SOCIAL RISK MODELING AT AIRPORTS: ON THE EXAMPLE OF ZAPORIZHZHIA CITY

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ABSTRACT

The aviation sector is in constant relationship with society and the social sphere at all levels. The airport acts as an entrance and exit gate from one sphere, region, country to another, and must ensure safety, good management and prevent possible risks. Therefore, airports should carry out activities related to the implementation of social modeling and use related methods. Now the state of the aviation sector in Ukraine is in a difficult situation, one of the main factors is the conditions of the COVID-19 pandemic, therefore, in the post-pandemic conditions, airports have to worry about their strengths/weaknesses, opportunities and threats for developing development strategies. The object of our research is the global risks at airports**.** The subject of our article is the social modeling of risks at airports using the example of the COVID-19 pandemic. The purpose of the article is to investigate the main contexts of social risk modeling at airports for the conditions of the COVID-19 pandemic at the airport in Zaporizhzhia. The airport risk modeling research methodology was defined by a systematic approach (system research stages) and synergy research. Qualitative research methods are the FORESIGHT complex and the use of strategic forecasting of desk analysis methods in combination with SWOT/STEEP/TOWS methods, which makes it possible to obtain possible scenarios. As a result, the introduction of social modeling can ensure the prevention of risks, threats and affect the strategic development of airports and the safety of air communications (for example Zaporizhzhia city).

Keywords: Social Modeling, Risk, Airport.

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Havaalanlarında Sosyal Risk Modellemesi: Zaporizhzhia Şehri Örneği Üzerine

ÖZET

Havacılık sektörü her düzeyde toplumla ve kamusal yapıyla sürekli ilişki içindedir. Havalimanı bir alandan, bölgeden, ülkeden diğerine giriş ve çıkış kapısı görevi görür. Hava limanının güvenliği, iyi yönetimi sağlamalı ve olası riskleri önlemelidir. Bu nedenle havalimanları sosyal modellemenin uygulanması ile ilgili faaliyetlerde bulunmalı ve ilgili yöntemleri kullanmalıdır. COVİD-19 koşulları nedeniyle Ukrayna'da havacılık sektörü çok zor durumdadır. COVID-19 pandemisinin koşulları ve pandemi sonrası koşullarda havalimanlarının güçlü/zayıf yönleri, fırsatları hakkında sratejiler geliştirmeli ve tehditleri öngörmelidir. Araştırmamızın amacı havalimanlarındaki küresel risklerdir. Makalemizin konusu, COVID-19 pandemisi örneğini kullanarak havalimanlarındaki risklerin sosyal modellemesidir. Makalenin amacı, Zaporizhzhia'daki havaalanında COVID-19 salgını koşulları için havaalanlarında sosyal risk modellemesinin ana bağlamlarını araştırmaktır. Havaalanı risk modelleme araştırma yöntemi sistematik bir yaklaşım (sistem araştırma aşamaları) ve sinerji araştırması ile tanımlanmıştır. Nitel araştırma yöntemleri, FORESIGHT kompleksi ve olası senaryoların elde edilmesini mümkün kılan SWOT/STEEP/TOWS yöntemleriyle birlikte stratejik tahminlerinin kullanılmasıdır. Sonuç olarak, Zaporizhzhia şehri örneği üzerinden sosyal modellemenin tanıtılması, havaalanları açısından risklerin, tehditlerin önlenmesini sağlayabilir ve havaalanlarının stratejik gelişimini ve hava iletişiminin güvenliğinin geliştirilmesine olumlu katkıda bulunabilir.

Anahtar Kelimeler: Social Modelleme, Risk, Havaalanı.

RELEVANCE

Globalization and the connectedness of world civilization into a single social space directly depend on transport links, the fastest and most comfortable for various types of transport is air transport. Airports are assemblies of social, cultural, economic, tourist and other relationships of people who have become air passengers. The increasing importance of air communications and airports in the life of the country and the individual determines the relevance of social modeling of risks at airports, which determine both threats to various spheres of social and economic life and threats to human life, especially with the emergence of global threats such as terrorism and pandemic. The work is of significant relevance both for the development of the sociology of transport, social forecasting and modeling, and specifically for the social development of the Zaporizhzhia region. The presence of an airport is one of the factors of human and territorial development, because today airplanes deliver to anywhere in the world not only cargo, but much more importantly, people with knowledge - the main currency of the post-industrial economy. In the context of the COVID-19 pandemic, the transport system was under threat, special attention was paid to the individual as the main carrier of the disease, undoubtedly influencing air travel. Aviation is one of the key channels for the spread of coronavirus and is extremely sensitive to inappropriate actions by governments of different countries. Airports have become places where both innovation and hazards and threats (biological, security, economic, social and reputational) are spread.

