# INNOVATIVE PROCESSES IN TOURISM OF UKRAINE

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Abstract: The purpose of the article is to determine the features of innovation processes in the tourism industry of Ukraine. To conduct an objective and thorough study, the following methods were used: abstract and logical; analysis and synthesis; system analysis; method of analogies; method of expert evaluations. The content of innovations and innovative activity is characterised, the main types of innovative technologies in the activities of tourism enterprises are considered. The main factors influencing the introduction of innovative technologies are highlighted, namely: the adverse impact of macroeconomic shocks, increased flow of financial risks, lack of own financial resources, low innovation activity in the service sector in Ukraine. It is determined that strategic management of innovations is important for service enterprises, which improves both entrepreneurial and professional economic

Keywords: Innovation, innovation process, innovative activity, innovative technologies, tourism, tourist enterprise.

### 1 Introduction

Tourism has great economic and social importance for the economy of many countries and is one of the fastest growing sectors. Due to high competition in the industry and economic and political instability in many regions, new challenges arise for the transformation of tourism towards innovative development (Bekjanov & Matyusupov, 2021).

If we look at the current practice of the global development of international tourism, the growth of competition in the tourism market and a number of other factors require the introduction of tourism innovations. In addition, modern changes in demographic, economic, social conditions, as well as changes in human psychology are becoming economic drivers, opening the way for the wide application of innovations in the tourism industry (Alimova et al., 2020).

The innovation process in tourism is developing in response to changes not only in the tourism services market, but also in other spheres of society. Such changes include changes in the needs of potential consumers of tourism products, new achievements of scientific and technological progress, including new technologies and methods, expansion of the information based on tourism resources, competition between tourism enterprises, hotel companies, museums and other entities interested in attracting and servicing tourists and sightseers.

Tourism business experts identify several main categorical characteristics of innovations in tourism at this stage: source of ideas (demand of potential tourists, new scientific and technical discoveries); form of innovation (changes in tourism products, tourism services, hospitality infrastructure); scale of distribution (state, region, country, continent, global system); capital intensity (large, medium, small) (Chueva et al., 2021).

The tourism sector is currently undergoing significant changes due to the shift towards a more experience-based product and the rapid growth of the tourism market. This shift places greater demands on travel companies to innovate. The increasingly short life expectancy of travel products requires companies to increasingly introduce new and better products. The ability of companies to change, develop new products and adapt to changes in the market is crucial for business and industry performance.

The active use of modern innovative technologies in the activities of tourism enterprises is a prerequisite for their successful operation, as the accuracy, reliability, efficiency and high speed of information processing and transmission determine the effectiveness of management decisions in this area.

The use of innovative technologies allows businessmen and marketers to explore new market opportunities for their tourism services by identifying and studying various market segments (geographic, demographic, professional, organisational, behavioural, etc.). Tracking relevant information can be used to predict future consumer demand and identify new trends in the behaviour of existing and potential customers. The use of GIS opens up broad prospects for substantiating and designing new tourist routes and recreational areas, publishing thematic tourist maps and creating web atlases, etc. The use of innovative technologies has created a unified tourist information space, making real information promptly available to all players in the tourism market

### 2 Literature review

In their article, the authors Amanova Nodirabegim Furkativna and Amanova Farangiz Furkativna describe the main directions of innovation in the tourism sector, as well as the factors that influence the development of innovation in tourism. According to the authors, the factors that determine the peculiarities of innovation in the tourism sector include: specific attributes of tourism products, producers and consumers of tourism services (Amanova & Amanova, 2021).

The role of innovation in the development of tourism and the fact that the tourism business depends on modern scientific developments and technological solutions, and the tourism industry is the initiator of the innovation process, search and development of new markets, are discussed in articles by such authors as R. K. Ergashev and Z. Yabborova (Ergashev & Yabborova, 2021).

Articles by authors such as Tomi Andrianto, Mehmet Ali Koseoglu, and Brian King review existing concepts and propose business model innovation process (BMIP) applicable to travel companies (Andrianto et al., 2022).

The article by S. Divisekera and V. C. Nguyen analyses the determinants of three types of innovation outcomes that are product, process and organisational which were generated by Australian tourism firms. The study examines how collaboration, human capital, information technology, financing, firm and market characteristics influence innovation outcomes (Divisekera & Nguyen, 2018).

