

INVESTIGATING COMMUNITY READINESS THROUGH IT INFRASTRUCTURE, ONLINE TRANSACTIONS, AND COMMUNITY BEHAVIOR FOR URBAN VILLAGE DIGITAL TRANSFORMATION IN PALEMBANG

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Abstract

The rapid development of information technology has encouraged digital transformation in various sectors, including public administrative services at the urban village level. However, the successful implementation of digital transformation depends not only on government readiness and technological infrastructure but also on the readiness of the community as the primary users of digital services. This study aims to evaluate community readiness toward digital transformation and design a web-based digital administrative service architecture for Sukamaju Urban Village, Palembang City, using the TOGAF ADM framework. The study employed a descriptive quantitative approach involving 395 respondents selected using the Slovin formula with a 5% margin of error. Data were collected through closed-ended questionnaires based on a 5-point Likert scale and analyzed using the E-Readiness approach through three main variables: Information Technology Infrastructure, Online Transactions, and Community Behavior. The results indicate that the Information Technology Infrastructure variable achieved the highest mean score of 4.32 (Very Ready), followed by Community Behavior with a mean score of 4.20 (Ready), and Online Transactions with a mean score of 4.11 (Ready). These findings suggest that the Sukamaju Urban Village community possesses a high level of readiness to support digital transformation in administrative services. Based on these findings, a web-based digital administrative service architecture was proposed using TOGAF ADM phases, including Architecture Vision, Business Architecture, Information Systems Architecture, and Technology Architecture. The proposed system is expected to improve service efficiency, reduce manual administrative processes, and support sustainable digital transformation at the urban village level.

Keywords: e-readiness; digital transformation; information technology infrastructure; community behavior; urban villages.

1. INTRODUCTION

The rapid development of information technology has become a fundamental driver in improving the efficiency and quality of public services in the modern era. Digital transformation at the urban village level is particularly important, as the urban village office represents the government unit that directly interacts with the community[1], [2]. However, the success of service digitalization depends not only on the readiness of infrastructure and government systems, but also on the readiness of the community as the primary users of digital services[3]. Palembang City, with its large population and broad administrative coverage, faces various challenges in implementing digital transformation, including at the urban village service level, such as in Sukamaju Urban Village, Sako District[4].

Sukamaju Urban Village still conducts most administrative processes manually, particularly in public document services such as Domicile Certificates, Family Card/Identity Card Referral Letters, and Certificates of Financial Hardship (SKTM). The service process, which involves in-person applications, manual verification, and physical document archiving, often requires 3–7 days or longer to complete. This condition highlights the need to digitalize administrative services through a web-based E-Surat system to improve service speed, efficiency, and organization[5], [6]. However, community readiness to adopt and utilize digital services remains a challenge, considering differences in digital literacy, online transaction habits, and attitudes toward technology use[7], [8].

Previous studies have generally focused on government readiness and technological infrastructure development to support digital transformation in public services[9]. However, studies that specifically assess community readiness and use the results as a basis for digital system architecture planning remain limited[10], [11]. Therefore, this study applies the E-Readiness approach to measure the level of community readiness based on three main aspects: information technology infrastructure, online transaction activities, and community behavior toward technology, through questionnaires distributed to 395 respondents in Sukamaju Urban Village.

This study first evaluates community readiness for digital transformation using the E-Readiness approach and subsequently translates the findings into a proposed digital service architecture using TOGAF ADM framework[12]. The E-Readiness findings serve as the foundation for designing the proposed digital service architecture using TOGAF ADM, ensuring that the proposed system aligns with both community readiness and public service needs.

This study is expected to contribute to the development of government information systems and serve as a reference for the Palembang City Government in designing more effective and targeted digital transformation strategies at the urban village level.

2. RESEARCH METHODS

2.1. Research Approach

This study employs a descriptive quantitative method with the community of Sukamaju Urban Village, Palembang City, as the research object. Data were collected through the distribution of closed-ended questionnaires to 395 respondents using a 5-point Likert scale. The analysis was conducted using the E-readiness approach to measure the level of community readiness based on three main aspects: information technology infrastructure, online transaction activities, and community behavior. The collected data were analyzed using descriptive statistics, including mean and percentage calculations, to determine the community's readiness level in supporting digital transformation at the Urban Village level.

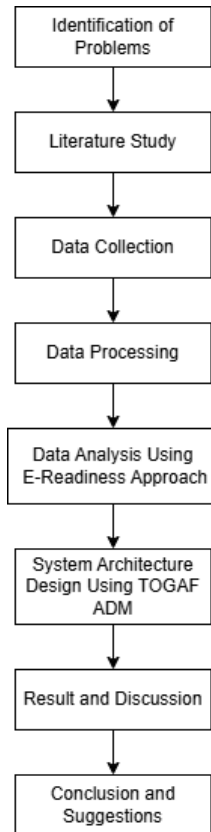


Figure 1. Research Stages

2.2. E-Readiness Analysis

The E-readiness approach was used to analyze the level of community readiness in supporting digital transformation at the Urban Village level. The analysis was conducted based on three main aspects: Information Technology Infrastructure, which evaluates device ownership, internet access, and the ability to use digital technology; Online Transactions, which measure community experience and trust in using digital transaction services; and Community Behavior, which assesses openness, perceived benefits, and the willingness to adapt to digital public services. These three aspects were further developed into questionnaire indicators to obtain a comprehensive overview of the readiness level of the Sukamaju Urban Village community in supporting digital transformation.

