



Implementation of the Integrated Public Service Information System Application (SIPUT) to Improve Public Service Communication in the Loktuan Village, Bontang City



Karina Nur Fitriani ^a

Hairunnisa ^b

Johantan Alfando Wikandana Sucipta ^c

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Abstract

SIPUT is an information system that utilizes information and communication technology to facilitate administrative management at the administrator level. The study aimed to find out the implementation of the SIPUT (Integrated Public Service System) application to improve public services in the Loktuan Village, Bontang City. This research used a descriptive qualitative approach with a purposive sampling technique. The primary data sources used in this study include the head of the Loktuan sub-district head, Mr Hadi Jumianto and Mrs Nurliya, and three public service employees or staff who operate the SIPUT application, as well as the surrounding community who often use public services in the Loktuan sub-district, as many as 5 people. Secondary data sources used are written sources. Data analysis using Miles and Huberman. In improving public services, five indicators serve as a benchmark for whether the efforts made can improve public service communication, namely fast service, appropriate service, cheap service, safe service, and fair service. The government can improve digital-based public services by adding additional features such as customer satisfaction levels and complaint telephone numbers if there are things that might harm citizens.

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Corresponding author:

Karina Nur Fitriani,

Faculty of Social and Political Sciences, Universitas Mulawarman, Samarinda, Indonesia.

Email address: karinanur.fitriani@yahoo.com

^a Faculty of Social and Political Sciences, Universitas Mulawarman, Samarinda, Indonesia

^b Faculty of Social and Political Sciences, Universitas Mulawarman, Samarinda, Indonesia

^c Faculty of Social and Political Sciences, Universitas Mulawarman, Samarinda, Indonesia

1 Introduction

In line with the development of science and technology in the field of the Indonesian government, there have been many changes. In the development of increasingly modern world technology, governments in developing countries must keep up with technological developments. The era of digital society in Indonesia is demonstrated by the rapid development of Information and Communication Technology (ICT), especially in the telecommunications industry in recent years. Technology is currently a need for urban society, where technology is a fundamental requirement of public services by the government to achieve effective and efficient public services along with the development of the paradigm from Old Public Administration to Dynamic Governance which has a very close correlation with developments technology (Kuswati et al., 2022).

According to BPS data from the 2021 Susenas Survey data collection, 62.10 percent of Indonesia's population will have access to the Internet in 2021. The high number of internet users in Indonesia cannot be separated from the rapid development of cellular telephones. In 2021, it is recorded that 90.54 percent of households in Indonesia already own/master cell phones. This figure has increased compared to conditions in 2018 which reached 88.46 percent (Maulana et al., 2023).

The successful implementation of public services is inseparable from the communication factor. The results of research conducted by Hardiyansyah (2018), concluded that communication has a major effect on the quality of public services. The magnitude of the influence of communication on the quality of public services is determined by the dimensions of the communicator, message, media, communicant, and effect. Communication plays an important role in the quality of public services. The communication factor must be the most important concern for public service organizations. Failure to build public service communication will result in disruption or cessation of the flow of public service information, and of course, will affect the quality of public services (Hardiansyah, 2015).

Efforts to improve the quality of public services are carried out by reforming the public service system as a whole and integrating it. In facing the era of globalization which is full of challenges and opportunities, the state apparatus in this case is focused on the government apparatus to provide the best possible service, oriented towards the needs and satisfaction of service recipients, to increase competitiveness in the provision of goods and services (Sihombing et al., 2022).