In a joint publication, the authors M. T. Alimova, S. Y. Abdusaidova, and I. I. Tuichiev present the directions of innovative development in the tourism sector through the use of information technology in the industry (Alimova et al., 2020).

According to 57 interviews with tourism SME entrepreneurs in Spain and the UK, the article by A. M. Williams, I. Rodriguez Sanchez and V. Škokić identify how risk and uncertainty are understood as changes during the innovation process in key areas such as technology, finance, marketing and organisation. They also explore how tourism entrepreneurs respond to risk and uncertainty through a range of strategies, including knowledge and networking (Williams et al., 2021).

Systematic literature reviews can be found in publications by authors such as Birgit Pikkemaat, Mike Peters and Bernhard Fabian Bichler, which provide an up-to-date overview of tourism innovation research and an agenda for future research on the relationship between small and micro enterprises and innovation, eco-innovation and the interaction between governance and

innovation (Pikkemaat et al., 2019). In this article (Santos et al., 2021), progress towards sustainability and innovation in tourism is analysed through a systematic literature review that summarises the last five years of research focused purely on innovation and its application in tourism. This research includes a range of theories, practices, methods and outcomes at different levels, stages and drivers, as well as the pursuit of innovation and sustainability in many tourism contexts.

Innovation should be considered as part of a tourism development strategy, and ICTs play an important role in this regard. It is advisable to support effective tools to increase innovation in tourism. These innovative efforts at the national level can lead to increased tourism spending, which is economically beneficial (Gavurová et al., 2021).

Many Ukrainian researchers are interested in the development of innovative trends in the tourism sector, focusing on the development of computer and telecommunication technologies. The problem of using innovative technologies in the activities of tourism enterprises is the subject of scientific works of scientists, especially theoretical provisions on the essence of the definition of "innovative potential" in terms of resource, production and integrated approach (Zaitseva, 2020).

The works of domestic scientists describe the characteristics of the terms "innovation", "new product", "knowledge-intensive industry" and "innovation marketing", as well as the study of ways and stages of promoting innovations to the market of goods and services and methods of managing marketing activities (Moskalenko, 2021).

The researcher analyses methods of improving the efficiency of channels for implementing innovative development and analyses marketing activities that promote innovative development.

The development of modern tourism largely depends on the development and implementation of innovative technologies aimed at improving customer service and expanding the possibilities of service tourism. In order to ensure the efficiency and profitability of this service sector, it is necessary to modernise and keep pace with progress. The innovative development of the tourism industry in general and tourism enterprises in particular is currently given the same importance in the scientific literature as the innovative development of the economy as a whole. The specificity of the industry determines any innovation in tourism, primarily the introduction of products with the highest consumer properties at a given time, which can increase the level of satisfaction of existing consumer demand (Chuieva et al., 2021).

The joint publication by I. Chuieva, L. Nikolaieva and N. Kosareva conducts an empirical study of innovative technologies in tourism activities in the global tourism services market, analyses information on the directions of development of innovative activities in the field of tourism services and their competent application in enterprises of this sector. The main innovative technologies, their content, application and efficiency are described (Chueva et al., 2021).

The researcher O. Chereshniuk considers the thematic issue of planning innovative projects based on a systematic approach and determining the costs of their implementation. As part of the innovation system, the researcher identifies the following elements: analysis of the external environment, analysis of the internal environment, innovation process and lag, and innovation. In order to accumulate information on the process of innovation, the authors have formed an accounting source of information. The model identifies synergistic effects, which include effective behavioural choices of top management, taking into account the price environment, achieving competitive advantages, minimising the impact of market fluctuations and mutual growth of stakeholders' investment confidence in cooperation (Chereshniuk, 2021).

The article by N. Shcherbakova analyses the number of tour operators and travel agencies operating in the Ukrainian tourism market, as well as the number and total cost of tourist trips sold by them. The state of tourism in Ukraine and the process of its reproduction in the post-war period are determined. The article also presents the distribution of tourists by the place of their movement during their holidays and the purpose of their trips in 2020. The article presents the Top 10 countries whose citizens visited Ukraine in 2021 and the countries most frequently visited by Ukrainians. The author analyses the demographic situation in Ukraine due to the war; the situation of tour operators, travel agencies and travel agents; which regions of Ukraine can receive tourists and which are dangerous due to the hostilities (Shcherbakova, 2022).