Table 1. Research Construct

NO	Construct	Construct Description
1	Information Technology Infrastructure (TI)	<ol style="list-style-type: none"> 1. Ownership of digital devices (smartphone/laptop) 2. Adequate internet access 3. Ability to use digital devices 4. Device storage capacity and technical specifications 5. Ownership of basic digital accounts

2	Online Transactions (TO)	<ol style="list-style-type: none"> 1. Frequency of e-wallet usage 2. Intensity of online shopping (e-commerce) 3. Use of online transportation and food delivery services 4. Use of mobile/internet banking 5. Trust in digital transaction security
3	Community Behavior (TL)	<ol style="list-style-type: none"> 1. Openness toward digital Urban Village services 2. Preference for digital and conventional services 3. Frequency of using official Urban Village social media or digital groups 4. Perceived benefits of Urban Village digitalization 5. Willingness to adapt to new technology

2.3. Likert scale

This study used a 5-point Likert scale to measure respondents' level of agreement with each statement in the questionnaire. The Likert scale was used because it can quantitatively measure respondents' attitudes and perceptions through clear assessment categories, ranging from strongly disagree to strongly agree. Each response was assigned a specific score to support the analysis of community readiness toward digital transformation at the Urban Village level.

Table 2. Likert Scale

No.	Description	Score
1	Strongly Agree (SA)	5
2	Agree (A)	4
3	Neutral (N)	3
4	Disagree (D)	2
5	Strongly Disagree (SD)	1

2.4. Population and Sample

The population in this study consisted of all residents living in Sukamaju Urban Village, Palembang City, with a total population of 27,672 people. This study used a sampling technique to determine representative respondents in measuring community readiness toward digital transformation at the Urban Village level. The sample size was determined using the Slovin formula with a margin of error of 5%.

$$n = \frac{N}{1+Ne^2} \quad (1)$$

Description:

n = Sample size

N = Total population

e²= Percentage of acceptable margin of error in sampling, set at 5% (0.05).

Based on the calculation using the Slovin formula, the result is as follows:

Based on the calculation using the Slovin formula, the total sample obtained in this study was 395 respondents. To achieve a more representative sample distribution in each area, this study applied the proportionate stratified random sampling technique by distributing samples proportionally across each neighborhood unit (RW). The sample allocation for each RW was determined based on the regional characteristics and the number of neighborhood associations (RT) in Sukamaju Urban Village.

Table 3. Number of Respondents in Each RW

RW Area	Number of RT	Respondents
RW 01	7	45
RW 02	6	35
RW 03	5	29
RW 04	5	29
RW 05	7	41
RW 06	8	47
RW 07	5	29

RW 08	6	35
RW 09	6	35
RW 10	7	41
RW 11	5	29
Total	67	395

2.5. Validity and Reliability

Validity testing was conducted to determine whether each questionnaire item was able to accurately measure the research variables. Before distributing the questionnaire to 395 respondents based on the research sample, a preliminary instrument test was first conducted on 30 respondents to ensure that each question item in every variable could properly measure community readiness toward digital transformation. The validity test was carried out using the Pearson Product Moment Correlation method by comparing the calculated r-value (r-count) with the r-table value at a significance level of 5% ($\alpha = 0.05$). A questionnaire item was considered valid if the calculated r-value was greater than the r-table value, indicating that the instrument was appropriate for use in the main study. The results of the validity test for each research variable are presented in the following tables.

Table 4. Validity Test Results of Research Variables

Variable	Statement	r-Value	r-Table	P (sig.)	Description
IT Infrastructure	TI1	0.944	0.361	0.000	Valid
	TI2	0.916	0.361	0.000	Valid
	TI3	0.932	0.361	0.000	Valid
	TI4	0.911	0.361	0.000	Valid
	TI5	0.909	0.361	0.000	Valid
Online Transactions	TO1	0.921	0.361	0.000	Valid
	TO2	0.912	0.361	0.000	Valid
	TO3	0.840	0.361	0.000	Valid
	TO4	0.845	0.361	0.000	Valid
	TO5	0.823	0.361	0.000	Valid
Community Behavior	TL1	0.912	0.361	0.000	Valid
	TL2	0.839	0.361	0.000	Valid
	TL3	0.807	0.361	0.000	Valid
	TL4	0.853	0.361	0.000	Valid
	TL5	0.871	0.361	0.000	Valid

Based on the validity test results for all research variables, it is known that all statement items have an r-value greater than the r-table value (0.361) and a significance value of $0.000 < 0.05$. Therefore, all statement items in the variables of IT Infrastructure, Online Transactions, and Community Behavior are declared valid and suitable for use as research instruments. Next, a reliability test was conducted to measure the consistency level of the research instrument in producing data. Reliability testing aims to determine whether the research instrument can provide consistent results when used repeatedly under the same conditions. In this study, the reliability test was conducted using the Cronbach's Alpha method, where the instrument was considered reliable if it had an alpha value greater than 0.60. The reliability test results for each research variable are presented in the following tables.

