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INTEGRATING SMART TECHNOLOGIES FOR SUSTAINABLE DESTINATION DEVELOPMENT AND EFFICIENT RESOURCE MANAGEMENT

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ABSTRACT

Purpose: This study utilizes IoT, AI, blockchain and data analytics to help sustain destination development and resource management. This research studies the use of digital technologies in developing energy, water, and waste systems, governance, and responsible tourism practices.

Methodology: The qualitative research methodology for this study has been the use of continuous review and analysis of secondary literature. The data and implications of smart technologies in tourism ecosystems was collected from multiple sources including but not limited to peer-reviewed journals, articles, books, industry reports and relevant policy papers.

Findings: In the results of this study, intelligent technologies significantly increase sustainable tourism in three key areas: operational and environmental efficiency, in real-time monitoring and prediction of resource management; better tourist participation and behaviour changes, personalized mobile and immersive virtual devices; improved transparency and equitable governance, using decentralized systems such as blockchain.

Originality: This study investigates whether converging smart technologies are tied to sustainability of the destination through the application of converging smart technologies. This method re-examines the blurry paradigms of technologies, bridged to socio-economic and governance systems by providing a way in which technologies are recreated across the inextricably divided paradigms of technology.

Keywords: Smart Tourism, Sustainable Destination Development, Resource Management, Digital Innovation, Smart Technologies, Responsible Tourism, Tourism Sustainability

INTRODUCTION

The integration of technology and sustainable development is rapidly transforming the global travel and hospitality industry (Asif & Fazel, 2024). In recent time, smart technologies such as Augmented Reality, Artificial Intelligence, and the Internet of Things have driven rapid advancement. This has led to the digitalization of tourism businesses for bettering the quality

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and personalization of experiences of travelers (Sustacha et al., 2023). Advancements of technology play an vital role in promoting sustainable tourism market by optimizing resource use, reducing environmental impact, and encouraging responsible travel behaviors (Pranita et al., 2023). In recent years, sustainability has been emphasized in the sector because of increased environmental awareness, climate change implications, and desire on the part of travelers for eco-friendly activities (Khatter, 2023). Globally, tourism stakeholders acknowledge the importance of technology in promoting sustainable practices (Pranita et al., 2023) as well as for medical tourism industry (Varshney, 2024). As a result, destination stakeholders are looking for methods to incorporate creative solutions into their strategy to fulfil the growing demand for sustainability (Khatter, 2023; Pranita et al., 2023). Specifically, the development of digital technology, especially artificial intelligence, has encouraged Destination Management Organizations and their partners to play an active role in disruptive technologies in order to improve competitiveness and enhance tourists' experiences (El Archi et al., 2023).

Sustainability in tourism is a factor that fundamentally contributes to the industry's growth. Due to the rise in tourism demand, developed and emerging countries have to adapt their methods of management in order to capitalize on their competitive advantages (Bieger et al., 2009). This adaptation requires proactive environmental stewardship; tourism destinations have to adapt rapidly changing technologies to support the pressures on local ecosystems. Service providers could learn from the online discussions by potential tourists about their travel plans and probable challenges at their destination where they want to visit (Ranga et al., 2023). A sustainable tourism destination should consider active environmental management, as tourist activity has a significant impact on the ecosystem that must be controlled to minimize harmful outcomes (Manente, 2008). However, the efficient deployment of Information and Communication Technology (ICT) has become an important aspect of modern destination strategy (Buhalis, 2003). With the combination with connected systems (such as sensors), smart phones, cloud computing, IOT, RFID networks, ICT infrastructures can support effective destination management by collecting, and analyzing decisions based on collective knowledge, consequently helping cities and destinations improve their performance and increase their quality of life (Xiang & Fesenmaier, 2017). What makes this smart destination a ‘smart destination’ is its integrated technological application in which visitors are actively engaged and integrated in the landscape, that can improve tourism and local quality of life for visitors. This is important, because the economic, social, environmental, and technological implications of sustainable smart destination are all important for sustainable smart destination (Shafiee et al., 2021). While this technology has already become a technological revolution, tourist destinations have faced significant challenges to find a sustainable means to maximize resource use and improve the living conditions of local communities and tourists (Coca-Stefaniak, 2021). While these areas allow academics to explore smart tourism concepts (Gretzel et al., 2016; Singh & Duhan, 2022), a significant gap remains in the application-based research. Researchers have not adequately considered the direct, measurable application of smart technologies in sustainable tourist destinations. Although some researchers, like (Francisco et al., 2018), have studied smart sustainability, there is still an absence of conceptual and empirical research linking these specific technology deployments directly to measurable resource efficiency gains in a comprehensive destination setting. By addressing these literature gap, this study uses an exploratory research approach with two key objectives. First, it seeks to summarize the specific smart technology applications applied in resource efficiency and sustainability performance as evidenced by various studies to help identify applications in smart technologies. Second, the findings of this work critically summarise the operational