Advances in information technology are also a solution to meeting the aspects of transparency, accountability, and public participation. The integration of government administration systems through online information networks, needs to be continuously developed, especially in the delivery of services, to enable the availability of data and information in government agencies that can be analyzed and used quickly, accurately, and safely (Sulistyaningsih et al., 2021). The implementation of public services is an effort by the State to fulfil the basic needs and civil rights of every citizen for goods, services, and administrative services provided by public service providers (Lindgren et al., 2019; Bertot et al., 2016). The public at all times always demands quality public services from bureaucrats, even though these demands are often not in line with expectations because empirically the public services that have occurred so far are still convoluted, slow, expensive, and tiring. Such tendencies occur because the community is still positioned as the party that "serves" not the one being served (Sinambela, 2014). Good governance through innovation in government agencies if implemented properly will also create good governance. One form of good governance is a smart city. A smart city can be interpreted simply as a smart city or a smart city that can provide a better quality of life and convenience for the community. Many things characterize an advanced city, some of which are the use of technology in various sectors and quality public services from government administration (Sutton et al., 2020).

The City of Bontang, which is known as the maritime industrial city, is one of the cities that has proclaimed Bontang City as a smart city as the vision and mission of 2015. The government's efforts to make it happen through spearheading services that are directly in contact with the community. Gradually people began to be introduced to the "smart city" programs. The city government also really appreciates and encourages innovations made by government agencies in Bontang City. One of the agencies that have innovation is the Loktaan Village. Loktaan Village is one of the most densely populated villages in Bontang City with a population of 20,896 people and an area of 3.58 km².

The Loktaan Village area is directly adjacent to several companies, the largest of which is PT. Pupuk Kalimantan Timur has a port directly facing the Makassar Strait. The dense population in the Loktaan Village with a total of 52 RTs has opened the eyes of the Loktaan Village government to innovate its services. In terms of sub-district government services, it is always demanded to be precise and fast. The majority of residents who work in companies and fishermen find it quite difficult to spend a long time when they want to take care of the paperwork, permits, and so on.

In 2015, citing kipkaltim.net, the Office of Communication and Information and Statistics of the City Government of Bontang launched an application to support the smart city program, namely an application called SIPUT (Integrated Service System). This application then developed and began to be implemented in other sub-districts in 2017 such as Gunung Telihan Sub-District, Belimbing Sub-District, Bontang Kuala Sub-District, Tanjung Laut Sub-District, Api-api Sub-District, Tanjung Laut Indah Sub-District, all Sub-Districts in Bontang City have implemented this application because it is a smart program. city Bontang city government.

SIPUT is an information system that utilizes information and communication technology to facilitate administrative management at the level of administrators and implementing agencies as a single entity that is intended for the implementation of an integrated and orderly service information system, fulfilment of residents' rights in the field of population administration with professional services and availability of data and information regarding population registration and civil registration at various levels is accurate, complete, and easily accessible (Sutton et al., 2020).

The application of SIPUT is very necessary to assist administrative processes in the Loktuan Village. The results of the initial observations of the researchers found that before the existence of the Loktuan sub-district snail application, they provided services to the community using a manual system, still using handwritten notes, after the development of the sub-district, service officers carried out services by typing manually on the computer. Services with this manual system have time constraints, namely, it takes a long time to perform 1 service, for example, the service for obtaining a certificate of incapacity must be typed in manually which makes residents wait for the service for a long time. The existence of the snail application in addition to making it easier for officers to carry out their service work also minimizes time when serving the community. This has had a positive impact on the Loktuan sub-district community.

A comparison of the use of the snail application and the manual service takes approximately 7 minutes, for example, making a marriage certificate requires typing for approximately 15 minutes. With the presence of a snail, it can be completed in only about 3 minutes. Approximately 80% of the time has been saved, by the aim of the snail application in improving services to the community in the Loktuan Sub-District, it has been greatly assisted, apart from increasing HR capacity automatically all employees must be able to use computers even though the average village employee is 30 years old but with the management of the snail, the application provides training on the use of computers to improve HR skills (Beasley et al., 2005; Zhu et al., 2008).

Apart from the effectiveness of the service, efficiency can also be seen when people no longer need to carry too many files, just take a photo of the file through the RT head and upload it to the snail application, thus minimizing the existing archives. However, the fact that the author has found that currently SIPUT in Loktuan Village is still experiencing problems that have not been repaired, that is, several letters cannot be processed using the SIPUT application, so they are still using a manual system. The most common problem is that there are errors in data input by the head of the RT, so the process of entering data by the head of the RT must be repeated until it is correct (Cordella & Iannacci, 2010; Lee et al., 2011).

