

Public Sector Innovation in Smart Village Development for the Cikupa Village Community, Cikupa Sub-District in Tangerang District

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Abstrak

This study aims to determine how public sector innovation in Cikupa Village and the Sustainability of Smart Village Development for the Cikupa Village Community in Cikupa Subdistrict in Tangerang Regency in the Future. The object of this research is to data on Smart Village Development Public Sector Innovation in Cikupa Village Community, Cikupa Subdistrict, Tangerang Regency. This research uses a qualitative approach research paradigm with a descriptive research type. The nature of the research used in this research is descriptive qualitative research. The research type uses descriptive research patterns. The research data sources are divided into 2, namely primary data sources and secondary data sources. The data collection stage in this study consists of observation, interviews, and documentation. Qualitative data analysis techniques, namely, data collection, data reduction, data presentation and drawing conclusions. The results showed that of the five dimensions, it can be concluded that the public sector innovation in developing a smart village for the Cikupa Village community in Tangerang Regency is in accordance with the five dimensions of innovation proposed by Everett M. Rogers, namely relative advantages, compatibility, trialability, observability. However, the complexity dimension is still considered insufficient and the sustainability of Smart Village in Cikupa Village, Tangerang Regency, is illustrated by the long-term planning of the village apparatus and the development of the Simpel Desa application, which continues to be improved and upgraded.

Keywords: Innovation, Smart Village, Simple Village

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INTRODUCTION

Along with the entry of the industrial era 4.0, society has experienced many technological advances, including changes in communication and information. Technological advances (Ashton, 2009) are currently developing very rapidly, characterized by the existence of internet-based technology, artificial intelligence (AI), and Big Data. Haag and Keen (1996) define information technology as a set of tools that help us work with information and perform tasks related to information



processing. The existence of E-Government makes it easier to provide services to the community and communication across government, both in improving internal efficiency, delivery or accessibility of public services, or the process of democratic governance by running faster and better than the public service. Thus, the improvement of innovation and quality of E-Government-based public services in Indonesia continues to develop and improve.

The enactment of Law Number 23 Year 2014 opens opportunities and protection for all local governments to create various breakthroughs and innovations in the administration of local government affairs. This is clearly stated in Article 386 which states that "In the context of improving the performance of local government administration, local governments can make innovations" and the innovation in question is all forms of renewal in the administration of local government. Referring to Law No. 6/2014 on Villages regarding local government, it is explicitly explained that a village is a legal community unit that has territorial boundaries authorized to regulate and manage government affairs, the interests of the local community based on community initiatives. The rights of origin, and/or traditional rights are recognized and respected in the system of government of the unitary state of the Republic of Indonesia. The administration of the village government includes the administration of the village administration. The village as a government entity also has the same role in organizing government functions, namely service, development, empowerment, and regulation.

The law is strengthened through Government Regulation (PP) No. 38/2016 on Regional Innovation which encourages local governments to innovate rural development. Furthermore, a Memorandum of Understanding (MOU) has been implemented between the Ministry of Communication and Information with the Head of the Region in 2017 regarding the Implementation of the Program Towards Smart City in Indonesia. Based on this agreement, the Ministry of Communication and Information together with local governments will facilitate the Smart City program with planning based on the characteristics of each region.

Related to innovation in rural areas, recently known as smart city. Smart city (Pratama, 2014) is a concept of development, application, and implementation of technology applied in an area as a complex interaction between various systems in it. The smart city concept is adopted into a smart village. Cikupa Village, Tangerang Regency, is one of the areas that has implemented the smart village program. implementing the smart village program in village development efforts. The Cikupa Village Government of Tangerang Regency also continues to develop governance through public service innovation as a village development effort through the smart village program. This digital-based service innovation is a village development concept that empowers the community using adequate information technology. This technology-based information system stores all important information related to the local area.

