





# SUSTAINABLE DEVELOPMENT: MODERN THEORIES AND BEST PRACTICES







#### Teadmus OÜ

# **Sustainable Development: Modern Theories and Best Practices**

Materials of the Monthly International Scientific and Practical Conference (April 28-29, 2023)

Sustainable Development: Modern Theories and Best Practices: Materials of the Monthly International Scientific and Practical Conference (April 28-29, 2023) / Gen. Edit. Olha Prokopenko, Tallinn: Teadmus OÜ, 2023, 210 p.

#### ISSN 2733-2942

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The collection consists of materials from the Monthly International Scientific and Practical Conference "Sustainable Development: Modern Theories and Best Practices". They represent scientific research results in such scientific areas as financial and economic, managerial and legal, social and cultural, ecological and technical, educational and pedagogical issues of sustainable development on local, regional and international levels.

Keywords: Sustainable Development, Financial Issues of Sustainable Development, Economic Issues of Sustainable Development, Managerial Issues of Sustainable Development, Legal Issues of Sustainable Development, Social Issues of Sustainable Development, Cultural Issues of Sustainable Development, Ecological Issues of Sustainable Development, Technical Issues of Sustainable Development, Regional Features of Sustainable Development, International Cooperation for Sustainable Development, Educational Institutions and Pedagogy for Sustainable Development.

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### FINANCIAL AND ECONOMIC ISSUES OF SUSTAINABLE DEVELOPMENT

## A SYSTEM OF QUANTITATIVE AND QUALITATIVE INDICATORS FOR ASSESSING THE FINANCIAL AND ECONOMIC SECURITY OF ENTERPRISES

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Each presented approach involves the use of a specific method of assessing the financial and economic security of a business entity, which is based on a certain system of quantitative and qualitative assessment indicators. Specialists group the following indicators according to five components [1-3]:

financial - indicators that characterize the level of the business entity's ability to meet its obligations, the financial capabilities of implementing a policy of extended reproduction and dynamic development, ensuring the operational activity of the entity with a sufficient amount of cash, the level of liquidity of the entity's financial assets, access to external investment resources, favorable conditions and the sufficiency of their size for development;

technical - indicators characterizing the degree of technical and technological equipment, progressiveness of equipment and technologies used in production processes, provision of production with resource-saving technologies, the possibility of expanding production capacity;

labor - indicators that reveal personnel potential, the ability of the business entity to effectively manage all types of activities, the ability and sufficient motivation of personnel for highly productive work;

production - indicators characterizing the actual level of use of production facilities, the degree of renewal of the portfolio of products and services provided by the business entity, the level of competitiveness of the entity's activity on the market;

integration - indicators that characterize the degree of integration of the business entity into the environment and society, the level of established relations with stakeholders from different angles.

So, as we can see, the selected groups of indicators cover all the main areas of activity of the enterprise in any field of activity and therefore allow the business entity to achieve a sufficient level of financial and economic security under normal conditions of development of the economy of the region or country. At the same time, it should be noted that among the above groups of indicators, scientists in researches practically do not pay attention to such an important component of the financial and economic security of the economic entity, as innovative potential, which is a decisive component of the survival of the enterprise in difficult economic conditions (which is observed today in Ukraine). Indeed, according to experts, innovative potential is the basis of the economic

growth of the enterprise, its strategic and prospective development, ensuring the stability of its financial, economic and commercial activities [4; 5]. At the same time, it should be noted that only with the help of breakthrough innovative solutions, which are based on technologies of environmental protection and economical use of natural resources, economical use and reuse of production resources, it is possible to withstand today's tough market conditions and achieve certain competitive advantages on him This is especially relevant both in the current conditions of martial law and in the post-war period for business entities of Ukraine.

For hotel, restaurant and tourism business entities, the innovative component should become the very trigger that will allow the enterprise to be brought out of the crisis state. In our opinion, evaluating the level of innovation potential as a component of the financial and economic security of hotel -restaurant and tourist business enterprises in modern economic realities will allow us to identify reserves and use them for the purpose of increasing the financial result of activity, and therefore ensuring the financial and economic security of establishments in this industry. That is why we believe that in the process of analyzing the financial and economic security of the enterprise of the chosen field of activity, the results of calculations of those indicators that allow to evaluate in a certain way the innovative potential formed at the enterprise of the hotel, restaurant and tourism business will be informative. Such indicators, first of all, should include the share of new (with a specific innovative component) goods or services in their total number, compliance of equipment with modern market requirements (in terms of energy efficiency, rational use of water resources, safety for the environment), quality of management (perhaps, innovative management methods are used in the organization of the institution's work), competitiveness of services (first of all, according to quality parameters).

The introduction of the proposed indicators to the methodology of assessing the financial and economic security of the subjects of the hotel -restaurant and tourism business will allow to obtain an objective assessment of the innovative potential at this stage of market development. In our opinion, it is important to consider the assessment of the level of financial and economic security of hotel -restaurant and tourist business enterprises in the aspect of identifying innovative potential.

Stabilization and further development of hotel -restaurant and tourist business enterprises thanks to the activation of innovative activities can occur because innovations are a means that increases the effectiveness of the process of adaptation to constant changes, variability of the external environment and adaptation of enterprises in order to obtain economic leadership among other sub- economic entities [6; 7]. Therefore, the innovative development potential of the subjects of the country's hotel, restaurant and tourist business includes not only its resource components, but also significantly depends on the degree of adaptation and implementation of changes in the innovation system by the economic entity. At the same time, in order to implement innovations, it is necessary to have not only a winning idea and the necessary amount of financial resources, but also the readiness, motivation and ability of all groups of personnel of economic entities to quickly move from the routine nature of their own activities to its rationalization type, based on new knowledge, and in as a result, start mastering and implementing new, innovative.

The importance of focusing attention on the innovative potential of hotel, restaurant and tourist business enterprises is also the fact that usually the service sector reacts quite

sharply to any changes and new challenges of the economic environment, and therefore the success of business entities in the industry will depend on the effectiveness of management business processes, which as a result acquire an innovative character [8]. The innovative potential of hotel -restaurant and tourist business establishments is reflected in the combination of types of organizational management structures and the application of modern marketing tools, thereby strengthening the successful integration of the entrepreneur's business processes into the regional environment. Therefore, the innovative potential of the subject of the hotel -restaurant and tourism business will be understood as a system of factors and components that ensures the ability of enterprises to implement and produce hotel -restaurant and tourism innovations in order to achieve success and increase their level of competitiveness in the market.

At the same time, it should be noted that today there are a certain number of problematic aspects that prevent Ukrainian subjects of the hotel -restaurant and tourism business from developing their own innovative potential and thereby gradually securing their own niche in the market. Among the problems of this nature, scientists name the insufficient amount of funding for operational projects, moral and physical wear and tear and low level of energy efficiency of the material and technical base of the subjects of the hotel -restaurant and tourism business in the country, the lack of highly qualified labor force, the imperfection of the legislative regulation of the innovative activity of the hotel -restaurant and tourism business, lack of management understanding of the expediency and necessity of introducing innovative technologies and evaluating the achieved level of effectiveness of conducting innovative activities, lack of resource support for innovative activities, etc. [4; 6; 8; 9].

**Conclusions.** A comparative characterization of approaches to assessing the financial and economic security of economic entities was carried out, highlighting the advantages and disadvantages of each method. Systematized information on those groups of indicators, according to which specialists evaluate the financial and economic security of economic entities. These groups of indicators include financial, technical, labor, production and integration indicators. The need to single out another important component of ensuring financial and economic security at the enterprise level - innovation potential - has been proved.

An approach to assessing the achieved level of financial and economic security of the subject of the hotel, restaurant and tourism business is proposed, which is based on the identification of five groups of indicators (financial condition, technological development, production, integration into society and innovation potential) followed by their expert evaluation assessment and calculation based on them of the integral indicator of financial and economic security.

Further research should be aimed at developing a road map for implementing the process of innovative development separately for hotel, restaurant and tourism businesses, which is connected with the essential features of their activity. The practical application of the specified road maps will allow to minimize the risks that enterprises in this field may face in the post-war period and increase the level of financial and economic security of their activities.

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### AGRICULTURAL LAND MANAGEMENT AS THE BASIS OF THE COMPETITIVENESS OF AGRICULTURAL ENTERPRISES

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Management of agricultural lands as a state system of interconnected, legal, technical-economic, organizational-economic, technological measures of the state in market conditions, aimed at regulating land relations, organizing a rational, efficient and ecologically stable and competitive territorial unit at the appropriate levels.

The object of management is the land resource potential of a separate land holding or land use. Subject of management – bodies of state power and local self-government, employees of the management apparatus of enterprises, landowners and land users.

Ukraine has an agrarian direction of development. It is the world's largest producer of sunflower oil, a major global supplier of grain and sugar. Agricultural lands occupy about 70% of the structure of the land fund of Ukraine. During the studied period from 2012 to 2023, there is a tendency to decrease the area of agricultural land (from 70.9% to 68.8%) due to the increase in the area of built-up land, which is explained by the rapid development of large settlements and the expansion of their borders at the expense of

other types land plots.

Taking into account the agrarian direction of the development of our country, the state management of agricultural land is an important and necessary measure, which is carried out through a system of legal, technical-economic, organizational-economic, technological measures of the state in market conditions, aimed at regulating land relations, organizing a rational, effective and ecologically stable territorial unit at the appropriate levels.

Legally, the importance of land resources is enshrined in Art. 14 of the Constitution of Ukraine [1], which states that land is the main national wealth under special state protection. Agricultural land has a special place in the structure of the land fund of Ukraine. According to Art. 19 of the Land Code of Ukraine [2] in the list of land categories, they are given the first place in order to emphasize their importance. Provisions regarding priority use of agricultural lands only for the needs of agriculture are enshrined in Art. 23 of the Land Code of Ukraine [2]. Agricultural land according to the provisions of Art. 22 of the Land Code of Ukraine [2] are provided only for the production of agricultural products, the implementation of agricultural research and educational activities, the placement of relevant products, or intended for these purposes.

Agricultural land includes agricultural land (arable land, perennial crops, hayfields, pastures, and fallow lands) that are systematically used for the production of agricultural products. Agricultural lands occupy 41,398.5 thousand hectares and are located on unique soils - chernozems. Chernozems occupy the main area of agricultural lands of Ukraine - 67.7% and make up more than 20% of the world's chernozems, which emphasizes the importance of state management of agricultural lands.

In the course of the study, with the aim of forming a competitive facility, the following strategic areas of agricultural land management were formed: 1. Facilitating the supply of economic sectors, subjects of economic activity and citizens with land resources. It is implemented through: the principle of targeted land use; the principle of the priority of agriculture on productive lands; the principle of information provision of the industry with zonal approaches to land management; the principle of market relations.

- 2. Guarantee of constitutional rights to land and protection of land ownership. It is implemented through: the principle of guaranteeing land ownership rights; the principle of equality of all forms of ownership and land management; the principle of inviolability of land ownership.
- 3. Ensuring effective state control over the rational use and protection of land. It is implemented through: the principle of state protectionism and regulation of economic activity.
- 4. Increasing the efficiency of land resource management. It is implemented through: economic regulation of effective and rational land use (economic stimulation, compensation for damages adequate to the damage caused to land use); the principle of payment for land (including land tax and rent for land use); the principle of capital agglomeration (merger); the principle of comprehensiveness and planning (taking into account predictive studies, technical and economic substantiation of land use and protection, land management schemes and on their basis development of projects for the organization of the territory and land use, based on its potential, market requirements,

etc.); the principle of systemicity (use of land, on the one hand, as production resources, and on the other, as a component of the environment, which is the field of human activity and a component of the "nature - society - production" system).

- 5. Land protection and greening of land use. It is implemented through: the principle of formation of ecological values; the principle of equality of economy and ecology through the formation of social consciousness.
- 6. Ensuring social justice in the field of land relations. It is implemented through: a regional approach (the process of managing land resources must take into account the peculiarities of the regions of Ukraine, since they are quite heterogeneous in terms of natural and economic conditions, the history and traditions of their development, and the mentality of their population); consideration of the human factor; taking into account historical business experience; principle of ethics.

Strategic directions and principles of agricultural land management are implemented in various branches of the national economy through a system of concepts and will contribute to the formation of competitive management entities - agricultural enterprises.

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### BUSINESS SECURITY: HIDDEN THREATS AND POTENTIAL OPPORTUNITIES

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In the conditions of the highest degree of aggravation of relations between our and neighboring countries, global crisis and chaos, business on the way to its development will encounter more and more obstacles. Constantly changing economic conditions create new barriers for business development. According to many experts, in the near future we can expect greater support and assistance in the development of social and innovative entrepreneurship from the state and international organizations, and therefore we can talk about some recovery of the economy in innovative areas. However, although such an opinion can be traced in recent scientific publications, it has not yet been outlined in the form of a concrete hypothesis.

So, today all over the world high-tech areas of innovation, which are a priority for all countries, are cybersecurity, geoengineering, bio-, nano- and information technologies, alternative energy sources, creative industry, microelectronics, modern engineering, ecology. Even today, in the harsh conditions of the Russian-Ukrainian war,

the gross value added of these high-tech industries shows more or less satisfactory performance.

The survey of the Institute of Economic Research and Political Consultations, conducted in December 2022 and presented to the general public in early 2023, shows that the share of entrepreneurs who believe that it is dangerous to work in the region due to Russian missile terror is uneven and varies by region:

- Zakarpatska, Khmelnytska, Kirovohradska, Cherkaska and Sumska from 0 to 20%:
  - Chernivetska, Rivnenska and Chernihivska from 20 to 50%:
  - Zhytomyrska, Vinnytska, Kyivska and Dnipropetrovska from 50 to 80%;
- Ivano-Frankivska, Ternopilska, Lvivska, Poltavska and Kharkivska almost 100%.

For Kyiv, this figure is 81% (Survey of the Institute of Economic Research and Political Consultation, 2022).

The main obstacles to business development today are:

- critical deterioration of the security situation;
- significant population emigration;
- a significant decrease in the level of income of the population and an increase in unemployment;
  - decline in business activity and economic conditions in the world;
- disruption of supply chains (Half a year of war: what is the state of the economy, 2022).

Despite the global economic crisis, the "working out" of the capitalist model and the market-based model, the accelerated development of civilization cannot be stopped. And therefore, the inability of domestic business to qualitatively change in accordance with new civilizational and globalization changes, the growth of information flows and intellectualization in the world, the rapid development of science, technology, and digitalization is added to the above-mentioned problems.

The main problem that slows down the development of the high-tech sector of the economy remains the lack of financing. Insufficient attention is paid to the issues of financial and logistical support for the implementation of scientific research and development in the priority directions of the development of science and technology. In addition to the lack of funding, the concepts of priority directions for the development of science and technology of the past years did not sufficiently highlight the need to use the most promising technological processes, including biotechnology, technology, waste-free, aerospace technologies and other technological processes of the future. The path to long-term stable growth is comprehensive development and expansion of the domestic market of high-tech industry, increasing its competitiveness. One of the ways to solve this problem should be the use of dual purpose high technologies (space technologies, defense industry technologies, etc.). This will provide an opportunity without significant capital investments, in a short period of time to establish the production of high-tech products for the needs of the domestic market, to change the position of the domestic producer, to ensure full production loading. The Ukrainian market is filled with high-tech products of producers of other countries (this is evidenced by the negative balance of export-import operations), while the products and technologies of Ukrainian producers remain unused. The introduction of such technologies, on the one hand, will ensure the organization of serial production of hightech products for national economic purposes, on the other hand, it will provide an opportunity to preserve critical science-intensive technologies of the defense complex. Revival of domestic production of many types of machine-building products based on dual-purpose technologies can become one of the main sources of increasing the revenue part of the state budget (Almazbek, Dooranov etal., 2021).

From the analysis of global technological development in the regional section, it follows that there is currently too high a level of differentiation of the countries of the world, that is, a global technological gap is clearly evident. Everyone benefits from the development of new technologies in an absolute sense, while in a relative sense, the countries of the technological core definitely benefit – the United States of America, the People's Republic of China, the State of Japan, the Federal Republic of Germany, the United Kingdom of Great Britain and Northern Ireland, the French Republic and the countries of the first technological circle – Canada, the Republic of Italy, the Kingdom of Sweden, Australia, the Kingdom of the Netherlands, the Republic of Korea. The globalization of the main markets actually does not leave Ukraine with an effective opportunity to preserve the current situation in the country. Either Ukraine accepts new challenges and assumes the risks of participation in the international division of labor, actively tries to find its place in the world economy, or preserves the current structure and trend of socio-economic and innovative development, and its innovative ecosystem falls into a recurrent or absorbing state.

It is about the formation of a new economy of the country under the influence of intensive processes of creation and dissemination of knowledge in all spheres of society. The basic industries of Ukraine can reach a new level of development only due to the growth of productivity and innovation, parallel growth of Hi-tech, Fin-tech, R&D, IT solutions for B2B, ISO, bioengineering, high humanitarian technologies.

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### CHANGES IN TAX REQUIREMENTS DURING THE WAR AND DIGITIZATION OF CERTAIN ACCOUNTING FUNCTIONS

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Accounting was, is and will be important for business, especially in critical situations. Due to the martial law in the country, many enterprises have reduced their volumes and volumes of work, but, despite the crisis, entrepreneurs continue to work. At a time when the Government of Ukraine is trying to adapt and simplify tax regulation, it is important for accountants to focus their attention on new changes in taxation, accounting and reporting. To stabilize activities, it is worth considering the tax burden, changes in labor legislation and changes in accounting systems.

Accounting is the financial back of the company. If any economic operation of the enterprise takes place, it must be timely reflected in the accounting records. In the case of not keeping accounting records on a continuous basis, at a certain time there is an accumulation of completed economic transactions, the conduct of which will then be long and expensive, which is included in the capacious period of restoration of accounting records.

Business entities have the opportunity to submit an application for the application of the simplified taxation system at the rate of 2% of income online through the Payer's Electronic Cabinet https://cabinet.tax.gov.ua/.

In addition, in the Diya mobile application, you can submit the declaration of the payer of the single tax of 2% and pay it.

All entrepreneurs are exempted from paying state tax for themselves during the period of martial law and 12 months after its end.

There are also no fines for late payment of taxes and submission of reports during martial law. It is allowed to form a tax credit from VAT without registered tax invoices for February-May 2022.

Payers on whose territory hostilities took place are exempted from land tax, environmental tax and real estate tax.

Regarding the optimization of taxation systems, significant changes in this direction have taken place over the past two weeks.

Taxation of the FOP underwent the maximum possible tax optimization during martial law as follows:

- reporting has been postponed;
- for groups 1 and 2 of the single tax, voluntary payment of the single tax has been introduced since March 2022;
- from March 2022, self-employed workers of all groups are exempted from paying social security for themselves and exempt from social security for mobilized workers;
- for group 3 of the single tax, the rate is reduced from 5% to 2% even without additional submission of administrative statements:
- a mobilized FOP or FOP military serviceman is exempt from all types of tax burden. Even the FOP, a VAT payer mobilized to the Armed Forces of Ukraine, is not required to submit a VAT tax return for reporting periods in which there are no

transactions for the supply or purchase of goods (services) and no other indicators subject to declaration.

As for the organization of document circulation in the conditions of digitization, we note that a feature is that the main object of electronic document circulation is the electronic document itself - a document in which information is recorded in the form of electronic data, including the mandatory details of the document and suitable for its acceptance content by a person (Article 5 of Law No. 851), that is, what is characteristic of the recognition of a primary document according to Article 9 of Law No. 996 [1] (Law No. 851). The legal force of an electronic document cannot be denied solely because it has an electronic form (Article 8 of Law No. 851). Therefore, an electronic document, which is drawn up in accordance with the requirements of current legislation and contains all the necessary details, has the same legal force as a document drawn up in paper form.

The real positive features of electronic document circulation are: 1) the possibility of including multimedia data in a document, in addition to text; 2) the possibility of using pre-prepared forms; 3) high speed of information transfer to a large number of addresses; 4) saving paper; 5) high compactness of the archive; 6) high speed of searching and receiving information; 7) the possibility of protecting documents from unauthorized access and delimiting employees' access rights to information [2]. (Okhrimenko H.)

Currently, the organization of electronic document management creates significant opportunities for the effective development of the enterprise and its production process, which leads to the transition to the automation of other management processes and causes a high demand for high-quality business analysis in order to create flexible management systems, which is simply not possible without qualitatively adjusted accounting and analytical information, which is provided by the account.

So, the war in Ukraine brought many changes to accounting. Companies are offered a number of optimization of taxes and simplification of accounting at enterprises. Regulatory changes allow digitization of certain functions of the accountant, in particular, that business entities have the opportunity to submit an application for the application of the simplified taxation system at the rate of 2% of income online through the Electronic Account of the payer, in addition, in the Diya mobile application, it is possible to submit the declaration of the payer of the single tax of 2% and pay it.

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### FORMATION AND IMPLEMENTATION OF INVESTMENT STRATEGIES FOR SUSTAINABLE DEVELOPMENT OF AGRICULTURAL ENTERPRISES

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A special place in the sectoral structure of Ukraine's economy is occupied by agriculture. Investments in agriculture of Ukraine should ensure its technical and technological renewal, increase factor productivity, competitiveness of the industry in domestic and foreign markets, sustainable development of the agricultural sector as a whole. Investment activity in agriculture is very sensitive to many factors: macroeconomic conditions, political stability, the state of institutions, infrastructure development, innovation potential, profitability of certain industries and financial instruments. The study of trends, factors of influence, interdependence of investment in agriculture and land reform creates the necessary scientific basis for making sound management decisions at both micro and macro levels, forecasting possible changes in the development of the industry.

In recent years, there has been a decline in investment and innovation activity of agricultural enterprises, which led to destructive processes in the productive forces of the industry, deteriorating land resources, reduced efficiency of agricultural production, declining and deteriorating quality of life of the rural population. Therefore, it is expedient to substantiate the theoretical principles of increasing innovation and investment activity and attractiveness of agricultural entrepreneurs.

Research shows that much more investment in agriculture, including foreign direct investment, is needed to eradicate hunger and poverty and promote rural development. Investing in agriculture by domestic and foreign investors can bring a wide range of benefits, such as higher productivity, increased food availability, job creation, poverty reduction, technology transfer and access to capital and markets (Impact, Challenges and Opportunities).

Ukraine is often called a potential global agrarian superpower. More than 70% of the total area of the country is occupied by agricultural land. This is just over 42 million hectares, of which 32 million are arable land suitable for growing cereals and vegetables. Approximately 25% of the population of Ukraine is employed in the agricultural sector (Onegina, V., Vitkovskyi, Y.).

The agricultural sector is one of the most promising sectors of Ukraine's economy, accounting for more than 20% of GDP. Ukraine is one of the five largest grain exporters in the world and ranks first in the world in terms of sunflower oil exports (58%).

Most of Ukraine's current agricultural output is a diverse combination of grains and fodder crops, including wheat, corn, barley, sunflower, sugar beets, tobacco, legumes, fruits and vegetables (Chernyshev, V., Okara, D.,).

Foreign investors often choose agribusiness in Ukraine because it provides a relatively quick return on investment and stable conditions, despite unpredictable factors such as bad weather.

It is well known that Ukraine has many advantages in the development of agriculture, including fertile soils and favorable location. But now the Ukrainian

agribusiness is attracting the attention of foreign investors due to the high level of hightech innovations. Ukrainian agro-technological companies are developing innovative solutions aimed at improving traditional methods of agriculture and the development of organic production. According to the Law of Ukraine "On Foreign Investment Regime", foreign investments are all values invested by foreign investors in objects of investment activity in accordance with the legislation of Ukraine in order to make a profit or achieve a social effect.

Investors can be:

- · foreign countries;
- international organizations;
- entities:
- individuals, including citizens of Ukraine living abroad.

The legislation of Ukraine defines the following forms of foreign investment:

- creation of enterprises that are fully owned by foreign investors, branches and other separate divisions of foreign legal entities, or acquisition of full-fledged enterprises;
- partial participation in enterprises created jointly with legal entities and individuals of Ukraine, or acquisition of a share of existing enterprises;
- acquisition of the right to use land and use natural resources on the territory of Ukraine independently or with the participation of Ukrainian legal entities or individuals;
- acquisition of real estate or movable property not prohibited by the legislation of Ukraine, by direct acquisition of property and property complexes or in the form of shares, bonds and other securities;
  - economic (entrepreneurial) activity on the basis of production sharing agreements;
  - acquisition of other property rights;
- without creating a legal entity on the basis of agreements with business entities of Ukraine.

This list is not exhaustive and, given the constant development of the business sector, the existing forms of investment activity in Ukraine can be changed or supplemented.

Digital technologies and innovations are already greatly changing the way agribusiness is run, bringing its efficiency to a new level (Transforming our world).

The use of drones or unmanned aerial vehicles (UAVs) in agriculture is considered one of the most promising innovations in this field due to its high economic feasibility. The use of UAVs has a variety of applications, in particular for effective agricultural planning, strengthening control at each stage of agricultural production, as well as chemical treatment of crops and more. UAVs are able to provide important information in real time, such data that is collected over time can also be used for a better dynamic understanding of each process. UAVs are equipped with special sensors that provide detection of contaminated crops, targeted fertilization, spot spraying and irrigation (Dieppe A.).

In practice, private land users face many problems. Most often people ask legal questions about land lease agreements (conclusion, change, termination and renewal), land ownership (registration, acquisition of rights, joint ownership. Many questions about the right to use someone else's land for agricultural purposes or for construction) (Hudzynskyi, O. D).