Table 5. Reliability Test Results Analysis

Variable	Cronbach's Alpha	Reliability Result
IT Infrastructure	0.956	High Reliability
Online Transactions	0.918	High Reliability
Community Behavior	0.910	High Reliability

Based on the reliability test results, all research variables have Cronbach's Alpha values greater than 0.60, indicating that the research instrument has a high level of reliability. Therefore, the variables of IT Infrastructure, Online Transactions, and Community Behavior are considered reliable and suitable for use in the research.

2.6. System Architecture Design Using TOGAF ADM

The results of the E-readiness analysis were used as the basis for designing the digital service system architecture for the Urban Village using the TOGAF ADM (Architecture Development Method) framework. In this study, the system design focused on four main phases : Phase A (Architecture Vision) to define the vision and objectives of

system development, Phase B (Business Architecture) to design the digital administrative service business processes, Phase C (Information Systems Architecture) to develop the information system design and service interface, and Phase D (Technology Architecture) to determine the required platform and supporting technological infrastructure[13].

3. RESULTS AND DISCUSSION

3.1. Respondent Characteristics

The respondent characteristics in this study were used to describe the profile of the Sukamaju Urban Village community as the research object. The respondent characteristics included age, education level, and occupation.

Table 6. Respondent Characteristics

Characteristics	Category	Frequency	Percentage
Gender	Male	191	48.4%
	Female	204	51.6%
	Total	395	100%
Age	17–20 Years	93	23.5%
	21–30 Years	155	39.2%
	31–45 Years	106	26.8%
	More than 45 Years	41	10.3%
	Total	395	100%
Education Level	Elementary School	6	1.5%
	Junior High School	42	10.6%
	Senior High School	268	67.8%
	Diploma (D3)	29	7.3%
	Bachelor Degree (S1)	48	12.1%
	Master/Doctoral Degree (S2/S3)	2	0.5%
	Total	395	100%
Occupation	Student	87	22.0%
	Private Employee	136	34.4%
	Government Employee	14	3.5%
	Entrepreneur	50	12.6%
	Laborer	27	6.8%
	Housewife	62	15.6%
	Unemployed	19	4.8%
	Total	395	100%

Based on the data collection results, the respondents were dominated by people of productive age with diverse educational backgrounds and occupations. These characteristics indicate that the respondents have varied abilities and experiences in using digital technology, which can support the analysis of community readiness toward digital transformation in the village administration.

3.2. Community Readiness Analysis Using E-Readiness

The community readiness analysis using the E-Readiness approach was conducted to measure the readiness level of the Sukamaju Urban Village community in supporting digital transformation. The measurement was carried out through three main variables, namely Information Technology Infrastructure, Online Transactions, and Community Behavior. Based on the questionnaire responses from 395 respondents, the total mean scores obtained were 21.60 for Information Technology Infrastructure, 20.53 for Online Transactions, and 21.01 for Community Behavior. These scores were then converted into percentages by comparing each total mean score to the maximum possible score for each variable, which was 25, and multiplying the result by 100 percent.

$$\text{Readiness Percentage (\%)} = (\text{Total Mean Score} / \text{Maximum Score}) \times 100\%$$

This calculation aims to facilitate data interpretation and provide a simple visualization of the proportion of respondents' assessments for each variable. Within the context of the e-readiness approach, these percentages are used as preliminary descriptive indicators to identify the general tendency of community readiness before conducting a more in-depth analysis based on the mean values, which serve as the primary basis for determining the level of readiness

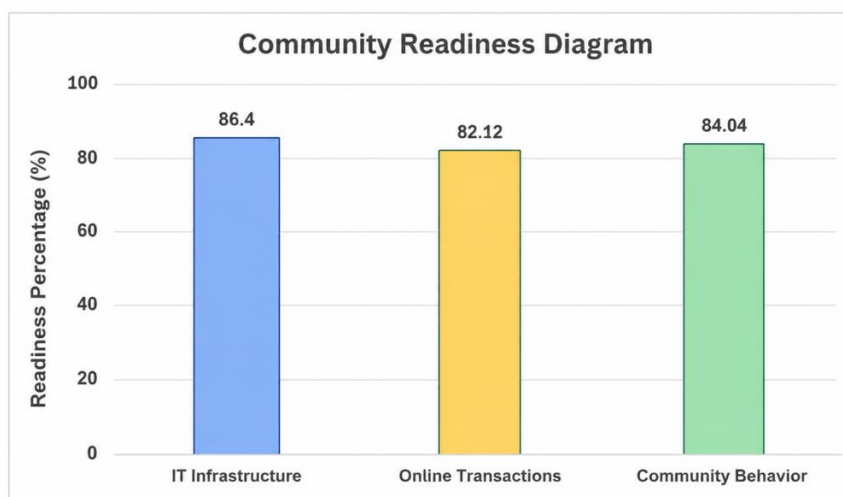


Figure 2. Community Readiness Diagram

Based on the calculation results, the Information Technology Infrastructure variable obtained the highest percentage at 86.4%, followed by Community Behavior at 84.04%, and Online Transactions at 82.12%. The high score in Information Technology Infrastructure indicates that most community members already have adequate digital devices and internet access. This condition is also supported by the respondent characteristics, which were dominated by individuals of productive age (21–30 years old) and respondents with senior high school educational backgrounds, who generally have greater exposure to digital technology.

