From a National Perspective: The Development of Smart Tourism Destinations in Indonesia

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Abstract. As the hub of the government and the economy in Indonesia, Jakarta is expected to lead the way in the growth of this industry. In order to meet this expectation in the fourth industrial revolution and the era of digitization, Jakarta's tourism industry needs to be supported by a number of ICT applications that can both improve the competitiveness of the city's tourism industry and the tourist experience for visitors. As a means of achieving this objective, the idea of a "Smart Tourism City" has gained popularity. This concept essentially aims for smart tourist governance in terms of attractiveness, accessibility, digitization readiness, sustainability, and partnerships. The purpose of this study is to understand national strategies via interviews with four important informants from the Ministry of Tourism and Creative Economy. The results have shown that the ministry has primarily used three strategies: creating strategies and a policy framework for the use of technology in tourism, working together and cooperatively with different stakeholders, and creating and utilizing digital infrastructure in tourist destinations.

Keywords: smart tourism city, smart destination, digitalization, public policy, urban tourism

1   Introduction

As the hub of regional and national economic activity, Jakarta has great aspirations to lead the development of a number of industries that support Indonesia's economic growth, including the tourism industry. Based on the data by Bank Indonesia in 2022, tourism has contributed 4.5% of the total national Gross Domestic Product (GDP) for 2022 – it has a total foreign exchange income of US$ 4.26 billion in the same year. However, the city's tourism industry needs to be supported by various ICT applications in order to keep up with the times and the advent of the digital era. It is hoped that this will increase the frequency of visits as well as improve the visitor experience. The phrase "smart tourism

city" is used in reference to these goals, and it builds on the ideas of "smart tourism" and "smart city".

Smart tourism city is a concept that focuses on city tourism governance with a variety of primary components including destinations, attractions, accommodations, and transportation, where digitalization can enhance without compromising environmental preservation. This idea seeks to enhance urban tourism, which can increase destination competitiveness and result in resource management that is more effective (Rahmat et al., 2021). To transform the nation's capital into a smart tourism city, several sectors of the tourist industry must be developed gradually and systematically. In contrast to other major cities throughout the world, Jakarta — the capital of Indonesia—still has a way to go in implementing smart tourism (Widodo et al., 2021). In light of the global tourist industry's advanced development, Indonesia, particularly Jakarta as the nation's economic hub, needs to catch up in order to become more competitive as a nation with a high tourism-selling value. Applying the smart tourism concept will promote urban growth, improve the visitor experience and the welfare of the populace, and boost the efficiency of the smart business ecosystem, resulting in overall competitive sustainability (Hanum et al., 2020).

Numerous stakeholders would inevitably need to participate in order to support Jakarta as a smart tourism city. This is intimately connected to the central government's participation since it has the power to develop policies relevant to the tourism sector and implement elements of smart tourism in cooperation with local governments. The Ministry of Tourism and Creative Economy (Kemenparekraf), which oversees all government operations in the Republic of Indonesia's tourism and creative economy sector, is a stakeholder whose opinions must be taken into account in this situation. Therefore, the primary goal of this study is to examine the Ministry of Tourism and Creative Economy's policy direction for developing tourism destinations, particularly in urban areas, towards smart tourism city. This research will then be able to offer recommendations and input to local authorities and other stakeholders in order to develop smart tourism cities in Indonesia more gradually.

2   Literature Review

The idea of a smart tourism destination, also known as a smart destination, was created to translate the smart city idea into a tourist attraction. Given the abundance of tourism information and the major reliance on ICTs, it is not unexpected that the ideas of smart cities be applied to tourist destinations. The idea of smart tourism is largely supported by the idea of smart cities, which is the application and integration of ICT and resource management stakeholders, in this example, destinations, to achieve sustainable development and enhance quality of life. But where the two vary is in their respective focuses. Smart destinations, as opposed to smart cities, provide a greater emphasis on the tourists (Gretzel and Koo, 2021; Ortega and Malcolm, 2020). As a result, by prioritizing

the integration of all stakeholders to create a sustainable destination in terms of economy, environment, and social structure, the data acquired and evaluated in the framework of a smart destination aims to improve the quality of the visitor experience.

