

# “Review Paper on the Impacts of Information Technology in Tourism and Hospitality Industry”

Mahamaya N,

*MBA Student, Santhigiri Institute of management*

*Thara Vijayan, Asst. Professor, Santhigiri Institute of management*

Submitted: 10-05-2022

Revised: 19-05-2022

Accepted: 22-05-2022

## ABSTRACT

This study focused on the impacts of information technology in the hospitality and tourism industry. Tourism and hospitality industry today, is changing significantly with in applications which is updated day by day in its fundamental to strategic activities. So the changing disruption, use of information technology is inevitable. Hospitality management is a multi-disciplinary area with the purpose of preparing people with more experience, assurance, skill for managing, marketing and operations for expansion of industry to develop in to the world economy. It may include hotels, restaurants, casinos, resorts tour agencies and airlines. This study is based on previous studies related to information technology with aim of assessing the recent changes and applications of IT in the industry. The study showed that IT in hospitality industry and tourism industry is most commonly used in fulfilling information need, studying behavior and performance managing operation process and innovation process. While study the articles give a sound advice for hospitality operators and rich stream of future research for academic, poor accuracy and lack of relevance throughout the reviewed journals underscore a worrying trend in hospitality research. Technology has helped reduce costs, enhance operational efficiency, and improve services and customer experience. Both the customers and business get the benefit from enhanced communication, reservation, and guest service systems. Front office information processing systems such as reservation, guest accounting and room management system, developments in telecommunications and more recently teleconferencing on the hotel industry.

**KEYWORDS:** Information Technology, Hospitality, Tourism, Business process, Innovation, Information and Communication Technologies,

Competitive Advantage, Hotels, Technology trend, Distribution, Internet.

## I. INTRODUCTION

The hospitality industry is a broad category of fields within the service industry and it may include lodging, food and drink facilities, event scheduling, theme park, travel and tourism and similarly hotels tourism agencies, restaurants and bars. Currently, IT is present in all our sectors, in individual as well as in organizational level. The tourism industry has not aware about the updation or trends happens in the society. Technology is changing rapidly across the industries. Tourism and hospitality industry is also growing faster with the distraction of information technologies. The technology made changes in both tourism offer and tourism demand. Ongoing improvement in technology field help the workers to achieve the goal very fast. The customer websites are playing a major role in the pre-trip travelling planning, booking the tickets. The adoption of ICT (Information and Communication Technologies) is also offering tools for the clustering and working together for globalization and creation of a critical mass ways which increases the competitive scope. ICT systems bring two sectors together which involve the tourism and hospitality sector. So, it is being an obvious part of tourism and hospitality industry that is adopted in different touristic sites, hotels, transportation and also by other associated service providers. Now a days the practice of e-tourism and digitalized tourism and hospitality activities is in the rise such as online reservation, flash packers, travel blogs, e-tour guides, and online platforms for services and so on. (Khatri, 2019).

Information and communication technologies a play a basic role in the tourism sector as well as the hotel management particularly

in hotels characteristically make an intensive information. Information systems form a fascinating and rapidly expanding field of the study. Hospitality industry normally lags in its function when in comparing with other fields but it has changed in recent years and the application of research has been improved. (Murphy, 2003).

As stated, the hospitality industry requires extensive use of IT support in its daily operations and managerial decision-making to get the latest information about the technology and hospitality managers to get more information through the articles and journals. Analyzing research endeavors in leading hospitality research journals can make a reflection growth and trend in the application of information technology in the hospitality industry. (Law, 2005).

In many hotels, high tech services are demanded and the customers are fully get satisfied without any complaints. IT makes hotel managers to take more advantage and then integrate to provide new and varied services into the business operations. Successful applications of technology to the dining experience by increasing the technological facility so it not only improves the performance but also the maximum customer satisfaction can be obtained. (Daniel leung, 2012).

