

Understanding Public Services Using Digital Technology: Empirical Model of Digital Public Service in Local Government

Rike Anggun Artisa¹, Sinta Ningrum²

{rikeanggunartisa@poltek.stialanbandung.ac.id¹, sinta.ningrum@unpad.ac.id²}

Universitas Padjadjaran, Sumedang, Indonesia^{1,2}
Politeknik STIA LAN Bandung, Bandung, Indonesia¹

Abstract. The Industrial Revolution 4.0 has changed many things, including work patterns in public organizations characterized by the Internet of Things and the use of artificial intelligence. This wave challenges public services to become easier and more responsive. This research aims to understand public services using digital technology by identifying an empirical model of digital public services in Sumedang Regency, one of the local governments in Indonesia. The research method used is a qualitative method by conducting interviews, observation, and reviewing documents. This research provides insights for decision-makers and other local governments planning similar transformations. Sumedang Regency is an example of how technology can improve the efficiency and responsiveness of public services at the regional level.

Keywords: Digitalization; Public Service; Local Government

1 Introduction

Public services are very important to maintain the existence of a country. Public services are the basis for meeting community needs and ensuring community welfare at the basic level. As time goes by, attention to providing good public services has increased. This shows that the government realizes how important it is to meet the hopes and needs of its citizens. Providing good public services has become the main concern of many governments[1]. Therefore, the government has a big responsibility to ensure the efficiency, affordability, and quality of public services to build public trust.

The development of information technology in the Industrial Revolution 4.0 era has changed many things, including public services. Currently, an efficient government is defined as a government that can provide public services through digital platforms and effectively meets the needs of its citizens using contemporary communication tools and channels [2]. This shows that the digitalization of public services promises efficiency because technology is considered capable of simplifying and speeding up services. Apart from that, when public services become digital, services will be closer to the community and can increase community participation or involvement (De Classe et al., 2021).

For more than two decades, digitalization and E-Government have been big topics in public administration reform. However, progress in implementation is still experiencing difficulties in several countries so that progress is quite slow (Pisár et al., 2022). These barriers can stem from

technical issues, regulations, or even cultural resistance. Nevertheless, technology adoption is still considered to help government governance. Technology can even increase transparency, increase accountability, and reduce the level of corruption in government [5]. By using information and communication technology, the government can optimize administrative processes, provide faster and more accurate access to information to the public, and create a more transparent environment. Therefore, although there are still challenges to implementing it, the potential of information technology can encourage public administration reform to become more effective and accountable.

When discussing the role of technology in the delivery of public services, it is important to understand that technology adoption is not only a necessity but also a strategic step towards responsive government. Digital public services reflect the government transformation that is currently developing in the digital era, technology-based innovation is the main key to increasing the efficiency and responsiveness of services.

As an empirical example of the implementation of digital public services, this research focuses on the model implemented by local governments in Indonesia, especially the Sumedang Regency. This research aims to describe in detail how Sumedang Regency uses technology to provide public services, with an emphasis on effectiveness, affordability, and the application of innovation to better meet community needs. Thus, it is hoped that this research can provide a concrete explanation of how technology can be a catalyst for improving the quality of public services.

2 Methods

This research uses qualitative methods by conducting an in-depth exploration of digital public services in Sumedang Regency. In this context, qualitative methods provide a wider space to understand various complex aspects and contexts that may be difficult to measure quantitatively.

This research seeks to explore the experiences and perceptions of various stakeholders such as government elements through the Communication and Information Service Sumedang Regency, service-providing agencies/units, as well as the community as users through in-depth interviews. Apart from that, by conducting observations it is hoped that we can obtain an overview of the digital public service process and interactions between government and society. Then, document reviews were carried out on various official documents including statutory regulations and reports related to the implementation of digital public services.

Furthermore, the author carried out an analysis to find the unique context that exists in Sumedang Regency to then find out the challenges faced. Therefore, this research has great potential to reveal important aspects of digital public services. The results of this research can provide a broader picture for decision-makers, other local governments, and other researchers who are interested in aspects of digital public services.

3 Result and Discussion

Sumedang Regency, like other regions in Indonesia, is transforming the use of government technology to maximize the benefits that can be felt by organizations and society. In this case, the Sumedang Regency Government is the subject that uses technology in government at the

local level. The choice of Sumedang Regency as the research focus was because the Sumedang Regency Government had achieved the highest Electronic-Based Government System index in Indonesia for the regional government category in 2022, namely 3.84 or very good [6]. These advantages provide a strong basis for investigating in depth how Sumedang Regency succeeded in achieving this achievement, as well as the concrete impact it had on the delivery of public services.

One of the drivers of change towards the digital era in Sumedang Regency is that the conventional system that has been implemented so far has many weaknesses. The conventional system, although in the Indonesian context it may still be necessary, faces big challenges in terms of time, cost, and efficiency. This then becomes an obstacle in providing fast, cheap, and efficient public services. Seeing this reality, there has been a strong urge to make changes in the implementation of public services in Sumedang Regency. This change is not only limited to the use of digital applications but also to business processes and interactions of the actors involved.

