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Smart City-Based Public Service Innovation at the Investment and One-Stop Integrated Services Office of Palangka Raya City

Syamsuri[1], Katriani Puspita Ayu[2],

Marvy Ferdian Agusta Sahay[3], Dwi Asri Cahya Wulandari[4]

[1,2,3]Department of State Administration Universitas Palangka Raya, Indonesia.
(email: marvysahay@fisip.upr.ac.id)
[4]Undergraduate Program Department of State Administration Universitas Palangka Raya, Indonesia.

Abstract

This study examines the diffusion of digital-based public service innovations at the Department of Investment and One-Stop Integrated Services (DPMPTSP) in Palangka Raya City, Indonesia. Utilizing Everett M. Rogers' Diffusion of Innovation theory, the research analyzes the implementation of three online service applications: SIMYANDU, OSS-RBA, and SIMBG. These applications, launched in 2021, aim to enhance public service delivery by offering online access to various administrative procedures, including permit applications, business registration, and investment licensing. The study investigates the effectiveness of DPMPTSP's communication strategies in promoting these services, the timeline of their adoption by the public, and the inclusivity of access to these digital tools. Findings highlight the successful integration of these applications into the public service landscape of Palangka Raya City, contributing to the development of a smart city. The study also explores the implications of these innovations for improving government service delivery and citizen engagement in the digital age.

Keywords:

smart city; innovation; public service

Introduction

Smart City is a system that integrates the factors of production of the modern world, the physical systems of the city, social systems, and digital systems through cyber media or the internet. (Dameri, 2017). The concept of Smart City was introduced after the global economic crisis in 2008, where the emphasis shifted from sustainable development and climate change towards entrepreneurship and platformization. (Baykurt & Raetzsch, 2020). The Smart City concept itself is a concept that implements information and communication technology in an integrated way to improve city management and the sustainability of a city (Gade & Aithal, 2022). Smart City aims to encourage cities to deliver optimal performance by focusing on the economy, population, governance, mobility, and the environment. Smart city emerges as a solution to address the issue of resource consumption to improve service efficiency and meet individual citizens' needs, as urban populations grow and resources become scarcer. (Shahidehpour et al., 2018). In a study conducted in Brazil, the implementation of smart city initiatives was found to

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improve the quality of life for urban residents and create strong urban communities (Macke et al., 2018).

In Indonesia, as a step to support the Smart City policy, the government implemented a policy in the form of Presidential Regulation Number 2 of 2015 concerning the National Medium-Term Development Plan (RPJMN) for 2015-2019. This regulation emphasizes building smart cities with high competitiveness based on technology and local culture. Several big cities in Java Island have implemented smart city concept such as Jakarta and Surabaya (Pangestu et al., 2021; Syalianda & Kusumastuti, 2021).

Talking about smart cities cannot be separated from innovation. Smart cities and innovation are two things that are mutually beneficial and intertwined. On one hand, a smart city is said to be a platform for innovation (Kim et al., 2021) and on the other hand, innovation can be an enabler for the development of smart cities (Maulana & Haerah, 2021). Innovation, in this context, refers not only to technological advancements but also encompasses novel approaches, processes, and ideas that lead to improved outcomes for citizens and the city as a whole.

As the capital city of Central Kalimantan Province, Palangka Raya is experiencing rapid urban growth which has resulted in the city facing various new challenges that need to be addressed. With these challenges, the government must create new innovations as a form of integration of various public services for the community, one of which is by building a Smart City. The development of Palangka Raya City through the Smart City concept can be a solution for modern sustainable development and also as an implementation of the vision and mission of the Palangka Raya City government as stated in the Palangka Raya RPJMD (Regional Medium-Term Development Plan) 2018-2023. From the vision and mission of the city government, it can be seen that the procurement of Smart City policies is not free from political bias. The involvement of politics in Smart City is also an effort by the city government to carry out the Smart City movement which is mandatory for each region.

The Investment and One-Stop Integrated Service Office (DPMPTSP) of Palangka Raya City is a department that serves various integrated public services. Therefore, DPMPTSP Palangka Raya must continue to innovate public services that support the advancement of Smart City. Implementing Smart City-based public service innovation is the biggest challenge for an agency because the agency must provide services that are easy to understand and comprehend by the public as service recipients.

