



Structured Abstracts of 'Sustainable Tourism in the Era of Community Innovation and Digital Solutions' session

AI and Cultural Heritage Interpretation: Legal and Ethical Challenges

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Background and introduction: Artificial intelligence is increasingly used in cultural tourism to interpret heritage sites through apps, chatbots, and virtual guides. However, such tools raise serious legal and ethical concerns, including misrepresentation, cultural appropriation, and lack of transparency. This study addresses whether current legal frameworks adequately regulate AI-generated heritage content and examines associated risks.

Objective: The research aims to identify the legal and ethical challenges of AI-driven cultural interpretation in tourism. It seeks to determine whether existing intellectual property and cultural protection laws are sufficient and to explore how AI affects authenticity, historical accuracy, and community representation in heritage-related digital content.

Methodology: This study uses a multi-method qualitative approach: (1) content analysis of AI-based cultural interpretation platforms, (2) expert interviews with heritage professionals, legal scholars, and developers, and (3) an online survey targeting tourists and institutional users to assess perceptions of trust, accuracy, and regulatory awareness.

Results: The research found significant regulatory gaps and inconsistent practices regarding AI-generated heritage content. Many applications lack clear source attribution or community consultation, resulting in distorted narratives. Stakeholders expressed concern over cultural accuracy, and most of survey participants supported stronger ethical and legal oversight.

Conclusions: AI offers great potential in cultural heritage interpretation, enhancing accessibility and engagement. However, without clear legal frameworks and participatory guidelines, it risks undermining authenticity and community rights. The study recommends developing international norms and including cultural stakeholders in AI content creation processes.

Limitations and future research directions: This study focused primarily on European applications, limiting generalizability to global contexts. Future research should include non-Western case studies, evaluate co-creation practices with local communities, and test practical legal models to ensure ethical AI use in heritage interpretation worldwide.

Keywords: AI, cultural heritage, legal regulation, ethical interpretation, deepfake, tourism, authenticity, intellectual property



Technological Trends in the Event Management Market

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Background and introduction: The event management sector has undergone profound technological transformations in recent years, generating both novel opportunities and complex challenges for organizers, participants, and service providers alike. This study seeks to critically examine emerging technological trends that are redefining the planning, implementation, and experiential dimensions of event organization.

Objective: A central focus is placed on the application of artificial intelligence (AI), which enhances participant engagement and strategic decision-making through personalized program recommendations, chatbot integration, and data-driven predictive analytics. Hybrid and fully virtual events have established themselves as standard formats, offering multi-perspective live streaming, interactive digital environments, and gamified participation frameworks.

Methodology: We selected interviews, as this approach enables us to obtain in-depth insights that go beyond the capabilities of general qualitative methods. The interviews are conducted with experts who were responsible for the creation, design, and implementation of the fan engagement initiatives mentioned above. The international sporting events selected for analysis include the FINA World Championships in 2022, the World Athletics Championships in 2023, and the Swimming Championships (25m) in 2024.

Results: The interviews are expected to reveal how AI-powered fan engagement tools enhanced audience interaction, emotional involvement, and overall event satisfaction. Furthermore, the study will likely demonstrate the operational benefits of integrating technologies like IoT, AR/VR, and blockchain, particularly in terms of security, efficiency, and immersive experience delivery.

Conclusions: The research outcomes will elucidate the ways in which distinct elements of the attendee experience were operationalized and evolved throughout the analyzed events, drawing upon knowledge derived from previous implementations.

Limitations and future research directions: While the current study focuses on implementation and immediate outcomes of technological innovations (especially AI-driven tools) in international sporting events, a promising avenue for further research would be to examine the long-term impact and audience perception of these technologies.

