DIGITAL REVOLUTION IN THE TOURISM SECTOR: CHANGES IN USER EXPERIENCE AND BUSINESS PROCESSES

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ABSTRACT

The digital revolution of the last decade has significantly changed the principles of the tourism sector, affecting both consumer behaviour and organisations' business processes. Digital technologies – from mobile applications and platform economies to artificial intelligence, personalisation systems and virtual reality – are transforming the stages of travel planning, experience and evaluation. The growing consumer reliance on real-time information, personalised recommendations, and seamless digital services indicates that technological progress is becoming one of the most important competitive factors for tourism organisations. The relevance of this topic is determined by the rapidly changing dynamics of the tourism market and the need for businesses to adapt to new consumer expectations, while ensuring operational efficiency.

This study aims to analyse how the digital revolution is transforming user experience and business processes in the tourism sector. To achieve this aim, the following research objectives are formulated: to analyse the theoretical foundations of digital transformation in tourism; to empirically examine its impact on user experience and business processes; and to identify practical implications and formulate recommendations.

This study applies a qualitative research approach based on scientific literature analysis and semi-structured interviews with tourism sector specialists.

The findings suggest that digital transformation enhances service personalisation and operational efficiency in tourism organisations, while simultaneously increasing technological dependence and the complexity of implementation.

Keywords: *Digitalization; tourism sector; digital transformation; user experience;*

1. INTRODUCTION

The rapid expansion of digital technologies has fundamentally transformed the structure of modern economic sectors, including tourism, which has become one of the most technologically intensive service industries. Digitalisation is increasingly recognised as a key driver of structural change in tourism, influencing business models, consumer behaviour, and service delivery systems. The integration of digital technologies enables tourism organisations to enhance efficiency, improve service accessibility, and develop more personalised customer experiences, thereby strengthening competitiveness in an increasingly dynamic market environment [1].

Tourism has historically been among the first sectors globally to adopt digital technologies. The introduction of computerised reservation systems and global distribution systems marked the early stages of digital transformation. At the same time, contemporary developments include artificial intelligence, big data analytics, Internet of Things technologies, virtual and augmented reality, and smart digital platforms that shape tourism ecosystems [1].

These technological advancements have significantly influenced business operations, marketing strategies, and consumer interaction patterns within the tourism sector [1]. Digital transformation is also closely linked to changes in consumer behaviour. The growing use of online travel planning platforms, digital booking systems, and real-time information services has reshaped how tourists search for information, evaluate

destinations, and purchase travel products. The expansion of internet use and digital services has led to increased reliance on digital environments for tourism-related activities, including booking accommodation, transportation, and travel packages [2]. As a result, tourism enterprises are increasingly adapting their business models to operate within digital ecosystems and to respond to evolving consumer expectations. At the organisational level, digitalisation contributes to the development of integrated information environments, data-driven decision-making, and platform-based business models. Digital platforms serve as centralised data hubs that support strategic management, enable real-time information exchange, and facilitate stakeholder interaction in the tourism market [3].

The creation of digital ecosystems enables tourism organisations to coordinate services, optimise resource allocation, and enhance the overall tourist experience through data analytics and intelligent systems. The digital transformation of tourism is also associated with broader structural changes in economic development. The widespread implementation of digital technologies reduces operational costs, increases productivity, and enhances competitiveness across the hospitality and tourism industry [4]. In addition to operational and economic impacts, digitalisation plays a crucial role in shaping contemporary research agendas in tourism. The growing academic interest in digital transformation, sustainability, smart tourism, and digital ecosystems reflects recognition of digitalisation as a fundamental structural force shaping tourism development [5]. Another significant dimension of digital transformation is the expansion of e-commerce in tourism. The development of digital platforms, online services, and information systems has reshaped market structures and enabled new forms of commercial interaction. Digitalisation supports customer engagement, improves communication channels, and facilitates data-driven marketing strategies, while introducing new challenges in financial management, technological integration, and organisational adaptation [6]. Nevertheless, despite the growing body of research, scholars emphasise the need for further investigation into the practical implications of digital transformation and its impact on tourism organisations and user experiences.

Therefore, the scientific problem addressed in this study concerns understanding how digital transformation reshapes both the user experience and organisational processes in the tourism sector amid rapid technological change.

This study aims to analyse how the digital revolution is transforming user experience and business processes in the tourism sector.