The object of our research is the global risks at airports.

The subject of our article is the social modeling of risks at airports.

The purpose of the article is to investigate the main determinants of optimizing social risk modeling at airports in the context of the COVID-19 pandemic at the airport in Zaporizhzhia.

ANALYSIS OF RESEARCH AND PUBLICATIONS

At the stage of sociological understanding of the problem of social modeling of risks at airports, we identified the main sources, where we emphasized that social modeling is a type of social technology. Surmin and Tulenkov, highlight a number of provisions, according to which we can get a

more complete understanding of the concept of "social technology". Social technology is a certain method for the embodiment of human activity to achieve socially important goals. Social technology appears in two forms: as a program that includes procedures, operations, algorithms, and, like the activity itself, is built in relation to this program. Sociologists consider social technologies that are used in management processes and are divided into two categories: technologies for preparing management decisions (diagnostics) and technologies for implementing decisions (Surmin, Tulenkov, 2004). Podshivalkina notes that it is advisable to single out these two categories in use for management processes. It also highlights the technology of social diagnostics, where algorithms for determining the state of a social object, or its individual subsystems, are primarily used (Podshivalkina, 1997).

Shtoff distinguishes two large groups of models: material and imaginary. Material models include models created by man artificially or taken from nature as a model. Imaginary people differ in that they are created in the form of imaginary images that exist only in the thoughts of a researcher or theorist (Shtoff, 1972). Plotinsky distinguishes among the varieties of models: meaningful, conceptual and formal models, which we have already mentioned above. He also notes the importance of social modeling in the professional training of a sociologist. Modeling and modeling should be thought of as a tool for structuring and organizing data. Models are built to solve specific problems, so it is necessary to be able to work with a fairly wide range of tools that are interchangeable and complementary to each other (Plotinsky, 2001). Bataroyev gives a more open idea of the model: “A model is a system created or chosen by the subject that reproduces the sides (elements, relations, parameters, properties) of the object under study that research serves as an indirect way of gaining knowledge about this object”. Bataroev gives a detailed classification of models, including: spatial-geometric, physical, chemical, mathematical, cybernetic, bionic and biological-informational, economic-mathematical and socio-cybernetic, ecological-cybernetic, logical, concept (Bataroyev, 1981). According to Uemov, a model is a system, the study of which serves as a means of obtaining information about another system (Uemov, 1971).

Beck points to the macrosocial changes that are generated by the emergence of risks during the transition to high modernization (Beck, 2001).

According to Foucault, in the theory of "calculative rationality", the truth about risk is created by a person in the process of discourse, the development of strategies, practices. It also emphasizes knowledge of risk rather than its nature. It is knowledge that helps to more clearly learn the truth of risk and is a factor in decision-making and action (2002: 278-302). Bauman emphasized that risks and contradictions come from society, and a sense of duty and the need to overcome them are individualized (Bauman, 2005). Algin notes about the problem of society's attitudes towards social risk that they have a number of interrelated aspects: study of methods for assessing social risk and methods of its perception by different groups and strata of the population; study of the mechanism of influence of economic, socio-psychological, moral, socio-technical, national and other factors; identification of specific categories and groups of people who are critical and uncritical in relation to social risk; analysis of the ways of participation of heterogeneous and incompetent public opinion on the discussion and development of risky decisions, projects; development and implementation into practice of actions for social risk management ("risk management system") (Algin, 1989).

Among Ukrainian authors, risk issues have been studied in the contexts of the sociology of life safety, risk management and social protection of the population. These issues were covered in the works of such Ukrainian authors: Krivoshein (Krivoshein, 2018: 31-44), Deineko (Deineko, 2016: 31-37), Kalashnikov (Kalashnikova, 2017: 16-23), Pogibna (Pogibna, 2018: 78-92), Chudik-Belousova (Chudik-Belousova, 2015: 82-108), Trebin (Trebin, 2017: 141-156).