The relatively lower score in the Online Transactions variable indicates differences in the intensity of digital service usage, particularly among older age groups, housewives, and respondents whose occupations do not depend on digital platforms. Although most respondents are familiar with services such as e-wallets, mobile banking, and e-commerce, their experience in using certain digital services still varies. This finding is consistent with previous studies suggesting that digital transaction readiness is influenced by user experience and trust in system security.

Meanwhile, the high score in the Community Behavior variable indicates that respondents generally demonstrate positive attitudes toward digital transformation, including openness to technological change and willingness to learn new systems. Previous studies have also emphasized that behavioral readiness and social acceptance are important factors in supporting the successful implementation of digital public services.

3.3. Discussion of Community Readiness Level

The discussion of community readiness level was conducted based on the interpretation of the mean values for each variable using readiness level categories based on the E-Readiness approach. The mean value of each variable was obtained by dividing the total average score of each variable by the number of measured indicators, which consisted of five indicators for each variable. Previously, the total average scores were used to calculate the initial percentages as a descriptive overview and for comparisons among variables, while the mean values were used as the primary basis for determining the community readiness categories. Based on these calculations, the mean values obtained were 4.32 for the Information Technology Infrastructure variable, 4.11 for the Online Transactions variable, and 4.20 for the Community Behavior variable. The analysis results indicate that all variables fall within the “Ready” to “Very Ready” categories, based on the 1–5 Likert scale used in this study.

Table 7. Community Readiness Categories

No.	Score Range (Mean)	Readiness Level	Readiness Category
1	1.00 – 1.80	Very Low	Very Unready
2	1.81 – 2.60	Low	Unready
3	2.61 – 3.40	Moderate	Fairly Ready
4	3.41 – 4.20	High	Ready
5	4.21 – 5.00	Very High	Very Ready

The grouping of mean values into levels and categories of community readiness is based on the Likert scale range of 1–5. Each mean score range represents a different level of readiness, where a higher average value approaching the maximum score of 5 indicates a higher level of community readiness. Therefore, the “Ready” and “Very Ready” categories reflect the dominance of positive responses from respondents toward the statements provided [14].

Table 8. Recapitulation of E-Readiness Index Results

No.	Variable	Mean Score	Level Kesiapan
1	IT Infrastructure (TI)	4,32	Very Ready
2	Online Transactions (TO)	4,11	Ready
3	Community Behavior (TL)	4,20	Ready

The Information Technology Infrastructure variable emerged as the most dominant aspect, with the highest mean score, indicating that the community has adequate devices and internet access to support digital village administrative services. Meanwhile, the Online Transaction and Community Behavior variables were also categorized as “Ready,” indicating that the community is accustomed to utilizing digital technology in daily activities and demonstrates a positive attitude toward digital service transformation. Overall, these findings indicate that the community has a good level of readiness to support the implementation of digital transformation at the Urban Village level, particularly in Sukamaju Urban Village, which serves as the object of this study.

3.4. System Architecture Design Using TOGAF ADM

The system architecture design using TOGAF ADM in this study was developed based on the results of the community readiness (E-readiness) analysis, which indicated that the residents of Sukamaju Urban Village were categorized as “Ready” to “Very Ready” in the aspects of Information Technology Infrastructure, Online Transactions, and Community Behavior. The results of this readiness assessment were not only used to evaluate the community’s potential acceptance of digital transformation but also served as the basis for determining the direction and architectural design decisions of the proposed system.

In the Information Technology Infrastructure variable, the mean score of 4.32 (Very Ready) indicates that most community members already possess adequate digital devices and internet access. This finding served as the foundation for selecting a web-based digital service platform, as web-based systems are considered more lightweight, accessible across various devices, and compatible with the diverse technical specifications of users’ devices.

Furthermore, the Online Transaction variable obtained a mean score of 4.11 (Ready), indicating that the community is familiar with digital services such as e-wallets, mobile banking, and e-commerce, and has a high level of trust in the security of digital systems. This condition supports the design of digital features such as online document submission, electronic document upload, digital data verification, and service status notifications, as the community is considered to have sufficient experience and understanding in interacting with digital systems.

Meanwhile, the Community Behavior variable achieved a mean score of 4.20 (Ready), demonstrating an open attitude, willingness to learn, and readiness to adapt to new digital systems. This finding served as the basis for designing a system that enables residents to act as self-service users, allowing administrative processes to be completed independently without full dependence on village administrative staff.

Based on these relationships, the TOGAF ADM approach was employed as a framework to translate the community readiness analysis into a structured system architecture design through Phase A (Architecture Vision), Phase B (Business Architecture), Phase C (Information Systems Architecture), and Phase D (Technology Architecture). Therefore, the proposed digital system design is not only oriented toward the administrative service needs of the village office but is also aligned with the community’s readiness level, ensuring that its implementation is more realistic, effective, and sustainable.

a. Phase A (Architecture Vision)

Administrative services in Sukamaju Urban Village are still mostly carried out manually through direct face-to-face processes at the village office, causing the service process to be less efficient and require a relatively longer time. Based on the E-Readiness analysis results, the community showed a “Ready” level in supporting digital transformation. Therefore, this study proposes the design of a web-based digital village service system architecture using the TOGAF ADM framework to support administrative services that are more effective, efficient, and integrated. The comparison between the current service condition (As-Is) and the proposed system condition (To-Be) is presented in the following table.

