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PROBLEMS AND PROSPECTS OF USING DIGITAL TECHNOLOGIES IN TOURISM

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Abstract

Tourism is one of the most dynamically developing areas of the world economy. The multiplicative effect of tourism is enormous, since the development of this industry affects many areas, including environmental, social and economic, which in turn affects the sustainability of the development of territories and regions. The digital transformation of society is an irreversible process, especially in the framework of recovery from the pandemic, and the tourism industry is no exception. One of the main products of the tourism and hospitality industry is a unique experience, impressions, emotions. In a highly competitive environment, the development and implementation of innovations is at the forefront in order to achieve a competitive advantage. The widespread use of technological innovations in the tourism industry will improve the experience of tourists, thanks to a deeper immersion of a person in a reality different from everyday life. According to the authors of the work, there is no mutual understanding between the providers of tourist services and information technology in the specifics of each other's spheres, but with their cooperation it is possible to achieve common well-being. Within the framework of this work, the prospects and problems of the introduction and application of digital technologies in tourism are analyzed, and a number of recommendations are given for representatives of the tourism business.

Keywords: Digital technologies, digitalization, economics, entertainment, tourism

1. Introduction

Digitalization currently covers a large number of spheres of economy and public life and continues to look for new ways of its implementation. Tourism is no exception.

Digital tourism as a separate category was on the agenda and it continues to interest many domestic and foreign scientists. Issues of digital tourism development were dealt with by: Glushkova, Piyadin, Nayda, Shamlikashvili, Guttentag, Merkx, Nawijn, Poux, Lehto. However, the issue of successful implementation of digital technologies in the tourism sector is still relevant. Moreover, the rapidly changing conditions that have become a consequence of the coronavirus pandemic have led to major changes in almost all spheres of society. Many sectors of the economy had to use new digital tools to transfer operational processes for remote access.

The tourism industry is among the most affected, since the restrictions primarily affected the movement of people and accommodation, catering and leisure enterprises. However, the industry has adapted to the prevailing conditions: museums held virtual exhibitions and online tours, theaters held online broadcasts of performances, hotels changed their focus to security (contactless registration, applications for virtual communication with guests, the use of QR codes for access to public places, etc.) (Bafadhal, 2021).

2. Problem Statement

There is no understanding between representatives of IT and HORECA as business areas why cooperation between these two areas is necessary, while, in our opinion, this can be effective cooperation in terms of creative, socio-economic, research goals. This paper analyses the prospects for the use of digital technologies in tourism, how and why they can be implemented.

3. Research Questions

Digital technologies by their nature can be used for different purposes in different areas. In practice, the tourism industry, especially in emerging economies, is poorly introduce technology into the operational processes associated with the provision of tourism services. Thus, we wanted to explore how technology can be used in tourism in a non-trivial way.

i.   How can digital technologies be used in the experience economy?
ii.   How necessary is the use of digital technologies in order to meet the needs of tourists for rest, recreation and new sensations?

4. Purpose of the Study

In 2020, virtual travel became an upward trend, which was due to self-isolation or quarantine regimes. Some destinations have developed an audio travel format that allows a person to mentally travel to a remote corner of the earth. For example, Un Gioco di Societa is an Instagram project of Italian entrepreneurs that allows you to walk through the streets of Milan, Rome and Naples. Unlike Google

street panoramas, time and weather change here, tourists can interact with passers-by, as well as participate in various scenarios.

Thus, the purpose of this work is to study the current problems and prospects of using digital technologies in tourism. In the opinion of the authors, at the moment the tourism industry only partially uses the potential of digitalization, which is due to the weak knowledge of this issue.

5. Research Methods

To achieve this goal, a comprehensive analysis of the market of existing digital technologies for the tourism industry was carried out, as well as a synthesis of problems of their wider use. In addition to empirical and statistical data, the scholarly literature on this topic was analyzed. The classification of possible problems of the introduction of digital technologies in the tourism industry was carried out. The authors proposed solutions aimed at improving the use of digital technologies in the tourism industry using generalization and critical thinking in the framework of the work.