In Cikupa Village, Cikupa Subdistrict, Tangerang Regency, one part of the smart village program has been developed, namely the development of the Cikupa village website which has the address <http://cikupa.desa.id/index.html> . Various public services are available on the village website, including village development, community empowerment, community development and village government administration. Cikupa Village also cooperates with the Simpel Desa application in an effort to make public services in Cikupa Village more effective. The application also contains a forum for villagers or (Forward) which is a social media for villages with a scope of one village, Village News which is a medium for imitation and modification of innovations between villages with a national scope, Village Info is information submitted by the Village Government and Village Institutions with a scope of one village, APBDes Infographics is related to APBDes and village statistics, Lapor Pemdes is a suggestion / criticism / idea to the village government for the progress of the village, Japri BPD is a submission of aspirations to the BPD, Letter Service is a letter request, Village market is a digital village market as a form of business control by BUMDesa, Village Wholesale provides convenience for the community to shop for glosses, PPOB is a transaction through the PPOB feature to make payments/purchases of pulses, electricity tokens, BPJS, PDAM etc., Simpel Jek is a delivery feature, meal ordering, Simpel Donasi is a feature for raising donations, Panic Button is a feature for help from crimes/natural disasters/emergencies, Simpel Donor is a feature for blood donors for the community, Chat Doctor is a feature for consulting with doctors.

Cikupa Village, Tangerang Regency, found several problems that generally occur in the implementation of the Village Government, including the lack of competent human resources, inadequate technological facilities and infrastructure. In services through the Simpel Desa application, there are also many obstacles as quoted in the assessment on the Play Store, namely.

The main fundamental obstacle was that it was implemented without mapping the stakeholders who would be involved in its implementation. stakeholders who will be involved in its implementation. Thus, there is no readiness and uniformity between the Government, the community and related stakeholders. The establishment of Smart Village was also not preceded by a study of the potential and needs of the region. The government, community and other relevant stakeholders do not yet have an agreement on the technical plan for Smart Village implementation. After the establishment of the smart village, it was not followed by a comprehensive follow-up from both the government and related stakeholders.

Based on this description, the researcher sees problems related to Public Sector Innovation in Smart Village Development in Cikupa Village, Tangerang Regency. This is the background for researchers to find out how public sector innovation is in Cikupa Village and how the sustainability of Smart Village Development for the Cikupa Village Community, Cikupa Subdistrict, Tangerang

Regency in the future. Based on these observations, the researcher is interested in making a study whose results are compiled in the form of a scientific research proposal with the title "Public Sector Innovation in Smart Village Development for the Cikupa Village Community, Cikupa Subdistrict, Tangerang Regency".

RESEARCH METHODS

The object of this research is data on Public Sector Innovation for Smart Village Development in Cikupa Village Community, Cikupa District, Tangerang Regency. This research uses a qualitative approach research paradigm with descriptive research type. This type of descriptive research can reveal and describe or explain an event so that the actual situation can be known. The nature of the research used in this research is descriptive qualitative research. The type of research uses descriptive research patterns. According to Best in Sukardi's book, descriptive research is a research method that tries to develop and interpret objects according to what they are.

Research data sources can be divided into 2, namely primary data sources and secondary data sources. The data collection stage in this study consists of observation, interviews and documentation. The snowball sampling technique (Nurdiani, 2014) is one way that is reliable and very useful in finding respondents who are intended as research targets through the relationship in a network, so that the required number of samples can be reached, The qualitative data analysis technique used is the Miles and Huberman model which can be described as follows, Data Collection, Data Reduction, Data Presentation and Drawing conclusions.

RESULTS AND DISCUSSION

1. Results

The concept of a smart village is a program that originated from the Village Law Number 6 of 2014 which requires creating an independent and sustainable village by utilizing the village budget and looking at the development of science and technology that is increasingly developing and the existence of Presidential Regulation Number 95 of 2018 concerning Electronic-Based Government Systems, so finally a policy program called the smart village program was created. This program is a government innovation in utilizing technology in improving the quality of public services that are more transparent, accountable and more effective and efficient. smart village is a service that utilizes information technology in carrying out village activities managed by the village community effectively and efficiently.

In this case, researchers will analyze the development of smart village innovations in Cikupa Village, Cikupa District, Tangerang Regency. Then data collection was carried out using interview techniques involving important

informants (Key Informants) consisting of the Cikupa Village Head, Welfare Head, Service Head, Planning Head and a total of 6 people. Furthermore, from the data collection, it is then analyzed on how the smart village innovation in Cikupa Village with the research objectives, namely to find out how public sector innovation in the development of smart villages for the Cikupa Village community in Cikupa District in Tangerang Regency and how the sustainability of smart village development for the Cikupa Village community in Cikupa District in Tangerang Regency in the future.

