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ENVIRONMENTAL VALUE MANAGEMENT STRATEGY AS A TOOL FOR ENSURING THE COMPETITIVENESS OF TRANSPORT ENTERPRISES

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It is established that the current dynamics of the development of the world economy are characterized by the aggravation of environmental challenges, increased resource constraints and the intensification of the global transformation of economic systems towards the implementation of the principles of sustainable development. It is substantiated that under such conditions, the environmental component of enterprise activity acquires strategic importance and is transformed from an auxiliary element of management into a key factor in the formation of long-term competitive advantages. It is proven that these processes acquire particular relevance in the transport sector, which is characterized by a high level of resource and energy intensity and belongs to the sectors of the economy with a significant anthropogenic impact on the environment. It is argued that the strengthening of international environmental standards, the integration of the principles of the "green" economy into business practice, as well as the orientation of global markets towards the

formation of environmentally responsible value chains necessitate the transformation of approaches to the strategic management of the development of transport enterprises. In this context, the feasibility of forming environmental value as an integral characteristic of an enterprise's activities has been proven, reflecting its ability to create added value by minimizing negative impact on the environment, increasing the efficiency of resource use, implementing environmental innovations and developing environmentally friendly business models. Strategic principles for managing the environmental value of transport enterprises have been developed, within which the key elements of the relevant strategy have been identified. The stages of its formation and implementation have been highlighted, a set of measures and management tools aimed at integrating environmental priorities into the enterprise's strategic management system has been systematized. The tools for implementing the strategy for managing the environmental value of transport enterprises in the context of ensuring their competitiveness have been detailed.

Keywords: management, transport enterprises, strategy, competitiveness, competitive advantages, greening, ecological value.

СТРАТЕГІЯ УПРАВЛІННЯ ЕКОЛОГІЧНОЮ ЦІННІСТЮ ЯК ІНСТРУМЕНТ ЗАБЕЗПЕЧЕННЯ КОНКУРЕНТОСПРОМОЖНОСТІ ТРАНСПОРТНИХ ПІДПРИЄМСТВ

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Встановлено, що сучасна динаміка розвитку світової економіки характеризується загостренням екологічних викликів, посиленням ресурсних обмежень та активізацією глобальної трансформації економічних систем у напрямі реалізації принципів сталого розвитку. Зростання екологічних ризиків, підвищення вимог до раціонального використання природних ресурсів, а також поширення концепцій «зеленої» та циркулярної економіки зумовлюють необхідність перегляду традиційних підходів до організації та управління економічною діяльністю підприємств. Обґрунтовано, що за таких умов екологічна складова діяльності підприємств набуває стратегічного значення та трансформується з допоміжного елементу господарювання у ключовий чинник формування довгострокових конкурентних переваг, підвищення ефективності функціонування та забезпечення стійкого розвитку суб'єктів господарювання. Доведено, що особливої актуальності зазначені процеси набувають у транспортній сфері, яка характеризується високим рівнем ресурсо- та енергоємності, значними обсягами споживання енергетичних ресурсів і належить до секторів економіки з істотним антропогенним впливом на довкілля. Аргументовано, що посилення міжнародних екологічних стандартів, поширення практик екологічного регулювання, інтеграція принципів «зеленої» економіки у господарську діяльність, а також орієнтація глобальних ринків на формування екологічно відповідальних ланцюгів створення вартості зумовлюють необхідність трансформації підходів до стратегічного управління розвитком транспортних підприємств. У цьому контексті доведено доцільність формування екологічної цінності як інтегральної характеристики діяльності підприємства, що відображає його здатність створювати додану вартість шляхом мінімізації негативного впливу на довкілля, підвищення ефективності використання матеріальних та енергетичних ресурсів, впровадження екологічних інновацій, розвитку ресурсозберігаючих технологій і формування екологічно орієнтованих бізнес-моделей. Розроблено стратегічні засади управління екологічною цінністю транспортних

