Journal of Innovation and Operational System
Vol. 3, No. 1, Januari-June 2026, pp. 1-1x
DOI: https:/10.59261/jiosjournal.v3i1.30

Development of E-Government-Based Village Websites to Increase Public Information Transparency (Nanggela Village Case Study)

Dyah Eka Patmawati[1]*, Davit Permana[2], Merlinda Intan Fauziah[3]
Politeknik Siber Cerdika Internasional, Indonesia
Corresponding Author: patmawatidyah0@gmail.com*,
davitpermana2001@gmail.com, merlindaif6@gmail.com

Keywords:
village website; e-government; transparency; public information; information system.

Article Info :
Accepted: ....
Approved: ....
Published: ...

ABSTRACT

Background: The development of information technology encourages village governments to provide public information services that are transparent and easily accessible to the community. Nanggela Village previously did not have a village website as an official information medium, so information was still delivered manually.

Objective: This research aims to develop an e-government-based village website and analyze changes in the accessibility and transparency of public information after the implementation of the system.

Method: The study employed a descriptive qualitative design, while the system was developed using the waterfall model, comprising needs analysis, system design, implementation, and testing. Data were collected through field observations, semi-structured interviews, and documentation, analyzed through data reduction, data display, and conclusion drawing, and the system was examined through functional black-box testing.

Results: The website integrates five main information components, namely village profile, government structure, news and announcements, village potential, and activity documentation, into one structured digital platform. Information that was previously scattered and undocumented is now stored digitally, updated periodically, and accessible at any time.

Conclusion: The study demonstrates a fundamental transition from a manual to a documented, accessible, and more transparent web-based information system in a previously non-digitized village, whose sustainability depends on consistent content updating and the capacity building of village officials.

This is an Open Access article distributed under the terms of the Creative Commons Attribution 4.0 International license https://creativecommons.org/licenses/by-sa/4.0/

INTRODUCTION

The use of information technology in village government is an important part of supporting public information disclosure and improving the quality of community services (Pertiwi et al., 2021). Village websites act as official information media that allow people to access government information online and sustainably (Fitriasari et al., 2022). Globally, digital government has become a central agenda of public sector reform, as governments increasingly rely on online channels to publish information, deliver services, and strengthen their accountability to citizens (Haug et al., 2024). In Indonesia, this agenda is formalized through Presidential Regulation Number 95 of 2018 concerning the Electronic-Based Government System (Sistem Pemerintahan Berbasis Elektronik, SPBE), which requires government institutions to utilize information and communication technology in governance and public services.

At the same time, Law Number 14 of 2008 concerning Public Information Disclosure obliges every public body to provide public information that is accurate, correct, and not misleading, and to make it available quickly, in a timely manner, and in a simple way. Law Number 6 of 2014 concerning Villages further positions the village government as an organizer of governance based on the principles of openness and accountability, and grants villages the right to access information through a village information system (Annahar et al., 2023). These regulations indicate that the provision of digital public information at the village level is not merely a technical option but a normative obligation of the village government (Wei & Zhang, 2025).

The implementation of village websites also supports the principle of e-government through the provision of transparent, documented, and easily accessible information to the wider community (Titis, 2024). However, the implementation of e-government at the village level still faces various obstacles, especially in villages that do not have basic information system infrastructure (Subhan & Pratama, 2019). In practice, village governments differ considerably in their readiness to implement e-government (Abdulnabi, 2024). Some villages have developed official websites and website-based public services, as reported by al. Djabbari et al., (2024) and Buntoro et al., (2024), whereas others still rely on conventional media such as notice boards, village meetings, and word of mouth (Mukhsin, 2020).

This disparity creates unequal access to public information among rural communities, because residents of villages without digital media have fewer opportunities to monitor village programs, activities, and decisions (Lythreatis et al., 2022; Susilowati et al., 2024). Nanggela Village is one of the villages that does not have a village website as an official means of information. Information delivery is still carried out through bulletin boards and verbal communication, so that the reach of information is limited and poorly documented (Mukhsin, 2020). This condition has the potential to hinder transparency and community participation in village development.