To find out the public sector innovation in the development of a smart village for the Cikupa Village community, Cikupa Subdistrict in Tangerang Regency with the theory of innovation attributes from Rogers (2003) to see the level of innovation carried out in the village. There are 5 indicators used in measuring these changes, namely:

1. Relative Advantages,
2. Compatibility,
3. Complexity,
4. Trialability,
5. Observability.

The five indicators run according to their flow and achieve success in increasing Public Sector Innovation in Smart Village Development for the Cikupa Village Community, Cikupa Subdistrict in Tangerang Regency. The five indicators are an important basis in developing the smart village concept, namely establishing cooperation that arises from the five indicators that synergize into one based on the use of technology and information that will be able to improve the welfare of village communities. The following interview results are based on Rogers' (2003) innovation theory.

1) Relative Advantages,

Relative advantage as a reference in seeing the innovation process whether it will be better than the previous innovation. Relative advantage is the degree to which an innovation is perceived to be better than the previous innovation idea. Usually, relative advantage is measured in economic terms, but social prestige, convenience, and satisfaction are often important components. The more relative advantages an innovation is perceived to have, the faster its adoption rate will be. The Simpel Desa application is in line with the main objective of public sector innovation, which is to improve economic development in each region. The Simpel Desa application is a multi-functional application that is used to manage administration, solve problems, and most importantly, the development of villages in the Tangerang Regency area.

So based on the results of interviews with several informants according to the Relative Advantages indicator in public sector innovation through the Simpel Desa application in Cikupa Village, it is said to be good. This is supported by the

opinions of people who feel the benefits and convenience of the Simpel Desa application. The Simpel Desa application also has many features that can be used to find inspiration and innovation regarding the development of a village. By using these features, it will be easier to get aspirations and inspiration about what activities should be done in the village so that the village is more advanced so that this is said to be a relative advantage in public sector innovation.

2) Compatibility,

Compatibility is the degree to which an innovation is perceived to be consistent with pre-existing values, past experiences, and the needs of potential adopters. Compatibility is the degree to which an innovation is perceived to be consistent with existing values, past experience, and the needs of potential adopters. A good innovation is an innovation that has compatible properties or compatibility with innovations that have been replaced or have existed before. This is so that old innovations are not simply forgotten. Old innovations become an important part of the transition process to new innovations. This can facilitate the adaptation process to new innovations more quickly.

Based on the results of the informant interviews above, it can be concluded that the Compatibility indicator is said to be good, this can be seen from the suitability of the application to the needs of the community. This application is in accordance with the existing values and the desired community needs in improving this application and the sophistication felt by the community as users of the Simpel Desa application.

3) Complexity,

Complexity defines emphasizing innovation on the side of complexity in this case its use. is the degree to which an innovation is perceived as difficult to understand or use. Some innovations are easily understood by most members of the social system. Others are more complicated so they will be slow to adopt. Complexity is assumed to be negatively related to innovation adoption and implementation. New innovations usually have a higher level of complexity compared to previously existing innovations. However, new innovations offer better and easier ways, so they are generally less of a problem. Simple Innovation.

Technology constraints are also often an obstacle, from the use of applications for the elderly to the limitations of digital technology owned by the community, this can be seen from the total population of Cikupa Village of 29,475 people. And only 531 residents use the application.

Tabel 1. Total Population Data of Cikupa Village Year 2022

DESA/KELURAHAN	JUMLAH PENDUDUK		
	LAKI-LAKI	PEREMPUAN	JUMLAH
CIKUPA	14,688	14,787	29,475
BUNDER	9,412	7,712	17,124
PASIR GADUNG	14,312	13,443	27,755
TALAGA	11,662	10,678	22,340
CIBADAK	6,728	6,183	12,911
BOJONG	9,823	9,597	19,420
DUKUH	9,807	9,416	19,223
SUKAMULYA	17,454	16,679	34,133
SUKADAMAI	12,728	11,889	24,617
PASIRJAYA	20,234	19,256	39,490
TALAGASARI	14,365	13,573	27,938
SUKANAGARA	6,438	5,958	12,396

Number of Village Simple Application User Data in Cikupa Village



Figure 1 Data on Simpel Desa Application Users in Cikupa Village

The lack of equitable development and dissemination of technology in the community causes a digital divide, especially among rural communities. When viewed in terms of the growth of internet users. The low rate of ownership and use of technology in rural communities is one of the reasons why rural communities have a higher digital divide.

