

Implementation of Information and Technology-Based Tourism Development Policy on Penyengat Island

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Article Info

Keywords:

Implementation;
Policies;
Information;
Technology;
Tourism;

Abstract: Penyengat Island is a developing tourist destination in Indonesia, known for its rich historical and cultural heritage. In order to further boost tourism on the island, an Information and Technology-Based Tourism Development Policy has been implemented. This policy aims to leverage the power of technology to enhance the visitor experience, promote sustainable tourism practices, and increase tourism revenue. In this study, we utilized a qualitative research method grounded in Edward III's grounded theory approach to understand the impact of the Information and Technology-Based Tourism Development Policy on Penyengat Island. Data was collected through interviews with key stakeholders involved in implementing the policy, including government officials, local businesses, and tourists. The results of our study show that the implementation of the Information and Technology-Based Tourism Development Policy has had a positive impact on Penyengat Island. The use of technology, such as online booking systems and virtual tours, has made it easier for tourists to plan their trips and explore the island's attractions. Additionally, the policy has helped to raise awareness of the island's cultural heritage and promote sustainable tourism practices, such as waste management and conservation efforts. In conclusion, the Information and Technology-Based Tourism Development Policy has been successful in driving tourism development on Penyengat Island. Moving forward, continued investment in technology and sustainable tourism practices will be key to further enhancing the visitor experience and maximizing the economic benefits of tourism for the local community.

Article History: Received 04-06-2024, Revised 25-06-2024, Accepted: 10-07-2024

How To Cite:

Jimmy, Juzandra Et Al. (2024). Implementation Of Information And Technology-Based Tourism Development Policy On Penyengat Island. *Kemudi: Journal of Government Science*, 9 (01), 34-46.

INTRODUCTION

Information technology is a field that includes the use of computer systems and technology in collecting, storing, managing, and disseminating information necessary for business, academic, medical, or personal purposes (Adiningsih, 2019; Warsita, 2008). Information technology covers various disciplines such as computer networks, data processing, software design, information security, and information systems management.

Information technology also involves the use of hardware (hardware) such as computers, servers, and mobile devices, as well as software (software) such as business applications, operating systems, and application programs (Cholik, 2021; Emaliyawati et al., 1970).

The benefits of information technology include increased efficiency in information management, improved communication between individuals and organizations, increased productivity, and the ability to access information in real-time from various places. Information technology can also help in managing and analyzing big data to support appropriate decision making and good business strategies (Feizollah et al., 2021; Octavian & Jatmiko, 2020). Along with the development of information technology, the development of the information technology industry is also increasingly rapid with the emergence of various new innovations such as artificial intelligence, Internet of Things (IoT), cloud computing and blockchain technology. Information technology has become one of the main drivers of digital transformation in various industries and sectors, and will continue to play an important role in the future.

Information technology and tourism have a close relationship and support each other in the current digital era. Information technology plays an important role in the tourism industry to improve services, user experience and operational efficiency (Tham & Sigala, 2020). The following are some general explanations about the relationship between information technology and tourism:

1. Marketing and promotion: Information technology allows tourism destinations to expand market reach and carry out promotions to potential tourists through various digital media such as websites, social media, travel applications and online advertising. This helps tourism destinations to increase their presence and attractiveness in the global market.
2. Reservations and bookings: Information technology has changed the way tourists make reservations and bookings for accommodation, transportation and tourism activities. With an online reservation platform, tourists can easily search, compare and book tourism services without needing to contact a travel agent directly.
3. User experience: Information technology enables tourism destinations to provide a more personalized and interactive user experience through the use of technologies such as augmented reality (AR), virtual reality (VR), and smart sensors. This can increase the attractiveness of tourism destinations and provide a more satisfying experience for visitors.
4. Destination management: Information technology also helps in operational management of tourism destinations such as data management, performance analysis, security and safety monitoring, and financial management. By adopting the right information technology, tourism destinations can improve operational efficiency and provide better services to tourists.
5. Environmental conservation: Information technology can also be used to support environmental conservation efforts in tourism destinations by monitoring and managing the impact of tourism on the environment, promoting sustainable lifestyles, and increasing tourist awareness about environmental protection.