підприємств, у межах яких визначено ключові елементи відповідної стратегії, що охоплюють стратегічні орієнтири, управлінські принципи, функціональні напрями та механізми реалізації екологічно орієнтованих управлінських рішень. Виділено етапи формування та реалізації стратегії управління екологічною цінністю транспортних підприємств, систематизовано комплекс організаційно-економічних заходів та управлінських інструментів, спрямованих на інтеграцію екологічних пріоритетів у систему стратегічного управління підприємством. Деталізовано важелі реалізації стратегії управління екологічною цінністю транспортних підприємств у контексті підвищення їх ефективності функціонування, зміцнення конкурентних позицій та забезпечення довгострокової конкурентоспроможності.

Ключові слова: управління, транспортні підприємства, стратегія, конкурентоспроможність, конкурентні переваги, екологізація, екологічна цінність.

Statement of the problem. The current stage of economic development is characterized by increased environmental challenges, increasing resource constraints and the intensification of the global transition to a sustainable development model. Under such conditions, the environmental component of enterprise activities is transformed from an auxiliary direction into a strategic factor in the formation of long-term competitiveness. These processes are of particular importance in the transport sector, which is one of the most resource- and energy-intensive sectors of the economy and is one of the significant sources of anthropogenic impact on the environment.

Strengthening environmental standards, integration of the principles of the "green" economy into business practice, as well as the orientation of international markets to environmentally responsible value chains necessitate a rethinking of approaches to managing the development of transport enterprises. In this context, the formation of environmental value, which reflects the ability of an enterprise to create added value by reducing its negative impact on the environment, rational use of resources, implementation of environmental innovations and development of environmentally friendly business models, is of particular importance.

Analysis of recent research and publications. The issue of greening the economic activity of enterprises and its impact on the formation of competitive advantages is the subject of active scientific research within the framework of the concept of sustainable development and the "green" economy. Scientific works substantiate that the implementation of environmentally friendly strategies contributes to reducing the resource intensity of production, increasing the efficiency of resource use and forming new sources of competitive advantages of enterprises [1-10]. Considerable attention is paid by researchers to the study of greening transport and logistics systems, since the transport sector is one of the largest sources of anthropogenic impact on the environment. Scientific works consider organizational, technological and managerial mechanisms for reducing emissions, optimizing transport flows and introducing environmentally safe transport technologies. In particular, Dykan V. and Sarbej S. formed a model of environmentally friendly resource management at railway transport enterprises, which includes such components as environmental data and knowledge management, conducting environmental audits and modeling, supporting environmental management decision-making and strategizing [1]. In another publication, these scientists, together with Skrypinsky O., investigated the potential of industrial parks as a basis for implementing the principles of a circular economy [2]. Korin M., Panchenko N. and Tokmakova I. thoroughly investigated the issue of resource conservation at railway transport enterprises, in particular, they substantiated the directions for increasing the efficiency of resource use, improving the resource flow management system, as well as the introduction of resource-saving technologies into production and operational processes [4, 7,

8]. The features of the formation of the concept of "green logistics" and environmental innovations have been revealed in scientific works [3, 9-10]. However, despite the significant number of studies devoted to environmental management and green logistics, the issue of forming a comprehensive strategy for managing the environmental value of transport enterprises, which would integrate environmental, economic and managerial aspects of activity and consider environmental friendliness not only as a limitation, but also as a source of creating added value and competitive advantages, remains insufficiently studied.

The purpose of the article is to develop a comprehensive strategy for managing environmental value, which would combine environmental, economic and innovative aspects of the development of transport enterprises and serve as a tool for strengthening their competitiveness in the context of greening the economy.

Presentation of the main material. In the face of large-scale destruction of transport infrastructure and high risks, companies are forced to look for new approaches to ensuring the continuity of transportation. One of the key areas is the diversification of routes. Companies are developing alternative logistics routes, using less busy or relatively safe transport corridors, even if they are longer. This allows reducing the risks of stops and ensuring the delivery of goods to critical regions.