The internet completion now a days made the tourism and hospitality industry to work hard for the smooth operations and the development of competitiveness. The success of a business to a certain extent depends on the ability to acquire and utilize the updated information to assist its management and marketing processes. Tourism and hospitality are connected by a large phenomenon which is largely application oriented. As the investment of IT system faces difficulty in the first situation and the adoption of IT are now indispensable components of the tourism and hospitality industry. The tourism and hospitality industry must be conscious of the modern changes accepted in the IT and the relationship with the customer service. As IT development becomes more refined, industrial practioners, educators, and policy makers may find many increasing difficulties in selecting, analyzing, implementing and operating new IT systems.

In the view of paramount importance of IT application in the tourism and hospitality industries and the absence of published articles that attempt to analyze the industry about the content of IT articles mainly published in the tourism and hospitality industry. This work will make better understanding about the recent updation of IT innovation application in tourism and hospitality from different aspects. (Rob law, 2009)

## OBJECTIVES

- To know the recent trends in information technologies used in the hospitality and tourism industry.
- To know whether the changes in Information technology has made a positive impact in hospitality and tourism industry.
- To know the benefits, needs and importance of information technology in hospitality and tourism industry.

## II. REVIEW OF LITERATURE

(Lau, 2020) The tourism industry is in a fight for survival during the coronavirus pandemic. Live-stream promotion and live-stream conference are introduced to primarily improve information quality, while 5G technology and Wi-Fi 6 are installed to enhance the system quality. Facial recognition, AI, and Robots are integrated to the daily operations to enhance service quality. The coronavirus COVID-19 pandemic has exerted a tremendous impact on the tourism industry worldwide. Travel restrictions, quarantines, and closures of transportations has led to a 22% decline of international tourist arrivals in first quarter in 2020 compared with 2019 and possibly to 60–80% over the entire year. Lockdowns and quarantines have been in effect, brick-and-mortar businesses such as restaurants, hotels, retail outlets, and travel companies have been on the losing side. However, new business opportunities have also emerged. Hotels to conduct live-stream rather than face-to-face conferences because hotels have 5G networks, hardware, and experience. Wi-Fi 6 is designed for high density implementations and hotel industry will benefit conference areas, lobby and restaurants with faster speed and coverage. The pandemic is prompting several industries to adopt “contactless” options.

(Nguyan, 2018) The tourism and hospitality industries have widely adopted information technology (IT) to reduce costs, enhance operational efficiency, and most importantly to improve service quality and customer experience. Technological innovations have a significant impact on the traditional hotel service process, on the one hand by changing the role of the customers in it, and on the other by modifying the behaviour, functions and tasks of hotel managers and service staff. Innovations are phone-as-key-cards, mobile self-check-in, mobile booking, self-service check-in kiosks, lobby media panels, electronic luggage tags, bring your own device, bring your own content platforms, smartphone boarding passes, hotel service

optimization systems, guest device connectivity tools.

(Wringly, 2018)The innovations made in the information technology made more tourists to get attracted to our place and also it made a link to the airport channels to bring more ideas including the offers and the new innovations that have made in the tourist filed to become more emerging in to the world. Current application service provider is the emerging type of information technology outsourcing services that offer a comprehensive of small and medium sized enterprises. Competitive advantages are also made in the field of technology by the enhancement of the e-commerce.

(P.et.al, 2018). Process redesign:The change in the process to optimize the value.

The emergence of information technology made changes in the traditional relationship between hotels and travel agents. It proves a loyal service for the customers even in the e-banking payments. Tourist kit provide some smart technology for the information to travelers.Customer Relationship Management system addressed by emerging the big data technique for efficient client profiling.

Rapid changes in the technology brings introduction of new ways of providing services in the tourism industry. The electronic lineation's specific form used for alienation in ICT, geo-based technology in place experience, light detection and ranging data and geographic information system mapping analysis are used.