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challenges and perceived benefits of smart technology integration from the perspective of destination management organizations and tourism stakeholders. In doing so, this research provides the basic knowledge needed for policymaking to move away from fragmented technological pilots and toward integrated resource-optimized and sustainable destination models.

LITERATURE REVIEW

Technologies have resulted in unanticipated technological advances and knowledge tools for the information community (Gretzel et al., 2016). Smart tourism refers to the continuous digital transformation of the tourism business over time (Fabry & Blanchet, 2019). Smart tourism can be regarded as a platform that links up tourism resources and information technologies like artificial intelligence, cloud computing, and IoT for efficient service provision to tourists in cities using mobile innovation and technological development (Wang et al., 2013). Smart destinations aim to improve the quality of life for all stakeholders, including residents and tourists (Gretzel et al., 2016), transform tourist's experience, tourism business and destination marketing strategies (Li et al., 2017). Improve resource manage productivity, boost destination competitiveness, increase consumer satisfaction, and integrate sustainability into the destination. While smart tourism attractions have made progress, (Chan et al., 2019) suggest that smart tourist destinations could be more advanced, destinations must establish a framework for combining business, technological, and social infrastructures to enable smartness. Academic research in travel and tourism is increasingly focused on digital technology (Ye et al., 2020). Recent research has emphasized the various dimensions, challenges, and components of this topic. According to (Gretzel et al., 2016), any site can be a smart tourism destination consists of two pillars: "soft" intelligence (organizational skills, cooperation, innovation, and leadership) and "hard" intelligence (technology infrastructure). Having just one of the two pillars does not make a destination brilliant. Having "hard" intelligence available is key to enhance human capital, make informed decisions through technology and infrastructure. Smart tourism requires integrated technology environments, responsive processes at all levels, end-user devices, and active usage of smart digital platforms by stakeholders (Buhalis & Amaranggana, 2015). Smart tourism is a technology-driven concept that serves as the baseline for smart tourism destinations. Some researchers consider it an outgrowth of the concept of e-tourism (Gretzel et al., 2015). The main difference is the fact that smart technology in the former allows more interconnection – between different objects – between smart technologies and other tools. E-tourism also provides information and networking between entrepreneurs. Smart tourism also involves online and physical infrastructure, benefiting both consumers and destinations. E-tourism focuses on digital connections, while smart tourism integrates both physical and digital experiences (Gretzel et al., 2016). Smart tourism destinations are part of the techno-urban phenomenon, raising the question of their ability to generate sustainability through interconnected social, urban, and technological transformations (Höjer & Wangel, 2015). With the integration of sustainability into tourism, smart destinations should prioritize openness, commitment, planning, development boundaries, and equity in implementation (Sharpley, 2000). Smart technologies are a vital toll in the tourism industry to improve sustainability and resource management. These innovations are transforming traditional tourism practices by enabling greater efficiency, environmental saving, and improved visitor experience. With the integration of artificial intelligence, internet of things, big data analytics and smart mobility, tourist destination services are evolving and changing. Here is a summary of top smart technology and actions that help to provide sustainable tourism development and responsible destination management around the globe.