The SIPUT application is related to the e-RT application so if there is an error in filling in the application it will have an impact on synchronized data in the SIPUT application, it is undeniable that there are several RT heads who do not know how to operate the e-RT program for the data input process so there are still many who using a manual system with a letter of introduction, this delay is due to the lack of socialization for the RT head in using the program that already uses the online system (Vatanasombut et al., 2008; Lin et al., 2011). As for the uses in the application (SIPUT) there are various types of services including making cover letters for KK, making cover letters for ID cards, resident domiciles, certificates of incapacity, marriage certificates, death certificates, and others. Based on the description above, the purpose of this study was to determine the implementation of the SIPUT (Integrated Public Service System) application to improve public services in Loktuan Village, West Bontang District, Bontang City.

2 Materials and Methods

This study uses a qualitative approach to descriptive research. This research uses the Purposive Sampling Technique. Primary data sources used in this study include key informants and research informants. The key informants in this study were the head of the Loktuan urban village, Mr Hadi Jumianto, and Mrs Nurliy staff in the government service & security sector, both of whom were credible primary data sources by the characteristics that the researchers had made. The research informants were 3 employees or staff of the public service section who operated the SIPUT application, namely Mr X, YZ, and the surrounding community who often used public services in the Loktuan sub-district as many as 5 people. The informants were selected according to the characteristics determined by the researcher.

Data collection techniques used observation techniques (to find out direct interpersonal communication between the village head and the community and the effectiveness of the SIPUT application that has been implemented) and interview techniques (conducted at the Lok Tuan Village Head and several employees in the Lok Tuan Village). Data analysis using Miles and Huberman.

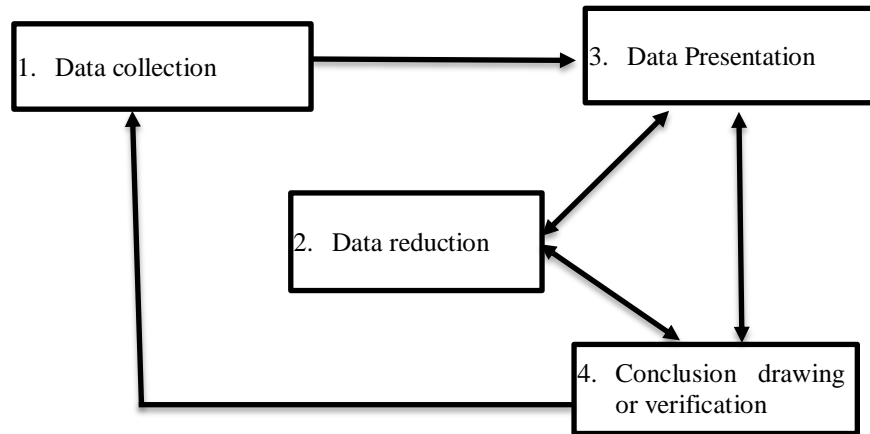


Figure 1. Data Analysis Methods Chart
(Miles et al., 2018)

Analysis of the data used using the concept (Miles et al., 2018). The analysis used includes data collection (interviews, observations, and field selection), data reduction (how to determine, focusing on simplifying, abstracting, and modifying information that occurs in field notes), data presentation, and drawing conclusions or verification.

3 Results and Discussions

After doing research at the Lok Tuan Village Office in the form of interviews conducted using purposive sampling technique to 2 informants, 2 key informants, and 5 supporting informants. Data that was not revealed through interviews, was supplemented by data from direct participatory observations carried out between January and May. To strengthen the substance of the data from interviews and observations, a search was made of existing documents and archives. All data from this research are described concerning the focus of research with indicators in improving public services as follows:

Fast service

The researcher conducted interviews with the Lok Tuan village head, namely Mr. Hadi Mulyanto a key informant who knows the integrated information system (snail) as an innovation service facility created by the Bontang City government in the Lok Tuan Village. Where the role of the village chief is known as a government apparatus whose position is closest to the community. Government service & peace staff, in this case, Ms. Nurliya, is one of the key informants in charge of services and understands digital-based public services, namely the integrated information system application (SIPUT) in the Lok Tuan Village.