This paper will discuss the diffusion of smart city-based public service innovations developed by DPMPTSP of Palangka Raya City. By exploring the potential of smart city-based

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public service innovation, we can pave the way for a more efficient, equitable, and sustainable urban future.

Methods

This paper uses a descriptive qualitative research method to emphasize the description and analysis of the innovation diffusion process in Smart City-based public services at the Investment and One-Stop Integrated Services Office (DPMPTSP) of Palangka Raya City.

Data collection was carried out through interviews, observations, and studies of documents considered relevant to the research topic. Qualitative data analysis starts with organizing data from field findings, followed by reduction and drawing conclusions.

Results and Discussion

Smart City-Based Public Service Innovation at the Investment and One-Stop Integrated Services Office (DPMPTSP) of Palangka Raya City

The Investment and One-Stop Integrated Services Office (DPMPTSP) of Palangka Raya City is an agency that participates in implementing the Smart City concept in Palangka Raya. In this case, it also participates in providing and shaping service innovation to the public using the smart city concept. DPMPTSP implements this concept by forming and running digital-based innovations such as SIMYANDU. There are also digital innovations formed by the central government, such as OSS-RBA, which DPMPTSP also runs in Palangka Raya. The following are digital-based public service applications currently available at the Investment and One-Stop Integrated Services Office (DPMPTSP) of Palangka Raya City:

A. SIMYANDU

The SIMYANDU (Integrated Service Management System) application was directly formed and developed by DPMPTSP of Palangka Raya City. This application aims to make it easier for the public to obtain licensing services using electronic or digital-based services. SIMYANDU has been implemented in Palangka Raya City since 2021, and this system has included several licensing sectors, including education, research and development, health, social, fisheries, agriculture, animal husbandry and plantations, trade and industry, transportation, and public works, housing, and settlement areas. This application can be accessed via https://simyandu.palangkaraya.go.id/.

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Figure 1.

Web display of SIMYANDU

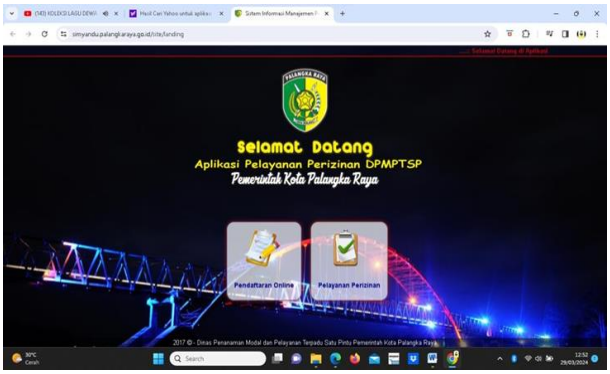
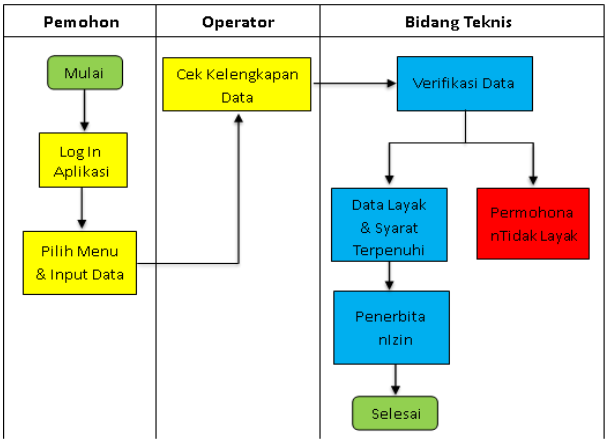


Figure 2.

Flow chart of SIMYANDU



B. OSS-RBA

The OSS-RBA (Online Single Submission Risk-Based Approach) application reflects the government's commitment to providing easy and fast services. This application is provided to business actors to start and run their business activities, assessed based on the level of risk of these activities. This application is a product of implementing Law Number 11 of 2020 concerning job creation. The services provided by OSS-RBA include risk-based business licensing, which covers issuing risk-based business permits for micro and small businesses (MSMEs), as well as permits for medium and large businesses. DPMPTSP Kota Palangka Raya has been using this application since 2021. DPMPTSP acts as an application user since this application is national and a product of the central government, serving as a means of applying for business permits for the community. This application can be accessed via https://oss.go.id/.