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SMART INFRASTRUCTURE AND IOT APPLICATIONS IN TOURISM

IoT Technology simplify tourism operations by improving visitor management, resource use, and sustainability practices. For example, in country like Peru, IoT solutions have improved decision-making processes and optimized resource allocation, resulting in greater consumer experiences (Ramirez-Asis et al., 2024). The tourism ecosystem utilizes technologies such as big data, cloud computing, machine learning to collect and analyze data which can improve safety, efficiency and personalized services (Rosário & Dias, 2024). SMART-Tour is a computerized system that utilizes IoT-based sensors to track environmental parameters such as waste production and air quality, providing sustainable tourism. This approach allows for real-time decision making to balance ecological balance, and guide tourists to environmentally friendly activities (Sharma & Pandey, 2025). This integration of IoT in smart destinations improves operation efficiency and visitor experience through data analytics and crisis management despite challenges such as data privacy and large investment requirements. (Agung Yuliyanto Nugroho et al., 2024). The IoT Sensors help tourists to provide live-time information about their trip and thus make the entire trip a complete experience. These sensors collect data about the visitor services and habits that enables them to identify patterns and improve the overall experience (Sharma & Pandey, 2025).

ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING IN SUSTAINABLE TOURISM

AI improves operational efficiency by using predictive analytics for demand forecasting and resource allocation, which helps manage visitor flows and minimize environmental consequences (Das, 2024). Intelligent technology, such as chatbots and automated trash management, expedite operations and increase tourist interaction, resulting in a more competitive tourism sector (Talukder, Swarna, et al., 2025). A method is used to estimate tourism demand and allows for better planning and resource management by using machine learning, such as the Facebook Prophet algorithm. Examples of such models can measure environmental impact by offering information about carbon dioxide and resource use that are essential to sustainable tourism strategies (KUPI, 2025). Ai processes encourage resource utilization and minimize environmental impacts to ensure the tourism development takes into account sustainability goals (KUPI, 2025). From analyzing massive amounts of data, AI enables proactive decisions, which facilitates site locations' decision-making, and thus protect biodiversity and develop environmentally-friendly tourism policies (Talukder, Swarna, et al., 2025).

MOBILE APPLICATIONS AND LOCATION-BASED TECHNOLOGIES FOR TOURIST ENGAGEMENT

Mobile applications have become a powerful tool for promoting sustainable tourism by actively encouraging environmental conservation and cultural heritage preservation (Chadha et al., 2024). These initiatives promote responsible tourism practices including elements that make their passengers more environmentally conscious, and improvements to the user experience, incorporating sustainability concepts into design and function directly (Chadha et al., 2024). Cultural points of interest, using Augmented Reality (AR) for interactive educational content, and providing real-time information that improves both navigation and environmental interaction (Evagelou et al., 2024). Plus, AR and VR technologies have revolutionized destination experiences by providing immersive virtual tour of locations, interactive maps and historical context for on-site exploration, and engaging digital content, which provides visitor marketing and cultural heritage promotion effectively (Juhanita Jiman

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& Salamiah Muhd Kulal, 2023). Together, these mobile and digital tools are transforming tourism into a more educated, engaging, and sustainable industry.

SMART ENERGY MANAGEMENT SYSTEMS IN TOURISM INFRASTRUCTURE

For hotel, energy efficiency is an important frontier for the sector, because hotels are the most energy intensive enterprises. For example, HVACs, lights, and hot water supply are key consumption factors. Effective use of LED lighting and smart HVAC controls can dramatically reduce energy consumption, often of 10-20%, and also work toward global sustainability targets such as the Paris Agreement and the Paris Agreement (Menegaki, 2025). Providing the optimal alignment is essential to aggressive objective emissions and successful case studies in Hawaii and Sweden show that the cost of retrofitting efficiency for efficiency results in significant energy and cost savings (Bohdanowicz, 2006). The scale of these efforts requires systemic innovations broader than smart grids for whole tourism areas. These sophisticated energy storage and management technologies are essential in maintaining supply and demand balance, enhancing overall efficiency and facilitating sustainable integration of renewable power to power tourism areas (Kumari et al., 2025). Directly integrating renewable energy technologies such as solar panels and wind turbines have become increasingly important in hotel business. The use of these resources minimizes the costs of operation and improves the quality of a facility's sustainability, thereby providing the best resource-efficient operations that help owners, operators, and environmental conscious customers (Bohdanowicz, 2006).

