



## Village government innovation towards smart villages for smart services study in Bintang Sari village, Cipanas sub-district, Lebak district

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### ABSTRACT

The village is the smallest government after the sub-district where the village is part of the government that cannot be separated by the community as the main actor in receiving public services. Villages are the joints of the people's economy that support the regional economy and the national economy, one of the village products that can support the regional economy and the national economy at the same time is the staple food products of the smart village for smart services program which aims to increase the productivity of rural communities accompanied by an increase in annual income, supporting national food self-sufficiency, supporting the fulfillment of TKDN, supporting regional and national economies through village administration and management systems, public services for village communities transparency and village information, village financial governance (Bumdes Bersama, Village Market) E-Commerce which is a breakthrough from smart villages for smart services to become a Pilot Village in Indonesia. To realize smart villages and the best services, there needs to be synergy between village officials and local communities so that smart villages can be realized well when collaborating with each other to create excellent services.

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### 1. Introduction

Along with the development of information technology, several villages in Indonesia have started to develop smart village projects. However, as there seems to be no agreement on what elements should be present in a smart village, various interpretations of smart villages have emerged. (Herdiana Sekolah Tinggi Ilmu Administrasi Cimahi Jl Raya Cibeer & Barat, n.d.). Judging from the above theoretical aspects of the development of smart villages, the best service to the community must certainly be supported by village officials who collaborate with the local community, especially empowering young people who have just graduated from high school to gain experience in addition to being supported by special trainings to master digital-based community services and in practice the government must work together in addition to the

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village community, young people and from the cellular operator to implement towers at various points so that the internet in Bintang Sari village remains stable and every once a month network and cable maintenance and towers are held. The benefits of smart villages will be felt by the community if these aspects run according to standard procedures, the point is synergy to achieve the success of smart villages for the community.

The development of human reason that is so quickly influenced by technology cannot be prevented, especially in the age of progress as it is today when humans create and need technology, each technology is created to meet a certain need and desire in humans. Once created, technology is developed to be more effective and efficient to meet the needs in question. In the end, past technologies will shift (Sinaga dkk., 2023)

The utilization of information technology has been widely applied both in industry and government, it can be seen in the development and development of a village in terms of economy, education and services. The application of technology in rural areas aims to improve the quality of village services to the community so as to reduce the thought of village backwardness commonly referred to as smart village. In connection with the issuance of Law number 6 of 2014 concerning villages which gave birth to policies on village funds and resulted in a significant increase in Smart Village innovation Smart. (Nurrahman, 2023)

Smart village is a smart village concept with the intention that the village has utilized the development of information technology such as smart government, smart community and smart environment. The application of smart villages is currently still not widely implemented, such as the Candimas Village, Natar District, which is located in South Lampung Regency and has a population of 10470 people with 226 households. Based on this population, of course, the village needs to improve services to the community as a form of innovation in the form of a smart village by utilizing information technology. The data processing process in the village is divided into three parts, namely the process of recording population data, recording village business data, submitting information about village activities, overall the processing is carried out with written media and office technology media (Ayu Megawaty, 2022).

Bintang Sari Village is a village located on Jalan Raya Sarengseng KM30 Sampaleun Village 1 Bintang Sari Village RT. 04 RW.01 Cipanas District, Lebak Regency Banten. Currently, Bintang Sari Village is led by an experienced Village Head, meaning that the village head has served in the first period 2016 to 2022 in article 39 paragraph 1 explaining that the village head is regulated in the law which reads that the term of office of the village head is 6 years and can be re-elected after the period is completed so that the village head can be 3 periods after the term ends can be re-elected. The successful implementation of smart villages is based on the success of villages in digital transformation with Information and Communication Technology (ICT) as the driving force. Information and Communication Technology (ICT) as the driving force (Nurchim & Nofikasari, 2018).