It is important to prevent violations of registered rights of use or property rights, better knowledge of land legislation and procedural rules among landowners and

professionals who carry out their activities.

The exception to the growing trend of investment in agriculture was 2020, when the annual volume of investment decreased by 10% compared to the previous year. This decrease in investment occurred when agricultural enterprises received UAH 70.5 million last year, net profit, which is even 3.2% higher than last year's profit.

With a fairly stable economic situation in the country, agricultural enterprises use the following methods of financing innovation (Burlaka, N.,):

- 1. Foreign direct investment. Foreign capital is invested in those countries where the economic crisis has hardly affected the real or financial sectors of the economy.
- 2. Credit collateral obtaining loans from banking institutions either by issuing bond loans or by financial leasing. However, in a crisis, agricultural enterprises can only rely on leasing operations for long-term means of production.
- 3. Schering attracting investment resources through the issuance of securities, including shares. This method is considered one of the most effective for businesses in industry, trade, financial sector of the economy.
- 4. Share financing is carried out by private investors or owners of cooperatives, limited liability companies.
- 5. Self-financing from own funds created on the basis of such sources as depreciation and profit. Due to the crisis in the economy, the profits of most agricultural enterprises are low, so investing is possible only with the necessary amount of depreciation (Chernyshev, V.G., Okara, D.V., Kovaleva, I.L.,).

Thus, among the main reasons for the decline in investment activity in the country, in particular in agriculture, are the following (Ilchuk, V., Shpomer, T):

- ·low level of investment protection and weak stock market development;
- ·certain inconsistencies and imperfections of the legislation;
- ·difficulty in obtaining a loan and high interest rates;
- ·low solvency of the population and state enterprises;
- ·high level of bureaucracy in decision-making on investment activities;
- ·high tax rates;
- ·low level of state support for agricultural producers.

The slowdown in investment can be explained primarily by the presence in the country of high investment risks, which investors seek to avoid under any circumstances. This can have negative consequences for the development of the agricultural sector, which can be manifested in reduced productivity, reduced production, higher prices of manufactured products, deteriorating quality and, as a consequence, reduced competitiveness.

One of the main problems hindering the development of agriculture in Ukraine and the expansion of its innovation and investment activities is, first of all, the low investment attractiveness of agricultural enterprises. Increasing innovation and investment activity and attractiveness of agricultural enterprises will contribute to the formation of a strong production potential that will provide a comprehensive solution to the problems of agricultural development. The introduction of a comprehensive investment program in the agricultural sector of the economy will stimulate its transition to a qualitatively new innovative type of development and promote the growth of competitive agricultural enterprises. Timely assessment of the investment attractiveness of the enterprise in order to forecast the prospects for further effective development of the agricultural sector will open new opportunities for diversification for domestic and

foreign investors, as well as increase investment guarantees for foreign investors in investment projects.

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#### GLOBALIZATION ASPECTS OF UKRAINE'S TELECOMMUNICATIONS ENTERPRISES' INNOVATIVE DEVELOPMENT

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Innovative activity of telecommunications enterprises is a requirement of today and an objective evolutionary process aimed at the invention, production, and implementation of new ideas and technologies, the release of innovative products, and the provision of a wide range of qualitatively new high-tech telecommunications services that meet market requirements and ensure a high level of the competitive telecommunications industry.

The presence and implementation of innovations at enterprises provide for progressive technological changes and positive financial results for enterprises and industries that contribute to the improvement of scientific and technical processes and the functioning of production systems.

Innovation is always an accelerator of social and industrial progress. According to the Law of Ukraine "On Innovative Activity" dated February 3, 2004. No. 1407-IV stipulates that "...innovations are newly created (applied) and (or) improved competitive technologies, products or services, as well as organizational and technical solutions of a production, administrative, commercial or other nature, which significantly improve the structure and quality of production and (or) social sphere [4].

In the Economic Code, innovative activity in the field of management is considered as an activity of participants in economic relations, which is carried out on the basis of the implementation of investments in order to implement long-term scientific and technical programs with long periods of payback of costs and the introduction of new scientific and technical achievements in production and other spheres of social life [1].

P. Drucker considers innovations from the point of view of sources of economic progress. He noted that innovations are a special tool for entrepreneurs, a means by which they have a chance to create a new type of business or service [2, p.156]. Ukraine is represented in several international rankings that evaluate the innovative potential and innovative capacity of the countries of the world. The most authoritative and influential are the Global Innovation Index, Bloomberg Innovation Index, Global Competitiveness Index, Innovation Union Scoreboard), Global Talent Competitiveness Index, and Readiness for the Future of Production Assessment.

In 2021, according to the Global Innovation Index, Ukraine slightly lost its position in 2018-2020 and took 49th place. In 2022, Ukraine took 57th place among 132 economies represented in this rating. Global Innovation Index, GII evaluates world economies according to their level of innovativeness and consists of approximately 80 indicators grouped into innovation inputs and outputs and aims to capture the multidimensional aspects of innovation. This year's result of Ukraine is primarily related to the negative impact of military events on the country's economy [3].

The negative impact on the innovative activity of telecommunications enterprises in Ukraine is caused by: a reduction in research and development costs, a decrease in the attractiveness of the research system for young scientists, a low concentration of researchers, an insufficient level of innovation infrastructure development, limited institutional and financial support tools for innovators, weak protection of intellectual property rights, deterioration of the ability to export goods with a high added value, an insufficiently high share of Internet users.

The strengths of Ukraine remain knowledge and technological results, innovative connections, human capital and research, opportunities to attract talent, market, and regulatory opportunities in the labor market, institutions, creativity, penetration of high technologies, and skills.

The functioning of telecommunications enterprises in Ukraine is under the influence of a significant number of negative factors: the inconsistency of the existing regulatory and legal framework with the modern requirements of today, the weak development of the institution of public-private partnership, the insufficient receptivity of enterprises to the introduction of innovations, the lack of qualified personnel, the low level of innovation potential of enterprises, the inconsistency of existing information - telecommunication technologies to the needs of the telecommunications market, low level of demand for innovative products, slow implementation of third and fourth generation (3G, 4G) mobile radio communication technologies, there is a need to modernize telecommunication networks of fixed local communication [5].

Ukraine has a sufficiently powerful scientific, intellectual, and personnel potential for the development and implementation of innovations. Revitalization of the innovative activity of telecommunications enterprises is aimed at ensuring economic growth and solving important socio-economic, financial, humanitarian, and environmental issues, and leveling the negative manifestations of today's global challenges.

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# METHODOLOGICAL AND ORGANISATIONAL FOUNDATIONS FOR THE STUDY OF NATIONAL ECONOMIC INTERESTS IN THE CONTEXT OF THE INFORMATION ECONOMY

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As part of the development of the information economy, national economic interests are formed and implemented, which are reflected in the programmes and activities of the Ministry of Digital Transformation of Ukraine:

development of information infrastructure;

introduction of tools for interoperability of digital documents with European ones to ensure and accelerate the implementation of the European integration course;

formation of a harmonious information ecosystem that will allow to scale, modernise and accelerate business development through the use of modern information technologies, create jobs and increase tax revenues to the budget;

digital transformation, which contributes to the emergence of new sectors of the economy, the development of Industry 4.0 and Industry 5.0, and the transformation of key areas of society;

ensuring economic and information security (Ministry, 2023).

The information economy is an economic activity based on the processes of the formation, development and use of the latest information technologies, which is a manifestation of the third, fourth and fifth industrial revolutions. Information progress

requires updating approaches to the study of national economic interests and relevant methodological support, which will form a comprehensive vision of harmonised changes in the development the national economy in the context of the formation the information society model.

Nowadays, there is no single methodology for studying national economic interests. The analysis of the existing methods is partial and covers only certain aspects of the realisation the national economic interests in the context of the formation the information society, namely the following methods:

- 1. National methodologies:
- 1.1 Economic security assessments, approved by the Order of the Ministry of Economy of Ukraine and based on a comprehensive analysis of economic security indicators to identify potential threats to economic security in Ukraine in order to prevent and deter real and potential threats to national interests in the relevant areas (Pro zatverdzhennia, 2013);
- 1.2. Assessment of the level of development the information society. The Resolution of the Cabinet of Ministers of Ukraine "On the Introduction of the National System of Indicators the Information Society Development", adopted in 2012, is in force in Ukraine and needs to be revised, supplemented, harmonised with international systems, and aligned with European standards to ensure easy accumulation and comparison of statistical information in the globalised space (Pro zatverdzhennia, 2012).
- 2. The world methods of calculating indices, which characterise the development of the information sphere and economy and reflect various aspects of the realisation of national economic interests:Network Readiness Index (NRI); Global Connectivity Index (GCI); The Inclusive Internet Index (3I-index); IMD World Digital Competitiveness Ranking (WDCR); Global Cybersecurity Index (GCsI); National Cyber Security Index (NCSI); Global Innovation Index (GII); Global Knowledge Index (GKI).

The level of development of the knowledge economy is assessed using the Global Knowledge Index (GKI) GKI is a joint initiative the Development Programme of United Nations (UNDP) and Knowledge Foundation by Mohammed bin Rashid Al Maktoum (MBRF) (Global, 2020). The information content of the Global Knowledge Index (GKI) allows identifying and justifying national economic interests and directions of the knowledge-based development society in the vector movement towards progress and economic well-being of the countries of the world. The index helps to determine the level of the knowledge component of countries based on an assessment of such components as education; research, development and innovation; information and communication technologies; and the economy. Compared to 2020, Ukraine's position in the GKI in 2021 deteriorated from 56th to 61st place, according to (Global, 2021).

The assessment, according to the above methodological approaches, uses a quantitative index (integral indicator) calculated on the basis of official statistics theinternational organisations, countries included in the study, as well as statistics collected by the organisation conducting the analysis. At the same time, for different indicators, the set of analytical data used to compile the indicator is not harmonised in accordance with common standards, which affects the results of the research.

The outlined methodological approaches allow assessing economic security, development of the digital and the knowledge economy, which are components that ensure the realisation of the key national economic interest, which is defined by the movement towards vector and achievement of the information economy model. In order

to substantiate the sufficiency of the above methods in the field of studying national economic interests in the context of the information economy, it is worth outlining the methodological and organisational foundations of such approaches:

- 1. The system of indicators is formed in a logical vision of the prospects for the implementation of the strategic goal based on national and global development priorities: the making the information society and knowledge economy, the transition to an innovative economic model. The system of indicators is aimed at assessing the dynamics of movement towards the goal and determining the vectors of corrective influence on the countries' movement towards the information society and innovation economy.
- 2. In most cases, the initiative to conduct international ratings is driven by the interest of key international business players in analysing markets with prospects for the development of e-commerce, Internet business and mobile commerce, which is an important tool for realising their economic interest in developing investment projects, and for the countries participating in such ratings an opportunity to increase investment attractiveness and enter global markets.
- 3. The content of international rankings is not only research, commercial, but also geopolitical, which is an argument in the confrontation between countries on the way to defending their national interests in the process of information transformation and building a new world map in the synergistic manifestation of the phenomena of the third, fourth and fifth industrial revolutions.
- 4. The theoretical and methodological basis and data set is unique and has its own specifics in each approach of international rating assessments, which in its informative content has more positive manifestations than negative ones, allows to obtain more information in the process of objective analysis of the implementation of national economic interests of countries and making management decisions of corrective influence.
- 5. To improve Ukraine's place in the international rankings of readiness for the information society and the knowledge economy, systematic work is needed on: research of national economic interests and relevant methodological support; systematic development of these interests in accordance with the conceptual definition of targets that should be fixed in key development strategies with the relevant implementation mechanisms.
- 6. Ukraine's participation in world rankings is an important aspect of ensuring harmonious changes in national economic interests in the context of the development the information economy, which allows, on the basis of the existing database and rankings, to formulate own methods of assessing information and innovation potential through the prism of the realisation national economic interests and the country's perspective vision as a competitive player on the world stage.

National economic interests in modern conditions are aimed at developing the main components of the digital economy and obtaining effects from informatisation, which include growth in economic indicators, employment, quality of services, and social welfare. Maximising these effects depends on the degree of completion (realisation) of the stages transition to the information economy:

The first stage - the formation, which is characterised by the degree of readiness of the economic, legal and business environment for the transition to the information economy;

The second stage - the formation, characterised by transformational changes in

public policy and management, social and business environment;

The third stage - the progress, characterised by the impact of transformational changes on the economy and society.

The author recommends studying national economic interests through the prism of an evaluative vision of the development processes (stages) of the information economy in the country, which outlines the scope for further scientific research.

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### THE INFLUENCE OF COMPLEX INTERNET MARKETING TOOLS ON BUSINESS DEVELOPMENT

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Integrated Internet marketing represents the combined use of all possible channels of advertising and promotion of resources in the network space, which contributes to increasing sales. Currently, the Internet marketing market is at a stage of rapid development.

The advantage of electronic marketing is rapid in formativeness, speed and relevance of data. Performance is higher compared to traditional advertising. Standard promotion in the mass media and on external advertising media is expensive and often does not pay off financially. Such advertising should be used rather as image advertising; it can serve to maintain interest in any brand or company.

The promotion of goods and services on the Internet involves the following mechanism: the visitor independently finds advertising by typing certain words and phrases in the search bar. The use of Internet marketing tools will ensure a wide reach of the target audience. On the Internet, any product has no limit on the number of potential consumers. They can be all Internet users (Turchyn L., Ostroverkhov V, 2019).

Internet marketing includes elements of marketing activity:

- research of the market, buyers, external environment;
- -promotion of products, branding, work with intermediaries, organization of trade and sales activities;

banner advertising and public relations (PR),

- methods of conducting marketing research on the Internet,
- formation of methods of correct positioning of the trademark on the market,
- study of demand and consumer audience,
- mastering formation algorithms;
- ensuring high efficiency of advertising campaigns, etc.).

Taking into account the specifics of electronic marketing, new marketing campaign tools are emerging. The global scale and comprehensiveness of the Internet's entry into various aspects of society have created a new, so-called virtual reality; its significance for society today cannot even be estimated, so deep and ambiguous the results can be (Lytovchenko I. L., 2011).

The rapid development and socialization of the Internet is the main trend of the modern online environment (Chukhrai N. I., Yurkiv O. Ya., 2017). The Internet is a global environment for the development of his concepts regarding:

- product or service intended for sale;
- the price, which is the exchange rate of this or that product for money;
- places or points of implementation, which is the site;
- promotion, which includes various strategies that contribute to the formation of a positive opinion about the product.

With the development of technology, new trends are constantly emerging. They influence the methods and strategies of implementing commercial activities in the digital world. To remain a competitive business, you should work with new tools, learn about trends and be flexible. It is important for marketers to monitor trends in the market of goods and services, monitor changes in the Internet space, and identify which tools are relevant and which are losing their functionality. The Internet and its development finds its use in various fields, namely the fields of science, economy, technology, education, its development has a significant impact on the availability of various types of information.

The World Wide Web directly influenced the identification of Internet marketing as an important direction in the marketing activities of enterprises and organizations. The company should gradually follow the strategy used by modern internet marketing. To determine the needs of the target audience, you need to create and promote content, try to encourage site visitors to purchase the offered product.

Integrated Internet marketing now uses all available channels for promotion of resources and advertising. With the development of society and the growth of progress in general, it becomes increasingly difficult for entrepreneurs to promote their product or service, especially in conditions of competition. For a successful business, a businessman must be an innovator in the organization of marketing activities. The business owner must monitor the actions of his competitors, use all possible (within the legal field) methods to achieve the goal. At the same time, the main goal of any business is to increase the company's competitiveness and maximize its profit. Internet marketing has become the most effective tool for this.

The use of online marketing tools helps to market brands, attract customers, conduct market research and many other processes that, other things being equal, would require more resources in an offline environment. With the help of the main trends and tools that dominate the field of Internet marketing, the company is able to significantly increase the level of sales, attract new customers, retain existing ones, and increase its visibility on the market.

Thus, any marketing strategy on the Internet is aimed at achieving these goals, and Internet marketing is one of the most relevant tools for the promotion of the company, which should be sufficiently financed, because it is he who is able to ensure the rapid promotion of the company's product to the market, fame and high profitability of the brand and business as a whole.

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### THE SIGNIFICANCE OF THE IT SPHERE FOR THE ECONOMY OF UKRAINE UNDER THE CONDITIONS OF MARITAL STATE

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The development of the information society in general and the IT sphere in particular at the current stage of development of Ukraine constitutes a powerful potential and contains a significant reserve for accelerating economic growth and strengthening the competitiveness of the national economy.

The development of the IT sphere is of key importance for the economy of the state. First, such development can contribute to the growth of production and increase of labor productivity. In today's world, information technologies are able to quickly change the competitive situation on the market, and the IT sector is one of the most dynamically developing branches of the economy. Secondly, the introduction of information technologies allows to increase production efficiency and optimize business management. Innovative solutions provided by IT technologies can contribute to the creation of new markets and products, which in turn can positively affect the increase in state revenues. Thirdly, the development of the IT sphere contributes to the creation of new jobs and the attraction of qualified labor. The creation of innovative companies based on the use of IT technologies can stimulate the attraction of investments and the creation of high-paying jobs. This, in turn, can help reduce unemployment and improve the socio-economic situation in the country. Fourthly, the development of the IT sphere can help improve the quality of life of the population. Expanding general access to information and IT services can contribute to the development of education, health care and other areas of life. Fifth, the development of IT infrastructure can increase the level of communication and reduce the distance between settlements, which in turn can contribute to the improvement of the development of different regions of the country. However, it is necessary to take into account that the development of the IT sphere can also have its negative consequences. One is the divide between those who have access to digital technologies and those who do not. This can lead to increased levels of social inequality and social exclusion. In this regard, it is important to introduce and implement an effective strategy for the development of the IT sphere, which will take into account the needs of the entire society and ensure equal access to digital technologies.

Therefore, the development of the IT sphere is important for the economy of the state and can provide numerous economic advantages. That is why there is a need to find effective directions, methods, tools and levers of state economic policy to support the development of the IT sphere of the national economic system. Their application will make it possible to turn this sphere into a kind of "point of recovery and growth" of the post-war economy of Ukraine.

According to the theory of state regulation of socio-economic processes, the basis of the mechanism of such regulation is state economic policy. In the global practice of state economic policy, the most effective methods, tools and levers of economic policy to support the development of IT entrepreneurs are considered to be: simplification of administrative procedures for registration of IT business entities; an increase in government spending on supporting IT enterprises, as well as industries and spheres with which IT business activities are related; increasing the efficiency of the national taxation system and applying tax preferences for IT business; construction and development of the business environment, market infrastructure, entrepreneurial ecosystem.

The choice in favor of certain methods, tools, levers of the economic policy of regulation depends on the state and trends of the development of the IT sphere at a specific moment or period of time. Currently, the peculiarity of the state and development of the IT sphere of modern Ukraine is that it is actually the only branch of the economy that has maintained fairly high growth rates since the beginning of the Russian military aggression against Ukraine.

It should be noted that the IT sphere of the Ukrainian economy has been showing high growth rates for several years. The share of active economic entities of the type of economic activity "Information and telecommunications" in the economy of Ukraine in 2020, compared to 2010, increased by 4.2 times, and amounted to 11.9% (of the total number of economic entities of the national economy in general): the average annual growth rate during 2010-2020 was 15.9%. The share of this type of economic activity in the structure of gross added value (by production costs) of the entire economy in 2020 reached the level of 5.7%, and compared to 2013 (4.4%), it increased by 1.3 percentage points. The share of employed workers in economic entities by the type of economic activity "Information and telecommunications" relative to the total number of employed in the economy in 2020 was 4.3%, while in 2010 it was 2.3% (increased from 284.4 thousand people in 2010 to 383.4 thousand people in 2020, the growth rate is 134.8%). The share of employees in economic entities by the type of economic activity "Information and telecommunications" relative to the total number of such employees in entities of the national economy in 2020 and 2010 is 2.2% and 2.6%, respectively (the absolute number decreased from 239,1 thousand people in 2010 to 162.5 thousand people in 2020, i.e. by 32.0%). The share of the type of economic activity "Information and telecommunications" in the total volume of production (goods and services), which

was realized by economic entities of the economy of Ukraine in 2020, was 3.6% (in 2010 - 2.0%) (Derzhavna sluzhba statystyky, 2023; Diialnist subiektiv hospodariuvannia, 2021; Prodanova L.V., 2019).

During the period of Russian military aggression, the IT sphere of Ukraine's economy demonstrates an extraordinary level of stability and provides foreign exchange earnings from the export of services and tax payments to the state budget. The share of the type of economic activity "Information and telecommunications" in GDP during 2010-2021 is 3-4% on average and has a growing tendency: in 2021, the value of the share increased to the level of 5.0%. The volume of exportof IT services from Ukraine reached 7.3 billion dollars by the end of 2022. USA(this is almost half of the export of services of the entire national economy), which is 5.3 billion dollars. (3.7 times) more than in 2016. As of January 1, 2023, the amount of taxes and fees to the consolidated budget of the country paid by the IT business of the Ukrainian economy is 32.2 billion hryvnias, which is 4.4 billion hryvnias (by 16%) more than the corresponding indicator of 2022, and 23.9 billion hryvnias (3.9 times) more than in 2017(Do IT Like Ukraine, 2022).

Thus, the IT sphere is in fact the only branch of the Ukrainian economy that, during the period of Russian aggression, maintained growth rates, ensured the growth of foreign exchange revenues and tax payments of the state, continues to develop, create new jobs, implement new projects, and attract investments. And although the full-scale war affected all spheres of the economy, the IT industry continues to be a pillar of Ukraine and may become one of the main drivers of development in the future. That is why economic policy measures to regulate the activities of business entities in the IT sphere should have a stimulating effect.

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#### THEORETICAL BASICS OF NEUROMARKETING

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Neuromarketing is an approach that uses research in the field of neurobiology and neuropsychology in marketing, studies a person's reaction to advertising or another way of promoting a product (banner, video, audio, text, etc.). The results of such studies allow more accurate forecasting of consumer behavior and decision-making logic.

The term "neuromarketing" was introduced by Professor Aile Smidts in 2002. This is how he described the commercial use of neurobiology and neuroimaging technology, brain mapping[1].

According to him, neuromarketing makes it possible to better understand the consumer and his reaction to marketing triggers by directly measuring processes in the brain and to increase the effectiveness of marketing methods by studying the brain's reaction[2].

Neuromarketing is a modern and quite effective method of promoting goods (services) on the market as a result of consumer manipulation. The goal of neuromarketing research, as one of the tools for improving the efficiency of the economy of impressions in conditions of sustainable development, is to obtain objective information about personal consumer preferences without resorting to subjective data obtained by traditional marketing tools.

Neurobiological knowledge allows marketers to influence consumers through the senses: sight, hearing, smell, taste.

Neuromarketing allows us to analyze the strengths and weaknesses of marketing strategies used by any business. By measuring the brain activity of the consumer, it is possible to understand the effectiveness of the advertisements, websites, commercials, flyers and related marketing tools used by the company. Since it is impossible to measure the subconscious mind of the consumer, neuromarketing tools allow specialists to obtain this information using effective methods.

Consumer behavior depends on a variety of factors, so it may not be the most accurate source of data, as consumers are not always honest, even with themselves, and may be subject to personal bias, and sometimes may not be able to express their feelings clearly. Therefore, traditional marketing tools, such as surveys, questionnaires, cannot always give an accurate answer as a result.

So, while traditional marketing focuses on what works or doesn't work, neuromarketing focuses on why and how. Neuromarketing gives us new, interesting ideas for understanding the consumer's mind.

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#### TYPES AND FOCUS OF DIGITAL ECONOMY DEVELOPMENT PROGRAMS

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The main principle of the digital economy is the in-depth implementation of digital technologies. For this, a variety of hardware and software tools are used to collect, process and transmit digital information in all spheres of economic activity.

Among the programs for the development of the digital economy, two types can be distinguished:

- 1) socio-economic programs supporting digitalization, which can be defined as aimed at supporting global competitiveness by ensuring a high technological level of the most developed sectors that make a large contribution to the economy of the region;
- 2) socio-economic programs of developing digitalization aimed at increasing the efficiency of the functioning of sectors that are expected to be developed to maintain status and authenticity in the global space.

The priority directions of the development of the digital economy both from the point of view of the tasks to be solved and from the point of view of the use of digital tools should be determined by the regions independently, based on its specificity as a territorial socio-economic unit that seeks to preserve its own identity both in the global space and in the current situation. For example, in agrarian regions, the priority of digitalization can be agriculture, and in industrial regions, the main effect can be achieved from the digitalization of industrial production. The choice of priority directions for the development of the digital economy should also take into account the need to create a balanced structure of the regional economy and maintain a basic level of self-sufficiency to meet the basic needs of the population.

In our opinion, for a more accurate account of the contribution of the digital economy, the information and communication technology sector should be singled out in statistical accounting as an independent one, which will allow tracking the direct contribution of digitization to the economy and evaluating indirect and induced contributions by identifying dependencies based on statistical data.

Thus, digitalization development programs should be aimed at:

- a) to support global competitiveness by ensuring a high technological level of the most developed sectors, which make a large contribution to the economy of the region supporting digitalization;
- b) to increase the efficiency of the functioning of the sectors that the region intends to develop in order to maintain its status and authenticity in the global space developing digitalization.

The digital economy expands the potential of economic development, while creating a number of time-bound obligations and expenses, the sources of which must be planned and identified in a timely manner. In the conditions of the digital economy,

regions can act as independent subjects of global processes, which moves interregional competition beyond the borders of the national economy - into the global digital space.

