

Innovation Strategies of the Maritime and Fisheries Sector Government in Improving the Quality of Digitalisation-Based Services in West Aceh Regency

Agus Pratama¹, Ilham Mirza Saputra², Sri Wahyu Handayani³, Fadhil Ilhamsyah⁴, Jalalaluddin⁵

^{1,2,3,4}Department of Public Administration, Teuku Umar University, Indonesia

⁵Department of Law, Teuku Umar University, Indonesia



DOI : <https://doi.org/10.61796/ijecep.v3i3.130>



Sections Info

Article history:

Submitted: July 30, 2026

Final Revised: August 20, 2026

Accepted: September 10, 2026

Published: September 30, 2026

Keywords:

Innovation

Service

Digital

ABSTRACT

Objective: The purpose of this research is to understand the innovation strategies of the government in the marine and fisheries sector in improving the quality of digital-based services in West Aceh Regency. **Method:** The method used in this study is qualitative with a descriptive approach. The data used includes primary and secondary data. Primary data consists of observations and interviews. Meanwhile, secondary data is sourced from documents, literature studies, journals, books, and other relevant references. **Results:** The research results show that the Marine and Fisheries Service of West Aceh Regency has implemented the Mitra DKP application, Xstar, and Website as digital-based services to optimize administrative services. Mitra DKP is one of the service innovations owned by the West Aceh DKP; however, this service is currently inaccessible due to some obstacles. The digital-based services currently in use are Xstar and the West Aceh DKP website. **Novelty:** of this study lies in its analysis of government innovation strategies in the marine and fisheries sector through the implementation of digital-based public services in West Aceh Regency. The study highlights the use of Mitra DKP, Xstar, and the West Aceh DKP website as service innovations while identifying the gap between the availability of digital innovations and their actual accessibility. This provides a specific perspective on how digital innovation can be optimized to improve administrative service quality in the marine and fisheries sector at the regional level.

INTRODUCTION

The legal basis for regional government administration is stipulated in Article 18 of the 1945 Constitution of the Republic of Indonesia. Regional autonomy is the foundation for the implementation of the principle of decentralisation [1]. The central government grants authority to local governments to regulate, implement, and manage their own administrative affairs. The delegation of autonomous rights to local governments aims to achieve public welfare through improved services provided by the government [2]. In general, there are four functions of government as described by Michael G. Roskin, including the implementation of administrative functions, the implementation of service functions, regulatory functions, and information gathering functions [3]. The essence of the service function is the activities or actions carried out by the government to meet the needs of the community. Cahyadi, [4] expressed a similar view, stating that public services are the most tangible measure of the government's performance in carrying out its duties. This means that the quality of the services provided by the government is a reflection of the government's performance.

Regulatively, Law Number 25 of 2009 concerning Public Services is the basis for the provision of services by the government or other parties. The fulfilment of services

must lead to strategic steps to realise excellent service. Quality excellent service is the focus of public organisations [5]. The achievement of excellent service can be implemented through service innovation. According to [6], innovation is closely related to technology and information. This means that one area of government service innovation discusses the concept of digitalisation. This is reinforced by Government Regulation No. 38 of 2017 on Regional Innovation.

Regional autonomy provides opportunities for regions to innovate independently in the delivery of government services to facilitate the achievement of regional objectives. Referring to Article 4 of Government Regulation No. 38 of 2017, there are three forms of regional innovation that can be implemented by regional governments, including innovation in regional governance, innovation in public services, and other regional innovations in accordance with government affairs under regional authority. To create innovation in services, a strategy is needed to strengthen innovation. According to Rusli [7], innovation can be strengthened by involving environmental aspects to enhance services. This means that innovation must be linked to the potential of a region as a resource or modality to support innovation. Conyers expressed a similar idea through the concept of participation, whereby the community is part of the environment as a means of obtaining information about regional conditions and the needs of the local community [8]. Thus, information from the community becomes the basis for innovation because it responds to the needs of the community.

Aceh Barat Regency is one of the regencies located in Aceh Province. Geographically, Aceh Barat can be considered a coastal region. The land area is approximately 2,927.95 km², while the sea area is approximately 957.38 km² or about 12 miles. In terms of natural potential, one of the strengths of West Aceh Regency lies in the fisheries and marine sector, both in capture fisheries and aquaculture.

