# How to Apply Smart Tourism Characteristics to Hotel Management

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## Abstract

**Purpose:** With the growth of the hospitality industry, it is imperative to identify how smart tourism characteristics may be used in hotel management. Current and emerging technologies such as analytic tools, automation, and Artificial Intelligence (AI) help to create value for the guests while also contributing to waste reduction, resource optimization, and increased profitability in the industry. **Research design, data and methodology:** The literature review was conducted to examine a broad scope of research in analyzing smart tourism characteristics for the improved management of hotels and establish the necessary background for this issue. The analysis was employed to specify the systematic approach of selecting, scrutinizing, and integrating the source of information. **Results:** According to the systematic literature analysis, four smart tourism characteristics have been established, which can improve various aspects of hotel management. They are as follows: (1) Smart Guest Experience Management, (2) Smart Operations and Resource Management, (3) Smart Customer Relationship Management, and (4) Smart Destination Management. **Conclusions:** The findings expose the radical approach that smart tourism characteristics take towards the management of hotels. The developments in IT and science-oriented solutions have opened greater opportunities as the hotel industry can enhance clients' satisfaction, productivity, and participation in environmental conservation initiatives for tourism.

**Keywords :** Smart Tourism, Hospitality Industry, Hotel Management

**JEL Classification Code**: L83, Z31, Z33

## 1. Introduction

In the context of the prevailing technological advancements in the contemporary world, a new phenomenon in the hospitality industry is witnessing the revolution in hotel management, which is called smart tourism. The modern approach to tourism implies using information and communication technologies (ICTs) in various segments of the tourism supply chain that opens up vast potential for improving the efficiency of operations, individual approach to guests, and promoting sustainability in the hotel industry. Given the growing trend of realizing

consumer services through technology, the need for hotels must recognize simple tourism characteristics to hold the ground and meet new demands from increasingly sophisticated, tech-savvy consumers.

The integration of smart tourism technologies brings a shift in the organizational structure of hotels and how they engage with guests. Process digitization and implementation of strategies like smartphone applications, smart assistants, and Internet of Things (IoT) devices can help organizations like hotels to enhance operational efficiency, resource management, and services that may suit a specific preference (Ghorbani et al., 2019; Hamid et al., 2021).

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delivery more, smart tourism opens up the potential for customer knowledge improvement and gives hoteliers ways of collecting critical data on the behaviors and preferences of their guests and then improves the standard of services they deliver and the satisfaction levels enjoyed by customers (Muniz et al., 2021).

There are several main challenges for hotels in successfully adopting smart tourism. Challenges range from data privacy and cybersecurity to sufficient capital investments in the infrastructure necessary for successful smart technologies (Ercan, 2019). Still, it must be understood that the implementation of the STC characteristics in hotel management has the potential to yield considerable benefits, such as efficiency improvement, cost reduction and the opportunity to meet the expectations of modern tourists differently (Tavitiyaman et al., 2024; Liu et al., 2022). With the growth of the hospitality industry, it is imperative to identify how smart tourism characteristics may be used in hotel management. Current and emerging technologies such as analytic tools, automation, and Artificial Intelligence (AI) help to create value for the guests while also contributing to waste reduction, resource optimization, and increased profitability in the industry (Yang et al., 2021; Zencir & Emir, 2019; Han et al., 2021).
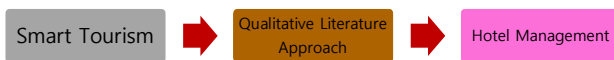


**Figure 1:** The Research Framework

## 2. Literature Review

Smart tourism has become an innovation that has added value to developing the concept of travel and tourism. Smart tourism is defined as using information and communication technologies (ICTs) pervasively in sector-wise segments, covering accommodation, transport, and destination management. This strategy leverages technology to deliver efficient, unique, cost-effective solutions to accommodate the ever-increasing traveler demands. The enhancement of various aspects in mobile computing, the Internet of Things, big data and analysis, and artificial intelligence has boosted smart tourism trends. These technologies have provided opportunities to develop solutions that can help automate processes and ensure they are fast; they can help minimize wastage and, most importantly, provide clients with a unique encounter. Therefore, Smart Tourism has been gaining popularity among the various sectors of the hospitality industry and is relatively well-developed in the field of hotel management since using smart technologies contributes to the effectiveness of the activity, satisfaction of guests, and promotion of sustainability.

