The Evaluation of Smart City Policy in Bandung City
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(Received: October 28-2021; revised: December 26-2021; published: December 31-2021)

ABSTRACT
Smart city is a concept which in its implementation utilizes technology and information which greatly facilitates for the public in accessing information. However, in implementing the Mayor's Regulation Number 1470 of 2018 concerning the Bandung Smart City Master Plan (the Bandung smart city master plan), problems were found in the roadmap which is part of the Bandung Smart City master plan for the 2018-2023 period. Given the smart city concept that continues to develop, an evaluation of smart city policies in the city of Bandung is carried out. This research was conducted using descriptive analysis by comparing the data that has been obtained, in which the results can be seen that the Bandung Smart City Master Plan already has a Roadmap containing program operations that will be carried out by the Implementing Regional Apparatus. However, the Roadmap contained in the Bandung Smart City Master Plan has not adjusted to changes in the implementation of Smart City in Bandung City including new programs that already exist, and there are no additional programs related to the dimensions of smart governance carried out by the Department of Communication and Information (Diskominfo) Bandung. This has resulted in a discrepancy of programs and activities related to Smart City in the City of Bandung that have been or are being worked on.

Keywords: Evaluation, Policy, Smart City

INTRODUCTION
Smart city-based development is currently a trend for every region. Many regions claim that their city development is based on smart cities. However, it should be understood that smart city-based development is a dynamic concept. This is because the initiation that will be used as a solution to problems in a city cannot be applied as a solution to problems that arise in other cities. Smart City emphasizes an innovation to solve the problems of each city according to the characteristics and needs of a city by utilizing ICT and infrastructure as enablers.

Smart City itself is a concept of managing city resources effectively to solve various challenges by providing innovative, integrated, and sustainable solutions to provide services, so that the quality of life of its citizens increases (Suhono, 2017). Smart city is also a concept of developing, implementing, and implementing technology that is applied in an area as a complex interaction between the various systems in it (Pratama, 2014). Smart city development is not only about utilizing information and communication technology (ICT) to achieve bureaucratic efficiency, but also about how to build a society by making ICT and infrastructure a supporting factor.

In accordance with the mandate of the Ministry of Communication and Information, to realize the “Movement Towards 100 Smart City” agenda, all Regional Apparatus Organizations (OPD) in the Communication and Information Sector are expected to become the leading sector in implementing smart cities. As a leading sector, the Bandung City Communication, and Information Office (Diskominfo) needs a guide and reference in running a smart city so that it can run as needed in overcoming urban problems in the city of Bandung.

The Smart City implementation guidelines are contained in the Mayor's Regulation Number 1470 of 2018 concerning the Bandung Smart City Master Plan (Master Plan Bandung Smart City) for the 2018-2023 period. The Mayor's Regulation regarding Smart City in Bandung
was made because at the time of implementation of smart city in 2012, there was no regulation that protects or underlies the implementation of smart city in Bandung. Therefore, a smart city guide and reference was made in the City of Bandung in a policy in the form of Mayor Regulation Number 1470 of 2018 concerning the Bandung Smart City Master Plan (Master Plan Bandung Smart City) for the 2018-2023 period. This regulation is used as a reference and work guideline for the relevant regional apparatus.

Smart city is one of the policies made to provide good service to the community. In public policy, there are efforts to utilize strategic resources to solve public or government problems (Chandler and Plano, 2008). Public policy is said to be a series of actions in the form of a choice to do or not do something to achieve state goals which are in the public interest by paying attention to available inputs, based on proposals from a person or group of people within the government or outside the government (Suwitri, 2010).

The public policy process consists of several agendas as follows: 1) setting the policy agenda (agenda setting), by determining what public problems will be resolved; 2) policy formulation, by determining possible policies that will be used in solving problems through the forecasting process (the consequences of each possible policy are determined); 3) policy adoption, determining policy choices through the support of the executive and legislature, previously carried out the process of policy proposals or recommendations; 4) policy implementation, the stage in which the adopted policy is implemented by a particular organization or administrative unit by mobilizing funds and resources to support smooth implementation. At this stage, the policy monitoring process is carried out; 5) policy evaluation, is the stage of assessing policies or policies that have been implemented.

