
Editorial

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1 Introduction

In the call for papers for this special issue, we outlined the meaning and implications of sustainability in the debate on smart destinations and digital tourism as the main goal to explore. This objective arises from the evidence that, despite sustainability representing a fundamental perspective in the debate on tourism management and it being one of the main dimensions supporting the smart configuration of a destination and the creation of digital tourism experiences, sustainability implications in digital contexts continue to be under-researched.

The wide diffusion of digital technologies has enabled radical innovations in tourism and has changed the competitive landscape at company and destination levels. In the smart tourism context, data transformed into knowledge assets forms the core competitive advantage (Ardito et al., 2019; Alcántara-Pilar et al., 2017; Koo et al., 2015; Thrassou et al., 2014). Additionally, as a result of the interconnection of tourism destinations with multiple communities of stakeholders through dynamic platforms, knowledge intensive communication flows and enhanced decision support systems, smart tourism focuses on the creation of a tourism experience that leverages digital technologies to achieve personalisation, context-awareness and real time monitoring (Del Vecchio et al., 2018a; Buhalis and Amaranggana, 2015; Trequatrini et al., 2016).

Smart tourism relies on extensive adoption of emerging technologies, such as social media and mobile technologies, smart devices and sensors to collect and exploit the huge amount of data for creating new value propositions (Joshi, 2018; Neirotti et al., 2016; Gretzel et al., 2015) and this has relevant implications for the ways in which tourism destinations compete. If the final objective of a Smart Tourism Destination is to enhance the tourism experience, maximising both destination competitiveness and consumer

satisfaction, this cannot be achieved without the guarantee of parameters of sustainability at social, economic and environmental levels that have to be preserved also for residents and local stakeholders (Serravalle et al., 2019; Presenza et al., 2014). Indeed, the competitiveness of tourism destinations is based on the destination's capacity to continuously attract tourists by offering high quality and unique experiences, ensuring benefits for stakeholders, the local community and the territory and in doing so enabling sustainable development (Boes et al., 2016; Shams and Lombardi, 2016; Law et al., 2014).

As a driver to improve business performances and new sources of competitive advantage (Hall and Wagner, 2012), sustainability is fundamental in tourism management and serves as a critical enabler of the smart configuration of a destination (Del Vecchio, et al., 2018b). According to the UNWTO (2015), sustainability refers to “the environmental, economic, and socio-cultural aspects of tourism development and a suitable balance must be established between these three dimensions to guarantee its long-term sustainability” [UNWTO, (2015), pp.11, 12]. The importance of sustainability in tourism was also underlined by the World Economic Forum (2015) in its report regarding the performance of world tourism destinations, where sustainability is identified as the only way a destination can consider for its development and competitiveness (Iunius et al., 2015).

The ultimate objectives of a smart tourism destination are represented by efficiency, sustainability and experiential enrichment. This is made possible by embracing advanced tools to collect, aggregate and analyse data generated by physical infrastructures and social connections, and by translating the derived intelligence into on-site experiences (Ndou et al., 2016; Del Vecchio et al., 2018b; Chung et al., 2017). This could satisfy the growing demand of tourists for more, more seamless, more personalised, and more all-inclusive local experiences (Law et al., 2014). It is in this respect that the definition offered by Neuhofer et al. (2012) on “technology enhanced tourism experiences” shows its relevance. However, a synthesis of smart destination principles, digital tourism experience premises and sustainability demands is needed to fully realise any potential gains in competitiveness in the long run.

Finally, we cannot neglect the impact of COVID-19 on the competitiveness of tourism destinations and on the large-scale adoption of digital technologies. Indeed the urgent health crisis management caused by the coronavirus (COVID-19) in early 2020, suddenly increased the adoption of digital technologies (Ienca and Vayena, 2020; Majumdar et al., 2018) such as big data, wireless communications and social networks, apps and global positions systems (GPS) systems, internet of things (IoT), artificial intelligence (AI) to collect and process large amount of data in multiple contexts supporting decision-making processes, businesses and policies (Trequattrini et al., 2016; Nambisan, 2017; Nambisan et al., 2017; European Commission, 2017). The increased adoption of digital technologies has been also observed in tourism destination management even though travel and tourism are among the most affected sectors with a massive shortfall of international demand due to global travel restrictions and border shutdowns to contain the virus. According to the latest issue of the UNWTO World Tourism Barometer, international tourist arrivals (overnight visitors) fell by 72% in January–October 2020 over the same period last year, curbed by slow virus containment, low traveller confidence and important restrictions on travel still in place due to the COVID-19 pandemic. Domestic tourism is helping to soften the blow, at least partially, and governments have taken impressive immediate action to restore the sector, while

protecting jobs and businesses. Many countries are also now developing measures to build a more resilient tourism economy post COVID-19. These include preparing plans to support the sustainable recovery of tourism, promoting the digital transition of the sector, moving to a greener tourism system, and rethinking tourism for the future (OECD, 2020).

Despite the relevance of the above issues, the sustainability and smart tourism nexus remains under-researched. Specifically, what sustainability means in this context and can imply for the competitiveness of destinations and companies, tourists' experiences, human capital and organisational configurations are the questions that have motivated our research and the call for papers we proposed to the attention of a multi-disciplinary community of scholars and researchers.

