Chapter 14
From Tradition to Transformation:
The Role of AI in the Evolution of Smart Tourism

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ABSTRACT

Tourism is a significant economic sector in many countries across the world. The tourism business has evolved significantly over the years, from traditional tour products/services to modern-day personalized and sustainable travel experiences. The newest technological advancement with the potential to change the travel and tourism industry is artificial intelligence (AI). One of the industries with the quickest rate of growth is tourism, travel, and hospitality. It generates 324 million globally, or 10% of the world GDP and one out of every ten jobs, and brings in US$ 9.6 trillion annually. It is anticipated that this industry will continue to grow in the years to come. Artificial intelligence (AI) capabilities have advanced recently, showing great promise for the industry's development to match visitor demands and usher in a new era of travel: smart tourism. This chapter adds to the development by surfacing how AI technologies relate to the transition from traditional tourism to smart tourism.

1. INTRODUCTION

The last two decades have been witnessed huge transformation in tourism industry worldwide, and developing nations are no exceptions of this. The technology has impacted tourism, travel and hospitality in distinctive ways especially in tourist's behavior and managerial strategic decisions. In fact, the ply of ICT / technology in tourism, travel and hospitality is not recent years but IT has been employed in

DOI: 10.4018/979-8-3693-1902-4.ch014

tourism, travel and hospitality industry since long. However, during Covid-19 and post Covid-2020, technology is recognized as to be determinant in the future of industrial world (Ivanov, 2019; Sharma et al.,2022). Many authors emphasized that IT has used to enhance and reshape tourism industry and has created the smart tourism paradigm (Gretzel et al.,2015; Koo et al., 2017). Buhalis (2020) suggested that e-tourism has a profound impact on the development of smart tourism. He further, stated that the e-tourism and web evolution have provided infrastructure to develops innovative tourism for all local stakeholders. Gretzel, Sigala, et al. (2015) stated that smart became famous due to smart phones and has since been applied in many area. In tourism used as smart tourism -eco-friendly, sustainable, integrated etc. further, they defined "Smart tourism as tourism supported by integrated efforts at a destination to collect and aggregate/ harness data derived from physical infrastructure, social connections, government/ organizational sources and human bodies/minds in combination with the use of advanced technologies to transform that data into onsite experiences and business value-propositions with a clear focus on efficiency, sustainability and experience enrichment" (p. 181).

The past literature also opined that emerging technology helps tourism destinations organizations to enhance managerial efficiency and maximum utilization of touristic resources for sustainable tourism development and improve the well-being of both tourists and local stakeholders (Sedarati, & Baktash, 2017; Koo,et al,2017; Taehyee Um & Namho Chung, 2019; Neuhofer, et al. 2015 and Jeong, & Shin, 2019). Almeida-Santana, A., & Moreno-Gil, S. (2017) emphasized the importance of AI, big data, and IoT in creating intelligent tourism ecosystems. The study underlines the potential of AI-driven chatbots and virtual assistants in providing real-time information and enhancing tourists' experiences. Buhalis and Amaranggana (2015) found that smart tourism technology enables tourists to access, use, and share tourism related information.

Moreover, Smart tourism technology can directly affect tourists when tourists are traveling in a smart tourist destination. As suggested in the tourism management literature, the Artificial Intelligence (AI) plays a significant role among tourists in their destination image, destination choice and future visiting behaviors (Almeida-Santana & Moreno-Gil, 2017; Prayag, 2009). In other words, smart tourism technology helps tourists to favorable destination position are more likely to wish to travel or advise to others. Above that, a number of studies have discussed the role of smart tourism technology in forming smart tourists' destination image (Buhalis & Amaranggana,2015; Gretzel, et al, 2015; Jeong, & Shin, 2019 and Neuhofer, et al. 2015). Gretzel et al. (2015) lays the foundation for understanding smart tourism and its connection to smart cities. He emphasizes the need for destinations to leverage technology, including AI, to enhance the visitor experience. It highlights the role of AI in processing large amounts of data to contribute personalized suggestions, recommendations and services to tourists.

Zhou and others, 2020 explained the uses of artificial intelligence (AI) and machine learning in the tourism, travel and hospitality industry are examined in this thorough study. It talks about how AI can improve recommendation systems to provide travelers with more individualized travel schedules and lodging options. The adoption trends and obstacles of AI in the travel and tourist sector are also covered in this article. According to Almeida-Santana et al. (2019), offers modern viewpoint on smart tourism locations. It highlights how crucial big data, IoT, and AI are to building intelligent tourism ecosystems. The study highlights how AI-powered chat bots and virtual assistants can improve visitor experiences by offering real-time information. "Tourism, artificial intelligence, and Xiang et al. (2017) conducted a literature review on hospitality.

The several uses of AI in the travel and hospitality industries are covered in this survey of the literature. It emphasizes how chat bots, personalized messaging, and predictive analytics may all help