#### Conclusions.

The development of the digital economy should not become an end in itself, its development should be aimed at solving existing problems and goals set in strategic documents. The mechanisms of the most appropriate use of funds and tools of the digital economy to solve the tasks of the region's development should be developed within the framework of measures to achieve specific goals.

The priority directions of the development of the digital economy, both from the point of view of the tasks to be solved and from the point of view of the use of digital tools, must be determined by the regions independently, based on their specificity as a territorial socio-economic unit that seeks to preserve its own identity in the global space, and the current situation.

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### UTILIZING ARTIFICIAL INTELLIGENCE IN CONTEMPORARY DEVELOPMENT OF SOCIETY: ADVANTAGES AND DISADVANTAGES

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Artificial Intelligence (AI) has become an integral part of our daily lives, from voice assistants to self-driving cars. AI has the potential to revolutionize how we work, live and interact with each other, but like any technological advancement, it comes with its advantages and disadvantages. In this context, it is important to explore both the benefits and drawbacks of AI to gain a better understanding of its impact on society. On one hand, AI has the ability to increase productivity, reduce errors, and provide more accurate results, while on the other hand, it can also lead to job displacement, ethical concerns, and privacy issues. In this discussion, we will delve deeper into the advantages and disadvantages of AI and analyze how we can harness its potential while mitigating its risks.

AI is a term used to describe computer systems that can execute tasks that traditionally require human intellectual activity, such as speech recognition, natural

language understanding, image recognition, decision-making, and others. AI comprises several key components:

- 1) sensors and input devices, which are hardware components that provide the system with information about the external world, such as cameras for image processing or microphones for speech recognition;
- 2) algorithms, which are mathematical formulas and instructions that enable the processing of data and decision-making. These algorithms can be based on machine learning, where the system learns from a vast amount of data;
- 3) models, which are software or hardware tools that enable the system to learn and solve tasks. These models can either be open, accessible to all users, or closed, accessible only to system owners;
- 4) databases, which are data repositories used for system learning and task solving. The data can be collected from various sources such as the Internet, sensors, or users:
- 5) the communication interface, which is a means of interaction between the user and the system. The interface can be graphical, voice-based, or text-based;
- 6) the management system, which is a component that allows the system to manage its work and perform tasks with maximum efficiency.

Taken together, these components enable AI systems to solve a diverse range of tasks with greater accuracy and speed than humans.

Therefore, based on [1-3], let's highlight the main advantages of AI:

- -autonomous devices can explore territories or environments where human presence may be harmful or dangerous to health or life (neutralization of explosive devices, fire or radioactive contamination zones, etc.);
- -used in various types of transport (trains, ships, cars) for unmanned control, which allows continuous movement for a long time without breaks for drivers to rest;
- -contributes to the development of effective solutions in areas with a limited number of highly skilled professionals (for example, preliminary medical diagnoses, etc.);
- -helps to minimize the human factor in critical areas that require monotonous work or reducing human errors (for example, in the work of air traffic controllers) and in those areas where long-term focused activities are required (for example, in the work of surgical assistants), significantly reducing the number of errors and increasing accuracy;
- -the implementation of innovative approaches (a decisive factor for many inventions in various fields that help people solve complex tasks, for example, recent achievements in technologies allow doctors to detect diseases at an earlier stage);
- -ability to solve economic problems (such as reducing costs, increasing labor productivity, addressing staff shortages, etc.);
- -availability 24x7 (while people need breaks and vacations to balance their work and personal life, AI can work endlessly without breaks, thinks much faster than humans and performs multiple tasks simultaneously with precise results, and can easily perform exhaustive repetitive tasks);
- -unbiased rational decisions (AI is devoid of emotions, very practical and rational in its approach);
- -faster decision-making (by automating certain tasks and providing real-time information, AI helps make quick and more informed decisions).

Among the main disadvantages of artificial intelligence, the following can be identified [1-3]:

- -high costs (requires significant financial, time, and human resources for creation, implementation, maintenance, etc.);
- -lack of creativity (cannot learn to think outside the box; while AI can learn over time based on previous data and experience, it cannot be creative in its approach);
- -total control (the accumulation of significant amounts of personal user data by computer systems can lead to the restriction of personal freedoms);
- -negative impact on the economy (job loss due to automation may lead to increased unemployment);
- -getting out of control (autonomous devices may become uncontrollable, making them difficult to stop or correct);
- -making people lazy (the lack of necessity to memorize or solve puzzles to perform work means that people are using their brains less, which may cause significant problems for future generations);
  - -technical failures (program errors, power outages, random mechanical damage);
- -constant need for improvement (manual code changes are necessary for corrections or improvements; machines can only perform the tasks for which they were designed or programmed, and if they are asked to do something else, they often fail or provide poor results, which can have significant negative consequences);
- -hacking (for example, in critical life-supporting societal production systems, the control of AI systems (defense complex, water and energy supply) may be compromised by criminals).

In conclusion, AI offers numerous advantages such as increased productivity, improved efficiency, and better decision-making capabilities. It has the potential to revolutionize many industries, from healthcare to finance to transportation. However, there are also several disadvantages to consider, such as job displacement, data privacy concerns, and the potential for bias in AI decision-making. As AI continues to evolve and become more integrated into our daily lives, it is important to weigh these pros and cons carefully and ensure that AI is developed and implemented in a responsible and ethical manner. Overall, while the advantages of AI are significant, it is important to be aware of its limitations and potential negative consequences.

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## MANAGERIAL AND LEGAL ISSUES OF SUSTAINABLE DEVELOPMENT

#### BUSINESS MANAGEMENT IN UKRAINE UNDER THE CONDITIONS OF MARITAL STATE

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Martial law conditions create a number of challenges for Ukrainian enterprises. The task of management in these conditions is to ensure the sustainability of enterprises and preserve their efficiency.

A good manager must anticipate all possible risks long before they occur. If something goes wrong, you need to urgently use pre-developed and agreed-upon plans to achieve the planned result, definitely take into account every variable and be aware of the algorithm of actions in any case. When "force majeure" occurs, any built-up balance is disrupted. At first, Ukraine, like the whole world, was shaken by the pandemic. Then a full-scale war. Business had to stop, there was practically no time to adapt to work in a post-pandemic society, and here - new, more radical challenges, but the natural flexibility and tendency of managers and employees to adapt all these years came in handy. Planning, organization, coordination and control of resources (human, material, financial) to achieve a certain goal despite all possible troubles is a defining feature and an important competence of a modern Ukrainian.

Much depends on the management logic, powers and responsibilities of each specialist and client. The pandemic and the war became external factors for Ukrainian business that almost no one could predict. This is the same force majeure that was necessarily mentioned in all contracts, but they never thought that they would have to work and live under these extremely unfavorable conditions. How do you get project management right when almost everything bad that could happen has already happened? First of all, identify the main problems, analyze the available resources, and create a work plan in new conditions. Develop a decision-making mechanism, taking into account that key persons may be in different places and may not be in touch for a certain time. Constantly motivate the team. Implement the plan step by step until external conditions stabilize. After that, sum up the project management in crisis.

Indeed, in February 2022, the projects were on hold, most of the teams moved to safe places, and the situation was uncertain, to say the least. The main task was to save the team, maintain morale and prepare for the resumption of work. This requires the following measures:

launch volunteer and other social projects; regularly communicated, shared news, supported each other; used a reserve fund to pay wages during downtime; publicly announce that the company works and undertakes social projects: from motivating clients' employees to volunteering.

Review existing competencies, resources, and skills that can help clients through difficult times of distraction, anxiety, and despair. This will allow you to save most of the team and quickly resume work. Each business project has become a mini-challenge, and each preparation is like an organized management of chaos. Searching for special locations protected from air attacks, solving logistical problems and trying to take moral aspects into account. Therefore, the scheme, where one manager controls the activities of subordinates under conditions of force majeure, is doomed to failure. Another approach to the organization of actions: horizontal structured management in teams. Culture of freedom and responsibility. Horizontal management of project management and team organization.

Horizontal management is an approach to management that involves the cooperation of company specialists at the level of equal partners in order to achieve common goals. In this approach, the emphasis shifts from vertical leadership to group interaction and communication between different divisions and specific specialists. The strategy of horizontal management involves the creation of favorable conditions for effective interaction between team members. The main features of such management:

development of leadership skills that ensure self-organization at all levels;

communication and information exchange, which allow to quickly solve problems and achieve common goals;

a common strategy for the entire organization that enables everyone to work in the same direction;

focus on the client, his needs and requirements, in order to be motivated to work on improving services;

providing feedback for further quality improvement and professional growth;

access to information and knowledge for all professionals in the organization to stimulate collaboration and interaction.

Ukrainian business continues to operate under martial law, which was imposed in Ukraine after the invasion of February 24, 2022. Due to the continuation of hostilities, it is currently difficult to estimate total losses and their consequences, but real GDP in 2022 will decrease by at least 35% in all components. The current state of the business is characterized by indicators:

ocontinue to work as before - 20% owork part-time - 18% ohardly works - 20% ooperation suspended pending better times - 35% othe business is not active and its restoration is not planned - 3%

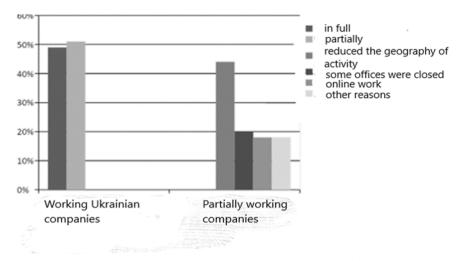


Fig. 1. The current state of the business is characterized by indicators:

Active or partially active enterprises experience difficulties in their work and need help for the following reasons:

- manufacturers lack orders 50%
- significant logistical difficulties 29%
- shortage of raw materials and components 21%
- payment for completed orders is not received or is delayed 20%
- lack of workers 17% [2].
- equipment damage due to hostilities 14%

## Assessment of the state of the business in comparison with the period until February 24, 2022

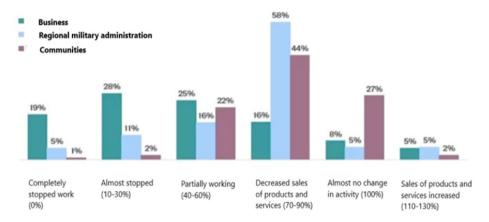


Fig. 2. Assestment of the state of the business in comparison with the period until February 24, 2022

# What hinders the restoration and development of business

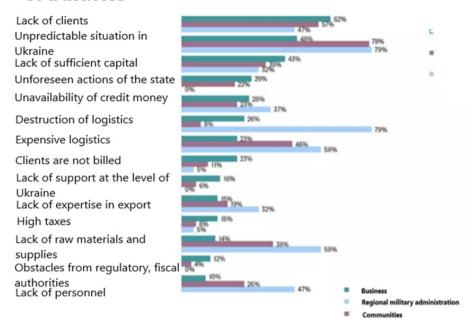


Fig. 3. Difficulties and obstacles in business recovery (2nd quarter of 2022)

Representatives of business and local authorities have a common opinion on some obstacles to the recovery and development of business. According to the Center for the Development of Innovations, the Office for the Development of Entrepreneurship and Exports, and the national project Diya, among these obstacles (magnified ranges of values):

lack of a sufficient number of customers (about 50-60%),

lack of sufficient capital (about 30-40%),

unavailability of credit funds (about 20-40%).

At the same time, business representatives and OVA communities have significantly different views on obstacles:

unforeseen actions of the state (from 0% to 30%),

lack of necessary support at the level of Ukraine (from 0% to 16%),

obstacles from regulatory and fiscal authorities (from 0% to 10%),

destruction of supply chains (from 10% to 80%),

lack of personnel (from 10% to 50%),

clients are not calculated (from 5% to 20%),

inefficient, long, expensive logistics (from 20% to 60%),

raw material base for production (from 15% to 60%),

high taxes (from 5% to 15%),

lack of expertise in export (from 15% to 30%)

the unpredictability of the situation in Ukraine (from 50% to 80%)

The difference in the assessment of such obstacles by communities and OVA differs by 1.5-8 times.

Businesses have had to face the risks associated with military conflict, such as danger to personnel, the possibility of reduced demand for goods and services, and other economic difficulties:

- Interruption of logistics chains, reduction of production and sales volumes. This can lead to a decrease in the company's profitability and staff reduction.
- Decrease in demand for some types of products, especially those that are considered necessary, but are not primary needs in the conditions of military operations. But some sectors, such as arms production or security services, may experience an increase in demand.
- Increase in costs for the protection of property, personnel and infrastructure. This can lead to a decrease in the profitability of the enterprise and a decrease in its competitiveness in the market.
- A decrease in the stability of the domestic currency, which can lead to an increase in inflation and difficulties with financing the company's activities, can affect the import and export of goods, and, accordingly, the profit of the business.
- Damage to the property and infrastructure of the enterprise, which can reduce its productivity and increase the costs of restoration and repair.
- Tax changes: The government may introduce tax changes to support military operations and national security, which may affect business revenues.

The task of management in these conditions is to ensure the sustainability of enterprises and preserve their efficiency.

The main strategic tasks of management in the conditions of martial law to preserve the activities of Ukrainian enterprises may include the following:

Ensuring the safety of the company's employees. OS conditions can be dangerous for the life and health of the company's employees. Therefore, management must take measures to ensure their safety, including training and instruction on the rules of behavior in dangerous conditions. The management and administration of the enterprise must take into account making maximum efforts to maintain the normal psychological human condition of employees, be understanding of the limitation of their working capacity or inability to perform their duties for a certain period of time, control threats on site and take measures to inform employees about future and existing threats [3].

The conditions of the SC can disrupt the normal operation of the enterprise, so measures must be taken to ensure the continuity of production. This may include stockpiling necessary materials and equipment, as well as planning work in accordance with martial law conditions.

Increasing production efficiency. Martial law can lead to a decrease in the volume of production and sales of products. Therefore, management should take measures to improve production efficiency and optimize costs.

Development of new products and services. Create new needs and opportunities in the market. Management must take action to develop new products and services.

Business strategies in the context of military conflict must be adapted to the specific situation and require a special approach to planning and execution.

Here are some possible strategies for businesses in martial law:

1. Providing services and products necessary for a military operation: Companies

that provide military equipment, medical equipment and other goods that are necessary for the conduct of war can be in high demand. Such companies can focus their efforts on increasing production volumes and improving product quality to meet demand.

- 2. Companies may consider expanding their market if they can find new markets in Ukraine or abroad where demand for their products or services is stable. For example, companies can produce products that are necessary not only for war, but also for other areas of life, such as medical care.
- 3. Cooperation with the government: Businesses can seek cooperation from the government to obtain support and protect the conditions of doing business. The government can protect businesses from competition and help regulate the market.
- 4. Businesses can consider developing different sectors to reduce risks and increase the stability of their operations.

Transportation and logistics can be important components of a business, as they ensure the delivery of goods and equipment to the front line, as well as ensure the efficient movement of troops and equipment between different zones. Companies must ensure the reliability and safety of their transportation and logistics services.

Companies may seek cooperation with the military to provide transportation and logistics services for military equipment and materials. The government can allocate funds for these purposes, which can ensure business stability.

Also, companies can consider the possibility of developing other modes of transportation, such as air or sea, to reduce the risks associated with the transportation of goods on land. For example, use modern technologies, such as drones, to deliver goods to the front line. This can reduce the risk to staff and ensure more efficient delivery.

Currently, Ukraine faces fundamental problems of destroyed infrastructure, lack of demand, and lack of access to financing and insurance. Reviving the economy and creating new business opportunities will require addressing both old and new challenges. The recovery can and should be used to invest in sustainable companies and infrastructure. Increasing exports, deepening value-added chains in agribusiness, establishing environmentally friendly steel production, and promoting IT startups will create opportunities for economic development.

Unfortunately, sustainable development programs lose their relevance in the conditions of military operations, which led to non-compliance with a number of regulatory and advisory acts in the field of sustainable development.

However, to improve the quality of information disclosure and determine the amount of damage, an important condition is the formation of reports in accordance with the recommendations according to the UN Sustainable Development Goals, the UN Global Reporting Initiative (GRI), including the edition "Linking the SDGs to GRI standards, 2021", TCFD recommendations - working group on disclosure of financial information related to climate, ecology.

Ensuring transparent reporting and disclosure of financial and non-financial information as measures that correlate with modern ESG standards, as well as possible compensations and reparations can be associated with numerous risks, but are in line with the ideas and goals of sustainable development, can and should be the basis anticrisis and force majeure management, the meaning of which is the settlement of conflicts, not their development and obtaining fair compensation for the damage caused. Regulation must be built with maximum consideration of the effects of tools of sustainable economic development (assessment of compliance with ESG standards,

disclosure of financial and non-financial information, implementation of anti-crisis practices of corporate social responsibility, ensuring the balance of rights and freedoms of citizens during the implementation of compensatory measures.

Therefore, proper management and training of specialists based on the principles of sustainable development and horizontal division of power have a positive impact on the company's development even in difficult external conditions. If each specialist has some authority and can make responsible decisions, it increases the sense of touch and contributes to a more efficient team work. The level of trust and mutual understanding between participants increases, which allows us to avoid conflicts and jointly implement the most ambitious projects even under the intense pressure of circumstances over which we have limited influence.

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#### DIGITAL ADAPTATION FOR THE DEVELOPMENT OF UKRAINIAN BUSINESS

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Digital transformation is an important stage of business reorientation at the current stage of development of the Ukrainian economy. In addition, the existing mechanisms of sustainable development of economic systems must be ensured in a harmonised space. In such circumstances, the harmonisation and intensive combination of digital technologies with sustainability models is a pressing issue.

The functioning of companies is based on the use of modern information systems and technologies. Digital adaptation strategies primarily involve maximising the involvement of information systems in business processes. The creation of adequate models of digital development should be combined with strategies for competitive development of companies.

Integrated models may be based on the following components: creation of an electronic network for collecting, processing and transmitting information on the operational activities of the company's structural units; preparation of electronic data on the effectiveness of current production and commercial activities; preparation of electronic document flow between production and commercial units; creation of a single integrated platform for combining the results obtained with the ability to build business intelligence for making management decisions.

It should be noted that the concept of building a management platform simultaneously involves the creation of a model of business analytical and performance components. The business analytical component of the proposed model should include a programme of organisational, managerial, economic analysis, determination of performance by indicators of the financial condition of the business, etc. The effective components of the information management platform for making management decisions should be based on the creation of programmes involving strategic analysis, SWOT analysis, risk management and crisis management, modelling, portfolioing, forecasting and strategising programmes.

The main purpose of this digital model is based on the full-fledged design of analytical indicators that will become the basis for creating a future competitive development strategy for the business. The task and purpose of the strategy model is to combine the existing methods of the company's business analytical activities and to implement new strategies based on the results of the identified results. In addition, the availability of existing methodological support will provide opportunities to engage integrated analytical mechanisms at each stage of the creation and implementation of this

process in business. Companies in such conditions will have a digital competitive advantage - the completed programme will have a full range of results and measures for making management decisions.

Understanding the importance of digital adaptation of Ukrainian businesses using the proposed platform will allow companies to simplify their analytics and management systems. At the same time, the proposals have risks that are more related to the information component of this programme. Understanding the opportunities and risks in cyberspace requires businesses to engage not only modern information technology but also specialists who can mitigate risks in this area. In addition, it is worth noting the financial component of attracting the latest information technologies for business. Thus, the development of the latest techniques should be based on the creation of financial opportunities and financial support for Ukrainian business.

In such circumstances, one of the ways to mitigate these risks may be to join the state digitalisation and digital adaptation programmes that have been developed and are now being implemented in various areas.

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#### ENHANCING COMPETITIVENESS THROUGH EFFECTIVE MANAGEMENT OF INNOVATION PROCESSES IN ECONOMIC ENTITIES\*

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In today's globalized and rapidly changing business environment, innovation has become an essential driver of competitiveness for economic entities. However, innovation is a complex process, and managing it effectively can be complex. To remain competitive, economic entities must adopt innovative management strategies that effectively leverage their resources, capabilities, and networks. This paper explores the role of effective management of innovation processes in enhancing the competitiveness of economic entities.

Innovation is the process of creating, developing, and commercializing new products, services, or processes that deliver value to customers and generate new sources of revenue (Chesbrough, 2010). Innovation is essential for economic entities because it enables them to create a competitive advantage by offering unique products or services that meet customers' changing needs and preferences (Porter, 1998). However, innovation is not only about creating new products or services but also about improving existing ones.

Effective management of innovation processes is crucial for economic entities to achieve sustained competitiveness. Innovation management refers to the processes, tools, and techniques enabling organizations to manage innovation effectively (Goffin & Mitchell, 2010). Innovation management involves identifying, evaluating, and selecting ideas for innovation, developing and testing new products or services, and commercializing them (Fagerberg & Fosaas, 2014).

Open innovation, co-creation, and strategic partnerships are some of the strategies that economic entities can use to manage innovation effectively. Open innovation involves using external sources of knowledge and expertise, such as customers, suppliers, and partners, to create and develop new ideas (Chesbrough, 2006). Co-creation is a collaborative process in which economic entities work with customers, suppliers, and partners to create value (Prahalad & Ramaswamy, 2004). Strategic partnerships involve the formation of alliances with other organizations to share resources, knowledge, and

capabilities and develop new products or services (Desouza & Awazu, 2005).

Effective management of innovation processes is critical for economic entities seeking to enhance their competitiveness.

Innovation is increasingly recognized as a critical factor for the competitiveness of economic entities. However, managing innovation processes can be complex, and failure to do so effectively can lead to wasted resources and lost opportunities. The authors explore the role of effective management of innovation processes in enhancing the competitiveness of economic entities. The authors examine the fundamental concepts of innovation management and competitiveness and highlight the importance of effectively managing innovation processes in achieving sustained competitiveness. The authors also discuss various strategies for managing innovation processes, including open innovation, co-creation, and strategic partnerships. Finally, the authors provide practical recommendations for economic entities seeking to enhance their competitiveness by effectively managing innovation processes.

The research has highlighted the importance of innovation management and discussed various strategies for managing innovation processes, including open innovation, co-creation, and strategic partnerships. By adopting innovative management strategies, economic entities can leverage their resources, capabilities, and networks effectively to create and commercialize new products or services that deliver value to customers and generate new sources of revenue. Economic entities that need to manage innovation effectively risk losing their competitive advantage and falling behind their rivals.

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#### EUROPE'S DIGITAL DECADE AND ARTIFICIAL INTELLIGENCE: A GUIDE FOR UKRAINE

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Artificial intelligence can be applied in many fields, including health care, energy consumption, automotive safety, agricultural production, combating climate change, monitoring financial risks, and many others. Artificial intelligence can also help detect fraud or abuse, cybercrime and threats, becoming an effective tool in the hands of law enforcement agencies to fight crime. At the same time, the use of such technologies brings new legal and ethical challenges. Understanding the importance of this, the European Commission has formulated and brought to the global debate its approach to artificial intelligence, focusing on excellence and trust, aimed at strengthening Europe's research and industrial potential, ensuring safety and the fundamental rights of citizens, as new technologies and algorithms know no borders [4].

Aiming to build a resilient Europe for the Digital Decade, where people and businesses can enjoy the benefits of AI while feeling safe and protected, the European Commission has developed The European AI Strategy, which aims to make the EU a world-class AI hub and ensure that AI was human-centered and reliable [3]. This goal has evolved into a European approach to excellence and trust through specific rules and actions.

Implementing a European approach, the European Commission and Member States have agreed to increase excellence in the field of artificial intelligence by joining forces on policy and investment. The first step was to review The 2021 review of the Coordinated Plan on AI with the aim of aligning actions and priorities with the current European and global AI landscape and putting the AI strategy into action. The use of investments for the development of the field of artificial intelligence is directed through the Horizon Europe and Digital Europe programs.

The creation of high-performance reliable artificial intelligence systems requires secure access to high-quality data, which has become a key topic of European legislative initiatives such as the EU Cybersecurity Strategy, the Digital Services Act and the Digital Markets Act, and the Data Governance Act.

A safe and innovation-friendly environment for users, developers and manufacturers is only possible when artificial intelligence is reliable. For the legal regulation of artificial intelligence, the European Commission proposed 3 interrelated legal initiatives that will contribute to the creation of reliable artificial intelligence, in particular:

- a European legal framework for AI to address fundamental rights and safety risks specific to the AI systems;
  - a civil liability framework adapting liability rules to the digital age and AI;
- a revision of sectoral safety legislation (e.g. Machinery Regulation, General Product Safety Directive) [2].

Taking into account the global nature of digitization and the large-scale application of new digital technologies, in particular artificial intelligence, international cooperation

in the field of artificial intelligence is also of particular importance for the competitiveness of European industry. In addition, the EU aims to gain leadership in some new areas, including cloud and data applications, and increase support for research and use of technologies in artificial intelligence, 5G, data analytics, etc., as envisaged in Shaping Europe's digital future, A New Industrial Strategy for Europe, Digital Europe Programme [1].

Considering the course towards the European integration of our country, it is obvious that the EU standards in this area will be the basis of the relevant norms of Ukrainian legislation in the future. But to date, only the Concept of the Development of Artificial Intelligence in Ukraine has been approved in Ukraine. Lack of conceptual foundations of state policy in the field of artificial intelligence, low level of digital literacy, public awareness of the general aspects, opportunities, risks and safety of the use of artificial intelligence and the absence or imperfection of legal regulation of artificial intelligence (including in the fields of education, economy, public administration, cyber security, defense) slow down the process of digital transformation of our state and do not contribute to integration and cooperation between Ukraine and the European Union.

