**PUBLISIA:** Jurnal Ilmu Administrasi Publik
http://jurnal.unmer.ac.id/index.php/jkpp

ISSN: **2541-2515(p), 2541-2035(e)**
Volume 8 (2) 2023
Pp. 228 - 240
DOI: 10.26905/pjiap.v8i2.8138


# Digital village innovation during the COVID-19 pandemic in Nusa Jaya District

**Dini Mauludiawati*, Toddy Aditya, Achmad Kosasih, Achmad Chumaedi, Slamet Setiawan**

Faculty of Social Science and Political Science, Government Science Study Program, Universitas Muhammadiyah Tangerang
Jl. Perintis Kemerdekaan I No. 33, RT.007/RW.003, Babakan, Cikokol, Subdistrict Tangerang, Tangerang City, Banten 15118.
*Correspondence: dinimauludiawati89@gmail.com

**Article History:**
Received: 14/07/2022
Revised: 13/06/2023
Accepted: 14/10/2023
Published: 28/10/2023

**Abstract**

The purpose of this study was to determine digital adoption in the Nusa Jaya Village, Karawaci District, Tangerang City. The Nusa Jaya Village made a breakthrough or innovation in their public services by utilizing and optimizing ICT in digitalization, Namely the application of pangkas applications. This study uses qualitative and descriptive methods for the phenomenon of e-government adoption in Nusa Jaya Village. Several factors influence e-government adoption which is one of the success factors of e-government, namely: Advantage (success) with the existence of a pruning application, the community is assisted in the process of making documents and other bureaucratic services, Trust (Trust) where the community has confidence in sites/applications where people are not worried about personal data leaks where there are policies that cover them, Internet Accessibility (Internet Accessibility) the quality of internet access itself has good access speed although there are some that are still hampered by their internet network the ability of the community to access internet services such as websites , e-mail. Internet Skills, which are still an obstacle and a challenge in the Nusa Jaya sub-district, apart from being constrained by limited competent human resources, knowledge, education and a lack of ability in the use and utilization of IT. There are still many people who are clueless, so it is difficult to socialize and train the application so that socialization must be carried out regularly and training needs to be increased again and not all people have smartphones.

**Keywords:** E-government, E-service, human adoption, technology

**How to cite**: Mauludiawati, D., Aditya, T., Kosasih, A., Chumaedi, A., & Setiawan, S. (2023). Digital village innovation during the COVID-19 pandemic in Nusa Jaya District. *PUBLISIA:Jurnal Ilmu Administrasi Publik*, 8(2), 228-240 -https://doi.org/10.26905/pjiap.v8i2.8138

## 1. Introduction

During the COVID-19 pandemic, the government must optimize applications or websites to provide services to the public. The optimization of technology should not be limited to the service sector alone but should be applied across various government sectors, including office meetings, attendance record keeping using forms or applications, and other activities (Primadara, 2022; Tasyah et al., 2021). This is necessary to adapt to new norms and modernization, especially within the bureaucracy, to continue providing services to the public. Administration during the COVID-19 pandemic has seen several changes in working models within the government, transitioning from in-office work to remote work, which is a significant change. This was done to implement social and physical distancing effectively to break the chain of COVID-19 (Fitria, 2020; Rizky et al., 2020).

Considering that bureaucracy remains pivotal in providing public services during the COVID-19 pandemic, there is an inherent need to maximize the utilization of Information and Communication Technology (ICT) in various government sectors. This is due to the work-from-home (WFH) policy, which limits physical movement. Consequently, the government needs to innovate and transform conventional face-to-face services into electronic or digital ones (Hasibuan & Sulaiman, 2019). ICT utilization (e-government) involves managing data, information, electronic workflow systems, and leveraging ICT advancements to make public services accessible, easy, and cost-effective. It also enhances transparency and accountability, allowing citizens to easily access and evaluate government activities (Presidential Instruction number 3 on 2003).

The digitization of e-government/ICT in Indonesia began in 1992 and gained further emphasis with the World Health Organization's declaration of the COVID-19 pandemic on March 20, 2020. This led to increased optimization of e-government in all government sectors, aligning with Presidential Regulation No. 95 of 2018 regarding Electronic-Based Government Systems. Following the guidelines set by Presidential Instruction of the Republic of Indonesia No. 3 of 2003 on the National Policy and Strategy for e-Government Development (Presidential Instruction number 3 on 2003), the COVID-19 pandemic underscored the importance of further emphasizing ICT utilization across all government sectors. This was done to maintain government services to the public despite physical and social distancing measures (Pertiwi & Azis, 2022).

Previously, the Tangerang City Government issued Local Regulation No. 5 of 2008 on the Formation and Organization Structure of the Tangerang City Regional Office and Mayor Regulation No. 28 of 2008 on the Organization and Working Procedures of the Tangerang City Communication and Information Office. Both policies addressed the implementation of e-government, indicating increased government support for e-government. Mayor Regulation No. 2 of 2016 on the Utilization of Information and Communication Technology further governed e-government implementation.