Preliminary observations conducted before the development stage showed that announcements, information on government activities, and information on village

potential in Nanggela Village were not archived in a form that could be accessed again by the public. Residents who did not attend village meetings or did not pass by the bulletin board had limited opportunities to obtain the information, and there was no official medium through which the village could present its profile and potential to external parties.

This situation makes the development of an official village website an urgent need. Without a digital information medium, Nanggela Village faces difficulties in fulfilling its obligations under the public information disclosure framework, information on village programs remains vulnerable to loss, and the ability of the community to monitor and participate in village development remains constrained (Muhtar et al., 2023). Delaying digitalization would also widen the gap between Nanggela Village and other villages that have already adopted e-government, while the growing availability of internet-connected devices offers an opportunity that has not yet been utilized by the village government (Ren, 2023; Susilowati et al., 2025).

Several previous studies have discussed the development of village websites as a public information media and village administrative services (Astuti et al., 2026; Fachrur R, 2025). Other research emphasizes the role of village websites in increasing financial transparency and village government activities (Nor et al., 2019). However, most of the research was conducted on villages that already have initial information systems or focused on evaluating website use. For example, Sihotang et al., (2023) research highlights the role of assistance and the readiness of technological resources in the adoption of village information systems. Meanwhile, Nurrahman, (2022) discusses the development of villages towards smart villages with relatively adequate digital infrastructure support (Zhao et al., 2022).

A closer examination of these studies reveals a consistent pattern. Artaya et al., (2023) focused on assisting and training village officials in operating village websites, so their contribution lies mainly in strengthening management capacity rather than in documenting how a website changes the information conditions of a village. Abbas & Sutrisno, (2022), Melinda et al., (2018), and Maulana et al., (2023) emphasized the design and construction of village information systems, with the system artefact as the main output rather than a structured comparison of information delivery before and after implementation.

Meanwhile, Djabbari et al., (2024); Titis Ayu Angganten, (2024) and Pertiwi et al., (2021) examined e-government from the perspective of transparency and public services in villages where digital media were already in operation. Consequently, empirical evidence on villages that start from a completely non-digital condition, and on the changes that occur when an official website is introduced for the first time, remains limited. This research gap is the point of departure for the present study.

The novelty of this research lies in the development of village websites in villages that do not have a website at all, as well as an empirical analysis of changes in information delivery conditions before and after the implementation of e-government-

based village websites. Based on this background, this research aims, first, to develop an e-government-based website for Nanggela Village using the *waterfall* system development model and, second, to analyze the changes in the accessibility and transparency of public information after the website was implemented.

Theoretically, this study is expected to enrich the literature on village-level e-government by providing empirical evidence from a village that had no prior digital information medium. Practically, the results are expected to serve as a reference for the Nanggela Village government in managing public information and for other villages with similar conditions that intend to initiate e-government. The implications of this research extend to regency-level policymakers, particularly the Community and Village Empowerment Office (*Dinas Pemberdayaan Masyarakat dan Desa*, DPMD), in designing assistance and training programs that support the sustainable use of village websites.

RESEARCH METHOD

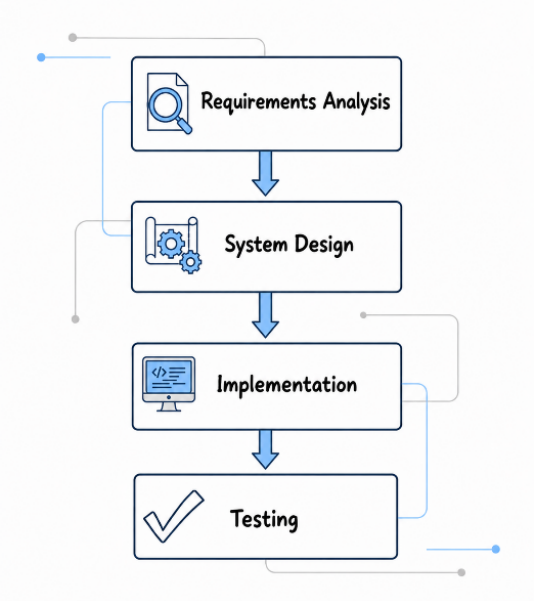


Figure 1. Stages of the *waterfall* system development model used in this research
Source: Authors' illustration

This research used a descriptive approach to describe the process of developing and implementing a village website and the changes that occurred in the public information system. The system development model used was the waterfall model, which consisted of four stages: needs analysis, system design, implementation, and testing. The waterfall model was selected because its systematic stages were suitable for developing a village government information system (Melinda et al., 2018).