Thus, it is urgent today to increase the level of knowledge and awareness of society on issues of digital transformation, the widespread introduction of artificial intelligence technologies, promoting trust in such technologies, understanding and applying European experience in the field of artificial intelligence.

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Regulatory framework proposal on artificial intelligence. URL: https://digital-strategy.ec.europa.eu/en/policies/regulatory-framework-ai

Shaping Europe's digital future. URL: https://digital-strategy.ec.europa.eu/en/policies/european-approach-artificial-intelligence

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#### FORECASTING, PLANNING, PROGRAMMING AS A GUARANTEE OF EFFECTIVE IMPLEMENTATION OF STATE SCIENTIFIC POLICY

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**Problem's setting.** The proclamation of independence, the formation of a civil society, the change of economic conditions of the economy management, the ideology of the development of market relations in Ukraine – all of those things set new challenges for the authorities regarding public administration in the field of science. In terms of the globalization challenges, the forms of science organization, historically, can not remain unchanged, so there is an urgent need for the transformation of state policy because of the transition from exclusively state science to the creation of new mechanisms of public administration, sources of funding and organization of scientific activities. Besides, due to the complication of the public administration object, where market elements appeared, it is necessary to develop effective mechanisms that would ensure the development of science and at the same time create conditions for improving its economic and social efficiency.

Analysis of recent research and publications. Various theoretical substantiation of state policy in the field of science in general and in Ukraine in particular can be found in the scientific works of such famous scholars as: A. Abdulov, A. Azizov, V. Arutiunov, A. Bezborodov, O. Vahanov, H. Volkov, L. Hokhberh, N. Hordieieva, D. Hvishiani, A. Hudkova, O. Dynkin, H. Dobrov, S.Zdioruk, H. Kalytych, D. Karkavin, K. Korzhavin, V. Kremen, B. Liebin, B. Malitskyi, L. Mindeli, S. Mykulynskyi, O. Popovych, K. Popper, V. Rasudovskyi, A. Sokolov and others.

**Previously unsolved problems.** Recently, the Ukrainian state has been actively involved in creating elements of the market innovation system and adapting science as its most important element to new political, social and economic conditions. However, the actions of the public administration agencies in this area were not always systematic and consistent. As a result, new and old forms of organization of science both exist in parallel, and come into conflict to some extent. A number of areas of public administration of science does not have adequate human resources, information and analytical, financial support.

The foregoing requires the need to form a complete and perfect concept of state policy in the field of science in Ukraine and to determine the key determinants of its effectiveness.

**Main part.** Speaking about state policy as the category, we must take into account the fact that although in case of the lack of a clear definition of the category of "state policy" in the legislation of Ukraine, it is necessary to refer to the works of scholars on this issue. In our opinion, any definition of state policy in the field of science should not contradict the general idea about politics in its traditional sense.

Thus, politics can be regarded as a consequence of the effects of the external environment and the distribution of power, as well as a set of leading ideas, and as a set of institutional structures, and as a decision-making process[1, c. 82]. In the most abstract form, politics represents the sphere of interaction between classes, parties, nations,

peoples, states, social groups, power and population, citizens and their associations. It is the most important and complex part of social life [9, c. 12].

The abstract form of understanding politics does not determine a full-fledged approach to ascertaining its content, as there is a lot of controversy surrounding the definition of the most categorical notion. It is due to the multidimensional and multifaceted nature of this phenomenon.

This statement is confirmed by the historical fact, the essence of which is reduced to the fact that the issues of politics, state, society constantly attracted attention of thinkers of different eras and peoples. In the history of political thought, we distinguish such classical works on social philosophy as "State" and "Laws" by Plato, "Politics" by Aristotle, "On the State" and "On the Laws" by Cicero, "The Prince" by Machiavelli, "Leviathan" by Hobbes, "A Political Treatise" by Spinoza, "The Spirit of Laws" by Montesquieu, "On the Social Contract" by Rousseau, "The Metaphysical Foundations on Natural Science" by Kant, "Grundlagen des Naturrechts" by Fichte, "Philosophy of Law" by Hegel, as well as the works by Locke, Weber, Jaspers and other thinkers of the past and present time. However, it should be noted that the works of the ancient pillars of public opinion study not so much politics as a certain kind of state activity, but as a political world in the modern sense [2, c. 21].

The problem of state policy in the national scientific literature has not yet been adequately covered, but some issues of this problem, namely: conceptual foundations of state policy, its analysis, means of implementation, etc. set out in the writings of some domestic scholars. Thus, the conceptual foundations for understanding the state policy in general can be reduced to the following formulations:

state policy is the political activity of the state and its institutions aimed at ensuring order in society, harmonizing and subordinating various social interests, achieving social harmony and organizing the management of the development of social processes (M.M. Lohunova, V.A. Shakhov, M.F. Shevchenko) [3, c. 26];

state policy is relatively stable, organized and purposeful activity (inaction) of state institutions, carried out by them directly or indirectly regarding a certain problem or a set of problems that affect the life of society (V.A. Rebkalo, V.V. Tertychka) [4, c. 6];

state policy is a relatively stable, organized and purposeful government activity in relation to a particular problem or object of consideration, which is carried out directly or indirectly through authorized agents and affects the life of society (V. Romanov, O. Rudik, T. Brus) [5, c. 5].

In turn, state policy is reflected in its functions. It is well-known that the main function for the modern legal state is to protect the interests of a man, to protect his rights and freedoms, to ensure proper living conditions. Other functions of the state are, to any extent, subordinated to its implementation. Among them, one can distinguish, first of all, the creation of democratic conditions for the definition and coordination of interests of various social groups of society; and secondly, the creation of conditions for the development of production; thirdly, the promotion of education, science and culture; fourthly, environmental protection; fifth, protection of the constitutional system; sixth, ensuring law and order.

In this regard, one can talk about state policy in various spheres of society. For instance, we talk about social, cultural, scientific, economic, regulatory, environmental, legal policy of the state. Thus, state policy is reflected in the purpose to regulate social relations, which are formed in real life.

The issue of the very nature of state policy in the field of science also causes contentious debate, reflecting the divergent views of scholars and practitioners on the role of the state in the scientific system. In this context, we consider it necessary to analyze the modern approaches of Ukrainian scholars to the the conceptual category titled in this article, which can be reduced to understanding in narrow and broad aspects.

B.A. Malytskyi in the broad sense defines state policy in the field of science as the long-term behavior of the state in regard to the issues related to science [6, c. 8].

Representatives of the narrow approach (S. I. Zdioruk [7, c. 33], H.I. Kalytych, K.M. Korzhavin [8, c. 105]) perceive the state policy in the field of science as the totality of actions of state officials (state authorities, which they personify), aimed at resolving problems encountered in the process of human activities in the field of science. They distinguish among the types of principles for the formation of state policy in the field of science the following ones: legislative, normative and purely political (personal). The first two directions are often combined with one another, the latter is mainly considered in the context of an individual's role in the state process because of the complexity of distinguishing the actions of some political leaders in making a political decision, especially when the change of policy direction occurs contrary to the current legislative and normative principles of the activity.

The analysis of the above definitions indicates that state policy is often viewed from structural positions, that is, as an entity consisting of a certain set of elements. This approach is mechanical to a certain extent, because those numerous relations and factors that ensure its smooth functioning remain unaddressed. That is why, in our deep conviction, it is necessary to distinguish two aspects – strategic and tactical as the basis of understanding the state policy.

Taking the following scientific provisions as the basis, we can define state policy as a strategy and tactics that determines the state's activities in a certain area of life of society and the state. Such an activity is carried out by the state systematically in order to achieve certain socially useful results. In our opinion, this very approach to the understanding of state policy allows us to show its teleological nature, i.e. that it is aimed at achieving a certain specific goal, which should be determined by the state policy strategy in a particular field. This, however, does not exclude the possibility that there may be intermediate goals, which achievement is determined by the tactics of state policy and achievements of which are a certain stage in the reaching the general goal of state policy in a particular field.

Taking into account the above mentioned, in our opinion, state policy in the field of science can be nominated as a strategy and tactics of state activity in the field of science, which is in line with national interests and international standards. At the same time, the important stages of the formation and, at the same time, the key determinants of its effectiveness are forecasting effort, strategic planning and object-oriented programming.

Forecasting effort in the field of science is scientifically grounded hypothesis about the possible state of science in the future, depending on the nature of the forecast background, as well as on the terms and means of achieving the set goals. The modern stage of social development is saturated with spontaneous events, paradoxical phenomena and uncontrolled processes capable of instantly redrawing the image of the future. Under such conditions, no primary forecast (especially medium or long-term) remains forever relevant – from the moment of creation to the end of the action. Under the pressure of random factors, the difference between the initial parameters of the

forecast and the actual socio-economic indicators is increasing, until it reaches a critical limit. After this, the forecast finally loses relations with reality, and the programs and plans developed on its basis lose their practical importance.

Only the regular corrections due to changes in the object of regulation and the environment (forecast background) can stop the prognosis "devaluation" of the forecast. Only a systematic correction allows us to ensure the proper flexibility of the forecast, its adequacy to the current situation, and "consistency" with objective tendencies. Thus, scientifically-based forecasting is not simply a basic forecasting (forecast of socioeconomic development, forecast of the effectiveness of planned activities, etc.). It is also their continuous refinement at all stages of the process.

Unfortunately, prognostic activities in the field of science are often carried out by evasion of the methodology. Over the past decades, any conceptual or programmatic document on science issues has been reviewed in regard to the relevance of forecasting. Appropriate forecasts remained in force even when their unreality became apparent from the very beginning. In general, prediction in the field of science has limited, static nature. It is carried out only at the previous stages of making strategic decisions and never accompanies the process of their implementation.

Touching upon the problems of forecasting, it is impossible to evade the issue of verification. Verification is an important part of the forecasting process. In the course of verification, the degree of reliability of the forecasts is determined, their gaps are clarified, the causes of the errors are established. In turn, the obtained information helps to rationalize the forecast activity, to avoid past failures and to improve overall planning effectiveness.

Verification is important not only in terms of summing up the final results of the forecast. It is expedient and desirable at the stage of its development. Preliminary verification – is an effective tool for checking the forecasts for the compliance with the requirements of modern science, the calculation of the probability of their implementation for the given confident intervals, assessment of their functional completeness.

Unfortunately, forecasting in the field of science is not supported by verification either at the initial stage or in the final phase. This is precisely why one can explain the fact that many of the forecasts lose relevance shortly after their development, and their methodological errors are replicated with constant consistency.

Strategic planning is the mean of formal prediction of future problems and opportunities in both any sphere and the field of science.

Strategic planning in the field of science is the key element of strategic public administration in the development of science, which helps authorities responsible for the implementation of scientific policy directions to make decisions that are coordinated with the approaches to the realization of their functions, objectives and tasks.

The role of strategic planning in forming state policy in the field of science can not be overestimated that allows consolidating resource potential in the most important areas of government activity, rational distribution of existing forces and resources, avoiding various imbalances, unnecessary steps, and wasteful expenditures. Finally, the flexibility of the state policy in the field of science in Ukraine, its tolerance to crisis phenomena and adequacy to the challenges of time precisely depend on the strategic planning in the field of science.

At the present stage of the development of Ukrainian society, the serious

disadvantage of strategic planning both in any sphere and in the field of science is its discrete nature. In accordance with the current legislation, the development of state target-oriented programs and their concepts is carried out on the initiative of public authorities by the actualization of certain problems of social life. In practice, this means that the target-oriented programs (concepts) are adopted not with a predetermined periodicity, but depending on a number of objective and subjective factors, such as: the existence of a certain problem, the existence of political will to solve it, the appropriateness of socio-political situation, etc. And this leads to the fact that unresolved problems continue to be escalated and gain increasing scales.

The main form of planning in the field of science is the development of state targetoriented programs aimed at solving the most important problems of the development of science.

State target-oriented programming in the field of science is an algorithm for developing a set of interrelated tasks and measures aimed at solving the most important problems of science development, are carried out by the usage of the funds of the State Budget of Ukraine and agreed upon by terms of execution, composition of performers, resource provision.

State target-oriented scientific, research and technical programs are the main mean of concentration of scientific and technical potential of the state for solving the most important natural, technical and humanitarian problems and realization of the priority directions of science and technology development.

The key points of state target-oriented programming in the field of science are: identification and systematization of strategic goals; development of an integrated system of measures aimed at their achievement; construction of a clear algorithm for the implementation of the planned activities (with a preliminary definition of the performers, sources and amounts of financing); maximum determination of planned parameters, criteria, indicators; the presence of control mechanisms and responsibility for the achieved results. Thus, state target-oriented programming in the field of science is characterized by complexity, multi-parameter nature, algorithmics, applied orientation and imperativeness.

Unfortunately, the development, adoption and implementation of most of the science-related programs is outside the unified legal field. There are currently no legislative acts or, at least, government decrees that would establish general requirements for non-targeted program documents, would regulate the procedure for their creation, would provide control over their implementation. This, on the one hand leads to a huge difference in programming, and on the other – stipulates the irresponsibility of its subjects.

Taking into account the above scientific considerations, we can state that the reasonableness of state policy in the field of science, its purposefulness, reality and efficiency depend on the quality of forecasting effort, planning and programming. At the same time, even minor mistakes in their implementation may turn into serious problems while solving important political tasks. That is why, in our opinion, it is expedient to make amendments to the Art. 56 of the Law of Ukraine "On Scientific, Research and Technical Activity" and to supplement it with the Art. 56-1, which should define forecasting effort, strategic planning and object-oriented programming as the methods of state regulation and management in scientific, research and technical activity.

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#### LAND RESOURCES MANAGEMENT ISSUES UNDER THE MARTIAL LAW

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Land management is an important part of sustainable development and ensuring food security. Effective use of land resources helps to ensure sustainable development of agriculture, reduction of waste and environmental pollution, as well as improvement of the quality of life of the population.

The organizational structure of land management is determined by the legislation of the country and depends on the specific situation in the country. Management of land resources is carried out:

- state level (the central body of executive power responsible for land relations in the country, in Ukraine this body is the Ministry of Economic Development, Trade and Agriculture):
- regional level (by the executive authorities of the relevant regions. In Ukraine, these can be regional departments for the development of the agricultural, industrial complex and land relations);
- local level (local bodies of executive power, such as district state administrations, city councils, etc. These bodies control the use of land plots, carry out land monitoring and ensure compliance with legislation on land relations)[1].

To ensure an effective management of land resources, it is necessary to create a system which will provide the coordination between different interested parties and have mechanisms for monitoring compliance with established rules and regulations. The organizational structure of land management should be flexible and adaptable to changes in the economic, social and ecological environment. Besides, an important aspect of the

organizational structure of land management is to provide an access to information about land relations and land management processes. This contributes to increasing the transparency and openness of the decision-making process on the use of land resources and provides the possibility for public control.

Therefore, an important component of the organizational structure of land resources management is ensuring the flexibility and adaptability of the system, the involvement of public organizations and public representatives in the decision-making process, and access to information about land relations and land resource management processes. Land management procedures include such stages as:

- land use planning (presupposes the development of a strategy and plans for the use of land resources taking into account ecological, economic and social aspects);
- registration of land rights (includes maintenance of the state land cadastre, where all land plots in the country are registered, and registration of land rights in accordance with the legislation);
- control over the use of land plots (performed by local authorities and other relevant bodies for the purpose of checking compliance with the conditions of land use established by legislation and taking measures to eliminate violations);
- establishment of land tax (presupposes proper assessment of land plots and establishment of tax rates in accordance with legislation).

In addition, the management of land resources may include such stages as allocation of land plots for ownership or use, resolution of disputes regarding land rights, implementation of land condition monitoring, and others. All these stages are aimed at ensuring effective and legal use of land resources in accordance with legislation.

On February 24, 2022 since Russia's full-scale invasion of Ukraine began, land resources are the subject of threats:

- 1) soil destruction and pollution;
- 2) destruction and destruction of infrastructure;
- 3) lack of control over land use in temporarily occupied territories;
- 4) mining territories;
- 5) violation of property rights.

Land management has a number of features that differ from traditional approaches in peacetime, namely the provision of:

- 1) protection of land resources and preservation of their functional integrity in conditions of military aggression;
- 2) stability of land systems. This involves the application of measures aimed at preserving the soil cover and preventing its erosion, as well as ensuring the proper organization of water management in areas with active hostilities.
- 3) effective use of land resources, which involves the development and implementation of effective measures to support agricultural production and the development of other sectors of the economy that are related to land resources;
- 4) effective control over the use of land resources. Various tools such as satellite images, aerial photography, etc. can be used to perform it.

Thus, the management of Ukraine's land resources in the conditions of Russian aggression has its own characteristics, related to the need of ensuring their protection and effective control over their use during the war. Such measures will allow preserving and effectively use the land resources despite difficult conditions and threats.

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#### LEADERSHIP STRATEGY AND ADMINISTRATIVE MANAGEMENT IN CONDITIONS OF STABLE DEVELOPMENT

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In the conditions of stable development of modern organizations, the strategy of leadership and administrative management are important factors of success. This strategy helps organizations respond to challenges, ensure competitiveness and achieve their goals. In this article, we explore the role of leadership strategy and administrative management in the context of sustainable development, review previous research and analyse their results, and consider the possibilities of applying the theory in practice.

One of the main approaches to leadership is transformational leadership. According to the concept of J. Burns, transformational leadership is aimed at increasing the level of motivation and development of subordinates, which helps to improve the work of the organization as a whole. A number of studies (Y. Bass, R. Riggio, etc.) confirm that transformational leadership is an effective tool that helps to increase the effectiveness of the organization. Transformational leadership is a leadership strategy that assumes that a leader must bring about change in an organization or team in order to improve performance and achieve new levels of success. This may include developing new ideas, strategies and processes, as well as developing the competencies and skills of team members.

Transformational leaders have the following characteristics:

Intellectual stimulation: Leaders have the ability to stimulate their subordinates to new ideas and help them develop their knowledge and skills.

Social stimulation: Leaders have the ability to stimulate their subordinates to cooperate and interact as a team.

Individual encouragement: Leaders have the ability to recognize and reward the individual achievements of their subordinates.

Improving relationships: Leaders have the ability to create favorable conditions for

interaction and cooperation in a team.

Ideological stimulation: Leaders have the ability to promote specific goals and defined values in the team.

It should be noted that transformational leadership can have a positive effect on team and organizational effectiveness. Such leaders usually create a climate of cooperation and trust in the team, as well as inspire subordinates to achieve greater results and promote their development. This can lead to an improvement in the quality indicators of the organization's work, such as innovation, customer satisfaction, production efficiency, etc.

Transformational leadership is one approach to leadership strategy that can bring many positive results in an organization or team. However, the use of this approach should be carried out taking into account the specifics of the organization and the situation in order to achieve the maximum effect.

Also, studies (M.Follett, J. Agyemang, A. Ansong, Y. Gao, etc.) show that the success of the organization depends on the level of efficiency of administrative management and leadership strategies. Administrative management is an approach to management focused on achieving specific goals and optimizing processes. This approach focuses on planning, organizing, managing and controlling. Research results (P. Drucker, R. Kotter, Northouse, P. G.etc.) show that effective administrative management is a key element of organizational success.

Studies conducted by various authors indicate that the strategy of leadership and administrative management are indeed key factors in the success of organizations in conditions of stable development.

New challenges are emerging in business and human resource management that require effective leaders and managers to be able to adapt and make strategic decisions. The following key topics related to the issue of leadership strategy and administrative management in conditions of stable development:

Strategic management. Research shows that effective leaders and managers must have clear strategy and planning that enables them to adapt to changes in the economic environment and succeed.

Development and management of human resources. An effective leader must develop and support his team, helping them to grow and achieve their goals. Management and development of human resources is a key element of effective administrative management.

Leadership qualities and characteristics. Effective leaders have specific qualities and characteristics such as decision-making, communication, collaboration and conflict resolution skills.

Technological changes and innovations. In today's world, technological changes and innovations are an indispensable component of sustainable development, and effective leaders and managers must be able to implement and manage these changes to ensure the company's competitiveness.

Organizational culture. Organizational culture is essential to effective leadership and administrative management. Effective leaders must be able to create and maintain a positive and progressive organizational culture that encourages development and achievement of results.

Companies that apply leadership strategies report improved motivation, increased work efficiency, and reduced personnel losses. Effective administrative management

helps ensure effective organization of processes and achievement of set goals.

Therefore, based on the research results, it can be concluded that leadership strategies and administrative management are key factors in the success of organizations in conditions of stable development. Effective administrative management helps to ensure the efficiency of the organization and the achievement of the set goals. Overall, research supports the role of transformational leadership in increasing employee creativity and engagement, job satisfaction, and innovative performance. To successfully implement a transformational leadership strategy, it is necessary to take into account the context of the organization and use it taking into account the individual needs of employees. To achieve success in terms of sustainable development, organizations must ensure effective interaction between administrative management and strategic leadership.

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#### MARKETING STRATEGIES IN THE CONSTRUCTION MARKET

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The construction market is a complex and dynamic environment with significant challenges and opportunities. It is becoming increasingly competitive, with the growing number of companies offering construction services and products. Changes in social and economic conditions can affect consumer habits in the construction sector. Legislative changes in the construction industry, such as new building codes, energy efficiency requirements, environmental standards, etc., can impact the marketing strategies of companies. The adoption of new technologies in this sector, such as digital solutions, 3D

printing, the use of drones, smart buildings, etc., may require the development of new marketing strategies aimed at promoting these technologies, their advantages, and opportunities in the market [6].

In the modern construction market, marketing strategies involve comprehensive measures and approaches aimed at achieving specific company goals, increasing its competitiveness, and satisfying the needs and expectations of customers. Researchers Zolotarova O. and Bondarenko N. believe that to achieve a competitive advantage, effective interaction with consumers, and a successful position in the market for construction services, marketing strategies require a comprehensive approach that takes into account the peculiarities of the market and uses various methodological approaches and tools [2].

The market for construction and non-construction premises can be defined as an economic segment that includes the purchase, sale, and rental of buildings and non-building objects, such as residential buildings, commercial premises, warehouses, offices, factories, and other buildings, structures, and land plots. Currently, there are approximately 88,737 construction companies in Ukraine, of which 3,600 are large and medium-sized [1].

Marketing in the construction industry is a complex of strategies and actions aimed at planning and implementing an effective advertising campaign, increasing brand awareness for the construction company, attracting new clients, and maintaining relationships with existing ones.

According to Kotler F., a well-known American marketer, marketing is a comprehensive approach to business management that involves analyzing, planning, implementing, and controlling a company's activities in order to satisfy customer needs and achieve desired results [4]. The scholar also believes that marketing strategies include product or service development, establishing competitive prices, effective product promotion in the market, including advertising, sales, public relations, and ensuring product accessibility to the target audience through the selection of the right sales channel [5].

Important aspects of marketing in the construction industry include studying the needs and desires of the target audience, analyzing competitors, developing and implementing an effective real estate sales strategy. It is also important to remember the ethical aspect of marketing in the construction industry, as construction directly affects people's lives, and it is necessary to comply with all norms and rules.

Developing a marketing strategy in the construction industry can be a complex process that requires market analysis, studying customer needs and demands, identifying competitive advantages, choosing marketing tools, and developing plans for implementing the strategy. The stages of developing a marketing strategy are as follows:

- 1. Market analysis studying the market for construction services and products, its size, dynamics, trends, and major players. Analyzing supply and demand in the market, identifying target customer segments, their needs, and demands.
- 2. Identifying competitive advantages establishing the main competitive advantages of the company in the construction market. These could be, for example, high-quality products, fast project implementation, low prices, reliability, etc.
- 3. Setting goals and objectives formulating specific marketing goals that align with the company's strategic objectives. Increasing sales volume, attracting new customers, increasing brand awareness, etc.

- 4. Selection of marketing tools choosing the optimal set of marketing tools such as product strategies (product development and positioning), pricing strategies (setting prices, discounts, promotions, etc.), communication strategies (advertising, PR, customer relations), distribution strategies (sales channels, distribution), service strategies (aftersales service, warranties), and others;
- 5. Development of marketing plans including a description of activities, timelines, budgets, and expected results. These could be plans for promoting new products, advertising campaigns, customer support initiatives, implementing innovative solutions, etc.;
- 6. Implementation and control implementing marketing initiatives and monitoring their effectiveness. Monitoring the implementation of the marketing strategy, analyzing results, making adjustments to plans, correcting mistakes, adapting to changes in the market and understanding customer needs and requirements [3].

Overall, it can be said that the construction market of Ukraine is an important segment of the national economy that is dynamically changing and influenced by various factors. The growth in the number of companies in this industry and the emergence of new technologies require companies to develop new marketing strategies. Regulatory changes can also impact marketing in the construction industry. As for the economic essence of the construction industry, it lies in the creation and renewal of fixed capital, which is necessary for the functioning of the infrastructure of almost all sectors of the economy.

It is important to constantly improve the marketing strategy, adapt to changes in the industry and customer demands, and respond to market challenges. Experimenting, improving, and developing is what is needed to maintain the competitiveness of a construction company in the market. Creating mutually beneficial partnerships and utilizing digital marketing tools to effectively promote services and products is also essential.

Marketing is a continuous process, and it is necessary to constantly improve strategies, analyze results, and adapt to changes in the industry and the market. With the right marketing strategy and appropriate measures, it is possible to attract new clients, increase sales, and ensure stable growth for a construction company.

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### OMNI-CHANNEL COMMUNICATIONS AS THE BASIS OF SUSTAINABLE DEVELOPMENT OF THE COMPANY

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In scientific literature, the communication channel refers to the environment in which the consumer interacts with the company. As one of the simplest methods of communication, single-channel marketing communications involve communication with the consumer through the use of a single communication channel. For example, it can be interaction only through the company's website or only in a traditional store.