Policy evaluation is the final stage in the policy process. Public policy evaluation is a process to assess how far a public policy can produce results, namely by comparing the results obtained with the goals or targets of public policies determined (Widodo, 2008). Bingham and Felbinger, Howlet and Ramesh (1995).

On this basis, researchers evaluated the policy of Mayor Regulation Number 1470 of 2018 concerning the Bandung Smart City Master Plan (master plan Bandung smart city) for the period 2018-2023, researchers found problems with the roadmap which is part of the Bandung master plan. Smart City Period 2018-2023. The roadmap itself is a map or guide that is used as road directions regarding a detailed plan that contains systematic stages regarding the implementation of a program of activities within a certain period of time (Nina Siti, 2017). The problems contained in the roadmap are that there are operational programs that have not adjusted to changes in the implementation of smart cities in the city of Bandung, including new programs that already exist.

**METHOD**

This study uses a descriptive method with a qualitative approach. The qualitative approach emphasizes the importance of understanding behavior according to patterns of thinking and acting. The subject of the study with inductive data analysis, directing the research objectives to efforts to find basic theories, more concerned with the process than the results, limiting the study to focus, has a set of criteria to check the validity of the data, the research design is temporary and the results of research by both parties are between researchers and research subjects. The qualitative research method was chosen by the researchers with the consideration that: first, the belief that the truth can be achieved by using qualitative methods, this is in line with the opinion
of Bogdan and Taylor (1992). Compare the data that has been obtained, both primary data and secondary data. The data analysis model used by the researcher is the Miles and Huberman data analysis model, which consists of data collection, data reduction, data presentation, and drawing conclusions.

RESULTS AND DISCUSSION

Smart city is a solution that has been chosen by the Bandung City Government to solve the problems that occur in the city of Bandung. One of the reasons for implementing the Smart City concept in the city of Bandung is because the problems in the city of Bandung are quite complex and require innovative ones. This is supported by the trend of the digital revolution that drastically changes the way of life and the future of humans where technology is an enabler in implementing Smart City in Bandung. In addition, Smart City is applied to deal with urban communities that will present new challenges and urban problems such as poverty, congestion, social, crime, reduced natural resources, pollution, health problems and other challenges (Bandung Mayor Regulation No. 1470) of 2018 About the Bandung Smart City Master Plan).

The preparation of this Master Plan is based on 3 (three) main elements in Smart City Readiness. These elements are structure, infrastructure, and superstructure. Elements of the structure, namely the development of human resources (HR), both implementers and beneficiaries of smart cities, preparation of budget resources, and resources for governance and governance. Furthermore, there is the infrastructure element, namely the development of infrastructure supporting Smart City which includes physical infrastructure, digital or ICT infrastructure, and social infrastructure for the public interest. The last element is the superstructure where there is the preparation of regional policies or regulations, institutions, and implementation procedures for the implementation of Smart City development.

Furthermore, within the framework of the smart city concept, there are Smart Governance, Smart Branding, Smart Economy, Smart Living, Smart Society and Smart Environment. The preparation of the Bandung Smart City Masterplan is guided by the Vision, Mission, Strategy and Regional Policy Direction in accordance with the initial document of the Bandung City RPJMD 2018-2023 which is guided by the Bandung City Regional Regulation No. 08 of 2008 concerning the RPJPD of Bandung City for 2005-2025. The Initial RPJMD Document the Bandung City RPJMD for 2018-2023 is a development guide for 5 (five) years and is in the strategic plan of regional apparatus and the RKPD.

Based on the roadmap of the Bandung City Diskominfo, there are several new programs on the implementation of Smart City in Bandung that have not been listed in the Bandung Smart City Masterplan Roadmap. One example related to this problem can be seen in the roadmap that there are no new programs related to the implementation of smart cities in the city of Bandung.

These programs include the website https://smartcity.bandung.go.id/ which contains all information related to features and supporting applications in the implementation of Smart City in Bandung City. These features include Public Service, Forum, Smartfood, Events, CCTV, Polling, Open Data, Information Regarding Covid-19, BCC, PPID, Virtual 360, 112, Lapor, Internship, JDIH, and e-books.