Table 9. Comparison of As-Is and To-Be

Administrative Service Process	Current Condition (As-Is)	Proposed System Condition (To-Be)
Letter Service Workflow (Domicile Certificate, ID Card/FamilyCard Introduction)	Residents visit the Urban Village office directly, fill out manual forms, staff verify physical	Residents submit letter requests through a web-based system, staff verify data digitally, and the letter is

Letter, Certificate of Financial Hardship (SKTM), etc.)	documents, the head of the Urban Village provides manual approval, the letter is typed and stored in paper archives, and residents collect the letter in person.	generated automatically. The head of the Urban Village approves and signs the letter through the system, the document is stored in a database, and residents receive notifications and can download the digital letter.
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Based on the comparison, the proposed system (To-Be) was designed to transform the previously manual administrative service process into an integrated web-based digital service system. In the proposed process, the community can submit administrative letter requests online, upload the required documents digitally, monitor the application status, and download approved documents through the system without having to visit the village office directly. Village officers are able to verify application data, manage digital documents, and process administrative services more efficiently through an integrated system, while the urban village head can provide approval and digital signatures electronically. In addition, all administrative data and documents are stored automatically in a digital database to support better document management and reduce the risk of archive accumulation or data loss. This proposal was developed by considering the results of the community E-Readiness analysis, which showed that the community has sufficient readiness in terms of technology infrastructure, online transaction experience, and digital behavior. Therefore, the implementation of digital village services is considered feasible and capable of supporting the digital transformation of public services in Sukamaju Urban Village more effectively and efficiently.

b. Phase B (Business Architecture)

The initial stage in the Business Architecture phase was carried out by analyzing the existing administrative service process (As-Is) in Sukamaju Urban Village. This analysis aims to identify the current service flow, the parties involved in the administrative process, and the problems that still occur in the manual service system. The existing process was analyzed to understand the inefficiencies and limitations in administrative services, such as direct face-to-face submissions, manual document verification, physical archiving, and delays in the approval process. The results of this analysis were then used as the basis for developing the proposed digital-based business process (To-Be) to support more effective, efficient, and integrated public services in the village office.

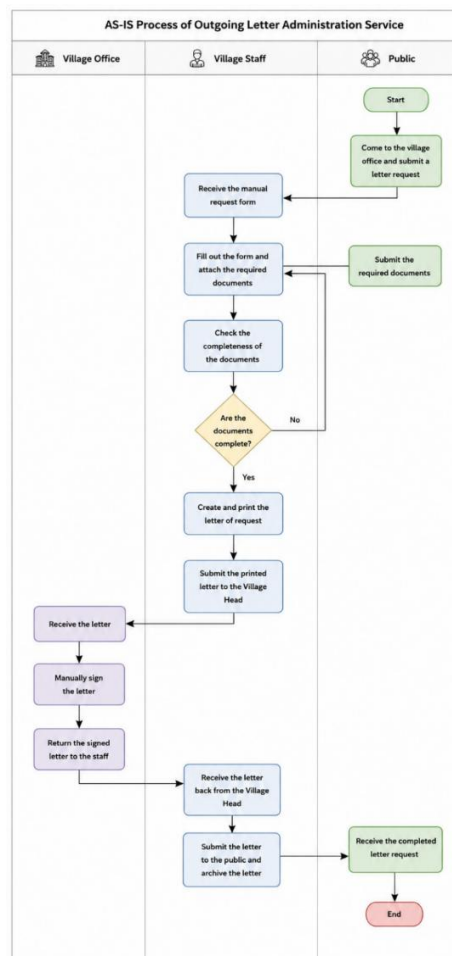


Figure 3. AS-IS Process of Outgoing Letter Administration Service

The AS-Is BPMN diagram shows that the administrative letter service process is still carried out manually, starting from direct letter submission to the verification, approval, and document archiving processes. This condition causes the service process to be less efficient, require more time, and potentially result in document accumulation and service delays. Therefore, a proposed business process (To-Be) is needed to support the digital transformation of administrative services. The system architecture design using the TOGAF ADM framework was developed as a proposed solution for digital village services based on the results of the community readiness analysis, which indicated a ready category.

