

# E-Government to Improve Public Service in Village Diffusion of Smart Kampung Innovation in Banyuwang

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**Abstract**—Information technology (IT) utilized in various sectors, also in public services in the form of the development of electronic governance (e-gov). In Indonesia, the development of e-Gov is aim to improve the quality of public services effectively and efficiently. This became a positive trend and began to be developed in many regions. An important factor in this case is how to design effective socialization mechanism. To successfully implement a program, Government have to make citizens realize and understand both the benefit and procedure. This research is going to observe the process of implementing the Smart Kampung program in Banyuwangi, a program that accelerates public service at the village government level with technology as the main element. Using the theory of diffusion of innovation, this qualitative research focuses on investigating the right communication channels to socialize the implementation of the program. The results show that even though the program relies on the use of communication technology, the process of recognition as well as learning to residents remains through communication channels that are appropriate to the social characteristics of the Banyuwangi community. With the majority of rural areas, traditional communication patterns through direct meetings become communication channels that are considered effective

**Keywords**—E-Government, Diffusion of Innovation, Communication Channel

## I. INTRODUCTION

The use of Information Technology in the field of Government marked by the development of Electronic Governance (e-Gov). Abdullahi Abdi Ali noted that globally there has been a change from traditional way of government operations to using paper-and-file approaches to government approaches where governments are aware of government innovation[1]. This trend was also portrayed by Mohan Datar et al who saw that since the 90s, where egov was first introduced, it has been applied in almost all countries in the world with their respective models and objectives, as needed[2].

E-Gov is seen as a medium to transform traditional governance towards efficiency. According to the World Bank, the use of technology by government agencies has the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth, and / or cost reductions[3]

This trend makes sense because of technological developments rapidly, also the benefits it offers. Mohammed Al-Shehri, quoting the OECD Report identified many advantages of e-government implementation such as:improves efficiency of government agencies in processing of data, improves services through better understanding of users' requirements, share information and ideas between all government agencies and department to build one mega data base, assists a government's economic policy objectives by promoting productivity gains inherent in ICT and e-commerce, improving transparency, accuracy and facilitating information transforming between government and customers, and lastly, helps in building trust between governments and citizens, an essential factor in good governance by using internet-based strategies to involve citizens in the policy process, illustrating government transparency and accountability[4]

In Indonesia, the implementation of e-Gov began officially with the issuance of the Instruction of the President of the Republic of Indonesia Number 3 of 2003 concerning National Policies and Strategies for the Development of e-Government, followed by a Guide to the Preparation of an e-Government Development Master Plan Institution of the Ministry of Communication and Information. The Government has realized the potential and opportunities for ICT utilization for the advancement of the nation and state, especially in the process of governance and improving effective and efficient public services.

Based on Roadmap E-Government Implementation 2014-2019, Indonesia targets eGov implementation in 2019 with the milestone as follows :

- 2014 - All information / data is available in digital form, consolidated, accessible and updated for the service, employees, the public, business and fellow government
- 2015 - Interaction between the government and its employees, the public, government and business as well as others. If employees, the public, businesses, other agencies ask, some answer.
- 2016 - Intergovernmental transactions with employees, the public, businesses and other agencies. Various transactional activities can be served automatically.
- 2017- Collaboration among government agencies in the activities: G2B, G2C, G2G, G2E. Various activities involving more than one agency implemented via single portal
- 2018 - Virtual integration of all government activities (Data warehouse and Data Mining is working properly)
- 2019- The establishment of a civil government. (Where all G2B, G2C, G2G and G2E served)[5]

Despite being a global trend, e-Gov application does not always run smoothly. Gathering several previous studies, Mesnan Silalahi et al concluded that there was a small success rate in the implementation of e-Gov in the world, including in Indonesia. He also mentioned a number of challenges such as human resources, infrastructure, community literacy, leader commitment, to culture[6].

The application of innovation to the community does require the right processes and strategies. The process of adopting this innovation has become a study of studies in various disciplines, one of which is communication. Rogers' diffusion of innovations theory is the most appropriate for investigating the adoption of higher education and educational environments[7]. Rogers defines diffusion as "the process in which innovation is communicated through certain channels over time among the members of a social system". As expressed in this definition, innovation, communication channels, time, and social systems are the four key components of the diffusion of innovations[8].