Based on the results of interviews with several informants above with the Complexity indicator, it can be concluded that users of the Simpel Desa application have a level of complexity, in public sector innovation through the Simpel Desa application there are still many complexities felt by the community and are not included in the indicators in the good category. This occurs due to the lack of public knowledge in using the Simpel Desa application, technological infrastructure that is still limited in the form of internet or smartphones, and application logins that often error.

4) Trialability,

Trialability is an innovation process that focuses on field tests or trials of innovation products. Innovation can only be accepted if it has been tested and

proven to have advantages or more value than the old innovation. So that an innovative product must pass the "public test" phase, where everyone or parties have the opportunity to test the quality of an innovation.

Based on the results of interviews with several informants above, Triability can be said to be good in line with Rogers' theory that innovation can only be accepted if it has been tested and proven to have advantages or more value than the old innovation. This can be seen in public sector innovation through the Sempel Desa application which has been tested and proven to have advantages or more value than manual services, with the discovery of the advantages contained in the Sempel Desa application.

5) Observability

Observability as the extent to which the results of the innovation are visible to others. An innovation must also be observable, starting in terms of how it works and is able to produce something better. This also applies to Public Service Innovations applied to the regional sector. Observability is also the degree to which the results of an innovation can be seen or felt by the recipient. In this case, if it is easier for someone to see the results of an innovation, the greater the likelihood that someone will be able to adopt it.

Based on the results of interviews from several informants above, it can be said that it is in accordance with Rogers' theory on the Observability indicator. Public sector innovation through the Sempel Desa application can produce something better and is already in the good category, this can be seen in the easy way to use the application and the features that are prepared to support services.

DISCUSSION

Public Sector Innovation in Smart Village Development for Cikupa Village Community, Cikupa Subdistrict, Tangerang Regency

Judging from the development of information technology, the smart village concept cannot be separated from the development of the smart city concept. This is based on the reason that the village as the lowest unit of government in the Indonesian government structure also requires renewal and adoption of the development of information technology, so that applying information technology will encourage the acceleration of smart city development that is being implemented. The smart village concept is understood by experts as the integration of information technology in the lives of rural communities, resulting in benefits and continuity between information technology and rural communities.

Public sector innovation in the development of a smart village for the Cikupa Village Community, Cikupa Subdistrict in Tangerang Regency uses the theory of innovation attributes from Rogers (2003) to see the level of success, namely in supporting the realization of smart village development including relative advantages, compatibility, complexity, trialability, observability.

From these five dimensions, it can be concluded that public sector innovation in developing smart villages for the Cikupa Village community in Tangerang Regency is in accordance with the five dimensions of innovation proposed by Everett M. Rogers, namely relative advantages, compatibility, trialability, observability. However, the complexity dimension is considered to be lacking, this is because the public sector innovation through the Simpel Desa application is still experiencing developments and changes in a more advanced direction. This requires a solution to overcome the complexity and difficulties experienced by the community in using the Simpel Desa application. So that this public sector innovation can be implemented and the benefits are felt as a whole for Cikupa Village, Tangerang Regency.

CONCLUSIONS

Based on the results of researchers' observations and in-depth interviews with informants related to this which is based on the theoretical indicators that researchers use as a reference for this research, the following conclusions can be presented:

1) Public Sector Innovation in Smart Village Development

From these five dimensions, it can be concluded that public sector innovation in developing smart villages for the Cikupa Village community in Tangerang Regency is in accordance with the five dimensions of innovation proposed by Everett M. Rogers, namely relative advantages, compatibility, trialability, observability. However, the complexity dimension is considered to be lacking, this is because the public sector innovation through the Simpel Desa application is still experiencing developments and changes in a more advanced direction. This requires a solution to overcome the complexity and difficulties experienced by the community in using the Simpel Desa application. So that this public sector innovation can be implemented and the benefits are felt as a whole for Cikupa Village, Tangerang Regency.

2) Sustainability of Smart Village Development in Cikupa Village

The sustainability of the Smart Village in Cikupa Village, Tangerang Regency is illustrated by the long-term planning of the village apparatus and the development of the Simpel Desa application. The aim is to increase digital literacy in the community so that the knowledge and skills to use digital media, communication tools, or networks in finding, evaluating, using, creating information and utilizing it healthily, wise, intelligent, careful, precise, and law-abiding in accordance with its usefulness in order to foster communication and interaction in everyday life in this case what must be digitally literate is the community's knowledge of technology how the village government provides digital literacy for the community so that

this community can access the simpel village application properly and no longer difficult.

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