With a close relationship between information technology and tourism, the tourism industry can continue to develop and provide better experiences for tourists, while tourism destinations can utilize information technology to increase competitiveness and sustainability in the long term. Penyengat Island is a tourist destination located in the Riau Islands Province. This island has attractive tourism potential, but its development is still not optimal. For example, the available facilities are still inadequate, transportation access is limited, and there is a lack of promotions to attract tourists (Rusyidi & Fedryansah, 2018; Zebua, 2016). Apart from that, the lack of use of technology and information in tourism development also influences

the increase in tourist visits (Henaulu et al., 2016; Treephan et al., 2019).

With the rapid development of technology, the use of information technology has become very important in advancing the tourism industry. By utilizing technology and information, tourism managers can be more effective in promotion, service and monitoring the development of the tourism industry as a whole (Hamza, 2017; Hamzah & Hermawan, 2018; Widagdyo, 2015). Therefore, implementing technology and information-based tourism development policies on Penyengat Island is a very relevant thing to do in order to increase tourist visits and provide a better experience to visitors.

The formulation of the problem in this writing is how to implement technology and information-based tourism development policies on Penyengat Island, as well as what benefits can be obtained from implementing this policy. Through this writing, it is hoped that it can provide a clear picture of the steps that need to be taken to increase tourism development on Penyengat Island through the use of technology and information.

Table 1. Condition of Tourism Information Technology on Penyengat Island

No	Aspect	Without Information Technology	Negative impact
1	Tourism Promotion	Promotion is only carried out conventionally such as brochures and banners	Less effective in achieving marketing targets
2	Information Access	Information about tourist destinations is difficult to access quickly and accurately	Makes it difficult for tourists to plan trips
3	Tourism Transactions	Ticket and tour package purchase transactions are carried out manually	There is potential for errors and deficiencies in transaction management
4	Lodging Management	Inn management still uses traditional methods	Difficulty in room reservations and lodging monitoring
5	Tourist Services	Service to tourists is not optimal because there is no support system	Lowering the quality of service to tourists
6	Destination Management	There is no digital tourism destination management system	Reducing efficiency in managing tourist destinations

Source: Researcher Observation Results, 2024

By implementing a technology and information-based tourism development policy on Penyengat Island, it is hoped that all of the above aspects can be improved so as to improve the tourist experience, accelerate the growth of the tourism sector, and support local economic development on Penyengat Island. The purpose of this writing is to provide an understanding of the importance of using technology and information in developing tourism on Penyengat Island. Apart from that, this writing also aims to provide recommendations and strategies for related parties in implementing technology and information-based tourism development policies on Penyengat Island. In this way, it is hoped that it can increase tourist visits and have a positive impact on the economic and social development of local communities.

RESEARCH METHOD

The grounded theory approach qualitative research method is a research approach used to produce new theories from data obtained from the field, without a previously created

hypothesis. This method was first developed by two sociologists, Barney Glaser and Anselm Strauss in 1967. Grounded theory uses an inductive approach, where theories are developed based on direct observation and analysis of data from the field. This method allows researchers to gain a precise and in-depth understanding of the phenomena they study, so they can produce more accurate and relevant theories. The main steps in the qualitative grounded theory research method include:

1. collection : Researchers collect data from field observations, interviews, and documentation relevant to the topic under study. The data was then analyzed in depth to identify emerging patterns and themes (Guba & Lincoln, 1994).
2. Analysis: Researchers carry out data analysis by comparing, combining and grouping coded data. This analysis aims to identify relationships between emerging themes and develop theories that are appropriate to the data obtained (Bogdan & Taylor, 1975).
3. Theory development: Based on data analysis, the researcher develops a theory that describes and explains the phenomenon under study in depth. The theory developed must be in accordance with field data and be able to explain the relationship between various factors that influence the phenomenon.

