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OPTIMIZING IT PROJECT MANAGEMENT IN UKRAINE'S AVIATION SECTOR: CHALLENGES, OPPORTUNITIES, AND STRATEGIC INSIGHTS

Анотація. *Всі галузі економіки, в тому числі і авіаційна, в умовах сьогодення перебувають на етапі цифрової трансформації, однак темпи цього процесу значно відстають як від світових, так і від європейських стандартів. Основними проблемами, які гальмують розвиток економіки, вважається перш за все обмежене фінансування, крім того гостро постає кадрове питання – недостатність висококваліфікованих спеціалістів, особливо зараз в період війни через відтік IT-спеціалістів за кордон та повільне і неналежне впровадження новітніх технологій. В статті розглядаються основні виклики та можливості, які стоять перед авіаційним сектором. Сформована мета статті – можливості для вивчення шляхів вдосконалення управління IT-проєктами для підвищення загальної ефективності та конкурентоспроможності авіаційної індустрії країни. Автори проводять аналіз сильних та слабких сторін авіаційного IT-сектору в Україні, порівнюючи його з європейськими показниками.За проведеним аналізом – європейські країни випереджають Україну за рівнем автоматизації та впровадження штучного інтелекту в операційні процеси, а також у забезпеченні кібербезпеки. Для скорочення цього розриву пропонується вдосконалена модель управління IT-проєктами, яка передбачає активну участь держави і приватного сектору, підтримку інноваційних проєктів та розширення співпраці на міжнародному рівні. Одним із завданням статті є створення моделі, яка сприятиме інтеграції сучасних технологій у процеси управління IT-проєктами, підвищенню ефективності використання ресурсів, а також підвищення загальної конкурентоспроможності української авіаційної індустрії на світовому ринку. Завдяки застосування даної моделі планується покращити кадрове питання (підготовка висококваліфікованих працівників IT-сфери), знайти шляхи покращення фінансування (внутрішні та зовнішні інвестиції), покращити рівень кібербезпеки (локалізувати та усунути загрози, перекрити канали витоку інформації). Основний висновок, який декларується авторами, засвідчує що для підтримки конкурентоспроможності українського авіаційного сектору необхідна суттєва оптимізація управління IT-проєктами, що дозволить не лише подолати існуючі виклики, локалізувати загрози та усунути небезпеки, а й використати нові*

можливості для розвитку авіаційної сфери, враховуючи глобальні тенденції розвитку технологічного прогресу та смарт-економіки.

***Ключові слова**: авіаційна галузь, авіаційна індустрія, управління IT-проєктами, гнучкі методології, державно-приватне партнерство, інноваційна стратегія, свот-аналіз, штучний інтелект, цифрова трансформація, інтеграція в економіку, модель управління IT-проєктами.*

JEL Classification: L93, M29

***Absztrakt**. A gazdaság minden ágazata, így a légi közlekedés is jelenleg a digitális átalakulás szakaszában van, de ennek a folyamatnak az üteme messze elmarad a világ és az európai színvonalától. A korlátozott finanszírozást tekintik a gazdaság fejlődését gátló fő problémának, emellett sürgető a személyi kérdés - a magasan kvalifikált szakemberek hiánya, különösen most a háború alatt az informatikusok külföldre kiáramlása és a legújabb technológiák lassú és nem megfelelő bevezetése. A cikk a légiközlekedési ágazat előtt álló fő kihívásokat és lehetőségeket vizsgálja. A cikk célja, hogy feltárja az informatikai projektek menedzselésének javításának módjait az ország légiközlekedési ágazatának általános hatékonyságának és versenyképességének növelése érdekében. A szerzők az ukrajnai légiközlekedési IT szektor erősségeit és gyengeségeit vizsgálják, összehasonlítva az európai mutatókkal valamint a kiberbiztonság biztosításában. Ennek a szakadéknak a csökkentése érdekében az IT projektmenedzsment továbbfejlesztett modelljét javasolják, amely magában foglalja az állam és a magánszektor aktív részvételét, az innovatív projektek támogatását és a nemzetközi szintű együttműködés kiterjesztését. A cikk egyik feladata egy olyan modell megalkotása, amely hozzájárul a modern technológiák integrálásához az informatikai projektmenedzsment folyamatokba, növeli az erőforrás-felhasználás hatékonyságát, valamint növeli az ukrán légiközlekedési ágazat általános versenyképességét a világpiacon. A modell alkalmazásának köszönhetően a tervek között szerepel a személyi kérdések javítása (magasan képzett informatikai dolgozók képzése), a finanszírozás javításának módjai (belső és külső beruházások), a kiberbiztonság szintjének javítása (a fenyegetések lokalizálása és megszüntetése, információszivárgási csatornák blokkolása). A szerzők által megfogalmazott fő következtetés azt bizonyítja, hogy az ukrán légiközlekedési szektor versenyképességének megőrzése érdekében az informatikai projektmenedzsment jelentős optimalizálására van szükség, amely nemcsak a meglévő kihívások leküzdését, a veszélyek lokalizálását és azok kiküszöbölését teszi lehetővé, hanem lehetővé teszi a légiközlekedési ágazat fejlesztésének új lehetőségeinek kihasználását, figyelembe véve a technológiai haladás és az intelligens gazdaság fejlődésének globális trendjeit.*