The article by A. Sydoruk, E. Bortnikova and N. Kyrychenko examines innovative technologies as a promising way of developing tourism and ways to introduce innovations into regional tourism and hospitality development. The influence of the tourism and hospitality industry on the economic development of the country is described. The problems that affect the development of the service sector in Ukraine in modern conditions are identified. The definition of the concept of "innovation in tourism and hospitality" is developed. The objects and subjects of the regional tourism policy, the main types of innovations and possible ways of their implementation in the process of development of tourism and hospitality in the region are allocated. The article also reviews the works of wellknown domestic scientists who have studied the essence of innovation, the specifics of managing service enterprises based on the use of innovative methods, and the place of innovation in the regional tourism market (Sydoruk et al., 2022).

In a joint publication, T. Lysiuk, L. Royko and Y. Biletskyi highlight that innovations in the tourism sector are aimed at creating new or changing existing products, improving transport, hotel and other services, developing new markets, introducing advanced information and telecommunication technologies and modern forms of organisation (Lysiuk et al., 2022).

# 3 Materials and Methods

The theoretical and methodological basis of the study are the basic provisions, scientific works and developments of domestic and foreign scientists on the innovative development of tourism enterprises.

In the course of the study, a set of methods and techniques was used: abstract and logical (when studying the latest publications and practical results on the topic, as well as in theoretical generalisation and formulation of conclusions); analysis and synthesis (when studying the current state and trends of innovation in the tourism services market); system analysis (to monitor the development of tourism enterprises); similar methods (to assess the state and development of tourism enterprises); expert assessments (when studying the specifics of infrastructure provision).

The information base of the study was formed by the relevant legislative and regulatory acts of Ukraine (laws of Ukraine, decrees of the President of Ukraine, resolutions of the Cabinet of Ministers of Ukraine). Analytical and statistical materials of the State Statistics Service of Ukraine, the State Agency for Tourism Development, reports of tourism enterprises and analytical data on the state of the tourism market, as well as the author's own observations were used.

# 4 Results

At the present stage, the world's interest in Ukraine is simply enormous, and we have to turn it into a powerful tourist flow. However, after the war with Russia, the nature of domestic tourism in Ukraine will change, and it will take some time to recover from the war. When the war is over and we start rebuilding everything, it is clear that domestic tourism will suffer economically. Of course, over time, it will recover and undergo

certain changes. Many tourists will go to places that have become symbols of this war. If people used to go to the places of Cossack glory, such as Kholodnyi Yar and Khortytsya, now they will go to the battlefields of the current war.

In this case, it is already necessary to create such tours and excursions so that visitors can understand what happened and tell their children and grandchildren about the struggle and victory in Ukraine.

Some types of sightseeing tours in Ukraine will be unavailable for some time, and beach tourism will have to be forgotten for a while, as demining will continue for a long time. On the other hand, there is hope that the number of post-war beaches will return to the level of early 2014, including in Crimea.

The war is now forcing people to "travel" (flee to safer places) across the country and seek refuge around the world. This situation has made us more united. There are not enough words to express our sincere gratitude to all friendly countries and their governments for their invaluable assistance to Ukrainians. For sheltering children, mothers and the elderly who fled their homes because of the war, providing them with housing, food and everything they need to live. Millions of internally displaced people have returned from other countries, and new friends will come to see this unique corner of Ukraine after the war is over. That is why the recovery of the tourism market is a very urgent issue today, as it is one of the business sectors that suffered the most during the war.

Since the start of Russia's full-scale invasion of Ukraine, some travel companies have closed down, while others have shifted their activities to volunteering - using their buses to evacuate refugees and using their connections to organise the purchase of humanitarian aid from abroad. Since the outbreak of the war, many travel agency owners have turned their offices into volunteer headquarters, and their employees no longer go on exotic trips, but send dry food and medicine to the frontline. Many travel agencies do not intend to resume operations until the fighting in Ukraine ends, but travel companies specialising in short trips to Ukraine have resumed their main tours for several weeks now.