Table 1. Number of Fishing Households in 2019–2022

Marine Fisheries		Public Waters		Number
2019	4,251	2019	411	4.662
2020	3,500	2020	342	3.842
2021	3,511	2021	346	3.846
2022	3,541	2022	346	3.887

Source: West Aceh Marine and Fisheries Service, compiled by the author

Based on Table 1, the number of fishing households (RTP) in West Aceh Regency is fluctuating. In the last three years, there has been an increase in the number of fishermen. In 2020, there were 3,842 fishermen in West Aceh, in 2021 the number reached 3,842 fishermen, and in 2022 the number of people working as fishermen was 3,887. Meanwhile, the potential for marine fisheries production in West Aceh has increased. In 2019, it reached 19,749 tons, in 2020 it amounted to 19,825 tons of production, in 2021 it amounted to 20,300 tons, and in 2022 it reached 20,822 tons of fishery production, meaning that there has been an increase in production compared to the previous year.

Based on these figures, the fisheries sector in West Aceh is quite promising. Therefore, given the significant potential, it is highly anticipated that the West Aceh Regency government will provide support and innovation in services to assist and improve the welfare of the community, particularly those working in the marine and fisheries sector.

Based on observations, the current public phenomenon or issue in the marine and fisheries sector is fishermen's complaints about the increasingly limited supply of diesel fuel, coupled with the difficulty of obtaining vessel or boat eligibility certificates [9]. Referring to the production data and these public issues, the author is interested in further examining the government's strategy in the maritime and fisheries sector in improving digitalization-based services to overcome public issues. The purpose of this study is to determine the form of the West Aceh Regency government's strategy in improving the quality of digitalization-based services, particularly in the fisheries and maritime sectors.

Research on government innovation strategies to improve service quality has been conducted extensively by previous researchers. However, there are several points of difference between the researcher's study and previous studies. The following are some research results relevant to the researcher's study. In their research, Sari & Pratiwi, [10] found that the Batam City government has various regional innovations based on public services in all OPDs in the Batam City government. However, the results do not provide detailed information on regional service innovations in the marine and fisheries sector. Then, research by Haqie, [11] found that the implementation of Surabaya buses as a public service innovation in Surabaya had an impact on minimizing traffic congestion and reducing plastic waste. Next, research by Adawiyah, [12] describes the implementation of public service innovation in Banyuwangi Regency, one of which is through the Service Mall. This innovation has an impact on the ease of access to administrative services effectively and efficiently. None of the previous studies have examined regional innovations in the marine and fisheries sector, so the researcher focused on this sector. The researcher hopes that this research focus will be novel, considering that Indonesia is an archipelago, so that information and research on marine sector services in particular can be improved.

Innovation in the public sector can be defined as a way or a breakthrough in overcoming congestion and deadlock in government [13]. Referring to Government Regulation No. 38 of 2017, regional innovation is defined as a form of renewal in the administration of regional government. This means that everything related to new developments in the performance of duties is referred to as innovation, whether in governance, public services, or new developments in accordance with the authority of the regional government. Innovation is a strategy for achieving public service objectives.

Referring to the law, public service is a series of service needs fulfillment based on laws and regulations for every citizen and resident for goods, services, or administrative services organized by public service providers [14]. From this description, it can be emphasized that there are three forms of service consisting of goods, services, and

administrative services. Goods services can be defined as services whose end result is public goods, while services are services related to services. Meanwhile, administrative services can be defined as services that produce documents or correspondence.

The quality of public services is an indicator in determining how the performance of services in a public service provider agency is carried out [15]. To measure the quality of public services as a basis for supporting regional innovation, this study uses the SERVQUAL concept pioneered by Zeithaml, Parasuraman, and Berry. There are five dimensions as benchmarks for public services, including:

1. Tangibles, namely the ability of service units to provide physical evidence, technological equipment, staff appearance, and communication targets. In terms of digitization, this includes ease of access to websites or applications that reflect the reliability of digital infrastructure.
2. Reliability refers to the ability to provide promised services promptly, accurately, and satisfactorily. The context of this study is the availability of licensing services that can be accessed by users at any time.
3. Responsiveness: the desire or effort to help the community and provide responsive and prompt services. This relates to the community's need for targeted services.
4. Assurance: the knowledge, courtesy, and ability of officers to foster public trust. In digital services, this relates to the assurance of data security and the credibility of the information presented.
5. Empathy is the attention given to the community. Good digital services still consider the convenience of users from various backgrounds, including fishermen who may have limited digital literacy [16].