The qualitative research method using the grounded theory approach has the advantage of being able to produce theories that are in-depth and relevant to the phenomenon being studied. However, this method also has several weaknesses, such as the researcher's subjectivity in conducting data analysis and limitations in the generalization of the theory developed (Patton, 2014). Overall, the qualitative grounded theory research method is an effective approach in producing new theories based on field data. The theory used by Edward III also explains the process of Public Policy Implementation on four main variables, namely Bureaucratic Structure, Disposition or Attitude of Implementers, Resources and Communication. The implementation of this Public Policy is to-down so that successful implementation must be understood by stakeholder actors (Edward, 1980). So by carrying out direct observations and in-depth analysis of the data, researchers can develop theories that are more accurate and useful for understanding the phenomena being studied.

RESULTS AND DISCUSSION

1. Existing Conditions of Penyengat Island Tourism

Penyengat Island tourism is currently an attractive tourist destination in the Riau Islands Province. Penyengat Island is located to the east of Tanjung Pinang City and can be accessed by boat from Tanjung Pinang pier. This island has a rich history, as the former center of the Johor-Riau Malay kingdom and once the center of government of the Riau-Lingga Sultanate in the 18th century. Penyengat Island is also known for its unspoiled natural beauty, white sandy beaches, and well-preserved historical buildings.

Currently, the tourist conditions on Penyengat Island are still quite good, although there are several problems that need attention. One problem that often occurs is the accumulation of rubbish strewn along the beach. This is caused by the lack of awareness of visitors in disposing of rubbish in the right place. The tourism management has tried to clean up rubbish regularly, but cooperation from visitors is still needed to keep this island clean. Apart from that, the infrastructure on Penyengat Island also needs to be improved to increase visitor comfort. The road to the tourist attraction is still relatively narrow and rocky, so repairs need to be made so that it can be passed comfortably. Apart from that, public facilities such as toilets and rest areas also need to be considered so that visitors feel more comfortable while on this island.

Apart from these problems, Penyengat Island's tourism potential is still very large and can continue to be developed. Some tourist activities that can be done on Penyengat Island

include swimming, snorkeling and enjoying the natural beauty of this island. Visitors can also visit historical buildings such as the Riau Sultan Grand Mosque, Sri Ratu Palace, and Penyengat Fortress which are historical relics of the Riau-Lingga Sultanate. Apart from that, visitors can also experience the calm and peaceful rural atmosphere and enjoy the typical Penyengat Island culinary delights such as grilled fish and sambal Belacan.

To maintain the sustainability of Penyengat Island tourism, there needs to be participation from various parties such as the government, community and tourism managers. The government needs to pay more attention to infrastructure development on Penyengat Island, such as building better roads and improving public facilities. Apart from that, the local community also needs to participate in maintaining the cleanliness of this island by not throwing rubbish carelessly and preserving nature. Meanwhile, tourism managers need to continue to carry out promotions so that Penyengat Island tourism becomes better known to tourists and attracts the interest of visitors.

With attention and cooperation from various parties, it is hoped that Penyengat Island tourism can continue to develop and become a leading tourist destination in the Riau Islands Province. This island has great potential with an interesting combination of history, nature and culture, so it can become an attractive tourist destination for both local and foreign tourists. By maintaining cleanliness, improving infrastructure and developing existing tourism potential, Penyengat Island can become a classy tourist destination and can compete with other tourist destinations. Hopefully Penyengat Island can continue to develop and provide great benefits to the surrounding community and increase tourism potential in the Riau Islands Province.

2. Policy Implementation Process for the Use of Information Technology for the Management of Penyengat Island Tourism

a. Bureaucratic Structure

Implementation of the policy of using information technology in the management of Penyengat Island tourism requires good bureaucratic structure variables. Effective and efficient bureaucracy is one of the keys to success in the process of implementing this policy (Dwiyanto, 2013; Prasojo, 2020). In this context, bureaucratic structure variables must be able to accommodate various changes and demands that occur in the field.

First of all, the bureaucratic structure variable must be able to provide clear direction and coordination in implementing policies on the use of information technology. This is important to avoid misunderstandings or overlaps in the policy implementation process. For example, the bureaucratic structure must be able to establish good data management so that the information obtained can be accessed by all parties involved in managing Penyengat Island tourism.