The study examines the impact of digital transformation on user experience and organisational business processes in the tourism sector.

To achieve this aim, the following research objectives are formulated:

1. To analyse the theoretical foundations of digital transformation in tourism.
2. Empirically examine its impact on user experience and business processes.
3. Identify practical implications and formulate recommendations.

This study applies a qualitative research approach based on scientific literature analysis and semi-structured interviews with tourism sector specialists.

The findings suggest that digital transformation enhances service personalisation and operational efficiency in tourism organisations, while simultaneously increasing technological dependence and the complexity of implementation.

2. THEORETICAL FRAMEWORK OF DIGITAL TRANSFORMATION IN TOURISM

2.1. Concept of digitalisation and digital transformation in tourism

The phenomenon of digital transformation in tourism has been widely examined in contemporary academic literature. Zaharia and Georgescu (2025) analyse the impact of digitalisation on the tourism industry and emphasise its role as a structural driver influencing competitiveness, innovation, and service development. Similarly, Purhani et al. (2025) highlighted the contribution of digital technologies to operational efficiency and economic performance in the hospitality and tourism sectors. In the broader context of digital economy research, Verhoef et al. (2021) conceptualised digital transformation as a comprehensive organisational change that extends beyond mere adoption of digital technologies, encompassing strategic restructuring and the creation of new value propositions. Saarikko et al. (2020) further argued that digital transformation requires organisational adaptation and reconfiguration of business models rather than simple process automation. In tourism studies, Gozgor et al. (2024) and Alieva et al. (2023) emphasised that digital technologies increasingly shape the development trajectories of tourism markets. According to Babtista et al. (2025), digitalisation contributes to service accessibility, the personalisation and simplification of tourism processes, positioning digital tools as central elements of tourism modernisation.

Thus, the academic literature distinguishes between digitalisation, the optimisation of existing processes through digital technologies, and digital transformation, a broader systemic change reshaping organisational structures and market interactions. Overall, digitalisation and digital transformation represent interconnected but distinct processes that reshape tourism by optimising existing activities while simultaneously enabling structural organisational change and the development of new business models.

2.2. Technological drivers of digital transformation

The rapid development and diffusion of advanced digital technologies drive the transformation of tourism. Research highlights the role of artificial intelligence, big data analytics, Internet of Things, blockchain, mobile platforms, virtual and augmented reality, and digital infrastructure in reshaping tourism services and business ecosystems [7]. The evolution of tourism technologies is often described as a transition from e-tourism to smart tourism, and then to smart tourism 2.0. E-tourism primarily supported online information exchange and electronic transactions, while smart tourism integrates digital and physical infrastructure through mobile devices, sensors and cloud computing [8-9].

Smart tourism 2.0 extends this development by incorporating artificial intelligence, virtual environments and hybrid digital-physical interaction systems. These technologies enable new forms of service automation, immersive experiences and AI-human interaction, as well as continuous engagement across travel phases [10]. Data plays a central role in these technological developments. The transition from structured information to big, real-time data, and from data processing to real-time processing is identified as a key factor enabling smart tourism systems and digital ecosystems [11].

In summary, the rapid development and integration of advanced digital technologies constitute the primary driving force behind the transformation of tourism systems,

enabling the evolution from basic digital services toward intelligent, data-driven and interconnected tourism environments.

2.3. Digital platforms and tourism ecosystems

Digital platforms are considered a fundamental structural element of tourism digitalisation. They function as centralised data hubs that support decision-making, service coordination, and interaction among tourism stakeholders [12].

The development of digital ecosystems enables integration of services, collaboration among market participants and the creation of unified information environments. These ecosystems facilitate communication, marketing activities and information exchange, which are essential components of tourism market functioning [13]. Research also emphasises the role of digital marketing and communication technologies in promoting tourism services and destinations, highlighting their importance for market interaction and customer engagement [14].

Overall, digital platforms and interconnected tourism ecosystems serve as central coordinating mechanisms that integrate services, facilitate stakeholder interaction, and support data-driven management in the contemporary tourism environment.

2.4. Impact on consumer experience and business processes

Digital transformation significantly influences tourist behaviour and expectations. The use of digital technologies contributes to the development of a new generation of tourists who expect personalised services, real-time information and enhanced travel experiences [13]. Digital tools support service personalisation, experience enhancement, and customer engagement through data-driven interactions and intelligent systems. The integration of immersive technologies and AI-based solutions expands the possibilities for experience design and interaction with tourism services [15].

