

READINESS OF THE DIGITAL ECOSYSTEM/ENVIRONMENT IN GORONTALO IN ENCOURAGING PUBLIC SERVICES TO GO DIGITAL IN THE ERA OF SOCIETY 5.0s

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ABSTRACT

The current rapid development of information technology has encouraged various sectors to shift from manual to digital, especially in the era of the pandemic. If the private sector is able to adapt to the massive use of digital technology, what about the government sector? The method in this study uses descriptive analysis of secondary data from various surveys and in-depth interviews at the Department of Information, Communication, and Statistics of Gorontalo Province. The digital ecosystem in the Gorontalo community is considered quite ready to enter the digital era. This can be seen from the coverage of digital infrastructure which has reached 93.3 percent of villages that have been served with an internet signal. A total of 72.68 percent of households have access to a cellular phone. In 2020, as many as 76.68 percent of Gorontalo households have been accustomed to accessing the internet. On the other hand, the government has also begun to prepare digital public services, this can be seen from the Gorontalo Province SPBE index value in 2019 which has reached a value of 3.18 with a good predicate, although at the Regency / City level it is still categorized as sufficient and lacking. People who are getting easier to get information and are getting smarter, are starting to demand easy and quality public services. So that the government needs to be encouraged to digitize public services in order to be able to meet various demands in the current technological era. this can be seen from the Gorontalo Province SPBE index value in 2019 which has reached a value of 3.18 with a good predicate, although at the Regency / City level it is still categorized as sufficient and lacking. People who are getting easier to get information and are getting smarter, are starting to demand easy and quality public services. So that the government needs to be encouraged to digitize public services in order to be able to meet various demands in the current technological era. this can be seen from the Gorontalo Province SPBE index value in 2019 which has reached a value of 3.18 with a good predicate, although at the Regency / City level it is still categorized as sufficient and lacking. People who are getting easier to get information and are getting smarter, are starting to demand easy and quality public services. So that the government needs to be encouraged to digitize public services in order to be able to meet various demands in the current technological era.

Keywords: *SPBE; E-Government; Digital Ecosystem*

INTRODUCTION

Information technology is currently growing. The State of Japan, in 2019, introduced the term society 5.0 as a resolution of the 4.0 industrial revolution that had been running previously. In this era, the use of robot technology, artificial intelligence, and also the internet of things (IoT) is increasingly blending and becoming a part of human life. Humans are increasingly inseparable from the various existing technologies.

The use of smartphones (smartphones) is increasingly widespread, where in 2021, as many as 76 percent of the Indonesian population use smartphones. Access to information is getting faster and more and more people can get through smartphones. This changes the way

people live and live. Especially when the COVID-19 pandemic strikes all over the world, a massive disruption occurs. People rely so much on the internet.

The high penetration of internet usage in the community was greeted with agility by businesspeople with the emergence of various digital business platforms including e-commerce which has been so active lately. This also causes people to flock to make shifts to digital services.

This is an opportunity as well as a challenge for the government as the implementer of public services. In the pandemic era, where human movement is restricted, the Government needs to make innovative efforts to continue to be able to provide good public services, including digital services. In addition, the community itself along with the rapid advancement of technology today, where information can be obtained easily, makes them also smarter and demands that public services are also easier and of higher quality. According to a report from Hootsuite, in 2020 We Are Social survey, Indonesians aged 16-64 years use the internet an average of 7 hours 59 minutes a day (on all devices). The majority access social media. This means that a third of the time in a day is always connected to various information and entertainment.

The government has issued Presidential Decree No. 95 of 2018 concerning an electronic-based government system (SPBE), which is a refinement of Presidential Instruction No. 3 of 2003 concerning the National Policy and Strategy for the Development of e-Government, as an adaptive step to the current development of information technology. This step aims to make governance more clean, effective, transparent, and accountable as well as to realize trusted and quality public services.

Almost all countries in the world are currently devoting their attention to an electronic-based government system (SPBE), including Indonesia. Compared to other ASEAN countries, Indonesia's position is still lagging. In Perpres No. 95 of 2018, SPBE services are divided into 2 categories, namely (a) electronic-based government administration services; and (b) electronic-based public services.

METHOD

The analysis was carried out descriptively from various secondary data sources collected from various surveys from BPS, United Nations, APJII, Litbang Kompas, Kemenpan-RB, and others, as well as qualitative research (in-depth study) with informants from the Gorontalo Province Communications and Information Office.