Multichannel marketing communications involve the use by companies of several communication channels that operate independently of each other. For example, through the site and the direct work of sales managers. Using multiple channels when interacting with the target audience is necessary when a company needs to be where its customers are.

The peculiarity of cross-channel marketing communications is due to the fact that the modern consumer interacts with the seller in the way that is most convenient for him, he wants to be able to switch from one communication channel to another if necessary. For example, if a customer purchased a product in an online store, he should be able to return or exchange it in an offline store. To ensure continuous interaction with the consumer, today it is necessary to integrate communication channels, facilitate the transition from physical channels (paper catalogs, printed advertising) to virtual ones with the help of QR codes, barcodes and tools of augmented and virtual reality [1-3].

Omnichannel marketing communications involve combining all possible communication channels around the user. They are the basis of modern marketing mix. Such a marketing strategy gives an enhanced effect from the joint use of various means of communication. Today, it is necessary to have a single communication channel, so traditional companies seek to enter the Internet environment, and online companies consider the possibility of organizing their physical presence.

Thus, we can observe the evolution of marketing communications from the use of a single channel for interaction with potential and real customers to the use of different methods and tools. With an omnichannel approach, the consumer interacts with the brand, and not with the communication channel itself. There is a multi-channel interaction, which is focused on an integrated approach to the consumer through all available communication channels - store, online store, through social networks, by phone or in another way. The consumer should not be aware of the difference in communication channels. This is especially important in the case of a repeat application (repeat purchase), when the consumer already has experience of communication with this

company [4, 5].

An omnichannel approach in marketing involves: uniform prices and the company's assortment, the possibility of payment in any convenient way (in the office, through a bank, cashless transfer, payment on the website, etc.), a single database of customers and their purchase history.

The main advantages of using omnichannel marketing communications are: expanding market share due to expanding the number of marketing channels and reaching the target audience; implementation of personalized loyalty programs with the help and availability of a single customer database; increasing the brand's goodwill by increasing the recognition of the organization on the market among consumers; increase in turnover of the company, etc.

Today, companies are forced to adapt to omnichannel consumers who interact with them through the use of various devices and platforms more actively than ever before. The buyer today chooses the most convenient channel for making a purchase and interaction with the brand, thereby showing loyalty to the brand.

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#### ROLE OF CHIEF SUSTAINABLE OFFICERS IN STRATEGIES IMPLEMENTATION

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Implementing sustainable strategies can be a complex process that requires significant effort and resources from an organisation. Some of the main challenges that organizations may face when implementing sustainable strategies include:

Lack of resources: implementing sustainable strategies may require significant financial, human, and technical resources, which may be a challenge for some

organisations, especially smaller ones.

Lack of knowledge and expertise: implementing sustainable strategies may require specialised knowledge and expertise, which may not be readily available within an organization.

Resistance to change: implementing sustainable strategies may require changes in the way an organisation operates, which can be met with resistance from employees, stakeholders, and other parties

Regulatory and legal challenges: some sustainable strategies may be subject to regulatory and legal requirements, which can add complexity and uncertainty to the implementation process.

Lack of alignment with business objectives: sustainable strategies must align with an organization's overall business objectives and goals, or they may be perceived as a distraction or a burden.

Measurement and reporting: measuring and reporting on the effectiveness of sustainable strategies can be challenging, as sustainability outcomes can be difficult to quantify and communicate.

Overcoming these challenges requires a commitment to sustainability from senior leadership, adequate resources, and effective communication and collaboration across all levels of an organisation.

The Chief Sustainability Officer (CSO) plays a critical role in the implementation of sustainable strategies within an organisation. Their main responsibilities include:

- 1. Developing and communicating the sustainability vision and strategy. The CSO is responsible for developing a clear vision and strategy for sustainability within the organization. They must communicate this vision and strategy to stakeholders, employees, and the public.
- 2. Setting sustainability goals and targets. The CSO is responsible for setting ambitious, measurable, and achievable sustainability goals and targets. They must work with other departments and stakeholders to ensure that these goals align with the overall business objectives.
- 3. Driving sustainability initiatives. The CSO is responsible for driving sustainability initiatives and programs within the organisation. This includes working with cross-functional teams to identify opportunities for improvement, implementing sustainable practices, and measuring the impact of sustainability initiatives.
- 4. Collaborating with stakeholders. The CSO must collaborate with internal and external stakeholders, including suppliers, customers, and industry partners, to drive sustainability across the entire value chain.
- 5. Reporting on sustainability performance. The CSO is responsible for reporting on the organisation's sustainability performance to stakeholders, including investors, employees, and customers. This includes tracking progress against goals, highlighting successes and challenges, and identifying opportunities for improvement.

Overall, the CSO plays a critical role in ensuring that sustainability is integrated into the organisation's culture, strategy, and operations. They must work collaboratively across departments and with stakeholders to ensure that sustainability is embedded in all aspects of the organisation's activities

The number of companies appointing a CSO has grown significantly over the last few years: in 2021 more CSOs were hired than in the previous five years combined (HBR, 2023). Due to the novelty of the role, the CSO's actual responsibilities and tasks

are still vague. It's critical for executives and boards to ensure that the CSO's role is balanced among all three elements of ESG (environmental, social, and corporate governance). Overall, having a CSO can help an organisation embed sustainability into its core strategy and operations, which can lead to several advantages, including improved reputation, cost savings, risk management, innovation, competitiveness, and compliance.

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#### THE USE OF PUBLIC-PRIVATE PARTNERSHIPS FOR INFRASTRUCTURE DEVELOPMENT

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The main prerequisite for the growth of the state's economic potential is the country's infrastructure development. Given the current state of the road network, healthcare facilities, and housing and communal services, there is a need to attract additional investment in the modernization of existing facilities and the construction of the required amount of new modern infrastructure. The high cost of creating socially important facilities and limited state budget resources have identified urgent problems of finding innovative approaches to further development of the country's infrastructure.

The use of infrastructure facilities results in the production of public goods, and the state is an interested party in the process of providing socially important services. In the process of searching for optimal models of joint design, construction and operation, many countries have used the public-private partnership (PPP) model. This model involves innovative technologies and management skills, active involvement of the private sector in the production and provision of public services. The use of PPPs helps to solve the problem of budget expenditures, gaps between supply and demand, and inefficiency of public services (Gryshchenko at al., 2022).

Based on the current state of PPP development in Ukraine, it is important to use the partnership between the state and business entities as one of the factors of stabilizing the macroeconomic environment. Important issues include strengthening political stability, the rule of law, improving the investment climate and the quality of sectoral legislation, as well as improving administrative procedures for selecting a private partner, organizing

and doing business, and protecting intellectual property rights. In the future, strategic documents aimed at sectoral and regional development will require changes regarding the possibility of implementing infrastructure projects under the conditions of a partnership between the state and private owners.

The state policy of PPP development envisages implementation of the necessary changes in the institutional environment; legislative formation of effective legal mechanisms; strengthening the protection of private investors in the implementation of infrastructure projects through public-private partnership mechanisms. It is important to develop methodological approaches to determining the effectiveness of projects; use of territorial marketing tools and tax incentives for private partners in PPP projects.

Given the huge losses of Ukraine's infrastructure due to Russian military aggression, reconstruction is a key issue for the country's economy. The need for capital construction projects is so significant that it exceeds the state's capabilities by several times. In these conditions, it is also advisable to intensify public-private partnership models in the implementation of infrastructure projects. This involves identifying the key areas and facilities that need to be restored as a matter of priority for the full functioning of critical infrastructure in various fields of activity (security, healthcare, housing and utilities, industry, education, communications, and transportation). The use of public-private partnerships in post-war reconstruction requires strengthening the areas that create the conditions for the development of this model: legal regulation, investment and business climate, institutions, financing, and experience (Kruhlov, 2022).

Thus, modern innovative approaches to the implementation of infrastructure projects based on public-private partnerships make it possible to formulate long-term strategies for attracting private investment, strengthening state regulation functions, reducing the burden on the state budget, solving the problems of providing quality services, and accelerating the development of territories at the regional and local levels. In addition, it is possible to use public-private partnership models in the process of postwar reconstruction of destroyed or damaged infrastructure in Ukraine.

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#### THEORETICAL ASPECTS OF ANTI-CRISIS MANAGEMENT OF ENTERPRISE ACTIVITIES

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Formulation of the problem. In recent years, there has been a clear trend of increasing economic and political instability at the national, regional and global levels.

A crisis is a turning point in the functioning of any system, when it is influenced from the outside or from the inside, which requires it qualitatively new response. The main feature of the crisis is that itthreatens to destroy the system (partially or completely).

The purpose of the research is to analyze the theoretical foundations of anti-crisis management of the enterprise.

Research results. Most crisis phenomena and situations are observed at the micro level. According to statistical data, 10-20% of small businesses fall into crisissituations every year, and about 10% of these businesses stop operating. The crisis of the enterprise is a turning point in the sequence of processes and actions. The most typical are two options for getting out of a crisis situation: successfully overcoming it or liquidating the enterprise as an extreme form.

In the most general case, a crisis situation is characterized by certainsigns:

- a threat to primary goals and values;
- the effect of suddenness for managers responsible for overcomingcrises;
- acute shortage of time to respond to a threat.

In the deep causes of the crisis that broke out, there are many different factors that can be accurately divided into two main groups: internal (socio-economic, market and other) and external (management, production, market).

Of course, all the factors listed above can lie in the eyerises of the firm, but the greater influence on the state of the firm is made by managementfactors. Management inefficiency itself should be considered the mostcommon problems for student enterprises that hinder themeffective functioning in the conditions of established market relations.

This problem is caused by certain factors:

- the absence of strategy in the company's activities and the focus on short-term results to the detriment of medium- and long-term ones;
  - insufficient qualification and inexperience of the company's managers;
  - low equilibrium of businesses of businesses to the afternoon for the consequences.

Domestic and foreign scientific literature is comprehensively researched theoretical aspects and methodological tools of anti-crisis regulation.

Domestic scientists in their scientific works devoted to analysiseconomic crises are demarcated by the concept of "anti-crisis regulation" and "anti-crisis management", emphasizing that the system of anti-crisis measurestaxiing includes measures of regulatory, economic, of an organizational and social nature, aimed at the protection of

domesticenterprises from crisis situations. The term "anti-crisis management" hasmicro origin and is mainly used during the procedure financial rehabilitation or bankruptcy [2].

Scientific studies of the methodological foundations of anti-crisis management atmicro-levels (levels of an individual enterprise) showed that a significant numberscientists narrow the process of anti-crisis regulation to the aggregatemanagement measures related to the equalization of the financial situationcompany or by the procedure of rehabilitation of the debtor enterprise. Proponents of such a methodical approach to anti-crisis regulation are scientists who interpret the content of this category as a set of forms and methods of implementing anti-crisis procedures in relation to the debtor enterprise [3]. Spreading this methodical approach, domestic scientists practically equate anti-crisis regulation at the enterprise with possible options for its financial restructuring - the recovery or bankruptcy procedure. Within the framework of such a methodological plane, the essence of anti-crisis management is interpreted as "a set of forms and methods of implementing anti-crisis procedures in relation to the debtor's enterprise." In this case, anti-crisisregulation is considered in the prism of domestic production relationships that are formed during financial recovery measures oliquidation.

A similar point of view is followed by researchers, what is the contentanti-crisis management at the level of enterprise functioning is reduced toset of measures to prevent bankruptcy of companies that ended up indifficult financial situation [4].

A number of other authors analyze anti-crisis management as a wholepreventive procedures used to restore the company's solvency [5]. Prof. Sytnyk S.S. adds that forachievement of the set goal within the framework of anti-crisis management managementthe enterprise must carry out a system of measures for analysis and planningprofit distribution mechanism [6]. The essence of anti-crisis measures is characterized from the economic standpoint of preventing a shortage of funds to support the economic activity of the enterprise [7].

Summarizing the results of scientific research made it possible to note thawith this methodological approach, the system of anti-crisis management measuresis narrowed down to financial analysis and response according to the "ex post" option -leveling the effects that are already taking place with the help of a specific setprocedures for anti-crisis restoration of the enterprise's financial condition, its solvency or reduced to bankruptcy proceedings. Bythe actual option of anti-crisis management comes down to ability to develop optimal ways, to determine priority values in the conditions of the regimeand coordinate the activities of the enterprise [8]. This is scientific and methodical the concept does not reflect the content and completeness of anti-crisis regulation as a separate field of management and needs to be supplemented.

From the point of view of preliminary forecasting of potential negative of events, the proposed definition seems to be more perfects cientists who interpret the essence of anticrisis regulation as a "system constant systematic actions of managers aimed at all elements of the organization with the aim of quick and timely response to possible external and internal threats to the effective functioning or development of the organization" [9]. Inwithin the framework of this concept, one of the main functions of anti-crisis management faces constant external and internal monitoring environment that enables managers to detect signs and prerequisites for the emergence of a crisis situation, which is the foundation of the system measures to eliminate possible negative consequences. We are in this perspective we share the opinion of researchers, which is the functional content of anti-crisis Management is defined as a specific type of

management activity that is carried out on an ongoing basis and is aimed at identifying characteristic signs of a potential crisis and justification of measures for its leveling forpreventing bankruptcy of the enterprise [10].

It seems appropriate to note the strategic focus on the future prospective assessment of the company's activity and the possibility of timely prevention of potential crisis phenomena and implementation of leveling measures their potential negative consequences. At the same time, the concept is presented provides for the separation of the sphere of anti-crisis management as a specific one element of management, which is vectorially aimed at solving a separate tasks (restoring the solvency of the enterprise, leveling it financial condition) and to a certain extent loses the closeness of connections with the entire system management of economic activity.

Conclusions. The modern market environment of the functioning of domestic enterprises is characterized by a high level of variability, aggravation of actual and potential threats from foreign competitors, imperfection institutional regulation of the sphere of the external environment in the person state, the risks of losing competitive positions on the world and national markets due to a low level of innovative activity business entities. Crisis situations arise at almost all stages of the enterprise's life cycle and are determined by the threatening trend of worsening the effects of economic crises.

In such conditions, in order to eliminate as much as possible and prevention of unfavorable economic and market situations of the enterprise should create effective alternative systems of their management activities that are strategically focused on timely diagnosis, prevention and mitigation of the consequences of crisis phenomena. In the conditions of a single ways of survival in the market environment - increasing the level of competitiveness of the enterprise, establishing an effective system anti-crisis management becomes a primary strategic goal successful development of the business entity.

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#### USER GENERATED CONTENT IN BRAND'S DIGITAL MARKETING STRATEGY

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User Generated Content (UGC) is a relevant tool for brand promotion on the Internet, as consumers increasingly trust the reviews and recommendations of other users more than traditional advertising. UGC is an important element of marketing campaigns and supports audience engagement with the brand or company [1].

UGC refers to any content created and published by users on the internet, such as text, photos, videos, comments, reviews, blog posts, social media posts, and more. It is created directly by users and is not professional content created by experts or companies. UGC content usually becomes part of social networks, forums, blogs, and other websites where users share their thoughts, ideas, and experiences with others [2].

Marketers can use UGC to achieve several goals, including [2-3]:

- 1.Audience engagement: UGC can increase interest and engagement with a brand or product as it is created by users and is more authentic.
- 2.Brand support: using UGC helps increase brand awareness and its products since the content allows showing how users use the products and share their experiences.
- 3.Increased sales: UGC can attract new customers and create deeper relationships with existing ones.
- 4.Improved SEO: UGC can improve a brand's position in search engines since the content often contains keywords and phrases that potential customers use when searching for goods and services.
- 5.Increased loyalty: customers feel a stronger connection to a company that shows interest in their opinions and experiences.

The current trends and predicted directions for user-generated content (UGC) development in 2023, as identified by internet marketers, include [1, 4]:

- 1.Expansion of UGC formats: 360-degree videos, virtual reality, interactive stories, live streams, and other formats are expected to become more common in the future.Increasing importance of visual content:
  - 2. Visual content, such as photos and videos, will remain the most popular format

for UGC as it allows users to easily and effectively share their thoughts and experiences.

- 3.Growing influence of micro- and nano-influencers: The number of micro- and nano-influencers creating UGC will increase, as their audiences are more loyal and engaged with their content.
- 4.Use of UGC in advertising: Companies will use UGC as an effective way to advertise their products and services, as it allows them to showcase products through real user experiences.
- 5.Development of technologies for processing and analyzing UGC: Technologies such as computer vision, machine learning, and artificial intelligence will help process and analyze large volumes of UGC to understand consumer demand and predict trends.

To motivate users to create branded content, companies use tools such as [5]:Creating contests (for example, a brand can offer prizes for the best photo or video showcasing the company's product); Offering gifts and discounts in exchange for creating UGC; Recognizing and thanking users for their efforts and creativity by supporting them on social media (commenting and sharing their posts); Inviting users to share their stories about using the company's products or services and sharing their experiences; Featuring the best UGC on their website to show that they value their users and encourage their creativity.

There are some risks for a brand when using UGC:

- 1.Loss of control: when a company uses content created by users, it does not have full control over what content will be created or how it will be presented. This can lead to situations where UGC does not meet the brand's standards or even harms its reputation.
- 2.Incompatibility with brand values and image: UGC may be incompatible with the brand's values and image, which can trigger a negative reaction from the audience.
- 3.Copyright: users may use materials that belong to other authors without permission. If a company uses such content, it may find itself accused of copyright infringement.
- 4.Responsibility: the brand is responsible for any content it publishes on its platforms. If users create content that contains false information, offensive material, or violates the law, the brand may face legal problems.
- 5.Quality control: companies must ensure quality control of user-generated content to ensure that it meets the brand's standards and does not elicit a negative reaction.

Brands have powerful advantages if they use modern digital marketing tools correctly. Here are examples of successful campaigns that effectively used UGC:

Starbucks #RedCupContest - A campaign in which Starbucks encouraged its customers to share photos of their drinks in red Starbucks cups with the hashtag #RedCupContest. The best photos were used to create a calendar for the following year, and winners received Starbucks gift cards. The campaign attracted a lot of attention and involved a large number of participants, who created over 40,000 photos.

Coca-Cola #ShareACoke - A campaign in which Coca-Cola printed names and surnames on its bottles and cans to encourage consumers to share drinks with their friends and loved ones. The campaign resulted in greater engagement from consumers who shared photos and videos on social media with the hashtag #ShareACoke.

GoPro Awards - A campaign in which GoPro encouraged its users to share their videos captured with GoPro cameras, using the hashtag #GoProAwards. The best videos were rewarded with cash prizes and the opportunity to be published on GoPro's official

YouTube channel. The campaign attracted a large number of participants and positive feedback from consumers who received inspiration and ideas for using their GoPro cameras.

In conclusion, User Generated Content is a powerful tool in modern marketing strategies that helps brands attract more attention and increase their influence on the audience. Using UGC allows creating more personalized and authentic connections with consumers, which increases customer loyalty and boosts conversions. UGC allows brands to reduce content marketing costs, as they can use user-generated content instead of creating their own. Brands can use UGC to increase their social activity, which contributes to enhancing their online presence and popularity. Engaging users to create their own content allows brands to improve their understanding of their audience, which helps develop a more effective marketing strategy.

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#### НАУКОВО-ТЕОРЕТИЧНІ ЗАСАДИ ПУБЛІЧНОГО АДМІНІСТРУВАННЯ РОЗВИТКОМ ПИРКУЛЯРНОЇ ЕКОНОМІКИ НА РЕГІОНАЛЬНОМУ РІВНІ

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У воєнний та повоєнний час держава відіграє і надалі відіграватиме провідну роль у післявоєнній відбудові економіки, тому зростатиме роль і вага інструментів впливу публічного управління та адміністрування у сфері економічної політики та економічного розвитку. Відповідно і на регіональному як серединному рівні публічного влади між державою і територіальними громадами зростатиме організаційна, комунікаційна, контрольна функції регіональних органів публічного управління та адміністрування. Одним із інноваційних напрямків формування економіки четвертого економічного укладу є перехід циркулярний тип економіки, на «зелені технології», побудова місцевої енергетики на відновлювальній основі.

Циркулярна економіка  $\epsilon$  новою економічною моделлю, в якій акцент робиться на повторне використання матеріалів, а також на створення доданої вартості за допомогою послуг та інтелектуальних рішень. Перевагами циклічної моделі є сировинних енергетичних скорочення споживання ресурсів, зниження навколишнє середовище, мінімізація відходів та негативного впливу на стимулювання інновацій. Сучасний стан циркулярної економіки на рівні ОЕСР, ООН і ЄС розглядається як засіб прискорення переходу суспільства до більш ресурсозберігаючої системи, тим самим підвищуючи конкурентоспроможність і реагування на глобальні екологічні виклики та загрози.

Мета дослідження: полягає в визначенні науково-теоретичні засади публічного адміністрування технологій циркулярної економіки на регіональному рівні. Об'єкт дослідження - публічне адміністрування технологій циркулярної економіки на регіональному рівні. Предмет дослідження - теоретичні та практичні аспекти публічного адміністрування впровадженням і реалізацією технологій циркулярної економіки в регіонах. Методи дослідження: теоретичний аналіз, порівняння та узагальнення науково-теоретичних підходів, метод аналізу законодавчих та нормативно-правових актів, моделювання.

Виклад основного матеріалу. В науковій літературі тлумачення регіону представлено у різних інтерпретаціях, що вказує на дискусійний характер даного поняття. Регіон визначається в літературі як територіальна одиниця, яка визначається за певними географічними, економічними, політичними та культурними критеріями[1]. Публічне адміністрування представляє собою регламентовану законами та іншими нормативно-правовими актами діяльність суб'єктів публічного адміністрування, спрямована на здійснення законів та інших нормативно- правових актів шляхом прийняття адміністративних рішень, надання встановлених законами адміністративних послуг [2].

Циркулярна економіка — це концепція сталого розвитку, яка спрямована на зменшення відходів та збереження ресурсів шляхом максимального використання матеріалів та енергії в межах економіки [3]. Як уже неодноразово зазначалося в науковому просторі, концепція циркулярної економіки базується на застосуванні принципів "3R" (reduce, reuse, recycle), а саме скорочення (Reduce), повторне використання (Reuse) та переробка матеріалів (Recycle). Технології циркулярної економіки - це інноваційні підходи та рішення, які дозволяють зменшити кількість відходів та витрат ресурсів виробництва, а також забезпечують їх повторне використання або відновлення в замкнутому циклі [4].

У публічному адмініструванні економічною сферою стимулювання до впровадження бізнесом технологій циркулярної економіки має велике значення, оскільки органи публічної влади мають великий вплив на регулювання ринків та інновацій, виробництво та споживання товарів та послуг. Для реалізації циркулярної економіки в регіонах можуть використовуватися різні технології публічного адміністрування, зокрема:

створення регіональних планів дій з циркулярної економіки. Такі плани визначають конкретні кроки, які повинні бути зроблені для забезпечення ефективного використання ресурсів та зменшення відходів. Реалізація таких планів потребує співпраці різних зацікавлених сторін, включаючи бізнес, громадськість та органи державної влади;

розбудова законодавчої бази: Уряд може приймати закони та регуляторні акти, які сприяють розвитку циркулярної економіки: наприклад, законодавчі норми, які зобов'язують виробників електроніки забезпечувати повне збирання та переробку відходів своїх виробів;

політика фінансового стимулювання: Уряд може надавати фінансову підтримку у вигляді субсидій та інших фінансових дотацій для створення інфраструктури для переробки відходів та використання вторинної сировини. Наприклад, субсидії на створення сортувальних ліній або переробних заводів;

розробка цільових програм: Уряд може розробляти програми для стимулювання розвитку циркулярної економіки. Наприклад, програми для підтримки малого та середнього бізнесу у сфері переробки відходів;

організація інформаційних кампаній: Уряд може організовувати інформаційні кампанії для підвищення свідомості громадян про проблеми відходів та можливості циркулярної економіки;

посилення міжнародної співпраці: регіони можуть співпрацювати з іншими країнами та міжнародними організаціями для обміну досвідом та реалізації спільних проектів у сфері циркулярної економіки.

Технології електронного урядування (е- governance) також можуть бути використані для моніторингу стану циркулярної економіки. Наприклад, доцільним  $\epsilon$  створення електронної системи обліку відходів та вторинних сировинних матеріалів, що дозволить ефективніше контролювати їх обіг та зменшити кількість незаконних сміттєзвалищ. Ще одним заходом  $\epsilon$  розширення мережі автоматів для збирання пластику, скла і алюмінію, за який людям буде нараховуватись фіксована сума на карту містянина з наступним її використанням для оплати проїзду в громадському транспорті, а також для оплати інших послуг. Тобто публічне адміністрування місцевого самоврядування та державного управління в особі відповідних органів влади  $\epsilon$  важливим суб'єктом процесів впровадження технологій циркулярної економіки на регіональному рівні. Окрім безпосередньо адміністрування, формами сприяння розвитку рециклічної економіки можуть

стати: забезпечення суб'єктів господарювання необхідними умовами та ресурсами для реалізації проектів з впровадження циркулярної економіки; залучення громадськості та бізнесу до співпраці; визначення стандартів та правил для забезпечення рівної конкуренції та захисту інтересів всіх учасників ринку тощо.