***Kulcsszavak:** légiközlekedési ipar, informatikai projektmenedzsment, rugalmas módszertanok, köz- és magánszféra partnersége, innovációs stratégia, SWOT-elemzés, mesterséges intelligencia, digitális transzformáció, integráció a gazdaságba, IT projektmenedzsment modell.*

***Abstract.** The Ukrainian aviation industry is undergoing digital transformation; however, the pace remains behind global and European standards due to several challenges. These include limited funding, a lack of skilled IT professionals, and a slow rate of modern technology adoption. The research, titled "Optimizing IT Project Management in Ukraine's Aviation Sector: Challenges, Opportunities, and Strategic Insights," addresses the urgent need for improvements in IT project management to enhance efficiency, competitiveness, and technological advancement within the aviation sector in Ukraine. This article analyzes the sector's current challenges, including insufficient government and private sector investment, internet infrastructure issues, and a shortage of IT specialists. It also identifies opportunities in areas like automation, digitization, and the potential for public-private collaborations. The study's primary objective is to develop and evaluate an optimal IT project management framework tailored to Ukraine's aviation industry. This framework aims to optimize resource usage, integrate modern technologies like AI, automation, and cybersecurity, and improve global competitiveness. Furthermore, the research offers a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis of Ukraine's aviation IT landscape, benchmarking it against European standards. A substantial gap exists between Ukraine and Europe regarding IT investment*

and automation, with European countries leading in adopting AI-driven systems, enhanced cybersecurity, and automated business and customer service processes. To bridge this divide, the study proposes an optimized IT project management model focused on strategic priorities such as investment in skill development, strengthening public-private partnerships, enhancing cybersecurity, implementing agile work methods, and supporting innovation through government initiatives. In conclusion, the study underscores that enhancing IT project management in Ukraine's aviation industry is crucial for maintaining global competitiveness and improving operational efficiency. The proposed model offers actionable insights to address current challenges while capitalizing on new opportunities, thereby ensuring resilience in the face of ongoing global digitization and technological advancements.

Keywords: *aviation industry, aviation industry, IT project management, flexible methodologies, public-private partnership, innovation strategy, SWOT analysis, artificial intelligence, digital transformation, integration into the economy, IT project management model.*

Problem statement. The aviation sector of Ukraine faces significant challenges in optimizing the management of IT projects in the conditions of global digital transformation. Despite some progress in the introduction of new technologies, the industry lags behind European competitors due to many key factors. These include underinvestment in IT infrastructure, a shortage of skilled professionals, slow adoption of advanced technologies such as artificial intelligence (AI) and big data, and cybersecurity vulnerabilities. In addition, the lack of effective cooperation between the public and private sectors and insufficient support for innovation from the government further inhibit the modernization of the industry. Solving these issues is important for preserving the competitiveness of the Ukrainian aviation industry on the world market, increasing the efficiency of operations, and ensuring compliance with international standards of safety and service quality. This study is aimed at identifying these barriers and proposing strategic solutions for optimizing IT project management in the aviation industry of Ukraine to use opportunities for growth and technological development.

Analysis of recent research and publications. The Ukrainian aviation industry, as in many other countries, is under increasing pressure to adapt to rapid technological change. Effective IT project management creates an element of innovation, especially in areas such as flight control automation, digital passenger service platforms, and navigation systems. The success of these projects depends on a clear strategy that can navigate the complexities of global competition and local challenges.