In the execution of e-government, attention must be given to e-government adoption or human adoption, which is a crucial factor supporting the success of e-government. E-government adoption represents the psychological acceptance of digital technology as a means for the government to provide information and public services to the population through the internet or other means (Beldad et al., 2011).

To enhance performance during the COVID-19 pandemic or to transition to the new normal, several measures should be taken to ensure that public services run smoothly. This includes strengthening the bureaucracy's capacity to master digital-based applications, emphasizing high-quality and innovative bureaucracy. This aligns with the principles of good governance, which aim for improved, more efficient, effective, responsive, accountable, and transparent systems (Febrianti & Priyadi, 2022).

Innovations are vital at a time like this to support the functioning of bureaucracy, especially in the public service sector. The issues faced by

the Indonesian government are also experienced by other nations, and governments worldwide are seeking solutions. COVID-19 has rapidly spread to all regions in Indonesia, making it essential for government services to continue. Therefore, Nusa Jaya Sub-District, located in Karawaci District, Tangerang City, Banten, has adopted digital innovation to optimize public services. They utilize ICT during the pandemic, where bureaucracy plays a crucial role in public administration. This digital innovation has facilitated and guaranteed access to various services. However, continuous community outreach is necessary to ensure public understanding of this application.

Based on these phenomena, this research formulates the conditions, implementation, obstacles, challenges, and e-government factors (human adoption) before and after the digitalization of the "Pangkas" application in Nusa Jaya Sub-District. The goal of this research is to understand the conditions, implementation, obstacles, challenges, and e-government (human) adoption factors before and after the digitalization of the "Pangkas" application.

## 2. Literature Review

The earlier research by Nurjanah & Mahendra (2022), titled "e-Service Quality in the Electronic Population Service Alpukat Betawi by the Jakarta Provincial Government," revealed that the e-service quality in the electronic population service "Alpukat Betawi" by the Jakarta Provincial Government falls within the 'good' category, with a score of 92%. This assessment was based on the four e-service quality dimensions presented by Papadomichelaki & Mentzas (2012), all of which were considered 'good.' The study employed a quantitative approach with a mixed data collection method.

In a previous study by Satriyo et al. (2021), titled "Implementation of the Pangkas Application (Simplified File Handling) in Public Services at the Department of Communication and Information Technology of Tangerang City," the findings indicated that the Pangkas Application is one of the efforts by the Tangerang City government to provide excellent services to its residents. In the implementation of this program, the Department of Communication and Information Technology received support from the districts and neighborhoods, which consistently conducted outreach and training for neighborhood leaders and community unit leaders (RT and RW) on the use of the Pangkas application. Despite certain challenges in some neighborhoods, such as limited community IT skills, infrastructure, human resources, education, and compliance with requirements, the study was conducted using a qualitative field research method with a case study approach.

### Innovations

Innovation is the generation of new ideas or concepts, or the continuation of a discovery, which involves the creation of goods, services, or value through the enhancement and utilization of technology. Innovation can significantly provide added value and well-being. The acceptance of an innovation depends closely on creative ideas (Hutagalung & Hermawan, 2018; Nasution & Kartajaya, 2018).

Digital Village is a concept, idea, or process carried out by the government, villages, and communities as a group. It involves using Information and Communication Technology (ICT) objectively, intelligently, and wisely to address a problem. It also entails the ability to effectively and efficiently provide human resources (HR) in a field used as a residential area by a community forming its own group or community. They coexist with local customs and regulations applicable in that area (Choiriyah, 2020; Faisol, 2019).

### E-government

E-government refers to an Information and Communication Technology (ICT) system owned or operated by those who transform their relationships with citizens, the private sector, and

other government agencies and institutions. Its purpose is to promote citizen empowerment, enhance accountability, improve transparency, and increase government efficiency. E-government also aims to enhance the capabilities and quality of capacity that can adapt to changes with citizens, businesses, and other government institutions (Indrajit, 2016; Yuhefizar, 2021).

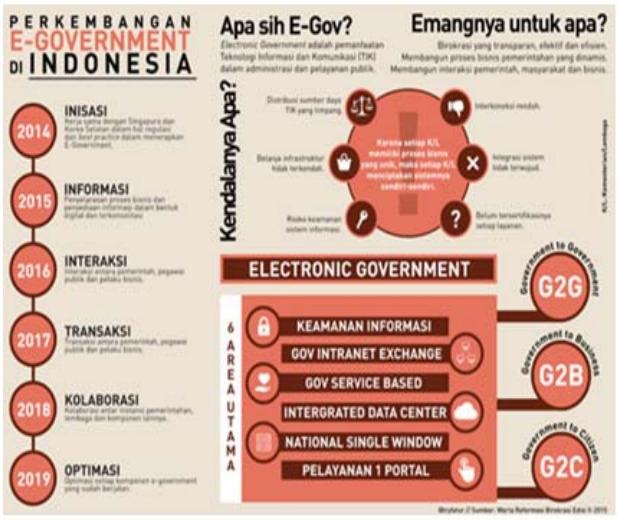


**Figure 1.** Development of e-government in Indonesia
Source: Yuhefizar, 2021

The concept of e-government involves various relationships, including Government to Citizen (G2C), Government to Business (G2B), Government to Government (G2G), and Government to Employees (G2E), as outlined by Indrajit (2016).