Keywords: Technological trends, event management, sport events, AI, fan engagement tools



Sustainable and Digital Cultural Tourism as Driver of Regional Development in the Romania–Hungary Cross-Border Area

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Background and introduction: In the context of rapid global economic shifts and the transition toward sustainable and digital development, cross-border cultural tourism gains strategic importance for border regions. This study focuses on the Romania–Hungary border area, with a special focus on two county pairs in each country: Bihor and Satu Mare (Romania), and Hajdú-Bihar and Szabolcs-Szatmár-Bereg (Hungary), where cultural events play a growing role in fostering regional identity, cohesion, and local development.

Objective: The paper aims to explore how sustainability and digitalization trends influence cross-border cooperation (CBC) in tourism and culture. It emphasizes the role of cultural events in strengthening regional identity and examines how digital tools and sustainable policies support or hinder CBC between Romania and Hungary.

Methodology: A qualitative approach was used, combining semi-structured questionnaires with interviews. Data were collected from 56 participants during cross-border cultural events and 10 stakeholders, including organizers, local authorities, NGOs, and digital promoters. The study was also complemented with policy analysis and case studies.

Results: Our findings show that cultural events are widely valued for enhancing regional cohesion and visibility. However, digital integration and cross-border cooperation face challenges, due to the lack of interest at the level of communities, local administrations, and the business environment, as well as due to organizational and legal barriers. Moreover, digital expansion in cultural tourism is uneven, influenced by participants' socio-cultural backgrounds and digital readiness.

Conclusions: Cultural events are key tools for regional development, but their full potential is limited by fragmented digital strategies and cooperation gaps. A shared framework is needed to align cultural and tourism policies, improve digital inclusion, and foster long-term collaboration across the Romania–Hungary border.

Limitations and future research directions: The study is limited by its qualitative nature and regional focus. Future research should include quantitative data and broader geographic coverage but also exploration of digital literacy, institutional cooperation models, and the long-term impact of cultural events on cross-border strategies.

Keywords: cross-border cultural tourism, digitalization, regional development, qualitative research, sustainability



Navigating Global Trends: Sustainability and Digitalization in Regional Tourism Development in Romania

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Background and introduction: Given the ongoing global economic changes, shaped by post-pandemic recovery, financial uncertainty, and geopolitical tensions, the tourism and hospitality sectors in Central and Eastern Europe face both challenges and opportunities. This study explores how global trends in sustainability and digitalization influence regional tourism development in Romania's North-West Region, highlighting the adaptive responses of local actors amid structural constraints and socio-economic disparities.

Objective: The main objective is to examine how regional tourism stakeholders interpret and implement sustainability and digitalization principles. The study aims to identify perceptions, strategies, and barriers encountered in adapting to global trends to inform more effective and inclusive regional development strategies in the tourism and hospitality sectors.

Methodology: A qualitative research design was employed, using semi-structured interviews with professionals and decision-makers involved in tourism planning, promotion, and service delivery. The interviews focused on participants' views regarding sustainable practices, digital transformation, institutional challenges, and the role of collaboration and policy support in fostering innovation and resilience in regional tourism.

Results: Findings indicate increasing awareness of sustainability imperatives, yet practical implementation remains inconsistent due to limited resources, institutional inertia, and uneven digital literacy. Digital tools are adopted reactively rather than strategically. Stakeholders emphasize the need for stronger inter-institutional collaboration, capacity building, and coherent policy frameworks to support sustainable and innovative tourism development.

Conclusions: The study reveals how global sustainability and digitalization trends are locally interpreted and operationalized. It underscores the importance of integrated regional strategies that align environmental responsibility, technological innovation, and inclusive economic growth. These insights contribute to the broader discourse on sustainable tourism and offer practical guidance for regional policy and planning.

Limitations and future research directions: The study's exploratory nature and limited sample size constrain generalizability. Future research should expand to include comparative regional analyses and incorporate quantitative methods. Further investigation is needed into the long-term impact of public policy and digital infrastructure on sustainable tourism transformation in post-transition economies like Romania.