Bandung Command Center (BCC). BCC is one of the smart city icons in Bandung. Equipped with sophisticated technology, BCC operations are aimed at improving public services from the Bandung City government to the community. BCC has two main functions, the first function is to improve public services to the outside, such as through LAPOR! (People’s Online...
Application and Complaint Service), NTPD 112 and monitoring of city traffic and conditions through CCTV. The second function is to facilitate internal services, namely in terms of decision-making management (decision support system) through reports related to city problems which are made routinely every week, based on violation data and public complaints collected from CCTV, LAPOR! and social media and emergency services for NTPD 112.

SADAYANA Bandung Super Apps (All Digital City Services) is an application that connects all digital services provided to the people of Bandung City. This application aims to manage various City resources effectively and efficiently to solve various challenges, develop, and create innovative solutions by implementing technology.

Virtual 360º Smart City Expo is an Exhibition Event virtually via the web or apps, with a 360-degree and interactive view. Virtual 360º Smart City Expo displays several contents such as information and public services, webinars, workshops, competitions, datathon, hackathon, virtual run, and virtual ride, culinary and online MSME products as well as donations (food, urban farming packages, tree seedlings) and live streaming (cctv, traffic monitoring, drones, and music).

Meanwhile, based on the Bandung Smart City Roadmap, there are no additional programs related to the dimensions of smart governance carried out by the Bandung City Communication and Information Office (Diskominfo). This causes the unknown target year for the achievement of new programs that have been carried out by the Bandung City Communications and Information Office (Diskominfo).

In addition, there are several programs from each OPD in the Bandung Smart City master plan roadmap which were not given information regarding the regional apparatus implementing the program. This problem is contained in the Roadmap of several Regional Apparatus Organizations (OPD), including:

The Bandung City Social Service has one of the medium-term programs, namely the Integrated Referral Service System (SLRT) which has an implementation target in 2019. However, according to the roadmap there is no implementing Regional Apparatus responsible for the implementation of this program so that the planning of the Integrated Referral Service System (SLRT) in the roadmap is less clear.

The same problem is also found in the PDAM Bandung roadmap. However, the difference is in one of the short-term programs, namely Aa Lincah (Applications Accurate, Agile, Smart and Reliable) which has several sub-programs under it with an implementation target in 2019. Based on the roadmap there is no implementing regional apparatus responsible for the implementation of this program. so that the planning of Aa Lincah (Application Accurate, Agile, Smart and Reliable) is less clear.

The next problem is in the Economic Section of the City of Bandung. This OPD has several medium-term programs including coordination and synchronization of the implementation of the production and distribution of goods and services, optimization of regional business development, TSL applications, and the WUB Website. However, in digital-based programs such as the TSL Application and the WUB Website, it is not stated who the implementing regional apparatus is responsible for implementing this program so that the digital-based program planning in the roadmap for the economy section is not clear.

Based on the results of the researcher's analysis, there are 3 (three) alternative recommendations that can be made to overcome program operational discrepancies in the Bandung Smart City Master Plan Roadmap for the 2018-2023 period with changes to the implementation of Smart City in Bandung City, as follows.
1) Public Policy Review

According to Dunn (2004) the public policy process is as follows: (1) setting the policy agenda (agenda setting), by determining what public problems will be resolved; (2) policy formulation, by determining possible policies that will be used in solving problems through the forecasting process (the consequences of each possible policy are determined); (3) policy adoption, determining policy choices through the support of the executive and legislature, previously carried out the process of policy proposals or recommendations; (4) policy implementation, the stage in which the adopted policy is implemented by certain organizations or administrative units by mobilizing funds and resources to support smooth implementation. At this stage, the policy monitoring process is carried out; (5) policy evaluation, is the stage of assessing policies or policies that have been implemented. In an effort to overcome obstacles, the Bandung City Communication and Information Office can carry out a policy evaluation process in the form of a review of the Bandung Smart City Masterplan. Review can be done once every 1 (one) year after the policy is implemented or adjust to the needs of the City of Bandung. The results of the review of the Mayor's Regulation regarding the Smart City Masterplan in the City of Bandung are carried out by making a concept of a policy review which can then be discussed further in forums and FGDs (Forum Group Discussion). However, before doing a review there are a few things that need to be considered. One of them is related stakeholders need to pay attention to some basic principles of roadmap preparation, including:

a. Obviously, the roadmap must be easy to understand and workable.
b. Concise, i.e., the roadmap must be presented in a concise and concise manner according to the specified format.
c. Measurable, i.e., programs, activities, targets, time, outputs, and outcomes must be measurable.
d. Adjustable, i.e., the roadmap must be able to accommodate the feedback and improvements needed.
e. Detailed, namely the roadmap must be a detail of the implementation of activities and the results of these activities.
f. Commitment, namely the roadmap must be a mutual agreement that provides a picture of awareness of the responsibilities that must be completed.
g. The official document, namely the roadmap, must be an official document of the Ministry/Agency and Local Government determined by the leadership of the relevant Ministry/Agency and Regional Government.

