

Adaptive Policy in Website-Based Digitization of Government Public Services: A Thematic Analysis

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ABSTRACT

Digital-based public services have an essential urgency in increasing efficiency, accessibility, transparency, and responsiveness of services to the public. This allows for significant improvements in governance. This research aims to analyze the implementation of services by local governments, especially at the One Stop Integrated Services Investment Service (DPMPTSP) of Rokan Hilir Regency. This research uses a qualitative approach using Online Research Methods (ORMs) as a data collection method. ORMs utilize the internet and other digital technologies to collect data and information. In this research, ORMs include data collection from official government websites. The analysis tool that is maximized is Nvivo 12 Plus. This research shows that implementing website-based digital public services faces obstacles and challenges that need to be overcome. Limited internet access, technology gaps, concerns regarding security and privacy, and limited resources are the primary concerns. However, the government can overcome these obstacles by investing in internet infrastructure, digital literacy programs, and collaboration with the private sector. Integrating digital public services can increase the efficiency, accessibility, transparency, and accountability of public services and build public trust in the government. In facing this challenge, the government needs to take appropriate policy steps to ensure the success and sustainability of inclusive and sustainable digital public services.

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INTRODUCTION

The urgency of public services is an essential aspect of government, which aims to meet community needs (Carter & Bélanger, 2005; Gao & Yu, 2020; Verma, 2022). Good public services must be accessible to all members of society without discrimination. Public services that are easily accessible and available to all levels of society help create equality and reduce social disparities (Jacob, Fudzee, Salamat, & Herawan, 2019; Suebvises, 2018). The government is responsible for providing public services to the

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community as part of its role in providing services and protecting public interests. The urgency of public services reflects the importance of fulfilling these responsibilities and the government's commitment to meeting the needs and aspirations of the community. Currently, digital-based public services add a new dimension to the urgency of public services, especially in the era of advanced [digitization](#) (Bullock, Stritch, & Rainey, 2015; Connolly, Bannister, & Kearney, 2010; Simonofski, Snoeck, & Vanderose, 2019).

[Digitization](#) has played an increasingly important role in the daily lives of modern society. Information and communication technology advances have changed how we interact, work, and access various services (Baharuddin, Qodir, & Loilatu, 2022; Ştefan et al., 2023; Trischler & Westman Trischler, 2022). One aspect affected by [digitization](#) is public services. Many governments and public institutions worldwide have shifted to providing their services online via websites (Capano, Howlett, Jarvis, Ramesh, & Goyal, 2020; Gul & Bano, 2019; Lyrio, Lunkes, & Taliani, 2018; Pereira, Cunha, Lampoltshammer, Parycek, & Testa, 2017). The study of [digitization](#) and website-based public services has experienced significant evolution over time. Initially, government and public agency websites only served as static information channels providing details about available services. However, with technological advances and increasing public demand, public service websites have become more interactive and integrated (Paul & Das, 2020; Rasool, Warraich, & Rorissa, 2020). Currently, the website platform has also been adopted by many governments in Indonesia, including in Riau Province. [One of the government websites that was maximized was initiated by the Rokan Hilir Regency PMPTSP Service to support public services](#) (Dinas PMPTSP, 2023).

Initial research on digitization and website-based public services highlights the potential benefits society can gain. Increased accessibility is one of the main benefits, where people can access public services anytime and anywhere without needing to visit government offices or related public institutions physically. Digitization can also increase administrative efficiency, reduce operational costs, and optimize resource use. However, along with technological advances, new challenges have also emerged in implementing and developing website-based public services. Successful digitization depends not only on adequate technological infrastructure but also on factors such as people's digital literacy, data security, and digital inclusion (Butt, Warraich, & Tahira, 2019; Carter & Bélanger, 2005; J. Lee & Kim, 2018; Ullah, Pingu, Ullah, Abbas, & Khan, 2021).