6. Findings

Digital technologies are beginning to penetrate the tourism industry at a small pace. However, today there is no clear understanding of how to most effectively apply the achievements of scientific and technological progress in the field of recreation.

It is important to note that in this case we are talking about the interweaving of two diametrically opposite spheres: tourism and digital technologies. The tourism sector is the most promising for the introduction of digital technologies, as it can offer a wide range of new types of entertainment and leisure.

The Internet has firmly entered the life of tourists: booking and buying tickets, ordering transfers, communicating with hotel representatives – all this has moved to websites and special applications. Of course, the possibilities of the digital sphere for the tourism industry are much more extensive. The impression economy can use blockchain technologies, artificial intelligence, big-data, biometric authentication systems and others.

In the last decade, companies have increasingly introduced CRM systems, automatic tools for setting tasks and planning, as this has a positive effect on the productivity and profitability of the company, and consequently on its competitiveness. Freeing up free time allows the staff and management of the organization to focus on innovation, further automation or expansion of the company's offerings. The latter is especially important in the context of the popularization of independent travel: since many travel companies are losing their main consumers, expanding the range of services or entering a new market will allow the company to continue to exist on the market.

Digitalization changes the model of interaction of market entities and allows to increase the competitiveness of individual countries, industries or companies. In the modern world, data and information are an important asset, the fifth factor of production, which has great consumer importance and provides high surplus value. Digital technologies in the tourism sector allow the development of new personalized service models, as well as the sharing economy (sharing-models) (Chhotua, 2021). This is

important to increase the competitiveness of offers, as it increases the target audience, increases the quality and consumer value of the service.

In Russian legislation, the task of developing digital technologies and their use is enshrined in a number of normative legal acts, the National Program "Digital Economy of the Russian Federation", which is aimed at increasing the availability of digital technologies and their popularization, including in the service sector, is being implemented. Nevertheless, the imperfection of the legal framework regulating the interaction of market entities, issues of ensuring the protection of personal data remains an important problem worldwide (Khurramov, 2020).

Strategic transformations of tourism and the hospitality industry in the era of the digital economy will affect the following areas: restructuring of the business model, involving the active introduction of various information technologies in the process of developing, promoting and selling a tourist product, the development of new high-tech products that meet the needs of modern tourists. Also, strategic transformations in tourism will affect the traveler himself, changing his preferences and travel goals.

It can be noted that at this stage the introduction of AR and VR technologies occurs at a rather superficial level (Guttentag, 2010). Now their use is reduced to local projects in the field of marketing and entertainment. However, VR technologies can also be used in exhibition and congress activities. In large cities, there are already exhibitions where visitors are invited not only to look at the works of artists, but also to complement the image, to revive it. In this case, the use of technology makes an important contribution to the formation of impressions of visitors, tourists, because it gives an opportunity to immerse yourself in what is happening and forms a deeper attitude to action (Trindade et al., 2018).

Taking into account the current trends of digitalization of society, it is necessary to introduce modern technologies more widely into recreational activities, to make them an integral part of the process of consumption of entertainment services. Since getting new impressions is one of the important motives for the consumption of tourist services, it can be said that the use of such technologies in exhibition and museum activities will favorably affect the effectiveness of the formation of their tourist attractiveness and, as a result, competitiveness.

Blockchain technology can also be introduced into the tourism industry. Blockchain will ensure the security of transactions, including payment transactions, both for the company and for the tourist (Valeri & Baggio, 2021). On the part of the tourist, this technology can be used both for the purchase of tours or tickets, and during the trip: a tourist will be able to pay anywhere in the world without worrying about the exchange rate or the lack of cash. The travel company will be able to collect and store data on purchased tickets, booked rooms, used loyalty programs and other customer information. This will allow not only to respond quickly in emergency situations (for example, for the export of tourists from abroad), but also to build a marketing campaign and create personal offers.