Effective e-government governance is closely tied to the principles of good governance. Good governance is the foundation for both central and local governments to manage public administration while involving all components, including the private sector and the public (Dewi & Suardana, 2023; Wibawa, 2019).

The relationship between e-government and e-governance is a fundamental component of e-governance. Government is one sector within the governance process. One key difference between e-government and e-governance is that e-government is a system, while e-governance is a system encompassing various sectors.

The principles of good government governance include Accountability, Transparency, Democracy, and the Rule of Law (Mariono, 2019). According to research by the Harvard JFK School of Government, when implementing concepts that utilize Information Technology (IT), such as digitization, in the public sector, three essential elements are crucial for developing successful e-government. These elements are Support, Capacity, and Value (Indrajit, 2016).

## E- service

E-service, or electronic service, is defined as an activity or effort delivered through Information and Communication Technology (ICT) media. E-service comprises three main components: electronic retail service, customer support, and customer service, thereby involving service, service recipients, and the service channel (ICT) (Rowley, 2006).

The quality of e-service primarily revolves around assessing or determining the quality of a program that directly impacts those experiencing it. It can be broken down into various components, including responsiveness, credibility, user-friendliness, reliability, convenience, communication, accessibility, competence, courtesy, personalization, sustainable improvement, security, and privacy. The key indicators of quality in e-government-based public services include efficiency, trust, reliability, and community support.

## E-government adoption (human resources)

E-government adoption is a psychological construct related to an individual's acceptance or rejection of computer-based technology used in providing government information and public services to the public through the internet or other digital means (Beldad et al., 2011).

In the context of digitalization and e-government, there are several factors that influence its effectiveness. Firstly, Advantage (Success). The success of policy implementation is closely tied

to the advantage and capability resources, including human resources, budget, and equipment, which affect policy processes in alignment with the availability of budget, adequate resources, infrastructure, and the need for human resource enhancement.

Secondly, Trust: This pertains to the level of trust the public has in a website or application, which includes concerns about safety, freedom from disruptions, and the ability of these platforms to protect personal information from leaks or misuse.

Thirdly, Internet Accessibility. This relates to an individual's and an organization's capacity to connect to the internet using computer terminals and other devices to access services such as email and the World Wide Web.

Lastly, Internet Skill. Individuals must possess the skills and competencies related to Information Technology (IT). As most aspects of life are now connected to digitalization, having internet-related skills is of paramount importance.

The establishment of e-government also necessitates supportive infrastructure and components for its success. These components include hardware, software, data, procedures, and human resources (Choiriyah, 2020; Kurniasih et al., 2013).

Regarding the obstacles and challenges in e-government, Prihantara (2010) states that some of these issues include e-leadership, which concerns the culture of information sharing and can facilitate various processes. Infrastructure for information networks is also a challenge, encompassing the quality, scope, and cost of access to telecommunication infrastructure, considering that infrastructure remains inadequate, expensive, and unevenly distributed, especially in Indonesia. Business environment is another challenge, taking into account market conditions, trade systems, and regulations shaping the context for the development of IT businesses. Lastly, the shortage of skilled human resources in IT is a challenge that must be addressed.

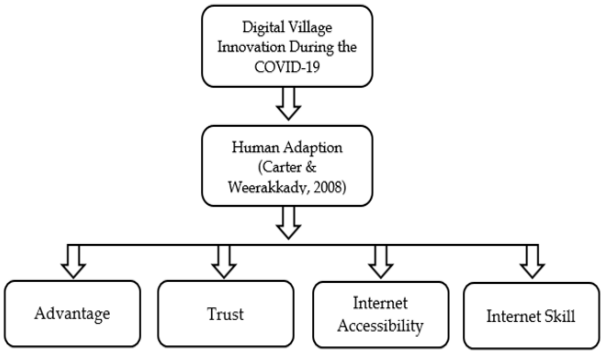


**Figure 2.** Research Framework

Based on Figure 2, according to Carter & Weerakkody (2008) in e-Government digitalization innovation adoption or human adoption there are factors that influence the running of e-Government, namely e-Government Adoption or human adaptation because these components are an initial step in the implementation of e-Government. Advancement is where the government plays an important role in implementing e-Government and this cannot be separated from capacity. Trust is the level of public confidence in a site, website, application whether it is safe or not, protected from all kinds of interference and whether personal data is not leaked or misused. Internet accessibility is the ability of a person or group to connect to the internet using a computer terminal or other device to access services. Internet Skill is a person's skill in operating technology and communication. This plays an important role in the implementation of e-Government, especially in facing the era of information digitalization.