Так, відповідно до планів виконання стратегії соціально-економічного розвитку Запорізької області на період до 2027 року розроблено та впроваджується проект міжнародної технічної допомоги «Партнерство для розвитку міст» (Проект ПРОМІС) за участю Федерації канадських муніципалітетів (ФКМ) за фінансової підтримки Уряду Канади, який сприятиме утвердженню циркулярної філософії та практики у економіку регіону [5]. Програма «Екологічна безпека та збереження природних ресурсів» спрямована на раціональне використання природних ресурсів та збереження екологічної безпеки життєдіяльності населення, і включає в себе основні напрями: охорона та раціональне використання водних ресурсів та зниження негативного впливу на атмосферу; розв'язання проблеми негативного впливу відходів на довкілля та здоров'я населення; збереження біологічного та відновлення ландшафтного розмаїття області; екологічний моніторинг та інформування. Досягнення цієї цілі на період 2021-2023 роки передбачає реалізацію сім проєктів рециклічної спрямованості. У зв'язку із військовою агресією рф частина з цих проєктів неможлива до завершення по причині тимчасово окупованих територій області, а інші, пов'язані із просвітницькою діяльністю, моніторингом екосистем, тривають.

Висновки: Отже, система публічного управління та адміністрування економічною політикою держави, у т.ч. циркулярною економікою, реалізується комплексно через інституції державної влади, центральних органів виконавчої влади, у тому числі на регіональному рівні, а також за участі місцевого самоврядування та громадських лідерів і є спрямованою на досягнення збалансованого (сталого) розвитку регіону. Конкретними засобами органів публічної влади у прийнятті рішень із впровадження циркулярної економіки виступають правові, організаційні, фінансові, адміністративні та управлінські інструменти, зокрема норми, важелі, субсидії, фінанси, проєкти тощо.

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# ФОРМИ ВИКОРИСТАННЯ ПУБЛІЧНО-ПРИВАТНОГО ПАРТНЕРСТВА У РОЗБУДОВІ СОЦІАЛЬНОЇ ІНФРАСТРУКТУРИ ТЕРИТОРІАЛЬНИХ ГРОМАЛ

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Соціальна інфраструктура є важливим фактором розвитку територіальних громад. Проблема в тому, що українська соціальна інфраструктура потребує серйозних інвестицій та розвитку, а бюджетних коштів не завжди достатньо для усіх потреб, тому необхідно залучати приватні інвестиції. Ситуація відбудови соціальної інфраструктури на інноваційній основі загострилася на тлі руйнівних наслідків воєнної агресії для місцевої економіки. Використання публічноприватного партнерства у розбудові соціальної інфраструктури територіальних громад є ефективним, оскільки дозволяє залучити приватний капітал, технології та інновації для покращення якості життя населення, зниження завантаженості державного бюджету та забезпечення сталого розвитку. Публічно-приватне партнерство дозволяє об'єднувати ресурси публічного та приватного секторів, забезпечуючи більш ефективне використання доступних ресурсів та оптимізацію витрат. Проте, питання полягає в тому, які саме форми та способи цього партнерства є найбільш ефективними та придатними для застосування, які можливості та ризики пов'язані з їхнім використанням, та які механізми контролю і моніторингу необхідні для забезпечення ефективності публічно-приватного партнерства.

Методи дослідження, які використані під час виконання наукового дослідження: теоретичний аналіз, порівняння та узагальнення науково-теоретичних підходів, метод аналізу. Мета дослідження - визначити форми використання публічно-приватного партнерства у розбудові соціальної інфраструктури територіальних громад. Об'єкт дослідження: публічно-приватне партнерство як інструмент розвитку соціальної інфраструктури територіальних громад. Предмет дослідження: форми та способи використання публічно-приватного партнерства для розвитку соціальної інфраструктури територіальних громад.

Викладення основного матеріалу. Проблематика визначеного дослідження відноситься до публічного управління та адміністрування сферою економіки. В умовах триваючої військової агресії територіальні громади в Україні перебувають у стані окупованих територій, тимчасово окупованих територій, територій зони військових дій і тилових територій, що передбачає формування диференційованих програм відбудови у галузевому та територіально у розрізі. Разом із ретельною діагностикою територіальних громад, необхідно зусиллями публічних влад і громадськості формування планів і диференційованих інструментів відбудови економічної і соціальної інфраструктури.

Соціальна інфраструктура відноситься до основних фізичних та організаційних структур і засобів, що забезпечують і підтримують функціонування

суспільства та його економіки, включаючи охорону здоров'я, освіту, житло, транспорт, зв'язок та комунальні послуги. Це охоплює різноманітні соціальні послуги та споруди, які необхідні для загального благополуччя та розвитку людей і спільнот [1].

Публічно-приватне партнерство (ППП) - це форма співпраці між публічним та приватним сектором для спільної реалізації проектів[2]. Публічно-приватне партнерство є ефективним механізмом залучення інвестицій для розвитку соціальної інфраструктури територіальних громад. Форми та способи використання ППП можуть бути різними в залежності від конкретної ситуації та потреб територіальної громади. Публічно-приватне партнерство включає такі форми, як договір про концесію, договір про довгострокову оренду, договір про спільну діяльність, договір про фінансування [3]. У практиці реалізації проектів соціальної інфраструктури в рамках ППП найчастіше використовуються форми концесії та договору про спільну діяльність[4]. Переваги подібних форм ППП:

ефективність реалізації проектів: ППП може забезпечити більш ефективну реалізацію проектів за рахунок залучення приватного досвіду, експертизи та ресурсів. Приватні компанії часто мають більшу гнучкість та ефективність у впровадженні проектів, що дозволяє досягти кращих результатів у коротші терміни;

розподіл ризиків: ППП дозволяє розподілити ризики між публічним та приватним секторами, тобто приватні партнери можуть взяти на себе значну частину фінансових ризиків, пов'язаних з проектом, що зменшує навантаження на державний бюджет;

фінансова ефективність: ППП може дозволити залучення приватних інвестицій для фінансування проектів, що дозволяє ефективно використовувати державні ресурси та забезпечити більший обсяг інвестицій в розвиток інфраструктури та послуг;

інновації та технічний прогрес: приватні компанії можуть внести інновації та передові технології в реалізацію проектів, що може покращити якість послуг, знизити витрати та підвищити ефективність;

гнучкість таадаптивність: ППП може бути більш гнучкою та адаптивною формою співпраці між публічним та приватним секторами. Умови та угоди ППП можуть бути деталізовані та пристосовані до конкретних потреб та вимог проекту, що дозволяє враховувати зміни у внутрішньому та зовнішньому середовищі і швидко реагувати на них;

сприяння економічному зростанню та розвитку: ППП може сприяти економічному зростанню та розвитку, залучаючи приватні інвестиції, створюючи нові робочі місця, розвиваючи інфраструктуру та покращуючи якість послуг; це може мати позитивний вплив на соціально-економічний розвиток країни та підвищувати життєвий рівень населення;

залучення інноваційних рішень та кращих практик: приватний сектор часто має доступ до інноваційних рішень та кращих практик, які можуть бути використані в реалізації проектів ППП; це може сприяти впровадженню сучасних технологій, енергоефективних рішень, зелених технологій та інших інноваційних рішень.

З аналізу зарубіжної практики впровадження ППП для розвитку соціальної інфраструктури критичним є врахування інтересів громадян та забезпечення

прозорості і відкритості процесів, а не рух фінансів чи матеріальних ресурсів у діяльності компанії [1]. Вітчизняна практика свідчить, що однією з найбільш ефективних форм ППП у розбудові соціальної інфраструктури є створення комунальних підприємств з приватним управлінням [5]. Прикладом успішної діяльності ППП є комунальне підприємство з приватним управлінням КП "Тернопільелектротранс". У 2019 р. Тернопільська міська рада передала управління транспортним підприємством приватній компанії "ТЕТ-2", що дозволило зменшити борги підприємства та покращити якість надання послуг. Можна припустити, що по переможному завершенні війни у системній відбудові економіки та місцевого економічного розвитку залучення капіталу як у нових формах, так і сферах економічної діяльності, соціальних послуг, комунального господарства зростатиме, на що вказує досвід країн Європейського Союзу, де приватні компанії активно ведуть бізнес з надання послуг водопостачання та водовідведення у містах, очищення води, переробка сміття тощо.

Висновки. В системі публічного управління та адміністрування економічною сферою публічно-приватне партнерство є важливим інструментом у розвитку та модернізації соціальної інфраструктури територіальних громад. До переваг використання ППП у розбудові соціальної інфраструктури можна віднести вищу адміністрування інвестиційних, зменшення навантаження державний бюджет та бюджети місцевих рад, а також більш висока якість управління ресурсами, вища ефективність та якість. Основними формами публічноприватного партнерства міспевого економічного розвитку довгострокова оренда, спільна діяльність, співфінансування проектів, менеджмент бізнес-процесів (управляючі компанії в комунальному господарстві).

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## SOCIAL AND CULTURAL ISSUES OF SUSTAINABLE DEVELOPMENT

### CONTENT SYNDICATION: DEVELOPMENT OF THE CONCEPT IN COMMUNICATION THEORY

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Modern theories of communication contain a number of scientific views and descriptions of approaches to content formation. Scientific theories emphasize the mechanisms and ways of effective cooperation with the audience, concepts of the existence of the latest applied technologies, etc. One of such mechanisms for the formation of quality content is syndication. Social networks and content are perceived as a part of the information space with a large percentage of trust from users in Ukraine, which began to grow rapidly after the creation of the Center for countering disinformation and the systematic publication in networks and telegram groups of information about the termination of the activities of certain media, channels, and the arrest of a number of persons. who unbalanced the media space of our country and conducted collaborative activities.

**The aim** of the scientific theses is the formation of the concept of "content syndication" as a form of cooperation with the readership.

The audience is demanding, the demand for constant updating of information resources, in particular on the Internet, is constantly growing, because Ukrainians, even in the temporarily occupied territories, want to know what is happening in Ukraine, understand the situation, and be informed. Due to the disconnection of Ukrainian television, it is possible to do this only in the Internet space through platforms.

There is a large list of literature outlining the problem of Internet communications, content creation, social networks and their problems in scientific circles of the 21st century. The works written by O. Kurban, I. Matchuk, N. Zadorozhnaya, T. Kuznetsova, L. Luparenko, S. Datta, A. Kumar Das, S. Ghosh, Debabrata S., Rodney J., Martinek R. were useful for writing our scientific work. Perego E., Solvi E. Khaodze Ch.

According to Y. Matchuk, "Modern information and communication technologies and the latest opportunities for communication through social media are becoming an increasingly important factor influencing the peculiarities of the implementation of foreign policy activities of international actors" [5].

What is important for Ukraine at the moment is the content of the network, which is capable of raising awareness and increasing interest in the topic of state and the war not only among Ukrainians, but also among the world community, the level of understanding of the depth of the threat to world democracy. That is why the content created by Ukrainians is important: in the rear, on the front lines, in gray areas.

There are enough definitions of the concept of "content" in the scientific literature

today, but the issue of content syndication remains relevant, which became especially acute with the beginning of the full-scale invasion of Ukraine by a terrorist country.

Content syndication, in our opinion, should be considered today as a process of simultaneous dissemination of information through various carriers and media, coverage of topical issues, demonstration of events from the front line, coverage of war results by soldiers, discussions. According to modern scientists N. Zadorozhnaya, T. Kuznetsova, and L. Luparenko, the concept of web syndication is somewhat related. They define it as "The simultaneous distribution of audio and video information across multiple pages or websites, usually using RSS or Atom technologies. The principle consists in distributing the titles of materials and links to them (for example, the latest messages of forums, etc.)" [2, p. 279]. It follows that the syndication of Internet content is a concept synonymous with web syndication, which is also interpreted as the possibility of blogging both individually and collectively to "...repurpose and republish old content and show it to a new audience" [11, p. 14]. It is worth noting that content syndication is very convenient for running discussion sites. An example of such can be not only pages in social networks, but also separate ones, such as Reddit, the purpose of which is discussion and debate.

On such platforms, anyone can ask a question or express their own attitude to a problem. Content is created that can reach a large number of audiences of different categories. This is especially noticeable on the pages of social networks. Modern scientists emphasize that social networks have a number of advantages: communication at a distance, informing about events in the country and the world, discussing current problems. "Social networks help people keep in touch with families and friends with whom they would otherwise not be able to communicate due to distance or simply lose touch" [8].

The formation and production of content is extremely responsible, especially for Ukraine today, which is conducting powerful confrontations in the information war against the aggressor country. It follows that syndication of content contributes to the distribution of information resources and is convenient for those who frequently update the page (that is, content). This is especially relevant now for those opinion leaders and journalists who run news telegram channels, blogs, and sites dedicated to events.

It is appropriate to single out a similar toolkit in order to describe content syndication as an independent process of forming an information environment. First, the system generates and performs mechanical work. Placement of content on cross-media platforms takes place without unnecessary intervention of specialists. Second, the information is updated every day, which increases the readership's interest in the platform.

To study content syndication as a way of filling platforms, an important element is the feed. It is described as the process of systematically filling content in the form of summary data, referring to the original source. After subscribing to the feed offered by the site, the user receives new information resources published on it. However, such manipulation requires special programs for reading them, i.e. RSS aggregators.

When creating content within the framework of syndication, one should not forget about an important element - collecting a subscriber base, which will ensure closer cooperation with the audience, the development of clients and client groups. This will also contribute to the updating of information resources, new directions of existing content (for example, you can make an audio or video recording on an existing post in

social networks) and send it to those subscribers who are already collected in the database to consolidate knowledge.

**Conclusions.** The constant development of communication theories emphasizes the current problems of Internet communications as a separate independent field. In current theories of communication, special attention is paid to the formation, distribution and influence of content. There is syndication is used as one way of high quality content making/

Content syndication is defined as a form of working with information that allows the content of the platform to be displayed on other sites. Web syndication contributes to the creation of feeds that are available to an unlimited number of users of the target audience in the form of short posts on platforms and social networks, containing the most current information on the topic or issue raised by the journalist.

Content syndication as a technology for close cooperation with the audience should follow an algorithm of actions consisting of six main steps, which can be supplemented by other actions during the campaign work on a certain issue or sectors. The proposed algorithm should include: detailed definition of the target audience with which the campaign works; description of the idea of presenting the problem; creation of unique and interesting content for the audience; selection of the base site for the central publication; publication of material on the main and auxiliary platforms; carrying out an assessment of the effectiveness of the work done and studying the results of the work.

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### COMPONENTS OF SOCIAL RESPONSIBILITY AND ARGUMENTS FOR THE TRANSITION TO SOCIALLY RESPONSIBLE BEHAVIOR BY BUSINESS

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In today's understanding of the phenomenon of corporate social responsibility, our view is best illuminated by A. Kolot, who interprets it as "a rational response of an organization to the system of conflicting expectations of stakeholders aimed at the sustainable development of the company; it is the responsibility of those who make business decisions to those on whom these decisions are targeted" [1, p. 6]. Taking this definition as a basis, we will supplement it with practical aspects of manifestations of socially responsible behavior set out in modern scientific research and recommendation materials. On this basis, we will attempt to establish the fundamental components of business social responsibility that are aimed at ensuring a satisfactory quality of life for people in the world.

The first component is the responsibility of economic entities to society for the production of sufficient quantities of high-quality products that comply with all national and global standards and consumer needs. When producing such products, materials, technologies, or raw materials that harm the environment and society should not be used, and legislative and ethical standards of business conduct must be ensured. The technology of product manufacturing must be based on principles of resource conservation and efficiency, reuse of water and production waste, and the transition to the use of renewable energy sources, among other things.

The second component involves the application of a human-centric approach, whereby the entrepreneur commits to creating safe working conditions, ensuring the implementation of declared components of the social package and gradually expanding its content, introducing systems of continuous professional and personal development of personnel based on the search, education, and development of talents, implementing programs to support and assist former employees of the enterprise, and so on.

The third component is social development of the territory where the entrepreneur's production facilities are located. This includes creating new high-quality jobs in the region and promoting entrepreneurial activity and startup implementation; assisting vulnerable population groups in the region; regularly conducting joint measures with the regional authorities to provide social security and community development, providing assistance to social institutions in the region; creating an effective and developed social infrastructure in the region capable of meeting all the needs of the population.

The fourth component is the protection and development of cultural values and the

natural environment, the accumulation of investments in the accumulation of knowledge and the development of innovations, their further dissemination and practical use in professional and production activities. The implementation of this component will allow businesses to concentrate their efforts on the social, economic, financial, cultural, and ecological revitalization of the enterprise's location.

The concept of corporate social responsibility has a long history and has been widely applied in the world, significantly increasing the level and quality of human life and reducing the negative impact of production on the environment. It is the basis for achieving sustainable development goals in practice. However, in Ukraine, there is a belief in the business environment that social responsibility is the prerogative of only large foreign-capital companies, and it does not apply to other entrepreneurs. The fallacy of this idea has led to the fact that only a few companies in the country support and implement this concept in their activities. This significantly hinders social and economic stabilization and simultaneously slows down the achievement of sustainable development goals in Ukraine.

Social responsibility is really aimed at solving a whole layer of social, environmental and humanitarian problems of society, which underlies the development of the educational and scientific spheres of the country, increases the innovative activity of business. Together, this contributes to the socio-economic development of the territory and requires significant financial costs. At the same time, the adoption of the concept of social responsibility and the implementation of its principles allows business entities to receive a whole range of economic and image advantages. Such advantages significantly increase the level of the company's competitiveness in the market, which in today's crisis conditions is a very important condition for the growth of the size of the final financial and economic performance indicators [2].

Let us formulate the arguments to convince the representatives of the business environment of Ukraine regarding the expediency of making a managerial decision in favor of a gradual transition to socially responsible behavior.

The first argument in favor of companies adopting principles of social responsibility is the significant growth of their brand as an employer in society. A company that consistently treats its current and former employees responsibly by developing and implementing programs for social and environmental health in the areas where it operates, actively participating in solving household, communal, and humanitarian problems in the city, and creating high-quality new jobs will inevitably feel an increase in its reputation on the labor market. This will lead to a higher interest from highly skilled and talented professionals in working for the company. As a result, this will gradually contribute to the growth of the professional, qualification, and motivation levels of the staff and the accumulation of the company's human capital. These trends will contribute to the growth of the company's innovation level, demonstrating its ability to take an active part in the smart specialization processes of the region, and acquiring stable trends in the growth of the profitability level of its economic activity.

The second argument for convincing businesses is the increasing interest of domestic and foreign partners and investors in close cooperation with the enterprise due to its policy of openness in financial and non-financial reporting based on annual business results. Such openness and information on retrospectively implemented social responsibility programs will allow the subject of entrepreneurship to gain access to advanced technologies developed by partners. This will also attract additional

investment, which, in combination, will increase capitalization, material and technological levels of production, product quality, and create conditions for possible entry of the enterprise into global markets for the sale of products and services.

The third argument in convincing representatives of the country's business about the expediency of implementing the principles of social responsibility is the increasing trust of consumers in the market products, which contributes to the growth of demand and profitability. Moreover, according to The Nielsen Global Survey of Corporate Social Responsibility and Sustainability, about 70% of Ukrainian consumers are willing to pay more for products of socially responsible companies, even if there is an increase in their prices [3]. In addition, the practice of American companies has proven that social responsibility significantly reduces investment risks, making the spread of its principles a stimulus for investors [4].

The firm conviction of Ukraine's business environment that transitioning to socially responsible behavior will bring not only an image, but also financial benefits, should be the basis for the socio-economic recovery and environmental safety of the country.

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#### HISTORICAL PREREQUISITES FOR THE EMERGENCE OF TOURIST ANIMATION.

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Statement of the problem, analysis of the latest research and publications The current situation of the man-made environment dictates the urgent need to restore the spiritual and physical strength of a person. Due to society's need for recreation, a new direction of tourist activity is developing in the world - animation, which is actively developing today as a means of rest, recreation and health improvement [3].

The birth of tourist animation is connected with the organization of leisure time, in ancient times - the holding of cult folklore holidays and ceremonies, the Olympic Games. However, the concept of "animation" appeared in the 70s of the last century and was associated with animation. Specialists in this field were called animators [5].

The analysis of literary sources [1] made it possible to find out that the combination of active and passive recreation among children, adolescents and young people is quite widespread.

This circumstance implies the need to develop entertainment activities that are characterized by emotional switching, unusualness, festivity, which fascinates children and promotes harmonious development.

Animation in tourism is developing in Ukraine and abroad in two main directions: the creation of special museums and parks, the organization of costume balls, shows, holidays, and animation as the implementation of leisure programs for tourists in places of long-term rest - health and recreation camps [6, 8, 10].

Classical tourism, which includes elements of active recreation (moving games, swimming, running, skiing, hiking, climbing), and passive recreation - reading, visiting stadiums, concerts, exhibitions, overview of monuments of architecture, history and culture [9].

Every year, the development of animated tourism in Ukraine gained more and more popularity. In 2003 - 2013 an average of 17 million foreigners visited our country, most of whom were citizens of the CIS countries, and a third came from the EU. However, in 2015, according to the rating of the World Tourism Organization, Ukraine was visited by about 12.5 million tourists, and it did not make it to the rating of countries that are attractive for tourists at all. Such a sharp decrease in attendance is related to the military conflict that began in 2014, and the country did not receive significant material resources. The situation worsened especially after the full-scale invasion of Russia on the territory of Ukraine on February 24, 2022. Currently, there is no question about the development of tourism in Ukraine. Although the tourism industry is extremely important for the economy of our country, and the development of this sphere of public life should become one of the priority tasks of the development of Ukraine after the war [10].

The topicality of the topic is determined not only by the needs of wartime(the need to rehabilitate children who suffered physical and mental injuries), but also the need to improve recreational and recreational work with children and teenagers after the end of the war.

**The purpose of the work:** to determine the historical prerequisites for the emergence of tourist animation as a form of active human leisure.

**Research methods:** theoretical analysis and generalization of data from scientific and methodical literature and documentary materials, system analysis method, historicallogical method.

**Research results.** Animation (from the English Animation – nasnaga, liveliness) is an activity whose purpose is to create a good mood for people of all age categories during recreation. According to its etymology, the word "animation" is of Latin origin ("anima" - soul, air, wind) and defines effort, inspiration, involvement in movement, active activity, stimulation of vital forces [2, 3].

The combination of active and passive recreation of vacationers, regardless of age category and social status, first of all, involves the presence of entertainment activities that are characterized by emotional switching, festivity, unusualness, dissimilarity to what they do in their everyday life. Speaking of foreign countries, the term "amusements" is quite often used there, which combines a complex of types of recreational activities of a person during the rest period, but in addition to entertainment socio-cultural, physical and recreational, cognitive, etc. The following areas of development of animation in tourism can be distinguished:

- 1. Creation of special museums and parks, organization of costume balls, shows, holidays and other scripted events.
- 2. Animation stimulation of leisure programs for tourists in places of long-term rest tourist centers, tourist villages, bases, cruise ships.

Both directions involve the unusualness and variety of events, the direct involvement of participants in the action, which requires leisure organizers to have certain tourist abilities to create special programs and scenarios, the ability to stimulate people's interest, to make them despite their embarrassment, inertia to participate in animation programs [2, 6].

Animation uses active types of recreation, which include moving, sports games, swimming, running, skiing, hiking, climbing, aerobics, hiking, and passive - reading, fishing, viewing photos and videos, playing music, gardening, visiting exhibitions, museums.

Also, animation can be classified by types that satisfy the various needs of vacationers. So, animation events occupy an important place in modern society, but for the further development of this segment of society's culture, it is necessary to determine the prerequisites for the emergence and development of animation as part of the modern recreational and health sphere.

Taking into account modern views, we can say that the sources of animation include religious ceremonies, rites and performances. The concept of free time was formed historically. Hunting, breeding of domestic animals, cultivation of wild plants changed the thinking of people. Belief in unknown forces left its mark on primitive art. Changes in social relations, the complication of collective ties were accompanied by the enrichment of meanings, images, the use of prohibitions, and the emergence of traditions. The development of human consciousness led to the creation of an image of

peace and one's place in it. Some elements of magical action have survived to this day [8].

In the III - IV millennium BC. e. revealed changes in people's lives and the development of recreation. Permanent settlements appeared, people engaged in agriculture, handicrafts, participated in commodity-market relations, as a result of which private property and social distribution of the population developed [2, 6].

Home occupations were related to games, sports competitions that required human participation, or observation of this action. Board games appeared. An example is the board game "Lotto" in ancient India. From ancient Indian literature, it is known about musicians, acrobats, jugglers, magicians who traveled the roads of ancient India [2].

People were united by common holidays - religious, folk, associated with calendar and labor customs. In ancient Greece, Rome, India, theaters appeared, drama developed, based mainly on mythology. The Greeks and Romans were the first to start holding mass theater and sports and circus spectacles. Greece became the birthplace of the Olympic Games, and Rome became the city of entertainment. Gladiator fights and chariot races were held here. Thus, even in those days, work and entertainment became an independent sphere of human life [2].

Philosophical thought, science, and art received further development in the Middle Ages. The Christian world regulated working days and days free from work - Sundays and Christian holidays. They spent their free time thoughtfully - they read canonical texts and pondered the controversies of the vital problems of Christians. Christians established traditions of pilgrimages to Jerusalem. People from the feudal-chivalric environment and rich burghers had fun, engaged in hunting and dancing. Tournaments were held by representatives of noble families who held the rank of knight. Tournaments included prizes, gifts, and sometimes a kiss from a noble lady. Gifts could be fur, thoroughbred stallions, money, expensive clothes [11].

