



SMART TOURISM AND VISITOR DECISION-MAKING: AN EMPIRICAL STUDY ON MOBILE APPLICATION USE AT MANGKUNEGARAN PALACE

Debora Shinta Dewi ¹, Nining Yuniati ², Moch Nur Syamsu³ Agung Yuliyanto Nugroho⁴

1,2,3,4</sup> Ambarrukmo Tourism Institute, Yogyakarta, Indonesia

*email Koresponden: deborashintadewi91@gmail.com

DOI: https://doi.org/10.62567/micjo.v2i3.1003

Article info:

Submitted: 30/06/25 Accepted: 28/07/25 Published: 30/07/25

Abstract

This study explores the impact of smart tourism features in a mobile application on tourists' decisions to visit Pura Mangkunegaran, Surakarta. Employing a quantitative method with a sample of 96 domestic tourists, the research evaluates four smart tourism components: Historical Information, Cultural Gallery, Cultural Events and News, and Educational & Interactive Features. Data were collected through structured questionnaires and analyzed using multiple linear regression. Findings reveal that all four features significantly influence visit decisions when analyzed simultaneously, but only Historical Information and Educational & Interactive Features show a significant individual effect. These two components provide deeper engagement, enriching the cultural experience and enhancing tourist motivation. The coefficient of determination ($R^2 = 0.600$) indicates that 60% of the variation in visit decisions can be explained by the mobile application's features, while 40% is attributed to external factors such as accessibility, personal interest, and promotional efforts. The study concludes that digital tools—when effectively designed and implemented—can play a strategic role in promoting cultural heritage destinations. The Mangkunegaran application exemplifies how smart tourism platforms can increase tourist engagement, support cultural preservation, and influence destination choices in an increasingly digital travel landscape.

Keywords: Smart Tourism, Mobile Application, Visitor Decision, Cultural Heritage, Mangkunegaran Palace.

1. INTRODUCTION

Digital transformation in tourism has become an important strategy in promoting and managing technology-based tourist destinations, especially in the era of rapid technological advancement where tourists increasingly rely on digital tools to plan, navigate, and enrich their travel experiences. Smart tourism emerges as a strategic innovation that integrates information and communication technology (ICT) into tourism services, enabling destinations to provide real-time, personalized, and immersive content for visitors. Through the use of interactive, informative, and educational mobile applications, smart tourism not only improves service





efficiency but also enhances visitor engagement and satisfaction. One notable cultural destination in Indonesia that has proactively adopted this approach is Pura Mangkunegaran in Surakarta, a historical palace that now leverages mobile-based smart tourism platforms to preserve its cultural heritage while simultaneously attracting and educating modern travelers. This adoption reflects a broader shift in cultural tourism, where digital media and mobile applications become essential tools for storytelling, cultural interpretation, and destination branding.

Advances in information technology have driven significant transformations in various fields, including cultural preservation and tourism. Amid the challenges of modernization and the declining interest of the younger generation in local cultural heritage, an innovative approach is needed to bridge traditional values with modern technology. One concrete example of such efforts is the development of the Mangkunegaran App, a digital platform designed to introduce and promote the cultural richness of Pura Mangkunegaran in an interactive and educational manner.

In recent years, the development of digital-based tourism has accelerated rapidly, especially after the COVID-19 pandemic, which accelerated the adoption of technology in the travel industry. Digital tourism trends include the use of artificial intelligence-based travel applications, interactive maps, and digital platforms that allow tourists to obtain personalized destination recommendations. According to a report by the World Tourism Organization (UNWTO, 2022), digitalization has transformed the travel patterns of global tourists, with a significant increase in online bookings and the use of location-based technology for travel navigation. According to Achmadi et al. (2024), public perception of manual booking systems tends to be influenced by factors such as age, education level, and digital literacy. The study shows that people with low digital literacy tend to experience obstacles when accessing online reservation systems and rely more on direct assistance from staff or physical counters. This indicates that although digital innovations offer efficiency, not all segments of society can immediately adopt them optimally.