Optimizing the management of IT projects in the Ukrainian aviation sector means overcoming obstacles within the industry, capitalizing on its strengths, and attracting opportunities to become worldwide. The contributors and their work in this area focus on the challenges and best practices of digital transformation in aviation. This picture provided the basis for developing a comprehensive model consisting of five components: skills development, government-business collaboration, cybersecurity improvements, implementing agile management methodologies, and policy support (tabl.1).

Table 1

The essence of the subject research

		Researchers	Optimization Focus
1	Skill development	Yakovyuk, V. in his work "Cybersecurity in the Aviation Industry: A Modern Challenge" (2020), highlights the skill gap in cybersecurity and digital technology, emphasizing the need for specialized training and education [1].	To close the talent gap, Ukraine must invest in tailored educational programs, hands-on training, and certifications. Collaboration with European academic institutions and industry partners will further enhance the workforce's capacity to manage advanced aviation IT systems.
		Ilchenko, O., in "Digital Transformation in Aviation: A New Horizon" (2021), stresses the importance of building a skilled workforce in aviation IT to handle emerging technologies such as AI and data analytics [2].	
2	Public-private collaboration and funding	Averyanov, V. in "Innovation and Investment in the Aviation Sector: A Path Forward" (2022), analyzes how public-private partnerships (PPPs) have driven IT innovations in Europe and how similar models could be replicated in Ukraine to overcome funding shortfalls [3].	The aviation sector should cultivate public-private partnerships to enhance funding for IT projects. This can be achieved through government grants, subsidies, tax incentives, and access to international funding programs like Horizon Europe.
		Richards, T., in "Agile Methodologies in Aviation IT Projects" (2022), emphasizes the role of joint funding initiatives between government and private entities in accelerating IT infrastructure development [4].	
3	Cybersecurity enhancement	Yakovyuk, V. has extensively explored cybersecurity risks in his work, "Cybersecurity in the Aviation Industry" (2020), underlining the vulnerability of Ukraine's aviation sector due to underinvestment in cybersecurity measures [1].	Strengthening cybersecurity protocols is vital to protect IT infrastructures from emerging threats. Ukraine must adopt advanced tools like AI-driven threat detection and enforce robust incident response strategies to safeguard the aviation sector's digital systems.
		Johnson, R., in "Securing Digital Infrastructures in Aviation: Global Perspectives" (2021), provides an international comparison of cybersecurity strategies, suggesting the adoption of AI-based threat detection and response mechanisms for Ukraine [5].	
4	Agile and Lean Project Management	Johnson, R. & Richards, T., in "Agile Methodologies in Aviation IT Projects" (2022), discuss the successful implementation of Agile and Lean management practices in European aviation projects and propose their adaptation to Ukraine's aviation IT environment [4].	Adopting Agile and Lean methodologies allows aviation companies to respond swiftly to technological changes and customer needs. Implementing these frameworks will reduce project development cycles, increase
		Yakovyuk, V. (2020) mentions the growing need for project flexibility and continuous improvement cycles to handle complex IT project demands [1].	

		Researchers	Optimization Focus
			efficiency, and allow for more flexible resource management.
5	Policy Support for Innovation	In "Digital Transformation in Aviation: A New Horizon," Ilchenko, O. (2021) emphasizes the role of government policy in facilitating digital transformation. He argues that regulatory reform and public policy drive IT innovation [2].	The Ukrainian government must implement policy reforms that support IT innovation. The aviation sector can attract more investment and accelerate its technological transformation by offering tax incentives for research and development (R&D), streamlining bureaucratic procedures, and providing regulatory support.
		Averyanov, V. (2022) discusses the importance of policy reforms and tax incentives in fostering technological advancements and encouraging investment [3].	

This study highlights previously unresolved parts of the problem for example, the lack of integration of advanced IT solutions, the insufficient development of cyber security, and the shortage of qualified workers in the Ukrainian aviation sector, which leads to a weakening of its global competitiveness.

Formulation of the goals of the article (statement of the task). This article aims to develop and analyze an optimized model for IT project management in Ukraine's aviation sector, addressing key challenges such as underinvestment, skill shortages, cybersecurity, and enhancing global competitiveness through the integration of advanced technologies.

Presentation of the main research material. Presentation of the main research material. The Ukrainian aviation industry has gone through a phase of active digital transformation but currently lags behind its main European competitors for several reasons, including insufficient funding, limited qualified personnel, and limited integration of modern IT solutions. In this context, the optimization of IT project management has become a critical factor in increasing the international competitiveness of Ukrainian airlines and airports. Most important today is the implementation of IT project management strategies aimed at addressing issues such as cybersecurity, global competition, and the integration of artificial intelligence (AI) and big data.