METHODOLOGY

The methodological principles and approaches to the study of the problem of social risk modeling at airports were determined by general scientific principles and methods (objectivity, historicism, comprehensive communication, systemic unity of historical and logical ascent from the abstract to the concrete, logical-conceptual analysis, hermeneutics). The airport risk modeling research methodology was defined by a systematic approach (system research stages) and synergy research. Empirical research methods are a qualitative complex of FORESIGHT methods and the use of

strategic forecast (desk analysis in synthesis with SWOT/STEEP/TOWS methods).

For the content analysis, information on the passenger traffic of the airports of Ukraine in 2019 and the Report on the results of the aviation industry of Ukraine for the 1st half of 2020 were taken, a list of information was formed, namely: data on the transportation of passengers, the activities of airlines, the activities of airports.

Using MAXQDA Analytics Pro, documents were analyzed (content analysis) and a matrix of codes was built, infographics in the form of statistical variables among 27 countries and separately data on the mention of "COVID-19" in 35 reports. For a full disclosure of modeling strategies were created: SWOT/STEEP/TOWS. With the help of which the main factors of strengths, weaknesses, opportunities, threats are highlighted and strategies for the development of the airport are formed on the example of the airport of Zaporizhzhia, for the formation of recommendations and directions for optimizing the use of social modeling of risks at airports.

PRESENTATION OF THE MAIN RESULTS OF THE STUDY

According to data on passenger traffic at Ukrainian airports, 2019 has a positive growth trend, and since 2014 (5 years) these indicators have been growing. If in 2015 the indicators were 10.69 (million), then in 2019 - 24.34 (million) passengers. International flights - 21,995,600 passengers, +19.82%, domestic flights - 2,341,000 passengers + 6.94%.

At that time, regional airports showed different data. The leader is Boryspil Airport - 15,260,281 passengers, + 21.08%. Behind him are Zhuliany, although in terms of indicator they decreased -6.91%, Lviv and Kharkiv, which also increased their indicators. The city of Zaporizhzhia was slightly ahead of the city of Dnipro with an indicator of 434,000 passengers, + 8.41%, while in Dnipro - 338,888 passengers, + 13.42%. There are airports that were moving towards negative dynamics, they reduced their passenger traffic - these are the airports of Vinnitsa, Ivano-Frankivsk and Kryvyi Rih.

The pandemic situation in the world and the restrictions that were introduced at the state level to counter the spread of the disease have significantly affected the aviation sector not only in Ukraine, but throughout the world. In the results of the activities of the aviation industry of Ukraine

for the 1st half of 2020, there is a significant reduction in the production indicators of the activities of aviation enterprises compared to the same period in 2019.

When comparing the activities of airlines in 2019 and 2020 within Ukraine, including international ones, it was found that 6096.4 passengers were transported in the 1st half of 2019, while in 2020 - 2009.2, the indicator compared 33 0 %. Including on regular lines 3765.3 in 2019 and 1132.1 in 2020 - 30.1%.

While passenger traffic stagnated, freight and postal traffic increased. The transportation of goods and mail was carried out by 18 domestic airlines. At the same time, due to restrictions on passenger air traffic during the quarantine period, transportation was carried out both directly by cargo companies and by companies that redesigned passenger aircraft for the carriage of goods. The leaders in transportation are ZetAvia, Antonov State Enterprise ATP, Ukraine International Airlines, Maximus Airlines and Sky Up. In the reporting period, these airlines carried out almost 88 percent of the total volume of cargo and mail transportation. This was caused, in particular, by the problem of lack of work and large volumes of supplies of auxiliary aids under quarantine conditions (masks, respirators, suits, disinfectants).

Airport activity decreased and aircraft servicing decreased by 56.7% compared to the same period last year. Thus, passenger traffic through Ukraine dropped to 61.8%. Commercial flights of domestic and foreign airlines during January - June 2020 served 18 Ukrainian airports and airfields, while only 6 airports (Kiev (Boryspil), Kiev (Zhulyany), Odessa, Lviv, Kharkov and Zaporizhzhia) concentrate 97 percent of all passenger traffic and postal freight flows.

The number of passengers served by the country's main airport Kiev (Boryspil) decreased by 62.4% compared to the first half of the previous 2019. Passenger traffic through the Kiev (Zhulyany) airport decreased by 67.6%, Lviv - by 60.5%, Odessa - by 54.6%, Zaporizhzhia - by 53.3%, Kharkiv - by 51.1%.