SMART MOBILITY AND SUSTAINABLE TRANSPORTATION FOR TOURIST DESTINATIONS

The future of sustainable tourism depends on how people move around in places. Smart Mobility improves the transportation infrastructure through technology, data analysis, and artificial intelligence, enabling tourists to travel more effectively and making the whole experience better and more comfortable (Tung et al., 2020). This technology integration promotes green transport, which emphasizes walking, cycling and public transit with an emphasis on health and community life to better health for residents and visitors (Ivanović et al., 2023). Tourism Organizations (DMOs) are increasingly pushing for such activities not just in order to minimize the impact of climate change but also in order to enhance their regional tenets of attractiveness and accessibility (Scuttari & Isetti, 2019). Electric cars are an important tool in developing tourists' sustainability, by reducing local pollutants and noise, creating a healthy environment for many locations (Ivanović et al., 2023). Successful implementations in South Tyrol's Alpine area show that smart investment in EV infrastructure could also serve as a means to innovate tourism products and create attractive new market options (Scuttari & Isetti, 2019). Smart Mobility systems and green transportation networks form an important foundation for creating low-impact, high-quality tourism environments.

SMART WATER AND WASTE MANAGEMENT IN TOURISM DEVELOPMENT

With modern technology adding to sustainable energy efficiency and smart mobility, modern resource management in tourism, especially in water and waste management, is changing resource management in tourism based on the principles of energy efficiency and smart mobility (Ifeoluwa Oreofe Adekuajo et al., 2025). AI-enabled models and IoT sensors enable the efficient monitoring and dynamic forecasting of water consumption. Hotel data integrated occupancy and environmental information can make adaptive system that reduce consumption by up to 30% every year and IoT insights enable housekeepers to choose more durable cleaning practices and minimize waste by utilizing IoT technologies (Kalsi et al.,

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2025). It is also evident in waste reduction as smart waste management systems that use IoT and data analytics improve operational efficiency and waste from landfills and eliminate waste. This technical approach is supplemented by material science advances such as the use of biodegradable materials that help hotel operations consistent with circular economy principles (Roy, 2024). Finally, these systems provide an integrated IoT ecosystem for sustainable resource management. In turn, such integrated systems allow continuous monitoring and optimization of energy and water consumption and resulting in considerable reductions in a facility ‘s spatial impact. For example, this infrastructure can directly engage guests through mobile applications, teaching them about conservation and creating a shared sense of environmental responsibility with guest participation, closing the gap between operational efficiency and host participation in sustainability (Sankar & Ilangovan, 2025).

BLOCKCHAIN TECHNOLOGY FOR SUSTAINABLE AND TRANSPARENT TOURISM SYSTEMS

Blockchain technology is disrupting the tourism supply chain, creating a transparent and fair supply chain in the tourism business, which will boost the industry over time. Blockchain increases the efficiency and transparency of the tourism supply chain and thus helps in a sustainable growth of the tourism sector. Blockchain streamlines the process of delivery and marketing by managing, transporting and delivering goods and services in an efficient manner, which will reduce the time to market and logistical challenges for the tourism industry (Prados-Castillo et al., 2023). Eleven arts and services intermediaries can be eliminated within the notion of decentralization to let local artists and service providers connect directly with tourists, empowering local economies (Talukder, Khan, et al., 2025). Furthermore, the Technology promotes unprecedented openness and trust by using safe, automated smart contracts that ensure transaction integrity for all stakeholders (Talukder, Khan, et al., 2025). It enhances sustainable tourism by tracking resource use, encouraging responsible supply chain management, and testing sustainability indicators. That provides passengers with accurate environmental and social implications that is not directly available to passengers on board (Al-Romeedy, 2024). Importantly, it acts as a vehicle for community empowerment, allowing locals to manage tourism in accordance with their cultural and socioeconomic interests (Talukder, Khan, et al., 2025). This technological revolution is revolutionizing new forms of digital governance in tourism management, and these new models are created for creative business models which encourage sustainability and inclusion among the constituents (Prados-Castillo et al., 2023). In addition, new officials are increasingly asked to recognize blockchain as a promise and to create supportive structures to use its ability to produce resilient, transparent, and equitable tourism landscapes (Capucho, 2023).