As shown in Figure 1, each stage was completed before the next stage began, and the output of each stage served as the input for the subsequent stage. In this study, the research type (descriptive qualitative) is distinguished from the system development

model (waterfall), which was used to produce the research artefact. Data were collected through observation, interviews, and documentation. Observations were conducted to examine the village information delivery system before the implementation of the website (Ikhbaluddin, 2021).

Semi-structured interviews were conducted with village officials to identify information needs and the required website features (Maulana et al., 2023). Documentation was collected in the form of village profiles, organizational structures, and archives of village activities (Ridhawati et al., 2022). System testing was conducted functionally to ensure that the website features operated according to user needs (Abbas & Sutrisno, 2022). The research was conducted in Nanggela Village, Cirebon city, West Java. The village was selected purposively because, at the time the research began, it did not have an official website or any other digital medium for delivering public information, making it a suitable case for observing the transition from a manual to a web-based information system.

The research subjects were village officials directly involved in governance administration and the delivery of public information, who were selected as informants through purposive sampling based on their roles and knowledge of village information management. The research instruments consisted of an interview guide containing questions on information needs, required content, and the readiness of officials to manage the website; an observation sheet used to record the media, documentation, and accessibility of information delivery before and after implementation; and a functional test-case sheet listing the test scenarios, expected results, and actual results for each website menu.

Qualitative data from observations, interviews, and documentation were analyzed using an interactive model consisting of data reduction, data display, and conclusion drawing/verification. Data reduction was performed by selecting and coding information related to information needs and the conditions of information delivery; data display was carried out in the form of descriptive narratives and comparison tables; and conclusions were drawn by comparing the conditions of information delivery before and after the implementation of the website on five aspects, namely the information medium, documentation, accessibility, information updating, and integration of information.

The results of functional testing were analyzed by comparing the expected result with the actual result of each test scenario.Data validity was maintained through source triangulation, by comparing information obtained from different informants and village documents, and technique triangulation, by cross-checking interview results with observation and documentation data. Ethically, the research was conducted with the permission of the Nanggela Village government, all informants were informed of the research objectives and participated voluntarily, and only village information approved for public release was published on the website.

Needs Analysis

He needs analysis stage was conducted through field observations and interviews with Nanggela Village officials. The observations identified the conditions of village information delivery before the implementation of the website, while the interviews explored information needs, required content, and the readiness of village officials to manage the website.

System Design

The system design stage involved designing the menu structure, information flow, and website interface. The website was designed to provide information on the village profile, government structure, news and announcements, village potential, and documentation of village activities. The resulting design comprised five main menus that correspond to the information components identified in the needs analysis.

System Implementation

At the implementation stage, the system design was developed into a web-based village website. The content was compiled based on the results of the needs analysis and adapted to the conditions and information needs of Nanggela Village.

System Testing

System testing was conducted functionally to ensure that all menus and website features operated properly and that the information could be accessed smoothly by users. Testing was carried out using the black-box technique, in which each menu was examined against predetermined test scenarios, and a feature was accepted when its actual result matched the expected result.

RESULT AND DISCUSSION

The results of this research are in the form of the development and implementation of the Nanggela Village website as an e-government-based public information media. Prior to the development of the website, the submission of village information was carried out manually so that the information was not well documented and difficult to access by the community.

The village website developed consists of five main components, namely village profile, structure village government, news and announcements, village potential, and documentation of activities. All of this information is integrated in one web-based platform that can be accessed at any time through internet-connected devices (Muzakkir et al., 2025).

The features developed in each menu are presented in Table 1. Before the website was developed, none of these information categories was available through an official digital medium; after implementation, five information categories are published in one platform. The appearance of the homepage and main menus of the website is presented in Figure 2.