### 2.1. Smart Tourism Technologies and Applications

Such application of smart tourism in the hotel industry is achieved through several technologies and innovative applications. Such technologies are serving to enhance the guest satisfaction elements and the core framework of operating a hotel. In accordance with Ghorbani et al. (2019) and Hamid et al. (2021), using hotel smart tourism solutions such as mobile applications and virtual assistants is mainstream nowadays. The studies reveal that these technologies enhance easy communication with the hotel guests, recommend the services to hotel guests and the guests can easily access numerous services provided at the hotel. They can reserve their room, check in and out, get their room keys, manage amenities, and even order specific services using mobile apps (Hamid et al., 2021). Technological innovations such as conversational agents based on machine learning and natural language processing can perform the concierge duties of guest services, respond to guests' inquiries, and offer recommendations for sites and restaurants in the region, as Ghorbani et al. (2019) noted.

According to Ercan (2019) and Yang et al. (2021), Internet of Things (IoT) and sensor technologies are defined as the means through which smart tourism continues in hotels. These studies pointed out that some IoT smart devices such as thermostats, lighting controls, and occupant sensors can be useful in measuring the room temperature, lighting, and other amenities which are important to the guests or which guests may prefer or the occupancy of the room to meet guest requirements while at the same time conserving energy. Likewise, Ercan (2019) highlighted that a sensor system will facilitate tracking hotel water and electricity usage, which will help in anticipating the correct time for depleting these resources. Tavitiyaman et al. (2024) described augmented and virtual realities (AR/VR) where the technology helps the hotel guests to touch moments such as destination imagery and within the hotel with the help of technology. Their research shows that it is feasible to use AR in the hotel since it can interface with the support of digital TV to show different data and videos in real space and physically touch the guests to guide them with maps, tours and information about the nearby points of interest. Furthermore, the study by Liu et al. (2022) establishes that it is possible to transport guests to virtual models of hotel rooms, restaurants, or other tourist attractions and phenomenon them before they purchase.

Big data analysis and Artificial Intelligence studied by as Liu et al. (2022) and Tavitiyaman et al. (2024), highlight that big data analysis has opened new prospects for hotel managers to understand guests' requirements, shift to appropriate pricing strategies, and enhance decision-making. Liu et al. (2022) argue that reservation systems, guest feedback, and social media are among the probable avenues

through which hotels may secure big data that may assist them in analyzing the pricing mechanisms and the services offered to the customers. Moreover, Tavitiyaman et al. (2024) discuss how, through AI, recommendation systems help to determine unique and related facilities, entertainment, and attractions around them based on the patterns of the guests and their preferences. As the studies mentioned, such technologies and applications are proactive in changing the hotel industry by enhancing productivity, satisfaction of guests, and responsible initiatives. However, certain concerns, such as data privacy, infrastructure, and user adoption, should be addressed for such technologies to thrive.

## 2.2. Benefits of Smart Tourism for Hotel Management

Several studies highlight that applying smart tourism characteristics in the management of the hotel has several benefits, including the potential to enhance different aspects of the hotel and its customers. Yang et al. (2021) and Ercan (2019) both focus on scientific papers concerning IoT and sensor networks regarding operational efficiency and resource utilization in operations, and smart systems extensively employed in the assignment of room and the management and control of energy consumption and some elements of preventive maintenance. In recent research conducted by Tavitiyaman et al. (2024), it was evident that due to real-time monitoring of data as well as real-time data analysis, the hotels can identify the areas of concern and what corrective action need to be taken to minimize wastage and the use of resources. Moreover, Liu et al. (2022) added that through AI tools in demand forecasting and decision-making relating to revenue management, hotel managers can adopt the right pricing strategies and, thus, attain the highest profit margin.