Wida Fitria's (2023) research entitled "The Influence of Smart Tourism Technology on Tourist Happiness through Travel Experience Satisfaction: A Survey of Indonesian Tourists Visiting Yogyakarta City" examines the relationship between smart tourism technology, travel experience satisfaction, and tourist happiness as the variables studied. Using quantitative methods and a survey of 262 tourists, the study found that smart tourism technology has a significant influence on tourist happiness through travel experience satisfaction. This highlights the importance of implementing smart technology to enhance tourist experiences and happiness. Dodi Setiawan's (2024) research titled "Smart Tourism: Blockchain, Artificial Intelligence, and Internet of Things Implementation in the Tourism Industry 5.0" examines how smart tourism technology influences tourists' intention to revisit through satisfaction and travel experience. Using an experimental design, this study found that the implementation of smart technology can enhance tourists' experiences, which in turn increases their intention to revisit.

Salsabila's (2023) study titled "Development of the Smart Tourism Concept Based on Changes in Tourist Behavior Post-COVID-19 Pandemic in Yogyakarta City" examines how changes in tourist behavior due to the pandemic influence the development of the smart tourism concept. The study's findings indicate that adapting smart technology to align with new tourist behaviors can increase their interest in visiting specific destinations. Nindyati's (2023) research titled "The Urgency of Implementing Smart Tourism for the Advancement of Indonesian





Tourism" emphasizes that the application of the smart tourism concept can provide tourists with a better experience and satisfaction, which in turn can influence their decisions in choosing tourist destinations. Pantiyasa's (2017) research entitled "Strategic Analysis of the Smart Tourism Concept in Indonesian Tourism" analyzes the strategy of implementing the smart tourism concept in the Indonesian tourism industry. The results show that the integration of advanced technologies, such as the Internet of Things (IoT), artificial intelligence (AI), and big data, can increase the competitiveness of Indonesian cultural tourist destinations in the international arena.

One of the potential tourist destinations for the implementation of Smart Tourism is the Mangkunegaran Palace in Surakarta. As one of the cultural and historical icons of Surakarta City, the Mangkunegaran Palace has strong tourist appeal, particularly in the cultural tourism sector. However, the challenge in managing digital-based tourism is how to optimally utilize technology to increase the number of tourist visits. A mobile application with Smart Tourism features can be a solution to enrich the tourist experience, provide interactive information, and increase tourist engagement in understanding the historical and cultural value of the destination (Buhalis & Amaranggana, 2014).



Figure I.1 Mangkunegaran Application Source: Personal Documentation

This application utilizes digital technology, including the Scan Object feature, to present historical information, artifacts, and cultural events in a more engaging and accessible manner for the general public. With a modern interface design and diverse content ranging from cultural news to tourist destination information, this application serves not only as a tourism promotion tool but also as an educational instrument that strengthens local cultural identity in the digital age. The development of the Mangkunegaran Application aligns with the concepts of smart tourism and digital heritage, where digitalization is utilized to enhance the quality of tourist experiences and expand the reach of cultural education. Through this approach, it is hoped that the noble values of Mangkunegaran will remain alive, recognized, and appreciated across generations and regions.

According to recent studies, smart tourism consists of three essential elements. First, Smart Experience, which is designed to provide visitors with a more engaging and meaningful





experience through real-time information access and efficient location-based services. Second, Smart Business Ecosystem, which facilitates collaboration among tourism businesses, stakeholders, and investors to build a more integrated and sustainable tourism environment. Third, Smart Destination, which aims to enhance the quality of the overall tourist experience, making it more attractive and competitive than conventional destinations. These three elements are supported by the systematic collection, processing, and use of digital data to optimize services and visitor satisfaction (Salsabila, 2023). Furthermore, the successful implementation of Smart Tourism greatly depends on how well digital technologies—such as artificial intelligence (AI), the Internet of Things (IoT), and mobile-based applications—are integrated into tourism services to enhance tourists' experiences, interaction, and cultural engagement (Setiawan, 2024).