RESEARCH METHODOLOGY

The research was conducted through an extensive literature review on academic and business literature. The main aim of this study is to present the current knowledge on using smart technology such as IoT, AI, blockchain, and smart mobility to increase sustainable resource growth and resource management in tourism. To do this, literature, journal articles, industrial reports, and related book chapters were identified, assessed, and presented. Finally, the literature review was used to identify, explain, and contextualise the questions and evidence on the use of smart technologies in tourism ecosystems. This includes a clear view of how these technologies can be utilized to reduce energy and water consumption, reduce waste disposal, help transportation, make transportation clear, and give the community involvement. Through this meta-analysis this study examined how integrated technology is involved in environmental protection, social-economic equity, and tourist-destination

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resilience. This review attempted to combine the findings and potential problems of technological integration with a critical analysis of the literature. This will provide a solid overview of the role of integrated smart systems to fully support holistic sustainability objectives, teaches us new governance models and design of future destination management practices promoting the sustainability of development and long-term resource management.

RESULTS

While this study attempts to integrate smart technologies in sustainable destination design and efficient resource management, it will provide a systematic analysis by using a qualitative analysis of systematic review and compilation of contemporary academic and industry literature. This study examined several research papers, peer-reviewed articles and industry papers demonstrating that the combined set of technologies - IoT, AI, blockchain, and smart mobility systems create a paradigm for tourism. The results are structured between three pillars: operational and environmental performance; tourist engagement and transparency and governance. First, this analysis suggests that smart technologies are at the heart of optimal operating and environmental efficiency. In several research studies, IoT sensors and AI data are applied to monitoring and prediction on a real-time basis and in the context of predicting resources. For instance, hotel management could save 10% or 20% on energy consumption via intelligent HVAC and lighting control, while AI and IoT water management is capable of saving up to 30% annually. Third, IoT data analytics-based, intelligent waste management systems remove waste from landfills and promote circular economy practices. The integrated smart systems incorporated in mobility improve the movement of vehicles, congestion, and support electric cars to reduce emissions and conserve destination landscapes. This composition confirms that these technologies move away from dependent action into data-driven management of natural resources.

It also shows that tourist experience and behavior have a significant role in the individual's experience and behavior. In this model, visitors take their visitors to the site through interactive educational content, real-time navigation and immersive glimpses into cultural history by entering through mobile applications, Augmented Reality (AR) or LBS. To apply sustainability principles directly to the user-facing platforms, visitors can boost satisfaction and enhance an environmental consciousness in the social environment. Thirdly, and in this respect, blockchain technologies offer clear indications of which transparency, equity, and adaptive governance are crucial tools. This study has shown how blockchain produces secure decentralized ledgers for supply chain management. It improves internal markets, has a positive impact on local populations, reveals sustainability claims, whether carbon footprint or ethical procurement, and has shown evidence of sustainability claims in relation to carbon footprint or ethical procurement. These further builds trust among all stakeholders. The results of this study also suggest that there is only so much technological “hard” infrastructure to replace these technologies. So, in order to develop smart destinations, I need a solid foundation of soft intelligence: collaborative governance models, community-based decision-making, and policies that encourage inclusive innovation. In this combination, the most resilient destinations are those that connect technology with participatory governance with local socioeconomic and cultural needs. As discussed in this systematic review of the literature, smart technologies provide a number of tools for a sustainable and competitive tourism destination. In our findings, the key takes away from this study was that the most powerful of these tools is not the single factor but the combination of the two in a governance system that ensures ecological balance over time, economic justice, and community wellbeing. Smart technology adoption will be key to resilient destinations in the 21st century.

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CONCLUSION

As discussed in the introduction of this paper, the findings are qualitative, drawing on academic and industry research to address the possible use of emerging technologies for sustainable destination development and better resource management. The main themes brought up in the paper relate to the IoT, artificial intelligence (AI), blockchain, and smart mobility. The review of available literature points to the need for digital tools in tourism management to be more collaborative and based on data. The overall findings highlight how these digital tools can deliver enhanced environmental outcomes through efficient use of resources, personalized tourist experiences, and transparency to communities and policy-makers. But, the research found that the full potential of these technologies is only possible through collaborative governance, cross-sector collaboration, and policy design. Combining technology with human-centered strategies creates a sustainable competitive edge that combines economic progress with ecological balance and social well-being. Developing resilient and sustainable tourism requires the intentional collaboration of smart technologies to work together towards sharing common sustainability.