Zencir and Emir (2019) and Han et al. (2021) have done a very high-stress research on how tourist uses mobile applications or virtual personal assistants to recommend to them their options of attraction sites, restaurants or services they offer at a certain lodge or hotel, based on their data or databases mined from the internet. Muniz et al. (2021) shows that smart in-room controls like smart thermostats, smart lighting, and entertainment systems enable clients to personalize comfort and environment. Further, Chuang (2023) asserts that innovation in mobile apps and IoT technologies facilitate easy check-in and check-out for guests. The findings emerging from specific studies, namely, Enhanced Customer Engagement and Loyalty Studies conducted by Han et al. (2021) and Tavitiyaman et al. (2024), show that the application of the online social interface, game mechanics, and proactive contact options enable the firm to offer the customers chance for the direct interaction, provide

the management with valuable information regarding the experiences, and address the challenges promptly. According to the study done by Tavitiyaman et al. (2024), it is evident that by using augmented and virtual reality, one can get the tangible feel of reality, which can be seen by the clients and guests, making the experience a delight. Similarly, Liu et al. (2022) argued that opening up more personalization-based loyalty programs and integrating the use of data analytics and AI for promotions would help encourage repeat business and, as a result, strengthen the guest and hotel relationship.

Tavitiyaman et al. (2024) and Han et al. (2021) argue that strategies such as appealing systems that use lights or temperature in proportion to occupancy reduce environmental hazards. In his study, Ercan (2019) acknowledges that smart water management systems can also help control and manage costs, thus conserving water. Lastly, Ghorbani et al. (2019) opined that by adopting a waste management system in hotels through IoT, it becomes easier to recycle, thus enhancing the looks and overall protection of the environment from the ill effects that hotels cause. This may enable hotels to strengthen internal and external productivity, as it is evident from prior research and satisfy customers' needs as well as enhance customer satisfaction while promoting sustainable development to improve the company's revenues and profitability in this cutthroat market and to meet the demand of new generation of travelers.

## 2.3. Research Gap and Justification

Although previous studies have provided an overview of topics in smart tourism and its use in the hospitality industry, the literature lacks sufficient information and empirical analyses on the everyday utilization of characteristics of smart tourism in hotel management. Most research relies on conceptual frameworks or theoretical models. However, to date there seems to be a dearth of empirical and practical literature examining the potential real-life applications, problems, and solutions in the operation of hotels. Therefore, there is a relative dearth of literature concerning the attitudes and adoption enablers regarding employees and managers in the hotel industry which are critical to the effectiveness of adoption. This study's purpose is to fill this gap by presenting a detailed practical methodology of smart tourism characteristics in the management of the hotel industry. As a result of this method and analysis of the primary and secondary data gathered from the cases and industry research, this work will provide practical perceptions and solutions for hotel managers and other stakeholders. Further, this quantitative study will supplement the existing literature and understanding of HEIs by emphasizing the views of industry experts, as well

as identifying the enablers, challenges, and key success factors regarding the successful application of smart tourism technologies in hotels. In the long run, this study will be of great importance to the hospitality industry because it will assist realize the opportunities that come with smart tourism while reducing the challenges.

**Table 1:** Investigation to Figure Out the Research Gap

| Gap in the Current Literature | Supporting Evidences |
|---|---|
| This study is to fill out the research gap by presenting a detailed practical methodology of smart tourism characteristics in the management of the hotel industry. | Hamid et al. (2021), Yang et al. (2021), Ercan (2019), Tavitiyaman et al. (2024), Zencir and Emir (2019), Han et al. (2021), Muniz et al. (2021), Chuang (2023), Han et al. (2021), Tavitiyaman et al. (2024), Liu et al. (2022), Ghorbani et al. (2019) |

## 3. Methodology

The systematic literature review was conducted to examine a broad scope of research in analyzing smart tourism characteristics for the improved management of hotels and establish the necessary background for this issue. In the course of the review, the literature analysis was employed to specify the systematic approach of selecting, scrutinizing, and integrating the source of information (Nantharath et al., 2016; Kang & Hwang, 2017).

