

DIGITAL TECHNOLOGIES IN THE MANAGEMENT AND DEVELOPMENT OF TOURIST DESTINATIONS IN THE EU

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Abstract

This article examines the issues related to the digital transformation of tourist destinations and the application of technological innovations in their management and development. Among the objectives of the report is the highlighting of good practices and examples related to the competitive development of tourist destinations.

Key words: Tourist destinations, digitalization, management, development

JEL: M150, Z30, Z300

Introduction

This article reflects the attempts to explore and synthesize some of the issues related to the successful implementation of digital technologies in the management and development of tourist destinations in the EU in the last few years. The tourism sector is the third largest sector of socio-economic activity in the EU and plays a key role in contributing to growth, employment and cohesion. This sector has huge potential for further growth by improving the visitor experience, creating new partnerships and collaboration opportunities, and by boosting innovation in European cities and regions. To accomplish the stipulated objectives and attendant tasks, this study employs a systematic approach in conjunction with various research methods. Observation method, analysis and synthesis method, deduction method are applied.

Digital technologies in the tourism industry

Tourism is one of the fastest growing and promising areas of management with high economic and social importance for the growth and well-being of many countries. The current conditions of increased competition in the tourist market, political instability in some regions and rapidly growing needs of tourists impose a new challenge to transition to an innovative path of development.

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Digitalization in the 21st century has spread to all spheres of modern man's life. It creates favourable conditions for organizations to automate their processes, i.e. to replace human capital with machines, to introduce innovations, to expand their scope of activity. Digital technologies contribute to increasing the quality of the offered product. Their application creates conditions for reducing the costs of production and supply of the tourist product, and from there for the achievement of competitive prices (Рибов, 2020).

Digital technologies are tools used to promote products and services. They are used at all stages of interaction with users, and their feature lies not only in the use of the Internet, but also in the application of offline tools (gadgets, etc.). The current boundary between offline and online formats is sufficiently arbitrary for digital technologies to bridge the two realities. According to experts in the field of digitization, in 20 years the virtual world will be inseparable from the real world (Айратович, 2021). Digital technologies help to attract customers and for more operative interaction with them, facilitating the creation of tourist offers, the effective positioning of the brand, the implementation of a targeted image policy, the development of personalized tourist products (Нюренбергер; Петренко, 2020).

New technologies also continue to restructure markets and sectors around the world. In recent decades, technological advances have made travel more accessible and easy for many people, and in the future it has the potential to completely change the concept of tourism (eg integrated ticketing, mobile payment systems, etc.). As virtual reality technology continues to improve, it is possible that virtual tourism may supplement or replace physical travel for some travelers. Conversely, as people live increasingly digital and connected lives, opportunities for analog, authentic travel experiences may become a preferred alternative to digital ones. Many of the jobs in the travel sector, ranging from travel agents to hotel staff, are likely to be affected by the increased penetration of automation in the economy. At the same time, specialized real-time translation software makes it easier for tourists to travel to areas where they don't speak the language. Translation apps can now translate not only texts, but also verbal information, and this can have an impact on tour guide services. Virtual reality (VR) technology is mainly used in video games, but also in the tourism sector for promotion through experiences in tourist destinations. Virtual tourism experiences may increasingly provide the opportunity for alternative visits to places deemed too ecologically or culturally sensitive to allow physical visitors access.

In trying to interpret the future, it should also be taken into account that many tourist destinations will connect their utilities and other services as well as their infrastructure to the Internet. These smart destinations will manage their energy, material flows, logistics and transport. Some urban destinations such as Singapore and Barcelona are already implementing many new data-driven services, including smart solutions for parking, waste collection. Smart destinations are constantly expanding their network of sensor technologies and working on their data plat-

forms, which are the basis of connecting different technological projects and adding future services based on data analysis and predictive modeling (Schaffers et al., 2011).

The fact is that digital transformation is a process characterized by the ubiquitous implementation and combination of digital technologies in all spheres of social and economic life. Digital transformation, along with the “European Green Deal”, is also a top priority at the European level. The European Commission annually reports digital progress in the EU member states through indicators that make up the Digital Inclusion in the Economy and Society (DESI) index.