Table 1. Main features of the Nanggela Village website

No	Menu	Information presented	Function for public information
1	Village profile	General information about Nanggela Village	Introduces the identity of the village to residents and external parties
2	Village government structure	Organizational structure of the village government and its officials	Clarifies the roles and responsibilities of village officials
3	News and announcements	News on village activities and official announcements	Disseminates information on village programs and decisions
4	Village potential	Information on the potential owned by the village	Promotes village resources to the public
5	Activity documentation	Documentation of activities carried out by the village	Provides an accessible record of implemented activities

Source: Research data processed by the authors

Based on the results of post-implementation observations, village information that was previously scattered and undocumented is now stored digitally and can be updated periodically (Matlala & Ncube, 2025). This shows a real change from manual systems to web-based information systems; Buntoro et al., (2024) stated that websites allow information publication to be carried out faster and more structured than manual methods.

Thus, there is an empirical change from manual information systems to web-based information systems that are more transparent and accessible (Singh et al., 2022). The comparison of public information delivery conditions before and after the implementation of the website is summarized in Table 2. The comparison shows that the change occurred in all aspects observed, from the information medium to the integration of information.

Table 2. Conditions of public information delivery before and after the implementation of the website

Aspect	Before implementation	After implementation	Source of evidence
Information medium	Bulletin boards and verbal communication	Official e-government-based village website	Observation, interviews
Documentation	Information was not well documented and was easily lost	Information is stored digitally on the website	Observation, documentation

Accessibility	Limited to residents present at meetings or near the bulletin board	Accessible at any time through internet-connected devices	Observation
Information updating	Depended on manual posting and verbal delivery	Can be updated periodically by village officials	Observation, interviews
Integration of information	Information was scattered across different media	Five information categories integrated in one platform	Documentation

Source: Research data processed by the authors

The results of functional testing are presented in Table 3. All test scenarios produced actual results that matched the expected results, indicating that the website menus functioned as designed and that the information could be accessed by users (Verma et al., 2023).

Table 3. Results of functional (black-box) testing

No	Test scenario	Expected result	Result
1	Opening the homepage	The homepage and main menu are displayed	Valid
2	Accessing the village profile menu	The village profile page is displayed	Valid
3	Accessing the government structure menu	The village government structure is displayed	Valid
4	Accessing the news and announcements menu	The list of news is displayed and each item can be opened	Valid
5	Accessing the village potential menu	Information on village potential is displayed	Valid
6	Accessing the activity documentation menu	Documentation of village activities is displayed	Valid

Source: Research data processed by the authors

Discussion

The results of the study show that the development of the Nanggela Village website plays a role as a means of implementing e-government at the village level. The village website not only functions as a medium for delivering information, but also as a tool to support transparency and governance (Djabbari et al., 2024). Research by Fitriasari et al. Fitriasari et al., (2022) and Ridhawati et al. Ridhawati et al., (2022) also states that village websites are able to increase public information disclosure.

The main difference between this study and previous research lies in the initial condition of the village studied. Nanggela Village previously did not have digital media at all, so the changes that occurred were fundamental, namely the full transition from manual to digital systems. This is different from the research by Buntoro et al., (2024)

and Abbas & Sutrisno, (2022) conducted on villages that already have an initial information system.

From the perspective of e-government stage models, which generally describe the evolution of digital government from the publication of information to interaction, transaction, and integration, the Nanggela Village website is positioned at the informational stage (Muhammad & Hromada, 2023). At this stage, the main value of e-government lies in making government information available online, which forms the foundation for subsequent stages.

This position explains why the changes observed in this study concern mainly the availability, documentation, and accessibility of information rather than online services. In contrast, Buntoro et al., (2024) and Djabbari et al., (2024) reported website-based self-service and public services, indicating that their study villages had already progressed toward the interaction stage. The convergence of this study with Fitriasari et al., (2022) and Ridhawati et al., (2022) therefore lies in the role of the website as a medium of information disclosure, whereas the divergence reflects different starting points of digital maturity. For a village that starts without any digital medium, reaching the informational stage is itself a fundamental change, because it creates, for the first time, an official and permanent channel through which the community can obtain information about its government.