Current application service provider is the emerging type of information technology outsourcing services that offer a comprehensive of small and medium sized enterprises.

Social and legal part is included here, the IT facilitate the compliance to social and regulatory process.

Value creation is mainly focused by lowering the cost which is customer friendly by reducing the number of labors and new innovative ways and methods.

(Connolly, 2017). The role of technology in hospitality has gained its high importance in efficiency managing, customer satisfaction and thereby generating enhanced revenue, all these also provide equal benefits to both the customers and the organization. The enhancement of the technology in hospital and tourism industry make various changes in operations including the customers can easily select the place to reside, reservation of room, compare price to review guest experience, accommodation facilities, infrastructure etc.

(Umemheshwara, 2017) A business within the tourism industry applies a digital marketing strategy in order to create appealing digital content to gain recognition, to create specific advertisements to attract its target audience, to engage in ongoing communication with customers for them to maintain satisfaction and loyalty to the business. Digital marketing, unlike traditional marketing gives opportunities for customers to ask questions or queries. Whereas traditional marketing such as print ads, TV ads and billboards are unidirectional. Hence, digital marketing provides personalized experience to the customers.

(Mattilaa, 2016)The tourism and hospitality management is the field where the competition is very high so as a solution for that proper promotion to the customer is need. So that more customers may attracted towards the innovative advertisement and promotion made by the sector. The destination development and management and promotion is also needed. Tourism promotion means trying to encourage the actual and potential customers to travel a destination through the spreading of information. Promotion is one of the most effective marketing mix elements used in marketing a tourist product.

(Jung.t.et.al, 2015) The mobile phones and gadgets help to improve the usage of various sites for travelling and accommodation and accessing the information provided. Not only enhancing the use of mobile gadgets in the tourism sector the development of new emerging applications and the new technologies made a wide change in the processing. This is undoubtedly the main character in the new ways of travel. The cell phone has become our tour guide, travel agency, best restaurant locator, map, and more. It's by our side during the entire purchase journey.

(Kang, 2015) IT is integrated in the tourism and hospitality industry to facilitate associated service activities. The fundamental activities may include accommodation, transportation, communication etc. The supporter system provide by the information technology will give befits to both the service providers and travelers.It is used to optimize the communication between travel service providers, travel agencies and travellers. So, it is being an obvious part of the tourism and hospitality industry that is adopted in different touristic sites, hotels, transportation and also by other associated service providers.

(W.et.al., 2015)The social media, mobile and information technology on tourism and hospitality is widely used for information search, sharing and exchange. As studies shows the trade shows for information exchange as the primary

information source is provided for both the consumers and business hotel. The cell phone is undoubtedly the main character in the new ways of travel, it has become our tour guide, travel agency, best restaurant locator, map, and more. According to a report by TripAdvisor, 45% of users utilize their smartphone for everything having to do with their vacations. This is why there's a need to adapt corporate services and communications to these devices.

(Chen, 2013) Some of the major emerging technologies used by the hospitality and tourism industry includes: WIFI, the guest and staff in hospitality industry can use the Wi-Fi for their purpose and can charge high cost for the Wi-Fi. It can be used as a way of charging high rent from the customers and the customers now a days being ore attracted towards the places with good Wi-Fi connection to reside. Becomes all the more powerful with help from 5G networks. They promise much faster loading and downloading speeds, wider coverage, and more stable connections. Beyond downloading content 20 times faster than before, 5G allows us to develop and deploy technology that 4G limited us. That means the connection between smart devices will be more efficient and we'll be able to start to truly enjoy the Internet of Things (IoT).

