Guest editorial: Reshaping future tourism through innovation

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The tourism industry is committed to creating memorable experiences for travelers (Leung, 2019). Technology is revolutionizing the sector and challenges the way we create valuable experiences to meet travelers' fickle needs (Buhalis, 2019). Thus, innovation has been long embraced by industry participants as a powerful tool to adapt to the ever-changing environment and market (Pikkemaat *et al.*, 2019). Innovation is defined as the introduction of new products or services, the implementation of new processes, the opening of new markets or the adoption of a new marketing or organizational methods in business practice (Schumpeter, 1934). Innovation, especially technological innovation, is central to the success of tourism companies as it contributes to increasing productivity, profitability and competitiveness (Buhalis, 2019; Tang *et al.*, 2020).

The tourism industry continues facing and is highly vulnerable to disruptive events, including health crises (COVID-19), political instability (Russia–Ukraine war, Israel–Hamas war), economic crises and natural disasters. These events have dramatically altered the landscape, causing paradigm shifts in consumer behavior, product/service design and delivery, processes, marketing and management in the tourism industry (Buhalis *et al.*, 2023). In a landscape marked by uncertainty and rapid change, continuous innovation is key to ensuring resilience and long-term success in the tourism industry (Jayawardena, 2022). It allows businesses and destinations to adapt to new realities, create unique value propositions and maintain a competitive edge in the global market (Lyu *et al.*, 2023).

In light of the new environments, it is believed that now is the opportune moment for academics and practitioners to engage in deep reflection, re-exploration and re-examination of innovation in tourism. Such thought is imperative to explore how innovation can profoundly contribute to shaping the future of our sector. As there exists a significant research gap regarding innovation within tourism (Nunkoo *et al.*, 2019), it is convinced that advancing knowledge in this domain is essential for the tourism industry to successfully adapt to the "new normal" post-pandemic and redevelop/maintain competitive advantages. Thus, in response to this imperative, a special issue has initiated in *Tourism Review* dedicated to the theme of reshaping future tourism through innovation. Its primary objective is to harness the power of innovation to facilitate the post-pandemic recovery of the tourism industry, while also laying the groundwork for its long-term prosperity and resilience in the aftermath of the pandemic.

This special issue has garnered significant interest from scholars worldwide, attracting a large number of submissions. Following rigorous rounds of peer review, a total of 8 papers have been retained for publication in this special issue. Individually and collectively, these studies highlight the range and diversity of research currently being carried out, pushing the boundaries of how developments in technology can be used to innovate to create new products or services, new operational processes to improve efficiency and new business models for sustainable and resilient organizations.

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The first paper by Tham *et al.* (2023) undertook a systematic review of 199 academic papers published between 2010 and 2021, investigating the realm of digital innovation in museums using the PRIMSA protocol. Through thematic analysis, the authors formulated a conceptual framework delineating four pivotal phases – initiate, develop, implement and evaluate – of digital innovation within museum contexts, underscoring the pivotal role of museums as key attractions within the tourism domain. At the initiate and develop phases, the integration of digital innovation into museum operations is aimed at generating IT-enabled novel products, processes or services to address challenges. Subsequently, during the implement and evaluate stages, the efficacy of the innovation is assessed holistically, encompassing considerations such as the quality of the innovation solution, visitor experiences and the broader impacts on both internal and external stakeholders.

Several studies have delved into tourists' inclination toward and acceptance of innovations. For instance, Mehmood and Khan (2023) investigated the impact of adopting autonomous vehicles on tourists' pro-environmental behaviors. Utilizing data collected from 586 tourists, the findings revealed that eco-friendly attitudes positively influence tourists' green self-image, which in turn mediates its impact on motivations to embrace autonomous vehicles. Consequently, technological, ecological and intrinsic motivations to adopt autonomous vehicles contribute to enhancing tourists' pro-environmental behaviors.

Sinha *et al.* (2024) investigated the factors motivating tourists' intention to utilize virtual reality (VR), integrating the technology acceptance model (TAM) with the theory of hedonic consumption. Drawing data from a sample of 252 Indian individuals who recently experienced VR, the study uncovered significant insights. Notably, authenticity emerged as the most influential factor driving tourists' adoption of VR, followed by perceived cost, cognitive reaction and enjoyment. Interestingly, perceived risks did not exhibit a significant impact on VR adoption in tourism, suggesting that tourists do not perceive significant privacy or physical risks associated with VR usage. Moreover, the study shed light on the role of personal innovativeness in amplifying the positive influence of attitude on tourists' intentions to utilize VR in tourism.

Rafi *et al.* (2024) explored the impacts of experiencing 360-degree VR videos on tourists' engagement levels, satisfaction levels, and subsequently, their favorable responses. To test this, they employed the Stimulus-Organism-Response framework and collected data from 975 Bangladesh tourists. The findings affirmed that 360-degree virtual reality videos notably enhance tourists' engagement with the website, consequently elevating their satisfaction levels and intention to visit destinations and disseminate electronic word-of-mouth. The study also highlighted that the positive impacts of 360-degree VR videos are further bolstered by factors such as web navigability and the quality of visual interface design.