Based on these dimensions, this study will analyze how digital innovations can contribute to improving service quality, particularly in the fisheries and marine sector.

RESEARCH METHOD

This study utilised a qualitative method with a descriptive approach. The research location was in West Aceh Regency, considering that the potential for fisheries and marine resources in this region is very supportive, making it interesting to relate to public service studies. The informants in this study consisted of the West Aceh Marine and Fisheries Service. The primary data sources used in this study were observations and direct interviews with informants. Meanwhile, secondary data were obtained from documents, journals, literature studies, and other reference books relevant to this study. The technique for determining informants was carried out using purposive sampling and in-depth interviews.

RESULTS AND DISCUSSION

The essence of public service is to meet the community's needs for goods, services and administration provided by the government. The West Aceh Marine and Fisheries Service, as the service provider, has its own strategy for improving services, particularly

digital-based services, in an effort to meet the needs of the community. This can be seen from Kooten's theory [17] on types of strategies. The following are the results of the study:

Corporate Strategi

Organisational strategy relates to the mission, objectives and new initiatives of an institution. The scope of discussion in organisational strategy looks at what the government must do and who the targets are so that organisational objectives can be achieved, particularly in the context of digitalisation-based services. The West Aceh Marine and Fisheries Service has the following vision and mission:

A. Vision

The realisation of robust, sustainable, and environmentally conscious marine and fisheries development.

B. Mission

1. Optimising the utilisation of capture fisheries, marine aquaculture, brackish water and freshwater aquaculture in marine and fisheries development;
2. Conserving marine and fisheries resources towards sustainable development
3. Enhancing guidance for aquaculture farmers, fishermen and fish processing by introducing ecological practices;
4. Improving the availability of marine and fisheries facilities and infrastructure.

The implementation of the mission is a manifestation of the services provided to the community, especially fishermen. The West Aceh Marine and Fisheries Service (DKP) has implemented several conventional service programmes and digitalisation-based service programmes in the implementation and achievement of the DKP's mission. One of the digitalisation-based programmes implemented by the DKP is the DKP Partner Application service. The DKP Partner Application is a digital platform owned by the West Aceh Regency DKP. The DKP Partner Application aims to facilitate administrative services and provide information, particularly on fisheries and marine affairs, as well as other information, to fishermen, aquaculture farmers and business actors in the fisheries sector. The DKP Partner service makes services more effective and efficient. One form of administrative service on the DKP Partner is the letter and recommendation feature. This feature provides an online service for fishermen to submit fuel recommendations through a form provided in the letter and recommendation feature.



Figure 1. DKP Partner Application
Source: Instagram @dkp.acehbarat

Broadly speaking, Mitra DKP's services are in line with the policy direction of West Aceh Regency through the 2023-2026 West Aceh Regency Development Plan. In the fourth year, or 2026, the development theme will be related to expanding and improving market access, encouraging industrialisation and investment, and optimising digitalisation in development.

Programme Strategy

The essence of the strategy programme is to pay attention to and discuss a specific programme within the organisation and examine the impact of its implementation on the organisation's objectives. The strategic direction of the DKP programme is to improve service quality, particularly digital-based administrative services through DKP Partners. Administrative services are a form of service that produces documents or correspondence. Through the letter and recommendation service feature, fishermen can apply for subsidised fuel recommendations. Furthermore, the DKP Partner application also functions as a monitoring medium for the development of aquaculture businesses.

"In the field of cultivation, to apply for assistance manually, come to the office. We have created an application with a format that you can fill out and upload your proposal online. Then, after the assistance is distributed, cultivators rarely report on their progress. With the reporting feature, they can update their harvest."