The use of the waterfall system development model is considered appropriate because the needs of the system are relatively clear and do not undergo significant changes during the development process (Saravanos & Curinga, 2023). These findings support the research of Melinda et al. Melinda et al., (2018) and Supriadi et al., (2022) who stated that the waterfall model is effectively used in the development of small- to medium-scale village information systems. The suitability of the waterfall model in this study was supported by the fact that the information categories needed by the village could be identified clearly through interviews and documentation before the design began.

For villages whose needs are still evolving or whose users are more diverse, iterative development models may be more appropriate (Mishra & Alzoubi, 2023). However, the success of the implementation of the village website is highly dependent on the commitment of the village apparatus in updating the content. Without sustainable management, the website has the potential to not be used optimally, as stated by Aminah and Saksono (Aminah & Saksono, 2021). Therefore, assistance and training in village website management are important factors in maintaining the sustainability of the system (Artaya et al., 2023).

The development of the village website also needs to be accompanied by increasing the capacity of village human resources. Officials responsible for the website need basic competencies in writing content, documenting activities, and using the website management system so that information can be published regularly (Aneta et al., 2023). This is in line with Artaya et al., (2023) and Sihotang et al., (2023), who

placed assistance and training as a prerequisite for the operation of village websites. In addition, the village government needs to establish a clear division of tasks and an internal schedule for updating information so that the website does not depend on a single operator.

Thus, the sustainability of village e-government is determined not only by the availability of technology but also by institutional commitment and the readiness of human resources (Kampira & Mukonza, 2025). Overall, these findings answer the research objectives. The first objective is answered by the successful development of the website through the stages of the waterfall model, as evidenced by the features in Table 1 and the testing results in Table 3. The second objective is answered by the changes in the information medium, documentation, accessibility, updating, and integration of information presented in Table 2, which indicate improved accessibility and transparency of public information in Nanggela Village.

This study has several limitations. It was conducted in a single village, so the findings cannot be generalized to all villages. The data were obtained mainly from village officials and did not yet include the perspective of community users, and the post-implementation observation period was relatively short, so indicators such as visitor statistics, the frequency of content updates, and the impact on community participation could not yet be measured. Future research should involve community respondents and use quantitative indicators of website use to measure the effect of village websites more comprehensively (Nurhidayat et al., 2024).

CONCLUSION

This study concludes that an e-government-based website for Nanggela Village was successfully developed through the stages of the waterfall model and functioned as designed in functional testing. The website integrates five main information components, namely village profile, government structure, news and announcements, village potential, and activity documentation, into one structured platform. Its implementation changed public information delivery from manual methods to a web-based system in which information is documented, periodically updatable, and accessible at any time, thereby supporting the transparency of public information.

These findings imply that village governments and the regency-level DPMD should accompany website development with operator training and regular content management. Given the single-site design and the absence of community-side data, future research should examine the impact of village websites on community participation and public service quality.

ACKNOWLEDGEMENT

The authors would like to thank the Head and officials of Nanggela Village for granting research permission, serving as informants, and supporting the development and implementation of the village website. The authors also thank Politeknik Siber Cerdika Internasional for its academic support during this research.

REFERENCES

Abbas, W., & Sutrisno, S. (2022). Pengembangan Website Desa Sebagai Sistem Informasi Dan Inovasi Di Desa Indu Makkombong, Kabupaten Polewali Mandar. *Jurnal Abdi Masyarakat Indonesia*, *2*(2), 505–512. Https://Doi.Org/10.54082/Jamsi.276

Abdulnabi, S. M. (2024). Issues And Challenges Of Implementing E-Governance In Developing Countries: A Comprehensive Analysis Of Civil Service Models. *Cogent Business & Management*, *11*(1), 2340579. Https://Doi.Org/10.1080/23311975.2024.2340579

Aminah, S., & Saksono, H. (2021). Digital Transformation Of The Government: A Case Study In Indonesia. *Jurnal Komunikasi: Malaysian Journal Of Communication*, *37*(2), 272–288. Https://Doi.Org/10.17576/Jkmjc-2021-3702-17