The definition of Electronic Government (e-Government) based on a quote from the World Bank refers to the use of information and communication technology by government institutions, such as the Internet, WAN, and mobile computing, which is expected to facilitate the transformation of relations with citizens, businesses, and other government institutions.

Based on the explanation in Presidential Regulation No. 95 of 2018, Article 1 paragraph 1 reads: "Electronic-Based Government System (SPBE) is a government administration that utilizes information and communication technology to provide services to the SPBE Users". Basically, the use of the word e-Government in Presidential Instruction No. 3 of 2003 with SPBE in Perpres No. 95 of 2018 has the same meaning.

The original definition of an ecosystem is an order of unity between all elements of the environment in a complete and comprehensive manner and influence each other. While what

is meant by a digital ecosystem, based on research from Uden et al (2007) it is stated that the digital ecosystem is a collaboration of various multiplatform, heterogeneous entities that participate in the digital domain. In the case of e-Government, the ecosystem in question includes applications, e-Government itself, infrastructure, internet network, and the readiness of users (community) to use digital content.

According to Law Number 25 of 2009 concerning Public Services, what is meant by public services are activities or series of activities in the context of fulfilling service needs in accordance with laws and regulations for every citizen and resident of goods, services, and/or administrative services provided by public service providers Public Services. Provision of public services: state administrative institutions, corporations, independent institutions established by law for public service activities, and other legal entities formed solely for public service activities.

Meanwhile, according to PermenPAN No. 63 of 2003, public services are all forms of public sector services carried out by government officials in the form of goods and or services in accordance with the needs of the community and the provisions of applicable laws and regulations.

Siagian (1992) said that public services have aspects, among others, service activities to the community in accordance with their rights, the form of service to the community in the form of important goods and services, service to the community adhering to the principles of effectiveness and efficiency.

The implementation of public services must be based on the following principles (Law No. 25 of 2009): public interest; legal certainty; equal rights; balance of rights and obligations; professionalism; participatory; equal treatment/non-discrimination; openness; accountability; special facilities and treatment for vulnerable groups; punctuality; and speed, convenience, and affordability.

RESULTS AND DISCUSSION

The current disruption forces various sectors of life to adapt to be able to survive and adapt to change, so as not to be crushed by the times. Various business sectors have begun to change their work system by adopting the latest technological developments. Those who cannot adapt will be eliminated from the competition and will die. Starting from the industrial era 4.0, it has changed people's behavior in shopping. Conventional consumption patterns (buyers and sellers transact face-to-face) have begun to shift to a more practical and faster way by utilizing information technology (internet) facilities.

The emergence of start-ups in Indonesia is currently experiencing a fairly rapid development along with the increasing penetration of internet and smartphone usage. According to Bank Indonesia, the circulation of money through this platform is fantastic, that in 2019 the number of e-commerce transactions per month reached 11-13 trillion. McKinsey & co even projects that by 2022 the value of the e-commerce market in Indonesia is valued at around 910 trillion.

If in the business sector, market players respond very aggressively to the current technological developments, what about the government? The demand from the public for easy and quality public services continues to increase. Especially in the era of a pandemic like what

is happening right now. In addition, the behavior of people who are already familiar with internet technology devices.

People are getting smarter and more information literate, so they have a tendency to "demand more" for public services provided by the government and other public service providers. Rapid technological developments from time to time also make public services that were once considered advanced and become pride, now may be considered outdated and obsolete if they are not adjusted to current conditions. In addition, the affordability of technological devices is increasingly reaching everyone, causing change to become faster.

Some of the issues of public demand that are often heard related to public services include, people want fast-paced services. In addition, the community also demands that the accessibility of services can be easier and more equitable. The community also wants the cost to get public services to be affordable. An issue that is no less important is the transparency of public information. Electronic-based government is expected to be able to answer the various demands of the community.

In the 2020 e-Government survey initiated by the United Nations (UN), Indonesia is ranked 88th out of 193 countries in the development and implementation of an electronic-based government system (SPBE) or e-Government. This survey is conducted every two years. In 2020, Indonesia's ranking showed a significant increase, 19 ranks, compared to the survey conducted in 2018. In the survey conducted in 2018, the State of Indonesia was ranked 107. There was a progressive increase from year to year, wherein in 2016 was only ranked 116.