First, The Innovation. Rogers offered the following description of an innovation as an idea, practice, or project that is perceived as new by an individual or other unit of adoption. An innovation may have been invented a long time ago, but if individuals perceive it as new, then it may still be an innovation for them.

The second element of the diffusion of innovations process is communication channels. Communication is "a process in which participants create and share information with one another in order to reach a mutual understanding. Diffusion is a specific kind of communication and includes these communication elements: an innovation, two individuals or other units of adoption, and a communication channel.

As the third aspect, the time is ignored in most behavioral research. He argues that including the time dimension in diffusion research illustrates one of its strengths. The innovation-diffusion process, adopter categorization, and rate of adoptions all include a time dimension.

The social system is the last element in the diffusion process. Social system as "a set of interrelated units engaged in joint problem solving to accomplish a common goal". Since diffusion of innovations takes place in the social system, it is influenced by the social structure of the social system. The nature of the social system affects individuals' innovativeness, which is the main criterion for categorizing adopters

This study try to investigate the diffusion process of e-government innovation in Banyuwangi Regency, East Java. Banyuwangi developed a program called Smart Kampung that pushed the E-Gov application to the village level. Smart Kampung is an integrated program for improving information technology-based services and community empowerment. Research focuses on four elements of innovation diffusion, namely: Innovation, Communication Channel, Time, and Social System.

## II. RESEARCH METHODS

The Research about Smart Kampung is a case study. This strategy is usually chosen based on the peculiarities of the phenomenon than others. In this context, Banyuwangi grew as leading area on implementing e-Gov in Indonesia. Evidence or the data that is required in the case study can be derived from six sources are: documents, archive footage, interviews, direct observation, participant observation, and physical devices [10].

The main instrument in searching the data is in-depth interviews accompanied observations to get as much information from informants. The observations were made to Obtain evidence to help understand the research context. Observation requires recording and recording roomates Occurs in situations that are specific. To support the primary data and secondary Researchers used the data sources. Researchers used the data drawn from other sources, such as the study of previous literature [11].

The Informants in this research came from some government agencies likes: Badan Pemberdayaan Masyarakat Desa (BPMDes) as the coordinator of Program, Dinas Komunikasi, Informasi, dan Persandian as support System, Head of Village : Ketapang, Sukonatar, Pakistaji, Taman Baru, Kradenan

### III. RESULT AND DISCUSSION

#### A. About Smart Kampung

Referring to the Banyuwangi Regent Regulation number 18 of 2016 about Integration of Village/ Village-Based Work Programs Through Smart Kampung, Smart Kampung is a concept of community development to do something smart and wise in overcoming various problems with the available resources efficiently in an area that is inhabited by people with the order of life related to local customs and the norms that apply in it. The scope of Smart Kampung is the following seven criteria, namely (1) public services, (2) economic empowerment (3) health, (4) education, art, and culture, (5) capacity building of human resources, (6) poverty (7) legal information.

This program aims to :

- Synergize the work program of each agency to get it implemented effectively and on target
- Improve the function of the village government in supporting the implementation of the district government program
- Improve the function of service to the community so the lowest layers of society can directly access it
- Increase participation and community participation in the implementation of district government programs
- Facilitate the community to get integrated services.

#### B. Innovation

E-government is not only about process automation and existing inefficiencies. This is about creating a new process and a new relationship between the governing (Government) and the regulated (community). *The use of ICTs is not just a cost or labor saving tool that is achieved simply by giving government computer officials or automating manual records. E-government is a solution that can truly revolutionize the government process itself.*

*Through Smart Kampung, the Government takes advantage of using IT optimally by building a new system of public services that produces a win-win solution for both the Government and the community. Smart Kampung brings people closer to access services which were previously carried out at the district or sub-district level can be done at the village. The use of information technology in services through the Smart Kampung program aims to provide services that are free / practical, transparent, easily accessible, fast service, government free of corruption, and supported & appreciated by the community. The services that can be accessed through Smart Kampung are: Management of Certificates (marriage, death, establishment of business, Poverty, Population Card), Birth certificate, Permit for encroachment of forests and plantations, Document creation, Statement for various purposes, Permit to establish a UMKM, Poor statement, Legal data & information network[12]*