Aneta, Y., Prahara, S., Aneta, A., & Ahmad, J. (2023). Optimizing Village Bureaucracy Transformation: Gorontalo, Indonesia. *Policy & Governance Review*, *7*(3), 211–236. Https://Doi.Org/10.30589/Pgr.V7i3.775

Annahar, N., Widianingsih, I., Muhtar, E. A., & Paskarina, C. (2023). The Road To Inclusive Decentralized Village Governance In Indonesia. *Sustainability*, *15*(11), 8616. Https://Doi.Org/10.3390/Su15118616

Artaya, I., Rifani, L., Putri, K., Syifa, F., Madaniya, V. P.-, & 2023, U. (2023). Pelatihan Pengoperasian Website Desa Barengkrajan Sidoarjo Sebagai Media Penyebaran Informasi Dan Komunikasi Masyarakat. *Madaniya.Biz.Idip Artaya, L Rifani, Kic Putri, F Syifa, Vva Prayogo, S Shafiramadaniya, 2023•Madaniya.Biz.Id*. Https://Www.Madaniya.Biz.Id/Journals/Contents/Article/View/562

Astuti, A. B., Sumarminingsih, E., Mahmudy, W. F., Wulandari, M. P., Ngabu, W., Sa'diyah, N. K., Rotchildi, G. A. P. R., Kasanah, I. L., Bihanda, Y. G., & Nugraha, A. S. (2026). Establishing E-Prodeskel, An Integrated Village Information System For The Empowerment Of The Local Community In Kediri. *Asean Journal Of Community Engagement*, *10*(1), 113–136. Https://Doi.Org/10.7454/Ajce.V10i1.1210

Buntoro, G. A., Wirawanto, Y., Hantoro, I. B., Aji, L. P., Yonatama, I., Syarifuddin, I., Prayitno, R. A., & Prasetyo, Y. (2024). Pemanfaatan Website Desa Dan Layanan Mandiri Sebagai Upaya Pelayanan Publik Masyarakat Desa Tugu. *Jurnal Pkm (Pengabdian Kepada Masyarakat)*, *7*(1), 39. Https://Doi.Org/10.30998/Jurnalpkm.V7i1.21020

Djabbari, M. H., B., I., Nugroho, T. C., Amiruddin, I., & Yanto, E. (2024). Implementasi E-Government Dalam Pelayanan Publik Berbasis Website Di Desa Tondowolio Kabupaten Kolaka. *Kolaborasi : Jurnal Administrasi Publik*, *10*(2), 158–170. Https://Doi.Org/10.26618/Kjap.V10i2.15588

Fachrur Rozieq Maulana. (2025). Pembuatan Website Desa Sebagai Sarana Digitalisasi Administrasi Dan Arsip Surat Masuk–Keluar Di Desa Mojoparon. *Comvice: Journal*

Of Community Service, *9*(2), 55–60. Https://Doi.Org/10.26533/Comvice.V9i2.1454

Fitriasari, N. S., Ariawan, I., Salim, H., Fawaz, F., Permana, S. A., Apriansyah, M. R., Cahyani, E. Y. P., & Pendi, M. (2022). Website E-Government Sebagai Media Informasi Masyarakat Desa Lontar. *Ilmu Komputer Untuk Masyarakat*, *2*(2). Https://Doi.Org/10.33096/Ilkomas.V2i2.1077

Haug, N., Dan, S., & Mergel, I. (2024). Digitally-Induced Change In The Public Sector: A Systematic Review And Research Agenda. *Public Management Review*, *26*(7), 1963–1987. Https://Doi.Org/10.1080/14719037.2023.2234917

Ikhbaluddin. (2021). Pelayanan Publik Berbasis Online Di Desa (Studi Pada Empat Desa Di Kecamatan Jatinangor). *Jurnal Teknologi Dan Komunikasi Pemerintahan*, *3*(2), 16–30.