United Nations categorizes index values above 0.75 points as Very High EGDI (E-Government Development Index) countries, values from 0.50 to 0.75 as High EGDI. While a score of 0.25 to 0.50 is categorized as Middle EGDI and those who score less than 0.25 are categorized as Low EGDI. Indonesia itself in the survey in 2020 managed to get a total of 0.6612 points so that it was included as a High EGDI country and ranked in the top 100 in the world.

The EGDI score is measured from several parameters, namely the quality and coverage of e-Government services, development of digital infrastructure, and human resource skills to run digital government services (e-Government).

Many studies on e-Government have been carried out in previous research. However, the average judge is about the readiness of the government. No one has highlighted the readiness of the ecosystem in the community, even though no matter how good the e-Government system is carried out by the government, if the ecosystem is not ready, the community is not ready, of course, the system will not work. The results of research from Mohi (2020) on local government strategies for improving public services through an electronic-based government system, the results show that the implementation of e-Government in the Gorontalo Regency local government has been going well.

The results of research by Nento (2017) on measuring the e-readiness of Gorontalo Province in the application of smart government, found that all government institutions in Gorontalo Province, both at the provincial level and at all district and city levels, did not yet have grade A grades or were very ready. From the measurement of e-readiness, the Gorontalo Provincial government gets a grade B and is the highest compared to the Regency/City. The average e-readiness value from all provinces and city districts is at grade C, which means the level of

readiness is moderate. The approach taken in this e-readiness measurement research is from a socio-technical perspective. The main factors that must be measured are human factors, technological factors and also institutional factors.

A. Digital Infrastructure

Cellular telephone signals are transmitted through base transceiver station (BTS) transmitter towers which are placed in certain areas. The absence of a BTS tower in a certain village does not necessarily mean that the area does not have a telephone or internet signal. A village can still get a telephone or internet signal from the BTS Tower located in another village, as long as it is within the service coverage radius of the BTS.

According to the results of the village potential data collection (Podes) conducted by BPS, the number of villages that have BTS towers in Gorontalo Province is 97 villages in 2020, an increase of 9 villages when compared to 2019 data which was 88 villages. The BTS tower serves several villages in the vicinity, considering that geographically, the locations between villages in Gorontalo are mostly close to each other. This can be seen from the village data that has an internet signal in Gorontalo Province.

The infrastructure for providing internet networks is relatively evenly distributed in a number of villages in Gorontalo. Of the 714 villages in the Gorontalo Region, only 48 villages (6.7 percent) have no internet signal yet. The majority of villages have even been served with high speed internet (3G and 4G) with details of 39.6 percent 4G, 42.2 percent 3G and 11.5 percent 2G/E/GPRS. This shows that in terms of infrastructure, Gorontalo is sufficient to adopt a digital-based public service system. For villages that have not been reached by an internet signal, some village offices have even been facilitated by the government with wifi facilities connected to the internet network. As happened in several villages in Pohuwato Regency such as villages in Wonggarasi District, the majority of which have no telephone or internet signal.

Table 1. Number of Villages with GSM or CDMA internet signals in Gorontalo Province in 2018

County/City	GSM or CDMA Internet Signal			
	4G/LTE	3G/H/H+	2G/E/GPRS	No signal
Boalemo	29	33	9	5
Gorontalo	88	97	11	10
Pohuwato	37	33	22	9
Bone Bolango	53	79	16	12
North Gorontalo	31	54	24	12
Gorontalo City	45	5	-	-
Gorontalo Province	283	301	82	48

Source: BPS Village Potential, 2018

B. Smartphone User Penetration and The Internet

The use of smartphones in the era of information technology that is growing at this time seems to have become a "must" part of human life. According to research from Statista (July 2020), smartphone users in Indonesia in 2021 are predicted to be 76 percent of the population in Indonesia, meaning that almost 8 out of 10 Indonesians use smartphones in their daily life. There was a very significant increase when compared to conditions in 2015 which only reached 28.6 percent of the population in Indonesia. Research from Statista predicts that by 2025, at least 89.2 percent of the population in Indonesia has used smartphones. The same thing also

happened in Gorontalo, although it is believed that there are not as many users at the national level.