The DKP Partner application has a positive impact on the organisation and its users because it provides services effectively and efficiently and serves as a means of supervision and a forum for providing the latest information on various aspects of aquaculture. The DKP Partner application is one form of innovation in the field of services owned by the West Aceh DKP. In addition to Mitra DKP, there is the Xstar (Excellence Integrated Application Recommendation System) digitalisation service, which is integrated with the central government.



Figure 2. Xstar Application

Source: <https://xstar.bphmigas.go.id/login>

The Xstar application service generally provides fuel recommendations to fishermen and fishing industry operators.

“It is an application in the fishing industry that issues fuel recommendations. We are now using Xstar for subsidised fuel recommendations. Actually, we authenticated the application a long time ago and registered with the Oil and Gas Regulatory Agency, but there were obstacles” (SM, DKP 22/07/2025).

Resource Support Strategy

Resource support strategies can be defined as efforts to utilise organisational resources, including labour, technology, and so on, to improve organisational performance. Resource support strategies can be seen in activities or programmes such as training, outreach, and the use of technology in services. There are several activities that have been carried out by the DKP to support the improvement of resource capacity, such as training in the use of the SRIKANDI (Integrated Dynamic Archiving Information System) application. Srikandi is a digital-based application for archive management in central and local government. Training in legal assistance for fish farmers. Training in fishery product processing. Then, related to extension. There are 6 (six) extension workers at the West Aceh DKP who are seconded from the Medan BPP. Extension officers are assigned to 12 (twelve) sub-districts in West Aceh, with each officer assigned to two sub – districts.



Figure 3. Home page and gallery of outreach activities

Source: West Aceh DKP website

The activity in Figure 3 is an extension activity that has been carried out by the extension team at the West Aceh DKP. Regarding the use of technology in services, in addition to several applications that have been discussed, such as Mitra DKP and Xstar, the DKP website is a form of technology-based service that provides information, services and digital content for users.

"In addition to recommendations, digitalisation-based services through the DKP website are also an alternative. We also need marketing such as digitalisation. Collaborative services involved in digitalisation often involve commissions on websites, fisheries, agriculture and livestock that are related to us. Plantations, food, fisheries and. Collaborating on fish food security." (SI, DKP 22/07/2025)

The DKP website functions as a communication tool and public service accessible to users, aiming to facilitate access to various information and services provided by the DKP. The website enhances service efficiency, transparency, and accountability, thereby improving overall service effectiveness.

Institutional Strategy

The discussion in the institutional strategy is the development of organisational capabilities in implementing strategic initiatives. As a government agency, DKP initiatives can be seen in the existence of innovation programmes related to digital technology, such as the Mitra DKP application. In 2023, the Mitra DKP application participated in the regional innovation awards. The regional innovation award is an award given to individuals, groups, and even institutions for creating innovations in regional government administration. The features developed in Mitra DKP include recommendations for subsidised oil, aid proposals, information on fisheries, as well as

consultation and reporting features. Basically, the Mitra DKP application is an effort by DKP to accelerate public services.

CONCLUSION

Fundamental Finding : Based on the problem formulation, the Mitra DKP and Xstar applications are solutions offered by the government to overcome fuel problems. The Mitra DKP service, in particular, is part of service innovation. Referring to Government Regulation Number 38 of 2017 concerning Regional Innovation, Mitra DKP is included in the types of public service innovation and governance. **Implication :** Explicitly, Mitra DKP is an innovation in the provision of services to the public or users for digital-based administrative services. **Limitation :** In practice, the Mitra DKP application is currently inaccessible due to technical difficulties. **Future research :** Should evaluate the technical, operational, and user-related factors affecting the accessibility and effectiveness of the Mitra DKP and Xstar applications in supporting digital-based fuel distribution services. Further studies should also compare the implementation of both applications to identify strategies for improving service reliability, accessibility, transparency, and efficiency.