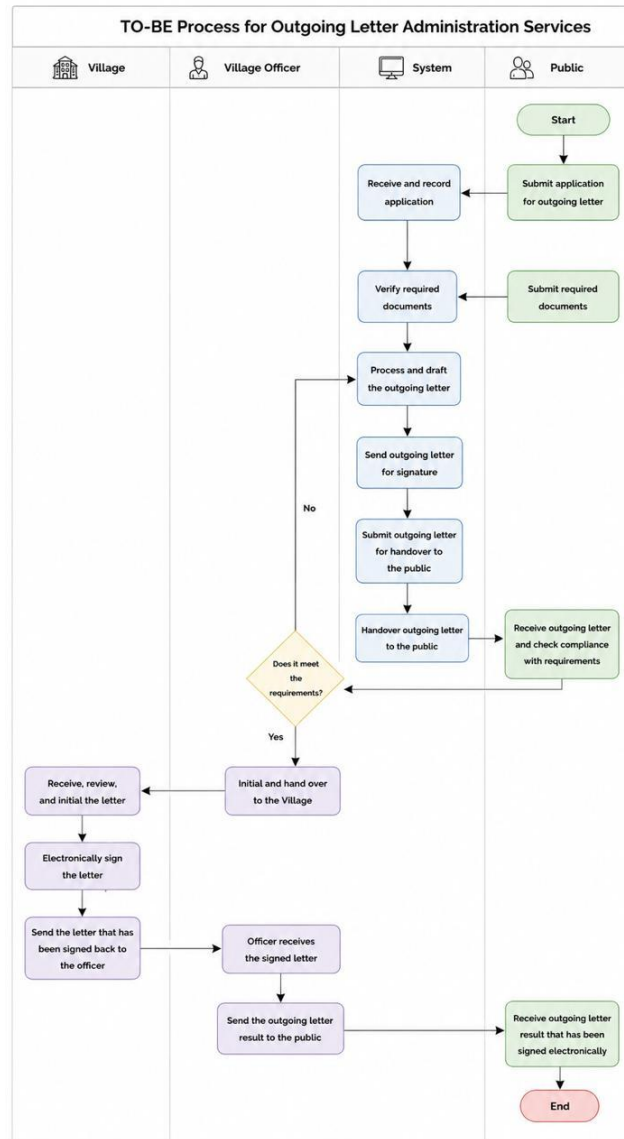


Figure 4. TO-BE Process for Outgoing Letter Administration Service

c. Phase C (Information Systems Architecture)

The interaction modeling between users and the system was carried out using a Use Case Diagram to describe the main functions of the proposed system[15]. The Use Case Diagram illustrates the interaction between the main actors, namely the community, village officers, and the urban village head, with the digital village service system. The diagram describes the main system functions such as letter submission, data verification, letter approval, and digital archive management. To support the implementation of the system, a technology architecture design is required to illustrate the relationship between system components and supporting infrastructure.



Figure 5. Use Case Diagram of the Village Administration System

The Use Case Diagram illustrates the interactions between actors and the main functions of the proposed digital village service system. To complement the system modeling, a Class Diagram is used to describe the structure of the system, including entities, attributes, and relationships between data components involved in the digital administrative service process.

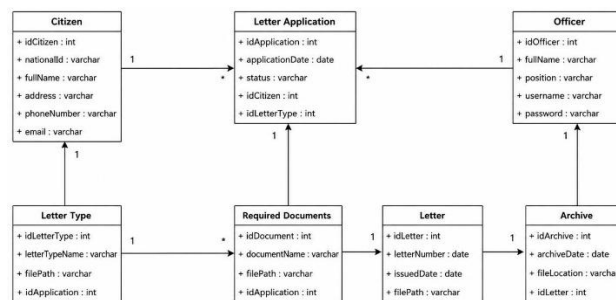


Figure 6. Class Diagram of the Village Administration System

d. Phase D (Technology Architecture)

The proposed system architecture illustrates the integration between users, digital service applications, databases, and network infrastructure in supporting digital-based administrative services in the village office. This architecture design was developed as a system development blueprint that can be used as a reference for implementing digital transformation in public services at Sukamaju Urban Village

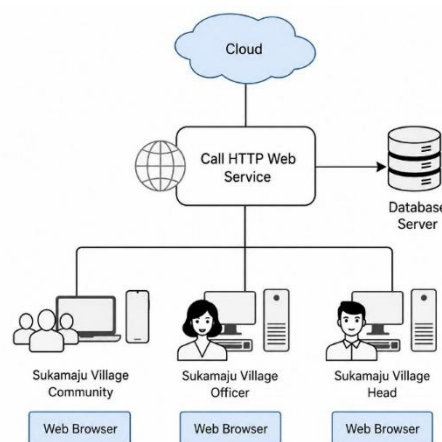


Figure 7. Technology Architecture

3.5. Proposed Digital Village Service System

The proposed digital village service system in this study was developed as a conceptual implementation based on the results of the community readiness analysis and the system architecture design using the TOGAF ADM framework. The proposed system is a web-based administrative service designed to support administrative letter services in a more effective, efficient, and integrated manner.

a. Homepage Interface of the System

The homepage interface was designed as the main access point for the community to use digital village services. This page contains the main service menus such as letter submission, application status tracking, and user information. The interface design was created to be simple and easy to understand so that it can be used by various groups of people according to the level of digital readiness identified in the previous analysis.



Figure 8. Community Main Interface Design

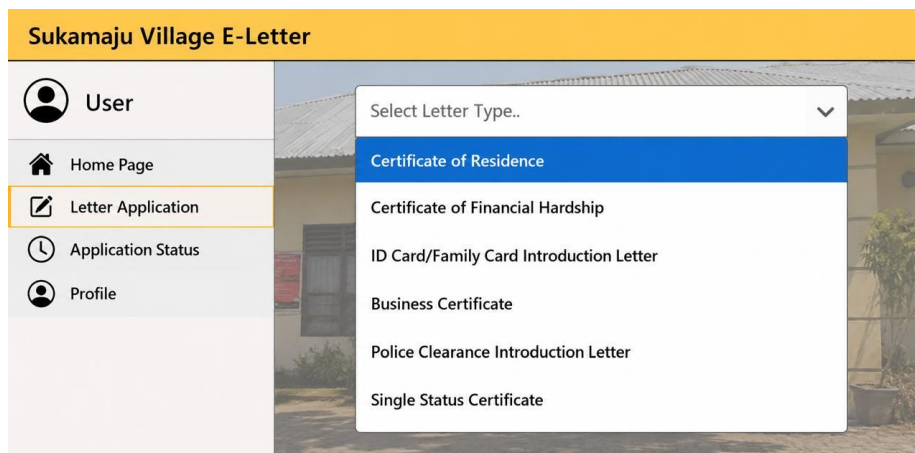


Figure 9. Community Letter Submission Interface Design

b. Staff Dashboard Interface

The staff dashboard is used by village officers to manage all digital administrative service processes. Through this page, officers can verify application data, create digital letters, manage archives, and monitor public service processes in an integrated manner. The dashboard interface was designed to support a faster, more structured, and more efficient workflow.



