

Tourism, innovation and territorial development: contemporary dynamics and sustainability challenges

Turismo, inovação e desenvolvimento territorial: dinâmicas contemporâneas e desafios da sustentabilidade

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DOI: <https://doi.org/10.29073/e3.v12i3.1103>

Received: 31/03/2026 | **Accepted:** 31/03/2026 | **Published:** 01/05/2026

ABSTRACT

Contemporary tourism is facing profound structural transformations driven by digitalization, the growing centrality of data, and the need for more sustainable and inclusive development models. In this context, this special issue of the *Journal of Economics, Companies and Entrepreneurs in the CPLP (E3)* brings together a set of studies selected from ICOTTS'23 – 5th International Conference on Tourism Technology & Systems, reflecting the multidisciplinary and transversal nature of this field of research. The included works address fundamental topics such as tourist behavior in digital environments, the integration of smart technologies in destinations, marketing and competitiveness strategies, as well as the dynamics of sustainability and territorial development. Recent literature shows that digital technologies, including intelligent systems, big data and digital platforms, play a decisive role in transforming the tourism experience, optimizing destination management and creating value for different stakeholders. At the same time, the importance of sustainability as a structuring axis of tourism development is reinforced, promoting a balanced articulation between economic growth, social inclusion and environmental preservation. The integrated analysis of these themes highlights the need for interdisciplinary and data-driven approaches, capable of responding to the complexity of contemporary tourism systems. This special issue thus contributes to the advancement of scientific knowledge by highlighting the interconnections between technology, innovation and territorial development, offering relevant perspectives for researchers, decision-makers and professionals in the sector.

Keywords: Tourism, Digital transformation, Smart tourism, Sustainability, Territorial development, Information systems, Innovation, Tourism experience

RESUMO

O turismo contemporâneo enfrenta transformações estruturais profundas impulsionadas pela digitalização, pela crescente centralidade dos dados e pela necessidade de modelos de desenvolvimento mais sustentáveis e inclusivos. Neste contexto, a presente edição especial da *Revista de Economia, Empresas e Empreendedores na CPLP (E3)* reúne um conjunto de estudos selecionados da ICOTTS'23 – 5th International Conference on Tourism Technology & Systems, refletindo a natureza multidisciplinar e transversal deste campo de investigação. Os trabalhos incluídos abordam temas fundamentais como o comportamento do turista em ambientes digitais, a integração de tecnologias inteligentes nos destinos, as estratégias de marketing e competitividade, bem como as dinâmicas de sustentabilidade e desenvolvimento territorial. A literatura recente evidencia que as tecnologias digitais, incluindo sistemas inteligentes, big data e plataformas digitais, desempenham um papel determinante na transformação da experiência turística, na otimização da gestão dos destinos e na

criação de valor para os diferentes stakeholders. Paralelamente, reforça-se a importância da sustentabilidade como eixo estruturante do desenvolvimento turístico, promovendo uma articulação equilibrada entre crescimento económico, inclusão social e preservação ambiental. A análise integrada destes temas evidencia a necessidade de abordagens interdisciplinares e orientadas por dados, capazes de responder à complexidade dos sistemas turísticos contemporâneos. Este número especial contribui, assim, para o avanço do conhecimento científico ao evidenciar as interligações entre tecnologia, inovação e desenvolvimento territorial, oferecendo perspetivas relevantes para investigadores, decisores e profissionais do setor.

Palavras-chave: Turismo, Transformação digital, Turismo inteligente, Sustentabilidade, Desenvolvimento territorial, Sistemas de informação, Inovação, Experiência turística

Contemporary tourism is going through a period of profound transformation, marked by the increasing integration of digital technologies, the centrality of data and the need for more sustainable and inclusive development models. In this context, this special issue of the **e³ – Journal of Economics, Business and Entrepreneurship in the community of Portuguese-speaking countries (e³)** brings together a set of papers selected **from ICOTTS'23 – 5th International Conference on Tourism Technology & Systems**, held between November 2nd and 4th, 2023, at the Polytechnic University of Bacalar, in Mexico.

ICOTTS asserts itself as a multidisciplinary scientific space that crosses tourism, information technologies and systems, promoting dialogue between different areas of knowledge and sectors of activity. The works presented reflect this diversity, addressing topics ranging from digitalization and intelligent systems to sustainability, territorial management and innovation in tourism.

This special issue is thus part of the editorial continuity of the **e³**, which has been highlighting the role of digital transformation, organizational innovation and responsible science in the analysis of contemporary economic and social phenomena (Sardinha et al., 2025; Sousa et al., 2025). In this sense, tourism emerges as a privileged field to observe these transformations, given its systemic and transversal nature.

CONTEMPORARY TRANSFORMATIONS OF TOURISM

Recent literature shows that tourism is deeply influenced by digitalization and the development of smart technologies. The integration of digital systems, artificial intelligence, big data and technological platforms has been redefining the way destinations are managed, promoted and experienced (Wu et al., 2024).

In this context, smart tourist destinations play a central role, relying on the intensive use of information and communication technologies to improve the visitor experience, optimise resource management and increase territorial competitiveness (Vaz et al., 2025). As evidenced in the literature, these technologies make it possible to provide personalized information, support decision-making and improve the overall quality of the tourist experience (Yap et al., 2025).