According to the National Socio-Economic Survey (Susenas) conducted by the Central Statistics Agency (BPS), household access to cellular phone use in Gorontalo is also quite high. In 2019, 72.68 percent of households had access to cellular phones. This number increased slightly from 63.75 percent in the previous year. What is interesting is that the use of computers in 2019 was lower than the previous year. On the other hand, the use of cell phones has increased. This shows that access to the digital world is also shifting from static tools to more mobile devices.

Using a smartphone without internet access feels incomplete. Smartphone features cannot be maximized without internet access. The presence of broadband infrastructure that is more evenly distributed makes internet access in the country easier. In addition, the current factor of the COVID-19 pandemic, which requires people to carry out activities at home, has also contributed to increasing internet access. In the second quarter of 2020, the Association of Indonesian Internet Service Providers (APJII) conducted a survey and found that the number of internet users in Indonesia was 196.7 million or 73.7 percent of the total population. A total of 95.4 percent of the internet is accessed via smartphones. Meanwhile, the number of internet users in Gorontalo in 2020 was only 667,018 people or only 56.93 percent of the total population of Gorontalo. This figure is quite high for a new area like Gorontalo. This number represents a very large market in today's digitalized economy.

The number of households accessing the internet in Gorontalo is increasing every year. Based on data from the Susenas conducted by BPS, in 2020 a total of 76.98 percent of households access the internet. This figure increases when compared to 2019 which was 72.68 percent and is believed to increase in the following years. This shows that most of the households in Gorontalo are used to and able to use the internet as an access door to digital services.

The large use of smartphones that access the internet has also changed people's behavior patterns. Various businesses, business activities, and services have become easier with the existence of technology. The widespread use of smartphones and the internet is not only used by Indonesian people to find information and communicate. Some people also use it for economic activities. Currently, people use smartphones in addition to accessing social media, also for online shopping, and access to financial services. Most households in Gorontalo access the internet for the purpose of getting information (65.78 percent), to get information for the learning process (38.73 percent), sending/receiving emails (19.11 percent), and accessing social media (94 percent).

C. Gorontalo Province SPBE Evaluation Results

In Gorontalo Province, for electronic-based government administration services, many Regional Apparatus Organizations (OPD) have made various digital applications to support work in this task environment. However, all of them are independent/stand-alone and are not connected to each other. The same thing actually happened in all local governments in Indonesia. Bappenas said that more than 27 thousand applications were made by various government agencies and were not connected to each other. Here are some digital applications made by the OPD within the Gorontalo Provincial Government.

Table 2. Names of Applications made by OPD in Gorontalo Province

No.	OPD name	App Name
1	Gorontalo Province BKD	SimASN
2	BPMPTSP	One Click ptsp
3	BAPPEDA	e-Renggar, e-RTS
4	SAMSAT	AR app, e-Samsat
5	Inspectorate	SIRRBIA
6	public health Office	e-GERMAS
7	BPMPTSP	APPIG
8	Diskominfo and Statistics	Sector e-Data
9	PMI	SIDDGO
10	P2E Bureau	e-Monev
11	Libraries and Archives	e-Archive

The innovations promoted by the government, along with the penetration of technological advances, have made many OPDs create various software applications to support their respective jobs. Some OPDs even have to hire a third party to help build the application. In terms of electronic-based public services, there have also been several OPDs trying to make them. However, the number is still small, for example in PTSP.

The results of an in-depth study of informants in this study, stated that the government still had difficulties in applying electronic-based government. Some of the problems include the difficulty of HR mastering IT and the lack of understanding among stakeholders. Another problem is that OPD has difficulty translating the intent of Presidential Decree No. 39 of 2018 concerning SPBE.

The implementation of SPBE within the Gorontalo Provincial government has already started. The implementation of SPBE has been covered by legal products that regulate it. Policy-wise, Governor Regulation No. 57 of 2019 concerning electronic-based governance in Gorontalo province has been issued, which is a derivative of Presidential Regulation No. 94 of 2018.

The management of SPBE in Gorontalo province is handled by the Information Communications and Statistics Office. There is one section, namely the ICT Governance and HR section which is responsible for regulating and managing SPBE across OPDs. Not many OPDs have implemented SPBE for public services, only about 15 percent, including PTSP, Health Office, Education Office and Public Works Office.