In cultural tourism promotion, the use of mobile applications like the Mangkunegaran App has great potential to become a strong and sustainable promotional medium. By presenting cultural information, history, and tourist activities in an attractive and modern way, this app not only makes it easier for tourists to access services but also serves as a digital promotional tool capable of enhancing the brand image of Pura Mangkunegaran as a technology-based cultural tourism destination. According to Gretzel et al. (2015), one of the key components of smart tourism is the ability to promote destinations through integrated digital media, thereby creating connectivity between information, services, and tourist experiences. Thus, digital promotional features in mobile apps, such as cultural event notifications, online campaigns, and social media integration, can strengthen tourists' decisions to choose and visit Pura Mangkunegaran. This indicates that smart tourism-based digital promotion is a strategic element in shaping positive tourist perceptions and increasing visits to cultural tourist destinations such as Pura Mangkunegaran Surakarta.

The implementation of Smart Tourism in various destinations still faces challenges, such as infrastructure readiness, technology adoption by tourists and industry players, and digital data security. Therefore, it is important to assess the extent to which the implementation of Smart Tourism features in mobile applications can influence tourists' decisions to visit Pura Mangkunegaran Surakarta. This research is expected to provide insights into the effectiveness of technology in enhancing the appeal of cultural tourism and offer recommendations for the development of more optimal digital-based tourism.

2. RESEARCH METHOD

This study uses a quantitative research approach that aims to analyze the causal relationship between smart tourism features in mobile applications and tourists' decisions to visit the Mangkunegaran Palace in Surakarta. Quantitative research is based on the assumption that phenomena can be classified and measured numerically, allowing researchers to focus on a set of variables to be analyzed using structured statistical methods. This research paradigm guides the formulation of hypotheses and the selection of appropriate analytical tools. This research was conducted at Mangkunegaran Palace, located at Jalan Ronggowarsito No. 83, Keprabon, Banjarsari District, Surakarta City, Central Java. This location was chosen due to its prominence as a cultural heritage site and its relevance in the implementation of digital tourism initiatives. The research population consists of domestic tourists who have visited or are currently visiting the site and use mobile-based smart tourism applications as part of their travel experience. These applications typically offer functions such as information search, online





booking, access to reviews, and interactive features like digital maps and virtual tours. A total of 96 respondents were selected using purposive sampling, ensuring that each participant had experience interacting with the Mangkunegaran mobile tourism app. Data was collected through a structured questionnaire covering items representing four independent variables Historical Information, Cultural Gallery, Cultural Events and News, and Educational and Interactive Features as well as the dependent variable, Visit Decision. Each item was measured using a Likert scale to capture the level of agreement or perception of the respondents.

Data were analyzed using multiple linear regression to evaluate the simultaneous and partial effects of smart tourism features on visit decision. Prior to analysis, the instrument underwent validity and reliability tests to ensure the accuracy and consistency of measurements. A significance threshold of 0.05 was applied to determine whether the relationship between variables was statistically significant.

3. RESULTS AND DISCUSSION

Pura Mangkunegaran is the official palace of the Mangkunegaran Duchy, located in the city of Surakarta, Central Java. In addition to being a historical relic, Pura Mangkunegaran is also a center for the preservation of Javanese arts and culture, such as dance, gamelan, traditional clothing, and ancient literature. Currently, Pura Mangkunegaran is one of the leading cultural tourist destinations in Surakarta.

To support technological and tourism development, a Smart Tourism-based mobile app has been developed specifically to introduce Pura Mangkunegaran in a more interactive and modern way. The app offers several key features, including:

- Narrator Voice-Over: Let's explore the features of the Mangkunegaran Smart Tourism Application a digital gateway to cultural heritage and interactive experiences.
- First, we have the Historical Information feature. This section offers a rich and comprehensive narrative of the Mangkunegaran legacy from its founding figures to its significant role in shaping Javanese history. Through clear and engaging storytelling, visitors gain a deeper understanding of the palace's historical and cultural significance.
- Second, is the Cultural Gallery. Here, users can browse a curated digital collection of high-quality photos, showcasing artifacts, traditional architecture, classical paintings, and vivid documentation of past cultural events. It's a visual journey through time accessible at your fingertips.
- Image: Third, the Events and News section keeps visitors updated. From traditional ceremonies and cultural festivals to the latest announcements and performances at Pura Mangkunegaran—this feature ensures you never miss a moment of cultural celebration.
- Fourth, discover the Educational and Interactive Features. This space is designed to offer fun and meaningful learning experiences. Interactive articles, cultural quizzes, and engaging storytelling provide a playful yet informative way to explore Javanese heritage.
- With all these features, the Mangkunegaran App brings together information, entertainment, and education giving both local and international tourists a more





informative, seamless, and immersive experience. At the same time, it empowers users to participate in preserving the noble cultural values of Indonesia.

With this app, local and international tourists can have a more informative, easy, and enjoyable visiting experience, as well as participate in the preservation of the cultural values of the archipelago.

According to data displayed in the Mangkunegaran Application, the history of Pura Mangkunegaran is presented digitally through interactive features that contain information about the founding figures and the cultural development of Mangkunegaran from time to time (Mangkunegaran Application, 2025). The establishment of Pura Mangkunegaran cannot be separated from the history of the Islamic Mataram Kingdom. In the mid-18th century, the political stability of Mataram was shaken by the intervention of the VOC (Vereenigde Oostindische Compagnie) in palace affairs. Amidst this tension, Raden Mas Said, known as a fierce anti-VOC fighter, took up arms to defend the palace's authority.

The conflict was resolved with the signing of the Salatiga Agreement on March 17, 1757. Through this agreement, the Mangkunegaran Kingdom was established, and Raden Mas Said was appointed as its leader with the title Kanjeng Gusti Pangeran Adipati Arya (K.G.P.A.A.) Mangkunegara I. To maintain the integrity and honor of the Mangkunegaran Principality, K.G.P.A.A. Mangkunegara I established his government on three main pillars:

- 1. Tri Dharma; Rumangsa Melu Handarbeni (Feeling a sense of belonging to the homeland), Wajib Melu Hangrukebi (Obligation to defend the homeland), and Mulat Sarira Hangrasa Wani (Courage to introspect and take responsibility).
- 2. Hanebu Sauyun, meaning united like a clump of sugarcane
- 3. Tiji Tibeh, meaning "One's success is everyone's success, one's death is everyone's death" (fighting together in both joy and sorrow).

Through the Salatiga Agreement, Mangkunegaran was granted rights to 4,000 acres of land, including areas such as Kaduang, Nglaroh, Matesih, Pajang, and Gunung Kidul. This principality stood as an independent entity with sovereignty over its own territory. However, during the Surakarta Social Revolution (1945–1950), the status of Mangkunegaran underwent changes. Since then, Mangkunegaran no longer holds administrative governmental power but remains actively involved in social and cultural fields, including the preservation of art, Javanese traditions, and education through libraries and museums. Pura Mangkunegaran is now a symbol of cultural heritage actively used as a historical and cultural tourist destination, including in the development of a smart tourism-based mobile application that provides historical information, digital galleries, cultural events, and interactive educational features for both local and international visitors.

In this chapter, the researcher presents the data from the research conducted. The research instruments in this study consisted of a questionnaire measuring perceptions of Smart Tourism features in the Mangkunegaran application and their influence on visiting decisions. Hypothesis testing was conducted using SPSS 25, including descriptive statistics, validity and reliability tests, classical assumption testing, multiple linear regression analysis, and significance testing. The number of respondents was 96 domestic tourists who had used the application.