REFERENCES

1. Agung Yuliyanto Nugroho, Sri Yulianto Fajar Pradapa, Ferat Kristanto, & Syah Riza Octavy Sandy. (2024). Mengintegrasikan Teknologi IoT dan Smart Destinations dalam Pengelolaan Pariwisata Berkelanjutan. Jurnal Teknik Mesin, Industri, Elektro Dan Informatika, 3(3), 357–366. https://doi.org/10.55606/jtmei.v3i3.4270
2. Al-Romeedy, B. S. (2024). Breaking Chains, Building Futures (pp. 90–107). https://doi.org/10.4018/979-8-3693-3286-3.ch006
3. Asif, M., & Fazel, H. (2024). Digital technology in tourism: a bibliometric analysis of transformative trends and emerging research patterns. Journal of Hospitality and Tourism Insights, 7(3), 1615–1635. https://doi.org/10.1108/JHTI-11-2023-0847
4. Bieger, T., Beritelli, P., & Laesser, C. (2009). TOURISM REVIEW.
5. Bohdanowicz, P. (2006). Environmental awareness and initiatives in the Swedish and Polish hotel industries—survey results. International Journal of Hospitality Management, 25(4), 662–682. https://doi.org/10.1016/j.ijhm.2005.06.006
6. Buhalis, D., & Amaranggana, A. (2015). Smart Tourism Destinations Enhancing Tourism Experience Through Personalisation of Services. In Information and Communication Technologies in Tourism 2015 (pp. 377–389). Springer International Publishing. https://doi.org/10.1007/978-3-319-14343-9_28
7. Buhalis, Dimitrios. (2003). ETourism : information technology for strategic tourism management. Financial Times Prentice Hall.
8. Capucho, J. (2023). Blockchain and Sustainable Tourism: Unlocking the Opportunities for a Greener Future. https://doi.org/10.20944/preprints202306.1517.v1
9. Chadha, P., Gera, R., Awasthi, S., Yadav, A., Kansal, L., Kumar, A. V., Saxena, A. K., & Parashar, K. (2024). Unlocking sustainable tourism: A holistic examination of mobile applications' impact and evolution in travel experiences (2013-2023). E3S Web of Conferences, 511, 01029. https://doi.org/10.1051/e3sconf/202451101029

ISSN: 2394- 059X
Peer Reviewed & Refereed Journal (IF: 7.25)
Journal Websit www.nrjhrm.in

10. Chan, C. S., Peters, M., & Pikkemaat, B. (2019). Investigating visitors' perception of smart city dimensions for city branding in Hong Kong. International Journal of Tourism Cities, 5(4), 620–638. https://doi.org/10.1108/IJTC-07-2019-0101
11. Coca-Stefaniak, J. A. (2021). Beyond smart tourism cities – towards a new generation of "wise" tourism destinations. Journal of Tourism Futures, 7(2), 251–258. https://doi.org/10.1108/JTF-11-2019-0130
12. Das, S. (2024). Application of AI Technology for the Development of Destination Tourism towards an Intelligent Information System. Economic Affairs, 69(2). https://doi.org/10.46852/0424-2513.3.2024.31
13. El Archi, Y., Benbba, B., Nizamatdinova, Z., Issakov, Y., Vargáné, G. I., & Dávid, L. D. (2023). Systematic Literature Review Analysing Smart Tourism Destinations in Context of Sustainable Development: Current Applications and Future Directions. Sustainability, 15(6), 5086. https://doi.org/10.3390/su15065086
14. Evagelou, A., Kleftodimos, A., & Lappas, G. (2024). Creating Location-Based Mobile Applications for Tourism: A Virtual AR Guide for Western Macedonia. Digital, 4(1), 271–301. https://doi.org/10.3390/digital4010014
15. Fabry, N., & Blanchet, C. (2019). Monaco's struggle to become a smart destination. International Journal of Tourism Cities, 5(4), 672–684. https://doi.org/10.1108/IJTC-02-2019-0034
16. Francisco, J., Ribes, P., & Ivars Baidal, J. (2018). Pages 151 to 170 Section Articles Perles Ribes. In J. Investigaciones Regionales-Journal of Regional Research (Vol. 42).
17. 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
18. Gretzel, U., Zhong, L., & Koo, C. (2016). Application of smart tourism to cities. International Journal of Tourism Cities, 2(2). https://doi.org/10.1108/IJTC-04-2016-0007
19. Höjer, M., & Wangel, J. (2015). Smart Sustainable Cities: Definition and Challenges (pp. 333–349). https://doi.org/10.1007/978-3-319-09228-7_20
20. Ifeoluwa Oreofe Adekuajo, Bisayo Oluwatosin Otokiti, & Friday Okpeke. (2025). AI-Driven Water Resource Management in Tourism-Intensive Regions: A Smart Sustainability Model. International Journal of Scientific Research in Science and Technology, 12(3), 575–609. https://doi.org/10.32628/IJSRST2512367
21. Ivanović, V., Lindov, O., Ivanović, N., & Spasojević, B. (2023). E-mobility Concept implementation in the function of sustainable Tourism development managing. Put i Saobraćaj, 69(4), 47–50. https://doi.org/10.31075/PIS.69.04.07
22. Juhanita Jiman, & Salamiah Muhd Kulal. (2023). Augmented Reality (AR) And Virtual Reality (VR) Applications In Tourism: Embracing Emerging Technologies For Improved Tourist Experiences In Malaysian Tourism Industry. INTERNATIONAL CONFERENCE ON DIGITAL ADVANCE TOURISM, MANAGEMENT AND TECHNOLOGY, 1(2), 188–199. https://doi.org/10.56910/ictmt.v1i2.34
23. Kalsi, N., Carroll, F., Minor, K., & Platts, J. (2025). Optimising Hotel Sustainability Through Smart Technology: A User-Centred Approach to Measuring