The fulfillment of infrastructure to support the implementation of SPBE has only reached approximately 40 percent. The internet network with fiber optic uses Telkom's, server equipment has also been installed but along with technological developments, higher capacity is needed. All infrastructure devices are in good condition and functioning. The Gorontalo Provincial Government has made a standard operation procedure (SOP) for the implementation of SPBE governance, but based on Presidential Decree No. 94 of 2018, there will be a new governance system that will be issued by the central and regional governments. However, until now the formulation of the new governance from the central government has not yet been passed down to the regions.

The Department of Communication and Information, which is given the authority to handle the implementation of SPBE in Gorontalo Province, also conducts periodic evaluation audits of all applications used or issued by OPD.

In implementing SPBE, the Gorontalo Provincial government uses various media including websites, android-based applications to the use of social media. Information that will be shared is filtered by the team at the Communications and Information Technology Office and uploaded to the media managed by each OPD. In terms of planning, the Gorontalo Provincial Communications and Information Office has designed an ICT master plan for the implementation of SPBE in Gorontalo, but it has not yet been fully implemented.

The results of the SPBE evaluation conducted by the Kemenpan-RB, referring to the Regulation of the Minister of State Apparatus Empowerment and Bureaucratic Reform of the Republic of Indonesia Number 5 of 2018, the SPBE index value of Gorontalo Province in 2019 has reached a value of 3.18 with a good predicate. The predicate of the SPBE index according to Permenpan-RB No. 5 of 2019, namely, a value of 4.2-5.0 is satisfactory, 3.5- <4.2 is very good, 2.6-<3.5 is good, 1.8 -<2.6 is sufficient and <1.8 is less. Although in general it has been categorized as good, one of the three SPBE assessment domains, namely the SPBE policy domain is still worth below three, to be exact 2.35, which means it is still in the sufficient category (has not yet reached the set target). While the other two domains have scored above 3, namely the governance domain (3.57) and the SPBE service domain (3.24).

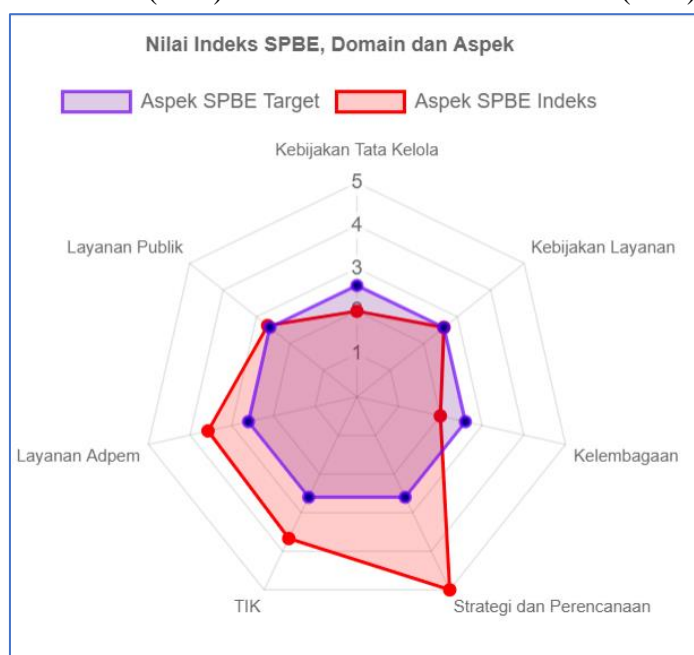


Figure 1. Graph of Gorontalo Province SPBE Index Value in 2019

Table 3. Number of Indicators, Total Weight, and Value of SPBE Index According to Domain and Aspect Details, Gorontalo Province in 2019

Domains and Aspects	Number of Indicators	Total Weight	Index Value
SPBE Policy Domain	17	17	2.35
- SPBE Governance Policy	7	7	2.00
- SPBE Service Policy	10	10	2.6
Governance Domain	7	28	3.57
- Institutional	2	8	2.00
- Strategy and Planning	2	8	5.00
- ICT	3	12	3.67
SPBE Service Domain	11	55	3.24

- Government administration	7	35	3.57
- Public service	4	20	2.67
SPBE Index			3.18
SPBE predicate			Well

Source: Kemenpan-RB (spbe.go.id)

The SPBE assessment at the Regency/City level, there are 1 Regency and 1 City whose results have been published by the Kemenpan-RB, namely Boalemo Regency with an SPBE index value of 1.45 with a predicate of less, and Gorontalo City with an index value of 1.95 with a predicate enough. So, for the Regency/City level, no one has achieved the good target as set by the government'.