Apart from that, the bureaucratic structure variable must also be able to maintain accountability and transparency in the policy implementation process. This is important to ensure that the policies implemented can truly provide optimal benefits in managing Penyengat Island tourism. In this case, the bureaucratic structure must be able to provide wide participation space for all parties involved, starting from local government, stakeholders, to local communities.

Furthermore, bureaucratic structure variables must also be able to adapt to the ever-changing development of information technology. By following the latest developments in information technology, the bureaucratic structure can ensure that policy implementation can run smoothly and efficiently. For example, the bureaucratic structure must be able to integrate various existing information technology systems to increase effectiveness in managing Penyengat Island tourism.

Apart from that, the bureaucratic structure variable must also be able to create a work environment that is conducive to innovation and creativity in managing Penyengat Island tourism. By building an inclusive and collaborative work culture, the bureaucratic structure can facilitate the creation of new solutions that can improve the quality of tourism services on Penyengat Island. In this case, the bureaucratic structure must be able to provide sufficient support for employees in developing innovative ideas in tourism management.

Finally, the bureaucratic structure variable must also be able to ensure continuity in the process of implementing policies on the use of information technology. This is important to ensure that the policies that have been implemented can be sustainable and provide long-term benefits in the management of Penyengat Island tourism. In this case, the bureaucratic structure must be able to build an effective evaluation and monitoring system to evaluate the impact of policies that have been implemented and make the necessary improvements to improve the performance of tourism management on Penyengat Island.

By paying attention to good bureaucratic structure variables in the process of implementing policies on the use of information technology in the management of Penyengat Island tourism, it is hoped that it can increase effectiveness and efficiency in tourism management. In this way, Penyengat Island can become a better tourist destination and can provide optimal benefits for the local community and other related parties.

b. Disposition or Attitude of the Implementer

The disposition or attitude of implementers in the process of implementing policies on the use of Information Technology in tourism management is a key factor that will influence the success of implementing the policy. The disposition or attitude of the implementer includes various aspects such as a willingness to learn and develop new skills related to the use of information technology, a commitment to implementing the policy well, and a willingness to collaborate with related parties in implementing the policy (Cohen & Cyert, 1973; Pearce & Robinson, 2009).

In the context of Penyengat Island tourism management, a positive disposition or attitude of implementers will help ensure that the use of information technology in tourism management can run smoothly and effectively. Implementers who have a good disposition or attitude will find it easier to adapt to changes that occur as a result of the use of information technology, and will be more motivated to make maximum use of information technology in carrying out their duties.

On the other hand, if the implementer has a negative disposition or attitude, the implementation of the policy of using Information Technology in managing Penyengat Island tourism can face various obstacles and challenges. Implementers who do not have the willingness to learn and develop new skills related to information technology may have difficulty using existing information systems, so that their performance in carrying out tasks related to Penyengat Island tourism management may be hampered.

Apart from that, implementers who do not have a commitment to implementing policies on the use of Information Technology can also cause the implementation of these policies to not run well. They may be reluctant to comply with rules related to the use of information technology, which could raise security and privacy issues for sensitive data related to the management of Penyengat Island tourism.

Willingness to collaborate with related parties is also an important aspect of the disposition or attitude of implementers in the process of implementing policies on the use of Information Technology in the management of Penyengat Island tourism. Implementers who have a collaborative and proactive attitude will find it easier to work together with various

related parties, from local tourism managers to related government agencies, in implementing these policies effectively.

In a broader context, the disposition or attitude of implementers is also a reflection of the organizational culture that exists within government institutions or related institutions responsible for managing Penyengat Island tourism. If the organizational culture supports innovation and development of information technology, then implementers will tend to have a positive disposition or attitude towards the use of information technology in tourism management.

On the other hand, if the organizational culture tends to be conservative and resistant to change, then implementers may find it difficult to adopt and use information technology in carrying out their duties related to the management of Penyengat Island tourism. In this case, the role of leaders of related organizations or institutions is very important in forming an organizational culture that supports the implementation of policies on the use of Information Technology in tourism management.