An equally important role can be played by the use of artificial intelligence, which processes large amounts of information less energy-intensive. For example, it can analyze on which dates there will be the greatest demand for transportation or which destinations will be popular in a given season.

Biometric authentication systems are now used in many sectors of the economy, including transport. One of the possible areas of its application in tourism may be facial recognition technology for checking in and boarding passengers on a flight.

At the moment, the popularity of acquiring Non-fungible token (NFT) assets is growing. NFT is a kind of right to own a unique digital asset. Such an asset can be an object of art, music or sound, "space" in the game (Mofokeng & Fatima, 2018). The development of this technology in the future gives a strong impetus to the development of digital tourism. Currently available VR technologies allow artists, designers to create unique spaces, universes, which, in turn, due to their uniqueness and the impossibility of replacement, give the potential for the development of some kind of personal offer (Merkx & Nawijn, 2021). The inability to copy this offer will cause its high cost and value for consumers.

Currently, it can be assumed that the processes of digital transformation of the ways of selling and consuming tourist products, improving the efficiency of solving problems and tasks expected from their use, will become more and more diverse. If earlier the functions of sales and customer support were often performed by different divisions of the company and even by different companies, then digitalization and customer experience will increasingly lead to an expansion of the sequence of interaction between the client and the company with its product.

Despite all the possible advantages of using digital technologies in various aspects of tourism activities, several important problems can be identified (Figure 1).
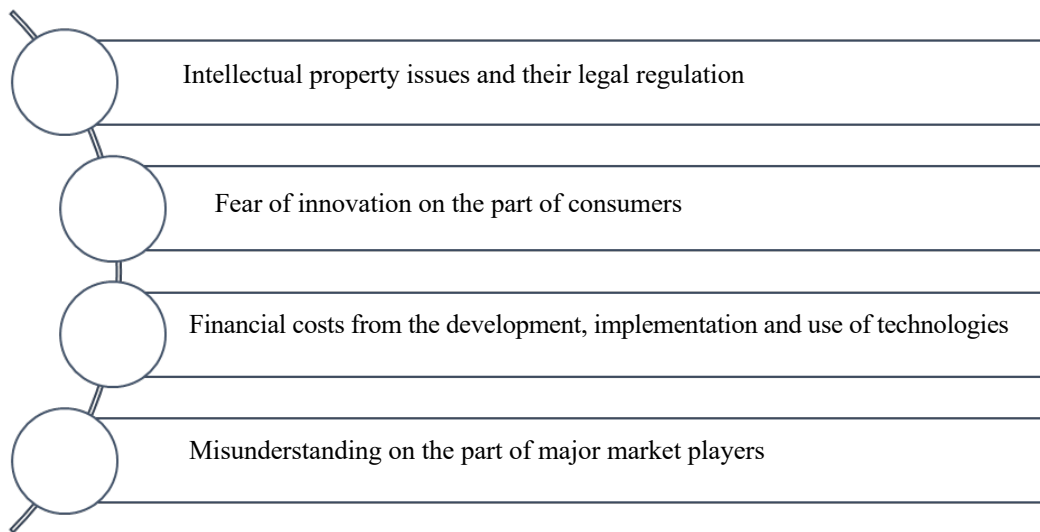

Figure 1. Challenges to the introduction of digital technologies in tourism. Source: author's work

1. Intellectual property issues

In this case, we are talking about the legal features of regulating relations between all participants in the production of goods and services. Moreover, legal relations in the field of intellectual property and digital relationships are a rather complex area of legal regulation.

To date, there are quite a few precedents in the field of the relationship between artificial intelligence and humans. Laws and regulations also do not consider all kinds of situations and ways to resolve them.

The difficulty of using digital technologies in other industries consists in that the fact that the technologies themselves are an object of intellectual property that does not belong to the company operating it. Accordingly, we are talking about the provision and observance of related copyrights. Thus,

there is a need to create new institutions, laws and mechanisms regulating legal relations in this area. This process is also quite costly and responsible, although it will provide the basis for the further development of legal relations and functioning in this area.