## 3. Research Methods

This research employs a qualitative descriptive method. The choice of a qualitative approach is due to the nature of the data generated in this study, which is descriptive in nature. It involves the portrayal of relevant phenomena obtained in written, textual, and document forms from trusted sources or informants. The qualitative research method emphasizes the search for mean-

ing, understanding, symbols, characteristics, concepts, interpretations, and explanations of a phenomenon. It is natural, holistic, focused, and employs multiple methods, prioritizing quality through various approaches. In qualitative research, the researcher cannot solely rely on variables but should consider the entire social situation to be studied, including aspects such as location, participants, and coordinating activities.

The study is conducted in Nusa Jaya Subdistrict, Karawaci District, Tangerang City. Data is collected from both secondary and primary sources, using techniques such as observation, interviews, questionnaires, and documentation. Triangulation, which involves cross-referencing multiple sources of data, is employed for credibility.

This study aims to explore the innovations in bureaucracy implemented by Nusa Jaya Subdistrict during the pandemic, as well as the challenges and barriers faced. The informants in this study include several staff members responsible for services in Nusa Jaya Subdistrict, the head of Nusa Jaya Subdistrict, and the secretary of Nusa Jaya Subdistrict. The choice of Nusa Jaya Subdistrict for interviews is due to its status as a digital-based pilot subdistrict.

In the data collection process, the researcher also utilizes internet searching to access secondary data easily and accurately, given the limitations in physical movement during the COVID-19 pandemic. This approach helps in gathering information online from various sources such as Google Scholar, Publish or Perish (journals), e-books, government websites, articles, news, and electronic data sources. After obtaining all the necessary data, the next step involves data analysis, which includes data reduction and presentation using narratives to make the field research more specific, transparent, profound, and engaging to readers. Furthermore, triangulation is used to validate the data's authenticity and reliability, which is a common practice in testing data in research.

## 4. Results and Discussion

The concept of a digital subdistrict (Kelurahan Desa Digital) is a digital program initiated by the Ministry of Communication and Information Technology (Kemkominfo) through the Directorate of Government Information Application Services (Direktorat Layanan Aplikasi Informatika Pemerintahan - LAIP). It has been increasingly promoted in Indonesia, with various provinces, including Banten, actively participating in its implementation. One of the notable examples is the city of Tangerang, which developed the "Pangkas" application.

The inception of the Digital Subdistrict concept started as an innovation by the head of Nusa Jaya Subdistrict. It leveraged information technology during the COVID-19 pandemic when public service activities were disrupted due to the implementation of social distancing measures to prevent the spread of the virus. This innovation aimed to ensure the continuity of public services by utilizing technology. It allowed residents to access services without the need to visit the subdistrict office, reducing face-to-face interactions with others and avoiding gatherings.

The "Pangkas" application, in particular, was introduced to simplify and expedite administrative processes, reducing the reliance on paper documents and minimizing the need for in-person interactions, especially during the pandemic when social distancing was enforced. This application can be accessed conveniently from anywhere and at any time.

As a result, the Digital Subdistrict (Pangkas application) was officially launched in August 2021 by the Mayor of Tangerang. Over time, residents have experienced many benefits from the application, although challenges and obstacles also emerged. Despite these challenges, it is crucial to continue implementing such innovations to ensure the smooth operation of e-government services.

## Advantages in village service innovation in the Pangkas Application


**Figure 3**. Flyer to digital Nusa Jaya sub-district
**Figure 4**. Pangkas Application
Source: Instagram @Nusajaya_Ceria

In the implementation of the Digital Subdistrict, the "Pangkas" application is utilized for public services, initially through WhatsApp. Citizens who wish to process document-related matters are required to schedule an appointment in advance. This ensures that when their documents are ready, they can simply collect them from the subdistrict office without any hassle, especially considering the ongoing COVID-19 pandemic.

To connect with the "Pangkas" application, citizens need to download it from either the Google Play Store (for Android) or the App Store (for iPhone). Following the download, they must fill out a registration form with their details such as name, address, phone number, ID number, email, and more. After completing the form, a password will be sent to them via SMS. They should enter the code they receive, and once verified, they can log in to the application using their ID number and password.

The "Pangkas" application provides various services through WhatsApp, including Electronic Identity Cards (KTP Elektronik), Family Cards (Kartu Keluarga), Change of Residence to the Karawaci District (Pindah Datang ke Kecamatan Karawaci), Moving Out of the City of Tangerang (Pindah Keluar Kota Tangerang), and BPJS Health Services (BPJS Kesehatan).

The "Pangkas" application (formerly known as "Siwarga") is not limited to certificate requests alone but offers a wide range of benefits. It provides various services accessible by neighborhood community leaders (RT and RW), as well as the general public. These services include: Citizen Data Collection, Population Information, Area Information, Poverty Data Collection, Emergency Button and Important Numbers, Government Assistance, E-paper, and more.