Keywords: Digital transformation, North-West Region Romania, Qualitative research, Regional development, Sustainable tourism

Marketing Sustainability in Tourism SMEs: A Systematic Review of Digital Strategies for Green Innovation and Competitiveness

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Background and introduction: Sustainability and digital transformation are critical challenges for tourism SMEs. While digital marketing offers tools to promote eco-conscious practices, its impact on sustainability outcomes remains unclear. This study explores how SMEs apply digital marketing to support sustainability and identifies innovation gaps via a systematic review.

Objective: To examine how tourism SMEs utilize digital marketing to achieve sustainability goals and develop a conceptual framework linking digital tools with green innovation and competitiveness.

Methodology: A PRISMA-based systematic review was conducted, analyzing 54 peer-reviewed articles (2015–2025) from Scopus, Web of Science, and Google Scholar. Thematic coding identified digital tools, sustainability outcomes, strategic patterns, and barriers across studies.

Results: Digital tools like social media, SEO, email marketing, IoT, and analytics help tourism SMEs improve sustainability efforts. Key themes include eco-branding, digital engagement, and crisis recovery. Challenges include digital skill gaps and inconsistent sustainability messaging. A framework shows how digital strategies support sustainability.

Conclusions: Tourism SMEs integrating digital tools with sustainable practices gain operational efficiency, stronger branding, and resilience. Six core themes—ranging from digital communication to policy support—highlight the dual benefits of this alignment. The review offers a framework guiding both academic and practical advancement in sustainable digital transformation.

Limitations and future research directions: The review's English-language focus may miss regional insights. Geographic and methodological gaps remain. Future studies should assess cross-cultural contexts, AI applications, and the measurable impact of digital strategies on sustainability.

Keywords: digital marketing; sustainability; tourism SMEs; PRISMA; green innovation; eco-branding; systematic literature review



Comparative analysis of public attitudes toward domestic leisure tourism of the NUTS-1 regions residents in Bulgaria

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Background and introduction: Tourism is a sector of high importance in Bulgarian economy. Domestic tourism is a significant part of it and have proved its significance during the COVID-19 crisis. Public attitudes towards domestic leisure tourism are to be investigated in order to describe the current situation of Bulgarian domestic tourism supply and demand.

Objective: The present paper provides comparative analysis of the public attitudes of the two Bulgarian NUTS-1 regions (Northern and Southeastern Bulgaria, and Southwestern and South Central Bulgaria) toward country's domestic leisure tourism. The scope of the research are winter and summer leisure tourism.

Methodology: Statistical data about both regions is collected from authorities (National Statistical Institute, ministries, municipalities, etc.) and provided in order to enlighten their current socio-economic situation. The primary data is obtained from a national representative face-to-face tablet survey based on a random sample stratified by the Bulgarian districts (28) and the residence place size. The results are presented via different indicators such as travel practices, length of stay, etc.

Results: Bulgarian residents from both regions travel more for purposes of summer leisure tourism but are more satisfied with their winter holidays. People from both regions support the idea that natural resources are the main prerequisite for domestic leisure tourism development but the high prices and the low quality of service are an obstacle for it. Those who prefer to spend their holidays abroad choose mainly Greece or Turkey (summer) and Austria, France or Italy (winter).

Conclusions: Having in mind the research findings it can be concluded that Bulgarian domestic leisure tourism needs to be promoted among both regions' residents, especially the winter one. Domestic tourism is preferred during crises but domestic tourist must be retained also in non-crises periods. They could be appealed with attractive pricing packages, sustainability policies, certification, adequate targeting and raising the quality of the product.

Limitations and future research directions: As the paper presents only part of the results obtained by the survey and other activities within the ongoing "Modeling and research of public attitudes of Bulgarian citizens regarding the image of domestic leisure tourism - situational analysis and conceptual framework for overcoming the negatives" project, further researches could be published regarding those attitudes, Bulgarian leisure tourism demand and supply, SWAT analyses, etc.

Keywords: Domestic tourism, leisure tourism, public attitudes, NUTS-1 regions, Bulgaria



Behind the experiences: The encounter of generation Y and New Tourism in the spirit of sustainability

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Background and introduction: What if every journey left behind not just footprints, but values?