Digital monitoring and risk management is also becoming an important tool. The use of GPS navigation, analytics systems and platforms for real-time traffic tracking allows you to quickly respond to changes in the situation, avoid dangerous areas and optimize routes. Such solutions allow not only to increase transportation safety, but also to reduce resource consumption in difficult conditions.

Another strategy is international cooperation and partnership. Ukrainian transport companies actively cooperate with foreign logistics companies and international organizations to provide access to new markets and transport corridors. This helps to compensate for losses from the destruction of domestic infrastructure and support export-import operations.

An equally important area is investment in infrastructure restoration and modernization. Enterprises, together with government agencies and international donors, are participating in projects to restore roads, bridges, and railway junctions. The emphasis is on the implementation of modern technologies that increase the resilience of infrastructure to future risks.

However, in addition to strategies for adapting transport enterprises to war conditions and infrastructure problems, it is also necessary to ensure their integration and adaptation to global innovative changes, in particular environmental and digital ones. In this regard, attention should be paid to the formation of a strategy for managing the environmental value of transport enterprises, which should be multi-level, starting from analytics and planning to specific implementation and monitoring tools. This will allow not only to adapt to war conditions and infrastructure challenges, but also to integrate into global innovative trends.

Scientists pay active attention to the development of effective strategies for the development of transport enterprises, in particular the management of their environmental value [1-7]. Based on these scientific developments, the following key elements of the strategy for managing the environmental value of transport enterprises can be distinguished (Fig. 1).

1 Definition of environmental mission and values, which includes the formation of a corporate policy focused on sustainable development, the inclusion of environmental principles in the mission and vision of the enterprise.

2 Measurement and monitoring of environmental indicators, which involves the use of Big Data, IoT sensors and digital platforms to control emissions, energy consumption, noise pollution, regular environmental reporting in accordance with ESG standards.