The relevance of this study is emphasized by the need to improve management processes and integrate new technologies into the aviation sector. In addition, global competition and the development of IT infrastructure in other countries emphasize the need for technological progress in Ukraine. As a result, defining and implementing the best IT project management strategies is crucial for the further development of the Ukrainian aviation industry and its compliance with international standards.

Development plan for IT project management in the aviation industry of Ukraine. The model for optimizing IT project management in the Ukrainian aviation sector is borrowed from domestic and foreign institutions. She has developed a multifaceted strategy that addresses supply chain, financial security, cyber security, and project management approaches, all within policy support. Such an approach can help Ukraine compete with the European aviation market by expanding infrastructure and operational capabilities.

Despite the growth in the number of IT projects in the Ukrainian aviation sector over the past three years, the speed of technology development continues to lag behind global standards [6; 7]. This delay is explained by several factors: insufficient funding, a lack of qualified specialists, and difficulties with the integration of modern technologies into the existing infrastructure. Although IT investments increased by 20% in 2021, according to the State Aviation Service of Ukraine, they remain lower than European ones. However, improvements in automation, such as a 25% increase in digitization of the reservation system, suggest that the sector can grow [8].

A SWOT analysis provides a deeper look into the strengths, weaknesses, opportunities, and threats faced by Ukraine's aviation industry in terms of IT project management (fig.1).

Strengths - 20% increase in IT investments - 25% growth in automation for booking systems - Emerging digital platforms for passenger services - Governmental support for innovation	**Weaknesses** - Shortage of skilled IT professionals - Insufficient funding for advanced IT projects - Slow integration of modern technologies - Lags in comparison to global digitalization standards
Opportunities - Further automation and digital transformation - International cooperation and partnerships - Policy-driven support for technological innovations	**Threats** - Global competition in aviation technology - Rising cybersecurity risks - Economic instability affecting sustained investments

Fig. 1. SWOT analysis of Ukraine's aviation industry in terms of IT project management

Let's consider the main aspects of IT project management in the aviation industry of Ukraine. First of all, these are investments in IT infrastructure, they are an extremely important factor in the introduction of innovations in the aviation industry. Thus, for the period from 2019 to 2022, a 20% increase in investments in the IT sector was observed in Ukraine, this indicator is positive, but a rather insignificant increase compared to the same indicator in Europe, where investment growth increased by 35%-50% during the same period. Europe's more tangible financial support is the result of strong public-private partnerships and significant government support [9]. In particular, countries such as Germany, France, and the UK, which have permanent

national strategies based on digital infrastructure, namely: 5G networks; cloud systems, and access to funding at the EU level, such as Horizon Europe [6]. In turn, Ukraine has limited public funding, less developed investments in the private sector, and political and economic instability, from 2022 due to the war started by Russia, all these problems prevent large-scale digital transformation, including the implementation of AI, big data, and blockchain technologies. All these factors and the difference in investment levels significantly slow down not only progress but also the stable development of Ukraine compared to Europe.

The second important factor is automation, which has a decisive role in increasing efficiency and reducing operating costs in aviation. Although even in such conditions, with the presence of threats and dangers, there is some progress in Ukraine, namely that digital platforms for reservation systems increased by 25% between 2019 and 2022 [8; 9]. However, the scope of automation remains limited. European aviation is ahead with comprehensive automation covering air traffic control, baggage handling, predictive analytics, and maintenance operations, especially since flights in our country were grounded during the war. Today, artificial intelligence (AI) and machine learning are particularly widely used in Europe to select, develop, and optimize flight routes, identify opportunities to reduce fuel consumption, and improve aircraft maintenance, which leads to cost savings and aviation efficiency. As an example, it can be noted that the improper implementation of automation technologies in Ukraine in such important areas as air traffic control and predictive maintenance makes them time-consuming and dependent on manual processes that are subject to more inaccuracies and errors, and accordingly less effective.