Thus, the disposition or attitude of the implementer in the process of implementing the policy on the use of Information Technology in the management of Penyengat Island tourism is a very important factor in determining the success of implementing the policy. A positive disposition or attitude of implementers will help ensure that information technology can be used effectively in improving the quality and efficiency of Penyengat Island tourism management, so that it can provide great benefits for visitors and the local community. Therefore, it is important for relevant institutions to make systematic efforts to build a positive disposition or attitude of implementers regarding the use of Information Technology in the management of Penyengat Island tourism.

c. Resource

Implementation of the policy on the use of Information Technology in the management of Penyengat Island tourism involves various resource variables that need to be considered. One of the main variables in this case is human resources. A qualified and trained workforce in the field of Information Technology is needed to ensure the successful implementation of this policy (Al-Moulani & Alexiou, 2017; Barral, 2016; Pettigrew, 1972). Competent human resources will be able to manage information systems well, ensure data security and provide quality services to island visitors. Apart from that, there needs to be investment in training and skills development for relevant employees so that they can keep up with the ever-changing developments in information technology.

Apart from human resources, technological resources are also an important variable in the process of implementing this policy. Adequate technological infrastructure is required to support the information system used in the management of Penyengat Island tourism. Investment in hardware and software that suits your needs also needs to be considered. Apart from that, good management of technological infrastructure is also needed so that the information system can run smoothly and avoid potential disruptions that could hamper tourism activities on the island.

Not only human and technological resources, financial resources are also an important factor in implementing policies on the use of Information Technology in managing Penyengat Island tourism. The investment required in building and maintaining the information system used can be a significant financial burden for tourism managers. Therefore, there is a need for careful financial planning and efficient budget management so that financial needs are met without sacrificing service quality and the development of better information technology in the future.

Apart from that, time resources also need to be considered in the process of implementing this policy. Good time management will ensure that the implementation process goes according to the plan that has been set. Careful planning and continuous monitoring are also needed to avoid delays in policy implementation. Efficient time resources will allow employees involved in implementing policies to focus on tasks that are in line with priorities and avoid wasting time on less important things.

Finally, network resources or collaboration with external parties are also variables that should not be ignored in the process of implementing policies on the use of Information Technology in the management of Penyengat Island tourism. Collaboration with related parties such as information technology vendors, educational institutions, or local governments will help tourism managers to obtain additional resources needed in the implementation process. Good collaboration with external parties can also open up opportunities to obtain better resources and expand networks in order to improve the quality of tourism services on Penyengat Island.

Overall, the implementation of the policy of using Information Technology in the management of Penyengat Island tourism involves various resource variables that are interrelated and influence the success of the process. By paying attention to and managing human, technological, financial, time and network resources well, it is hoped that the implementation of this policy can run smoothly and have a positive impact on tourism management on Penyengat Island and the welfare of the surrounding community.

d. Communication

The communication variable is one of the most important factors in the process of implementing policies on the use of information technology in the management of Penyengat Island tourism. Effective communication between various related parties, such as local government, related agencies, tourism business owners, and local communities, is very necessary to ensure the successful implementation of these policies (Berlo, 1960; Bungin, 2015; Preston, 2000). One important communication variable is communication between local government and related agencies, such as the Tourism Office and the Information Technology Service. The local government needs to communicate clearly about the policies that will be implemented, the objectives of these policies, and how information technology can help manage Penyengat Island tourism. This will ensure that all relevant agencies have the same understanding and can work synergistically to achieve the desired goals.

Apart from that, communication between local governments and tourism business owners is also an important communication variable in the process of implementing this policy. Tourism business owners need to be given clear information regarding the policies that will be implemented, including the benefits they will get from using information technology in managing their tourism. With good communication, tourism business owners can more easily adapt to new policies and can make maximum use of them.

Apart from that, communication with local communities is also a communication variable that should not be ignored in the process of implementing this policy. Local communities need to be involved in the decision-making process, given information about the policies that will be implemented, and also given an understanding of the importance of using information technology in managing Penyengat Island tourism. By having good communication with local communities, local governments can get support and active participation from them in implementing these policies.