*The Smart Village Program contributes to a new bureaucratic system that is faster and easier. This is carried out through various simplifications of the bureaucratic system. It was said by Akhmad Faisol, Division Head in Badan Pemberdayaan Masyarakat Desa (BPMDes), One of the simplification is for the management of various files that only can get through the village and then validated by the village apparatus to the district. This change refers to the fact that Banyuwangi is the most extensive district in East Java, which is about 5,782 km<sup>2</sup> and is inhabited by around 1.5 million people. So there is a need for a service system that can reach a wide area and be able to quickly serve the population. Through the use of technology the problem of distance and population can be overcome.*

*IT is considered capable of building transparency, especially regarding the budget in the government process in Banyuwangi. According to Tri Jatmiko, Head of the Banyuwangi Statistics and Encryption Section, Office of Communication and Information and coding, in the Smart Kampung program, each region has an EVB (Village Fund Management) system. This system makes it easier for village officials to report finances because of an automated system that has a higher level of validation. Through this system, transparency and the use of funds in villages are more accountable.*

*With faster and easier services, Banyuwangi is developing a new interaction model between the Government and the Public. Faisol said that Smart Kampung is an effort to change the image of the village and increase public trust in the village institution. In the past, the assumption that was believed was that the village was an institution that often carried out illegal levies to attempt to ask for more money to manage a file more quickly. Village officials are often assumed to be unfriendly in service, to the point of being lazy. The relationship between the village apparatus is then changed through the Smart Kampung program. Now, with the Smart Kampung program, each village has a standard service time for each file and a "free" information on the service. Village officials were also asked to provide good and friendly service so that residents no longer felt difficulties or were reluctant to access services.*

#### C. Communication Channel

In this implementation, communication is not only the initial stage but also becomes the most important part. Therefore, the Banyuwangi Regency Government carried out this process intensively in various ways. In general there are two main audiences, namely village officials and residents. Diffusion of innovation is a process of communication with specific efforts to spread new innovations. To achieve effective communication the selection of channel play important role. There are two kinds of channels, which are by mass media or direct (face to face). With the scale of the local program and the character of the rural community, the chosen channel is the direct communication.

Village officials are the target of the Smart Kampung learning process because they act as operators at the village level. In the learning process to village officials, the Banyuwangi Government utilizes several communication channels.

Routinely, the District Government held training since the beginning of the launching of the program. According to Tri Jatmiko, every time a new innovation is built, the Government invites both village officials and technical implementers. As the sustainable step, the Office of Communication, Informatics and Coding opened consulting services through IT technical personnel.

The government also uses several mass media channels such as radio. Not only above the line, Government also made brochures and guidebooks for implementers at the village level. This Guidebook is used by village officials to understand at once if they encounter initial difficulties.

Last but maybe the most important, the role of the Major is essential, as the conceptual, driver, also motivator. Several times the Major summoned the village heads and took part in monitoring the implementation. Top down communication models from leaders are important to affirm commitment of program.

Other audience is the citizen. The government use communication channels that are suited to the needs of the community. In this case, the communication channel which are used most are cultural accent through religious activities. Through recitation, the village apparatus tries to provide understanding to residents about the program benefit, procedure, and facilities. This religious cultural pattern is considered as the most effective mechanism and carried out in almost all villages.

In addition, there are also other communication channel, such as : Regular meetings once a month, the official will go directly door to door in the area with passive/low participation, also distributing a guide book that downloaded from the website to each head of the Neighborhood Association (RT)

Furthermore, the researcher conducted further interviews in several villages to find differences in the use of communication channels in rural and urban areas (urban districts)

As the representation of Rural, In Sukonatar, the model used in the delivery of changes in public services is to conduct regular meetings once a month. In addition, facing passive citizen, the apparatus will go directly door to door to disseminate information. Also, they distribute a guidebook downloaded from the website to each head of the Neighborhood Association (RT). So, if there are still people who lack understanding of the technical implementation of public services, they will immediately get the information through the head of the RT.