A third important factor is cyber security, data loss, and the possibility of interference in the control system are of increasing concern in the aviation industry due to the heavy reliance on digital systems and the potential for cyberattacks. It should be noted that European countries have made significant progress in the field of cyber security and information security, supported by such regulatory acts as the EU Law on Cyber Security and the GDPR. European airports and airlines that use advanced threat detection systems based on artificial intelligence and have well-established protocols for responding to various types of incidents are pleasantly impressive. In this situation, Ukraine is lagging in the development and formation of cyber security infrastructure, working under conditions of insufficient funding and budget restrictions, which limit spending on the implementation of advanced protection tools, such as encryption and AI-based threat detection. In addition, the lack of cyber security specialists (although Ukraine has an excellent training school at the Lviv and Kyiv Polytechnics, the National Aviation University, the Flight Academy of the National Academy of Sciences, departmental institutions of higher education of the Ministry of Internal Affairs and the Armed Forces), increases vulnerability, creating conditions for cyberattacks on the aviation sector, which may affect the security of the aviation industry and data protection.

Artificial intelligence (AI) and big data, which are transformational forces in aviation that provide the opportunity to predict maintenance, optimize flight routes, and improve customer service, are the next important sectors. As we noted earlier,

artificial intelligence and big data analytics are widely used in Europe to improve operational efficiency and improve passenger service. In particular, European airlines use artificial intelligence for real-time flight data analysis, predictive maintenance, and air traffic management. Thanks to this, they improve planning accuracy and minimize delays. In turn, big data analytics are used to personalize passenger services, provide broader marketing services, and optimize pricing strategies. Whereas in Ukraine, the introduction of artificial intelligence and big data needs better development, because it is at the initial stage of its birth. While data analytics is used in the customer service system nts and bookings, however wider applications for operational improvements are underdeveloped again due to a lack of technical expertise and appropriate infrastructure. Ukraine needs significant investment in research and development to close the gap with Europe.

An important factor is a qualified workforce, which is an important basis for the management and implementation of IT projects in the aviation industry. European countries have a well-developed pool of personnel with specialized training programs in the field of aviation technology and information technology (IT). Countries such as Germany and the UK have academic programs and specialized training that prepare graduates to work in aviation IT businesses. In Ukraine, despite the growth of the IT sector, there is a shortage of qualified professionals with skills in working with special aviation technologies such as AI, big data, and cyber security. Of course, the lack of personnel slowed down the country's ability to carry out digital transformation in aviation [7]. In addition, the brain drain, when skilled professionals, especially today in times of war, seek opportunities abroad, further inhibits progress and destroys the aviation infrastructure. To solve these problems, and localize and eliminate threats to personnel security, Ukraine should invest in specialized educational programs, professional training, and partnerships with European institutions, increasing the material and moral motivation of IT sector specialists to retain and develop the necessary personnel for its aviation industry. Investments, automation, cyber security, artificial intelligence, and big data, as well as the development of the workforce, which are implemented in the aviation industry of Ukraine, will be able to expand the capabilities of managing IT projects in the aviation sector, thereby bringing our state closer to European standards. Equally important is the use of opportunities such as global partnerships and innovative development trends. Below we offer the key components of an optimized strategic model of IT project management in the domestic aviation industry (fig. 2).

We will try to improve the optimization model of IT project management strategy in the aviation sector of Ukraine. For the domestic aviation industry to be able to optimize the management of IT projects, a comprehensive strategic approach is necessary. This strategy should focus on improving financing, eliminating skills shortages, and accelerating the adoption of advanced technologies while capitalizing on strengths such as increased IT investment and advances in automation.