However, there have been requests for excursions: first within Lviv, then nearby in the mountains, and now throughout western Ukraine. Tours of museums and castles that had been closed for a long time have also recently resumed.

The national tourism market of Ukraine is a reformed market in transition, with an average level of socio-economic development and a market structure and tourism industry formed in accordance with macro-regional (European) standards. Due to the terrible war, the current stage of development of tourism enterprises is characterised by relatively low involvement in the global tourism process.

We believe that the recovery of tourism enterprises is possible only under the conditions of an innovative process, which implies the ability to master the media and influence to achieve the necessary profitability and competitiveness. The service sector, as a developing industry, is characterised by an increase in the volume of service production and a rise in risk, which requires an increase in the personal qualities of enterprise managers compared to the existing management organisation. The dynamism of the management process and the manager's intuition are becoming increasingly important. Innovative activities create new types of services, sales and marketing methods that are directly based on increased investment and the development of strategic plans, which, in turn, requires the management of relevant information.

From this point of view, the importance of the basic principle of modern innovation management, awareness, is growing. For companies in the service sector, it is of paramount importance to ensure technology transfer as an independent area of information support for the innovation process.

Monitoring should provide statistically significant factors for service companies that can be used for a reliable assessment of the innovation process. At the same time, an enterprise's activity is based on a model of communication events, and information about the dynamics and quality of their development depends on how these communication events are perceived by the enterprise's personnel.

If an enterprise adopts the concept of organisational innovation in its management system, it may face specific problems, the most important of which is ensuring successful coordination within the enterprise. The solution to this problem lies in rationalising the human potential of the enterprise, the main factor of which is the qualification of employees. High quality and continuous development of personnel should ensure the efficiency and coordination of innovative transformations, which, in turn, contributes to the overall increase in labour productivity.

Successful implementation of organisational innovations requires systemic solutions that require flexible organisation of innovative changes and constant feedback that takes into account the external and internal environment, as well as the parameters of the innovation process and content.

There are four main types of innovative products, depending on their nature and functional purpose (Figure 1). The first category includes new technologies and products, auxiliary equipment and materials. Economic effects include management methods in the fields of science, production and other activities based on forecasting and planning, financing, pricing, incentives and rewards, and performance evaluation.



Figure 1: Types of innovations and innovative products Source: Constructed by the authors

Innovative entrepreneurial activity is a special process of business organisation based on the constant search for new opportunities to improve technical and technological factors of production. It can be described as a socio-economic process that creates new, more advanced goods and technologies through the use of innovations.

The need for such activities is driven by the following factors: the need to improve the technical and technological level of production; increased costs and unprofitable business activities of the enterprise; outdated technologies and equipment; improving the efficiency of production activities through the introduction of innovations; increase in labour productivity as a result of innovation (Kudinova, 2019).

In general, the following main types of innovation activities at enterprises are distinguished (Figure 2).



Figure 2: Types of innovative activity at enterprise Source: Constructed by the authors

At the current stage, the process of restructuring the Ukrainian market is rather slow, and the offer on the travel market is not differentiated and is practically not characterised by exclusivity. Among the global distribution networks, the strongest in the

Ukrainian market are AMADEUS and Galileo, through which travel agencies book airline tickets and other services.

In general, transnationalisation has not yet affected the national tourism market and has only slightly affected it (growth of national tour operators, albeit small and uncompetitive in the international tourism market; attention of transnational hotel groups, the need to form national hotel chains, development of transport infrastructure).

The formation of the national tourism product is based mainly on certain tourist and recreational resources with innovative elements, as well as on a flexible combination of natural, cultural and historical resources, enhanced by the ethnic and religious identity of different regions of the country.

The geographical concentration of tour operators reflects the geographical structure of market demand: it is highest in Kyiv and relatively high in Volyn, Zakarpattia, Ivano-Frankivsk, Kyiv, Lviv, Rivne, and Chernivtsi regions (Figure 3). Data on the concentration of tourism enterprises in the ARC is not yet available (State Statistics Service of Ukraine).



Figure 3. Map of concentration of tour operators in Ukraine Source: Compiled by the authors based on data from the State Statistics Service of Ukraine

Regions with the highest concentration of tourism operators are, accordingly, generators of tourist flows, although the flow of foreign tourists to our country is almost absent at the present stage during the war.