An integrated service information system in the SIPUT application implemented by the Government and used by the local community, especially residents of the Lok Tuan Village, is responsive and the process is quite easy with very fast time because it does not require time to queue and wait in the service process like public services in general. This was conveyed by the key informant, in this case, Mr. Lok village chief Tuan Mr. Hadi, who said that

“The time needed by residents to use the SIPUT application is quite fast, although each letter request requires a different turnaround time, for example making an application for making an ID card can take 3 minutes, making a KK can take up to 4 minutes, making a marriage certificate can take up to 5 minutes”. (interview June 22, 2023)

All obstacles in public services through the snail application such as human error can be handled by the public service that works behind the snail application by re-checking the input data with the required data using the Family Card (KK) or Resident Identification Number (NIK) belonging to residents who have uploaded during the file submission process. Ms. Devi Indah Ariska and Ms. Citra Indah Lestari said,

"The errors so far have been resolved, the errors are not from our employees but from the citizen data, for example, the citizen data is sometimes different in the SIPUT and those in the KK file wrong date of birth. The way to overcome this is to re-enter according to the Family Card." (interview, May 29, 2023)

In the process of inputting files by residents, receiving and making request files by the public service team using this snail application requires a quick and short time, so it has fulfilled one of the indicators in improving public services in the Lok Tuan sub-district, East Bontang District, Bontang City. According to Kotler ([Apridiyanti et al., 2020](#)), service is any action or activity that can be offered by one party to another, which is essentially intangible and does not result in the ownership of anything. Meanwhile, Public service according to [Ariyanto et al. \(2022\)](#), is any activity carried out by the government against several people who have every activity profitable in collection or entity, and offers satisfaction even though the results are not tied to a product physically. Public services that are provided with fast service indicators through integrated information system applications (SIPUT) are also supported by a good network system and people who can make good and optimal use of them so that the process of public services can be handled quickly there is no more accumulation of files that cause delays processing of citizen files.

According to Kotler ([Badu, 2021](#)), service is any action or activity that can be offered by one party to another, which is essentially intangible and does not result in the ownership of anything. Meanwhile, public service according to [Gerontas et al. \(2022\)](#), is any activity carried out by the government against several people who have every activity profitable in collection or entity, and offers satisfaction even though the results are not tied to a product physically. Public services that are provided with fast service indicators through integrated information system applications (SIPUT) are also supported by a good network system and people who can make good and optimal use of them so that the process of public services can be handled quickly there is no more accumulation of files that cause delays processing of citizen files ([Francois, 2000](#); [Ashraf et al., 2014](#)).

Service is right

Referring to customer satisfaction means providing good service with the principle of convenience to customers, in this case, citizens who have an interest in public services that are utilized in the service process for residents of the Lok Tuan sub-district, Bontang City. To improve public services, appropriate services are needed so that the public or users of these public services feel satisfied and comfortable in the process of requesting service assistance from related parties. The comfort of citizens is of course inseparable from a sense of security and trust in public service officers ([Simatauw, 2021](#)). Public service employees can be trusted when they understand the main tasks and functions of the work they carry out.

The researcher intends to find out about the accuracy of the service through the conditions and understanding of the snail operator or sub-district service employee who is in charge of this field, Mr. Hadi as the Lok Tuan village head said, *"Of course, he understands because if he doesn't understand there will be many mistakes in inputting the data. Usually, before handing it over to the residents, I correct if there is a revision, then I sign it."* (interview, June 22, 2023).