As for Western Europe, moving games, walking on stilts, riding on a swing, various competitions - wrestling, tug-of-war, throwing stones were popular there. Cockfighting was popular. Mass holidays united all townspeople, the oil festival turned into a carnival, the procession through the city was accompanied by a magnificent theatrical performance with live paintings. In the process of this carnival, you could see folklore characters [2].

Since the middle of the 15th century, the role of education and affirmation of faith in the power of scientific knowledge has been growing. In Western countries, the literacy level of the population is increasing, books are becoming more accessible, the urban population is growing, and new professions associated with changes in the social structure are emerging. This could not but affect the time spent free from work. A person increases his general and professional education, distributes working and free time. In everyday life and on vacation, a person tries to compensate for his fatigue. Full-value leisure in the field of public service is gradually gaining enormous importance. The restoration of physical and moral strength requires a thorough and cost-effective approach, thereby creating prerequisites for the growth of a significant segment of the economy in the sphere of recreation and leisure, gaming and entertainment [3].

Social forms of leisure are developing in modern times. Differentiation takes place - event participants are divided into spectators, listeners into performers. Spending leisure time is based not only on traditional forms of free time organization [2].

As a result of the development of new forms of leisure, often oriented to the

character and taste of the intelligentsia, there were changes in society, and the personality itself changed. Leisure in a certain sense becomes an independent sphere of a person's existence, and as a result became a secular occupation.

In an industrial society, the cultural and leisure activity of a person develops intensively. New directions, types and forms of organization are created in accordance with the needs of society. Leisure is manifested in social forms, in the form of mass events. Individual home study is associated with cultural and leisure purposes - a book, a magazine, and recreational equipment - a bicycle, a computer, a car [7].

Mass art comes first. Creativity, artistic practice acquire a commercial character.

In the 19th - the first half of the 20th century, circuses, theaters, zoos, and attractions were the usual way of entertainment for the population. In winter - ice skating. The 20th century is the birth of the entertainment industry, which is based on mass art and technical capabilities. They contribute to the development of audio production, various pop shows, performances, and entertainment theme parks [2, 7, 8].

In the second half of the 20th century, a production system was created, which is called the "leisure industry" - a system that depends on the organization of work, technology, and management methods for providing services to vacationers. At the turn of the 1960s and 1970s, signs of a new post-industrial society began to appear in developed countries. Industrial mass production was replaced by knowledge-intensive information and computer technologies, which led to an information revolution, and the possibility of broadcasting cultural products in different regions of the world appeared. The modern pace of life, the high intensity of the human habitat, the use of technology leads to an internal crisis of the person himself. Unfavorable conditions are created for the living space of a family, an individual who feels spiritually disorientated [2, 7].

In the 80s pp. In the 20th century, there was a need for modern leisure activities in our country, but their development did not progress. Gaming activities, including gambling and computer games, various types of tourism, foreign night entertainment were strictly prohibited.

According to statistics, recently more and more families are vacationing abroad with children. Excellent conditions for this have been created in many countries, especially in the tourist complexes of Spain, France, Portugal, Egypt, and Turkey. During recreation, children reach out not only to their parents, but also to their peers. Therefore, special children's playrooms and playgrounds for activities with children organized by animators [3, 4, 7] are provided in modern places of mass recreation.

**Conclusions.** One of the important means of recreation and health activities is animation tourism, which began to develop in the ancient world in the form of travel. The formation of the prerequisites for the emergence of tourist animation as a form of active human leisure in primitive society was conditioned by: the biological need of man for motor activity, the complication of the social and economic life of primitive people, the development of abstract - logical human thinking, the development of magical rites and beliefs, initiation rites, games, competitions, festive events as a type of collective motor activity.

Based on the above, in the conditions of modern society, two interrelated questions are actualized; on the one hand, it is a tendency to decrease the motor activity of children, deterioration of their health; from the second - high health-improving possibilities of physical exercises as a means of increasing motor activity. In order to improve and improve the physical condition of the family, it is advisable to introduce

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### INNOVATIVE DEVELOPMENT OF UKRAINE THROUGH THE ACTIVATION OF PARTNERSHIP BETWEEN BUSINESS AND EDUCATION

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Innovative economic development is a prerequisite for ensuring high living standards for the population. The activation of the pace of innovative development in the country can be achieved through strategic partnership between business and education. For this to happen, enterprises and universities must work together, cooperate, and interact to achieve common goals and meet the socioeconomic needs of society. The result of such cooperation should be to provide business representatives with highly professional personnel capable of generating innovative ideas and management decisions. In other words, the collaboration between universities and enterprises will be the foundation for ensuring business competitiveness and improving the standard of living in the region and the country as a whole.

In economically and technologically developed countries of the world, the requirements for the qualifications and competencies of employees are rapidly changing. There is an intense introduction of new technologies and innovations in all spheres of human life. These processes are also taking place in Ukraine, but at a slower pace. The reason for such a slowdown is the significant number of problems caused by Russia's full-scale military attack. In addition, Ukraine has been under the influence of a socioeconomic crisis for over thirty years, which negatively affects the quality of life of the population. It is under these conditions that Ukrainian business and education must become partners. This will allow for the provision of a proper level of qualification for specialists in the labour market. It will also enable the raising of the innovative level of Ukraine's economic development.

In order to achieve positive changes in the economic development of regions and the country's economy as a whole, education must become more practical and geared towards the specific needs of business. This means that educational programs must be developed considering the urgent needs of the labour market. It is also important to ensure cooperation with business in the process of training learners, including through internships and practical training at the enterprise's base. Also important is to ensure cooperation with businesses in the process of training students, including through their internships and practical training at the businesses in the region [1]. This will allow students to gain necessary work experience and strengthen the interaction between education and business. Businesses will have the opportunity to have access to innovative, creative, and talented young people who they can persuade to become their own employees. Such a strategy for joint business and education development will be beneficial not only for these two participants, but also for society as a whole through reducing youth unemployment and increasing the income level of the population.

One of the primary ways of partnership between businesses and education is the creation of internship and practicum programs for students. These programs allow students to gain practical experience in a real business environment and enhance their competitiveness in the job market. Within the framework of dual education, businesses

can offer universities special educational programs for the professional development of learners. These programs will bring educational content closer to the requirements of the job market and allow students to acquire the necessary knowledge and skills.

Businesses should be willing to invest in education and research activities, fund scholarships for talented students, conduct training for instructors, develop or actively participate in joint innovative projects. All financial expenditures associated with such actions by business management should be considered as investments in their own future development. Universities can engage business partners in jointly financing research and development, which will enhance the effectiveness of innovation centers and laboratories. Such initiatives will allow students to acquire new competitive knowledge and experience from leading industry practitioners. Economic entities will gain access to new innovations and technologies, which will become another factor in business development and expansion of opportunities for further cooperation with educational institutions.

The partnership between business and education can become a powerful stimulus for the innovative development of small and medium-sized enterprises, as demonstrated by the experience of developed countries around the world. Within this collaboration area, universities can provide consulting services for small and medium enterprises, helping them develop and navigate modern innovative technologies, and enhance their competitiveness in regional and national markets. This will become an additional factor for investing in the development of technological support for the educational process in educational institutions by business entities.

The analysis of global experience allowed for the formulation of the main components of effective cooperation between business and education that should be implemented in Ukraine:

- 1.Creation of innovative educational programs by providing specific competency requests by businesses for graduates. Achieving such competencies can be done through the direct involvement of industry professionals as lecturers.
- 2.Funding scientific research based on specific requests from businesses. Both teachers and students can participate in project implementation. Joint projects can be developed that will help students gain practical experience and develop skills, as well as help companies attract talented professionals. Such projects can be submitted for grant competitions to secure international funding.
- 3.Implementation of practical-oriented learning principles through transferring some of the educational content to the workplace. Businesses can offer internships and practices for students and graduates, which will allow them to gain real work experience in the company.
- 4.Engaging students and graduates in working for the company, which can be done by selecting talented students during internships or educational sessions at the company.
- 5.Businesses and educational institutions can exchange knowledge and experience in various fields, allowing students and teachers to access the latest technologies and innovations in business. This will help businesses improve their competitiveness and profitability. To implement this direction of cooperation, various events can be held at the university or company.
- 6.Businesses and educational institutions can collaborate in developing clusters and innovative ecosystems, which will contribute to the creation of conditions for the development of creative enterprises and increasing the region's competitiveness.

Therefore, a partnership between business and education can be very beneficial for the development of Ukraine's innovative future, and it should become a driver for economic recovery and the return of Ukrainians. However, this requires a change in the mindset and the willingness of both sides to work together towards a common goal.

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### STAFF MOTIVATION AS THE MAIN FACTOR IN INCREASE OF WORK EFFICIENCY

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Today, staff motivation has gained considerable importance in the field of management, it is one of the main factors of increasing labor efficiency.

Motivation is an internal ambition, a desire to achieve a certain goal. Motivation is important for both employee as well as for the organization.

Motivation is important for an employee because:

motivation will help an individual achieve his personal goals;

a motivated person, a person satisfied with work;

helps and encourages self-development;

a person gains more experience and skills by working with a dynamic team.

Similarly, motivation is important for the organization:

the more motivated the employees, the more powerful the team;

the more teamwork and individual contribution of employees, the more profitable and entrepreneurship is more successful;

better adaptability during the period of making changes and development of creativity;

motivation will lead to an optimistic attitude towards work, as well as creation and acceptance new challenges for themselves, which, in turn, will support healthy competition in the workplace.

Work motivation is the most important factor in work performance, it forms the basis of the employee's work potential, that is, the entire set of properties that affect the production activity of the organization. Labor potential consists of psychophysiological potentialand personal (motivational) potential. Motivational potential plays a roltrigger mechanism, which determines what abilities and to what degree the employee will be separateduse in the process of work.

Today, for an employer who wants to increase the efficiency of work in his organization, motivation is a relevant and important issue that requires further

development and thorough research in order to create a truly working system of personnel motivations that can be used in practice by various organizations.

### SOCIAL AND CULTURAL COMPONENT OF THE DEVELOPMENT OF THE COSSACK-HETMAN STATE DURING THE TIME OF B. KHMELNYTSKYI

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he modern concept of sustainable development includes three components: economic, ecological and sociocultural. The first steps on the way to understanding the continuity of generations, the interconnectedness of historical and cultural unity from the oldest generations to the present and further to posterity were reflected in the documents of the time of the formation of the Ukrainian state from the time of the hetmanship of B. Khmelnytskyi. From the first years of the development of the Ukrainian state, the issue of the development of the social sphere appeared as a necessity and a fact.

In the first documents of B. Khmelnytskyi as hetman, the main tasks and directions of state policy are clearly outlined. The international situation at that time did not contribute to a quick and positive resolution of all issues and problems. In May-June 1648, in the station wagon of B. Khmelnytskyi "To all Ukrainian Little Russians"emphasized the importance for the Cossack-Hetman state of relations with the countries of the East "remote beyond the Black Sea" [2, p. 645-646].

The substantiation of the Ukrainian position of interest and control in the Black Sea region is reflected in the Zboriv Treaty: "from the Black Sea and the Dnieper estuary up to the south..." [2, p. 138-139]. It is important that the declaration of Ukraine's claims to the Black Sea coast was recognized by foreign countries.

A number of sources confirm the tradition of Tatar-Ukrainian trade. B. Khmelnytsky mentioned the constant arrivals of subordinates of the Crimean Khan to the border towns of the Cossack state [2, p. 84].

Famous trade raids of Tatar merchants to Poltava, Uman, Myrhorod, the then capital - Chigyrin [ 2, p. 486-487]. They mostly bought bread and various food supplies. Horses, Turkish and other Eastern goods were imported into Ukraine.

Ukrainian merchants went to the possessions of the Ottoman port near Ochakiv, to the estuaries for salt until the beginning of the 19th century. However, Ochakivska, as well as Crimean trade, did not dominate at that time. The main trade route from the Cossack-Hetman state went to Moldova and Constantinople.

Customs tariffs for foreign merchants - Greeks, Armenians, and Turks - were specified in the station wagon and B. Khmelnytskyi dated April 21, 1654. This document also lists the main goods that were imported to the Hetman region at that time - fabrics, carpets, jewelry, gold, silver, precious stones, pearls, etc. [2, p . 507-508]. That is, the main import duties were aimed at Turkish goods, which significantly increased their value.

The draft agreement with Turkey on maritime navigation is significant for highlighting the issue of the socio-cultural component of dispute resolution. The source

is weighty in that the desire to solve a number of problems is reflected not only in domestic documentary acts of the Cossack-Hetman state, but also certified in an international legal manner [2, p. 619-622].

From the first paragraph of the agreement, it is stated that "the Cossack army and its state" are free to sail on the Black Sea, with calls to any ports of all the states of the Black Sea coast, both Christian and of other religions. Free trade was declared: sale, purchase, exchange without any obstacles and difficulties [2, p. 619-622].

The clauses of the agreement provided for: exemption of Ukrainian merchants from "all duties, payments and taxes", allowed free redemption and exchange of captives, etc. [2, p. 619-622].

The agreement indicates a new balance of power in the Black Sea basin. He continued the tradition of princely times, when the sea was called "Russian".

The geopolitical direction of the formation of the state territory is seen relatively rarely on the pages of historical monuments. This is not surprising, since from the middle of the XVII century. the process of incorporation of Ukraine into the Russian Empire began. Therefore, the political opinion of the national intellectual forces focused primarily on the defense of autonomy, and not on broad geopolitical problems.

For a long time, an important consolidating factor of national consciousness was the religious aspect. This was relevant in the princely era, the Lithuanian-Polish period. However, in the future, both in the mind and on the pages of chronicle sources from the second half of the 17th–18th centuries. religious issues were dismissed. The church received confirmation of its properties in the 18th century. gradually removed from the active influence on the state life of the Hetmanship. A significant part of the clergy began to faithfully serve the interests of the Russian Empire.

So, from the middle of the 17th century social and cultural security is inextricably linked with the development of the economy, trade, politics, etc. New roads were opened, there was a significant caravan movement, and at the same time an active cultural exchange, mutual penetration in art, everyday life, partly religion. Particular attention is drawn to the variety of means of solving the economic, political, military, and cultural interests and needs of not only the Cossack-Hetman state, but also the countries of the East and West, which in essence have not lost their relevance to this day.

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#### THE NEWEST TECHNOLOGIES IN VOLUNTEER PROJECTS FOR UKRAINE.

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Modern society is developing at a very fast pace. In these months of the active phase of the Russian-Ukrainian war, Ukrainian society was forced to develop even faster. It also affects the use of the latest technologies, in particular blockchain, in those areas where they are not yet used. Specialists call a blockchain a decentralized database formed as a network of computers that interact with each other based on a consensus protocol and a chain that stores blocks with encrypted data about any agreements or records.

Thanks to the application of blockchain technology, it is possible to optimize both the internal business processes of companies and the processes taking place with external market participants. This could dramatically change the trading landscape. By optimizing these processes, there is potential for significant savings.

However, this technology should not be considered a panacea or a magic wand. It is a reliable tool to protect against database changes by attackers, to automate and increase the transparency of logistics processes, as well as for international settlements. Now the technology is at the stage of development and development [4].

In the Ukrainian legislation, the law on virtual assets was adopted on the eve of the war. On February 17, 2022, the Verkhovna Rada adopted the Law of Ukraine "On Virtual Assets" (project No. 3637), taking into account the President's amendments. Therefore, activities with these assets became possible in the legal field.

As of October13, 2022, the global cryptocurrency coin collection campaign Unchain Ukraine has raised more than \$9 million for humanitarian aid to Ukraine. Blockchain activists launched the initiative on February 25. The founding organizers are Oleksiy Meretskyi, Oleksiy Bobok, Oleg Kurchenko, and Rev. Miller [2].

The main task of the fund is financial and humanitarian aid to Ukrainians who suffered in the war. The fund provides funds to individuals, volunteers or organizations that help Ukrainians to get out of the war zone; buy food, medicine, protective equipment, etc. 4.9 million dollars have already been distributed among volunteers.

Unchain Fund continues to accept applications for assistance from Ukrainian public and volunteer organizations and other volunteers, medical institutions and state authorities. Today, one of the largest recipients is the "Kyiv City Clinical Hospital No. 17"-1.9 million uah[2].

Contributions are accepted in different coins. In Ukraine, the world's first cryptocurrency charity debit card weld was created. All this led to the fact that Ukraine is already among the top three in the use of cryptocurrencies, and blockchain technologies are working to rebuild the country. Weld still remains the first and only cryptocurrency card in Ukraine [2].

American hosting service Airbnb supported work in Ukraine. Brian Chesky, the CEO of Airbnb, said on his Twitter that private individuals who finance the purchases of volunteers use this alternative method of financing, because sometimes banking institutions block the transfer of funds, and the blockchain allows to bypass it.

Since the start of the Russian invasion, the Ukrainian government and an NGO supporting the military have raised \$63.8 million through more than 120,000 cryptocurrency donations. This includes a donation of \$5.8 million from Polkadot founder Gavin Wood and CryptoPunk NFT worth over \$200,000.

On February 26, Ukrainian government accounts on Twitter published a request for donations in cryptocurrency. To date, \$54.4 million worth of donations have been received in Bitcoin, Ethereum, TRON, Polkadot, Dogecoin, and Solana [1].

British Elliptic experts investigated the cryptocurrency wallets of several volunteer groups. Thus, the "Return Alive" fund was founded in 2014 and financed the purchase of body armor, military equipment, etc. In the second half of 2021, he had over \$200,000 in cryptocurrencies [3]. With the start of the active phase of the war, the fund auctioned an NFT with the Ukrainian flag for \$6.5 million in ETH, the 10th most expensive NFT ever traded. The proceeds were transferred to the organization [1].

Most of the donations received to date have been in Bitcoin and Ether, although a significant portion is USD stablecoins. But not only cryptoassets are donated; people also send NFT to public ETH account. One such NFT has a value of approximately \$300.

A virtual war museum was created practically from the beginning of the war. On the first day of the sale of virtual exhibits, the NFT War Museum collected more than 600,000 dollars in support of Ukraine. This was announced by the Minister of Digital Transformation of Ukraine Mykhailo Fedorov in Telegram. This is the amount the museum collected on the first day of the sale of virtual exhibits. A total of 1,282 digital works of art were purchased.

The collected funds will go to the cryptocurrency fund, which was created by the Ukrainian crypto exchange KUNA, to support the Ukrainian army and digital and cyber resistance," the minister wrote. "We became the first to combine blockchain technology and modern art to document the historical truth about the war of the Russian Federation of Ukrainian companies [5]. You can visit the NFT museum or buy a digital artwork from the site," he added. Fedorov reminded that the Museum of Metahistory was launched by the NFT community with the support of the Ministry of Digital. [6].

Accordingly, we can say that such a network-centric approach, including in the matter of collecting money, provides new opportunities. Some of which we are just mastering. A positive point is that Ukraine has managed to pass a law that partially normalizes activities with such assets, which greatly simplifies the life of organizations and foundations that provide assistance to vulnerable segments of the population, hospitals, and the armed forces.

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### THE INFLUENCE OF SOCIO-CULTURAL FACTORS ON SUSTAINABLE DEVELOPMENT: CHALLENGES AND OPPORTUNITIES

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In the modern world, sustainable development has become one of the most pressing issues for the global community. However, in order to successfully implement sustainable social development practices, it is essential to consider the socio-cultural issues that can impact this process. This article aims to analyze the socio-cultural factors that hinder or facilitate sustainable development, and identifies opportunities for utilizing these factors in building a society that promotes sustainable development.

The current state of scientific research on socio-cultural issues in sustainable development is both relevant and constantly expanding. Understanding the interplay between social, cultural aspects, and sustainable development is a crucial characteristic of contemporary research. Many studies focus on the influence of social and cultural factors on the formation of sustainable culture, as well as the role of socio-cultural context in implementing sustainable development practices.

Research in this field focuses on understanding the social and cultural aspects of sustainable development and identifying ways to overcome socio-cultural barriers and maximize the positive impact of social and cultural factors on sustainability. Many studies aim to analyze the socio-cultural factors that contribute to or hinder sustainable development and develop strategies for harnessing these factors for the benefit of sustainable development.

Researchers also concentrate on studying the role of public awareness, ethical leadership, and social responsibility in the context of sustainable development. Analysis of best practices and the implementation of innovative approaches aimed at addressing social and cultural issues arising in the process of sustainable development are also undertaken.

Scientific novelty of our research lies in addressing the topical issue of the interplay between socio-cultural factors and sustainable development, as well as uncovering new challenges and opportunities associated with this interrelationship. This article proposes an original approach to understanding the influence of socio-cultural factors on sustainable development, including analyzing their role, interactions, and impact on

various aspects of sustainable development, such as social justice, ecological balance, and cultural diversity.

It is known that in the 1990s, a new philosophical foundation for global development emerged, known as sustainable development. This approach aims to achieve long-term stability, focusing on supporting future generations. As a result of this shift in values, the international political concept of sustainable development was established, continually enriched with new elements. This is evident from the documents of UN global forums dedicated to sustainable development, where the significance of social issues and global regulation of the world economy is increasing. Such a transition from the initial ecological focus to a more comprehensive understanding of the problem is evident (Sidenko V., p. 18).

Many researchers and practitioners (V. Andrushchenko, H. Bilyavskyi, P. Holovchenko, S. Didenko, I. Ivanyuk, P. Koreniuk, V. Kremen, V. Luhovyi, M. Nesterova, P. Saukh, P. Sikorskyi, A. Yatishyn, and others) study the issues of creating a socially secure situation and ensuring sustainable development. However, the role of innovative approaches and social factors in ensuring sustainable development and achieving social security has not been sufficiently explored yet. According to the authors, the main goals of sustainable development aimed at ensuring social security include poverty and hunger eradication, achieving food security, promoting a healthy lifestyle, attaining quality education, facilitating employment and fair wages, and others (Harashchuk O., Kutsenko V., p. 11).

The development of the social sphere and the creation of a safe social environment contribute to the system of social protection measures. This entails creating conditions for the development of socially significant qualities of individuals, who are consumers of socio-cultural services. To ensure this, objects within the social sphere must be safe. Criteria, indicators, and indicators should be used in assessing safety. When ensuring sustainable development of society, it is important to utilize not only the social potential of the social sphere, which includes resources and personnel but also the energy, physical, and spiritual capabilities of workers. This helps create and implement highly effective projects in the fields of science, production, business, and leisure. The innovative potential is particularly important and effective in ensuring sustainable development and social security. It is directed towards creating or seeking and implementing innovative solutions (Harashchuk O., Kutsenko V., p. 15).

The United Nations has defined sustainable development as the main direction of civilization's development in the 21st century. Ukraine is among the countries that have committed to incorporating the principles of sustainable development into their economic system (Okhrimenko O., Ivanova T., p. 12). Thus, achieving the implementation of sustainable development principles in the country can be accomplished through the modernization of governance systems and social relations based on social responsibility, where motivational mechanisms for socially responsible behavior are involved in the realms of individuals, society, business, and the state (Okhrimenko O., Ivanova T., p. 13).

Green tourism is gaining the greatest popularity and prevalence in terms of mitigating the challenges of the economic crisis due to the pandemic. Global strategies for socio-economic and ecological development are amplifying the significance of this sector as a vital sphere of human activity. Ukraine's transition to the principles of self-governance and self-sufficiency resulting from the processes of decentralization is also a

stimulating factor in enhancing the efficiency of economic development in rural areas based on green tourism and local natural resources. Green tourism specifically produces social benefits and is recognized as a priority sector for diversifying the rural economy and supporting well-being. However, it requires extraordinary measures during periods of prolonged restrictions on tourist flows between countries worldwide. The strategy for the development of green tourism objectively demands the creation of conditions that align with the goals of sustainable development, as well as the establishment of mechanisms and instruments for their realization at both regional and national levels (Zinchuk T., Usyuk T., p. 16).

Preserving cultural heritage is an important aspect of sustainable development as it recognizes the value of indigenous peoples' values, traditions, and nature-based practices (Zinchuk T., Usyuk T., p. 28).

The modern approach to human development involves the inclusion of people in key areas such as politics, economy, culture, and social sphere. Increasing the percentage of people excluded from these spheres poses a threat to sustainable development. The primary mechanism for improving the state of sustainable development is the implementation of social inclusion policies (Zinchuk T., Usyuk T., p. 50).

In her research, E. Semenyuk examines the scientific aspect of creating a concept of sustainable development as a strategy for optimizing all spheres of human activity, including their interaction with the environment. The author emphasizes that the sociopolitical aspect, detached from the scientific one, is insignificant (Semenyuk E., p. 138).

To achieve sustainable development, it is important to consider psychological, moral, cultural, and political aspects. Economic issues are not the main focus. Sustainable development precedes the inheritance and satisfaction of the life needs of future generations. Thus, sustainable development serves as a means of education, human rights protection, ensuring physical and spiritual well-being, promoting democracy, legality, and other aspects (Sadovenko A., Maslovska L., Sereda V., Tymochko T., p. 14). The modern concept of sustainable development takes into account not only the economic or eco-economic aspect but also the social aspect with its political, ideological, moral, and cultural components (Sadovenko A., Maslovska L., Sereda V., Tymochko T., p. 27). Therefore, the authors summarize that globalization is a process of increasing interdependence, interaction, and convergence among different countries and peoples of the world. It primarily occurs in the economic sphere but also influences the domains of information, culture, technology, and governance (Sadovenko A., Maslovska L., Sereda V., Tymochko T., p. 21).

In the process of societal and governance transformation, the state functions as a regulator, controlling and influencing the expression of local or global cultural values through its policies, with the aim of promoting sustainable development (Bielska T., p. 38).