It is no less important when conducting a review is to determine and consider the stakeholders involved in the implementation of Bandung Smart City. Review of the Bandung Smart City Master Plan can be done using the Penta-helix method. Penta-helix is widely understood as agents who play the role of transformational intermediaries where this method emphasizes the active role of citizens, not only to change and democratize the smart city concept but to participate directly in the implementation of Smart City (Igor Calzada, 2020).

Based on the Penta-helix multistakeholder framework, the actors who can be involved in reviewing the Bandung Smart City Masterplan are:

a. The government, in this case the Bandung City Communication and Information Office (Diskominfo) which acts as a regulator or leading sector in the implementation of Smart City in Bandung City.
b. The business sector, in this case the private sector, both managers, community stalls, and business actors to help develop Smart City to be more effective, efficient, and productive.

b. Academics, who act as drafters in standardizing business processes and certifying products and skills in human resources.

c. Civil society, as an important actor to provide recommendations and support the progress of implementing Smart City in Bandung City.

d. Social Communities, which act as accelerators and act as actors, movers, and liaisons to assist the implementation of Smart City in Bandung City.

Furthermore, after determining the stakeholders involved during the review, the relevant stakeholders need to distinguish and pay attention to several things, including:

a. Policy Inputs, namely resources in the form of time, budget, implementing human resources, equipment and so on to produce the expected output and impact in accordance with the road map that will be reviewed.

b. Policy Process, namely administrative, organizational, and political activities as well as approaches for policy input regarding the Bandung Smart City Masterplan which will be reviewed to become policy outputs and their effects.

c. Policy Outputs, which considers the resources that will be received by target groups or beneficiaries. Target groups in this case are individuals, communities, organizations or certain groups who are the targets of policies contained in the Bandung Smart City Roadmap operations. Meanwhile, beneficiaries are beneficiaries when the road map in the Bandung Smart City Masterplan is implemented.

d. Policy Impacts, namely the actual changes generated by the road map that has been reviewed.

2) Consolidation of Program Action Plans and Implementation of Bandung Smart City Activities

The next effort that can be made to make the Bandung Smart City Roadmap clearer, more focused, and easier to understand is to consolidate which shows the linkages of activities, implementation priorities and targets for completion of the Bandung Smart City program to the Bandung Smart City Masterplan. The systematic implementation of consolidation consists of:

a. Achievement. Contains exposure to the program and implementation of Bandung Smart City activities that have been achieved by each Implementing Regional Apparatus.

b. Plan. Contains exposure to the program and implementation of Bandung Smart City activities that are currently and will be carried out by each Implementing Regional Apparatus, including the quick wins that have been determined.

c. Success criteria. Contains an explanation of the results to be achieved for each program and the implementation of Bandung Smart City activities for each Implementing Regional Apparatus. This success criteria refers to and measures of success published by the Ministry of PAN and bureaucratic reform.

d. Priority Agenda. Contains an explanation of the program and implementation of Bandung Smart City activities that are currently and will be implemented based on the priority scale of each Implementing Regional Apparatus.

e. Implementation time and stages of work. Contains an explanation of the period of implementation of Bandung Smart City programs and activities that are being and will
be implemented by each Implementing Regional Apparatus along with the stages of implementing programs and activities.

f. Person responsible. Contains information about work units or human resources who oversee each program implementation and implementation of Bandung Smart City activities.

g. Budget plan. Contains information on the planned amount of the budget that will be allocated to support the implementation of each Bandung Smart City program and activity.