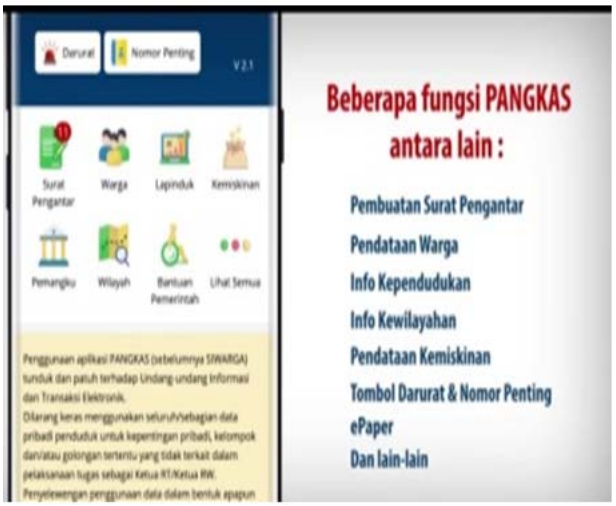


**Figure 5.** Pangkas Application user interface
Source: Youtube Kota Tangerang

The application serves as a comprehensive tool for residents and local community leaders, offering access to essential services and information, facilitating data collection and communication with local authorities.

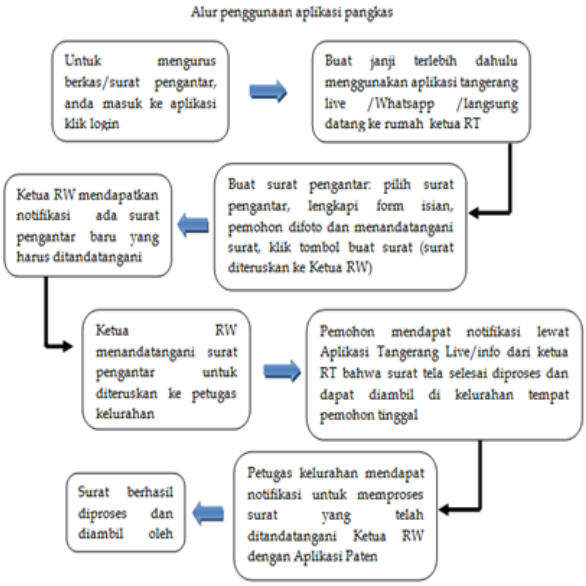


**Figure 6.** The flow of using the app

With this application, people should be helped in making documents, even though some people already understand the flow of making a cover letter and some don't yet understand because of several obstacles, for example not understanding how to use the application, a poor network and not being able to use a smartphone.

**Figure 7.** Mayor of Tangerang, when launching the Pangkas Application
Source: Berita Satu (Fikri, 2021)

The implementation of digital applications by Nusa Jaya sub-district contributes to increased transparency and accountability in public service delivery, providing a convenient means for residents to manage their population-related paperwork without incurring any fees (Fikri, 2021).

The advantage of this e-government implementation, particularly the "Pangkas" application, is that it greatly assists the public in managing their data. The community has shown enthusiasm for this application. It's important to note that this digital solution doesn't replace conventional services but enhances them with technology. Instead of physically going to the sub-district office and waiting in line, residents can access the same services via electronic devices such as laptops and smartphones. This digitalization brings significant benefits to the community, making it easier for them to access services without the need for physical visits and long wait times. They can simply initiate a conversation via WhatsApp with the sub-district office to schedule an appointment or inquire about the necessary requirements for documents like ID cards and birth certificates.

## Community trust in the Pangkas Application

With the implementation of the "Pangkas" application and WhatsApp, residents have found it highly beneficial as it significantly expedites services and saves time compared to the conventional service system. The conventional system often required them to carry numerous documents, spend hours waiting in line, and navigate through slow and convoluted bureaucratic procedures. This lack of efficiency and transparency resulted in numerous complaints from the community regarding the poor state of bureaucracy. It's important to note that the Nusa Jaya sub-district acts as an intermediary in data processing, document creation, and data analysis, while the Civil Registration Office (*Dukcapil*) is responsible for processing the data.

While there might not be a strong legal framework in place for e-government, the policies mentioned can serve as preliminary references for e-government policies. The most fundamental aspect of e-government implementation is the legal framework. Clear legal guidelines are essential for ensuring the proper implementation of e-government. This includes safeguarding personal data and sensitive information in bureaucracy to prevent data breaches. Even though specific laws addressing data security might be lacking, it doesn't mean there are no regulations against data theft or leaks. Several regulations like PP No. 71 Tahun 2019, PP No. 80 Tahun 2019, Ministerial Regulation (Peraturan Menteri Kominfo) No. 20 of 2016 cover aspects of personal data protection. Additionally, the government has regulations like Government Regulation (PP) no. 82/2012 concerning Electronic Systems and Transactions (PTSE).

The community's trust in this application is built on the assurance that their personal data won't be leaked or misused. It's crucial for the government to ensure data security and privacy.

Failure to do so could undermine public trust, making it difficult to regain once lost.