Now the permanent airport of the Zaporizhzhia region is the Zaporizhzhia International Airport. The Mariupol airport is inactive due to

its proximity to the buffer zone of the military conflict. Berdyansk Airport is also not operational due to bankruptcy, but the flow of tourists has increased significantly. In 2019, Berdyansk received about 1,500,000 tourists per season, in contrast to 2015 - 300,000 tourists, which is a significant factor for the resumption of the airport's operation. The airfields of Melitopol and Kirillovka functioned as passenger airfields by the early 1980s, but were closed. Other airfields are predominantly considered military. It can be argued that regional flights are not possible. Such spheres as freight, postal, completely dependent on highways, which are just beginning to be put into proper form. For an industrial region, which can also be called a resort region, it is important to have flights that are not functioning.

The analysis of data from reports “COVID-19 impact on the European air traffic network” provided by “Eurocontrol” from April 14, 2020 to November 26, 2020 (EUROCONTROL, 2020) was carried out. Eurocontrol provides information on the impact of COVID-19 on the European air traffic network, on the basis of which it provides support in the form of forecasts and possible development scenarios to avoid the crisis. The purpose of this analysis was to identify the participation of the Ukrainian aviation community in joint work with aviation organizations.

According to the results of the analysis of the constructed matrix, references to Ukraine by the dictionary code "Ukraine" were identified in 13 reports, 35 each. A total of 20 references. Also, according to the vocabulary code "Kiev", there were 3 references in 3 reports, 35 each. This result puts Ukraine in 19th place among 27 countries in terms of references. More indicators per mention in: France, Spain, Germany, Great Britain, Italy, Turkey, Norway, Greece, where the indicator varies from 130 to 396 mentions. Less in Romania, Hungary, Albania, Slovakia, Bulgaria, Lithuania and Latvia, where the indicator varies from 18 to 12 mentions.

The infographic of statistical variables was built from the lowest mentions to the highest in terms of percentage. Ukraine ranked 9th (0.8%). The top 5 largest were compared by France (14.2%), Spain (11%), Germany (10%), Great Britain (8%) and Italy (6.4%).

Acording to the analysis of the data, we can conclude that the COVID-19 pandemic has caused great damage not only to the Ukrainian

aviation market, but also to the global one. Airports, for their part, have reduced their workforce and economic indicators are in crisis. In general, the aviation sector of Ukraine was not ready for such global problems and the implementation of large-scale threats. The reports of the world organizations ICAO and ASI also note instability and recommend holding events and developing strategies, forecasts and scenarios for overcoming the crisis, introducing new technologies, and in some cases changing the architecture of the airport itself. Therefore, due to the presence of one operating airport in Zaporizhzhia in the region, a social risk model has been developed on its example.

Based on the results obtained, when building development strategies, the main factors of strengths/weaknesses, opportunities and threats were identified.

At the first stage, the main questions are posed using a descriptive model: “What?”, “How?”, “To whom?”, “How is it distributed?”, “Prices? Expenses? Contributions?", "How do we manage it?". With the help of answers, basic factors are determined that will help us understand this object. A cognitive model of the Zaporizhzhia airport is also being developed in the form of a Mind Map, with the help of visualization the cognitive model turns into a state of a cause-and-effect model.

At the second stage, the main factors are decomposed into composite STEEP analysis, where S - social factors, T - technical, E - economic, E - environmental and P - political. From the obtained factors, the main trends are built, have the dynamics of improvement or deterioration. Thus, improvement trends are seen in the architecture (the new terminal of the Zaporizhzhia airport, capable of covering a flow of 400 passengers per hour, has modern equipment and space) in combinations at the international level (now the airport serves connections to Antalya, Boda, Istanbul, Sharm el-Sheikh, Dortmund, Vienna) tourism/culture development (which is seen in the activities of the city of Zaporizhzhia on the improvement of the city). Deteriorating tendencies are seen in politics (due to the possible height of the conflict in the buffer zone, proximity to the buffer zone); technologies (now, due to problems with the opening of a new terminal at Zaporizhzhia airport, the old terminal is being used, which is considered obsolete). Strong trends were also found, in particular competition that is absent and airport security.

The next step is the development of a SWOT analysis, which identifies the main strengths, weaknesses, opportunities and threats that will form possible strategies for the development of TOWS. Thus, the analysis established the following:

Entering the global air travel market and creating a connecting hub between other international airports is SO: Maxi-Maxi's strategy with strengths and opportunities in mind.

Reducing the negative impact on the environment, involving air carriers, improving the airport infrastructure is the strategy of WO: Mini-Maxi, taking into account weaknesses and opportunities.