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Figure 3.

Web display of OSS-RBA

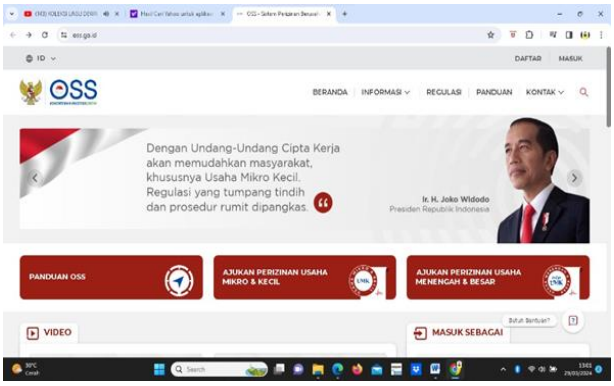
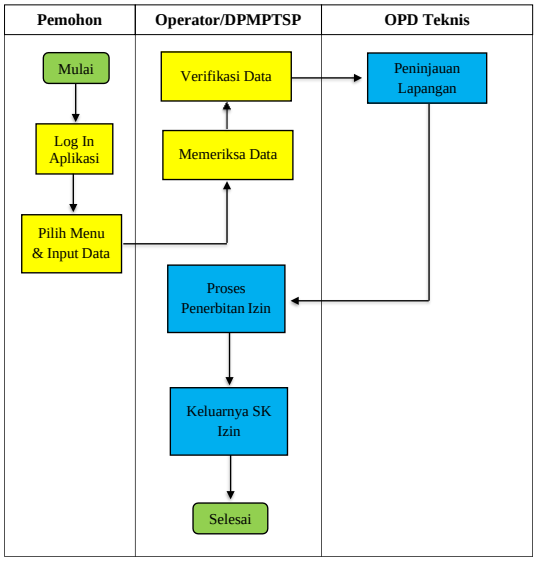


Figure 4.

Flow chart of OSS-RBA



C. SIMBG

The SIMBG application is a means of managing permits given by local or central governments to building owners for new construction, alterations, expansions, reductions, and/or building maintenance following applicable building technical standards. Several permit applications can be accessed via SIMBG, including access to permit requests for PBG (Building Construction Approval), construction planners, construction implementers, demolition planners, and demolition implementers. This application, created directly by the government, makes it easier for the government, the public, or applicants to manage building permits in risk-based business activities. In this application, the Investment and One-Stop Integrated Services Office (DPMPTSP) of Palangka Raya City acts as the permit issuer after receiving technical consideration

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recommendations from related agencies. The related agency referred to in this SIMBG application is the PUPR agency. This application can be accessed via https://simbg.pu.go.id/.

Figure 5.

Web display of SIMBG

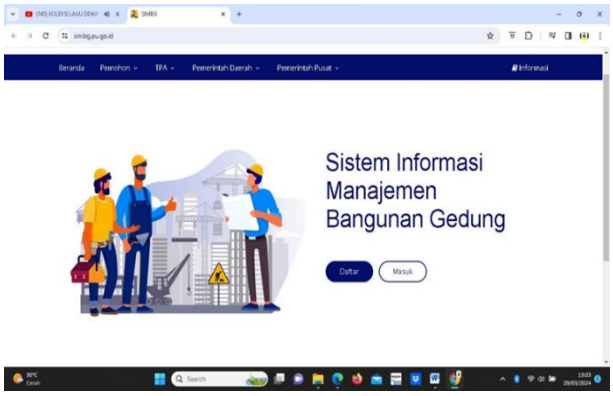
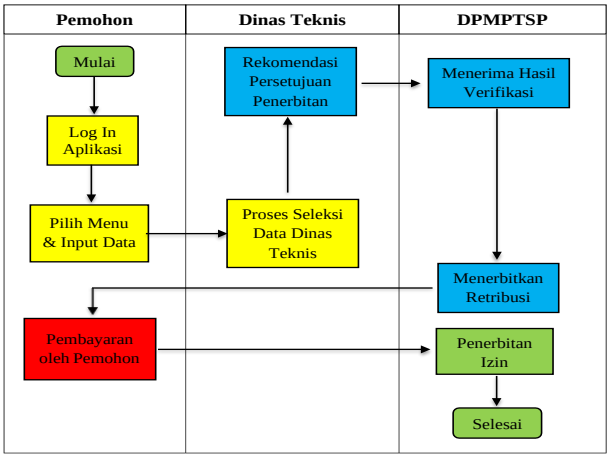