REFERENCES

- [1] S. Nadir, "Otonomi daerah dan desentralisasi Desa: Menuju pemberdayaan masyarakat desa," *Jurnal Politik Profetik*, vol. 1, no. 1, 2013.
- [2] A. Fauzi, "Otonomi daerah dalam kerangka mewujudkan penyelenggaraan pemerintahan daerah yang baik," *Spektrum Hukum*, vol. 16, no. 1, pp. 119–136, 2019.
- [3] W. Risnawan, "Fungsi Birokrasi dalam Efektivitas Pelayanan Publik," *Dinamika: Jurnal Ilmiah Ilmu Administrasi Negara*, vol. 4, no. 1, pp. 511–518, 2017.
- [4] R. Cahyadi, "Inovasi kualitas pelayanan publik pemerintah daerah," *Fiat Justicia Jurnal Ilmu Hukum Fakultas Hukum Universitas Lampung*, vol. 10, no. 3, pp. 569–586, 2016.
- [5] R. S. Muharam, "Inovasi Pelayanan Publik Dalam Menghadapi Era Revolusi Industri 4.0 Di Kota Bandung," *Decision: Jurnal Administrasi Publik*, vol. 1, no. 01, pp. 39–47, 2019.
- [6] F. A. Fachrian and S. Ode, "Inovasi Pelayanan Transportasi Publik Kereta Commuter Indonesia Di Wilayah Jabodetabek," *JOURNAL OF GOVERNMENT (Kajian Manajemen Pemerintahan Dan Otonomi Daerah)*, vol. 4, no. 1, pp. 1–21, 2018.
- [7] A. Rusli, A. Darmawan, M. A. Arsyad, and R. Mentari, "Agrokompleks," vol. 22, no. 1, Jan. 2022.
- [8] R. Wirawan and R. Nurpratiwi, "Partisipasi masyarakat dalam perencanaan pembangunan daerah," *Jurnal Ilmu Sosial Dan Ilmu Politik (JISIP)*, vol. 4, no. 2, 2015.
- [9] A. Firmansyah, "Nelayan di Aceh Barat Keluhkan BBM Terbatas dan Sulit Urus Izin Kapal," *AJNN*, 2024. [Online]. Available: <https://www.ajnn.net/news/nelayan-di-aceh-barat-keluhkan-bbm-terbatas-dan-sulit-urus-izin-kapal/index.html>
- [10] M. E. P. Sari and D. A. Pratiwi, "INOVASI DAERAH DALAM PENINGKATAN PELAYANAN PUBLIK DI KOTA BATAM," *JURNAL TRIAS POLITIKA*, vol. 5, no. 1, pp. 1–12, 2021.
- [11] Z. A. Haqie, R. E. Nadiah, and O. P. Ariyani, "Inovasi Pelayanan Publik Suroboyo Bis Di Kota Surabaya," *JPSI (Journal of Public Sector Innovations)*, vol. 5, no. 1, pp. 23–30, 2020.
- [12] P. R. Adawiyah, "Inovasi dalam Pelayanan Publik di Mall Pelayanan Publik Kabupaten Banyuwangi," *POLITICO*, vol. 18, no. 2, 2018.
- [13] Y. Suwarno, *Inovasi di sektor publik*, 2008.

- [14] *Undang-Undang (UU) Nomor 25 Tahun 2009 Tentang Pelayanan Publik*, Pub. L. No. 25, 2009. [Online]. Available: <https://peraturan.bpk.go.id/Details/38748/uu-no-25-tahun-2009>
- [15] S. Hutagalung and D. Hermawan, *Membangun inovasi pemerintah daerah*. CV. Budi Utama, 2018.
- [16] A. Parasuraman, V. A. Zeithaml, and L. Berry, "SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality," vol. 64, no. 1, pp. 12–40, 1988.
- [17] J. Salusu, *Pengambilan Keputusan Strategik*. Grasindo, 2004.

***Agus Pratama (Corresponding Author)**

Department of Public Administration, Teuku Umar University, Indonesia

Email: aguspratama@utu.ac.id

Ilham Mirza Saputra

Department of Public Administration, Teuku Umar University, Indonesia

Sri Wahyu Handayani

Department of Public Administration, Teuku Umar University, Indonesia

Fadhil Ilhamsyah

Department of Public Administration, Teuku Umar University, Indonesia

Jalalaluddin

Department of Law, Teuku Umar University, Indonesia