Table 1. Descriptive Statistics





					Std.
Variable	N	Minimum	Maximum	Mean	Deviation
Historical Information (X1)	96	9	25	0,80903	2.858
Cultural Gallery (X2)	96	10	25	19.01	2.690
Event and News (X3)	96	10	25	18.48	3.187
Educational and Interactive (X4)	96	8	25	0,8	3.293
Visiting Decision (Y)	96	12	30	23.20	3.518

Table 2. Scoring Range and Classification

	Score			.
Variable	Range	Classification	Frequency	Percentage
Historical Information	21 - 25	Very High	36	37.5%
	16 - 20	High	41	42.7%
	11 - 15	Moderate	19	19.8%
Cultural Gallery	21 - 25	Very High	41	42.7%
	16 - 20	High	42	43.8%
	11 - 15	Moderate	13	13.5%
Event and News	21 - 25	Very High	31	32.3%
	16 - 20	High	38	39.6%
	11 - 15	Moderate	27	28.1%
Educational & Interactive	21 - 25	Very High	36	37.5%
	16 - 20	High	35	36.5%
	11 - 15	Moderate	25	26.0%
Visiting Decision	26 - 30	Very High	44	45.8%
	21 - 25	High	35	36.5%
	16 - 20	Moderate	17	17.7%

The tables above show that the average perception of Smart Tourism features in the application is generally in the "High" to "Very High" category. The highest mean score was obtained in the Cultural Gallery (19.01) and Historical Information (18.85) features, indicating that these features are highly appreciated by users. For the dependent variable, Visiting Decision, the mean score was 23.20, indicating that the decision to visit Pura Mangkunegaran is strongly influenced by the Smart Tourism features offered. The scoring classification reveals that for all independent variables, more than 75% of respondents rated them as High or Very High, which implies positive user engagement with the features. Specifically, Historical Information and Educational-Interactive features appear most impactful based on regression analysis.

Table 3. Normality Test (Kolmogorov-Smirnov)

Statistic Asymp. Sig. (2-tailed) Conclusion





0.078 0,138888889

Data is normally distributed

The normality test was conducted using the Kolmogorov-Smirnov test, which produced a significance value (Asymp. Sig. 2-tailed) of 0.200, which is greater than 0.05. This indicates that the residuals are normally distributed, and therefore, the data meets the assumption of normality. This result allows for the continuation of parametric testing using regression analysis.

Table 4. Multicollinearity Test

Variable	Tolerance	VIF	Conclusion
Historical Information (X1)	0,508333333	1.366	No multicollinearity
Cultural Gallery (X2)	0,497222222	1.397	No multicollinearity
Event and News (X3)	0,55625	1.248	No multicollinearity
Educational & Interactive (X4)	0,538888889	1.289	No multicollinearity

Multicollinearity was assessed using Tolerance values and the Variance Inflation Factor (VIF). According to the results, all Tolerance values were greater than 0.1, and all VIF values were less than 10, as shown in the following table. These results indicate that there is no multicollinearity among the independent variables, meaning each variable contributes independently to the regression model without overlapping effects.

Table 5. Heteroscedasticity Test

Variable	Sig. (p-value)	Conclusion
Historical Information (X1)	0,290277778	No heteroscedasticity
Cultural Gallery (X2)	0,431944444	No heteroscedasticity
Event and News (X3)	0,511111111	No heteroscedasticity
Educational & Interactive (X4)	0,284722222	No heteroscedasticity

The heteroscedasticity test was conducted using the scatterplot method, where the standardized residuals were plotted against the predicted values. The scatterplot shows that the points are randomly and evenly distributed, without forming a specific pattern. This suggests that the residuals have constant variance, and thus the assumption of homoscedasticity is fulfilled. Alternatively, if the Glejser test was used, it would produce significance values (p-values) for each variable. All values were found to be greater than 0.05, indicating the absence of heteroscedasticity

Table 6. T test (Partial test)

Variable	t-count	Sig. (p-value)	Conclusion
Historical Information			Significant effect on visiting
(X1)	4.911	0.000	decision
			No significant effect on visiting
Cultural Gallery (X2)	1.316	0,132638889	decision
			No significant effect on visiting
Event and News (X3)	1.177	0,168055556	decision





Educational & Interactive (X4)

4.002

0.000

Significant effect on visiting decision

The results above show that only X1 (Historical Information) and X4 (Educational & Interactive Features) have a significant effect on the visiting decision (Y), as their p-values are below 0.05. Meanwhile, X2 (Cultural Gallery) and X3 (Event and News) have no significant effect since their p-values exceed 0.05. This suggests that tourists are more influenced by historical and interactive/educational content in the application than by visual gallery or event/news information when deciding to visit Pura Mangkunegaran.