### Internet accessibility Pangkas Application


**Figure 8.** Data on internet users in Indonesia
Source: Hootsuite (we are social), Riyanto 2022

According to the data above, the population or population of Indonesia reached 277.7 million as of January 2022, for mobile connected around 370.1 million, internet users in Indonesia were 204.7 million, up 1% from the previous year, active social media users were 191.4 million, the social media with the most users in Indonesia is WhatsApp with 88.7% of the total population (Riyanto, 2022).


**Figure 9.** Internet user data in Tangerang City
Source: Banten.bps.go.id

The population of Tangerang City was 2,274,000 in 2020, while in 2020 internet users in Tangerang City were around 76.03% or 1,735,062 people. Tangerang is the city with the fastest internet access in Indonesia in the first quarter of 2021 (Speedtest Global Index). Tangerang City's average download speed is 24.69 Mbps, upload speed is 14.85 Mbps, and latency is 28 ms (Stephanie, 2021).

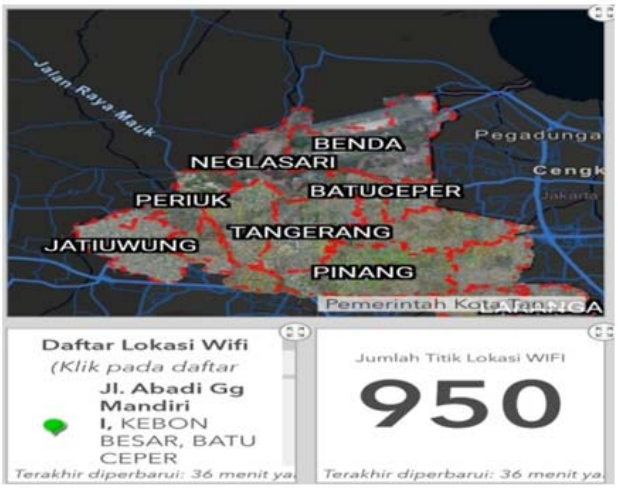


**Figure 10.** RW net distribution
Source: Maps. Tangerang Kota.go.id

The latest government program in the city of Tangerang is "RW Net," which has already been implemented in 168 Neighborhood Associations (Rukun Warga or RW) across various areas, including Benda, Neglasari, Periuk, Batuceper, Tangerang, Pinang, and Larangan. The total target is 950 locations. However, issues related to internet access remain a challenge. Despite some areas having good internet signal quality, there are still instances where the internet access is insufficient. This issue is not unique to Nusa Jaya, and it sometimes hampers access to applications for meeting various requirements.

On one hand, this application significantly improves public services. But on the other hand, the lack of reliable internet access can pose difficulties. To address this, local authorities have been promoting the application through Neighborhood Associations (RT/RW) and are planning to fur-

ther raise awareness by distributing pamphlets and conducting outreach campaigns. This effort aims to ensure that the community is well-informed about the availability of digital e-government services.

## Internet skills in using Pangkas Applications

Digital literacy is related to skills because it involves not only technology but also the ability to learn, think critically, be creative, and innovative to achieve digital competence. In Indonesia, the overall digital literacy index in 2021 is expected to reach 3.49 on a scale of 1 to 5, indicating an improvement from the previous year's index, which was around 3.46.

This assessment was conducted through face-to-face surveys with 10,000 respondents in 514 regions or cities in Indonesia. The respondents were internet users aged 17-70. As digital literacy increases, there have been improvements in various areas, such as the digital culture pillar. However, the digital ethics and digital security pillars have declined (Kominfo, 2022).

To enhance the skills of human resources and the community, training and regular socialization are essential to ensure that people understand the Pangkas application. The socialization and training for the Pangkas application are directly facilitated by the Information and Communication Office with the assistance of the Neighborhood Associations (RT/RW), and communities. This training is aimed at enabling these groups to efficiently assist people in handling their documents.

Once the Neighborhood Associations (RT/RW) have been trained, they disseminate information and training to their residents. This is to ensure that the community can benefit from the Pangkas application provided by the Tangerang City government. The application has already been introduced to approximately 5,000 households at the RT and RW levels, and it has been promoted in 10 sub-districts, with the remaining 3 sub-districts yet to be covered.

**Tabel 1.** Recapitulation of Users of the "Pangkas" Application for August 2021

| Kecamatan Cibodas | Total of Recapitulations |
|---|---|
| Kecamatan Cibodas | 16,994 |
| Kecamatan Jatiuwung | 9,365 |
| Kecamatan Karawaci | 1,124 |
| Kecamatan Pinang | 663 |
| Kecamatan Ciledug | 483 |
| Kecamatan Neglasari | 490 |
| Kecamatan Cipondoh | 324 |
| Kecamatan Periuk | 373 |
| Kecamatan Larangan | 348 |
| Kecamatan Tangerang | 168 |
| Kecamatan Batu Ceper | 581 |
| Kecamatan Karang Tengah | 45 |
| Kecamatan Benda | 24 |
| Total | 30,982 |

**Table 1.** Summary of Application users for the period August 2021
Source: Integrated District Administration Services Managed by the Tangerang City Communications and Information Service in August 2021 (Satriyo et al., 2021)

With a total population of 2,274,000 in Tangerang City (in 2020) and approximately 76.03% of the population being internet users (about 1,735,062 individuals), one would expect that more people in the city would already be using the Pangkas application (which has around 30,982 users in Tangerang). However, there are still various obstacles and challenges in its implementation. These challenges include limited knowledge among the population when it comes to using smartphones. Some residents still do not own smartphones, and the unstable internet network poses a significant problem.