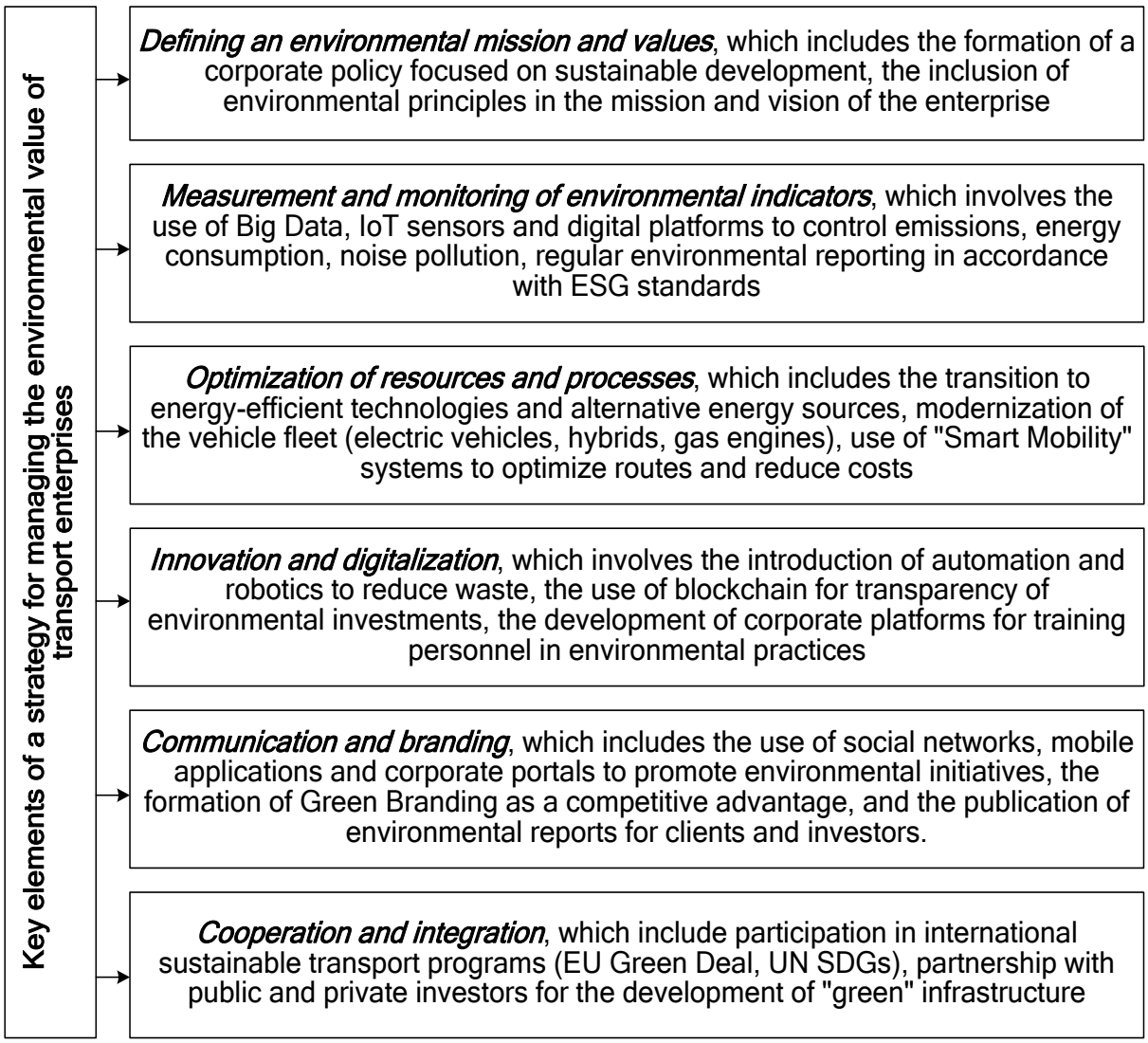

Fig. 1. Key elements of the environmental value management strategy of transport enterprises (formed on the basis of [1-7])

3 Optimization of resources and processes, which includes the transition to energy-efficient technologies and alternative energy sources, modernization of the fleet (electric vehicles, hybrids, gas engines), the use of "Smart Mobility" systems to optimize routes and reduce costs.

4 Innovation and digitalization, which involves the introduction of automation and robotization to reduce waste, the use of blockchain for transparency of environmental investments, the development of corporate platforms for training personnel in environmental practices.

5 Communication and branding, which includes the use of social networks, mobile applications and corporate portals to promote environmental initiatives, the formation of Green Branding as a competitive advantage, the publication of environmental reports for clients and investors.

6 Cooperation and integration, which include participation in international sustainable transport programs (EU Green Deal, UN SDGs), partnership with public and private investors for the development of “green” infrastructure.

Such strategies should be implemented in stages (Fig. 2).

At the first analytical stage (diagnostic stage), the current state of the vehicle fleet, emission levels, and infrastructure should be assessed, a SWOT analysis of environmental opportunities and threats should be conducted, and key barriers (financial, technological,

institutional, etc.) should be identified.

The second stage is strategic planning, which includes: setting goals (reducing emissions, renewing the fleet, developing "green" infrastructure); identifying priority areas of innovation (electric transport, biofuels, digital logistics); developing a roadmap for the integration of international standards.

The third stage can be defined as institutional consolidation, which can be implemented through the implementation of internal corporate environmental responsibility policies, coordination with government programs and international initiatives, and the creation of partnerships with technology manufacturers and financial institutions.

In the future, implementation and monitoring should be carried out, namely: launching pilot projects (electric buses, charging stations, digital management systems); measuring results according to environmental KPIs (CO_2 reduction, fuel economy); adjusting the strategy in accordance with market changes and international requirements.

It is important to ensure communication and cooperation in the process of implementing the strategy, as they create the basis for sustainable development and trust between all participants in the transport industry. Effective communication allows enterprises to transparently inform customers, investors and partners about environmental initiatives, achieved results and plans for the future. This creates a positive image of the company and increases its competitiveness.