Smart tourism research suggests that “smartness” should be understood as a holistic phenomenon rather than being limited to the application of digital tools. Grumadaitė and Jose (2023) conceptualise smart tourism through multiple dimensions—intelligence, innovativeness, network, and knowledge-basedness, learning, agility, sustainability, and digitality—arguing that these dimensions jointly shape consumer behaviour in tourism services. Their analysis highlights that achieving effective smart tourism outcomes requires coherence between service provision and service use, as consumer expectations, abilities, and actual behaviour may diverge, creating contradictions in the tourism service experience [16].

Digitalisation also transforms internal organisational processes. Researchers note that digital technologies enable cost reduction, operational efficiency, and process optimisation across tourism enterprises [4]. Digital innovation contributes to strategic change and the emergence of new forms of digital entrepreneurship and platform-based business models [17]. Tourism organisations increasingly rely on data-driven decision-making and integrated information systems to manage operations and forecast demand [18].

In general, digital transformation simultaneously reshapes both tourist experiences and internal organisational operations by enabling personalisation, automation, and data-driven management across tourism services.

2.5. Challenges and research gaps

Despite the rapid expansion of digital technologies in tourism, researchers emphasise that the long-term implications of digital transformation remain insufficiently

explored [18]. Studies also highlight barriers to digital transformation, including a lack of technological competencies, resistance to organisational change, limited digital maturity, and insufficient strategic planning [2]. Furthermore, the academic literature remains fragmented, and scholars emphasise the need for systematic research examining the impact of digital transformation on tourism experiences and organisational processes [20].
Overall, despite the widespread adoption of digital technologies in tourism, significant theoretical and practical gaps remain regarding their long-term organisational, experiential and strategic implications.

2.6. Research model of digital transformation in tourism

Based on the analysed literature, digital transformation in tourism can be conceptualised as a multi-level process involving technological, experiential, and organisational dimensions.

Figure 1. Conceptual Structure of Digital Transformation in Tourism

This structure reflects the interdependence among digital technologies, user experience, and organisational change described across the reviewed studies.

In summary, digital transformation in tourism can be conceptualised as a multi-level process linking technological innovation, user experience transformation, and organisational change within an integrated developmental framework.

3. RESEARCH METHODOLOGY

This study applies a qualitative research design to examine how digital transformation influences user experience and organisational business processes in the tourism sector. Qualitative research is appropriate for analysing complex social and organisational phenomena, particularly when the aim is to explore participants' perceptions, experiences, and interpretations [7]. The research focuses on practice-based insights from tourism sector specialists directly involved in digital transformation initiatives. This approach enables a deeper understanding of how technological changes are implemented and experienced within tourism organisations.

The primary data collection method used in this study is semi-structured interviews. Semi-structured interviews enable the researcher to explore predefined thematic areas while allowing greater depth in examining participants' perspectives. This method is widely used in research on digital transformation and organisational change because it allows participants to describe their experiences, practices, and challenges related to technology implementation.

The semi-structured interview was designed to examine two main analytical dimensions:

1. changes in tourism user experience
2. transformation of organisational business processes

Additional questions addressed digital technology adoption, implementation challenges and perceived organisational impacts.

The empirical research was conducted with tourism sector specialists representing travel organisations operating in Lithuania. Participants were selected using purposive sampling based on the following criteria:

- managerial or executive position;
- direct involvement in digital transformation processes;
- experience in tourism service management;

The final sample consisted of seven respondents. The selected participants represent major tourism service providers and decision-making roles within their organisations. This sampling strategy was chosen to ensure that respondents possess practical knowledge and experience relevant to the research problem.

3.1. Data collection

Data were collected through semi-structured interviews conducted with the selected participants. Interviews focused on organisational digital transformation practices, implementation processes and their perceived effects on customer experience and business operations.

The interview protocol included questions related to:

- digital technology adoption in tourism services;
- personalisation and customer interaction;
- operational process transformation;
- digital platform use;
- organisational challenges;
- strategic implications of digital transformation;

All interviews were conducted individually. The collected data were documented and prepared for qualitative analysis.

3.2. Data analysis

The collected qualitative data were analysed using thematic analysis. Thematic analysis allows systematic identification of recurring patterns, themes and relationships within qualitative data. This method is commonly used in studies examining organisational change and technological transformation because it supports the interpretation of participants' experiences and perceptions [7].