Table7. F-Test (Simultaneous Test)

F-count	Sig. (p-value)	Conclusion
34.775	0.000	All variables jointly influence the decision

The result shows that the significance value is 0.000, which is less than 0.05, indicating that the four independent variables (X1, X2, X3, and X4) simultaneously have a significant effect on the visiting decision (Y).

Individually, only Historical Information and Educational & Interactive Features significantly influence the visiting decision. Simultaneously, all four features of Smart Tourism in the mobile application have a significant impact on tourists' decision to visit Pura Mangkunegaran. This suggests that a holistic approach in improving all features is beneficial, but emphasis should be placed on historical narratives and interactive learning content, as these are the most impactful drivers of visitation interest.

Regression Analysis

Based on the multiple linear regression analysis, the equation is:

Y = 7.206 + 0.336X1 + 0.159X2 + 0.122X3 + 0.301X4

This indicates: Every 1-point increase in Historical Information (X1) increases the decision score by 0.336 points. Educational and Interactive Features (X4) also have a strong influence with a coefficient of 0.301. Meanwhile, Cultural Gallery (X2) and Event and News (X3) have lower coefficients and were found not statistically significant based on the t-test (p > 0.05).

To evaluate how much of the variance in the dependent variable (visiting decision) can be explained by the independent variables (Smart Tourism features), the coefficient of determination (R^2) and the multiple correlation coefficient (R) were analyzed.

Table 8. Coefficient of Determination

 (R^2)

Model Summary	R	\mathbb{R}^2
Model	0,775	0,600

The R value (Multiple Correlation Coefficient) is 0.775, which indicates a strong positive correlation between the Smart Tourism features and the decision to visit Pura Mangkunegaran. This





means that the relationship between the independent variables and the dependent variable is both positive and strong. The R² value (Coefficient of Determination) is 0.600, which means that 60% of the variation in the visiting decision can be explained by the four Smart Tourism features: Historical Information, Cultural Gallery, Event and News, and Educational & Interactive Features.

While this study found that 60% of the variance in visiting decisions can be explained by Smart Tourism features (Historical Information, Cultural Gallery, Event and News, and Educational & Interactive Features), the remaining 40% is influenced by other external or personal factors not examined in this research. These may include:

1. Personal Interest and Motivation

Some tourists may visit based on personal or cultural interest, emotional connection, curiosity, or a desire for spiritual or historical experiences that go beyond app features.

2. Word of Mouth and Social Influence

Recommendations from friends, family, influencers, or online reviews on social media platforms can significantly influence a person's decision to visit a destination, even if they do not use the official tourism application.

3. Accessibility and Infrastructure

The ease of transportation, availability of parking, accommodation options, and quality of supporting infrastructure often impact the decision to travel to a specific site.

4. Cost and Budget Considerations

Entrance fees, travel costs, accommodation prices, and other expenses can be decisive factors, especially for budget-conscious travelers.

5. Destination Promotion and Advertising

Offline promotions such as brochures, TV ads, billboards, or tourism expos can affect people's awareness and interest, independently of mobile app usage.

6. Weather and Seasonality

Climatic conditions and timing such as rainy seasons, holidays, or cultural festivals can strongly influence tourist flow and decision-making.

7. Cultural Events and Personal Schedules

Some people visit due to specific events such as traditional ceremonies, local performances, or personal schedule availability, which may not always be directly promoted through the application.

8. Digital Literacy and Technology Access

Not all potential tourists are equally familiar with or have access to mobile applications. Some may make decisions through traditional methods due to age, education level, or technological barriers.

These external factors, although not directly measured in the study, are essential to understand the full scope of what influences tourist behavior. Future research may consider including such variables to provide a more comprehensive analysis of visitor decision-making patterns.