Transport companies should integrate into international programs such as the EU Green Deal or the UN SDGs to gain access to financing and the latest technologies. Partnerships with investors, manufacturers of green transport and digital solutions allow for faster innovation and lower costs. It is also important to develop cooperation with local communities and authorities, as they are the ones who shape the conditions for infrastructure development.

Communication and cooperation should be systemic and multi-level. At the corporate level, this means creating internal environmental policies and regular reporting on results. At the industry level, this means exchanging experience between companies, joint projects and participating in professional associations. At the international level, this is implemented through integration into global environmental initiatives and the use of best practices.

Among the principles of strategic management of the environmental value of a transport enterprise, the following should be identified:

– the principle of sustainable development – a balance between economic efficiency and environmental responsibility;

– the principle of innovation – the priority of new technologies and digital solutions;

– the principle of integration – compliance with European standards and international practices;

– the principle of transparency – openness in reporting on environmental results;

– the principle of social orientation – taking into account the interests of society and improving the quality of life.

A key component of the strategy are the tools that will be used in the process of its implementation (Table 1).

Financial support is a basic condition for the implementation of environmental innovations. These include state subsidies for the purchase of electric vehicles and the development of charging infrastructure, EU grants for sustainable transport projects, as well as loans from international banks (EBRD, World Bank), which have special programs for “green” investments. Such instruments allow to reduce the financial burden on enterprises and stimulate them to modernize.

Technological tools include the implementation of modern environmental technologies: electric buses, biofuel or hydrogen trucks, energy recovery systems, as well as real-time emission monitoring. It is important to use innovative materials and energy-efficient solutions in the construction of warehouses and transport hubs. Technological tools ensure a practical reduction in environmental burden.

Stage	*Activities*	*Tools*	*Result*
Diagnostics	Assessment of the state of the vehicle fleet, emission levels and infrastructure; SWOT analysis of environmental opportunities and threats; identification of key barriers (financial, technological, institutional)	Environmental audit, comparison with ISO 14001, ESG metrics, analytical reports	Identifying weaknesses, forming a basis for strategy
Planning	Formation of an environmental mission; definition of goals (reduction of emissions, renewal of the fleet, development of "green" infrastructure); development of a roadmap for the integration of international standards	Strategic maps, business plans, green funds, investment programs	A clear roadmap for ecological transformation
Institutio-nalization	Implementation of corporate environmental responsibility policies; coordination with government programs and international initiatives; creation of partnerships with technology manufacturers and financial institutions	Internal regulations, corporate standards, cooperation agreements, environmental certifications	Systematic consolidation of environmental principles in the company's activities
Realization	Launch of pilot projects (electric buses, charging stations, digital management systems); modernization of the fleet; personnel training	IoT, Big Data, Smart Mobility, alternative energy sources, innovative technologies	Reducing emissions, optimizing resources, increasing efficiency
Monitoring	Regular assessment of environmental indicators; audit; adjustment of strategy in accordance with market changes and international requirements	ESG reporting, dashboards, ISO 14001 certification, KPI metrics	Transparency, investor and customer trust, strategy adaptability
Commu-nication	Promoting environmental initiatives; forming Green Branding; informing clients and partners	Social networks, corporate portals, mobile applications, PR campaigns	Customer loyalty, competitive advantage
Collaboration	Integration into international programs; partnership with investors; participation in global environmental initiatives	EU Green Deal, UN SDGs, grant programs, international projects	Access to financing, integration into the global market

Fig. 2. Stages, measures and tools of the strategy for managing the environmental value of transport enterprises in terms of ensuring their competitiveness (developed by the authors)

Table 1

Tools for implementing the strategy for managing the environmental value of a transport enterprise (formed by the authors)