(Caber., 2012) The behavior of the customers is to be identified properly by knowing the psychological factors which affect the customers. The psychological study will be on the ways of how the travelers plan for trip in web search. The information provided by the smartphones showed the usefulness, ease of use, social influence, and satisfaction with travel websites. Hospitality workers are emotional labour workers because they must display appropriate emotions to their customers to provide outstanding service. Emotional intelligence (EI) helps employees regulate their emotions and display appropriate emotions, and hence should help hospitality workers provide outstanding service. However, the strength of the relationship between EI and hospitality workers' job performance substantially varied across studies. Hence, the purpose of the present study is to clarify the mixed findings and to examine if EI can improve hospitality workers' job performance.

(Horster, 2012) The information technology in the hospitality industry made changes in the process techniques and even in the accessing the code of the travels and tourist place booking gain competitiveness. Mobile tablets and smartphones have replaced large desktop

computers, making them virtually extinct. This is helpful, because many travellers take some type of mobile device with them on a trip. This helps hospitality businesses keep customers advised of changes and delays to their reservations, offer deals, and advertise by using GPS tracking. Computer systems allow communication between larger hotel chains with multiple locations to connect easier. They also help keep staff on the same page and make it easier to access information, making your guests experience much better. Guest requests, housekeeping information, and reservations can all be found on one system.

(Berne, 2012) Restructuring process of tourism sector and hospitality and distribution by the information and communication channel. The adoption of electronic data interchange among the hotel system and management support for IT play an important role. Web based self-service technology is also operated in various industry. The total hospitality product is to be administered effectively, operations managers need to acquire an understanding of the complete process involved in planning, implementation and control, including a knowledge of the design and development stages. Operations is greatly affected by introducing new products. At the same time, new products are constrained by existing operations and technology.

(Shivaji, 2011) They include integrating sensors connected to the Internet inside items like cars, suitcases, buildings, and more, The digitization of destinations has hugely influenced the travel and tourism industry, tourism companies can develop and use mobile apps in order to contact users at given points, thus, allow them the opportunity to interact with a certain hotel, leisure place, or a museum. Technology to find out the best services which are readily available at your fingertips to make your trip a dream vacation. Modern travellers are looking for customized and unique travel experiences with the help of technological advancements.

(Clus, 2009) RFID in the firms of hospitality industry provide effective management tracking personnel, vehicle management, and linen and laundry management etc. it help the managers to know the number of vacant, pre occupied or occupied rooms. Digital Conference: facilities offer the Wi-Fi for the corporate to meet and access visual along with digital conference. Mobile communication and automation: in recent times the guest is expecting the digital interaction for all the operations and it will be easier without time consuming and also provide particular apps, software or site for the use. Smart room keys: It is also one new innovation made the most facing

issues for the customers are losing key of their room so for instead of that the IT innovation provide a scanning system in the door so that the customers can easily open the door by swiping their phones through keyless pad mounted on door, fingerprint activated room entry system and retina scanning devices are also available.

Near Field communication or NFC is the next generation short range high frequency wireless communication technology that gives the ability to exchange data between the device s. communications between NFC devices can transfer data up to 424kbits/sec, which makes the payments by the smart phones and cards. Cloud Services which provides a wide area for the connection between the customers and the hospitality industry to become connected with the trend. Feedback on social media, now the feedback and compliance can be get in the social media by the various site provided by the hospitality industry.

So the technology integrated with the hospitality and tourism industry together and they made a fast changes in the sector even though this sector face a competitiveness in the field. The emergence of new technology made the field to emerge more into the economy and get flourished easily.

(Niinien, 2007) Tourism and hospitality are social phenomenon and the industries associated with them are largely application oriented. As a such the IT has recently drawn the attention of tourism and hospitality business as a tool for both enabling and inducing change.IT supports consumer certainty with customers being able to use technology to select and customize their product as well as to personalize experience.