From the employee's standpoint, Demirović Bajrami *et al.* (2024) examined the potential influence of employees' personal traits and internal marketing strategies on their engagement in green innovative behaviors at the workplace. Drawing data from a sample of 683 frontline employees across hotels in Serbia, the study reveals significant insights. Specifically, it finds that various facets of internal marketing – such as internal communication, training and development, empowerment, work environment, salary, incentive and reward systems and work support – serve as motivating factors encouraging employees to adopt green innovative practices in their work settings. Regarding individual traits, the study underscores the importance of traits such as extraversion, openness, agreeableness, conscientiousness, creative self-efficacy and optimism, all of which exhibit positive correlations with employees' engagement in green innovative behaviors. Conversely, the trait of neuroticism is identified as a deterrent to the adoption of green innovation among employees.

The final batch of papers focused on how tourism destinations harness innovations in their practices. For example, Xu *et al.* (2024) unveiled the pivotal elements and implementation pathways of digital innovation within smart tourism destinations. Employing a qualitative design, data was gathered from Chinese smart tourism destinations and analyzed using grounded theory methodology. The results yielded a conceptual framework comprising four core components of digital innovation in smart tourism destinations – digital organizational innovation, smart data platform, multistakeholder digital collaborative ecosystem and smart tourism scenario system –along with two implementation pathways: closed innovation and open innovation. This study not only underscores the paramount importance of knowledge in the innovation processes of smart tourism destinations but also constructs a comprehensive framework for digital innovation within such destinations.

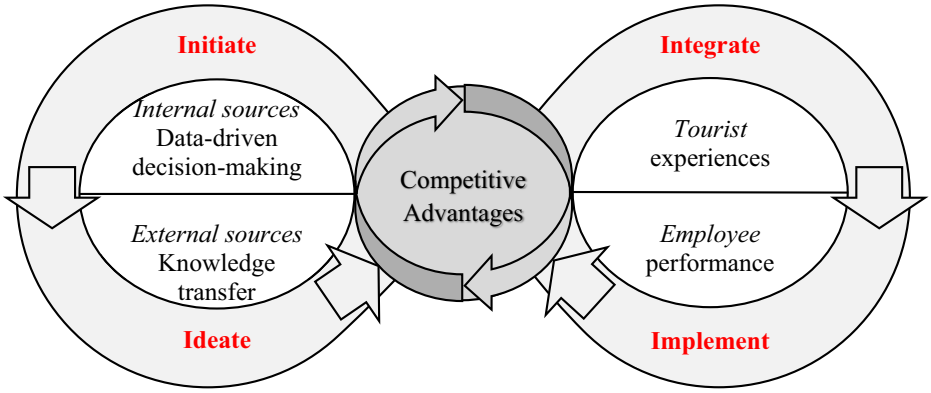
Chen *et al.* (2023) introduced the spatiotemporal transformer network as an innovative approach to augment the precision of tourism demand forecasting. This model consists of three key components: temporal transformer, spatial transformer and spatiotemporal fusion modules. Through an empirical examination utilizing hourly tourist demand data sourced from Beijing, China, the researchers conducted a comprehensive assessment of the model's efficacy. The findings demonstrate that the proposed model surpasses alternative methods in terms of forecasting accuracy, particularly due to its integration of dynamic spatiotemporal features, which have been demonstrated to significantly enhance forecasting precision.

Teixeira *et al.* (2024) explored how innovations bolster the competitiveness of destination and companies. Drawing data from 119 companies in Madeira, Portugal, the study unearthed significant findings. It was revealed that intellectual capital and strategic market approaches elevate destination competitiveness, consequently enhancing the competitiveness of tourism businesses. Institutional, research and development (R&D), organizational and managerial barriers were found to impede destination competitiveness, thereby diminishing the competitiveness of tourism businesses. This study not only enriches the existing literature on the intersection of innovation and competitiveness but also furnishes practical insights that could inform decision-making processes within organizations operating in the tourism sector.

This collection of papers underscores the critical role that innovation in redefining the future of tourism, providing valuable insights into its significance and impact on industry practices. This special issue responds to the unprecedented disruptions and explores the opportunities and challenges brought by rapid technology advancement. The depth and rigor of these papers highlight the importance of scholarly reflection on innovation in tourism, emphasizing the need to navigate today's evolving and competitive landscape. The studies in this special issue demonstrated that innovation is crucial for driving growth and enhancing competitiveness in the ever-changing tourism environment. Based on these studies and Frankenberger *et al.* (2013)'s 4I-framework of innovation, Figure 1 presents a framework and actionable suggestions for the tourism industry to embrace innovation and pave the way for a promising future.