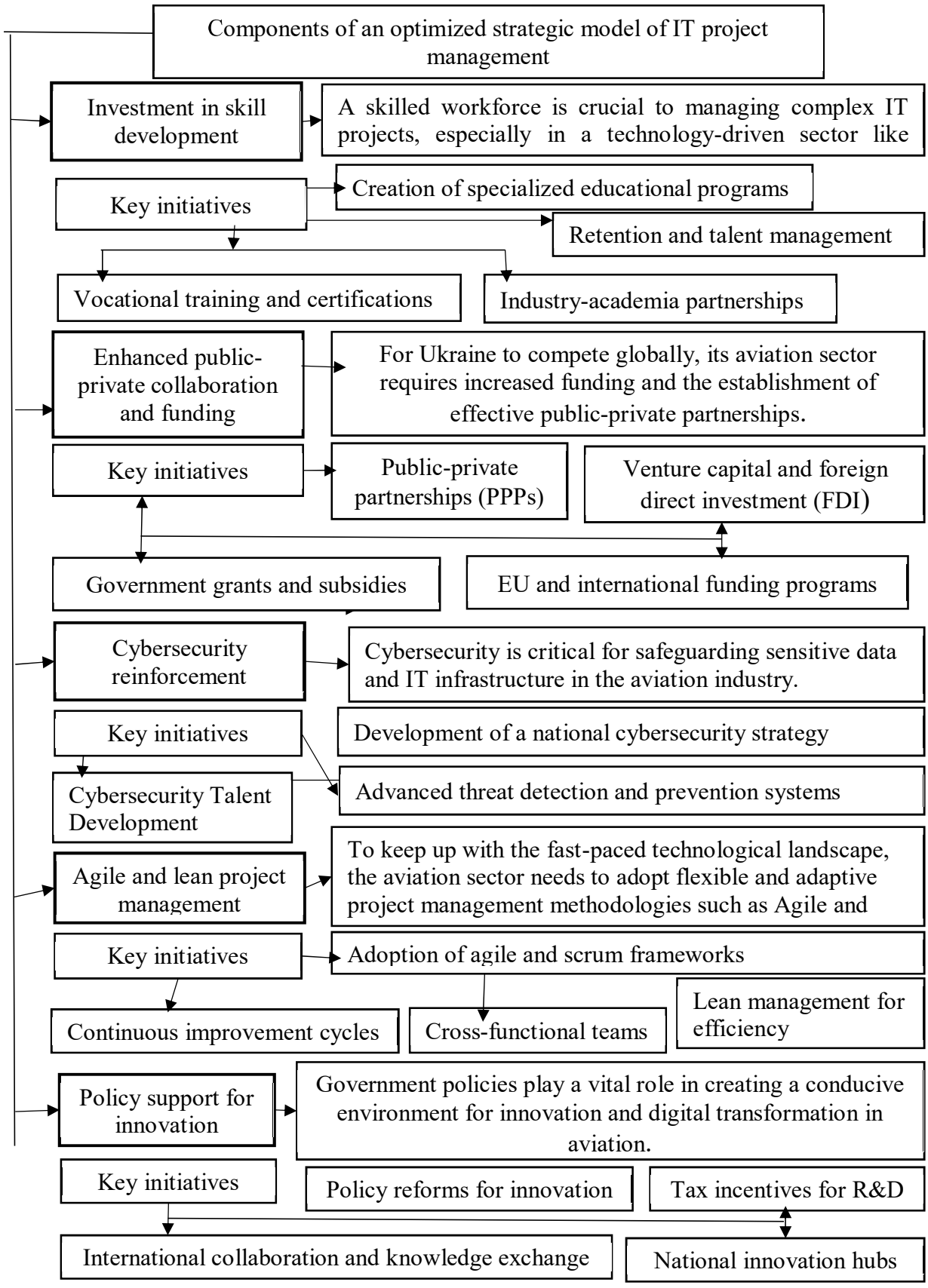

Fig. 2. Components of an optimized strategic model of IT project management

Our state is constantly suffering from a shortage of professionals with specialized knowledge and IT skills in the aviation industry, such as artificial intelligence (AI), big data, cyber security, and automation technologies. To eliminate the shortage of qualified specialists, there is a need for strategic investments in education and skills development. Partnerships with aviation companies, universities, and technical institutes should focus on the development of specialized training programs in aviation information technology (IT). These programs emphasize hands-on skills in emerging technologies, offering hands-on training in artificial intelligence (AI), data analytics, and cybersecurity to create a pipeline of skilled professionals.

Developing certification programs for IT professionals tailored to the specific needs of the aviation industry to help bridge the skills gap. This process should include short-term courses or online programs aimed at the practical application of IT in aviation operations. Establishing partnerships with European universities and aviation technology companies will allow Ukrainian students and specialists in the IT sector to familiarize themselves with progressive technologies and best industry practices.

Several measures need to be taken to prevent a brain drain abroad, where skilled workers move abroad in search of better working conditions and financial opportunities. Airlines and state governments must implement incentive programs such as appropriate salaries, career growth opportunities, and bonuses to retain talent in Ukraine. The inadequate financial capabilities of the state alone cannot provide the amount of investment required for comprehensive digital transformation. Government initiatives should encourage partnerships between private entities, foreign investors, and government institutions. A PPP would allow the aviation industry to pool resources and existing expertise while accelerating the pace of IT infrastructure modernization and innovation.