According to the head of the Lok Tuan sub-district, in this case, Mr Hadi Mulyono said that the staff assigned to the public service sector certainly understand the applications used because if they don't understand, they will make mistakes that hinder the completion of files and harm residents. This was also conveyed by the sub-district staff in charge of public services, Ms Devi Indah Ariska and Ms Citra Indah Lestari said that *"In my opinion the service employees here really understand how to use the SIPUT application because there has never been an error on the part of the employee, usually the error is only in the residents' data."* (interview, May 29, 2023)

Not only that, officers who work in the field of public services, especially the SIPUT application, are of course officers who already understand IT and the applications used before being assigned to that field. The application used is quite easy and requires a little expertise in operating a computer, following the opinion of the respondent Mr Hadi said, *"Initially there was this application, of course, there was special training for service employees, but just being told how to use this application, there was no special training because how to use this application is quite easy to operate, the important thing is to understand how to operate a computer."* (interview, May 29, 2023).

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mistakes that hinder the completion of files and harm residents. Officers who work in the field of public services, especially the SIPUT application, are of course officers who already understand IT and the applications used before being assigned to that field. The application used is quite easy and requires little expertise in computer operation.

In the process of improving services, of course, cannot be separated from evaluation to improve services and things that are lacking so that they can be utilized optimally. Researchers find out the extent of the evaluation carried out by the Lok Tuan sub-district service so that residents who use these services get convenience in their use, not only that the evaluation process is also carried out to minimize errors in the public service process, the ward leadership always reminds them to be more careful in assigned to service personnel.

Other things that can be considered besides evaluation are the benefits and conveniences that SIPUT users get. The researcher asked several supporting informants such as residents who took advantage of the suitability and accuracy of using the SIPUT application and found that all SIPUT users felt helped by easy and fast digital-based services. Service improvement with appropriate service indicators has been achieved through mastery of content, understanding of applications, accuracy of file processing, and data generation which can be concluded from the narratives of informants, both key informants and supporting informants.

Cheap service

Cheap services are services that do not require large costs to get them. Cheap services in the sense that the costs required by the community to obtain these services are affordable to all citizens. This needs to be emphasized because public services held by the government are not intended to seek profit but to fulfil constitutional mandates.

Following are some opinions from respondents regarding the low-cost services offered by the Integrated Information System (SIPUT) that can be used by residents of the Lok Tuan Village in obtaining public services. The researcher tried to ask some of the residents he met regarding the costs incurred by residents when using the SIPUT application and all the respondents he met said the same thing that there had never been any collection of fees either from the application or from the service staff they met when taking the files. A resident of RT 09 named Bompeng Rilangi said "*No fee is charged, everything is FREE*", followed by a resident of RT 31 named Joko Ainun "*Never ask for anything in return, because taking care of correspondence is indeed their job*". (interview, May 28, 2023)

The same thing was conveyed by Mrs Nurliya as a staff member for government services and peace. She said, "*There is no charge for using the application, all services are free*" (interview May 29 2023).

The researcher also tried to ask again whether there were reports of extortion related to the use of the SIPUT application, and he replied "*Thank God there are none yet, all employees in the village are trustworthy*". (interview, May 28 2023)

In terms of responding well to the community's need for a service, of course, the government is making efforts to make it easier for users of public services, one of which is by making services easy and inexpensive. Services whose benefits can be felt by the community without any complaints behind it. The SIPUT application is a breakthrough in digital-based public services because users can easily access it from anywhere and at any time, thereby reducing transportation costs, waiting time costs, and queuing somewhere to get these services. Cheap means that using this application does not require a large fee, it is enough to have an internet network and a supporting mobile device. Meanwhile, using the SIPUT application does not require other costs, such as transaction fees,

In the process of socializing the application of the Integrated Information System (SIPUT), it is carried out without charging a penny. Thus it can be concluded that the improvement of public services in Lok Tuan Village, North Bontang District, Bontang City in terms of cheap service indicators has been fulfilled, because the application used by Lok Tuan residents does not require a fee to use it, apart from the cost of the private internet network belonging to each individual who uses it want to use the service.