The effectiveness of innovative tourism activities is manifested in minimising total costs and increasing the profitability of tourism enterprises, as well as in obtaining additional benefits by business entities

The changing realities of the innovative space for the functioning of tourism enterprises put forward new requirements for determining the status of tourism operators depending on the assessment of innovation potential (Lysiuk et al., 2021).

To study the innovation potential, the Top 10 tourism operators in Ukraine were selected.

To identify the type of innovative behaviour of tourism enterprises, we chose a scale that is a universal means of standardising the values of assessment criteria and allows us to set the corresponding rank of the criterion in the range from 1 to 4 points, where 4 points corresponds to the maximum possible value and 1 point to the minimum (Mykhailichenko, 2015).

Table 1 shows eight evaluation criteria that serve as identifiers of the four types of innovative behaviour of tourism operators.

Table 1: Scales used to assess the type of innovative behaviour of tourism enterprises

No	Assessment criteria	Score in points						
		1	2	3	4			
1	Readiness of enterprises to innovate (Rei)	Low	Low Insufficient Medium		High			
2	Attitude of enterprises to innovation (Aei)	Conservativ e innovators	Innovators- followers	Innovators- members	Innovators- leaders			
3	Innovation intensity (Ii)	Fading	Cyclical	Increasing	High			
4	Scale of innovation (Si)	Point innovations	Only product innovation s	Some areas of the firm's activity	All areas of the firm's activity			
5	Sufficiency of innovation financing (Sfi)	Low	Medium	High	High			
6	Informatio n support for innovation (Isi)	Low	Average	Above average	High			
7	Availabilit y of resources for innovation (Ari)	Not applicable	Partially applicable	Individual resources are used	Optimal combinati on of resources is used			
8	Spillover effects of innovations (Sei)	Minor effects	Incidental effects	Systematic economic and social effects	Significant economic and social effects			

Based on the data presented in Table 1, a range of average values (I) for tour operators was determined. The estimated values for the innovative behaviour of tour operators are presented in Table 2.

Table 2: Assessment of types of innovative behaviour of tour operators

№	Tourist enterprise	The average score according to the criteria of innovative behavior							The	
		Rei	Ae i	li	Si	Sfi	Isi	Ani	Sei	mean value
1	JoinUP	3,7	3,6	2,7	3,8	3,7	3,8	2,8	3,2	3,41
2	TUI	3,9	3,8	2,1	3,5	2,4	3,1	3,6	2,7	3,13
3	Coral Travel	3,8	3,8	2,8	3,6	3,4	3,9	3,5	2,2	3,38
4	Pegas Touristik	2,6	2,8	3,6	3,3	3,4	2,7	2,9	3,5	3,10
5	TEZTour	1,8	2,6	1,8	3,1	1,8	2,7	2,2	1,9	2,24
6	TPG	4	3,2	2,9	3,5	3,8	3,8	3,5	2,8	3,44
7	Геуегіуа (Фесрія)	3,2	3,8	2,4	2,6	2,7	2,6	3,3	3,2	2,98
8	АссоісНоиг (Аккорд- тур)	3,6	3,4	3,3	3,7	3,1	2,6	2,6	3,4	3,21
9	Hamalia (Гамалія)	2,1	2,6	2,5	3,5	3,4	31 4	2,1	1,8	2,88
1	Pegas Touristik	3,1	2,5	2,9	3,4	3,2	2,8	26	2,73	2,96

By assessing the types of innovative behaviour of tourism operators, we conclude that tourism as a system is highly resilient to external shocks, but after the COVID-19 pandemic and the war with Russia, the negative consequences in the socioeconomic sphere will be unprecedented.

To further assess the behavioural, institutional and socioeconomic changes in the supply and demand for the products of domestic tourism enterprises, as well as to identify resources to improve their competitiveness, we will use the PEST analysis tool and its extended version, the PESTEL analysis.

This marketing tool allows you to study the main factors: sociocultural, technological, economic, political, environmental and legal, namely the elements of PESTEL analysis: environment, technological environment, economic situation, political and legal environment, demographic and cultural characteristics.