Figure 6.

Flow chart of SIMBG



Of the three web-based applications, OSS-RBA is known to be the most widely used by the public. The following is a recapitulation of the number of applicants from the three applications above:

Table 1.

SIMYANDU, OSS-RBA & SIMBG applicants in 2023

Month	Numbers of Online Applicants		
	SIMYANDU	OSS-RBA	SIMBG
January	7	246	19
February	7	1.742	39
March	15	744	34
April	10	341	5
May	10	521	47
June	18	1.669	22
July	9	925	32

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Month	Numbers of Online Applicants		
	SIMYANDU	OSS-RBA	SIMBG
August	8	832	32
September	9	710	35
October	9	696	27
November	19	947	41
December	18	390	28

Source: compiled by authors

Innovation

The cornerstone of the diffusion process lies in the innovation itself, which, according to Rogers (2014) is an idea, object, or practice perceived as new by individuals or a community. In the context of DPMPTSP Palangka Raya, the innovation under study is the suite of digital services aimed at streamlining and improving the accessibility of public services.

The research findings reveal that DPMPTSP Palangka Raya has actively embraced digital innovation by implementing three core applications: SIMYANDU, OSS-RBA, and SIMBG. SIMYANDU, developed in-house by DPMPTSP, facilitates various permit applications, including research permits, while OSS-RBA and SIMBG are government-developed applications utilized by DPMPTSP for business licensing and other related services. These applications collectively represent DPMPTSP's commitment to providing online, citizen-centric services aligned with the Smart City vision of Palangka Raya.

Communication Channels

Effective communication channels are essential for conveying information about innovations to potential adopters. DPMPTSP Palangka Raya employs a multi-pronged approach to communicate the availability and benefits of its digital services. Direct communication methods include face-to-face interactions between DPMPTSP staff and citizens seeking services. Additionally, the agency utilizes indirect channels such as WhatsApp and its official website to disseminate information and provide access links to the online applications.

To ensure the successful implementation of these digital services, DPMPTSP has invested in training its staff, particularly application operators, through workshops and technical guidance in collaboration with relevant associations. This proactive approach to staff development ensures that frontline personnel are well-equipped to assist citizens in utilizing the online platforms effectively.

DPMPTSP has effectively utilized various communication channels to promote its digital-based services. Direct communication with the public, WhatsApp, and the website have been instrumental in informing people about the availability of these services. Additionally, the department has conducted technical guidance workshops to educate its staff, particularly the operators of these applications.

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Time

The time element in the diffusion process encompasses the planning, organizing, and implementation phases, as well as ongoing monitoring and control of the innovation. DPMPTSP Palangka Raya's journey towards digital service delivery began in 2020 with the introduction of the core applications. However, it took until 2021 for these applications to be fully operational and actively utilized by the agency. This timeline highlights the importance of allowing sufficient time for staff training, public awareness campaigns, and system optimization before an innovation can reach its full potential.

The findings also indicate that the adoption of these digital services by the public has been relatively swift, primarily due to their user-friendly design and the convenience they offer. Citizens have readily embraced the online platforms as they eliminate the need for physical presence at the DPMPTSP office, saving time and effort.

Social System

The social system comprises the individuals and stakeholders involved in achieving a common goal. In this context, the social system consists of DPMPTSP staff and the citizens who utilize the digital services. The research findings emphasize that DPMPTSP Palangka Raya has adopted an inclusive approach, making its digital services accessible to all citizens regardless of their background or technical proficiency. This commitment to inclusivity ensures that the benefits of digital innovation reach the entire community.