However, more recent research has shown that, regardless of the origin and features of the smart city and smart destination, there is usually a gap on a local scale between smart city and tourist initiatives. To manage the mix of work, play, and mobility activities that coexist in urban environments, a number of writers (such as Chung et al. 2021; Gretzel and Koo 2021; Soares et al. 2021) advocate the Smart Tourism City idea. According to these writers, the principles of a smart tourist city combine those of a smart city and a smart destination. Following this definition, a "smart tourism city" is described as "an innovative tourist destination that guarantees sustainable development that facilitates and enhances visitors' interaction with experiences at the destination and improves the residents' quality of life" (Lee et al. 2020, p.2).
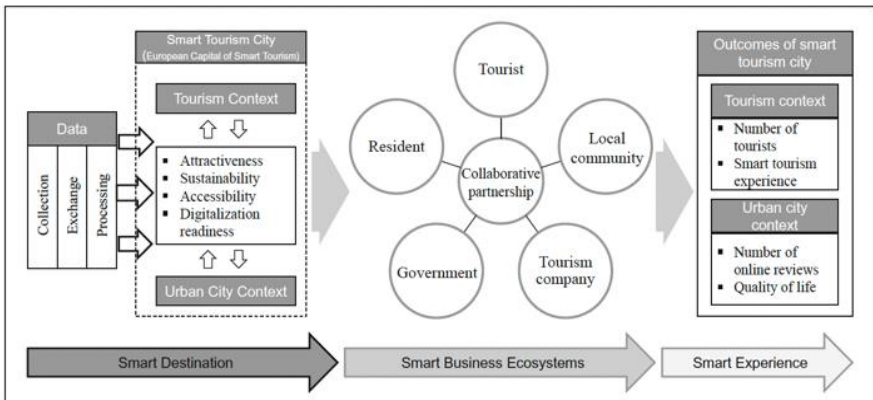
Figure 1. Smart Tourism Framework
Source: Chung et al. 2021

As shown in Figure 1, Chung et al. (2021) updated the Gretzel et al. (2015) smart tourism framework and proposed three elements of smart tourist cities: smart destination, smart experience, and smart business. Smart destinations provide tourists improved communication and engagement opportunities in urban settings, enabling them to form tighter bonds not just with city residents but also with local companies, the local government, and tourist attractions. As revealed by the smartness component in city management (Albino et al. 2015), the focus of smartness in smart destinations is to integrate tourism stakeholders in order to get easy access to tourist information, attractions, available packages, transportation to attractions, packages, and amenities (Hunter 2021; Buhalis and Amaranggana 2015). The second component, smart business, is an ecosystem of dynamically interconnected, complex businesses where a wide range of

participants collaborate to share and jointly generate tourism resources (Lee et al. 2020). When all the pieces are taken into account, it becomes obvious that smart cities provide their residents with access to resources, mobility, and a sustainable standard of living. With integrated smart surroundings, they also make tourism easier, which enhances the tourist experience. After that, smart destinations and the business ecosystem form the basis of smart experiences, which current ICTs have improved for both tourists and residents.

3   Methodology

The information utilized as the writing material for the discussion's main points was gathered for this study using a qualitative methodology. The study findings are reported by the authors based on fieldwork reports of opinions and analyses of data. In-depth interviews served as the main method of data collecting during the research, which was conducted from February to May 2023. Four key informants were interviewed by the writers in this respect, namely:

- Senior Policy Analyst of Thematic Tourism and Governance Materials from the Directorate of Destination Development 1 of the Deputy of Destination and Infrastructure Development at the Ministry of Tourism and Creative Economy
- Director of Destination Governance of the Deputy of Destination and Infrastructure Development at the Ministry of Tourism and Creative Economy
- Junior Policy Analyst from the Directorate of Destination Governance of the Deputy of Destination and Infrastructure Development at the Ministry of Tourism and Creative Economy
- Coordinator of the Tourism Crisis Management of the Directorate of Destination Governance of the Deputy of Destination and Infrastructure Development at the Ministry of Tourism and Creative Economy

In order to analyze the data, we used methods that are often applied to the study of this kind of data, such as reading and rereading the material while coding it to look for recurring patterns. Using the program Atlas.ti 8, all interview-related digital data (audio and video files) were coded and transcriptions were made. During the coding process, all the significant phrases and words were classified and grouped based on how similar they were, and ultimately, major themes were found for each group.