Changes in the external environment of tour operators, especially in the case of a pandemic and war, require proper research in order to further predict and develop strategies to combat changes. In our study, we investigate changes in the external environment of domestic tour operators using the PEST analysis method. Political factors often include national stability, tax policy, foreign trade regulation and community development policies. According to the study, economic factors include the business cycle, the contribution of various industries to gross domestic product, interest rates, inflation and employment. Socio-cultural factors include demographics, income, social mobility, changes in lifestyle, behaviour and attitudes to work and leisure, and education.

Technological factors include national research expenditure management, the level of digitalisation of economic sectors, new discoveries and developments, and the speed of technology transfer. Environmental factors include legislation on environmental protection, waste management and energy consumption. Legal factors include a country's antitrust and anti-corruption policies, labour laws, and health and safety (Lysiuk et al., 2021).

However, the speed of the pandemic spread and the war with Russia have made significant adjustments to the list of important factors used in PEST analysis. PEST analysis is a powerful and widely used tool for understanding risks and opportunities as a tool for tourism businesses to adjust their strategies in times of crisis. It identifies the change and impact of the external macro environment on the competitive position of a business unit. We try to understand the external factors and assess how innovation models should evolve to meet their environment. The innovation strategy mitigates the impact of external factors and exploits new opportunities, as a new competitive position can be created in the process.

PEST analysis is most effective when analysing environmental factors in terms of resources, capabilities and key innovations. National tourism is highly volatile and particularly sensitive to cyclical changes in countries of origin, global and regional economic conditions and adverse events such as natural disasters, epidemics, political unrest and terrorism.

As for the social factors of the external environment, in which we consider it appropriate to consider in more detail the employment of the population in the tourism sector, as this indicator is closely related to the impact of the pandemic and the war, there are also negative trends worth noting.

As of the first half of 2021, the total contribution of the tourism industry to employment is 4.8%, while in 2016-2020 this figure was 5.5%~5.8%. The role of vocational education in the tourism industry has increased significantly. Technical factors affecting tourism in quarantine are becoming extremely important.

National courses on the digitalisation of the service sector and communication with customers are leading to major changes in marketing strategies, especially for tourism businesses (Lotysh, 2017).

The rapid development of innovative technologies has made it possible to deepen the personalisation and customisation of services provided. Domestic tourism enterprises have responded to this change in the technological environment by creating personalised interfaces for mobile applications and websites, communicating in messengers, and using social media to collect a large amount of information about their customer base (Moskarenko, 2020).

In order to reveal the tourism potential and opportunities to increase the competitiveness of national tourism enterprises, we use PEST analysis, which allows us to reflect the degree of influence of external factors of different orientation and importance.

The analysis identifies a list of environmental factors for Ukrainian tour operators, taking into account the consequences of the pandemic and war (Table 3).

Table 3: Factors of the external environment of tour operators

		Average score					
Factors	Degree of influence	1	2	3	4	5	Weighting coefficient / direction
Political aspects     (Political)							
(Political)  1.1. Development of international partnerships	2,8	4	3	2	2	3	0,03/+
1.2. Reduction of administrative control over the tourism sector	4,6	5	4	4	5	5	0,04/+
1.3. Strengthening of strategic planning of tourism activities at the national level	4,4	5	4	4	4	5	0,05/+
1.4. War	4,6	5	4	5	5	4	0,05/-
1.5. Restrictions on movement across national borders	5,0	5	5	5	5	5	0,05/-
1.6. The country is in the "red zone" in terms of COVID-19 spread (2019-2021)	4,4	4	5	4	4	5	0,04/-
1.7. Opacity of statistical research	2,4	3	2	3	2	2	0,02/-
2. Economic aspects							
2.1. Exchange rate dynamics	4,4	5	5	5	4	4	0,05/-
2.2. Personal income level	5,0	5	5	5	5	4	0,04/-
2.3. External debt of the country	4,8	4	5	5	5	5	0,05/-
2.4. Declining demand in the service sector amid the pandemic and	4,6	4	5	5	4	5	0,05/-
2.5. Growing interest in domestic tourism	4,8	5	4	4	4	4	0,05/+
2.6. Tax breaks for individual entrepreneurs during the quarantine and war, suspension of penalties and fines	2,2	3	2	2	2	2	0,02/+
3. Social aspects (Social)							
3.1. Population growth rate	2,6	2	2	3	3	3	0,02/-
3.2. Educational level of the population	4,6	4	5	5	4	5	0,04/-
<ol> <li>3.3.Knowledge of foreign languages</li> </ol>	2,8	3	2	2	4	3	0,03/-
3.4 Changes in the structure of urban and rural population	3,3	4	4	4	3	2	0,03/+
3.5. Employment rate	3,6	6	4	4	4	2	0,04/-
3.6. Consumer expectations of the population	2,6	3	2	2	2	4	0,03/-
3.7. Changes in behavioural reactions of consumers of tourism services	2,6	4	3	2	2	2	0,03-
4. Scientific and technical factors (Technical)							
4.1. The process of digitalisation	4,2	3	4	4	4	5	0,04/+
4.2. The level of innovation in the sector	2,2	4	2	2	2	3	0,03/-
4.3. Customisation of customer service	6,6	3	3	2	2	2	0,03/-
4.4. Use of e-marketing tools	4,4	5	5	4	4	3	0,05/+
4.5. Possibility of introducing remote forms of service provision	5,0	5	5	5	5	5	0,05/+
4.6. Implementation of logistics and customer self-service systems	4,6	5	4	4	5	5	0,05/+
ALL:						99,2	1