The development of digital technologies and their entry into all spheres of economic and social life necessitates a rethinking of the approach regarding the utilization of their exceptional potential for increasing the competitiveness and the Bulgarian economy, by increasing demand and supply, increasing the efficiency of public services and successfully addressing the main social challenges in the period up to 2030. The main objectives of the cultural digitization policy are to promote the display of the richness of the Bulgarian cultural heritage and the creation of content and new online services, including for entertainment, education and tourism. In this way, it helps to improve the quality and diversity of digitized materials in the field of culture and encourages the development of new methods for the restoration and preservation of cultural heritage through information technology (Цифрова трансформация на България за периода 2020-2030 г, n.d.)

The new look of tourist destinations in Europe

The European Union pays more and more attention to the multifaceted positive effects of tourism. First of all, tourism is recognized as an important economic activity that contributes significantly to the economic growth, employment and progress of the less developed regions of the country (Ianeva, 2017). In the tourism business, large companies advocate these aspects by creating corporate social responsibility policies that balance the interests of all stakeholders in tourism areas, namely the tourism businesses offering products, the tourist destinations as well as the local population.

“Smart” has also become a buzzword describing technological, economic and social developments fuelled by new technologies that are based on sensors, new ways of connectivity, information exchange, open data and more. Harrison et al. (Harrison et al., 2010) view the concept as leveraging real-time operational data, integrated and shared, using sophisticated analysis, modelling, optimization and visualization to make better operational decisions. The term does not only describe new modern technologies, it has also been added to cities (smart cities) to describe efforts aimed at innovative use of technology, through which optimization of resources, efficient management, sustainability and quality of life are achieved. From an infrastructure perspective, for example a smart home, the emphasis is on promoting technological integration. Added to technology, smart phone/smart

TV, etc., describes the multi-functionality and high levels of connectivity of new technologies. In the context of markets and the economy, technology supports and develops new forms of cooperation and connectivity that lead to innovation, entrepreneurship and competitiveness.

It is important to note, however, that smart tourism develops in innovative tourist locations, built on a technological infrastructure of the latest generation, which guarantees the sustainability of tourist areas. It is a rational continuation in the evolution and combination of traditional and digital tourism thanks to the wide use of information and communication technologies. The genesis of the concept of smart tourism lies in the increase of smart city projects and the mass spread of Internet communication. According to Caragliu (Caragliu, Del Bo and Nijkamp, 2011) a city can be defined as smart “when investments in human and social capital, traditional and modern communication infrastructure foster sustainable economic growth and a high quality of life with the wise management of natural resources by targeting their efficient use”.

In this sense, smart destinations (Димитрова, 2022) are key to the transformation of the tourism sector. They are distinguished by the ability to make effective decisions and anticipate the challenges that arise from the tourism business. Smart regions manage to create a seamless and exciting experience for tourists while effectively managing local resources. The concept of smart destinations is a new perspective on how the tourism business can be managed in the most efficient way possible (Buhalis and Amaranggana, 2013). Smart regions are not only characterized by the use of new technologies to be applied in traditional tourism activities. Their essence and distinguishing features are much more complex. Some of the key features of smart destinations include:

- innovation – innovation adds a more holistic perspective to tourist destinations. They use innovative business ideas, models and processes to improve their products and services for a positive tourist experience;
- sustainability – smart destinations arise thanks to the expansion of the concept of smart city and regional development, focusing on sustainability at different levels such as energy infrastructure, transport, etc. The management of sustainability in smart destinations is expressed in the regulation of three key dimensions: social and economic justice, efficiency and reduction of energy consumption, and information management and improvement of the tourist experience;
- rational management – smart destinations integrate information and communication technologies to manage the resources of the regions in a sustainable way. The use of technology-based destination management solutions contributes to efficient and informed decision-making. Smart regions should collect and disseminate information to facilitate the efficient allocation of tourism resources, ensuring that the benefits are well distributed.

Smart destinations imply changes in the way tourism is managed based on new opportunities facilitated by technology and rationally adapted to local realities.

Raising the status of a region to an intelligent or “smart destination” is a process that requires investment and coordinated work between the private and public sectors. One of the most commonly used prerequisites for the effective management of smart destinations involves the use of the Internet of Things, artificial intelligence, augmented or virtual reality, data management, etc.