Direction	Tools	Effect
Monitoring	IoT, Big Data, ESG reporting	Transparency, investor trust
Optimization	Energy-efficient technologies, Smart Mobility	Cost reduction, emission reduction
Innovations	Automation, blockchain	Efficiency improvements, new business models
Communication	Social Media, Green Branding	Customer loyalty, competitive advantage
Collaboration	International programs, investments	Access to financing, integration into the global market

Digitalization of transport allows you to optimize processes and reduce costs. The group of digital tools includes artificial intelligence-based route management systems, the use of big data for demand forecasting, "smart" warehouses with automated energy consumption control, as well as blockchain for transparent tracking of environmental indicators. Digital tools create added value and increase business efficiency.

Regulatory instruments are legislative and regulatory mechanisms that stimulate environmental modernization. These include the introduction of Euro-6/7 standards, environmental certification of transport enterprises, tax incentives for "green" investments, as well as restrictions on the use of obsolete vehicles. Regulatory instruments create the framework conditions for the development of environmentally friendly transport.

It is important to form corporate environmental responsibility programs, partnerships with technology manufacturers and international institutions. Such organizational tools include the creation of internal environmental KPIs, reporting on emission reductions, and training personnel in the use of new technologies. Organizational tools ensure sustainability and long-term sustainability of changes.

Communication channels that can become practical tools for implementing the environmental value management strategy of enterprises are:

– social networks (Facebook, LinkedIn, Instagram, TikTok) – to promote environmental initiatives, inform customers and create a positive image;

– corporate portals and websites – to publish environmental reports, news about innovative projects and achievements;

– mobile applications – integration of "green" delivery tracking functions, informing customers about environmental benefits;

– PR campaigns and media – articles, interviews and press releases emphasizing the company's environmental responsibility;

– internal communications – regular trainings, corporate newsletters and seminars for staff on environmental practices.

Attention should also be paid to the following formats of cooperation:

– industry forums and conferences – participation in transport and environmental events to exchange experience and find partners;

– international programs – integration into initiatives such as the EU Green Deal or UN SDGs, which opens up access to financing and new technologies;

– grant projects – cooperation with international funds to obtain resources for environmental innovations;

– partnership with technology manufacturers – joint pilot projects with suppliers of electric transport, charging stations or digital solutions;

– cooperation with local communities and authorities – development of infrastructure (charging stations, ecological routes) in cities;

– associations and professional

associations – participation in transport and logistics associations to promote environmental standards.

As the above suggests, communication and collaboration should encompass both external channels (customers, investors, international partners) and internal ones (staff, corporate culture). This creates a holistic ecosystem where environmental strategy becomes not only a business goal, but also part of the brand and competitive advantage.

In the long term, the strategy should ensure the systematic integration of environmental and digital solutions into the activities of transport enterprises. This means creating "smart" logistics systems based on artificial intelligence, extensive use of big data for demand forecasting and route optimization, as well as forming partnerships with international companies. It is important that enterprises not only meet environmental standards, but also position themselves as leaders in the field of sustainable transport.

Thus, the strategy for managing the environmental value of transport enterprises should provide for a gradual transition from analysis and pilot projects to large-scale implementation and international integration and rely on a set of financial, technological, digital, regulatory and organizational tools. This will not only reduce environmental pressure, but also increase the competitiveness of Ukrainian companies in the international market.

Conclusions. It is argued that the strengthening of environmental standards, the spread of the principles of the "green" economy and the orientation of markets to environmentally responsible value chains necessitate the transformation of approaches to the strategic management of transport enterprises. The feasibility of forming environmental value as an integral characteristic of the enterprise's activities, reflecting its ability to create added value based on the rational use of resources, the introduction of environmental innovations and the minimization of negative impact on the environment, is proven. Strategic principles for managing the environmental value of transport enterprises are developed, key elements of the corresponding strategy are identified, and the stages of its formation and implementation are highlighted. A set of measures and management tools aimed at integrating environmental priorities into the strategic management system and increasing the competitiveness of transport enterprises is systematized.

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