### 3.1. Selecting Data Sources and the Search Approach

Web of Science, Scopus, and EBSCO host as a basis for defining initial literature searches related to the research used in the current studies. To gather relevant materials, the following keywords were used: The main keywords were used, and since more articles, papers, and books were required for this study, any identified source containing any of the following terms were included: smart tourism, hotel management, hospitality technology, and tourism innovation (Kang, 2023). Furthermore, an initial paper and abstract search were done with immediate access to the ten latest articles in the specialty areas of hospitality and tourism in journals such as the Journal of Hospitality and Tourism Management, International Journal of Hospitality Management and Tourism Management in case a particular study had not been captured in the above search (Phommahaxay et al., 2019).

### 3.2. Eligibility Criteria and Study Selection

To avoid including studies of low methodological quality

and not related to the research question, a list of criteria was formulated to guide the inclusion process. Three databases were also established. Only articles in English, specifically in scientific journals and academic conference papers published, were kept. The analyses must connect exclusively to smart tourism technologies or characteristics relevant to hoteling or the hospitality business. Those studies outside the general area of interest or needed to be more adequate in providing quantitative results were also excluded (Kang, 2022). The study selection process involved two stages: The first step was to select only the title and abstract of any further study and then assess only the full text of the respective studies. Two researchers who were not connected to the site under analysis for the assignments underwent the screening to minimize bias. In case of a tendency to include or exclude a study, if something was in contradiction, it was resolved by making a group discussion of the problem (Nguyen et al., 2022).

### 3.3. Data Extraction and Analysis

For qualifiable studies, documentation was reviewed for the needed information and entered into a data extraction form. The variables that have been extracted from the retrieved data include the study details such as the author's name, year of publication, type of study, the kind of STT or STA investigated, the context of the study, for example, hotel type and location, benefits that are associated with smart tourism in hotel management, challenges that are likely to be faced while implementing smart tourism in hotel management, and potential approaches in smart tourism in hotel management that have this paper, therefore, used a narrative synthesis technique in an attempt to categorize the extracted data for analysis (Guzak & Kang, 2014). This procedure involved identifying overall tendencies, similarities and observations in the selected papers and identifying deviations and dissimilarities. Thus, the study's objectives were to ascertain the effects of the ST characteristics on hostelry operations, the strengths and weaknesses of ST, and the critical success factors.

### 3.4. Quality Assessment

To certify the inclusion of high-quality and reliable studies in the systematic review, a thorough quality assessment process was adopted. Various standard criteria/checklists were employed on aspects such as study design, mode of sample determination and size, method of data collection, and data analysis techniques to evaluate study quality. The research quality was assessed concerning factors/indices, including sampling procedures, collection instruments, and data analysis techniques. In addition, the quality assessment pointed to the comprehensiveness and

openness of stated outcomes and the relevance and generalizability of the obtained outcomes to the context of hotel management and the world of smart tourism.

# 4. Findings

## 4.1. Smart Guest Experience Management

The findings project that the integration of smart tourism technologies has transformed the way hotels manage guest experiences. Smartphone applications and personal or social assistants can effectively deliver specialized solutions and construct the guests (Ghorbani et al., 2019; Hamid et al., 2021). These technologies are used for communication, recommendation systems, and immediate services such as facility controls, services, and details of the hotel's local attractions (Muniz et al., 2021). In addition, this review noted that by implementing AR and VR, the customers are provided with a GUI that includes information on different facilities and tourist attractions physically located in the chosen hotel without needing to physically visit the hotel (Tavitiyaman et al., 2024). These technologies can have audio and video guided tours, the topography of a building's layouts, and models of the rooms or desired facilities for customers, which is useful in organizing the options and keeping expectations more realistic (Liu et al., 2022).

