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**INSTITUTIONAL MEASURES OF AIR TRANSPORT
SAFETY STRATEGIC MANAGEMENT
AT THE LEVEL OF THE STATE AND UKRAINIAN ECOSYSTEM
AIRPORTS – AVIATION LOGISTICS INTERACTION**

The ecosystem airports – aviation logistics of Ukraine is a part of the transport complex of Ukraine, which is an important component in the structure of the national economy and a link between all components of economic security to ensure the basic conditions of life and development of the state and society. The assessment of economic, technological, safety, social and ecological hazards is an integral part of all the logical blocks of the structural and functional scheme of strategic management of aviation safety in terms of sustainable development of the national economy. The implementation of the proposed institutional measures will ensure an appropriate level of safety, efficiency and regularity of the ecosystem airports – aviation logistics of Ukraine.

The ecosystem of airports - aviation logistics is an open system that responds quickly to dynamic changes in the environment and integrates the economic, technological, safety & security, environmental, social and political spheres [1 - 7]. It is an undoubted catalyst for the sustainable development of the global, regional and national economy through high-tech development and the introduction of new innovative solutions. The role of the airport ecosystem and aviation logistics in all these processes cannot be underestimated. It is the ecosystem of airports - aviation logistics that is the driving force that can develop the economic system in the context of globalization.

The implementation of the Association Agreement with the European Union in the context of the development of transport and logistics infrastructure creates favorable conditions for effective international trade cooperation and the involvement of domestic enterprises in global supply networks. The updated

National Transport Strategy of Ukraine until 2030 provides for significant investments in the development of all modes of transport. Despite the fact that the transport industry of Ukraine as a whole meets the existing needs of the national economy in the movement of goods and passengers, the level of logistics service, transport safety, quality and efficiency of energy use, environmental impact does not meet modern requirements. The common transport policy with the EU and the strategy of integration of Ukraine's transport system into the European transport network require coordinated efforts of business and government to improve the interaction of different modes of transport, active introduction of multimodal and intermodal transport technologies, harmonized development of infrastructure (including airports) and aviation segment on transport & logistics market.

However, at the present stage the ecosystem of airports - aviation logistics of Ukraine faces a number of challenges. Among the main risks in the functioning of the aviation transport logistics branch of Ukraine may be the negative consequences of the COVID-19 pandemic, reducing the volume of export-import operations in a recession, reducing the volume of passengers carried, reducing the load of logistics infrastructure. Risks should be determined according to the following conditions of functioning and development of the ecosystem of airports - aviation logistics of Ukraine: export-import operations, infrastructure, passenger and freight traffic, airport congestion, logistics organizations, stakeholders of multimodal transportation, which allows anticipating risk detection [8 - 9].

Sectoral analysis of the impact of the transport sector on the country's economy shows, which accounts for about 6.6% of GDP (for comparison: in the 28 EU member states on transport and warehousing, including attention and courier activities, accounted for about 5.1% of total GDP). More than 6% of the employed population works in this field. Transport accounts for 12.1% of the value of exports and 5.3% of the value of imports. These statistics indicate that Ukraine has significant reserves to improve the efficiency of the transport sector through the development of transport infrastructure, the introduction of new translation technologies, the formation of a competitive environment between modes of transport [10].

The National Transport of Ukraine identifies the main tools of the strategy for solving transport problems that have accumulated in the industry, as well as ways to develop each mode of transport, including aviation. For sustainable development of branch is necessary to ensure the liberalization of air transport markets in accordance with the expected Agreement with the EU on the Common Aviation Area with the simultaneous liberalization of the air transport market with the CIS, Middle East, Asia and Africa. Development of terminal passenger and cargo complexes is important to meet international standards and represents new opportunities for customers in terms to reduce the cost of price transportation. There are currently 23 airports in Ukraine (including 3 state airports), including 4 airports in Crimea and the Joint Forces operation area. In addition, there are 11 airfields and 35 separate runways. The total amount of necessary investments in the development of airports is estimated at UAH 8.7 billion. [11].