4   Results and Discussion

4.1 Developing Strategies and Policy Framework Regarding the Use of ICT in Tourism

The rise in popularity of the era of the Industrial Revolution 5.0, marked by the ease of access to information through digital media, forces Indonesia, which is still in the age of the Industrial Revolution 4.0, to accelerate the pace of development of its tourism sector in order to accommodate the phenomenon of cultural shift colored by digitalization. In this case, the national government directs the Ministry of Tourism and Creative Economy to establish a strategy to carry out the harmonization between media and digital infrastructure in the continuity of the activities of the country's tourism sector. The digital tourism strategy developed and implemented by the Ministry of Tourism and Creative Economy primarily supports the application of information technology in Indonesian tourist destinations in order to create quality tourism experience while being digitized. This strategy is seen in particular in the two policy directions related to the development of Indonesian tourism destinations contained in the Ministry of Tourism and Creative Economy Strategic Plan for 2020 – 2024, namely the policy direction for tourism marketing based on strategic partnerships and the policy direction to encourage innovation and adoption of technology to support tourism and creative economies.

The first policy-related strategy is the use of technology, especially digital marketing, in order to market and promote Indonesian tourist destinations more comprehensively. In line with the Y and Z generations who are closely associated with digital devices both on a daily basis and while traveling, also known as 'always connected travelers', the Ministry of Tourism and Creative Economy has directed the use of digital marketing through collaboration with content creators and influencers using various media (from paid, owned, social media to endorsement), as well as cooperation with filmmakers. Promotion of tourism through movies is expected to increase public awareness, the popularity of destinations, and the number of tourists visiting related tourist destinations.

Meanwhile, strategies related to the second policy include the effective and efficient use of cutting-edge technology. The use of ICT as an enabler in promoting destinations in which all components and tourism actors (accommodation, transport, attractions, ancillaries, and other amenities) are integrated with tourists is the primary objective of this strategy. The desired final results are drawn with the use of big data analysis and artificial intelligence to help the Ministry of Tourism and Creative Economy in obtaining a comprehensive picture of travel patterns, spending behavior, and various other data that show the characteristics of tourists in Indonesia. In this case, the collection and interpretation of big data will be carried out progressively to aid in the adoption of future public policies related to marketing strategies such as improving the image and sales value of Indonesian tourism in the eyes of tourists, as well as Indonesian tourism activities that are able to adapt to trends and social changes following the COVID-19 pandemic.

4.2 Collaboration and Cooperation with Stakeholders

In the policy direction to develop tourist destinations in Indonesia that are digitized and able to realize quality tourism experiences in the national scope, collaboration and cooperation with various stakeholders, both from the government, state-owned enterprises, private companies, and academia, are carried out thoroughly. The Ministry of Tourism and Creative Economy strives to team with strategic partners from a variety of backgrounds to improve work efficiency in financial and technical aspects as well as consider their perspectives in decision-making processes to create an inclusive travel experience. Here are some examples of forms of collaboration and cooperation with various stakeholders that have been planned or implemented by the Ministry of Tourism and Creative Economy.