Similar research on digitization and official government services shows that implementing information technology has played a crucial role in increasing the accessibility, efficiency and transparency of public services (Ayyash, Herzallah, & Al-Sharafi, 2022; Campmas, Iacob, & Simonelli, 2022). This public service is also included in licensing services by the government (Pitchay Muthu Chelliah, Thurasamy, Alzahrani, Alfarraj, & Alalwan, 2016). Previous research also highlights that digitization allows the government to provide services that are faster, more responsive and easily accessible to the public, thereby increasing public satisfaction and trust in government institutions (Ibrahim, Baharuddin, & Wance, 2023). Nonetheless, challenges such as the digital divide and data security remain significant concerns, requiring careful strategies in applying information technology in public services (Sarkar & Das, 2022).

Although many studies have been conducted on digitization and website-based public services, there are still several research gaps that can be explored further, including assessing the effectiveness of digitization and web-based public services by

governments at the local level. This study aims to accommodate the gaps in previous research by maximizing thematic analysis. Several research questions are considered relevant, which are described as follows. (1) How does the government website-based service system help the public service process in Rokan Hilir Regency? (2) What obstacles and challenges are faced in implementing government website-based digital services? These two answers to questions make it possible to find out how the digitization of public services is implemented at the local level and explore the obstacles and challenges. This research can contribute to the development of digitization and the idea of affordable and accommodating public services, including being a severe consideration for local governments.

METHOD

This research uses a qualitative approach using Online Research Methods (ORMs) as a data collection method. Online Research Methods (ORMs) refer to research approaches that utilize the internet and digital technology to collect, analyze, and interpret data. Through online platforms such as online content analysis, ORMs enable researchers to conduct empirical studies efficiently (Harricharan & Bhopal, 2014). In this research, ORMs include taking data from the official government website, especially the One Stop Integrated Service Investment Service (DPMPTSP) Rokan Hilir Regency, accessed via <https://ptsp.rohilkab.go.id/>.

The use of ORMs was chosen because this method provides flexibility and the ability to answer research questions more efficiently. Researchers can collect relevant data online from official government websites using the internet and digital technology. The analytical tool used in this research is Nvivo 12 Plus. Nvivo 12 Plus is software used to analyze qualitative data. Researchers can use Nvivo 12 Plus to manage, organize, and analyze data collected through ORMs. The approach using Nvivo 12 Plus was chosen because this software provides features that enable researchers to carry out in-depth and systematic data analysis, including identifying patterns, themes and relationships between data, which facilitates overall interpretation of research findings (Salahudin, Nurmandi, & Loilatu, 2020).

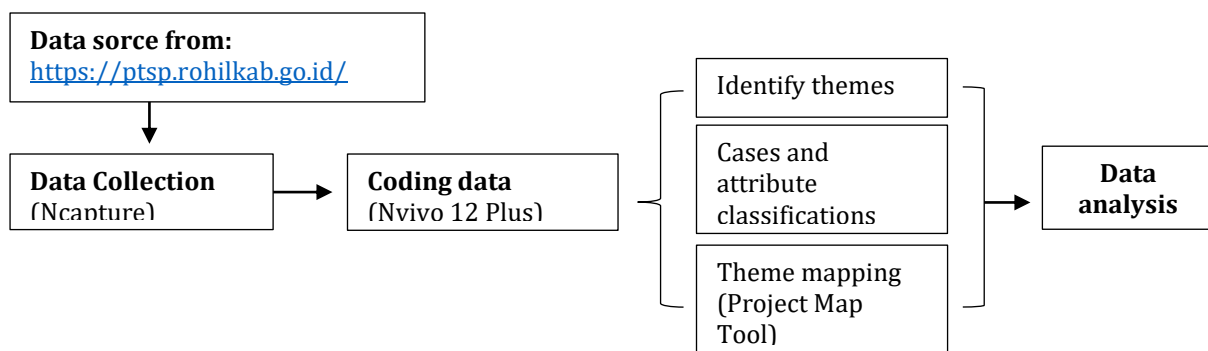


Figure 1. Data Analysis Process

Figure 1 depicts the analysis process, which begins with the data collection stage from the official website of the One Stop Integrated Service Investment Service (DPMPTSP) of Rokan Hilir Regency. Data was collected using Ncapture in Google Chrome to obtain relevant data. The collected data is then transferred to the analysis tool, namely

Nvivo 12 Plus. The data coding process uses analysis features provided by Nvivo 12 Plus, such as Identifying themes, Cases and attribute classifications, and Theme mapping (Project et al.). The Identify Themes feature is used to identify information on official websites. Cases and attribute classifications are used to categorize the collected data. Meanwhile, theme mapping is used to map the overall data coding results. The data that has been collected and coded is then analyzed and described to answer the research questions asked.