Discussion

The findings of this study reveal that Smart Tourism features integrated into the Mangkunegaran mobile application have a meaningful influence on tourists' decision to visit Pura Mangkunegaran, Surakarta. Through quantitative analysis involving 96 respondents, several key conclusions emerged. The descriptive statistics show that most respondents rated all four Smart Tourism features Historical Information, Cultural Gallery, Event and News, and





Educational & Interactive Features as High to Very High. This indicates that users have a positive perception of the application's design and content.

From the multiple linear regression analysis, it was found that Historical Information (X1) and Educational & Interactive Features (X4) have a significant partial effect on visiting decision (p < 0.05), while Cultural Gallery (X2) and Event and News (X3) do not significantly affect it when considered individually. However, the F-test confirms that all four features jointly influence visiting decisions significantly (p = 0.000).

These results suggest that tourists value substantive, informative, and interactive content more than passive content such as galleries or news feeds. The Historical Information provides contextual depth and cultural insight that enrich the tourist experience, while interactive educational elements engage users and enhance learning, making the visit more meaningful. This supports theories of engaged tourism, where digital tools that facilitate cognitive and emotional involvement can positively shape tourist behavior.

Furthermore, the coefficient of determination ($R^2 = 0.600$) indicates that 60% of the variance in the visiting decision can be explained by the four features. The correlation coefficient (R = 0.775) also shows a strong positive relationship between the Smart Tourism features and tourists' behavioral decisions. This confirms that the mobile application plays an important role in influencing tourist behavior, validating the role of digital transformation in modern tourism.

Nevertheless, approximately 40% of the influence on tourist behavior and destination engagement stems from external or unmeasured variables such as word of mouth, transportation accessibility, cultural events, weather conditions, personal interests, digital literacy, and affordability. This is consistent with findings by Achmadi et al. (2024), who emphasized that digital literacy significantly affects the perception of tourism services, especially when manual systems are still widely used. Moreover, transportation and affordability remain core factors influencing accessibility, particularly in developing countries (Pantiyasa, 2017; Nindyati, 2023). Therefore, destination managers should not solely rely on digital innovations but should design strategies that integrate offline and contextual elements to enhance visitor inclusivity.

These findings are also in line with Gretzel et al. (2015) and UNWTO (2022), who argue that smart tourism must go beyond technological infrastructure and address socio-cultural dynamics and localized needs. As such, an integrative framework is essential—combining digital platforms with real-world enablers such as community readiness, supportive policies, and infrastructure development (Salsabila, 2023; Setiawan, 2024).

In conclusion, Smart Tourism applications should not be regarded merely as promotional tools but as strategic instruments that influence destination decision-making and enhance the visitor journey. Their true effectiveness lies in the delivery of high-quality, relevant, and culturally engaging content. This is echoed by Buhalis and Amaranggana (2014), who stress that the smart tourism framework is built upon interoperability, personalization, and contextualization. Similarly, Neuhofer et al. (2015) found that smart technologies contribute meaningfully to personalized and emotionally resonant experiences.

Furthermore, as highlighted in the study by Fitria (2023), smart tourism technology has a direct impact on travel satisfaction and perceived happiness—mediated by the ability of content to spark curiosity, facilitate learning, and foster cultural appreciation. This emphasizes the importance of curating digital content that is both informative and immersive. Destination





managers must therefore focus on producing interactive and meaningful narratives that connect tourists with local heritage and cultural identity (Setiawan, 2024; Nindyati, 2023). Through this balanced strategy, Smart Tourism can fulfill its potential not only as a technological solution but also as a catalyst for sustainable and inclusive tourism development.

4. CONCLUSION

This research concludes that Smart Tourism features embedded in the Mangkunegaran mobile application play a crucial role in shaping tourists' decisions to visit Pura Mangkunegaran Surakarta. The findings demonstrate that users generally have a highly positive perception of the application's features, particularly the Historical Information and Educational & Interactive content, which were found to have the strongest influence on visiting intentions. These features contribute significantly to the users' understanding and appreciation of the site, making their potential visit more meaningful and informed.