**Vision and Mission of Bintang Sari Village** The vision is to make the village advanced and independent. The mission is to advance Bintang Sari Village, which was previously underdeveloped, into an advanced, independent village, ready to advance the village economy through MSMEs, community economic institutions, advance BUMDES, Creative Economy, make the village independent, productive, and self-reliant. Although Bintang Sari Village was left behind, thanks to the breakthrough and vision and mission of the Arjani Village Head, which slowly began to gradually realize. The program that has been prepared by the Arjani Village Head is none other than in facing the onslaught of technology, namely implementing SMART VILLAGE FOR SMART SERVICES to facilitate the community in obtaining administrative services, one of which is by presenting village applications and village websites. Where in the smart village program for smart public services intended for the Bintang Sari community using a smartpone, the application can be downloaded at the playstore after being installed, just register using the NIK of Bintang Sari villagers, but if the elderly who want to register can be assisted by the Bintang Sari village aparat as to meet the needs of

correspondence or administrative data, it is easy not to just sit at home, the letter is immediately delivered by the Bintangasari village apparatus or it can be in the form of a pdf file if you want to print it yourself at home, of course, it has been signed by the village head by barcode system (Suryatiningsih dkk., 2022).

This paper mainly aims at investigating the possibility of the “smart village” development concept as a suitable way to address sustainability in rural development. The study is based on two types of findings: first, it presents the subject’s literature review as a theoretical basis for links between the concept of the “smart village” and sustainable rural development; further, it reveals the results of empirical research concerning factors that shape the potential of regions and rural communities for “smart village” concept implementation in selected local systems in regions of Eastern Poland recognized as the peripheral ones (Adamowicz & Zwolinska-Ligaj, 2020).

These efforts culminated into the coining of the word “smart village”, defined as a community that tries to develop current strength and resources, while making futuristic developmental plans on the basis of technology. While there are several thematic areas of priority within the smart village development framework, agriculture is seen as the most important of them all. Furthermore, the need to bridge the digitization gap between cities and villages, is also an important aspect, so that lives and livelihood can be improved. Since a smart village is one that seemingly accepts new technologies, precision agriculture uses ultra-modern techniques for animal and crop production, which saves time and reduces wastage, and meets the requirements of smart villages. This is crucial for the sustainability of smart villages. This is because improved food production and efficient animal management systems must be at par with village development, and must be continually transformed to influence the different aspects of smart villages, in terms of policy and practice. (Adesipo dkk., 2020).

Smart City-based development has become a trend of city development around the world. The development of Smart City is not just to improve the efficiency of the bureaucracy by utilizing information and communication technology (ICT), but also how to develop the community by making ICT infrastructure and facility as supporting factors or enablers. Smart city is defined as an innovative city on the use of Information and Communication Technology (ICT) and other means to improve its quality of life, efficiency of urban services, and competitiveness, as well as sustainability (Aziiza & Susanto, 2020).

## **2. Method**

This research method uses a qualitative descriptive method. Meanwhile, data collection was done through observation, interviews, and literature study. All data obtained was then analyzed qualitatively. In addition, the author collected data through the digital media of Bintangasari Village such as Facebook, Youtube, Instagram, and the official website of Bintangasari Village, in which there are activities carried out by the Village Head and village officials in implementing village programs that have been structured in accordance with the RPJMDES of Bintangasari Village. In addition, the author conducted direct interviews with all Bintangasari village officials regarding the implementation of the smart village system for smart services and the existence of special training in the application of digital-based technology, meaning that village officials can apply, understand in digital-based community services if village apparatus resources are trained as much as possible to understand and be able to master digital technology.

## **3. Analysis and Results**

Today, in the age of digitalization, humans tend to have a dependence on smartphone mobile phones where by having an android-based mobile phone with a data package, they can explore the world by surfing in cyberspace both on social media and online purchases, but the usefulness of the internet must also be filtered where there is a positive side that facilitates all

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human mobility matters, the negative side The internet has become one of the supporting infrastructures for the successful implementation of smart villages. In Indonesia, many village governments have provided public internet access points in village areas. However, the implementation of these access points has not been able to reach all rural areas due to geographical constraints and electricity availability (Nurchim & Nofikasari, 2018). The vision for smart villages is that access to modern energy can act as a catalyst for development in the areas of education, health, productive enterprises clean water, sanitation, environmental sustainability and participatory democracy that help to support further improvements in energy access. Initially, the concept of rural development was Mahatma Gandhi's concept of swaraj and village suraj. However, today the concept is newly referred to as smart villages. We know that, India is a developing country, with the help of smart villages we can make India a SS country. Currently, our government is also giving a strong focus on smart villages. The government is implementing so many schemes on smart villages (Somwanshi dkk., 2016).