RESULTS AND DISCUSSION

Government Website-Based Service System: Integration of Digital Public Services

In this digital era, the Rokan Hilir Regency government has implemented a website-based service system that aims to simplify and speed up the service process for the community. Through the official government website, the public can access information related to public services digitally (Dinas PMPTSP, 2023). Digital services in Rokan Hilir Regency have been integrated with other public services. It can be seen as follows:

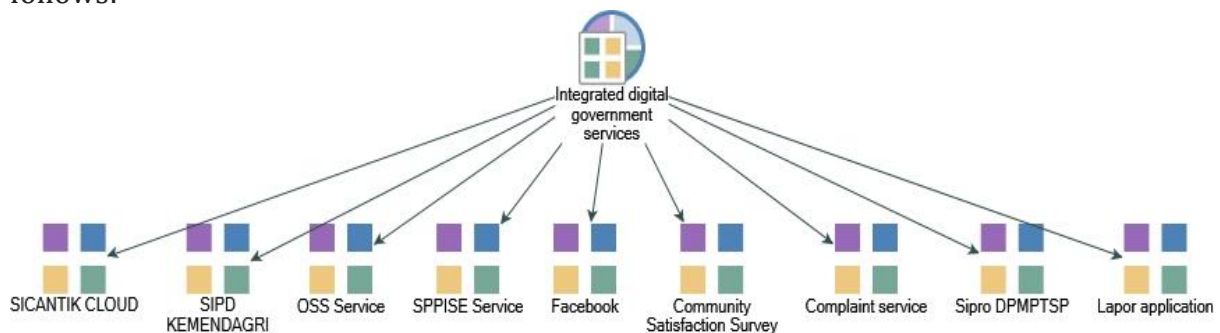


Figure 2. Integration of digital public services

Figure 2 shows that Rokan Hilir Regency has integrated several digital services with other public services. First, there is Sicantik Cloud, a platform that stores and manages Rokan Hilir Regency government data. This helps in efficient data management and allows local governments and communities easy access. Apart from that, Rokan Hilir Regency is also integrated with the Ministry of Home Affairs' SIPD, an information system that manages regional government budgets and finances. Integration with SIPD allows more effective monitoring and management of budget use. Rokan Hilir Regency also uses OSS Service, an online business licensing service, to simplify and speed up the business licensing process.

Furthermore, through integration with Electronic Information and Investment Licensing Service System (SPPISE), Rokan Hilir Regency provides public services through one door, making it easier to access and use these services. Rokan Hilir Regency also uses Facebook as an additional communication channel between the government and the community. There is a Community Satisfaction Survey, which measures public satisfaction with public services, and a Complaint Service to receive and manage public complaints. Finally, Rokan Hilir Regency is integrated with Sipro DPMPTSP, a system that manages Investment and One Stop Integrated Services (DPMPTSP) licensing services. With this integration, the community can get better and more efficient services from the Rokan Hilir Regency government (DPMPTSP, 2023).

Integrating public services with digital platforms in Rokan Hilir Regency has brought significant benefits. First, operational efficiency increases because using platforms such as Sicantik Cloud and SIPD Ministry of Home Affairs speeds up data and budget management reduces bureaucracy, and increases productivity. Second, ease of access is realized through integration through SPPISE Service and OSS Service, which allows people to access various public services through one door quickly and easily. Additionally, transparency and accountability are enhanced through platforms such as Facebook, the Community Satisfaction Survey, and the Complaint Service, where the government can interact with the public, receive feedback, and handle complaints openly. Lastly, this integration helps improve the quality of public services by leveraging data from citizen satisfaction surveys to understand their needs better and make appropriate improvements. Overall, integrating digital public services in Rokan Hilir Regency provides benefits in terms of efficiency, accessibility, transparency, accountability, and improving the quality of public services.