- *Government (Ministries, offices and regional tourism authorities):*
    1) Cooperation with the Ministry of Communications and Informatics (Kominfo) to develop ICT infrastructure in five Super Priority Destinations (DSP) and tourist villages in Indonesia in order to establish signal coverage to support digital tourism trends. In addition, cooperation was also carried out in terms of the development of services for priority tourist destinations, remote destinations that still have many blind spots, and tourist villages that are really far from the technology center.
    2) The Ministry of Tourism and Creative Economy cooperates and coordinates with the Tourism and Creative Economy Office (Disparekraf) in each region as the implementer of responsibilities for the creation of local websites or tourism applications (e.g., the JAKI application for Jakarta tourism) as well as monitoring evaluations to ensure maintenance and development of ICT periodically in order to improve accessibility at the destination.
    3) Internal collaboration of the Ministry of Tourism and Creative Economy with strategic partners in the provision of preventive and curative media centers, such as the Tourist Information Center or TIC (e.g., the TIC established by the Labuan Bajo Tourism Authority on the occasion of the ASEAN Summit in Labuan Bajo)
- *State-owned Enterprises/Private Companies:*
    1) Collaboration and cooperation with state-owned enterprises (e.g., the collaboration done in Taman Mini Indonesia Indah or TMII with InJourney).
    2) Collaboration with Telkomsel to create a special media that can create connectivity and carry out visitor management between tourist destinations in Indonesia.
    3) Development of financial and technical aspects in order to realize the development or revitalization of digital infrastructure in tourist destinations with private companies and start-ups such as Telkomsel and Grab.
- *Academias and Research Institutes:*
    1) The Ministry of Tourism and Creative Economy has established cooperation related to the disaster prevention and management sector with authorities such as the National Agency for Disaster Countermeasure (BNPB), the

National Search and Rescue Agency (Basarnas), the Disaster Risk Reduction Center (DRRC) of the University of Indonesia, and academics from the world's leading universities (e.g., Kobe University in Japan) who are working in coordinated fields in terms of profiling tourist destinations as well as the preparation of training modules and Resilient Tourism Guidelines.

4.3 Development and Use of Digital Infrastructure in Tourist Destinations

In the era of digitalization in Industry 4.0, the key element to attract tourists and enhance the role of tourism in the economy is the implementation of "smart" technologies in tourism management components. The openness of information and the completeness of data are also aspects that merit attention, one of which is digitalization, which facilitates the collection and interpretation of data as needed. In connection with this, the establishment of a policy direction based on the importance of the development and utilization of digital infrastructure technology 4.0 in improving the experience of tourists when visiting tourist destinations in various regions of Indonesia is encouraged. Here are examples of strategies that have been planned or implemented by the Ministry of Tourism and Creative Economy in tourist destinations:

1) Use of digital technologies that are the result of external inventions that are easily accessible to all, such as websites for virtual guided tours and Google Translate;
2) Implementation of digital information such as automated ticket purchases with QR Codes to reduce waiting lines and the launch of other travel experience-supporting apps such as virtual guided tours in tourist destinations, especially those related to culture and history;
3) Escalation of the quantity and quality of internet networks such as Wi-Fi and internet signals in various destinations and tourist villages in order to provide internet network connectivity services as part of the adaptation process in the era of digitalization. For this, the Ministry of Tourism and Creative Economy collaborates with many stakeholders in the digital industry, one of which is Telkomsel;
4) The use of sophisticated digital technology such as VR/AR in tourist destinations that will increase inclusion in the travel experience (such as in the Candi Borobudur tourist area), the use of sensors for crowd monitoring in some regions and destinations in Indonesia, and the presence of chatbot features on regional tourism websites.

5   Conclusion

The main aim of this paper is to examine the Ministry of Tourism and Creative Economy's policy direction for developing tourism destinations, particularly in urban

areas, towards smart tourism city. It is found that The Ministry of Tourism and Creative Economy, through the duties and functions carried out by the Deputy for Destination and Infrastructure Development, has initiated, formulated, and implemented policy directions related to the development of Smart Tourism City in Indonesia through the use of technology. Collaboration between various stakeholders or stakeholders as a whole is the main strategy implemented by the Ministry of Tourism and Creative Economy. The Ministry of Tourism and Creative Economy seeks to collaborate with all parties to increase work efficiency, consider the perspectives of local and international tourists in the decision-making process to create an inclusive travel experience, and collect and study aspects in the tourism sector based on big data.

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