The analysis followed several stages:

1. familiarisation with interview data;
2. identification of initial themes;
3. grouping of themes into analytical categories;
4. interpretation of patterns related to research objectives;

The analysis focused on identifying how digital transformation affects:

- tourism user experience;
- organisational business processes;
- operational efficiency;
- implementation challenges;

3.3. Research validity and reliability

To ensure research credibility, the study applied several methodological principles typical of qualitative research:

- purposive selection of knowledgeable participants;
- use of a semi- structured interview framework;
- systematic thematic analysis;
- alignment between research objectives and analytical categories.

These procedures support the internal consistency and analytical transparency of the research process.

3.4. Ethical considerations

Participation in the research was voluntary. Respondents were informed of the study's purpose and the use of the collected data for academic research. Confidentiality of individual responses was ensured.

3.5. Research limitations

The study is based on qualitative data obtained from a limited number of participants within a specific national context. Therefore, the findings reflect practice-based insights rather than statistically generalizable results. This limitation is characteristic of qualitative research focused on in-depth exploration of organisational processes.

4. RESULTS AND DISCUSSION

The semi-structured interviews reveal that digital technologies significantly reshape user experience in the tourism sector. Respondents emphasised that digital platforms enhance service accessibility, personalisation, and convenience throughout the travel journey. Participants highlighted that online booking systems and digital communication channels improve efficiency during information search and travel planning. Real-time data availability strengthens interaction between customers and service providers. Service personalisation emerged as a key theme. Interviewees noted that digital tools enable tourism organisations to tailor services to customer preferences and behavioural data, thereby increasing satisfaction and perceived value. Furthermore, digital applications and automated systems simplify service processes, reduce procedural complexity and improve transparency, allowing customers to compare options and make informed decisions more efficiently.

The findings indicate that digital transformation substantially affects internal business processes within tourism organisations. Respondents reported growing integration of digital technologies into operational management and strategic planning. Process automation was identified as a major impact area. Digital tools reduce manual tasks and automate booking systems and customer management processes, enhancing operational efficiency and resource allocation. Data-driven decision-making also emerged as a central theme. Real-time data access enables organisations to monitor performance, analyse customer behaviour, and adjust service strategies accordingly. Digital platforms were described as integrative infrastructures that coordinate marketing, customer interaction and service management, supporting faster adaptation to market changes.

However, participants emphasised that performance outcomes depend on levels of technological integration and organisational readiness, including infrastructure and staff competencies.

4.1. Challenges of digital transformation

Despite the reported benefits, interview participants identified several challenges associated with digital transformation. One of the most frequently mentioned issues is the lack of technological competencies among employees. Respondents indicated that implementing advanced digital systems requires specialised knowledge and continuous staff training. Financial investment was also identified as a major constraint. Digital infrastructure development, system integration and technology maintenance require substantial resources. Another challenge highlighted by respondents is the complexity of integrating new technologies into existing organisational systems. Compatibility issues and organisational restructuring requirements may complicate implementation. Participants also noted increasing dependence on digital platforms and external technology providers. This dependency was described as a structural feature of digital transformation that influences organisational autonomy and strategic flexibility.

Overall, the empirical results indicate that digital transformation in tourism operates as an interconnected multi-level process. Changes in user experience, organisational processes and operational performance are structurally linked through digital platforms and data integration mechanisms. This supports the interpretation of digital transformation as an integrated developmental framework rather than a set of isolated technological changes.

5. CONCLUSIONS

The study examined how digital transformation affects user experience and business processes in the tourism sector using qualitative empirical data from semi-structured interviews with tourism industry specialists. The findings demonstrate that digital technologies play a central role in reshaping tourism services and organisational operations. Digitalisation contributes to enhanced personalisation, improved service accessibility, and increased convenience throughout the tourist journey. At the same time, digital transformation supports the automation of operational processes, data-driven decision-making, and improved coordination within tourism organisations. The results also show that digital transformation is associated with structural organisational changes. Tourism enterprises increasingly rely on digital platforms, integrated information systems and data analytics as core components of service delivery and strategic management. However, the study confirms that significant implementation challenges accompany digital transformation. These include technological competency gaps, financial investment requirements, system integration complexity and growing dependence on digital infrastructures. These findings indicate that digital transformation requires not only technological adoption but also organisational adaptation and capacity development.

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