The findings from the interviews conducted with various stakeholders, including the Head of the Public Service Mall at DPMPTSP, analysts, operators, and community members, support the results of the study. The interviewees confirmed the existence of digital-based innovations at DPMPTSP, the use of various communication channels to promote these services, the time frame involved in diffusing these innovations, and the inclusivity of the social system in adopting these applications. For example, Mr. Pancar, Head of the Public Service Mall at DPMPTSP, stated, *"...Here, there are indeed digital-based innovations. We have an application called SIMYANDU, which is a product of PTSP. There are also other applications, namely OSS-RBA and SIMBG, but for these two applications, PTSP is not the creator; we are only users because these applications are directly from the government. So, for these two applications, we cannot modify or innovate further..."* (Interview, Wednesday, March 13, 2024).

Mr. Arifai, Policy Analyst and also the person in charge of applications at DPMPTSP, added, *"...Yes, we have digital-based services here. We at PTSP have an application that we developed ourselves, and we can continue to develop it. The name of this application is SIMYANDU. SIMYANDU is a permit application that has a wide selection of permit applications. For example, if students want*

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to conduct research here, they can use SIMYANDU so they don't have to go back and forth to ask about the requirements and other things because the information is complete there. Then there are also OSS-RBA and SIMBG applications here, but for these two applications, we are only users..." (Interview, Monday, March 18, 2024).

These statements were corroborated by Ms. Christi, one of the residents who was dealing with it at the office, who said, *"...Oh yes, I have also taken care of a research permit at PTSP through an application. If I'm not mistaken, it's called SIMYANDU. When I looked there, there were many submission portals, not just research permits..."* (Interview, Thursday, March 22, 2024).

The interviews also revealed the various communication channels used by DPMPTSP to promote its digital-based services, including direct communication with the public, WhatsApp, and the website. The interviewees confirmed that these communication channels were effective in informing them about the availability of these services.

Regarding the time frame, the interviewees confirmed that the process of diffusing these innovations began in 2020 and was fully operational in 2021. They also acknowledged that the department continues to optimize the performance of these applications.

Finally, the interviewees confirmed that the digital-based services are available to all members of the public who require services from DPMPTSP. There are no specific groups targeted in using these applications, and there is no difference in application usage

The author should explain the results of research in detail and discussion section contain results of the research finding and their ensuing discussions.

Conclusion

The diffusion process of smart city-based innovations at the Department of Investment and One-Stop Integrated Services (DPMPTSP) in Palangka Raya City has been conducted quite well. This is evidenced by the presence of digital-based innovations aimed at supporting the Smart City initiative in Palangka Raya. The department has disseminated information about these innovations using two methods: direct and indirect communication.

Since the inception of these digital-based innovations, the department has continuously prepared to provide the best possible service to the public. Although there is room for improvement, as they currently utilize WhatsApp and their website and haven't explored more widely accessed platforms like Instagram and TikTok, the department has successfully diffused these digital-based services. This is demonstrated by the department's success in informing the public about these services, with the public acknowledging that they didn't need much time to

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understand and accept the applications offered by DPMPTSP, and subsequently, they could easily adopt these innovations.

This is further proven by the fact that there are members of the public who are willing and interested in using the digital-based applications provided by DPMPTSP. Moreover, the absence of social disparities in service provision is a key advantage of these digital-based services, as evidenced by the fact that the users of these applications are the citizen of Palangka Raya City. While the study demonstrates the successful diffusion of digital-based innovations at DPMPTSP, it is essential to address potential challenges and future implications:

Digital Divide: Efforts should be made to bridge the digital divide and ensure equitable access to these services for all citizens, including those with limited digital literacy or access to technology.

Data Security and Privacy: Robust data security and privacy measures must be implemented to protect sensitive information and maintain public trust in these digital platforms.

Continuous Improvement: The department should continuously evaluate and improve these applications based on user feedback and technological advancements to ensure their long-term effectiveness and sustainability.

Integration with Other Services: Exploring the integration of these applications with other government services could further enhance convenience and efficiency for citizens.

By addressing these considerations, DPMPTSP can further optimize its digital-based services and continue to improve public service delivery in Palangka Raya City.

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