Even though the government has made various digital public service applications, it has not been widely used by the community, because they are still not used to using this digital-based public service.

In August 2021, the results of a poll from Kompas R&D, there are still few people who use public service facilities with this digital technology. More than half of the respondents (52 percent) stated that they had never accessed public services online at all. Meanwhile, 13 percent of respondents stated that they often use digital services.

Although the use of the digital government system is still not optimal, in fact more than half of the respondents (57.8 percent) assess that in terms of infrastructure, the government is ready. Likewise, in terms of human resources (HR), the government is considered ready to implement digital public services.

In addition to the issue of uneven internet infrastructure and a digital culture that has not been developed, the government also needs to immediately resolve issues related to data security. Along with government digitization efforts, there have been countless cases of data leakage originating from the government's official website.

Without certainty about the security of personal data, it is certainly difficult for the public to trust and want to use digital public service facilities. Ultimately this will have an impact on the level of trust and use of digital services provided by the government. Do not let the investment that is not cheap to build digital government is not used optimally by the community just because of concerns about the security of their personal data not being guaranteed.

Obstacles

At the beginning of promoting innovation, the impact is that many regions are competing to make IT-based innovations with various computer program applications. Some regions even hire experts from third parties to produce these various applications. As a result, almost every region has an application, but they cannot communicate with each other. The principle of interoperability cannot be applied.

Some of the obstacles faced by the Gorontalo Provincial government in implementing SPBE include a limited budget, infrastructure to support SPBE is not optimal (only about 40%, some of the planned ICT infrastructure has not been fulfilled), so that SPBE implementation is not optimal. Another obstacle is that there is a gap in understanding between OPD related to SPBE, so that the implementation of SPBE within the scope of OPD cannot be optimal and the architecture and governance of SPBE which will be the implementation guidelines have not been handed down by the center to the regions.

In an all-digital era, the demand for public services to keep up with the development of information technology is increasingly emerging. Based on the data presented in this discussion, it can be seen that most of the people of Gorontalo are used to accessing the internet. The internet service infrastructure is also fairly evenly distributed in most villages in the Gorontalo area. This shows that the community is quite ready to enter the digital era. But on the other hand, the government is still not able to take advantage of these opportunities to improve the quality of public services, the government needs to be encouraged to immediately digitize various public services, of course, while still paying attention to data security.

If the government is able to optimize public services digitally, the government will reap the benefits in the form of improving the quality of government services to its stakeholders; control, transparency, and accountability of government administration in the context of implementing the concept of Good Corporate Governance will increase; significantly reduce the total administrative, relation and interaction costs incurred by the government and its stakeholders for daily needs; provide opportunities for the government to obtain new sources of income through its interactions with interested parties; create a new community environment that can quickly and accurately respond to various problems faced in line with various global changes and existing trends.

CONCLUSION

Based on the data described above, in general the digital ecosystem in the Gorontalo community is quite ready to accept various digital services. The infrastructure for providing internet networks has reached 93.3 percent of villages in Gorontalo. Households that have access to cellular phones in Gorontalo reached 72.68 percent. Meanwhile, 76.98 percent of households in 2020 have accessed the internet, with the goal of the majority being accessing social media.

The private sector has previously taken advantage of this ecosystem to accelerate its business activities. Seen by the shifting of people's behavior, from conventional to digital shopping which is getting higher. On the other hand, the government still needs to be encouraged to be able to produce go digital public services, in order to meet the various demands of the community.

SUGGESTION

SPBE is needed to realize clean, effective, transparent, accountable, quality and reliable governance. To realize the SPBE's goals, several things need to be done, including:

1. Starting from the formulation of governance relations between agencies. This is important, because the system that was built is a catalyst in work relations between agencies to be more effective and efficient. If the governance of this relationship is not clear, then the system that is built will not be able to have a significant change impact.
2. Creating an integrated system, which is interconnected with other systems. Talking about technology and public services, the government must of course provide adequate and integrated, and integrated tools, starting from the local government level to the central government level.

3. Provision of reliable human resources from internal agencies, so as not to depend on third parties. This is to ensure the continuity of the services that have been created and to ensure data security.
4. Optimize the ecosystem that exists in the user (community). The ecosystem in question is infrastructure readiness, internet network distribution, user control of devices, and internet accessibility by the community.

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