In addition, the adoption of smart technologies directly influences the satisfaction of tourists and their behaviours, namely in terms of the image of the destination, loyalty and digital communication, including the phenomenon of electronic word-of-mouth (Matyusupov et al., 2025).

In this context, it is also important to highlight the contribution of the **e3** magazine itself to this discussion, namely through the analysis of smart tourist destinations and the role of

technologies in the construction of contemporary tourist experiences (e.g. Pereira et al., 2023).

BEHAVIOUR, DATA, AND THE DIGITAL ECONOMY

The first set of articles focuses on understanding tourist behavior in an increasingly digital and data-driven context. The literature shows that digital technologies play a decisive role in the way tourists search for information, make decisions and evaluate their experiences.

Smart tourism technologies make it possible to offer personalized and data-driven services, significantly improving the quality of the experience and the efficiency of decision-making processes (Yap et al., 2025). At the same time, the growing importance of data and open systems in tourism destinations reinforces the need for approaches based on data-driven management, promoting innovation and value creation (Celdrán-Bernabéu et al., 2026).

This block thus highlights the transition to data-driven tourism, where information, connectivity and digital systems play a structuring role.

Within this thematic block, some contributions also explore learning processes and competencies in tourism education, using advanced methodological approaches such as structural equation modeling and data-driven techniques. These studies highlight the importance of cognitive and self-regulated learning strategies in academic performance and competency development, reinforcing the relevance of analytical approaches in higher education.

INNOVATION, MARKETING AND COMPETITIVENESS

The second block addresses innovation and marketing strategies in tourism, highlighting the role of digital technologies in promoting destinations and creating competitive advantages.

Recent literature shows that smart technologies directly influence the tourism experience, namely through co-creation of value, personalization and interactivity (San Martín et al., 2026). These technologies also contribute to the formation of the image of the destination, the satisfaction of tourists and their propensity to share experiences in digital environments (Matyusupov et al., 2025).

However, it is important to recognize that the relationship between technology and the tourist experience is not linear. Recent studies highlight a certain paradox, in which technology can simultaneously enrich and limit the authenticity of the tourist experience (Kemala Sari et al., 2025).

In this context, the competitiveness of destinations increasingly depends on the ability to integrate technology, digital marketing and experience management.

SUSTAINABILITY AND TERRITORIAL DEVELOPMENT

The third block focuses on sustainability and the role of tourism in territorial development, highlighting the need for balanced models between economic growth, social inclusion and environmental preservation.

The literature highlights that sustainability is today a central element in tourism management, being reinforced by the integration of digital technologies and institutional support (Jokom et al., 2025). Smart tourist destinations emerge, in this context, as instruments to promote a more efficient use of resources and improve the well-being of local communities (Samancioglu et al., 2024).

This set of articles also highlights the importance of tourism as an engine of local development, contributing to territorial cohesion and the enhancement of cultural and natural resources.

ENVIRONMENT, TERRITORY AND EVIDENCE-BASED MANAGEMENT

The last block addresses the environmental dimension and the management of tourism resources, highlighting the importance of scientific and data-driven approaches to territorial planning.

The use of data, sensors and digital systems makes it possible to improve decision-making processes and support more effective public policies, contributing to the sustainability of destinations and mitigating negative impacts (Celdrán-Bernabéu et al., 2026).

In this context, tourism should be understood as a complex system, where the integrated management of natural resources, infrastructure and tourist flows is essential to ensure long-term sustainability.

NOTE ON THE ARTICLES IN THE SPECIAL ISSUE

The papers included in this special issue reflect the thematic diversity of the ICOTTS'23 conference, addressing different dimensions of contemporary tourism, from the analysis of consumer behavior and the digital economy to marketing, sustainability and territorial management strategies. Together, these works highlight the growing interconnection between technology, innovation and sustainable development, contributing to the advancement of scientific knowledge and the definition of new approaches in the tourism sector.

Given the high number and diversity of selected contributions, this special issue is structured into two volumes. The present volume includes a total of 16 articles, while a second volume will include additional contributions, further extending the discussion on tourism, technology, and territorial development.

This special issue is published alongside the regular issues of Volume 12, which will be released subsequently during the year, reflecting the journal's commitment to the timely dissemination of high-quality research arising from international scientific collaboration.

CONCLUSION

The set of contributions gathered in this special issue shows that contemporary tourism should be analyzed as an integrated system, where technology, territory and society are dynamically interconnected.

Increasing digitalisation, coupled with the need for sustainability and the complexity of territorial systems, requires interdisciplinary and data-driven approaches. In this context, scientific research plays a key role in understanding these dynamics and defining strategies that promote a more balanced, innovative and sustainable tourism development.

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AUTHORS' CONTRIBUTIONS (CREDIT)

Conceptualization, AA, JV, LS; validation, AA, JV; investigation, JV, ÁS, MJG, MS; writing—original draft preparation, JV, AA, LS; writing—review and editing, JV, ÁS, MJG, MS; supervision, AA, JV, LS. All authors have read and agreed to the published version of the manuscript.

FUNDING

This research received no external funding.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

Data supporting the findings of this study are available upon reasonable request.

ETHICS STATEMENT

This study did not involve human participants or animals and therefore did not require ethical approval.

ACKNOWLEDGEMENTS

The authors would like to acknowledge the ICOTTS'23 – 5th International Conference on Tourism Technology & Systems for the scientific contributions that supported this special issue.