The main task facing Ukraine is to create an attractive policy for venture capitalists and foreign investors by directing funding to aviation IT projects. Tax benefits, relaxation of regulatory barriers, and guarantees for foreign investments can help mobilize international capital, and use it for the development of the industry. The government's task is to provide financial support to large and small aviation companies, providing grants and subsidies for the development of IT projects, in particular those related to cyber security, artificial intelligence (AI), and automation. Another option is the opportunity for Ukraine to benefit from international financial initiatives such as Horizon Europe, which supports innovation and digital transformation; and DAAD grants for student exchange and training and practice in German institutions of higher education. To gain access to these funds, Ukraine must develop comprehensive proposals and establish partnerships with European aviation partners and higher education institutions.

To prevent breaches, challenges, risks, and potential threats, Ukraine should give priority to cyber security measures, with increasing dependence on digital networks and cloud systems. Ukraine's aviation industry should adopt a robust cybersecurity strategy that meets global standards, such as the EU Cybersecurity Act and GDPR. This framework should emphasize the protection of critical infrastructure, including air traffic control systems, passenger databases, and digital platforms. Investing in AI-

based threat detection, localization, and remediation platforms and security tools should be a top priority. Thanks to the toolkit, IT platforms can provide real-time monitoring and automatically neutralize cyber threats before they materialize.

Given the shortage of qualified specialists in cyber security and the IT sector, Ukraine should expand training and development programs in the field of cyber security and the IT sector. Partnership programs with international organizations can not only provide expertise and support to improve national capabilities but also accelerate their implementation. Domestic airlines should create clear protocols for responding to challenges and threats and conduct regular simulations and improvements to ensure readiness to repel cyber-attacks. These protocols should be aligned with international best practices to reduce or eliminate the impact of cyber security incidents. It is these methodologies that will create conditions for organizations to better respond to changes, optimize the necessary preventive and protective processes, and focus on delivering value to customers.

Practices of flexible project management, their adaptation, and real use in modern conditions will make it possible to make decisions faster, choose the optimal solution in specific conditions better cooperate in a team, and improve in the development of IT projects. In particular, Scrum teams will give the ability to ensure continuous provision of high-priority functions, and the process itself will be made more flexible, competitive, and efficient. It is worth remembering the principles of economic management, which are aimed at eliminating unnecessary actions and increasing the efficiency of the work process because they must be integrated into IT projects of the aviation industry. That is, reducing redundant actions and processes will create conditions for organizations where they can reduce costs and increase productivity. Important to the aviation industry are Agile and Lean methodologies, which emphasize constant iteration and feedback loops. Aviation companies should launch continuous improvement platforms, improve their essence and culture, create conditions under which teams constantly monitor and evaluate their work, learn from mistakes, make corrections, and implement algorithms for making quick optimal decisions. It is the creation of effective multidisciplinary teams, which include IT specialists, engineers, financial analysts, and project managers, that can improve management, coordination, and fruitful cooperation, which will lead to effective implementation of the assigned tasks and improved project results.

An important place in this process is given to politicians, and top managers of public administration, who must determine the first and priority regulatory reforms that support the management of IT projects, encourage the transformation of innovations, and reduce bureaucratic obstacles. The government of Ukraine should optimize regulation and reduce the administrative burden on aviation structures that seek to implement the latest technologies. Important stages in strategic management will be: 1) quick approval of innovative projects, especially in such areas as AI, automation, and cyber security; 2) proper financing of these projects; 3) modernization of the process of training specialists; 4) creation of a modern and multifaceted practice base for IT specialists in the aviation sector. Therefore, an equally important task is to encourage aviation companies to invest in research and development of research works

for IT projects, providing them with tax benefits and other advantages, and motivating their participation. A way to reduce the tax burden on aviation companies that focus on innovation will be to stimulate additional investments in advanced technologies and thereby integrate IT projects into aviation activities. Ukraine strives for cooperation with the European Aviation Safety Agency (EASA) and international research institutes, and therefore should not stop there, but actively develop partnerships with globally interested aviation infrastructures, having a strong scientific and Research base. This partnership and interaction can lead to the transfer of knowledge, the development of joint projects, and the use of joint resources, which will allow our country to keep up with the progressive global aviation technologies.

The creation of aviation-oriented innovation centers or technology parks will contribute to the creation of a scientific and technological cooperation environment for startups, technology companies, and aviation businesses to work on IT solutions. Such innovation centers can receive government support and bring together innovators by providing funding, mentoring, and technical resources.