Consequently, research findings indicate that AI and big data analysis have been applied in managing hotel with enormous changes regarding probable enhanced operational productivity and customer satisfaction levels. By applying communication tools such as AI-powered chatbots and virtual assistants, the customers have a possibility not only to address their requests immediately but also do it in a way that the data will be collected and analyzed in order to provide them with a personalized experience. Big data analysis enables hotel managers to get a clear insight on customer's needs and behaviors which are essential in making sound decisions especially when it comes to using certain marketing strategies (Han et al., 2021). It is for this reason that one may view it as an enlightened one, that is, the kind of approach that enables one to anticipate the needs and wants of the guests so as to facilitate their satisfaction and hence the turnout of the loyal customers. Likewise, managing energy responsively and improving the resource utilization also works for strengthening the sustainability concept in operation where energy usage and resource are minimized in the context of hospitality industry while more emphasis has placed on the sustainable practice as discussed by Ercan (2019) and Yang et al. (2021). These describe how integration of smart technologies has made the process of managing the hotel and hence improving the customers experience core business process.

## 4.2. Smart Operations and Resource Management

The findings show that smart tourism technologies have the tendency to enhance operation efficiency and resource managements in hotels. The automation of smart rooms, controlling the energy consumed, and even monitoring the facility through IoT devices as well as sensor networks becomes possible on a real-time basis (Ercan, 2019). These systems also control the lightings, and temperature together with other utilities that require the presence of people and, therefore, employ efficient energy utilization techniques (Yang et al., 2021; Kim & Kang, 2022). At the same time, IoT, as well as big data analytics for estimation of residual use value, avoids future failures, reduce time, and expenses on maintenance (Han et al., 2021). Furthermore, the use of AI technologies to enhance the demand forecasting and improving the revenue management industry is a massive correlation to the RevPAR as identified by Tavitiyaman et al. (2024).

However, the integration of robotics and automation in the running of the hotels adds to the efficiency and usage of resources. Some of the applications of robots are in delivering room services, cleaning services, and helping to carry luggage. This would reduce the reliance on human labor and enhance the quality of services delivered (Ivanov et al., 2020). Self-service check-in and check-out facilities enable guests to complete formalities in a short span of time, thus reducing guest's waiting time and increasing guest satisfaction. Further, integration of RFID technology and real-time data analytics enables the smart inventory management systems to control the stock, and to predict and manage the supply, which helps avoid excessive procurement and storages resulting in waste (Zeng et al., 2019). Through the implementation of these sophisticated technological tools, the hotels can end up improving their productivity, cutting costs, and optimizing on the resource use, thus enhancing guest satisfaction as well as sustainability.

## 4.3. Smart Customer Relationship Management

From the study findings, it is evident that smart tourism solutions reveal new avenues for the hotel sector to improve its communication with guests and boost their loyalty. To communicate the information, users utilize newsfeeds, direct messages, and certain features typical for gaming and also enables hotels to receive feedback and respond to topics connected with it (Chen et al., 2021; Han et al., 2021; Tavitiyaman et al., 2021). The use of data analysis and AI benefits can initiate particular loyalty programs and the increased motivation behind concentrated encouragement of focused promotion to support the guest–hosting relations

(Liu et al., 2022). In addition, the tools for handling social media accounts and the tools for recognizing binaries for sentiment analysis also help the hotels gain insights into customers' preferences and attitudes (Chuang, 2023; Hong & Kang, 2022).

Moreover, as Smith (2020) points out, use of customer data platforms (CDPs) and complex customer relationship management (CRM) systems enables the hotels create integrative personalities of clients that include various data beginning with the history of the client's bookings and ending with the data received from the client's social media accounts and preferences in the hotel. The customer focused approach that hotels have to deliver highly personalized messaging with effective one of them begins even earlier. It starts with the pre-arrival communication and does not end when the guests leave the hotel. For instance, the aforementioned recommendation systems can comprise smarter suggestions on what the guests might find interesting; places to grab a bite from, events, promos or discounts to help foster better satisfaction and loyalty among guests (Garrido-Moreno et al., 2021). The customers will also be supported by the active use of such components as chatbots and voice or virtual assistants integrated into CRM systems, ensuring guests will get all the necessary help and services on the spot at any time during their stay at the hotel, which will improve their experience. Such advanced technologies and software should be utilized in ways of enhancing the closeness with the guest as well as ensuring the guests keeps on coming to the hotel chains over and over again.