Figure 10. Urban Village Staff Main Interface Design

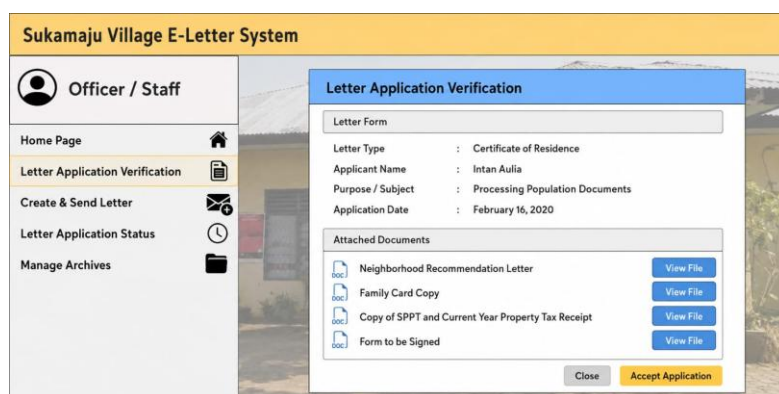


Figure 11. Urban Village Staff Letter Request Verification Interface Design

c. System Compatibility with E-Readiness Results

The proposed digital village service system has been aligned with the results of the community E-Readiness analysis. The community readiness level, which falls within the “Ready” to “Very Ready” categories, indicates that the community already possesses basic digital technology skills, internet access, and readiness to adapt to digital-based services. Therefore, the proposed system is expected to support the digital transformation of public services at the Urban village level more effectively.

3.6. Discussion

The results of the E-Readiness analysis indicate that the Sukamaju Urban Village community demonstrates a relatively high level of readiness to support digital transformation in public administrative services. The Information Technology Infrastructure variable achieved the highest readiness score, indicating that most respondents already possess adequate digital devices, internet access, and the ability to operate digital technologies. This finding suggests that the technical barriers to implementing web-based administrative services are relatively low. The dominance of respondents within productive age groups and senior high school educational backgrounds further strengthens the possibility of successful digital service adoption. These findings align with previous studies emphasizing that digital infrastructure availability and technology accessibility significantly influence digital transformation readiness in public service environments.

The Online Transactions variable achieved a slightly lower score compared to other variables, although it remained within the “Ready” category. This result indicates that while most residents are already familiar with digital services such as e-wallets, online shopping, and mobile banking, differences in digital transaction habits still exist among certain demographic groups, particularly older adults and respondents whose daily activities are less dependent on digital platforms. This finding highlights the importance of designing a digital administrative system that remains simple, intuitive, and supported by clear guidance to minimize potential barriers for less technologically experienced users. Therefore, user-friendly interfaces and accessible service workflows become critical components of the proposed digital system.

Meanwhile, the Community Behavior variable demonstrates that respondents generally possess positive attitudes toward digital transformation, including openness to technology adoption and willingness to adapt to new digital systems. This readiness in behavioral aspects suggests that community resistance toward digital public services is relatively low, thereby increasing the feasibility of implementing a web-based E-Surat service system. The findings support previous research indicating that behavioral readiness and trust toward technology are important determinants of successful digital public service implementation.

The integration of E-Readiness findings with the TOGAF ADM framework provides an important contribution to this study by ensuring that the proposed digital architecture is not solely technology-oriented but also aligned with actual community conditions. The readiness analysis served as the basis for designing business processes, information systems, and technology infrastructure through the phases of Architecture Vision, Business Architecture, Information Systems Architecture, and Technology Architecture. As a result, the proposed web-based E-Surat system was designed to facilitate online letter submission, digital document verification, status monitoring, electronic approval, and digital archiving. This architecture is expected to reduce service delays, improve administrative efficiency, and enhance accessibility for residents who previously relied on manual face-to-face administrative processes.

Overall, the findings indicate that Sukamaju Urban Village possesses favorable conditions for digital transformation implementation. The proposed digital administrative service system has strong potential to improve service effectiveness, optimize administrative workflows, and support better public service governance. Nevertheless, future implementation should consider digital literacy assistance, socialization programs, and technical support mechanisms to ensure that all community groups can adapt effectively to digital administrative services.

4. CONCLUSION

This study successfully evaluated the level of community readiness toward digital transformation in Sukamaju Urban Village using the E-Readiness approach and utilized the findings as the foundation for designing a digital administrative service architecture using the TOGAF ADM framework. The results indicate that the community demonstrates a high level of readiness, with the Information Technology Infrastructure variable categorized as Very Ready (mean score = 4.32), while the Online Transactions and Community Behavior variables were categorized as Ready, with mean scores of 4.11 and 4.20, respectively. These findings indicate that the community possesses sufficient technological infrastructure, digital experience, and behavioral readiness to support the implementation of digital administrative services at the urban village level. Based on the readiness analysis, this study proposed a web-based E-Surat administrative service architecture developed through TOGAF ADM phases, including Architecture Vision, Business Architecture, Information Systems Architecture, and Technology Architecture. The proposed system enables online document submission, digital verification, electronic approval, notification services, and digital archiving, thereby improving efficiency, transparency, and accessibility of public services compared to conventional manual processes. Therefore, the implementation of digital administrative services in Sukamaju Urban Village is considered feasible and has strong potential to support sustainable public service transformation. Future studies may focus on system implementation, usability evaluation, security testing, and integration with broader smart governance initiatives to optimize digital service performance and user satisfaction.