Geophysical model: strategic components for optimizing IT project management (fig.3):

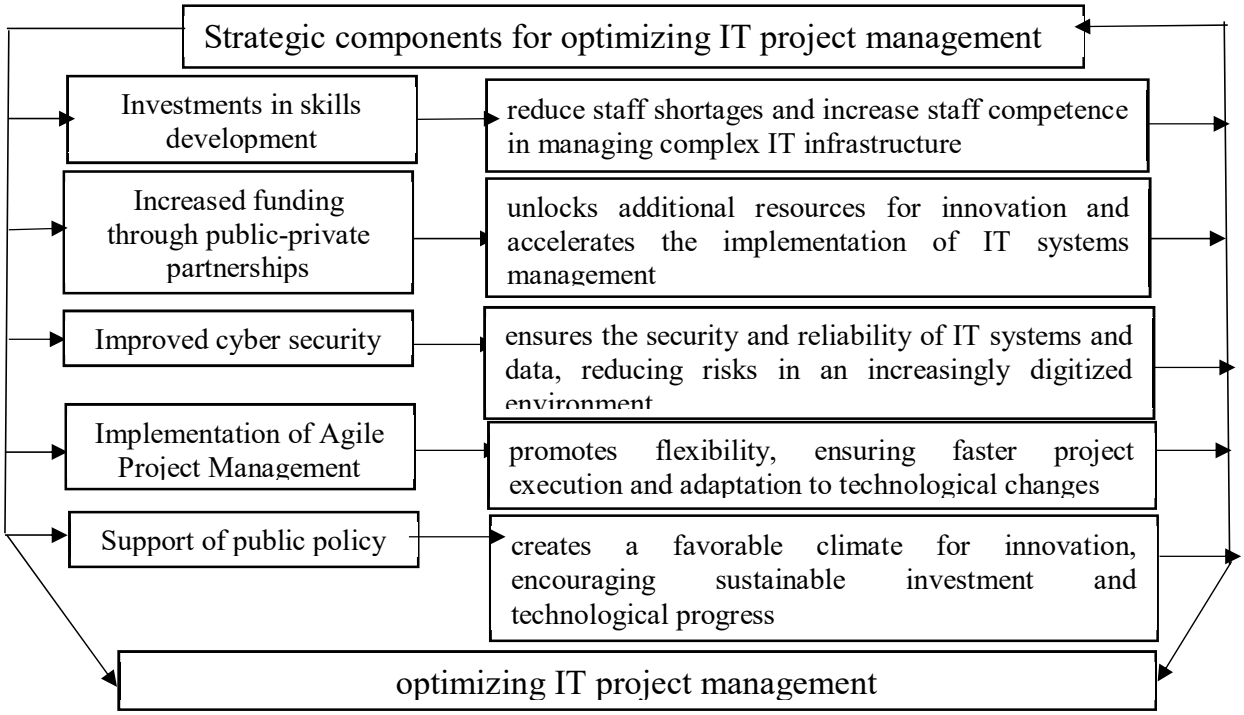

Fig. 3. Strategic components for optimizing IT project management

Conclusion. Therefore, the strategic management of IT projects in the domestic aviation industry is of priority importance for maintaining global competitiveness and improving the quality of service provision in the aviation industry. Despite the significant achievements in the aviation field notable successes in digitization and the introduction of the latest technologies, significant problems remain. The way to overcome these problems is to use a comprehensive optimization strategy, which is

based on the development of professional competencies and skills, improvement of the protection system and cyber security, public-private partnership, and a flexible toolkit of project management methodologies. By implementing the proposed strategic model, the domestic aviation industry will be able to fully utilize the advantages of digital transformation, while ensuring long-term sustainability, stability of development, and competitiveness in the global market.

The implementation of a model of strategic optimization of the aviation industry, pursuing the goal of bringing the Ukrainian aviation sector to the world stage, will provide an opportunity to solve critical internal challenges, such as insufficient funding and a shortage of qualified IT specialists, while providing global opportunities for innovation. Prioritizing the development of professional competencies and skills, promoting public-private partnership and social responsibility, strengthening cyber security as one of the branches of information security, applying flexible tools and methodologies, and implementing a support policy, the Ukrainian aviation industry can not only accelerate its digital transformation, improve the adoption of effective IT solutions, but also to increase competitiveness. Such a comprehensive approach will improve the management of IT projects in the aviation industry, position Ukraine as a promising player in the global aviation market, improve scientific research work, and improve the training system of IT specialists for the aviation sector.

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