Safe service

Researchers asked about the security of the SIPUT application in protecting user data, Mr. Hadi Mulyono as Lurah Lok Tuan said, "*Indeed, the data is not secure because this application is from a third party but these third parties can be trusted because we have signed an MOU, if in the contract they are ready to maintain the confidentiality of data from Loktaan residents,*" (interview, January 15, 2023).

In addition to the sub-district leadership, the researcher also asked the same thing of the service staff in the Lok Tuan Sub-District, Ms Devi Indah Ariska and Ms Citra Indah Lestari said something similar but more assertive in answering the security of the application, he said that "*guaranteed data is safe, even though the application this is from*

Fitriani, K. N., Hairunnisa, H., & Sucipta, J. A. W. (2023). Implementation of the integrated public service information system application (SIPUT) to improve public service communication in the Loktuan Village, Bontang City. *International Research Journal of Management, IT and Social Sciences*, 10(4), 244–253. <https://doi.org/10.21744/irjmis.v10n4.2340>

a third party because at the beginning there was an MOU signed in the contract, they were ready to maintain the confidentiality of data from Loktuan residents. (interview, May 29 2023)

Furthermore, Mr Hadi also explained about efforts made by Kelurahan staff in ensuring the confidentiality and security of residents' data, Mr. Hadi Mulyono as Lurah Lok Tuan said that “there is a locking system, so in the IT there is a password and also the email of each employee who is there, so those who know specifically government officials and admin.” (interview, June 22, 2023).

Law Number 25 of 2009 concerning Public Services certainly provides direction to all service providers, both state administrators, BUMN, BUMD, BHMN the private sector, and individuals, to provide standardized services by fulfilling service standard components. Every public service provider is obliged to fulfil 14 service standard components, in particular the 13th service standard concerning service security and safety guarantees in the form of a commitment to provide a sense of security, free from danger and risk of doubt (Grimaldi et al., 2020). This 13th Service Standard refers to the sense of security offered by all existing public service activities. The digital-based services offered by the Lok Tuan Bontang Village Government are no exception. The data security of users or residents of the Lok Tuan Sub-District is also highly guarded by public service employees on duty in the Lok Tuan Sub-District.

Safe Service is one of the indicators in efforts to improve public services carried out by the Lok Tuan Village government, North Bontang District, Bontang City. From searching the documentation carried out by the researchers, both through interviews and direct observation, it was found that the snail application is a digital application that is quite safe in storing user data, as evidenced by an MOU letter signed with third parties and service employee agreements in protecting the personal data of Lok Tuan residents.

Fair service

Equitable service is a service that is fair to all elements of society. In the General Indonesian Dictionary, the word justice comes from the root word "fair", and gets the prefix and the ending an. The meaning of word fair has the meaning of honesty, straightness, and sincerity that is not one-sided, neutral, or balanced so justice implies something that is not one-sided or impartial and not arbitrary.

According to Khubone et al. (2020), the word justice comes from the word "fair". The word fair comes from the Arabic "adl" which means fair. Justice lexically means the same or equal, or equal. According to the general view, justice is maintaining the rights of others. The definition of justice is giving rights to those who are entitled to receive them. Justice is a measure of the legitimacy of order in the life of the nation, society, and state. The embodiment of justice needs to be pursued by providing guarantees for the upholding of justice.