REFERENCES

- [1] G. L. Sukma, "ANALISIS PENGGUNAAN TEKNOLOGI INFORMASI DIGITAL DALAM PELAYANAN PUBLIK DI KELURAHAN KARAWANG KULON," vol. 15, no. 1, pp. 1–5, 2024.
- [2] P. Sigana, "MENGHADAPI PERUBAHAN DUNIA MELALUI TRANSFORMASI DIGITAL MENUJU KESUKSESAN PADA ERA DIGITALISASI Dimpo," JSI (Jurnal Sist. Inf.), vol. 11, pp. 51–58, 2024.
- [3] B. Hanggoro, S. Mareta, and N. Santoso, "Analisis Dampak Adopsi Teknologi Finansial E-Wallet terhadap Literasi Keuangan Digital (Studi Kasus pada Masyarakat Kota Depok)," vol. 6, no. 3, pp. 1337–1346, 2025.
- [4] K. Palembang, "Dalam angka 2025." Accessed: Nov. 09, 2025. [Online]. Available: <https://palembangkota.bps.go.id/id/publication/2025/02/28/0208b66a6228c7c108c3f7c4/kota-palembang-dalam-angka-2025.html>
- [5] N. A. Yulianti, R. N. Illahi, and B. Cantika, "Model Penerimaan Teknologi dalam Layanan Kependudukan : Studi Empiris terhadap Implementasi Identitas Kependudukan Digital di Kabupaten Garut Technology Acceptance Model in Civil Registration Services : An Empirical Study on the Implementation of Digital Population Identity in Garut Regency," vol. XXI, no. 1, pp. 62–86, 2025, doi: 10.52316/jap.v21i1.588.
- [6] A. N. Shavira, "ANALISA TEKNOLOGI INTERNET YANG BERPERAN SEBAGAI MEDIA TRANSAKSI E-COMMERCE DALAM MENINGKATKAN PERKEMBANGAN EKONOMI SECARA SIGNIFIKAT," J. Ilm. Sain dan Teknol., vol. 2, pp. 35–40, 2024.
- [7] A. Anirwan, "KAJIAN LITERATUR: FAKTOR-FAKTOR YANG BERPENGARUH DALAM TRANSFORMASI DIGITAL LAYANAN PUBLIK DI INDONESIA," vol. 5, no. July, pp. 177–185, 2025, doi: 10.51577/ijipublication.v5i3.659.
- [8] A. Puspita and A. N. Handayani, "Dampak Teknologi Digital Terhadap Perilaku Sosial," vol. 2, no. 10, pp. 446–451, 2022, doi: 10.17977/um068v1i102022p446-451.
- [9] S. Pratami, P. Julizar, and D. Antoni, "ANALISIS KESIAPAN TRANSFORMASI DIGITAL PADA KELURAHAN PALEMBANG," vol. 16, no. 2, pp. 330–336, 2025.
- [10] D. Lestari, "Model E-Readiness untuk Pengukuran Kesiapan Pengelolaan Aduan E-Lapor DIY," pp. 86–90, 2020, doi: Model E-Readiness untuk Pengukuran Kesiapan Pengelolaan Aduan E-Lapor DIY.
- [11] R. N. Qaimah and E. Handrian, "E-Readiness Sistem Informasi Pelayanan Terpadu Kependudukan (SIPENDUDUK) Pada Dinas DISDUKCAPIL Kota Pekanbaru Resni Nur Qaimah dan Eko Handrian," vol. 2, no. 1, pp. 23–42, 2025.

- [12] M. L. Hakim and Y. H. Putra, "Perancangan Enterprise Architecture Planning sebagai Blue Print Sistem Informasi pada Badan Keuangan Daerah Kota Singkawang The Design of Enterprise Architecture Planning as a Blueprint for the Information System at the Regional Financial Agency of Singkawang City," vol. 10, pp. 70–80, 2024.
- [13] R. F. Siregar and H. Yani, "Perencanaan Enterprise Architecture Sistem Informasi Pada Kantor Lurah Selamat Kota Jambi Menggunakan Framework Togaf-Adm Jurnal Manajemen Teknologi dan Sistem Informasi (JMS)," vol. 3, pp. 323–333, 2023.
- [14] N. Anisah and R. Puspasari, "Sistem Informasi Kuesioner Materi Pembelajaran SMP Swasta Generasi Bangsa Martubung Menggunakan Skala Likert," J. Rekayasa Sist., vol. 2, no. 2, pp. 604–617, 2024.
- [15] T. A. Rospricilia, M. Nizar, and P. Ma, "Pemodelan Integration Use Case (IUC): Perancangan Use Case Diagram (UML) untuk Sistem-sistem yang Terintegrasi," pp. 165–172, 2024.