Good practices in the implementation of digital technologies in the management and development of European tourist destinations

In the Spanish city of Malaga, all digital channels are designed to provide tourists with useful information received on their devices. Museums offer their own apps, as do local tourism authorities, which even include an audio guide for the city. For information on the go, QR codes and beacons have been installed at points of interest throughout the city. Data is also available on all social media channels. If a visitor cannot find what they are looking for, they have the option of using the chat function on the Malaga tourism website. The local authorities lead the Smart Costa del Sol project, to which 15 municipalities have joined with the aim of creating a common platform containing information suitable for tourists and improving their experiences and experiences. A parking guidance system has been created for tourists in the municipality, which uses sensors in the parking lots that identify vacant spaces and transmit information in real time through the free SMASSA application.

Virtual reality technology enables travel for users who do not have sufficient time and funds or are limited in terms of physical conditions. The Helsinki 2020 project is an attempt by local authorities to provide tourists with experiences of visiting the Finnish capital in the past, present and future. Through virtual reality, the visitor can get an idea of what Senate Square looked like in the 19th century or how the citizens of Helsinki will live in the future. The virtual model successfully communicates with the modern Finnish capital in real time by importing Big Data, e.g. air quality, traffic level, etc. The National Museum of Finland in Helsinki also uses virtual reality to enrich the visitor experience by building a connection between the various museum artefacts (Казанджиева, 2021).

In recent years, Bulgaria has also been making efforts to implement digital technologies in the management and development of the destination. The Ministry of Tourism, together with the English technology company Horizon Software Solutions, created the official marketing interactive Platform and mobile application iLoveBulgaria (<https://ilovebulgaria.eu/>). It provides information both about the sights of the state, as well as information about the offers of businesses related to tourism, culture and history. The purpose of the Platform is to implement effective national marketing of Bulgaria as a year-round tourist destination, to stimulate visits to tourist sites and to support the tourism business, using smart advertisements and new technologies that are easy to use and financially accessible.

The iLoveBulgaria mobile application offers residents and visitors of Bulgaria an experience through attractive offers and various loyalty programs. The complete list of the 100 national tourist sites is included in the Platform. Each one features a custom-made sign with a unique QR code that can be scanned with a mobile device. Thus, the tourist receives information and advertising about the site and, in parallel, earns bonus points, in exchange for which he also receives incentive prizes. iLoveBulgaria provides good opportunities for business as well, bringing together in one place all the elements of the Bulgarian tourist product. Through the specified platform, information can be shared by all Viber users, through the Chat Extension (Министерство на туризма, n.d.).

Another project related to some specialized types of tourism is of interest, namely the implementation of 12 wine and culinary destinations, which are digitized and available on the website of the Ministry of Tourism. They were developed under the “Share Bulgaria” project, which is implemented jointly with the Ministry of Agriculture, Food and Forestry. The interactive map makes it possible, with one click on the selected destination, to obtain information about tourist attractions in the region, about typical culinary specialties and the wine characteristic of the region. A description of the tourist attractions in the destination is also included, each marked with its exact geographical location, thus helping tourists find the sites they want to visit more easily. In addition to an interactive map, the project is also included in the iLoveBulgaria platform. The selected wine and culinary destinations are 12 in number with the idea of corresponding to the number of months in the year. They include 55 municipalities throughout the country, nearly 120 tourist attractions and the typical wine and cuisine of each region, over 80 typical dishes and 12 traditional wines.

The main goal of the project is the promotion of travel within the country, as well as the promotion of lesser-known tourist sites and attractions, thus increasing the recognition of the regions. The mentioned project has a positive effect on the development of a number of municipalities both in the field of tourism, the growth of the local economy as a whole, the extension of the tourist season and the confirmation of Bulgaria as a year-round destination (www.tbmagazine.net, n.d.).

The Ministry of Tourism also plans to create a single digital guide that will welcome everyone who enters the country. The electronic map of Bulgaria will unite various elements of the tourist service and product - such as cultural and wine routes, farmers' markets, developing local communities, significant natural sites and iconic landmarks from the cultural and historical heritage, which are of interest to every guest of the destination. A drop-down menu on the map will integrate various functions and options to access more information to allow easy planning of short visits - transport connectivity, reservations, by purchasing QR code tickets for museums, galleries, concerts and various events, virtual video - tours prepared by tour guides or bloggers, photographers and travelers, as well as many other op-

portunities that can be upgraded over time and in the longer term (Министерство на туризма, n.d.).

Conclusion

Tourist destinations have long not relied solely on their natural and anthropogenic resources to attract tourists. They are increasingly looking for and applying in their management various digital solutions that facilitate their development and positioning. The presented study found several important components that are subject to further research, namely the development of smart destinations in the context of sustainability and rethinking the tourism offer.

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