Integrating digital public services in Rokan Hilir Regency has paved the way for significant positive efforts in improving efficiency, accessibility, transparency, accountability, and quality of public services. In terms of efficiency, this integration allows for more efficient data management and more optimal budget use through platforms such as Sicantik Cloud and SIPD Ministry of Home Affairs. This helps reduce time and costs associated with administrative processes, increase productivity, and speed up public services to the community. Regarding accessibility, integrating digital public services through SPPISE Service and OSS Service allows the public to access various public services through one door. By reducing administrative barriers and providing easy access, people can quickly and efficiently obtain the services they need (Jacob et al., 2019; Reissig, Stoinescu, & Mack, 2022). This helps improve the affordability of public services for all levels of society. Regarding transparency and accountability, integration with platforms such as Facebook, Community Satisfaction Survey, and Complaint Service allows the Rokan Hilir Regency government to interact directly with the community.

The public can provide feedback, submit complaints, and transparently monitor the government's response. This helps build public trust in government and increases accountability in the provision of public services (Baharuddin et al., 2022; I. K. Mensah & Adams, 2020; Pérez-Morote, Pontones-Rosa, & Núñez-Chicharro, 2020). Overall, integrating digital public services in Rokan Hilir Regency has provided tangible benefits in increasing the efficiency, accessibility, transparency, and accountability of public services. The public can access services, provide feedback, and monitor the complaint handling process. This helps the government improve the quality of services and overall government governance. By developing and strengthening the integration of digital public services, Rokan Hilir Regency can optimize the use of technology to increase efficiency, accessibility, transparency, accountability, and quality of public services. This will strengthen relations between government and society and advance sustainable regional development.

Thus, integrating digital public services in Rokan Hilir Regency has a positive impact and can be an example for other regions to improve public services. By continuing to strengthen this integration, local governments can continue to improve operational efficiency, ensure better accessibility for the community, increase transparency and accountability, and continue to improve the quality of public services. In addition, it is

also essential to keep abreast of technological developments and ensure that integrating public services with digital platforms remains relevant and effective (Connolly et al., 2010; Mishra & Geleta, 2019; Sharma, Metri, Dwivedi, & Rana, 2021). Community involvement in this process is also significant, so their needs and hopes can continue to be considered in developing digital public services. Integrating public services with technology is the right step to improve government efficiency and people's quality of life in an increasingly digital global context. Rokan Hilir Regency can continue to be a successful example in this regard, and other regions can take inspiration from their approach to improving public services.

Barriers and challenges to implementing government website-based digital services: Adaptive Policy Recommendations

In implementing government website-based digital services, various obstacles and challenges must be faced. Although digital services can bring significant benefits in increasing the efficiency and accessibility of public services, several obstacles must be seriously addressed. Although these recommendations are general, the problem of implementing web-based services in government has attracted attention in various cases. Theoretically, this recommendation is relevant because it is based on the results of scientific studies tested on similar cases and can be used as a guide for similar situations, including in Rokan Hilir. Implementing these recommendations will provide benefits for reflection and evaluation by the government or related parties, enabling more optimal learning and improving digital-based public services in the future. Therefore, the contribution of these recommendations, which derive from common obstacles encountered in many cases, can be a valuable basis for understanding and solving problems in developing digital-based public services. The common obstacles and challenges that often occur are mapped as follows to formulate adaptive policies:

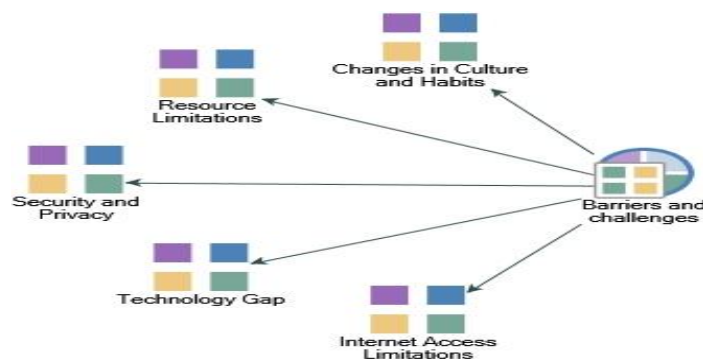


Figure 3. Barriers and challenges to website-based digital public services in general for adaptive policy recommendations

Figure 3 shows several important points that could hinder website-based digital public services. Limited internet access in some areas is the main obstacle in implementing government website-based digital services. People will need help accessing digital services in areas with slow or unstable internet connections (Beaunoyer, Dupere, & Guitton, 2020; Siriwardhana, Gür, Ylianttila, & Liyanage, 2021). Reports found that in Riau Province, were still 646 villages not covered by good telecommunications signals (Adri & Amin, 2022). This will hinder their accessibility to information and public

services provided digitally. To overcome this obstacle, the government must invest in internet infrastructure and improve connectivity in remote areas or those that still need to be covered by an adequate internet network. Investments in internet infrastructure and increasing connectivity in remote areas or those still not covered by an adequate internet network are essential to overcoming limited internet access (Myovella, Karacuka, & Haucap, 2020; Tan & Zhao, 2019; Zhang, Luo, & Liu, 2022). It is also possible for local governments to continue to collaborate with internet service providers and related institutions to expand internet coverage to areas that are still underdeveloped (G. Lee, 2019; Löfgren & Webster, 2020).

Apart from that, technology gaps are also a challenge in implementing digital services. People with limitations in understanding and using technology will need help utilizing digital services. Some people need access to the computer or smartphone devices needed to access these services. Lack of technological understanding or limited digital literacy skills can also prevent people from utilizing digital services effectively (Choi & Chandler, 2020; Klein & Todesco, 2021; Phuyal, Bista, & Bista, 2020). The government must provide digital literacy training and programs to reduce this technology gap so people can better use digital services (Buchholz, DeHart, & Moorman, 2020; Falloon, 2020; Kuek & Hakkennes, 2020). By increasing people's digital literacy, the government can reduce the technology gap, increase public participation in utilizing digital services, and increase the effectiveness and success of the overall implementation of digital public services (Bouzuenda, Alalouch, & Fava, 2019; Scupola & Mergel, 2022; Valle-Cruz, 2019).

Data security and privacy are also essential concerns in implementing digital services. People may feel hesitant to provide their personal information via online platforms due to concerns about possible data misuse (Desson, Lambertz, Peters, Falkenbach, & Kauer, 2020; Lean, Zailani, Ramayah, & Fernando, 2009; Pereira et al., 2017; Wakunuma, Siwale, & Beck, 2019; Wong & Welch, 2004; Wyatt, 2021). Governments must ensure the security and privacy of user data by implementing strong security measures and maintaining the integrity of systems used in the provision of digital services (Bouzuenda et al., 2019; Wang et al., 2020). Besides, more resources are needed to implement government website-based digital services. Implementing and maintaining digital services requires an adequate budget, a skilled workforce, and technological infrastructure (T. Lee, Lee, & Lee-Geiller, 2020; Noori, Hoppe, De Jong, & Stamhuis, 2023; Nurdin, Scheepers, & Stockdale, 2022; Verma, 2022; Vian, 2020). Local governments with limited resources may need help building and maintaining the infrastructure necessary for digital services. Therefore, the government needs to carry out careful planning and allocate resources wisely to ensure the sustainability and success of the implementation of digital services.