Creating environmental standards, strengthening the competitive position, attracting passengers, providing the airport with advanced specialists is the strategy of ST: Maxi-Mini, taking into account strengths and threats.

High-quality allocation of resources/finances, creating a reserve, improving the technical base, developing organizational culture/training, improving transport links with other cities is the WT: Mini-Mini strategy, taking into account weaknesses and threats.

The ability to see and analyze a complex aviation system is extremely important for conducting social risk modeling, allows you to develop the necessary development strategies and prevent possible threats.

Recommendations can be roughly divided for the Zaporizhzhia airport, airports/airfields of the Zaporizhzhia region and government authorities.

1. Recommendations for the airport of Zaporizhzhia.

Zaporizhzhia Airport has an international status and has all the certifications for international flights. Now the question is about opening a new terminal and after its opening it is important to take all possible measures for further development and quality management. For this, all possible risks in various areas (social, technical, economic, environmental, political) must be taken into account. Now the Zaporizhzhia airport is the only one in the region, it can serve passenger/cargo/postal flights and communications. The developed strategies through SWOT/STEEP/TOWS

analysis show the main trends in the airport's development, weaknesses, strengths, opportunities and threats of the airport, which must be taken into account for further activities.

The developed development strategies have a gradation from weak to strong.

Thus, the WT: Mini-Mini strategy focuses on minimizing weaknesses and threats. In the case of this strategy, the airport will have to fight for its survival. WO Strategy: Mini-Maxi tries to minimize disadvantages and maximize opportunities. An airport can identify opportunities affecting the external environment, but have internal weaknesses. ST strategy: Maxi-Mini, maximizing strengths and minimizing threats, builds on the strengths of the airport, which can deal with threats in the environment. The main step of the airport in this case is to make full use of the strengths of the fact that it is possible to meet a threat in the environment inadvertently, which may lead to large losses. Strategy: SO: Maxi-Maxi is the strongest and most anticipated strategy. The airport is able to use its strengths and capabilities.

2. Recommendations for airports/airfields of the Zaporizhzhia region.

Conduct a study on the state of airports and airfields in the Zaporizhzhia region and their profitability, to improve the region's capabilities in various areas (economy, tourism, business, cargo transportation, and others). What could be an opportunity not only to improve opportunities within the region, but also to communicate within Ukraine and at the international level. Conduct proper statistical counting not only of passengers, but also of air traffic in order to obtain complete information about the flow of the airport. Conduct monitoring inside and outside the airport to assess the mood of passengers and the area where the airport is located. Attract quality infrastructure and conduct marketing activities to draw attention to the airport. Competitiveness check. Involvement of ecology specialists and bird watchers (to create favorable conditions for takeoff, landing, aircraft parking). Creation of programs to attract young people (internship, vocational guidance, involvement in airport volunteer activities).

3. For government authorities. Expand the categories of statistical data not only for Ukraine as a whole, but also for regions. Pay attention to the development of social technologies and their implementation. To hold open events, programs, conferences on the state and development of the aviation sector in Ukraine. Conduct activities to attract young people to the aviation sector. Implementation of practice at the airport for management students.

4. For local authorities. Conduct a study on the state of airports/aerodromes in the region and assess the feasibility of their operation. Provide communication with operating airports in the region on conducting information collection methods to obtain more data on the state of the airport. Use sociological methods to collect information to assess public reaction to airports (innovations, knowledge about the airport). The main factor that acts as a brake on the development of the aviation sector is the political conflict in Ukraine. The Zaporizhzhia region is located in proximity to the occupied territories and Crimea, does not allow air carriers to enter and expand air borders through security and economic factors. An important area is to reduce corruption as a factor in the complication of activities.

Amid the COVID-19 pandemic, the global aviation community is in crisis. Airport risk modeling skills should prevent such threats and develop scenarios of possible exit for further management and operations. Now the aviation industry is demanding the return of passenger confidence. It is this time that is the impetus for development and changes (architecture, technology). To create new opportunities.

CONCLUSIONS AND PROSPECTS FOR FURTHER RESEARCH

Based on the results of the study, a number of factors, strengths/weaknesses, opportunities, threats were formed and analyzed, and development strategies were developed using the example of Zaporizhzhia airport. This confirms the existing hypothesis that the production of social modeling can ensure the prevention of risks, threats and affect the strategic development of airports and security. Zaporizhzhia Airport has all the opportunities for successful development and quality management, while the opening of a new terminal is expected and, if all risk factors are taken into

account, the airport will be able to move to the next level of successful and efficient operation.