(Frew, 2004). To gain loyalty and maximum need satisfaction they can use CRM techniques, hotels can combat online intermediaries. CRM is not a hotel specific term or solution and serves almost every industry globally. Regardless of industry, a CRM tool should allow you to store client information, identify sales opportunities, record service issues and manage marketing campaigns all in one central location. Many CRM systems integrate email, text messaging and other forms of communications. There is a growing trend in the CRM space around automation and personalization that is making this system more important than ever. Hotel sales teams are working to secure new group business while marketing teams are focused on bringing in new leisure travellers. A group sales CRM is ultimately about 1-1 relationship management while a marketing CRM must be super effective at segmentation and profiling. In other words hotel

sales CRMs need to be good at customization within 1-1 conversations and hotel marketer CRMs need to make massive datasets precise and actionable.

(Dale, 2004) There are 5 relationships made: channel, which enable one company to access the distribution channel of another; collaborative, where competitors cooperate with each other to achieve goal;commutative,content from infomediaries enriches and adds value to partner website; complementary, cross related products are brought together; converse, distribute unrelated products.

(Siguaw, 2003) Developments in the technology made the change is the hospitality and tourism sectors may reflect in the ways of how people changes in booking the rooms, in the distribution and highlight how economic issues are forcing hotels to provide increase amount of the investment made by the third party. Using economic scale and scope the latter are gradually gaining control over both the sale of the hotel product and the selling price. Merchant model can brings changes in the relationship between intermediary and supplier. The stress faced by the merchant channels can be avoided by commoditization, drafting terms and conditions carefully to effectively fence rates and that hotels need to strive to drive the business to their own websites.

(Picolli, 2003) The highlight strategic threat posed by online intermediaries, the dangers of over-reliance on the merchant model the need to develop a logical pricing strategy and the need to get direct ownership of shopping experience and to gather customer data.Travel intermediariesare some of the most critical agents in the tourism distributionchannel. Thanks to tourism intermediation, among other factors, the travel and tourism industry is one of the fastest-growing industries worldwide.

### III. FINDINGS

- The promising future regarding both the IT applications for the tourism and hospitality management can be identified positively. Hospitality industry integrate to the IT sector to increase the quality improvement and understanding the value of different IT applications.
- The study of IT is most commonly used for the fundamental purpose of information need and behavior and performance study. When studying the internal business process design, information technology focused on the customer management process. The

information technology in value creation competitive advantage is increasing.

- The benefits we get from the impact of information technology in hospitality and tourism industry mainly focuses on reservations system, mobile communication, in- room technology, online booking and payments.
- The IT have to be made further to exploit the full potential to emerge more innovations in the hospitality industry.
- Technology has helped reduced costs, enhance operational efficiency and import services and customer experience.
- IT replaces the human labor with technological labor. The technological changes include online reservation system, mobile communication and automation, cloudservice, IN room technology, Wi-Fi infrastructure overhauls, digital conference facilities,NFC technology, robots and infrared sensors, smart room keys, entertainment on tap etc.

#### IV. CONCLUSION

The use of technology in the hospitality and tourism industry has helped speedup operations and helped the travelling process much more enjoyable and efficient. Technology not only helps large chain hotels, but can useful to Business to Business and other smaller companies in the industry. Since there is competition prevalent in the tourism industry as well as adapting the industry's offering to best competition to best match the changing tourism patterns with new marketing strategies is at central of gaining success in the market place. Information technology play significant role by creating value with business process management and redesign. The adoption in tourism management practices allow for new and challenging research avenues.

The study showed that the IT is most commonly used for the fundamental purpose of information need and behavior and performance study. When studying about the internal business process design, information technology is found focused on customer management. The value creation and competitive advantage is increasing, since new area of study for tourism and hospitality industry is there for the exploitation of full potential technologies. This focuses on adoption and diffusion of information technology in creating value and gaining competitive advantage. Therefore, the ICT and the Information Technology made a competitiveness in the various sectors of the economy and help the emergence of hospitality industry.