The issue of internet skills remains a major hurdle and challenge in Kelurahan Nusa Jaya. The limited human resources, knowledge, and capacity in IT usage have hindered the application's adoption. Many people lack digital literacy skills, making it difficult to promote the application. Some residents do not own smartphones, while others who do have smartphones may not be able to download the application due to storage limitations. The personnel handling digital public services often lack competence in IT since they may not have formal education in the field. This situ-

ation has become a significant barrier to the implementation of e-government. Training programs have been initiated, but not all community members and personnel have fully grasped the technology.

Therefore, continuous efforts are needed to promote the application to the community and provide enhanced training. The application has significantly aided residents in managing their documentation. Previously, Kelurahan Nusa Jaya collaborated with Diskominfo and received training from Diskominfo to educate its staff about Information and Communication Technology (ICT).

## 5. Conclusion

Based on the research findings and discussions, it can be concluded that the Digital Village innovation in public services in Kelurahan Nusa Jaya aligns with the Human Adaptation (in e-government) framework as proposed by Carter & Weerakkody (2008). This framework includes several elements: (1) advantage (success): the implementation of the pangkas application has proven beneficial to the community in streamlining the document creation process and other bureaucratic services; (2) trust: the residents have shown trust in the application and its security, reducing concerns about data leaks; (3) internet accessibility: while there is generally good internet access quality, some challenges remain, such as unstable internet networks. Moreover, some residents may have limited skills in accessing internet services like websites and emails; (4) Internet skill: challenges related to internet skills persist in Kelurahan Nusa Jaya, largely due to limited human resources, knowledge, education, and IT competencies. Many residents face digital literacy issues, making it challenging to promote and use the application. Additionally, varying smartphone capabilities may also hinder the proper functioning of the application.

To overcome these challenges and further promote the adoption of digital applications like Pangkas, ongoing training and support are necessary. Regular socialization and training are essential. Government support is crucial in setting guidelines, procedures, infrastructure, and providing the necessary resources. It is also important to establish monitoring mechanisms at the community level, including RW, RT, and residents, to ensure the continued success of the application's implementation.

## References

Beldad, A., De Jong, M., & Steehouder, M. (2011). I trust not therefore it must be risky: Determinants of the perceived risks of disclosing personal data for e-government transactions. *Computers in Human Behavior*, *27*(6),2233–2242. https://doi.org/10.1016/j.chb.2011.07.002

Carter, L., & Weerakkody, V. (2008). E-government adoption: A cultural comparison. *Information Systems Frontiers*, *10*(4), 473–482. https://doi.org/10.1007/s10796-008-9103-6

Choiriyah, I. U. (2020). Penerapan e-government melalui m-Bonk di Kabupaten Sidoarjo. *Publisia: Jurnal Ilmu Administrasi Publik, 5*(2), 126–135. https://doi.org/10.26905/pjiap.v5i2.3948

Dewi, L. P. R. S., & Suardana, I. B. R. (2023). Reflections of agile governance in public services in the digital age. *Publisia: Jurnal Ilmu Administrasi Publik, 8*(1), 84–90. https://doi.org/10.26905/pjiap.v8i1.9154

Faisol, A. (2019). Perancangan Sistem Pelayanan Kelurahan Digital Terpadu (Siperdit) berbasis Progressive Web App (PWA). *Jurnal Mnemonic*, *2*(2), 1-4. https://doi.org/10.36040/mnemonic.v2i2.82

Febrianti, M. M., & Priyadi, M. P. (2022). Implementasi good governance dan kinerja pegawai dalam meningkatkan kualitas pelayanan publik pada masa pandemi Covid-19. *Jurnal Ilmu dan Riset Akuntansi (JIRA)*, *11*(8).

Fikri, C. (2021, August 23). *Melalui Aplikasi Pangkas, Kelurahan Nusa Jaya Tangerang terapkan konsep kelurahan digital*. Berita Satu. Retrieved from: https://www.beritasatu.com/megapolitan/817703/melalui-aplikasi-pangkas-kelurahan-nusa-jaya-tangerang-terapkan-konsep-kelurahan-digital

Fitria, N. J. L. (2020). Penerapan work from home dan work from office dengan absensi online sebagai implikasi e-Government di masa new normal. *Civil Service Journal*, *14*(1), 69–84.

Government Regulation (PP) no. 82/2012 concerning Electronic Systems and Transactions (PTSE).

Hasibuan, A., & Sulaiman, O. K. (2019). Smart city, konsep kota cerdas sebagai alternatif penyelesaian masalah perkotaan kabupaten/kota, di kota-kota besar Provinsi Sumatera Utara. *Buletin Utama Teknik*, *14*(2), 127-135.