Modern development measures for the development of airports and aviation logistics in Ukraine are extremely necessary, but insufficient, as they do not take into account global trends in air transport, and most importantly - the rapid development of global supply chains. This is facilitated by the equally rapid development of e-commerce. Sales through online stores increase annually by 20-30% and amount to more than \$ 750 billion in the global dimension. A study by World Trade Organization experts has shown that the quality of infrastructure, including air transport, affects the total volume of international trade and is a factor in the effectiveness of trade. In particular, trade with an export-oriented country, which has doubled the number of airports, will increase bilateral trade by 15% in the future [10].

Global trends towards the privatization of airports and the expansion of the participation of private operators in the formation of strategies and plans for the development of airport infrastructure have significantly changed the existing business models of their production and commercial activities. In many countries around the world, investors see the airport infrastructure, as a generator of stable long-term revenue flow, forcing operators to constantly improve the processes and management of passenger and freight flows, as well as the active interaction of the aviation hub with surrounding areas [12].

Under such conditions, the implementation of modern concepts of airport development is promising for Ukraine, in particular, the transition from the business model of the hub airport to the city airport. Airports have become multimodal, multifunctional enterprises that are crucial for business competitiveness and economic development. They create demand for services, materials and jobs not only at the airport, but also in companies that provide services in the surrounding areas.

The basis of the airport city concept is a new strategic approach to the commercial development of the airport area, which simultaneously creates benefits for the base region and for the country as a whole. City airports can be created on the basis of both civilian and military airports and dual-base airports, which will have not only a direct economic and social effect, but also large-scale inductive consequences of positive impact on sustainable development of regional, local and national economy. The development of "aerotropolises" involves the presence of numerous companies and organizations that will be located in close proximity to the airport. This will not only enable fast and convenient communication with domestic suppliers, partners and customers, but also open wide opportunities for contact with the world [10].

The efficiency of the airport as an important part of the global logistics network is determined by the balance between costs (resources) and the level of customer service. The network principle of formation of a modern terminal-logistics complex of the airport presupposes the existence of a certain hierarchy and specifics of functional purpose for each of the types of network objects. The availability of distribution and industrial facilities within the airport infrastructure allows to create conditions for a significant expansion of the range of services

provided, including value added / value, in the segment of storage and distribution of goods, as well as mutual interest in the effective operation of industrial producers. Products & Logistics market operators: for manufacturers - cost reduction based on optimization of transport technologies, supply chains, inventories, structure of production assets, etc.; for logistics operators - the use of the effect of scale in the concentration of traffic flows in places of their mass generation and repayment, ample opportunities for the provision of value-added services / value.

The combination and interaction of these solutions, concentrated within the logistics network, with the participation of the airport create a favorable environment for the organization of a large number of logistics business processes, determine the synergetic effect. The introduction of the principles of logistics in the production and commercial activities of airports has made many changes in the organization of airport processes, as well as in the coordination and cooperation of all elements of air transport. The role of logistics is to study and optimize the processes in the individual subsystems of the integrated logistics system of the airport and the coordination of operations not only at airports.

Air transportation can be carried out by both specialized airlines and passengers airlines. Identification of key players, their relevant customer bases and optimal characteristics is necessary to understand the balance between demand and supply characteristics, which helps to determine the strategy of customer service and ensure the efficiency of the airport as an important supply chain with air transport [12].

Thus, the development of global supply chains / networks and e-commerce creates new opportunities for the international integration of airports and the introduction of innovative networking mechanisms. All of the above indicates the need, on the one hand, to parallelize individual processes over time, and on the other - to find sources to reduce resources and time to carry out the necessary operations in the express supply chain with the participation of partner companies. Contrary to the generally accepted express delivery scheme through hub airports, it is proposed to use other airports that will allow the use of direct routes.

The ecosystem of airports - aviation logistics has a positive synergistic impact on the sustainable development of the national economy of Ukraine.

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