3.1 Empirical Model of Digital Public Services in Sumedang Regency

To provide digital public services, the Sumedang Regency Government has taken several strategic steps, including building a public service portal called "Tahu Sumedang". This public service portal is intended to provide easy access for the people of Sumedang Regency to obtain the various public services provided.



Fig. 1. Display of the Public Service Portal „Tahu Sumedang“

This portal becomes the main access point that allows the use of one account for all services. With this portal, the public can access various government services more efficiently and practically. In addition, this portal also reduces the administrative complexity that users may experience when having to access multiple accounts. This is a manifestation of efforts to provide integrated services.

Then, another innovative solution provided to bridge between service users and service providers is the construction of a public information system known as „WA Kepo“. „WA Kepo“ is an abbreviation for „Whatapps Kebutuhan Informasi dan Pelayanan Online“ or Whatapps Online Information and Service Needs. This system has the main objective so that the people of Sumedang Regency can get the information they want about Sumedang Regency and Public Services [7]. The use of WhatsApp as the basis for „WA Kepo“ is because WhatsApp is one of the most widely used instant messaging applications. This is also in line with the condition of

people who already relatively know how to use WhatsApp as a daily communication tool. Therefore, it is hoped that it can increase the rapid accessibility of information.

„WA Kepo" as an innovation was also recognized by winning an award at the 2023 West Java Innovation Competition as one of the best innovations in West Java [8]. This achievement reflects the serious efforts of the Sumedang Regency Government in utilizing technology to improve service quality through providing information to the public. This is also evidence that the use of digital technology has an impact on the governance of public services at the local government level.

Another strategic thing in implementing digital public services in Sumedang Regency is providing a digital platform. This digital platform aims to provide various government services online without having to come directly to a government office. This digital platform involves various elements of local government organizations and service units, for example for population and civil registration matters, the public can access the digital platform of the Population and Civil Registry Service to be able to access the various services it has.

To fully understand the digital public service process in Sumedang Regency, the following is an empirical model that provides a complete picture of the interactions that occur between service users and service providers.

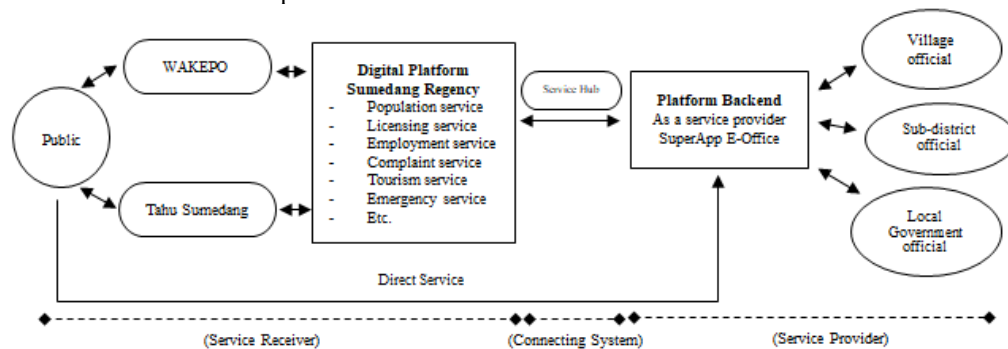


Fig. 1. Empirical Model of Digital Public Service in Sumedang Regency

Figure 1 can visualize how service users can access various public services on digital platforms through two main access points, namely the Public Service Portal „Tahu Sumedang" and the Public Information System „WA Kepo". Next, there is a connecting system that directs users to the backend platform, namely the part that manages the service process behind the scenes. This backend platform is a link between service users and service providers at various levels of government (regional government organizations, sub-district governments, and village governments). After the service user accesses the digital platform, the backend platform will direct the service user's request to the appropriate service provider. This model provides an overview of how each level of government provides integrated public services in the digital public service ecosystem in Sumedang Regency.

In implementing this digital public service model, there are main prerequisites that must be met, namely the availability of technological infrastructure that can support the continuity of digital public services. This technological infrastructure consists of hardware and software. The provision of hardware is carried out through investment in the provision of servers, computers, and other hardware. Meanwhile, software is carried out through the provision of various applications that can support the provision of digital public services. This software is also

important to manage to ensure that service processes are managed well, including ensuring data security.

Community participation is an issue that is no less important in the context of digital public services, which plays a key role in the successful implementation of the model. Ideally, public participation should include the active use of digital platforms, ensuring that all levels of society can benefit from this public service innovation. However, the fact is that there are still certain groups of people who do not have access to digital platforms. One of the obstacles faced is limited internet access, especially in areas known as blank spot zones in several areas in Sumedang Regency. Therefore, it needs to be acknowledged that inequality in access to technology can widen the digital divide.