2. Fear of innovation

Despite the convenience and practicality of these technologies, some consumers will still resist using them. It should be noted that society and certain categories of individuals perceive innovations and changes with caution. In this case, it is necessary to work on information support for all categories of travelers.

For example, initially cash-free payment was not very popular. However, in 2010–2018 there was a phenomenal, 30-fold increase in the number of non-cash card transactions in Russia: from 5.8 to 172 per person per year.

Speaking about informing consumers, it is also necessary to note the low level of promotion of the technologies themselves and available entertainment offers using digital technologies. That is, often people themselves find some kind of excursions using digital technologies, interesting exhibitions. At first glance, the problem is weak promotion. If we look at the situation more deeply, there is also an incorrect choice of target audiences.

Thus, it is necessary to conduct large-scale information campaigns so that every consumer understands how he can use a technological innovation and what it will give him. Information is an important part of the process of introducing information technology into operational tourism activities (Lu et al., 2022). Moreover, for each segment, the audience may need to develop its own set of instructions, since each individual target audience perceives information differently.

3. The cost of implementation and use

As noted earlier, digital technologies should be used more widely in the tourism industry, as this will have a beneficial effect on increasing the attractiveness and potential of objects of tourist interest. However, both the development and implementation of technologies, as an intangible asset, entail large costs, which business representatives cannot always afford to incur. Moreover, it may not be possible for a small company.

Analyzing the prospects for the introduction of digital technologies in tourism, we can note that due to the relatively high cost of maintaining the technology, they must first be tested and aprobated in large cities, megacities, since they already have the necessary infrastructure. Definitely, for small regions, such technologies may be expensive at first, but in the long term it can be a factor in the sustainable development of the territory, by attracting tourist interest and the need for personnel to maintain the technology or project.

To decide whether a company should spend large financial resources on digitalization, it is necessary to conduct a financial and economic assessment of the effectiveness of its use (Dianova & Sharifullina, 2020). Definitely, in most cases it will be positive, but it is important not to forget that there are products or services that do not need their digitalization.

4. Misunderstanding on the part of business

All of the above problems lead to the fact that many entrepreneurs do not see the point of digitalizing their activities. However, it should be remembered that the target audiences are very different

in their values and preferences. So, for example, both generation Y and generation Z (according to the theory of generations of W. Strauss and N. Howe) do not represent life outside the digital environment and have high technical literacy, and they are now becoming the main consumers of tourist services.

Some companies, especially small startups, notice this feature. Young entrepreneurs are kind of innovators. Their ideas in their own way reflect the needs of young consumers, since they are an integral part of this group. More and more startups in tourism are focused on the introduction of digital technologies. Nevertheless, large business players are not ready to risk their reputation and introduce technological innovations into their production, since they focus on relatively outdated technologies that have been tested by time.

All these problems affect the decision-making process and the speed of the introduction of digital technologies into production.

7. Conclusion

More widespread use of information technologies in tourism will have a positive impact on the experience and impressions of tourists both about the destination and about individual tourist resources, products and services.

Technologies represent a wide range of technical and engineering achievements. Digital technologies make it possible to reduce costs, increase operational efficiency, improve the quality of services and the quality of customer service.

Today there is a great potential for the introduction of digital technologies into most business processes in order to increase the competitiveness of the enterprise and improve the overall welfare of society.

For developing economies, tourism is a strategic tool for ensuring economic growth. Increasing the competitiveness of the tourism industry in the global market of tourist services is becoming an important goal. Technological development, the creation of new, unique offers, goods and services, increasing access to tourist resources is becoming a factor in the growth of the attractiveness of destinations for tourists of different categories.

Since there is not a large number of studies showing the effectiveness of the introduction of digital technologies in tourism, entrepreneurs do not have confidence in the need to use them in their activities. Nevertheless, in the conditions of digitalization of society, it is necessary to adapt the sphere of leisure, entertainment and recreation to new technological realities.

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