Equitable services are inseparable from the services provided by service employees to the public receiving public services. Services are fair by not discriminating against anyone who uses them, both in terms of social status and from an economic standpoint. This was conveyed by the Lok Tuan Lurah, Mr Hadi Mulyono who said that "every resident who comes to the Kelurahan office to process correspondence we treat all Loktuan residents and newcomers alike" (interview June 22, 2023)

The researcher asked the same thing of the service staff in the Lok Tuan sub-district, the respondent Ms Devi Indah Lestari and Ms Citra Indah Lestari explained that "Not at all, we make everyone who performs services from their teens to their parents the same, whether they have low or high social status, we equate them, the important thing is to adjust the queue". (interview, May 29, 2023)

In terms of responding well to the community's need for a service, of course, the government is making efforts to make it easier for users of public services, one of which is by making services easy and inexpensive. Services whose benefits can be felt by the community without any complaints behind it. The SIPUT application is a breakthrough in digital-based public services because users can easily access it from anywhere and at any time, thereby reducing transportation costs, waiting time costs, and queuing somewhere to get these services. Cheap means that using this application does not require a large fee, it is enough to have an internet network and a supporting mobile device. Meanwhile, using the SIPUT application does not require other costs, such as transaction fees.

4 Conclusion

Based on the results of research to improve public service communication in the Loktuan subdistrict, Bontang City. In improving public services, five indicators serve as benchmarks for whether the efforts made can improve public service communication, along with the indicators for improving public services used by the Lok Tuan Subdistrict government cheap service, safe service, and fair service.

The public is expected to always comply with the rules that apply in each constitution for convenience in the process of interaction with public services, both in terms of the procedures to be followed for filing files and from an emotional standpoint, being willing to stand in line in an orderly manner with other residents who come first. The government can improve digital-based public services by adding a column of criticism and suggestions at the end of each file submission option in the SIPUT application so that it can be used as material for consideration in the development of even better government software in the next version. The government can also add additional features such as customer satisfaction levels and complaint telephone numbers if there are things that might be detrimental to citizens, such as requesting additional fees for the file retrieval process.

Conflict of interest statement

The authors declared that they have no competing interests.

Statement of authorship

The authors have a responsibility for the conception and design of the study. The authors have approved the final article.