While in Taman Baru which is located near the central district, gave socialization tasks carried out by each RT. Each RT is also given training and direction from the village to understand the online service system. RT is also tasked to send messages via SMS to online service officers in the kelurahan if

residents want to access public service. This is slightly different from the village area which tends to use routine meeting.

Meanwhile, the use of mass media in this program is relatively minimal. The Government use it to build city brand as a tourism destination.

#### *D. Time*

The dimension of time becomes an important element in the diffusion of innovation. A process of educating the community on a new idea takes time. The Smart Kampong Program was launched on May 30, 2018 with a total of 41 Villages as a Pilot Project. According to BPMDes data submitted by Faisol, up to November 2017 of the target of 189 new villages 133 that have just reached the target. Although it only lasted for a year, the technology adoption process was quite smooth, just like happened in Kampung Anyar.

Kampung Anyar is a one of pioneer villages when the Program is launched in 2016. As a pilot project, implementation ran well because before the launch of Smart Kampong, all operators from each pilot village received training. The readiness of Kampung Anyar was supported by 14 operator who almost all had graduated from undergraduate education. Residents have almost all understood the service system with IT. All administrations are immediately taken care of in the village office, so that people no longer need to move places to do administration. Residents feel that services like this are very helpful and make it easier for them. Some also consider that this is the right way to eliminate the bad nature of the former bureaucracy.

Different conditions occur in Smart Kampung implementation in Kradenan. Even though the program implementation has been going on since 2016, the village community has not been fully able to accept the change in the IT-based public service system. According to village officials, this condition was due to the educational background. To overcome this problem, Village official has had several solutions to facilitate public. They extend the service overtime until evening every Friday to provide opportunities for villagers who work until the afternoon on weekdays and do not have time. They also made on-call pick-up services for residents through RT or RW to assist in the processing of KTP and KK. The on-call service is also offered through the Facebook page.

#### *E. Social system*

The Social System refers to the relationship between individual community members who work together to complete their goals. The diffusion of innovation takes place in a social system so that conformity with the system determines whether or not and sooner or later the innovation is understood and carried out. With the social system of the Banyuwangi community that is rural, cultural aspects must be a concern. For villagers, the innovation of digital-based public services in Banyuwangi is less familiar. The District Government needs to formulate a simple narrative to explain to the community. For

this reason the narrative used is about the ease and speed of the service that you want to use. The narrative is also conveyed through communication channels that are of a cultural nature such as regular citizen meetings or recitation.

In addition, Government need to understand the needs of the community. This makes in Smart Kampung, Village are welcome, at certain points are asked, to produce local innovations. The village can create activity program according to the socio-cultural conditions in the fields of Sports, Customs, Religion, and other Activities. Some examples include:

For example in Ketapang Village, the official provide maximum facilities include free wifi, easy accessible library, the development and optimization of SMEs, savings and loan services, electricity or water services deposits, and garbage transportation. In the field of socio-culture, Ketapang Village develops various arts, religion, or sports training.

Another innovation that was also developed in Pakistaji was the learning of three foreign languages conducted at the village hall. The three languages are English, Mandarin, and Malay. This activity is taught by selected tutors from the Education Agency, conducted one week three meetings and carried out at night.

Furthermore, in this aspect, personal roles also determine the speed of diffusion innovation. Village Communities consider leaders as respected figures, the influence of leaders, both formally such as apparatus and opinion leaders such as religious leaders or community leaders are important aspects. The District Government relies on these leaders to become agents of change, becoming the instructors of the Smart Kampung program to the community. At the top level, Smart Kampung has full support from regional leaders. This is because this program is the idea of Abdullah Azwar Anas, Banyuwangi Regent who considers that Smart Kampong will be a breakthrough in relation to the implementation of public services as well as community empowerment. According to Anas, the village is the front guard in the public service, this then becomes the initiation of a reduction in the bureaucratic chain.

#### IV. CONCLUSION

This research shows that in diffusion of innovation requires the right strategy. Disseminate digital-based innovations to rural people who are identical with low literacy requires four elements of innovation diffusion, namely the power of innovation, accuracy of communication channels, time dimension, and conformity with the social system. Further research can be carried out by conducting further evaluation by measuring the respond of community to get more objective findings.

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