Kampira, A., & Mukonza, R. M. (2025). E-Government/Ai Integration State And Capacity In Developing Countries: A Systematic Review. *Administrative Sciences*, *15*(12), 482. Https://Doi.Org/10.3390/Admsci15120482

Lythreatis, S., Singh, S. K., & El-Kassar, A.-N. (2022). The Digital Divide: A Review And Future Research Agenda. *Technological Forecasting And Social Change*, *175*, 121359. Https://Doi.Org/10.1016/J.Techfore.2021.121359

Matlala, M. E., & Ncube, T. R. (2025). Electronic Records Management Amidst The Seismic Shift In The Dynamic Infosphere. *Records Management Journal*, *35*(1), 59–74. Https://Doi.Org/10.1108/Rmj-04-2023-0022

Maulana, H., Munawaroh, R., Nuha, N. A., Ilmi, D. F., Rachmansyah, M. F., Masyuri, A. S. A., & Haramain, A. M. (2023). Perancangan Sistem Informasi Desa Berbasis Website Di Desa Pandean Kecamatan Gondang Kabupaten Nganjuk. *Jurnal Penelitian Sistem Informasi (Jpsi)*, *1*(2), 28–48. Https://Doi.Org/10.54066/Jpsi.V1i2.472

Melinda, M., Borman, R. I., & Susanto, E. R. (2018). Rancang Bangun Sistem Informasi Publik Berbasis Web (Studi Kasus : Desa Durian Kecamatan Padang Cermin Kabupaten Pesawaran). *Jurnal Tekno Kompak*, *11*(1), 1. Https://Doi.Org/10.33365/Jtk.V11i1.63

Mishra, A., & Alzoubi, Y. I. (2023). Structured Software Development Versus Agile Software Development: A Comparative Analysis. *International Journal Of System Assurance Engineering And Management*, *14*, 1504–1522. Https://Doi.Org/10.1007/S13198-023-01958-5

Muhammad, H., & Hromada, M. (2023). Evaluating A Proposed E-Government Stage Model In Terms Of Personal Data Protection. *Applied Sciences*, *13*(6), 3913. Https://Doi.Org/10.3390/App13063913

Muhtar, E. A., Abdillah, Widianingsih, I., & Adikancana, Q. M. (2023). Smart Villages, Rural Development And Community Vulnerability In Indonesia: A Bibliometric Analysis. *Cogent Social Sciences*, *9*(1), 2219118. Https://Doi.Org/10.1080/23311886.2023.2219118

Mukhsin. (2020). Peranan Teknologi Informasi Dan Komunikasi Menerapkan Sistem

Informasi Desa Dalam Publikasi Informasi Desa Di Era Globalisasi. *Teknokom*, *3*(1), 7–15. Https://Doi.Org/10.31943/Teknokom.V3i1.43

Muzakkir, M., Surdin, I., & Ishak, I. (2025). Rancang Bangun Dan Implementasi Mobile Web Sebagai Sarana Informasi Pemberdayaan Masyarakat Desa Nain Kecamatan Pagimana. *Jurnal Ilmiah Sistem Informasi Dan Teknik Informatika (Jisti)*, *8*(1), 133–141. Https://Doi.Org/10.57093/Jisti.V8i1.277

Nor, W., Hudaya, M., & Novriyandana, R. (2019). Financial Statements Disclosure On Indonesian Local Government Websites: A Quest Of Its Determinant(S). *Asian Journal Of Accounting Research*, *4*(1), 112–128. Https://Doi.Org/10.1108/Ajar-06-2019-0043

Nurhidayat, Nurmandi, A., & Congge, U. (2024). Bridging The Digital Divide: Analyzing Public Participation In Indonesia's E-Government Through The E-Participation Index. *Otoritas: Jurnal Ilmu Pemerintahan*, *14*(2), 481–498. Https://Doi.Org/10.26618/Ojip.V14i2.14435

Nurrahman, A. (2022). Pengembangan Desa Sukapura Menuju Smart Village. *Jurnal Ilmiah Wahana Bhakti Praja*, *12*(2), 89–109. Https://Doi.Org/10.33701/Jiwbp.V12i2.3055