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References

- Apridiyanti, A., Suharman, H., & Ardianto, Z. (2020). Successful Implementation of Information Systems in Public Sector Organizations. *Journal of Accounting Auditing and Business*, 3(1).
- Ariyanto, D., Dewi, A. A., Hasibuan, H. T., & Paramadani, R. B. (2022). The success of information systems and sustainable information society: measuring the implementation of a village financial system. *Sustainability*, 14(7), 3851.
- Ashraf, N., Bandiera, O., & Jack, B. K. (2014). No margin, no mission? A field experiment on incentives for public service delivery. *Journal of public economics*, 120, 1-17. <https://doi.org/10.1016/j.jpubeco.2014.06.014>
- Badu, S. Q. (2021). Implementation Of Integrated Licensing Service Policy In Increasing The Effectiveness Of Public Services In Gorontalo District. *IJIERT*, 8(5).
- Beasley, M. S., Clune, R., & Hermanson, D. R. (2005). Enterprise risk management: An empirical analysis of factors associated with the extent of implementation. *Journal of accounting and public policy*, 24(6), 521-531. <https://doi.org/10.1016/j.jaccpubpol.2005.10.001>
- Bertot, J., Estevez, E., & Janowski, T. (2016). Universal and contextualized public services: Digital public service innovation framework. *Government information quarterly*, 33(2), 211-222. <https://doi.org/10.1016/j.giq.2016.05.004>
- Cordella, A., & Iannacci, F. (2010). Information systems in the public sector: The e-Government enactment framework. *The Journal of Strategic Information Systems*, 19(1), 52-66. <https://doi.org/10.1016/j.jsis.2010.01.001>
- Francois, P. (2000). 'Public service motivation' as an argument for government provision. *Journal of Public Economics*, 78(3), 275-299. [https://doi.org/10.1016/S0047-2727\(00\)00075-X](https://doi.org/10.1016/S0047-2727(00)00075-X)
- Gerontas, A., Zeginis, D., Promikyridis, R., Androš, M., Tambouris, E., Cipan, V., & Tarabanis, K. (2022). Enhancing Core Public Service Vocabulary to Enable Public Service Personalization. *Information*, 13(5), 225.
- Grimaldi, M., Sebillo, M., Vitiello, G., & Pellicchia, V. (2020). Planning and managing the integrated water system: a spatial decision support system to analyze the infrastructure performances. *Sustainability*, 12(16), 6432.
- Hardiyansyah, H. (2015). Komunikasi Pelayanan Publik Konsep dan Aplikasi.
- Hardiyansyah, H. (2018). *Kualitas Pelayanan Publik: Konsep, Dimensi, Indikator dan Implementasinya*. Gava Media.
- Khubone, T., Tlou, B., & Mashamba-Thompson, T. P. (2020). Electronic health information systems to improve disease diagnosis and management at point-of-care in low and middle income countries: a narrative review. *Diagnostics*, 10(5), 327.
- Kuswati, Y., Hartati, T., & Kusmayadi, D. (2022). Implementation of E-Government-Based Policies in Improving Public Service Satisfaction in the Majalengka Regency Local Government. *International Journal of Social Science and Business*, 6(3), 385-394.
- Lee, J., Bharosa, N., Yang, J., Janssen, M., & Rao, H. R. (2011). Group value and intention to use—A study of multi-agency disaster management information systems for public safety. *Decision Support Systems*, 50(2), 404-414. <https://doi.org/10.1016/j.dss.2010.10.002>
- Lin, F., Fofanah, S. S., & Liang, D. (2011). Assessing citizen adoption of e-Government initiatives in Gambia: A validation of the technology acceptance model in information systems success. *Government Information Quarterly*, 28(2), 271-279. <https://doi.org/10.1016/j.giq.2010.09.004>
- Lindgren, I., Madsen, C. Ø., Hofmann, S., & Melin, U. (2019). Close encounters of the digital kind: A research agenda for the digitalization of public services. *Government information quarterly*, 36(3), 427-436. <https://doi.org/10.1016/j.giq.2019.03.002>
- Maulana, M. M., Suroso, A. I., Nurhadryani, Y., & Seminar, K. B. (2023). The Smart Governance Framework and Enterprise System's Capability for Improving Bio-Business Licensing Services. *Informatics*, 10(2), 53.
- Miles, M. B., Huberman, A. M., & Saldana, J. (2018). *Qualitative Data Analysis*. (Fourth Ed). SAGE Publication.
- Sihombing, T., Dewi, E., & Hutapea, D. (2022). Implementation of public service policy to improve the service quality of Sisingamangaraja xii international airport. *The Social Perspective Journal*, 1(2), 145-163.
- Simatauw, H. (2021). Transparency of public service principles in Amantelu Village, Sirimau District, Ambon City. *International Research Journal of Management, IT and Social Sciences*, 8(6), 605-612. <https://doi.org/10.21744/irjmis.v8n6.1951>
- Sinambela, L. P. (2014). Teori Reformasi Pelayanan Publik: Teori, Kebijakan, dan Implementasi Cetakan Ketujuh.
- Sulistyaningsih, T., Nurmandi, A., Salahudin, S., Roziqin, A., Kamil, M., Sihidi, I. T., ... & Loilatu, M. J. (2021). Public policy analysis on watershed governance in Indonesia. *Sustainability*, 13(12), 6615.
- Sutton, R. T., Pincock, D., Baumgart, D. C., Sadowski, D. C., Fedorak, R. N., & Kroeker, K. I. (2020). An overview of clinical decision support systems: benefits, risks, and strategies for success. *NPJ digital medicine*, 3(1), 17.

- Vatanasombut, B., Igbaria, M., Stylianou, A. C., & Rodgers, W. (2008). Information systems continuance intention of web-based applications customers: The case of online banking. *Information & management*, 45(7), 419-428. <https://doi.org/10.1016/j.im.2008.03.005>
- Zhu, Q., Sarkis, J., & Lai, K. H. (2008). Confirmation of a measurement model for green supply chain management practices implementation. *International journal of production economics*, 111(2), 261-273. <https://doi.org/10.1016/j.ijpe.2006.11.029>