Other challenges and obstacles were identified in the issue of changing culture and habits. Some people, including government employees, are generally more comfortable with traditional or face-to-face ways of interacting and providing services (Chen & Kim, 2019; Hariguna, Ruangkanjanases, & Sarmini, 2021; Obaid et al., 2022). To overcome this challenge, the government needs to educate the public about the benefits and convenience offered by digital services and provide adequate training for government employees to adapt to changes in work. Effective education and communication campaigns also need to be carried out to encourage cultural and habitual changes in

maximizing digital potential (R. Mensah, Cater-Steel, & Toleman, 2021). With efforts to overcome these obstacles, implementing government website-based digital services can be more successful and benefit society (Hariguna et al., 2021; Petrescu, 2019). In facing this challenge, the government needs to take a holistic and sustainable approach to ensure that the entire community can access and utilize digital services effectively.

Thus, in facing obstacles and challenges in implementing government website-based digital services, several steps can be taken to overcome these problems. One way is by investing in internet infrastructure and improving connectivity in remote areas or those still needing an adequate internet network. This step is essential to ensure all citizens have access to government digital services equally. In addition, digital literacy training and programs must be provided to reduce the technology gap in utilizing digital services. The adoption of digital services will increase by increasing public understanding of internet use and government applications. Third, data security measures must be implemented to maintain privacy and public trust. This will help people feel safe using government digital services and increase their trust in the government. Finally, careful planning and wise allocation of resources need to be carried out to ensure the sustainability and successful implementation of digital services. By taking these steps, governments can improve the overall efficiency, accessibility, transparency, and responsiveness of public services (Torres, Pina, & Acerete, 2005; Wu, Yan, & Vyas, 2020).

The implication of overcoming obstacles and challenges in implementing government website-based digital services is improving the quality and effectiveness of public services. Overcoming limited internet access, technology gaps, data security, and privacy, as well as limited resources, the government can ensure that digital public services can be accessed by all citizens easily, provide fast and appropriate solutions, and provide a satisfying experience to users. Additionally, overcoming obstacles in changing culture and habits has implications for transformation towards a more responsive and innovative government. By encouraging the adoption of digital services by the public, the government can speed up administrative processes, minimize bureaucracy, and increase public participation. This will strengthen the relationship between government and society, build trust, and create a more transparent and accountable environment. Overall, the implication of overcoming obstacles and challenges in implementing government website-based digital services is increased efficiency, accessibility, transparency, and responsiveness in the provision of public services. The public will experience real benefits in terms of ease of access, speed of response, and improved quality of services the government provides.

CONCLUSION

Some obstacles and challenges must be faced in implementing government website-based digital services. Limited internet access, technology gaps, concerns regarding security and privacy, and limited resources are some challenges that must be overcome. However, governments can overcome these obstacles through investments in internet infrastructure, digital literacy programs, and collaboration with the private sector. Effective integration of digital public services can increase the efficiency, accessibility, transparency, and accountability of public services and build public trust in the government. Several policy recommendations can be made to overcome obstacles and challenges in implementing government website-based digital services. First, the

government must invest adequate resources in internet infrastructure and improve connectivity in remote areas or those that still need to be covered by an adequate internet network. Second, the government must launch a digital literacy program that targets people from various backgrounds by providing appropriate training and education. In addition, it is essential to maintain the security and privacy of people's data when implementing digital services. Lastly, collaboration with the private sector and related parties will strengthen the implementation and utilization of digital public services. By implementing these recommendations, the government can ensure the success and sustainability of digital public services that benefit society.

This research has conceptual and practical impacts on implementing government website-based digital services. Conceptually, this research highlights the importance of overcoming various barriers faced in implementing digital public services, such as limited internet access, technology gaps, and data security and privacy concerns. By presenting concrete policy recommendations, this research provides a framework for governments to address these challenges, which can improve the efficiency, accessibility, transparency and accountability of public services. This research offers steps that governments can implement, such as investment in internet infrastructure, digital literacy programs, and collaboration with the private sector, to ensure the success and sustainability of digital public services. Looking at digital-based public services in one institution may not be enough to provide comprehensive policy recommendations, so future research could broaden the scope to compare and analyze the implementation of digital public services in various government institutions, allowing for broader and more diverse policy recommendations. In addition, further studies are needed to more specifically provide policy recommendations based on relevant empirical experience and the challenges identified in the case studies being researched. This step enables policy mapping that is more targeted and responsive to local needs and dynamics.

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