The application of the concept of "smart" development in rural areas has gradually received increasing attention. Although smart villages and their practices have received late attention compared to smart cities [1], society has much hope for the sustainable development of rural areas through smart village initiatives and practices (Zhang & Zhang, 2020).

There are three main problems highlighted in this study, first, the people of bintangsari village do not know digital technology well, only understand using video calls and online shopping, second, the number of micro, small and medium enterprises is only circulated around the village of bintangsari not marketed outside the region or global market so that it is very limited in sales internally in the village, third, the lack of cellular operator signal towers because it has not entered the overall installation of towers in bintangsari village, there are only three towers for cellular networks while the cipanas area is very wide, requiring as many as fifteen social operator towers (Agung Saputra & Rahman Isnain, 2021).

After this research was carried out for three days in bintangsari village, cipanas sub-district, it can provide solutions from researchers collaborating with the head of bintangsari village, there are three solutions that can be applied to smart villages for smart services, namely in the form of applications made by researchers with the help of students who have IT skills from the sixth semester computer faculty, the name of the application is smartvillage apps and has been approved by the head of bintangsari, namely Mr. Arjani, the application can be downloaded at PlayStore by registering using email and password eight digit letters and numbers can only enter the application and please complete the registration by entering the population identification number NIK, fill in name, address, place and date of birth and others (Somwanshi dkk., 2016).

The second solution is to make it easier for micro, small and medium enterprises, the head of Bintangsari village and lecturers of bina bangsa university, especially lecturers of the faculty of economics and business, collaborate in opening BumDes village-owned business entities so that the village head makes one place in Bintangsari village to accommodate all types of businesses or home-based businesses that will be tamping in the bumdes, trademarks will be patented or legalized through law faculty lecturer seminars so that Bintangsari villagers have legality in business and trademarks, there is more for packaging, of course, it must be attractive and durable, it can be zipper plastic or press plastic so that it is airtight (Simarmata dkk., 2020).

The third solution is for the village head of bintangsarai to collaborate with cellular operator telokonsel indihome to install towers at fifteen points in cipanas sub-district and especially in bintangsari village as the main model in implementing the smart village system for smart services thanks to the collaboration of bina bangsa university lecturers, IT, law, business economics and government fields so that within five months a smart village for smart services will be realized, especially in bintangsari village as a smart village pilot village (Wati, 2023).

In order for the technology to be applied effectively and efficiently, the method of implementing the activities carried out includes designing and making tools according to the

group's production capacity, explaining functions and components, assisting the use of tools, educating maintenance, and monitoring. (Produktivitas Usaha Tani Jamur Tiram melalui Penerapan Inovasi Teknologi Bangker Pintar di Desa Balecatur dkk., 2020).

Bintangasari Village Government Innovation Smart Village For Smart Services is the main goal of the independence of a village where there are programs that have been designed by the Head of Bintangasari Village.

**Smart People** Digital marketing activities product research, and copy writing, cash on delivery transactions, Instagram and FacebookAds, Citizens empowered, More efficient community interaction, Entrepreneurs Collaborate, Digital Literacy, eLibrary, Hybrid Learning, 21st Century Education, Inclusive Society, Enhancing Creativity (Jacob dkk., 2023).

**Smart Living** The program consists of, Spatial Harmonization, Improved access to health services through an integrated system, Emergency Transportation/Ambulance, Health Assistance, Social fund for house of worship facilities, Better social welfare services (Supriana dkk., 2018).

**Smart Environment** BUMDES (Village Business Entity) can use whatapp to connect with customers who want to exchange waste for groceries, Security disturbance reporting system, Child-friendly Integrated Public Space (RPTRA), CCTV, Energy governance, for example street light applications using solar panels and on/off sensors 5 (Irfan dkk., 2020).