## 4.4. Smart Destination Management

The findings of the reviews reveal that the advanced technologies of smart tourism are also useful in achieving the strategic goals of efficient management of tourist destinations that enhance the enjoyment of guests on their trips. Facilities such as smartphones and virtual personalities create a real-time information pipeline anywhere, including points of interest, events, transportation, and culture (Tavitiyaman et al., 2021). These technologies ensure the best options for searching and nautical the available opportunities a guest can use. Moreover, the study suggests that interactions between industry and the local commerce and tourism industry might assist hotels in creating themed and bundled experiences that customers would consider appealing based on data science and AI recommendations of such experiences (Muniz et al., 2021). It also helps considerably enhance loyalty and satisfaction among the guests, aids in developing the local economy and supports sustainable tourism. The implication analysis emerging from this systematic review shed light on how the facets of ST tourism influence the tactical and strategic elements of

hotels: the service provision to guests, proficient operational performance, customer relations, and destination promotion. By incorporating these technologies and embracing big data and data analytics, hotels can offer smart, connected and sustainable experiences to guests, increased productivity and a repeat customer base.

**Table 2:** Results of the Research

| Management Solutions | Key Statement |
|---|---|
| Smart Guest Experience Management | By implementing AR and VR, the customers are provided with a GUI that includes information on different facilities and tourist attractions physically located in the chosen hotel without needing to physically visit the hotel. |
| Smart Operations and Resource Management | Smart tourism technologies have the tendency to enhance operation efficiency and resource managements in hotels. The automation of smart rooms, controlling the energy consumed, and even monitoring the facility through IoT devices as well as sensor networks becomes possible on a real-time basis. |
| Smart Customer Relationship Management | The tools for handling social media accounts and the tools for recognizing binaries for sentiment analysis also help the hotels gain insights into customers' preferences and attitudes. |
| Smart Destination Management | The study suggests that interactions between industry and the local commerce and tourism industry might assist hotels in creating themed and bundled experiences that customers would consider appealing based on data science and AI recommendations of such experiences. |

## 5. Conclusions

The systematic review's findings expose the radical approach that smart tourism characteristics take towards the management of hotels. The developments in IT and science-oriented solutions have opened greater opportunities as the hotel industry can enhance clients' satisfaction, productivity, and participation in environmental conservation initiatives for tourism. However, realizing these benefits comes only with some challenges. Therefore, the study under discussion stresses that gaining maximum benefit from such systems

requires a strategic approach, not a random one, according to the challenges and critical success factors presented in the literature. Therefore, the key recommendations focus on using smart technologies as a powerful tool to improve the quality and satisfaction of guests in tourism. The mobile application services of hotels, along with the virtual assistants and augmented/virtual services, give all and sundry a chance to provide personal services, the real-time proposed solution for every visitor, and the ability to interactively explore the hotels or various sites for tourist attractions (Ghorbani et al., 2019; Tavitiyaman et al., 2024; Liu et al., 2022). Therefore, hotel chains can use these technologies to satisfy the higher-level clients' needs and, subsequently, enhance satisfaction and gain positive impressions. However, the applicability of all the developed solutions depends on the issues connected with user acceptance and the possibility of incorporating the proposed solutions into the current IT environments of hotels (Han et al., 2021). The human resources department must be provided with enough training and productivity to improve the technologies the guests use (Zencir & Emir, 2019).

