Participation is required in the process of a public policy.

- b. Literacy of the goal of achieving the vision. Introducing the Smart City concept to the community as literacy strengthening in the form of socialization in the form of teaching, using and utilizing the Smart City concept, especially programs or applications that are public in nature so that residents of Yogyakarta City understand the direction of Smart City. Besides educating the public, it is hoped that there will be feedback from the community to participate in the development of the Smart City concept. One of the Smart City programs built by the government aims to facilitate community service, so socialization is needed so that people are aware of the Smart City Program, including:
  - 1) Utilization of digital technology. Preaching Smart City with social media.
  - 2) Face to face. Introducing the Smart City program so that it can reach all levels of society, socialization can be carried out directly, for example through socialization through community information groups, social group communication forums and other existing information networks.
  - 3) Promotional media. Conducting campaigns with content about the Smart City movement through pamphlets or billboards.
  - 4) Joining other activities and utilizing existing stakeholders. By utilizing campuses, communities and corporations in Yogyakarta, it is hoped that the Smart City program will be conveyed and used by all people.
- c. Development of regional smart city policies and institutions, through:
  - 1) Policy. It is necessary to stipulate a mayor regulation that regulates the implementation of the smart city master plan, the implementation of programs related to smart city needs to be integrated with the annual budget planning cycle, in order to ensure the implementation/realization of the Yogyakarta Smart City, it is necessary to prioritize infrastructure preparation (physical, digital and social) and structure (HR, Budget Resources) in an integrated manner, as well as a smart city development strategy, it is necessary to implement the concept of Gendong by optimizing the synergy between villages, campuses, communities and corporations or other parties that are in line with the smart city policy.
  - 2) Institutional. *First*, the formation of the Smart City Council which is a multi-stakeholder institution formed by the Regional Government whose task is to assist local governments in carrying out their functions as smart city

management. Regional Smart City Council positions are elected by the Regional Head and ratified by Regional Head Regulations for five years. Meanwhile, in the implementation of its activities and operations, the Regional Smart City Council is financed by using the APBD or alternative financing from other third parties. In carrying out its functions, the Smart City Council can have the authority such as establishing smart city service standards for the City of Yogyakarta, supervising, monitoring and evaluating the implementation of Regional Smart City development, providing approval and support for policy proposals, work plans and strategic Information Technology initiatives in smart cities, as well as conducting studies and research in order to accelerate the development and implementation of the smart city of Yogyakarta City. The duties and obligations of the Smart City Council include:

- a) Provide policy direction in Smart City and follow up on monitoring and evaluation results
- b) Provide input to the Yogyakarta Smart City implementation team regarding the implementation of Yogyakarta smart city programs and activities
- c) To accommodate and discuss proposals, needs and aspirations of Regional Apparatus Organizations
- d) Providing policy recommendations to the Regional Head to encourage the acceleration of the development and implementation of Smart City in Yogyakarta City
- e) Receiving suggestions and input from the public regarding the acceleration of the development and implementation of smart cities in Yogyakarta City
- f) Discussing the results of internal and independent audits as evaluation material
- g) Reporting to the Regional Head regarding the development of the implementation of the Yogyakarta smart city

*Second*, the formation of the Smart City Development Implementation Team. The Smart City Development Implementation Team is a multi-sector institution within the Regional Government that functions as a coordinating forum between sectors related to the implementation of Regional Smart City programs and activities. The position of the Smart City Implementation Team is chosen by the Head of the Communication and Information Office as the Secretary of the Smart City Council as well as the person in charge of managing the Smart City ecosystem in the region. Membership of the Regional Smart City Implementing Team is validated through a Decree of the

Head of the Communication and Information Agency, and is valid for one year. In carrying out its functions, the Regional Smart City Implementation Team has the authority such as proposing Smart City programs and activities to be included in the SKPD RKPD and Renja SKPD to each Regional Apparatus Organization and proposing a budget ceiling for Smart City activities within the KUA-PPAS to the Regional Government Budget Team (TPAD). The duties and obligations of the Smart City Development Implementation Team include:

- a) Ensuring synchronization between Yogyakarta Smart City programs and activities in the Yogyakarta Smart City Master Plan with development programs and activities in the regional development plan documents, both RPJMD, SKPD Renstra, RKPD, and SKPD Renja
- b) Ensuring the implementation of Yogyakarta Smart City programs and activities
- c) Reporting the implementation of Smart City programs and activities to the Regional Head and the Yogyakarta Smart City Council
- d) Attending the coordination meeting held by Yogyakarta Smart City
- e) Coordinating with Regional Apparatus Organizations and TAPD regarding the planning and budgeting of Yogyakarta Smart City programs and activities
- f) Implementing the input provided by the Regional Smart City Council related to Yogyakarta Smart City programs and activities

*Third*, a forum to support the implementation of Yogyakarta Smart City. The forum to support the implementation of Yogyakarta Smart City is a forum that implements the concept of holding hands to accelerate the priority implementation of Yogyakarta City development by involving existing forums with the spirit of smart city. Smart city support forums can be developed with the initiative of the government or citizens, which must be managed in a participatory manner by the government so that the running of the forum can have a positive correlation with the implementation of smart cities. Referring to the concept of holding hands with several forums that have been formed to accommodate the roles of campuses, villages, communities, and corporations, namely:

- a) Healthy Cities Forum
- b) LPPM Forum
- c) CSR Forum
- d) Cultural Forum
- e) River Forum

- f) UMKM Communication Forum (ForKom)
- g) Regional History Lovers Community

Thus, strengthening the literacy of Regional Smart City and developing policies and institutions of Regional Smart City are two main alternative options. This is because both have a vital role in achieving the success of Smart City in Yogyakarta City. Community and apparatus literacy is important considering that both of them directly intersect with the Jogja Smart Service (JSS) program. Especially with the densely populated population and the heterogeneity of conditions in the city of Yogyakarta, which require intensive training and facilitation. Meanwhile, policy and institutional development is also important because a government program must have a legal umbrella as well as synergy and collaboration between the government, private sector, community and other stakeholders in maintaining the sustainability of Smart City. This means that the policy of the Jogja Smart Service (JSS) program in Yogyakarta City is more appropriate if it uses a mixed or combined instrument.

## CONCLUSION

Smart City raises the consequences of the concept of how a city or area is managed intelligently. This means that the government continues to strive to produce outputs and service impacts that provide added value for its citizens and all stakeholders in the service system despite limited resources. The policy formulation of the Jogja Smart Service (JSS) program in Yogyakarta City still has various challenges so that a combined instrument is needed, namely synergy and collaboration between the government, private sector, society and other stakeholders to support the program's effectiveness. The existence of collaborative involvement of the government, campus, corporations, communities and villages can be seen in the concept of Gendong. Collaborating with Gendong is an alternative for community empowerment based on the local potential and culture of the Yogyakarta City. Collaborating with Gendong also strives to alleviate poverty and improve the welfare of the people of Yogyakarta City by combining the wisdom of the local culture that is owned by the community, namely the spirit of participation through mutual cooperation. Community empowerment through Cooperating with Gendong emphasizes increasing empowerment, independence, and community capacity in managing various resources, both non-material and material. Furthermore, it is also necessary to strengthen regional Smart City literacy, policy development, and institutions which can be alternative priorities for the Jogja Smart Service Program (JSS) policy.

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