Adaptation to technology is also a challenge in itself because there are certain groups of people who need time to get used to and understand the use of digital services. So, there needs to be an inclusive approach to implementing digital public services, which includes providing outreach and support to the community so they can make optimal use of digital platforms. Given these obstacles, the Sumedang Regency government still provides conventional service channels to help those who cannot access public services and ensure that there is no discrimination in obtaining digital public services.

3.2 Impact and Benefits

Digital public services in Sumedang Regency provide impacts and benefits not only to the community but also to the government as a whole. Not only does this make services more accessible, but it also changes the way governments interact and carry out their functions. The biggest impact on society is the convenience, affordability, and speed of service. People can get services that are easily accessible, cheap, and fast through digital platforms. Administrative processes in public services can be completed more efficiently. The speed of obtaining this service can save time and possibly also reduce costs for society. Apart from that, people can be happy and satisfied.

Meanwhile, the Sumedang Regency government also received great benefits from implementing digital public services. Through an integrated digital system, the government can make it easier to provide the services the community needs. More efficient services can improve budget efficiency and community welfare. In digital systems, data can be managed and documented better. This allows data analysis for better decision-making for the future.

The implementation of digital public services in Sumedang Regency has several advantages which are positive aspects and strengthen the effectiveness and efficiency of digital services, including the creation of a single data center or data center. Local governments can easily manage, analyze, and utilize information for better decision-making because public service data is collected in an integrated manner on one platform and ensures that the information is accurate and consistent. The next advantage is that you can remain independent or not depend on certain vendors. Not being dependent on one vendor allows Sumedang Regency to be more flexible in selecting and integrating various technology solutions that suit current needs and developments. This can encourage innovation and reduce the risk of dependence on one party.

Then, another advantage of implementing digital public services is gaining public support and trust. The existence of a public service platform that is effective and easily accessible to the public can increase public trust and participation in using digital services. Public support and acceptance is critical to the success of digital public services. With the same regional context

and needs, the digital model and platform used can be easily applied in other regions. Therefore, the experience of Sumedang Regency can be an inspiration for other regional governments to adopt digital public service models.

However, apart from the various advantages, several disadvantages need to be corrected. The first drawback is that the application owned by Sumedang Regency is not fully integrated with the application provided by the central government. To ensure harmony and consistency in the delivery of public services nationally, synergy between regional and central governments must be improved. Then, dependence on the internet network is another drawback. To ensure equal participation of all Sumedang Regency residents in digital public services, it is necessary to improve infrastructure and internet coverage, even though internet access is currently increasing.

3.3 Sumedang Regency Digital Public Service Strategy

To achieve effective and measurable goals in digitizing public services, the Sumedang Regency government is implementing several core strategies, including strengthening the commitment of regional leaders. The Sumedang Regency Government realizes how important direct support and high commitment from regional leaders are in driving change towards better digital public services. This commitment is the main driver for encouraging all regional officials to optimize digital services.

Socialization and mentoring regarding digital literacy is the next strategy. The Sumedang Regency Government realizes that the success of digital public services depends on the community's digital understanding and skills in addition to digital infrastructure and platforms. Therefore, outreach and mentoring activities are carried out to increase people's digital literacy so that they can use digital public services.

Another digital public service strategy that the Sumedang Regency Government hopes is to be able to integrate existing systems with other systems nationally. This is done so that public services can run synergistically at the national level. Sumedang Regency realizes the importance of integrating this system. However, there is still quite a lot of homework to achieve this so cooperation between various levels of government is needed.

Another thing that is strategy in digital public services is to simplify business processes. The Sumedang Regency Government realizes that making business processes easier can improve the performance of digital public services. People can get services more quickly and easily by eliminating bureaucratic obstacles. However, the complexity of business processes and the existence of sectoral egos means that simplifying business processes still has a long way to go.

It is hoped that the various strategies pursued by the Sumedang Regency Government can accelerate the achievement of digital public service goals. This effort is part of ongoing efforts to address the challenges and opportunities associated with digital transformation at the regional government level.

4 Conclusion

The implementation of digital public services at the local government level is experiencing quite interesting dynamics in this era of transformation. This research provides an overview of digital public services in Sumedang Regency, Indonesia. Sumedang Regency's digital public services have an innovative approach by creating the public service portal "Tahu Sumedang" and the public information system "WA Kepo." The empirical model of digital public services in Sumedang Regency shows how people can access various services via digital platforms using one account.

For the sustainability of digital public service delivery, high commitment is required from all relevant parties, especially regional leaders. Along with that, digital infrastructure must also be improved. Then increasing digital human resource capacity is an important step so developing and training ICT skills for regional officials must be a top priority. Furthermore, there needs to be a policy framework that can become a clear legal reference, as well as performance incentives. Finally, integration of regional and central systems needs to be pursued to realize an integrated smart government.

Sumedang Regency provides an example of how technology can help improve the efficiency and responsiveness of public services. On the other hand, the challenges faced reflect the importance of a holistic strategy.

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