The research also established how successful implementation of smart technologies in tourism will assist in the reduction of operational costs on machinery, time, workforce, and other resources through the use of automation, a digital health check, and predictive analysis (Ercan, 2019; Yang et al., 2021; Tavitiyaman et al., 2024). Such opportunities include the interconnectivity of smart devices, the network of sensors within the buildings for optimizing power consumption, the incorporation of AI in the management processes of the back-end and front-end for reduced wastage, and the introduction of the correct sustainable measures for the efficient management of the hotels. However, a need for such technologies is based on the essential infrastructure, and their use could be an issue of privacy and security while processing data (Hamid et al., 2021; Chuang, 2023). Handling contests that demand overall messages, awareness and contribution across employees with tactical data governance and interacting with the technology vendors to turn into a strategic ally to address such risks becomes critical to sustain the risks and gain better results profitably consistently and at scale.

Han et al. (2021) and Tavitiyaman et al. (2021) also found that smart tourism solutions can help make improvements in customer relationship management (CRM) by facilitating promotional messages, marketing advertisements, and acquiring customers' feedback. Using data, Artificial Intelligence and social media is another way hotels could derive more positive feelings from the guests and seek to do business with them in the future. However, implementing CRM strategies attract factors such as focusing on customer needs, acknowledging, respecting consumers' privacy, and the companies' honesty in collecting customer data (Chuang, 2023). These points are crucial for adoption and customer loyalty, assuring guests about the absence of malicious intents and plans and about their adherence to the values that help build trust. Based on the review analysis, it is also postulated that smart tourism technologies can play a positive role in enabling efficient destination management concerning generating up-to-date information, personalized travel experiences, and recommendations for tourists (Tavitiyaman et al., 2021; Muniz et al., 2021). Partnerships between hotels and local businesses, attractions, and tourism agencies will greatly improve a guest's experience while contributing to the community's economic growth and the advancement of sustainable tourism-related industries.

Thus, to realize the ideal position of smart destination management, there is adequate cooperation and collaboration between different sectors of the countries, such as hotels, local authorities, other stakeholders, and most importantly, proper flow of information (Ghorbani et al., 2019). Relationship management, data interoperability, data governance, and stakeholder management are also crucial when focusing on integrated guest' experiences. This section explains how to overcome the potential risks in these aspects. The implications derived from this systematic review help articulate a comprehensible understanding of hotel amenities and possible tactics to consider while addressing such areas. Hence, the identification of smart tourism characteristics and the integration of new technologies give the ability to gain a competitive advantage and satisfy the customer. The second environmental level is the organizational level, which entails Organization structure, information, employees, and other individuals. On the hotels' side, value creation should be aimed at investing in proper data management systems and cyber protection measures to accumulate and provide guest data safely. However, it is also important to note that there is a need to encourage and facilitate the implementation of smart tourism technologies and the organization's general use of digital tools.

Some other possibilities for innovation within the hotel business include embracing technology plug-ins from vendors, educational relationships, and professional organizations because they offer the experience of exchanging, skills improvement, and the formation of potential partnerships that, in turn, can bring innovations. In addition, it is always crucial to audit the smart tourism measures in place as this will assist in determining the impacts and areas that may need further enhancement by making changes in line with the current trends and guests' expectations. However, it is necessary to highlight some limitations of the present systematic review since the present systematic review may still be far-reaching. However, there can be numerous broader research questions for the hotel

management field regarding the characteristics of smart tourism unexplored. This study also offers an avenue for further research whereby an analysis of the effects that result from the implementation of smart tourism technology on hospitality accommodation in terms of customer satisfaction, revenue and profitability will be ascertained. However, cross-sectional research may also provide more information concerning the different regions of the world with varying classes of hotels to understand the outlook for smart tourism solutions implementation.

The theoretical effect of Government regulations and support, along with standard practice, would also be highly beneficial. Hence, this area should also be explored. Because technology itself is not a fixed idea, examples like the metaverse and blockchain can be named useful in further separating what these technologies are capable of bringing to the hotel business world and the potential negative implications that may arise from the application of these innovation developments.

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