**Smart Government** Free Wifi, Public Administration Service Administration System (SIAPA), Village and Population Administration System (SiADek), Geographical System, and Village Administration (SiGadis), Village Fund Reporting System, Effective, open and efficient public services (Lavandaia Dharma Bali dkk., 2021).

Where in this application it makes it easier for citizens of Bintangasari Village to get digital-based public services by registering using E-KTP only by entering the NIK and password, the data will be integrated easily. Bintangasari Village, Bintangasari District and Disdukcapil Karanganyar Regency are very easy to get administrative needs (Lusiana, 2018).

**Smart Mobility** Bintangasari villagers and people outside the region can access affordable produce and handicraft products cheaply through the website or whatap. The payment system can be done online or Cash On Delivery (COD). Delivery services will use Online Ojek or other couriers who have collaborated with the village (Supriana dkk., 2018).

Where the six pillars of Smart Village For Smart Services that have been implemented in Bintangasari Village since 2018 until now and have received high enthusiasm from the residents of Bintangasari Village make it very easy in all practical matters quickly and on time according to what is desired. The concept of smart villages is where villagers find solutions to their problems by utilizing digital technology. With the presence of technology, it is expected that the community can think about solving problems that occur in the village. One of the problems often found in villages is how to increase the sales of village products (Lavandaia Dharma Bali dkk., 2021).

Smart Village for smart Services in Bintangasari Village can be made a pilot for the implementation of digital-based public services, mobility using android, village spatial governance can be managed properly only using the SMART VILLAGE version 4.0 application where all activities have been integrated on the official website of Bintangasari Village <https://desabintangarisamrtvillage.ac.id> and the SMART VILLAGE application, all forms of services and mobility can be served digitally accurately only by downloading the application in the playstore only entering the NIK E-KTP then all access can be obtained but adjusted to the domicile listed on the E-KTP, the point is that if there are residents outside Bintangasari Village, they cannot access or access is denied (Hamonangan Simanjuntak & Netanel Rumokoy, n.d.).

Smart villages must be understood as empowering, strengthening the village of Bintangasari and increasing the welfare of the Bintangasari village community based on digital-based technology,

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mentoring and counseling should be needed to educate Bintang Sari villagers to strengthen their understanding of the importance of digitalization in developing village potential, governance, MSMEs, BumDes, E-Commerce, Village Space Governance so that people are aware of technology that digital technology is very important to support the smooth running of human activities creative economy development utilizing BUMDes and smart villages (Hayati dkk., 2021).

As a pilot for Smart Village development, emphasizes the concept of One Village One Product based on ICT that is integrated between villages. Villages with a focus on developing agriculture, livestock, horticulture and fish will supply other areas. Some villages that have the potential to be developed as tourist villages will become markets for the agricultural and industrial products produced. (Rini Rachmawati, 2018) Smart Village is an alternative in village development because it applies the concept of appropriate technology, especially in increasing the capacity of village governments and creating a technologically literate society (Nuraini dkk., n.d.). Smart village is a smart village concept with the intention of a village that has taken advantage of the development of smart government information technology, smart community, and smart environment (Agung Saputra & Rahman Isnain, 2021).

#### 4. Conclusion

Based on the results of research in bintang sari village, cipanas sub-district, lebak district, it can be concluded that the smart village program for smart services can be carried out well if the government collaborates with stakeholders who are experts in their fields, for example, greeting the legality of trademarks and business licenses is certainly collaboration with legal experts, both fields of small and medium enterprises must collaborate with business economists, The government sector certainly collaborates with experts in the field of government plus the field of information technology and finally telecommunications, of course, must work with cellular operators to install many towers for stable internet access, besides that training is held for bintang sari villagers to understand all things for the creation of smart villages for smart services in bintang sari village. This research has limitations because it is only one to two days to maximize this research, it takes one month to be effective and right on target, all things are realized, which means that the star village is successful in becoming a smart village in digital-based public services so that it can become a model for other villages and for further research all villages in Lebak district, especially can learn from Bintang Sari village to become a smart village for public services.

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