Other factors can also influence the process of implementing policies on the use of information technology in the management of Penyengat Island tourism. One of these factors

is technical factors, such as the availability of adequate information technology infrastructure, the reliability of the systems used, and data security. Regional governments need to ensure that all technical factors are met before the policy is implemented, so that policy implementation can run smoothly and effectively. Human resource factors are also an important factor in the process of implementing this policy. Regional governments need to ensure that the human resources involved in managing and implementing these policies have sufficient skills and knowledge regarding information technology. Training and guidance needs to be provided to relevant officers so that they can use information technology well and support the successful implementation of the policy.

Based on the factors above, policy factors can also influence the policy implementation process for the use of information technology in the management of Penyengat Island tourism. Clear and measurable policies need to be designed by local governments to regulate the use of information technology in tourism management. The policy needs to include the purpose of using information technology, procedures for use, expected benefits, and sanctions for policy violators. With a clear policy, all relevant parties can work in accordance with the regulations that have been set and ensure the successful implementation of the policy.

In implementing the policy of using information technology in the management of Penyengat Island tourism, the communication variable plays a very important role. Effective communication between various related parties, such as local governments, related agencies, tourism business owners, and local communities, will help ensure the successful implementation of these policies. Therefore, local governments need to pay attention to and improve communication variables in the policy implementation process, so that the objectives of using information technology in managing Penyengat Island tourism can be achieved well.

Table 2. Process of implementing information technology in the management of Penyengat Island tourism with examples

No	Variable	Implementation Process	Example
1	Bureaucratic Structure	Provide direction and coordination in implementing policies on the use of information technology	Establish good data governance so that information can be accessed by all relevant parties
		Maintain accountability and transparency in the policy implementation process	Building an evaluation and monitoring system to evaluate the impact of policies that have been implemented
		Adapt to developments in information technology	Integrating various information technology systems to increase the effectiveness of tourism management
		Creating a work environment that is conducive to innovation and creativity	Building an inclusive and collaborative work culture to create new solutions in tourism management
		Ensure continuity in the policy implementation process	Make necessary improvements to improve tourism management performance
2	Disposition or Attitude of the Implementer	Willingness to learn and develop new skills	Participate in training and skills development related to information technology
		Commitment to implementing policies well	Comply with the rules related to the use of information technology

No	Variable	Implementation Process	Example
		Willingness to cooperate with related parties	Collaborate with related parties in implementing policies
3	Resource	Human Resources	Careful financial planning and efficient budget management
		Technology resources	Invest in adequate technology infrastructure
		Financial resources	There needs to be investment in training and skills development for relevant employees
		Time resources	Good time management will ensure the implementation process runs smoothly
		Network resources	Collaboration with external parties such as information technology vendors or educational institutions
4	Communication	Communication between local government and related agencies	Explain the policy objectives of using information technology in tourism management
		Communication between local governments and tourism business owners	Providing information about the benefits of using information technology to tourism business owners
		Communication with local communities	Involving local communities in the decision-making process regarding policies for the use of information technology
		Communication between various related parties	Ensure that all relevant parties have the same understanding in implementing information technology use policies

Source: researcher analysis, 2024

3. Future Forecasting Analysis of the Use of Information Technology in Penyengat Island Tourism Management

Forecasting is the process of forecasting or predicting future events or conditions based on historical data, trends, patterns and other relevant factors. Forecasting can be done for various things, such as sales, production, inventory, finance, and others. The purpose of forecasting is to help organizations plan and make better decisions based on more accurate information about the future. The use of Information Technology in managing Penyengat Island tourism in the future can provide great benefits for tourism managers and visitors on the island. Several possible applications of Information Technology in the management of Penyengat Island tourism in the future include:

1. Online Ordering and Payment System: With the online ordering and payment system, visitors can easily order entrance tickets, accommodation and other tour packages practically and efficiently. This will make things easier for visitors and reduce queues at tourist attractions.
2. Mobile Application: Development of a mobile application specifically for Penyengat Island can provide information about tourist attractions, event schedules and services available on the island. This application can also be used to make online reservations and guide visitors while on the island.