#### REFERENCE

- [1]. Berne. (2012).review on impact of information technology as operation management in hospitality sector,international journal of contemporary hospitality management vol: 2 page no:121-130 .
- [2]. Caber:. (2012). Evaluated tourism and analyse the network patterns, international journal of hospitality management vol: 34 page no:117-126.
- [3]. Chen, I. A. (2013).review of changes made by information technology in tourism sector, international journal of hospitality management, vol. 33 page no:150-163.
- [4]. Clus, s. A. (2009). Journal on hospitality and tourism. Journal on hospitality and tourism, international journal of hospitality management, vol. 22 no. 1 page no:117-128.
- [5]. Connolly, n. A. (2017).review on role of information technology in tourism sector, cornell hospitality quarterly, vol. 57 no. 3, page no:140-152.
- [6]. Dale. (2004).review on changes made travel and tourism,international journal of contemporary hospitality management, vol. 19 page no:96-112.
- [7]. Daniel leung, n. A. (2012). Progress development of information technology in the hospitality industry evidence from cornell hospitality quarterly, tourism management, vol. 10 no. 2 page no:82-110.
- [8]. Frew. (2004).journal on travel and tourism,the international journal of tourism research, vol. 7 no. 1page no:56-80.
- [9]. Horster, p. A. (2012). Near field communication technology in hospitality industry,journal of hospitality and tourism technology, journal of hospitality and tourism technology, vol: 5 no.2 page no:203-216.
- [10]. Lau, a. (2020). New technologies used in covid-19 for business survival insights from the hotel sector. Information technology & tourismvol: 6 no: 3 page no:140-156.
- [11]. Jung.t.et.al. (2015).review on factors affecting travel and tourism by information technology,cornell hotel and restaurant quarterly, vol: 33 (3) page no:115-125.
- [12]. Kang, j. A. (2015).review on application of information technology on tourism sector,international business research, vol: 4(2) page no:118-127.
- [13]. Khatri, i. (2019). Information technology in tourism and hospitality industry :a review of

- ten years publications vol:9 page no.:106-125.
- [14]. Law, r. L. (2005). An analysis of it publications in leading hospitality journals,journal of tourism and hospitality research, vol: 4(2) page no:48-56.
- [15]. Mattilaa, I. S. (2016).review of research on application of information technology on hospitality industry,journal of hospitality and tourism technology,journal of hospitality and tourism technology, vol: 2(1) page no:140-153.
- [16]. Murphy, p. O. (n.d.). Review of research on information technology in the hospitality industry,international journal of hospitality management, vol: 31 page no:125-148.
- [17]. Nguyaa, d. A. (2018). Determinants of innovation in tourism and hospitality sector, international journal of hospitality management, vol: 28 page no:153-160.
- [18]. Niinien, b. (march 2007).review on research on impacts of information technology in tourism and hospitality,international journal of hospitality management vol: 52 page no:126-143.
- [19]. P.et.al, t.-b. (2018).a review on the applications and innovations of information technology on hospitality industry,international journal of information management, vol: 18(4) page no:117-129.
- [20]. Picolli, o. A. (2003). Marketing hotels using global distribution system,journal of tourism and hospitality research, vol: 6(1) page no:112-120.
- [21]. Rob law, r. L. (2009). Information technology application in hospitality and tourism a review of publication from 2005 to 2007,journal of travel research, vol: 39 page no:104-114.
- [22]. Shivaji, v. J. (2011). Information technology in tourism,international business research, international business research vol: 4(2) page no:147-162.
- [23]. Siguaw, c. A. (2003).changes made by information technology in travels and tourism sector,does technology make a difference? Service business 5(1) page no:113-123.
- [24]. Umeshwara, k. P. (2017). Impact of digital marketing in travel and tourism,journal of hospitality & tourism research 36 (1) page no:107-119.
- [25]. W.et.al., d. (2015).innovations made in hospitality sector by information technology,journal of hospitality management, 27(6) page no:108-115.
- [26]. Wringly, s. A. (2018). Hospitality and tourism changes by information technology,international journal of hospitality management, 31(2) page no:125-131.