Although not all features had a significant effect when analyzed individually, together they contribute positively and substantially to influencing tourists' behavior. The overall impact suggests that Smart Tourism applications function not merely as informational tools, but as strategic digital platforms that support cultural tourism engagement. They help bridge modern technology with traditional heritage by providing rich narratives, visual and interactive content, and accessible information for wider audiences.

Beyond the application itself, it is also important to acknowledge that tourists' decisions are influenced by various external factors, including personal interests, social recommendations, access to transportation, and promotional efforts beyond digital means. These aspects remain integral to the broader tourism experience and should be considered in future development strategies.

In conclusion, the Mangkunegaran tourism application, through its Smart Tourism features, has proven effective in enhancing destination appeal and influencing visiting decisions. Its success underlines the importance of combining cultural richness with digital innovation to promote heritage tourism in a modern, engaging, and user-centered manner.

5. REFERENCES

- Achmadi, A., Purnamasari, D., & Rahardjo, R. (2024). Digital literacy and the perception of manual booking systems in tourism. Journal of Tourism Technology Studies, 6(1), 35–48.
- Buhalis, D., & Amaranggana, A. (2014). Smart tourism destinations. In Z. Xiang & I. Tussyadiah (Eds.), Information and Communication Technologies in Tourism 2014 (pp. 553–564). Springer. https://doi.org/10.1007/978-3-319-03973-2 40
- Fitria, W. (2023). The influence of smart tourism technology on tourist happiness through travel experience satisfaction: A survey of Indonesian tourists visiting Yogyakarta City. Journal of Smart Tourism Research, 5(2), 22–35.





- Gretzel, U., Sigala, M., Xiang, Z., & Koo, C. (2015). Smart tourism: Foundations and developments. Electronic Markets, 25(3), 179–188. https://doi.org/10.1007/s12525-015-0196-8
- Neuhofer, B., Buhalis, D., & Ladkin, A. (2015). Smart technologies for personalized experiences: A case study in the hospitality domain. Electronic Markets, 25(3), 243–254. https://doi.org/10.1007/s12525-015-0182-1
- Nindyati, D. (2023). The urgency of implementing smart tourism for the advancement of Indonesian tourism. Tourism and Innovation Journal, 4(1), 55–66.
- Pantiyasa, I. K. (2017). Strategic analysis of the smart tourism concept in Indonesian tourism. Indonesian Journal of Tourism Strategy, 3(1), 10–25.
- Salsabila, R. (2023). Development of the smart tourism concept based on changes in tourist behavior post-COVID-19 pandemic in Yogyakarta City. Journal of Contemporary Tourism, 2(4), 78–89.
- Setiawan, D. (2024). Smart tourism: Blockchain, artificial intelligence, and internet of things implementation in the tourism industry 5.0. Journal of Digital Economy and Tourism, 6(1), 15–32.
- UNWTO. (2022). Digital transformations in tourism: Key trends and developments. World Tourism Organization. https://www.unwto.org
- Koo, C., Shin, S., Gretzel, U., Hunter, W. C., & Chung, N. (2016). Conceptualization of smart tourism destination competitiveness. Asia Pacific Journal of Information Systems, 26(4), 561–576. https://doi.org/10.14329/apjis.2016.26.4.561
- Xiang, Z., Du, Q., Ma, Y., & Fan, W. (2017). A comparative analysis of major online review platforms: Implications for social media analytics in hospitality and tourism. Tourism Management, 58, 51–65. https://doi.org/10.1016/j.tourman.2016.10.019
- Zhang, L., & Benyoucef, M. (2016). Consumer behavior in social commerce: A literature review. Decision Support Systems, 86, 95–108. https://doi.org/10.1016/j.dss.2016.04.001
- Tussyadiah, I. P., & Fesenmaier, D. R. (2009). Mediating the tourist experiences: Access to places via shared videos. Annals of Tourism Research, 36(1), 24–40. https://doi.org/10.1016/j.annals.2008.10.001
- Wang, D., Li, X. (Robert), & Li, Y. (2013). China's smart tourism destination initiative: A taste of the service-dominant logic. Journal of Destination Marketing & Management, 2(2), 59–61. https://doi.org/10.1016/j.jdmm.2013.05.004