As the tourism industry faces urgent environmental and social challenges, a growing number of travellers, especially from Generation Y are looking for experiences that reflect their personal beliefs: authenticity, connection, responsibility, and a sense of purpose. Regenerative and sustainable tourism is no longer a niche; it is a conscious response to the need for more meaningful, value-driven travel.

Objective: At the heart of the research lies a core question: how can experiences, whether rooted in local traditions or supported by digital tools, foster deeper connection to nature, culture, and the self? Our aim was to explore how experience design can become a tool for shaping a more sustainable mindset, especially in the value-driven travel decisions of Generation Y.

Methodology: As part of our research, we conducted in-depth interviews with six tourism professionals who are actively shaping sustainable and regenerative tourism practices in Hungary. Their insights offered an authentic view of current trends and challenges. The qualitative approach was complemented by an online survey, which served as a pilot and provided a glimpse into travellers' attitudes and ways of thinking.

Results: The findings show that GenY is open to more sustainable travel, especially when experiences offer genuine connection to local culture. However, many get stuck due to lack of information, financial constraints, or the convenience of familiar choices. Digital tools are most effective when they act not as gimmicks, but as bridges to deeper, more meaningful experiences. This, however, requires awareness on the provider side as well, real change can only happen within a functioning system.

Conclusions: Real change doesn't begin with campaigns, it starts within. It begins in those experiences that move us, leave a mark, and raise questions. New Tourism is not just a trend, but a response to a world longing to reconnect with itself, and with others. In this process, experience management is more than the design of moments, it holds the potential for a deeper shift in mindset. One where travel becomes not only about us, but about what we can co-create for a more liveable future.

Limitations and future research directions: The sample size of the survey was limited, so the findings point more toward directions than universal conclusions. Still, the responses clearly reflect a growing need for more conscious travel and the realization that local contexts require local answers. A future study could explore in greater depth how European best practices can be adapted to the expectations and values of Hungarian travellers. Because meaningful change only happens when good examples don't just inspire but truly resonate.

Keywords: sustainable tourism, regeneration, experience management, Generation Y, digital engagement



Responsible Tourist Guiding - Theory and Practice

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Background and introduction: Tourist guides play a key role in shaping the experiences and behaviours of travellers. Positioned at the frontline of tourist-destination interactions, guides have the potential to influence not only visitor satisfaction but also the sustainability of the destinations they interpret. This paper investigates the extent to which professional tourist guides incorporate principles of responsible and sustainable tourism into their everyday guiding practices.

Objective: The aim of the research is to explore whether and how tourist guides incorporate principles of responsible and sustainable tourism in their daily work, and to identify good practices they use to influence tourist behaviour in a positive and ethical way.

Methodology: The study uses a mixed-method approach in three stages: (1) a pilot study with 10 semi-structured interviews of tourist guides to explore responsible tourism practices; (2) a broader online survey to quantify attitudes, behaviours, and challenges (target: 200 respondents); and (3) follow-up interviews to deepen insights from the survey (10-15 guides selected from survey respondents). This design allows for both breadth and depth in understanding how guides promote responsible tourist behaviour.

Results: The research is currently in progress. The anticipated contribution of the pilot study is revealing initial patterns in how guides perceive and apply responsible tourism principles. The full study aims to identify common good practices and barriers, providing data-driven insights to support guide training and policy development.

Conclusions: While the findings are still pending, the research is expected to highlight the often-overlooked role of tourist guides in promoting responsible tourism. It will contribute theoretically to understanding guides as agents of sustainable behaviour and offer practical insights for guide training, tourism policy, and destination management focused on responsible visitor engagement.

Limitations and future research directions: The study may be limited by a small convenience sample and potential bias in self-reported practices. Further research should include observational studies of guiding in practice, cross-cultural comparisons, and longitudinal approaches to assess the long-term impact of responsible guiding on tourist behaviour and destination sustainability.

Keywords: responsible tourism, guide, sustainability, economic impacts, social impacts