Furthermore, there are steps to consolidate the program action plans and the implementation of Bandung Smart City activities that can be done to support the implementation of the consolidated systematics that have been made as follows:

a. Understand the substance, outcomes, and outputs of each Bandung Smart City program and activity. This will help identify the stages of the program and implementation of Bandung Smart City activities.

b. Understand the interrelationships between Bandung Smart City programs and activities.

c. Determine the level of completion of Bandung Smart City programs and activities. Implementing Regional Apparatuses need to recognize the implementation of Bandung Smart City, then compare the results that have been achieved with the expected results in the Roadmap in each Regional Apparatus Organization. If it is appropriate, then the activity can be stated in the proposal document as a (completed) activity. However, if it is not appropriate, then the activity is stated in the proposal document as an activity that is (currently and will be implemented).

d. Create an action plan for each Bandung Smart City program and activity. The action plan sets the targets for the Bandung Smart City implementation activities to be implemented and the results to be achieved by each implementing Regional Apparatus every year.

e. Consolidating all the Bandung Smart City Program and Activity Action plans.

3) Improvements Using the Changed Nature of Innovation

Apart from looking at the policy process, the urgency of reviewing the Bandung Smart City Master Plan must also look at the function and existence of Smart City as an innovation. Innovation as a new idea that is applied to initiate or improve a product or process and service (Stephen Robbins, 1994). Based on this understanding, Robbins focuses on 3 (three) main things in innovation, namely:

a. New ideas, namely a thought process in observing a phenomenon that is happening, including in the field of education. This new idea can be in the form of the discovery of an idea of thought, idea, system to the possibility of crystallized ideas.

b. Products and services, namely the results of follow-up steps from new ideas which are followed up with various activities, studies, research and experiments so as to give birth to more concrete concepts in the form of products and services that are ready to be developed and implemented, including the results of innovations in the field of education.

c. Improvement efforts, namely systematic efforts to make improvements and make continuous improvements so that the benefits of the innovation can be felt. In an effort
to improve, changes can be made in innovation through 6 (six) characteristics of change, namely: (1). Replacement (substitution); (2). Change (alternation); (3). Addition (addition); (4). Restructuring (restructuring); (5). Elimination (elimination); (6). Reinforcement (reinforcement).

Based on this theory, efforts that can be made to overcome the problems that have been described related to the Roadmap in the Smart City Master Plan in Bandung City are to make policy improvements through several characteristics of innovation change, namely:

a. Addition, this effort is carried out by adding or updating innovations that have been implemented by the implementing regional apparatus. In addition, when conducting a review, the Bandung Smart City Master Plan Roadmap can be added to the program operational achievement targets that are placed after the program implementation year according to the Smart City development roadmap in each Regional Apparatus. Additions are also made to the Implementing Regional Apparatus which is divided into several implementing sub-units in detail according to the operations that have been initiated.

b. Restructuring, this effort is carried out by rearranging the results of updating or adding to the Bandung Smart City Roadmap, both from the format in it and the operations of each Smart City dimension.

c. Elimination, when reviewing the Bandung Smart City Master Plan, an operational program was removed that did not work in the roadmap in the previous year.

Reinforcement, namely by increasing the ability of the personnel and facilities in accordance with the operations assigned to the Bandung Smart City Roadmap.

CONCLUSION

As the leading sector in implementing Smart City in Bandung City, the Bandung City Communication, and Information Office (Diskominfo) needs a guide and reference in running Smart City so that it can run as needed in overcoming urban problems in the City of Bandung. The Smart City implementation guidelines are contained in the Mayor's Regulation Number 1470 of 2018 concerning the Bandung Smart City Master Plan (Masterplan Bandung Smart City) for the 2018-2023 period. The Bandung Smart City Master Plan has a Roadmap that contains program operations that will be carried out by the Implementing Regional Apparatus. However, the Roadmap contained in the Bandung Smart City Master Plan has not adjusted to changes in the implementation of Smart City in Bandung, including new programs that already exist. This has resulted in a mismatch of programs and activities related to Smart City in the City of Bandung that have been or are being worked on.

Researchers provide several alternative recommendations that can be used to solve the problem, namely:

a. Conduct a public policy review once every 1 (one) year by involving the Regional Apparatus Implementing Smart City, the Business Sector, Academics, Civil Society, and Social Communities.

b. Consolidation of Program Action Plans and Implementation of Bandung Smart City Activities by paying attention to the systematics and implementation steps of the consolidation of program and activity action plans to match the expected outputs.

c. Make improvements using the changing nature of innovation, such as additions, rearrangements, deletions, and policy strengthening.
REFERENCES