Pertiwi, A., Dema, H., Mustanir, A., & Anugrah, E. (2021). Penerapan E-Government Dalam Mewujudkan Transparansi Tata Kelola Pemerintahan Desa (Studi Pada Pemerintahan Desa Bulo Timoreng). *Praja: Jurnal Ilmiah Pemerintahan*, *9*(3), 130–139. Https://Doi.Org/10.55678/Prj.V9i3.508

Ren, Y. (2023). Rural China Staggering Towards The Digital Era: Evolution And Restructuring. *Land*, *12*(7), 1416. Https://Doi.Org/10.3390/Land12071416

Ridhawati, E., Susianto, D., Buchori, Taufik, & Mistina. (2022). Pengembangan Media Tata Kelola Dan Informasi Potensi Desa Berbasis E-Government Pada Desa Tiyuh Karta Sari. *Near: Jurnal Pengabdian Kepada Masyarakat*, *2*(1), 1–10.

Saravanos, A., & Curinga, M. X. (2023). Simulating The Software Development Lifecycle: The Waterfall Model. *Applied System Innovation*, *6*(6), 108. Https://Doi.Org/10.3390/Asi6060108

Sihotang, D. M., Purwandari, B., Eitiveni, I., Putri, M. F., & Hidayanto, A. N. (2023). Factors Influencing Village Information Systems Adoption In Indonesia: A Qualitative Study. *The Electronic Journal Of Information Systems In Developing Countries*, *89*(5), E12271. Https://Doi.Org/10.1002/Isd2.12271

Singh, S., Kumar, V., Paliwal, M., Verma, P., & Rajak, B. (2022). A Citizen-Centric Approach To Understand The Effectiveness Of E-Government Web Portals: Empirical Evidence From India. *Information Polity*, *27*(4), 539–555. Https://Doi.Org/10.3233/Ip-220001

Subhan, & Pratama, A. B. (2019). Kesiapan Desa Dalam Penerapan E-Government (Studi Perbandingan Di Desa Semaya Dan Desa Pegiringan Kabupaten Pemalang). *Sawala: Jurnal Administrasi Negara*, *7*(2), 161–175. Https://Doi.Org/10.30656/Sawala.V7i2.1542

Supriadi, U., Supriyadi, T., & Abdussalam, A. (2022). Al-Qur'an Literacy: A Strategy And Learning Steps In Improving Al-Qur'an Reading Skills Through Action Research. *International Journal Of Learning Teaching And Educational Research*, *21*(1), 323–339. Https://Doi.Org/10.26803/Ijlter.21.1.18

Susilowati, A. P. E., Rachmawati, R., & Rijanta, R. (2024). Does The Digital Divide Matter? Comparison Between Java And The Rest Of Indonesia In Developing Smart Villages. *Human Geographies*, *18*(2). Https://Doi.Org/10.5719/Hgeo.2024.182.6

Susilowati, A. P. E., Rachmawati, R., & Rijanta, R. (2025). Smart Village Concept In Indonesia: Ict As Determining Factor. *Heliyon*, *11*(1), E41657. Https://Doi.Org/10.1016/J.Heliyon.2025.E41657

Titis Ayu Angganten. (2024). Penerapan E-Government Guna Mendukung Transparansi Dan Keterbukaan Informasi Publik Di Desa Tapak Kabupaten Magetan. *Jurnal Sosial Humaniora*, *2*(1), 1–10. Https://Doi.Org/10.70214/Vyb31023

Verma, A. S., Choudhary, A., & Tiwari, S. (2023). Software Test Case Generation Tools And Techniques: A Review. *International Journal Of Mathematical, Engineering And Management Sciences*, *8*(2), 293–315. Https://Doi.Org/10.33889/Ijmems.2023.8.2.018

Wei, J., & Zhang, T. (2025). Impact Factors Of Open Government Information In The Era Of E-Government. *Humanities And Social Sciences Communications*, *12*(1). Https://Doi.Org/10.1057/S41599-025-05250-8

Zhao, W., Liang, Z., & Li, B. (2022). Realizing A Rural Sustainable Development Through A Digital Village Construction: Experiences From China. *Sustainability*, *14*(21), 14199. Https://Doi.Org/10.3390/Su142114199