ISSN: 2394- 059X
Peer Reviewed & Refereed Journal (IF: 7.25)
Journal Websit www.nrjhrm.in

Water Usage via IoT Sensors in Housekeeping Operations. Journal of Smart Tourism, 5(3), 108–120. https://doi.org/10.1177/27652157251354987

24. Khatter, A. (2023). Challenges and Solutions for Environmental Sustainability in the Hospitality Sector. Sustainability, 15(15), 11491. https://doi.org/10.3390/su151511491
25. Kumari, M., Kumar, S., & Devi, N. (2025). Energy- Efficient Tourism A Pathway to Sustainable Hospitality (pp. 161–182). https://doi.org/10.4018/979-8-3693-8769-6.ch006
26. KUPI, M. (2025). THE IMPACT OF AN ARTIFICIAL INTELLIGENCE-BASED FORECASTING MODEL ON THE DEVELOPMENT OF SUSTAINABLE TOURISM. Geojournal of Tourism and Geosites, 61(3), 1758–1766. https://doi.org/10.30892/gtg.61334-1544
27. Li, Y., Hu, C., Huang, C., & Duan, L. (2017). The concept of smart tourism in the context of tourism information services. Tourism Management, 58, 293–300. https://doi.org/10.1016/j.tourman.2016.03.014
28. Manente, M. (2008). Destination management and economic background: defining and monitoring local tourist destinations Central paper, Session 4: Tourism destination management.
29. Menegaki, A. N. (2025). Powering Down Hospitality Through a Policy-Driven, Case-Based and Scenario Approach. Energies, 18(2), 328. https://doi.org/10.3390/en18020328
30. Prados-Castillo, J. F., Guaita Martínez, J. M., Zielińska, A., & Gorgues Comas, D. (2023). A Review of Blockchain Technology Adoption in the Tourism Industry from a Sustainability Perspective. Journal of Theoretical and Applied Electronic Commerce Research, 18(2), 814–830. https://doi.org/10.3390/jtaer18020042
31. Pranita, D., Sarjana, S., Musthofa, B. M., Kusumastuti, H., & Rasul, M. S. (2023). Blockchain Technology to Enhance Integrated Blue Economy: A Case Study in Strengthening Sustainable Tourism on Smart Islands. Sustainability, 15(6), 5342. https://doi.org/10.3390/su15065342
32. Ramirez-Asis, E., Guerra Muñoz, M. E., Campos Cieza, H. J., Cruz-Castillo, N., Soto, R. H., & Cabanillas, L. A. (2024). IoT Solutions for Operational Efficiency in Tourism Management (pp. 451–468). https://doi.org/10.4018/979-8-3373-1032-9.ch029
33. Ranga, I., Singh, R., & Ranga, B. (2023). Which User-Generated Content is Considered Useful by Tourists? An Investigation Into the Role of Information Types Shared in Online Discourse in Online Travel Communities. International Journal of Human–Computer Interaction, 39(15), 3114–3126. https://doi.org/10.1080/10447318.2022.2093447
34. Rosário, A. T., & Dias, J. C. (2024). Exploring the Landscape of Smart Tourism: A Systematic Bibliometric Review of the Literature of the Internet of Things. Administrative Sciences, 14(2), 22. https://doi.org/10.3390/admsci14020022
35. Roy, B. K. (2024). Prospective Developments and Advancements in the Hospitality Sector for Eco-Friendly Waste Handling (pp. 154–175). https://doi.org/10.4018/979-8-3693-2181-2.ch011