The first two stages of innovation – "initiation" and "ideation" – describe when tourism organizations start thinking of innovation and generate initial ideas from both internal and external sources (Frankenberger *et al.*, 2013; Xu *et al.*, 2024). Internally, there is a growing importance placed on leveraging global data and knowledge for decision-making. This recognition has become even more pronounced in the wake of the COVID-19 pandemic, when the tourism industry faced unprecedented challenges and disruptions. The utilization of real-time data and advanced analytics has emerged as a powerful tool for tourism organizations, enabling them to make agile and targeted decisions in response to rapidly changing circumstances (Chen *et al.*, 2023; Volchek *et al.*, 2019). This shift toward data-driven decision-making enables agile and targeted responses, potentially revolutionizing traditional decision-making approaches in tourism.

Figure 1 Innovation in tourism



Source: Authors' own creation

Externally, the concept of "knowledge transfer" has traditionally revolved around the management of industrial and intellectual property rights, focusing primarily on the acquisition and utilization of technological innovations. Recently, this perspective is evolving toward a broader understanding of "transversal knowledge transfer" (OECD/Eurostat, 2018). This expanded concept acknowledges that innovation acquisition extends beyond technological advancements to encompass a wide spectrum of knowledge domains, including personal, social and cultural dimensions. This holistic approach to innovation acquisition enables tourism organizations to tap into a rich reservoir of insights, ideas and practices from a variety of sources, including partnerships with other industries, collaborations with academia, engagement with local communities and exchanges with international stakeholders.

The "integration" and "implementation" of innovation within destinations and tourism companies serves a dual purpose: enhancing tourist experiences and optimizing employee performance. From the perspective of tourists, innovation manifests as a catalyst for immersive and unforgettable experiences, facilitated by advancements in technology and service delivery (Rafi *et al.*, 2024). This entails the implementation of novel technologies, services and practices that augment the overall quality, convenience and enjoyment of the tourist journey. Innovations in this context may encompass advancements such as immersive technologies, robotics and artificial intelligence, mobile applications and biometrics, all aimed at delivering memorable and immersive experiences for travelers.

From the viewpoint of tourism employees, innovation is instrumental in driving improvements in job performance and satisfaction. By embracing cutting-edge tools and methodologies, employees can enhance their productivity, efficiency and effectiveness in delivering high-quality services to tourists. This could involve the deployment of robots as assistants, the introduction of virtual reality as innovative training programs, the implementation of biometrics as efficient digital management systems and the introduction of flexible work arrangements. By embracing innovations tailored to their needs and roles, employees are empowered to perform their tasks more effectively, engage in continuous professional development and derive greater fulfillment from their work experiences.

As a result of the four-stage process, innovations play a pivotal role in bolstering the competitiveness of destinations and tourism companies (Frankenberger *et al.*, 2013; Teixeira *et al.*, 2024). Innovative practices enable destinations to differentiate themselves from competitors by offering unique and compelling experiences that resonate with

travelers. For tourism companies, innovation drives efficiency, cost-effectiveness and customer satisfaction, all of which are critical factors in maintaining a competitive position. By embracing various innovations, tourism companies can streamline operations, enhance service quality and capitalize on emerging market trends. By harnessing the power of innovation, destinations and tourism companies can stay ahead of the curve, adapt to evolving consumer preferences and thrive in an increasingly competitive industry landscape.

While the papers presented in this collection offer valuable insights into various aspects of innovation in tourism, they also illuminate areas that demand further exploration to fully grasp its dynamics. Some broader topics like disruptive innovation, business model innovation and social innovation are yet to be fully addressed. These topics have the potential to reshape the very fabric of the tourism industry and its interactions within the broader ecosystem. Future research endeavors could delve into understanding how disruptive innovations might revolutionize tourism operations and reshape industry structures at a macro level. How can tourism organizations be encouraged to engage with innovation and evolve their business models and process to a radically changed business environment? How can tourism managers be encouraged to change ideas/process and methods of working that are often, to be kind, decades old? How can tourism organizations proactively collaborate with customers, suppliers, or even competitors to co-create new products, services, or solutions that challenge establish norms, and/or break the all too well-established mould of traditional tourism? Addressing these macro-level challenges requires a strategic shift toward innovation at a more holistic level, transcending traditional product and process innovation.

While the papers featured in this special issue represent a significant step forward in advancing our understanding of innovation within the tourism sector, there remains a substantial amount of work to be done. As the industry continues to navigate the complexities of an ever-evolving landscape, the pursuit of innovation will undoubtedly remain a cornerstone of success and sustainability (Jayawardena, 2022). Future research endeavors should aim to explore new frontiers of innovation, identify emerging trends and opportunities and develop actionable insights that can inform strategic decision-making and drive positive change within the tourism industry. By embracing innovation as a catalyst for transformation, the tourism sector can navigate challenges, capitalize on opportunities and chart a course toward a more resilient, inclusive and sustainable future.

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