Development strategies for Zaporizhzhia airport WT: Mini-Mini (minimizing weaknesses and threats), WO: Mini-Maxi (minimizing disadvantages and maximizing opportunities), ST: Maxi-Mini (maximizing strengths and minimizing threats), SO: Maxi-Maxi (full use of strengths and opportunities) provide a holistic view of the airport system, based on them, the airport can develop alternative strategies, tactics, activities. To create a set of plans for future activities in case of emergency situations that may be caused by risk factors of contact, local, national, international and global levels.

The whole set of recommendations and optimization of social risk modeling at airports were divided for the Zaporizhzhia airport, for the airports/airfields of the Zaporizhzhia region, state authorities and local authorities.

The Zaporizhzhya region is considered industrial, and now, due to the occupation of Crimea, the tourist attractiveness of the region is growing in Berdyansk and Kirillovka, which requires a revision of the logistics capabilities of the region. The aviation sphere of the region is represented only by the Zaporizhzhia airport, while the Mariupol airport does not function due to military-political factors, and the Berdyansk airport, due to bankruptcy. There is a very important area of future research is monitoring the state and developing a strategy for the development of the aviation sector of the Zaporizhzhia region. Risk modeling is the modeling of social relations under the influence of risks, providing for models of economic, political, cultural, technical, social, environmental and others, the research of which is one of the tools for developing development strategies, as was shown by the example of the Zaporizhzhia airport.

Social modeling as a social technology act as a primary tool for researching risks at airports, since on its basis all the factors, strengths and weaknesses, opportunities and threats are obtained on the basis of which development strategies are developed and measures to optimize activities are determined.

The main functions of the airport are to ensure air flights and transportation, organize the activities of all links of the airport structure, meet the needs of passengers and ensure security. Risk prevention at airports is the key to quality development and management.

In the context of the COVID-19 pandemic, the aviation industry has suffered heavy losses at the global level. But it was in such a time of stagnation that airports and related organizations had to work to optimize operations, improve technical support and develop development strategies. Now the world is still in quarantine conditions and this should not be a brake on the development of the aviation sector in Ukraine. All over the world, international organizations hold online events, conferences, round tables, conduct research, apply forecasting and scenario methods for possible developments. The aviation sector of Ukraine has a rich history, outstanding aircraft designers and can revive its position in the aviation market.

Airports are strategic assets that contribute to the well-being of the local economy. They help build communities and connect people. Airports are the gateway to Ukraine that connects communities and families. They are critical infrastructure that provides fast transport across Ukraine. Airports are supported by local communities: most airports are wholly or partly owned by local councils. Each airport in Ukraine is an important part of the national network that connects passengers from all over the country. Airports connect Ukraine with the rest of the world: airports provide international and domestic tourism, business travel, import and export, education, flying clubs, skydiving, scenic flights, transfers to hospitals and emergency services. Airports add growth to the economy: many people work at airports across the country.

Airports are more than just transport infrastructure assets. Local airports affect us all: the communities in our country rely on their airports to provide access to health care, education and opportunities for economic growth, such as tourism. They are also critical parts of our disaster response infrastructure. Runways are needed for air travel in case of emergencies. Social cohesion: family and social ties are vested in regular flights. Join the world. Regional cities of Ukraine require communication with the world. Job Creation: Airports create jobs and promote tourism and other industries, and

shape healthcare access. Airports allow regular and emergency medical flights.

Airports of the future must be clearly designed (architecturally, technologically, socially) and meet the main requirement: accessibility, trust and human proximity to the aircraft. Of course, the fulfillment of such a condition requires the joint work of the entire aviation industry, scientists and researchers in various fields, therefore it is important to work together to develop an effective and high-quality system. Airport risk modeling is intended to be one of the methods to achieve this goal.

The airport is one of the main parts of civil aviation. More than half of the industry's employees work at airports. The airport is a strategic facility providing security for passenger transportation. A special feature is the ability to move the aircraft from space to space, from one territory to another in different parts of the world, and the airport acts as a gate. How do you see the airport of the future? The shape and appearance of the airport may vary. Full and partial automation and technologization of all passenger service processes is possible. This is all important, but the main thing is the social, human factor, it is the person who gives impetus to the aviation sector, ensures safety and prevents risks, and in this development we see a movement towards the birth of the characteristics of the future.

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