ISSN: 2394- 059X
Peer Reviewed & Refereed Journal (IF: 7.25)
Journal Websit www.nrjhrm.in

36. Sankar, J. G., & Ilangovan, K. (2025). The Role of Smart Technology in Enhancing Sustainable Tourism Experiences (pp. 379–408). https://doi.org/10.4018/979-8-3693-7388-0.ch014

37. Scuttari, A., & Isetti, G. (2019). E-mobility and Sustainable Tourism Transport in Remote Areas. Zeitschrift Für Tourismuswissenschaft, 11(2), 237–256. https://doi.org/10.1515/tw-2019-0014

38. Shafiee, S., Rajabzadeh Ghatari, A., Hasanzadeh, A., & Jahanyan, S. (2021). Smart tourism destinations: a systematic review. Tourism Review, 76(3), 505–528. https://doi.org/10.1108/TR-06-2019-0235

39. Sharma, S., & Pandey, N. (2025). Intelligent and Sustainable System of Information for the Travel and Tourism Sector. 2025 2nd International Conference On Multidisciplinary Research and Innovations in Engineering (MRIE), 524–528. https://doi.org/10.1109/MRIE66930.2025.11156635

40. Sharpley, R. (2000). Tourism and Sustainable Development: Exploring the Theoretical Divide. Journal of Sustainable Tourism, 8(1), 1–19. https://doi.org/10.1080/09669580008667346

41. Singh, R., & Duhan, A. (2022). SMART TOURISM AND TOURIST ATTRACTIONS. PARIPEX INDIAN JOURNAL OF RESEARCH, 39–40. https://doi.org/10.36106/paripex/4804209

42. Sustacha, I., Baños-Pino, J. F., & Del Valle, E. (2023). The role of technology in enhancing the tourism experience in smart destinations: A meta-analysis. Journal of Destination Marketing & Management, 30, 100817. https://doi.org/10.1016/j.jdmm.2023.100817

43. Talukder, M. B., Khan, M. R., Kumar, S., & Singh, K. (2025). Blockchain and Tourism. In Open Innovation and Technology in Tourism and Hospitality (pp. 279–302). IGI Global. https://doi.org/10.4018/979-8-3693-8633-0.ch015

44. Talukder, M. B., Swarna, D. A., & Sawon, Md. M. H. (2025). Sustainable Tourism Redefined (pp. 145–174). https://doi.org/10.4018/979-8-3373-5332-6.ch005

45. Tung, V. W. S., Cheong, T. M. F., & To, S. J. (2020). Tourism management in the era of smart mobility: a perspective article. Tourism Review, 75(1), 283–285. https://doi.org/10.1108/TR-05-2019-0180

46. Varshney, S. (2024). COMPETENCY REQUIRED BY MEDICAL TRAVEL FACILITATORS IN MEDICAL TOURISM INDUSTRY. PARIPEX INDIAN JOURNAL OF RESEARCH, 9–12. https://doi.org/10.36106/paripex/4004052

47. 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

48. Xiang, Z., & Fesenmaier, D. R. (2017). Big Data Analytics, Tourism Design and Smart Tourism (pp. 299–307). https://doi.org/10.1007/978-3-319-44263-1_17

49. Ye, B. H., Ye, H., & Law, R. (2020). Systematic Review of Smart Tourism Research. Sustainability, 12(8), 3401. https://doi.org/10.3390/su12083401