Thus, with this call for a special issue in the *International Journal of Digital Culture and Electronic Tourism*, we tried to encourage papers for examining novel phenomena connecting sustainability with tourism management, regional development and technology management, by employing original methodologies, and offering interesting theoretical and empirical contributions to this research area. In response to this call, we received a meaningful number of submissions with original contributions to theory and practice. These papers form an important basis for initiating further discourse on the topic.

2 Structure of the special issue

The special issue is composed of nine papers and it has been structured according to a logical order that takes readers from conceptualisation to application. It starts with a conceptualisation of smart tourism and sustainability. It continues with an exploration of social innovation emerging in ambidextrous SMEs and the digitalisation of tourism in response to the emergence of Covid-19. This is followed by papers related to the usage of digital technologies in sustainable tourism for disabled individuals and the role of human capital for tourism development. From this, the special issue then moves from discussing accommodation facilities for the smart destination to the application of digital technologies for the conservation of cultural heritage. It ends with the analysis of consumer behaviours and perceptions about ecological issues in cruise and aviation contexts.

More specifically, paper 1 titled 'Social big data for sustainable smart tourism development: a conceptual framework' by Ndou and Mele provides a conceptual framework for guiding tourism operators and destination managers to properly deal with social big data and create value for a sustainable smart tourism destination by extracting insights and knowledge that would help them optimise customer touchpoints and adapt to market changes.

Paper 2, titled 'Social innovation and smart tourism in ambidextrous SME alliances: an empirical analysis of alliance performance', by Schena and Russo demonstrates how SME alliances can manage the dilemma of exploration and exploitation to gain a financial performance advantage. Specifically, it finds that SME alliances that do not move towards social or tourism strategies should prefer a targeted alliance to obtain economic benefits and that if innovation objectives are considered as the basis of the formation of the alliance, the greatest economic benefits are achieved through an ambidextrous alliance.

Paper 3, titled 'Digitalisation in the hospitality industry: motivations, effects and role of Covid-19', by Morrone et al. focuses on the reality of the health emergency due to Covid-19 by investigating, through a case study, the level of digitalisation of hotel structures, the underlying motivations, the effects of the digitalisation processes and the role of Covid-19. It demonstrates that digitalisation has a series of positive effects, such as an increase in revenues, reduction of costs, and improvement of the corporate image.

Paper 4, titled 'Sustainability and disability in the digital age: some experiences in Italian tourism' by Migliaccio, focuses on the special needs of people with disabilities to demonstrate with an empirical investigation related to Italy that digital technologies can support the development of respective tourism experiences. It concludes that such accessible digital experiences can represent an opportunity for the sustainable development of a destination.

Paper 5, titled 'Human capital and smart tourism's development: primary evidence' by Lombardi et al. focuses on the role of human capital in the context of smart tourism by providing evidence through a structured literature review. The main findings show how human capital should be developed and improved to develop sustainable smart tourism, with a positive impact on the overall economic growth of a country or a destination. Additionally, this paper proposes a future research agenda.

Paper 6, titled 'An empirical model of long-term development for accommodation facilities: the role of smart destination' by Digiorgio and Renga investigates the contribution offered by the different promotional tools developed by destinations to the long-term development of accommodations in the territory. It proposes a model to analyse the impact of destinations' digital tools on booking channels, direct and intermediated (both online and offline), and in turn their effect on revenue.

Paper 7, titled 'Application of a digital framework towards the comprehension and restoration of the thin marble envelope of the *Casa delle Armi* built cultural heritage' by Ferrero et al. moves from the centrality of cultural heritage into the offering of a destination to explore the opportunities associated with digital technologies for the maintenance and restoration of cultural and architectural heritage. The paper adopts a digital framework to study a real site for demonstrating that digital technologies open up new scenarios for built heritage preservation, maintenance and enjoyment.

Paper 8, titled 'Study on the ecological attitudes of Italian cruise passengers' by Crovella et al. investigates the interaction between the background of Italian cruise passengers and their attitudes to predict their ecological behaviour. It offers insights regarding the implementation of green practices by demonstrating that these passengers paid in large part attention to sustainability criteria adopted by the cruise ship operators and would be willing to pay additional charges to tackle the environmental burden caused by the cruise.

Finally, paper 9 titled 'Passengers' perception on aviation environmental issues and its effect on sustainable tourism' by Amicarelli et al. investigates Italian and foreign passengers' main characteristics and their attitude towards aviation-related environmental topics. It demonstrates that flight-tourists are not well informed about aviation environmental issues, have little interest in aviation environmental policies, and are not inclined to pay for more sustainable aviation. The study provides interesting implications for the practical implementation of strategies of communication and the promotion of environmental awareness.

The papers included into this special issue are characterised by a plurality of perspectives, the combination of different theoretical focuses and methodological

approaches. At the beginning of this editorial project, we were aware of the complexity of the topics related to our research and the multifaceted relationships emerging at the intersections between the issues of smart destination, digital tourism, and sustainability. The contributions received during our editorial work confirmed the complexity of our research questions and the papers finally included into the special issue all combine theoretical and methodological rigour with novel contexts of analysis and original types of empirical evidence.

We truly hope this special issue will inspire the future work of scholars and researchers in the field of smart destinations, digital tourism and sustainability and in the broader areas of business and tourism management, sustainability science, and innovation and technology management. We are aware that many research questions remain in these complex research domains and that their intersection calls for further investigation. However, we are very grateful to the authors of the selected papers, who through their research, and to the best knowledge of the editors, have provided a first attempt to fill some relevant existing gaps and have contributed to nurturing ideas that will hopefully motivate new future contributions.

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