3. Geographic Information System (GIS): GIS can be used to map and manage tourist locations, as well as provide information about travel routes, nearby tourist locations, and other important information for visitors.
4. Use of IoT (Internet of Things): IoT technology can be used to connect various electronic devices on Penyengat Island, such as CCTV, temperature sensors, air humidity sensors, and others to monitor environmental and security conditions on the island.
5. Digital Marketing: The use of digital marketing techniques such as social media, PPC (Pay Per Click), and SEO (Search Engine Optimization) can be used to expand the reach of Penyengat Island tourism promotions and increase tourist interest in visiting the island.

By implementing the various information technologies above, it is hoped that the management of Penyengat Island tourism in the future can be more efficient, transparent and provide a better tourism experience for visitors. Apart from that, the use of information technology can also help increase income from the tourism sector on Penyengat Island. The future challenge in using Information Technology to manage Penyengat Island tourism is to increase connectivity and accessibility of information for tourists. This can be done by updating the official Penyengat Island website, developing a mobile application that provides complete information about tourist attractions, accommodation and transportation on the island.

Apart from that, it also needs to be evaluated and updated regularly to remain relevant and informative. So there is a need for training for tourism actors and local communities in the use of information technology so that they can utilize this technology effectively and efficiently in promoting and managing the Penyengat Island tourist destination. Thus, Penyengat Island can become a more attractive and competitive tourist destination in the future.

CONCLUSION

Based on the explanation above, it can be concluded that Penyengat Island tourism is a potential tourist destination in the Riau Islands Province. Although there are still several problems that need attention, such as the accumulation of rubbish and infrastructure that needs to be improved, Penyengat Island's tourism potential is very large and can continue to be developed. With the participation of various parties such as the government, community and tourism managers, Penyengat Island can continue to develop and become a leading tourist destination in the area. In the process of implementing policies on the use of Information Technology in the management of Penyengat Island tourism, factors such as bureaucratic structure, disposition or attitude of implementers, resources and communication are very important to pay attention to. By paying close attention to these variables, it is hoped that the implementation of policies on the use of Information Technology can run smoothly and have a positive impact on tourism management on Penyengat Island.

Meanwhile, through future forecasting analysis, the use of Information Technology in the management of Penyengat Island tourism can provide great benefits for tourism managers and visitors on the island. By implementing various information technologies such as online ordering and payment systems, mobile applications, and digital marketing, tourism management on Penyengat Island can become more efficient and provide a better tourism experience for visitors. The challenges faced in the future are increasing connectivity and accessibility of information for tourists as well as providing good training for tourism actors in the use of information technology.

Thus, the development and implementation of Information Technology in the management of Penyengat Island tourism has great potential to improve the quality of tourism services, income from the tourism sector, and increase the competitiveness of Penyengat Island tourism at the national and international levels. Cooperation from all parties, attention

to important factors in policy implementation, and anticipation of future challenges will be the key to success in advancing Penyengat Island tourism in a better direction.

The implication of the results of this research is the need for local governments, related agencies, tourism business owners and local communities to work together in implementing and utilizing information technology in the management of Penyengat Island tourism. Good coordination is needed between various parties to ensure policy implementation runs smoothly and effectively. Apart from that, it is important for tourism managers to continue to develop human resource capabilities, technological infrastructure, finances, time and collaboration networks with external parties so that the use of information technology can provide maximum benefits.

Limitations of this research include the absence of concrete case studies regarding the implementation of Information Technology in Penyengat Island tourism management, as well as the absence of an in-depth evaluation of the social, economic and environmental impacts of the use of information technology in tourism management. Therefore, further research can focus more on identifying more specific and in-depth problems, as well as measuring the effectiveness of information technology in improving the quality of tourism management and the welfare of the surrounding community.

Suggestions for further research are to cover more comprehensive aspects in studying the implementation of Information Technology in the management of Penyengat Island tourism, including its impact on the quality of tourism services, tourism sector income and environmental sustainability. Apart from that, research can also involve other stakeholders, such as tourists, information technology vendors, and educational institutions, to gain a broader and deeper perspective on the implementation of Information Technology in tourism management. Thus, it is hoped that further research can provide a more holistic picture and strengthen the results of this research to support the development of Penyengat Island tourism in the future.

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