Based on the analysis of the factors of the external environment of Ukrainian tour operators, the main directions of influence of innovative technologies on the competitiveness of the tourism sector were identified (Table 4).

Table 4: Directions of influence of innovative technologies on the competitiveness of the tourism sector

Sphere of influence	Area of influence	Technology		
Creation of tourism products	Accelerate the process of creating new tourism products	GDS and other booking systems, Internet		
Promotion	Emergence of new methods and technologies for tourism promotion	Internet, webinars, multimedia technologies, GDS		
Marketing	Formation of new marketing channels for selling tourism products	Internet, booking systems, e- commerce		
Management	Improvement of tourism business management technologies	Specialised software products for tourism business management		

Source: Created by the authors

Thus, according to the results of the PEST analysis, taking into account the negative consequences of the pandemic and the war, we have identified the key factors of the external environment of Ukrainian tour operators and the directions of influence of innovative technologies on the competitiveness of the tourism industry.

When selecting the factors, we also took into account their direction of influence and weighted average weight, which allowed us to identify the most important negative and positive components of the external environment of tour operators. It is worth noting that in the strategic planning of innovative activities of tourism enterprises at the national and regional levels, attention should be paid to increasing the importance of such environmental factors as the development of international partnerships, tax incentives for individual entrepreneurs in the tourism sector, and demographic changes.

# 5 Conclusion

Thus, the study identified reserves for increasing the competitiveness of Ukrainian tourism enterprises in the sectoral market by taking into account additional innovative factors of their external environment. The results of the study have created the basis for further research on the external microenvironment of tourism enterprises at the local, regional and national levels, including an overview and prospects in crisis conditions, i.e. as a result of the consequences of the war with the Russian occupiers.

The rating assessment allows us to identify the most innovative and, accordingly, attractive tour operators for work in the tourism market. Given the multiplicity of rating criteria, its results will allow its participants to indirectly analyse their own work and adjust their strategic outlook for the future.

Based on the relative homogeneity of the tourism resource base, the evaluated tour operators were identified as the main players in the development of tourism in Ukraine, taking into account the specifics of their organisation and activities.

Unfortunately, we are unable to analyse the state of tourism activity in 2022, as reliable statistics are not available due to the war. Nevertheless, we will rebuild our Ukraine, make it better, and we will restore domestic tourism. However, in order to provide quality tourism services in the future, we need to find innovative solutions that will guarantee the safety of tourists and

employees of travel companies. Innovative developments will help ensure the competitiveness of travel companies and enable them to provide high-quality services.

It is well known that tourism in Ukraine has been and will remain one of the most promising industries, as the country has all the conditions for the development of domestic and foreign tourism.

Today, companies are offered a wide range of advanced technologies, including global reservation systems (GDS), integrated communication networks, multimedia systems, smart cards, management information systems and many other systems, to solve various problems and improve the quality of services in the tourism sector.

The future of tour operators lies in chatbots, blockchain technology, artificial intelligence and the Internet of Things. Such innovations are already being implemented in the international travel market, and it is crucial that Ukraine keeps up with these innovations.

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**Primary Paper Section:** A

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