Hutagalung, S. S., & Hermawan, D. (2018). Membangun inovasi pemerintah daerah. *Deepublish*, 1–215.

Indrajit, R. E. (2016). *Konsep dan Strategi Electronic Government*. Retrieved from: https://www.academia.edu/30100450/Electronic_Government

Kominfo. (2022, January 20). *Budaya Digital Membaik, Indeks Literasi Digital Indonesia Meningkat*.

Kurniasih, D., Fidowaty, T., & Sukaesih, P. (2013). Pengaruh implementasi kebijakan e-government terhadap kinerja aparatur Kota Cimahi. *Sosiohumaniora*, *15*(1), 6. https://doi.org/10.24198/sosiohumaniora.v15i1.5234

Mariano, S. (2019). Penerapan e-government dalam pelayanan publik di Kabupaten Sidoarjo. *Journal of Chemical Information and Modeling*, *53*(9), 1689-1699.

Peraturan Menteri Kominfo. (2016). Peraturan Menteri Kominfo No. 20 Tahun 2016 tentang Perlindungan Data Pribadi dalam Sistem Elektronik.

Nasution, A. H., & Kartajaya, H. (2018). *Inovasi*. Andi Offset.

Nurjanah, S., & Mahendra, W. (2022). E-service quality pada pelayanan kependudukan elektronik Alpukat Betawi Pemerintah Provinsi DKI Jakarta. *Publisia: Jurnal Ilmu Administrasi Publik*, *7*(2), 174-187.

Papadomichelaki, X., & Mentzas, G. (2012). e-GovQual: A multiple-item scale for assessing e-government service quality. *Government Information Quarterly*, *29*(1), 98-109. https://doi.org/10.1016/j.giq.2011.08.011

Pertiwi, G. S., & Azis, A. M. (2022). Optimalisasi prosedur pelayanan publik dengan perancangan e-government berbentuk website pada masa pandemi Covid-19. *Jurnal Manajemen Maranatha*, *21*(2), 145-154.

Instruksi Presiden (INPRES) Nomor 3 Tahun 2003 tentang Kebijakan dan Strategi Nasional Pengembangan E-Government.

Peraturan Presiden (PERPRES) Nomor 95 Tahun 2018 tentang Sistem Pemerintahan Berbasis Elektronik (SPBE).

Prihantara, A. (2010). Hambatan dan tantangan dalam mewujudkan good governance melalui penerapan e-government di Kabupaten Cilacap. *Jurnal Infotekmesin*, *1*(1).

Primadara, I. R. (2021). Implementasi e-government dalam pelayanan publik pada masa pandemi Covid-19. *ProListik*, *6*(2).

Riyanto, A. D. (2022). *Hootsuite (we are social): Indonesia Digital Report 2022*. Retrieved from: https://andi.link/hootsuite-we-are-social-indonesian-digital-report-2022/

Rizky A, S., Trisiana, A., Ajrur R, F., Algileri M, L., Syaibani, I., & Nur F, S. (2020). Menumbuhkan kesadaran masyarakat Indonesia untuk memutus rantai penyebaran wabah COVID-19. *Jurnal Global Citizen: Jurnal Ilmiah Kajian Pendidikan Kewarganegaraan, (9)1*, 51–62. https://doi.org/10.33061/jgz.v9i1.3889

Rowley, J. (2006). An analysis of the e service literature: Towards a research agenda. *Internet research*, *16*(3), 339-359.

Satriyo, S. B., Kurniawan, B., & Aulia, R. A. (2021). Implementasi Aplikasi PANGKAS (Gampang Ngurus Berkas) pada pelayanan publik di Dinas Komunikasi dan Informatika Kota Tangerang. *Jurnal Inovasi dan Kreativitas (JIKa)*, *1*(2), 126-139. https://doi.org/10.30656/jika.v1i2.4246

Stephanie, C. (2021, July 19). *10 kota di Indonesia dengan Internet Terkencang, Jakarta Runnner-up*. Kompas.com. Retrieved from: https://tekno.kompas.com/read/2021/07/19/10020027/10-kota-di-indonesia-dengan-internet-terkencang-jakarta-runner-up

Tasyah, A., Lestari, P. A., Syofira, A., Rahmayani, C. A., Cahyani, R. D., & Tresiana, N. (2021). Inovasi pelayanan publik berbasis digital (e-government) di era pandemi Covid-19. *Jurnal Ilmu Administrasi: Media Pengembangan Ilmu Dan Praktek Administrasi*, *18*(2), 212-224. https://doi.org/10.31113/jia.v18i2.808

Wibawa, K. C. S. (2019). Urgensi keterbukaan informasi dalam pelayanan publik sebagai upaya mewujudkan tata kelola pemerintahan yang baik. *Administrative Law and Governance Journal*, *2*(2), 218–234. https://doi.org/10.14710/alj.v2i2.218-234

Yuhefizar. (2021, March 4). *E-government*. Retrieved from: https://ephi.web.id/blog/2021/03/04/e-government.