Overall, the state of scientific development regarding social and cultural issues of sustainable development is dynamic and continues to evolve. It is important to note that the scientific exploration of social and cultural aspects of sustainable development is an ongoing process that requires further research to gain a deeper understanding and address complex social and cultural issues related to sustainable development. There is a need for further research employing an interdisciplinary approach to uncover the interconnections between social, cultural, economic, and environmental aspects of sustainable development.

Furthermore, it is crucial to continue research efforts aimed at seeking innovative solutions and best practices for implementing sustainable development that consider the social and cultural specificities of particular regions and communities. Conducting scientific inquiries in this field can lead to the development of new strategies and programs aimed at strengthening the socio-cultural aspect of sustainable development.

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### THE ROLE OF EDUCATION IN IMPROVING THE COMPETITIVE ADVANTAGES OF THE REGION'S BUSINESS ENVIRONMENT

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The quality of educational services in a country will significantly determine the current level of national income and gross domestic product, as well as their potential for growth over time. The level of quality of higher education forms a corresponding amount of human capital. In other words, the education received determines the set of knowledge, skills, and abilities of a professional in their chosen field. Furthermore, education determines the supply of professional mobility of highly skilled specialists. As a result, they will be able to obtain prestigious employment in their field with a sufficient level of pay and, therefore, can afford to live at a decent standard.

The quality of education also plays an important role in the formation of intellectual, innovative, and human resource support for the effective operation of small and medium-sized businesses. Market trends, consumer expectations, production technologies, and resource bases are constantly changing on a daily basis, affecting all

sectors of the country's economy. In order for workers at all levels to quickly adapt to these changes, the scope of their knowledge and practical skills must be wide-ranging, and they must also possess approaches to psychological resilience. This knowledge and skills must be provided to graduates by educational institutions in the region. This is important because it is expected that graduates will remain living and working in their own region. Therefore, to ensure even development of the business environment across the entire country, the quality of higher education must be provided not only in the capital region and major provincial centers, but also by all educational institutions. This will help to organize the processes of internal migration and prevent further growth of trends in the outflow of young, talented people beyond the country's borders.

We would like to note the existence of such dependencies between the quality of education and the development of the business environment in the region [1]. First, business will always move to those regions where high-quality educational services and a sufficiently highly professional workforce are provided. It is these employees who are able to ensure the competitiveness and profitability of economic entities. The more such centers will be on the territory of the country, the more development the economy of Ukraine will achieve. Due to such trends, there will be an increase in the number of jobs, the activation of innovative management decisions and an increase in the welfare of the population. In addition, the favorable development of the business environment will be an incentive for young and ambitious entrepreneurs to enter this area. Therefore, knowledge on starting one's own business must be provided to all applicants for higher education without fail.

Secondly, quality education will help to strategically develop the level of professional competence of the workforce in the region. This will start the process of accumulation of his human capital. Increasing the level of competence will contribute to the growth of productivity and business efficiency. The competitive positions of businesses and sustainable trends in the development of the economy will be ensured.

Thirdly, it is impossible to ensure the innovative development of business without high scientific activity in the region. At the heart of such a process is the developed scientific field in the region. It is almost impossible to achieve this without increasing higher education services and at the same time investing in business in the implementation of specific scientific projects. Therefore, close cooperation between business and education at the regional level will increase the level of innovation in the business environment and revenues to the state budget of the country.

Fourthly, the symbiosis of high-quality education and a developed business environment should create conditions for the competitive positioning of the region at the international level. This is highly likely to become a driver for attracting investments, investments and partners for even greater activation of the business environment.

In order to improve the quality of higher education in Ukraine, we can list the main activities. It is important to increase funding for universities. This will increase the level of teachers' motivation for quality work and improve the state of material support of the educational process. At the same time, it is very important to ensure the high quality of teaching disciplines, for which it is necessary to involve only professionals. Attention should be paid to harmonizing the content of educational programs with the requirements of the labour market and the expectations of enterprises of the competence level of future employees. It would be very appropriate to look for universities of international partners, cooperation with which will improve the internal quality standards of educational

services. In addition, international partnerships should form the basis for joint scientific research, in which it is expedient to involve the best students and business representatives in the region.

Consequently, the quality of educational services can have a significant and decisive impact on the business environment of a country's region. Such an impact will be manifested in economic development, growth of competitiveness and attractiveness of the region for businesses and investors. High-quality education ensures high professional competence of the workforce, development of scientific potential and innovative growth of the development area. Therefore, regions that focus on improving the quality of education in their development strategy may have an advantage in the competition for attractiveness to businesses and investors. This will be especially relevant in the post-war period to accelerate the recovery and development of the Ukrainian economy.

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### THE FEASIBILITY OF COMBINING SMART CITY TECHNOLOGY AND URBAN AUTHENTICITY

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With the development of the global economy and modern technologies, the concept of "smart cities" is becoming increasingly relevant and in demand. Smart cities actively utilize information and communication technologies to improve the quality of life for citizens and the efficiency of urban services. An important component of smart cities is the preservation and support of urban authenticity, which combines traditions, culture, and identity in the context of the latest technological trends.

Urban authenticity is a unique way of life, traditions, and cultural values that shape the image of the city and its historical heritage. The support and development of authentic urban culture is of great importance for economic stability and social well-being. A key aspect of this issue is the level of influence of cultural distinctiveness on the attractiveness of tourist destinations, economic potential, as well as the creation of a positive and distinctive local identity.

Authenticity is often determined by the cultural, architectural, social, and historical characteristics of a city. In the light of globalization and modernization, the preservation and strengthening of a city's authenticity have become important issues for economic development.

Many studies have been conducted on the feasibility of implementing smart urban solutions. According to the McKinsey Global Institute, the adoption of smart technologies can lead to a 15-20% reduction in energy consumption, a 30% decrease in water and waste volumes, and a 20-30% reduction in urban car traffic [1]. This can contribute to budget savings and stimulate economic growth. An example is the city of

Barcelona, which reduced energy and water consumption by 30% through the implementation of a remote-control system for lighting and water supply.

Urban authenticity is a factor of attractiveness for tourism and investments. Preservation of urban authenticity not only improves the quality of life for local populations, but also enhances the appeal of the city for tourists and investors. Conducting assessment measures and restoration projects can stimulate revenue from tourism, increase gross regional product, and create new job opportunities. An example is the Venice MOSE project, estimated at 5.5 billion euros, which aims to protect the city's cultural heritage and landscape from floods. As a result of implementing measures within the project, the city's tourist appeal and real estate market stability have increased.

Preserving authenticity can be combined with the installation of modern technologies and infrastructure in cities. Integration of traditional architectural styles and materials with modern digital sensors and monitoring systems can create new economic opportunities. An example is China, where the model "eco-city" of Tianjin is being created. In the modernization of the city, unique autonomous systems for water supply and energy efficiency are being used. At the same time, the project focuses on preserving traditional aspects of urban architecture and values.

Recently, there has been increasing attention paid to the issue of preserving the authenticity of urban heritage. The authenticity of the urban environment plays a crucial role in attracting tourists and creating a pleasant living environment for city residents. However, the question of how to economically justify the costs of preserving and reviving the authenticity of the urban environment remains very relevant and open.

In the Netherlands, where authenticity plays a key role in the development of the tourism industry, numerous studies have been conducted that demonstrate that the preservation of the authenticity of the urban environment is not only an investment in cultural heritage, but also has a positive impact on the city's economy. For example, in the city of Haarlem, which is a model for the preservation of an authentic urban environment, approximately 40% of tourists choose the city specifically because of its authenticity. According to the National Statistics Center of the Netherlands, the tourism industry is one of the country's key economic sectors, and its contribution to the economy in a given year is 4.5% of GDP [3].

However, the preservation and revival of authenticity in the urban environment is not always economically justified. In many cases, especially in economically young cities, preserving authenticity may require significant investments, which may be justified by the tourism industry. In such cases, state support tools, such as tax breaks and special grants for the preservation and revival of authenticity in the urban environment, may be applicable.

Another argument in favor of preserving authenticity in the urban environment may be the reduction of infrastructure costs. Preserving old buildings and structures prevents the need for new construction, leading to cost savings on construction work and maintenance of new buildings.

Thus, while the issue of preserving authenticity in the urban environment may be economically challenging, there are numerous arguments in favor of this process. Preserving and reviving authenticity in the urban environment can have a positive impact on tourism, contribute to a reduction in infrastructure costs, and significantly improve the living environment for city residents.

Examples of successful practices:

Barcelona, Spain. Barcelona is considered one of the best examples of successful combination of authenticity and innovation. The city effectively preserves its history and cultural heritage - from the Gothic Quarter to the famous works of Gaudi - while developing as a technological and innovative center. This continues to attract tourists and foreign investors, contributing to its upward economic development.

Kyoto, Japan. Kyoto successfully manages the balance between preserving its famous cultural heritage, including idyllic temples and gardens, and stimulating the city's technological development. A pearl of Japan's history, Kyoto is home to a number of major companies, including Nintendo and Kyocera, contributing to its economic success.

Thus, based on the examples provided, it can be argued that preserving cultural authenticity is an investment in the future of the city that contributes to its economic prosperity. Investing in urban authenticity helps attract tourists, which directly impacts the development of the hospitality, restaurant, transportation, and other segments of the economy. Therefore, investing in urban authenticity creates new job opportunities and increases the overall well-being of residents.

Cities with unique historical and cultural landmarks attract countless tourists and investments. Famous authentic cities worldwide such as Rome, Paris, and Barcelona attract millions of tourists annually. Authentic cities provide an attractive environment for creative professionals and high-tech experts. Urban authenticity positively impacts the development of the creative economy, including new media, design, fashion, art, and culture. Neighborhoods like Soho in New York or Berlin's Mauerpark serve as catalysts for economic growth.

Urban authenticity is an important factor in the development of local and regional economies. Therefore, it is the responsibility of authorities to attract investments in the preservation and development of the unique character of cities. In the long term, such investments can contribute to overall economic growth and improve the quality of life for urban populations.

Urban authenticity is a critical factor in the strategy for sustainable urban development. Well-planned investments and the preservation of cultural identity can be decisive factors in ensuring social, cultural, and tourist growth in cities. Examples of cities like Barcelona and Kyoto show that success can be achieved by preserving urban authenticity and simultaneously integrating modern innovations and technologies.

The integration of smart city technologies and the preservation of urban authenticity are economically justified paths to urban development. The experience of many countries and cities shows that this approach contributes to improving the quality of life for citizens, optimizing and increasing the efficiency of urban resources. Moreover, the integration of smart city technologies and the preservation of urban authenticity can also serve as a foundation for creating new attractive tourist destinations and promoting sustainable socio-economic development.

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### THE NEGATIVE IMPACT OF THE WAR ON THE EDUCATIONAL ENVIRONMENT OF UKRAINE

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The foundation for the successful functioning of a country's economy in both operational and strategic periods lies in only one factor - the quality of education. This thesis can be refuted many times and proven that money and investments, naturalclimatic and political factors are more effective. However, the truth of these words will not change. Only in the region and country where there is a high level of education quality, will the economy be highly developed and innovative. It is essential to ensure the quality of education at all levels, from preschool to higher education. Providing youth with competitive knowledge, developing their entrepreneurial skills, and equipping them with specific economic tools is perhaps the main condition for activating and scaling small businesses in the territory. Therefore, the quality of education becomes a factor in opening up new job opportunities. Simultaneously, negative phenomena in the country's economy such as unemployment, migration of able-bodied and prospective population beyond the country's borders, low income levels, and unsatisfactory living standards of the population are reduced. Thus, we can conclude that the development of a country's economy is always based on quality education, the formation and support of which should become one of the priority components of state policy and support.

In 2014, Ukraine experienced a societal, political, and military conflict that resulted in a new phenomenon for the country - the forced relocation of universities, research institutions, scientific and pedagogical staff to other cities and regions of the country. Additionally, between 2014 and 2022, a portion of the country's scientific and educational potential was lost due to the departure of some teachers to the uncontrolled territories of Donetsk and Luhansk regions, as well as the Autonomous Republic of Crimea. Moreover, some educators and scientists left the country for temporary or permanent residence abroad, and some changed their area of activity drastically. Since the full-scale invasion by the aggressor forces into Ukraine on February 24, 2022, there have been massive destruction of educational institutions, loss of lives of teachers and students, and mass displacement of actual and potential participants in the educational process to safer Ukrainian territories and beyond the country's borders. As a result, there is a need in the country's educational space to make efforts to stop and prevent further trends of losing scientific and educational potential and migration of progressive educators and scientists outside of Ukraine. These processes have been happening quite

intensively during the year of the war, which limits the possibilities of implementing an innovative scenario for the development of Ukraine's educational environment [1].

Thorough research is needed on the issue of the level and quality of life for scientific, educational, and research staff who have been internally displaced to other regions of Ukraine, as well as the sufficiency and effectiveness of legislative regulation of the activities of temporarily displaced universities. The motivation level of educators and scientists to engage in productive and high-quality work will depend on the favorable conditions created for them in the new cities. This should serve as a guarantee of the social and socioeconomic revitalization of regional economies, including those in occupied and war-torn areas of the country as a whole. In addition, special attention should also be given to educational institutions that have been forced to relocate twice [2].

The phenomenon of the relocation of universities and scientific institutions from the non-government-controlled territories of Ukraine requires thorough research aimed at establishing the current level of their performance during the period of 2014-2022. It is important to identify problematic aspects and prospects for further development, to substantiate managerial decisions aimed at improving working conditions and ensuring an adequate level of quality of educational and scientific services. The comprehensive assessment of the conflict's impact on the state of the educational and scientific spheres of Ukraine should be carried out to simultaneously quantify the scale of negative consequences of the loss of scientific and educational potential of relocated educational institutions and the positive shifts in the performance of other educational institutions of Ukraine resulting from the admission of relocated personnel.

In the absence of reliable and comprehensive published statistical and analytical data on the actual state of forced displacement of educators and scientists, it is appropriate to make at least an approximate assessment of the scale of such loss. Based on this assessment, a roadmap for preserving the intellectual capital of all those affected by Russian military aggression on the territory of Ukraine should be developed. This roadmap should help the adaptation of displaced scientists and educators to the radically changed conditions of life and work. As a result, the restoration of the scientific and educational potential of all regions of Ukraine will take place. This will contribute to the revitalization of the economy of the regions of Ukraine in the short and long term.

One of the key factors in stabilizing the country's economy in both wartime and post-war periods is an active entrepreneurial movement. Micro, small, and medium-sized businesses are the driving forces that keep the Ukrainian economy afloat. Moreover, this sector of the country's economy creates new jobs, including for internally displaced persons. Thus, small business today plays a role as a driver of both the economic and social components of regional economies. The development and spread of small businesses should become one of the most effective factors in stabilizing the situation in the country, provided that hostilities cease and Ukraine receives security guarantees from reliable foreign partners. However, the question arises of how to activate the entrepreneurial movement in a particular territory. The answer to this question can only be one - to provide promising youth and economically active representatives of the adult population with sufficient knowledge on how to organize their own business and achieve economic success. Social entrepreneurship, the prototype of which is already being demonstrated by the phenomenon of volunteering, can also play an important role here.

Therefore, it is crucial to shape the educational curricula of Ukrainian educational

institutions in such a way as to provide learners with specific knowledge on the procedures of starting their own businesses and to reinforce this knowledge through practical application. It is also advisable to conduct intensive training courses on business planning for all interested parties, particularly for individuals who have been involved in combat operations or forcibly displaced. High-quality execution of these measures will facilitate a more rapid socialization process for these vulnerable groups and create an additional factor for activating regional economies.

Thus, education must become the driving force of the Ukrainian economy under any circumstances, enabling a smoother and painless transition from a "war economy" to a peaceful stage of existence for the independent country.

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#### ІННОВАЦІЙНІ НАПРЯМИ УДОСКОНАЛЕННЯ ГАЛУЗІ ОХОРОНИ ЗДОРОВ'Я В УКРАЇНІ

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На сьогодні, одним із важливих напрямів реалізації державної політики у галузі охорони здоров'я є проведення дієвого реформування системи публічного адміністрування цієї сфери. Для ефективного впровадження реформ у галузі охорони здоров'я необхідне використання гуманістичних підходів та дотримання принципу соціального забезпечення населення в організації діяльності з надання громадянам медичних послуг. У процесі грунтовних трансформацій у системах охорони здоров'я розвинених країн світу, стратегічно важливим завданням є забезпечення якісної комунікаційної взаємодії між представниками медичної спільноти, центральними і місцевими органами влади та громадськістю.

Так, варто зазначити, що успішне та своєчасне впровадження реформ у галузі охорони здоров'я зумовить підвищення рівня добробуту та здоров'я населення, що, в свою чергу, сприятиме позитивному сприйняттю громадськістю прогресу реформ медичної сфери. Така ситуація можлива за умови високого рівня підготовки та злагодженості дій органів влади. Міністерство охорони здоров'я України прагне здійснити реформування медичної галузі з максимально позитивним результатом для суспільства, адже громадяни покладають великі сподівання на державну владу та, разом з тим, з упередженням ставляться до будь-яких змін щодо реалізації реформування державного управління [1].

Доцільно наголосити, що одним із пріоритетних завдань держави у процесі

реформування сфери охорони здоров'я  $\varepsilon$  приведення вітчизняної системи охорони здоров'я до міжнародних стандартів, що дозволить громадянам України отримувати якісну медичну допомогу у відповідності до сучасних тенденцій та науково-технічних здобутків медичної сфери у  $\varepsilon$ вропейській спільноті. Такий напрям реформування медичної галузі зумовить створення абсолютно нової моделі розвитку системи охорони здоров'я, яка буде орієнтована на проведення профілактики захворювань, а не на їх лікування [3]. Доцільним кроком, також, слід вважати модернізацію системи публічного управління сферою охорони здоров'я у питаннях її законодавчого забезпечення. Нагальною необхідністю  $\varepsilon$  перегляд законодавчої бази галузі, в тому числі, розробка, ухвалення та реалізація у життя нового закону України, який би регулював діяльність закладів охорони здоров'я та здійснення медичного обслуговування населення, згідно з  $\varepsilon$ вропейськими стандартами.

Також, потребує розробки та ухвалення закон, який би визначав основні засади загальнообов'язкового державного соціального медичного страхування задля реалізації конституційних прав громадян України на охорону здоров'я, надання медичної допомоги населенню та медичне страхування. Потребують внесення доповнень, також, положення Закону України "Основи законодавства України про охорону здоров'я". Згідно з вимогами Угоди про асоціацію з Європейським союзом, державний уряд України має імплементувати міжнародні медико-санітарні правила у вітчизняну систему охорони здоров'я, здійснювати обмін найкращими досягненнями та здобутками у медичній практиці для поступової інтеграції у європейську спільноту [4, с. 73]. Для досягнення результативного функціонування системи охорони здоров'я України необхідно розглянути основні напрями і завдання держави, які необхідно реалізувати у процесі реформування зазначеної сфери.

Структурна реорганізація: доцільним у ракурсі реформування галузі охорони здоров'я вбачаємо продовження удосконалення системи охорони здоров'я на основі принципу розмежування процесів надання медичної допомоги по рівнях: первинний, вторинний та третинний. У контексті структурних перетворень системи охорони здоров'я України, також, необхідно реалізувати наступні заходи [2, с. 425]:

- здійснити переорієнтацію завдань галузі охорони здоров'я та зробити акцент на проведенні профілактики захворювань, а не на їх лікуванні;
- закріпити принцип вільного вибору пацієнтом лікаря на первинній ланці надання медико-санітарної допомоги;
- надати медичним закладам статус прибуткових організацій та перетворити їх на автономні самоврядні організації з надання медичних послуг шляхом укладення договорів на медичне обслуговування;
- створити умови для забезпечення рівних прав державних та комерційних закладів охорони здоров'я;
- сприяти інтеграції закладів охорони здоров'я у об'єднання медичного профілю та, у перспективі, спеціалізації таких закладів;
- передати частину функцій Міністерства охорони здоров'я України, зокрема, закупівель лікарських засобів, фінансування деяких медичних установ та закладів вищої освіти медичного профілю до спеціально створеної державної структури [2, с. 426].

Отже, такі нововведення необхідні для запобігання реалізації корупційних схем у процесі діяльності Міністерства охорони здоров'я України та зосередження уваги на проведенні саме лікувальної роботи. Забезпечення якості та доступності медичних послуг. Застосування комплексу матеріальних та моральних мотиваційних механізмів та заохочень для медичних працівників  $\varepsilon$  досить необхідним кроком для оптимального функціонування системи охорони здоров'я з метою підвищення рівня якості надання медичної допомоги.

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#### ENVIRONMENTAL AND TECHNICAL ISSUES OF SUSTAINABLE DEVELOPMENT

## COMPONENTS OF INNOVATIVE DEVELOPMENT OF AGRICULTURAL ENTERPRISES IN UKRAINE

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The agricultural sector is one of the most important and promising areas of Ukraine's economy. This thesis is objective, as the industry provides consumer needs for accessible and high-quality food products. Moreover, the industry is a powerful component of filling the state budget through existing projects on the import of agricultural products. Therefore, in order to ensure stable trends in the development of the industry over time, it is important to introduce comprehensive modernization and updating programs and projects on a permanent basis for the technical, technological, and resource components of the agricultural sector's functioning. This is especially important during times of war and post-war periods to ensure food security in Ukraine. It is essential that such transformations are based on innovation, which will significantly improve the effectiveness of management decisions, labour productivity, and improve the quality of the industry's products. The sources of such innovations can be their own developments, for which close cooperation between production and leading scientific organizations of the country should be established. Developments developed and tested by other organizations in Ukraine or the world can also be used.

Thorough analysis of scientific works by Ukrainian researchers on a selected topic [1-2] has confirmed the high level of relevance of the research topic and identified the main directions for innovative development of the agricultural sector of the region and the country. The first direction that can be identified is the use of cutting-edge technologies at all stages of agricultural production in the country. This direction encompass-es a wide range of innovations and effective management solutions that are already being applied in Ukraine. These innovations include smart irrigation systems, automated soil and crop monitoring systems, the use of satellite imagery to improve mapping accuracy and monitor key yield indicators and influencing factors, progressive approaches to analyzing big data, and the application of modern plant protection tools. However, before any type of innovation is applied in practice, experts must thoroughly investigate the socio-economic feasibility of each one. It should be noted that the activation of innovation development among business entities in the agricultural sector can be achieved through public-private partnerships. To this end, support programs for startups, innovative initiatives of small and medium-sized businesses, professional development and mastery of innovative technologies for personnel of agricultural enterprises and farm managers should be created.

The second direction is highly relevant for Ukraine in the context of its potential opportunities for an accelerated EU accession procedure. This direction is associated

with the development of organic farming in agriculture. Expanding the range of high-quality organic agricultural products will simplify the procedures for Ukrainian producers to enter European markets and increase the volumes of purchases of such products. However, this will require passing international certification and recognition procedures. Increasing the proportion of organic products in the domestic supply will have a positive impact on the quality of consumer goods for Ukrainians. This will create favorable conditions for increasing the life expectancy of the population of the country, which is a significant factor given the powerful demographic crisis that Ukraine has experienced throughout its entire period of independence. In this context, strategic decisions should be taken at the level of individual agricultural enterprises to reduce the size and gradually cease the use of chemical fertilizers and transition to natural fertilizers and tools for increasing yields. Such a trend should be further spread and consolidated in the industry.

The third direction is associated with updating the tools of communication with the market and consumers. To this end, the marketing approach applied in a particular economy must be completely reviewed and modernized. This direction encompasses a broad spectrum of activity ranging from creating an informational and interactive website for product ordering to developing unique branded products. Positioning such products in the market will generate investor interest and attract additional funds for the development and modernization of production. Moreover, modern global trends demonstrate a very high level of digitization in the agricultural product market, which gradually needs to be implemented in Ukraine as well.

The fourth direction is associated with the development of agro-tourism or green tourism and the proliferation of projects in this sphere across all regions of Ukraine. Agro-tourism, as evidenced by leading foreign experience, can simultaneously become an additional source of income for farms and a factor of tourist attractiveness for a particular region or country as a whole for foreign and domestic tourists. The promotion of this practice will create a positive image of Ukraine in the world and gradually increase tourism revenue to the country's budget. The opportunities for implementing this goal are quite realistic due to Ukraine's current high support in the world. We can also anticipate an increase in the interest of Europeans in visiting the country that they directly helped defend the right to their own identity and independence in the post-war period. Therefore, at the regional level, managerial decisions should already be taken to activate the processes of creating tourist routes and organizing cultural and entertainment events. This will encourage agricultural enterprises in the region to consolidate their efforts in implementing agro-tourism projects. It should also be clearly understood that for the effective implementation of this direction, a complete modernization, automation, and digitization of production processes in Ukrainian agricultural enterprises and farms must be carried out.

The fifth direction of state programs should focus on the restoration of agricultural lands, ensuring ecological safety, and preserving natural resources. Due to the war, a significant portion of agricultural lands are currently mined and contaminated, and significant amounts of funds and innovative technologies will be needed for demining and cleaning up all territories of Ukraine, including those designated for agricultural use. The safety of human life and health should be a crucial goal of these programs. Therefore, the utilization of existing innovations and the development of new innovative solutions for soil, water, and forest resource restoration, as well as animal and plant

diversity, should be prioritized.

The sixth direction of innovative development in the agricultural sector of the regional economy is linked to the accumulation of human capital in the industry and the attraction of talent. To achieve this goal, favorable conditions should be created to attract young people and young graduates to agriculture, and opportunities should be provided for their continuous professional development. To this end, the level of remuneration in the agricultural sector must increase.

The step-by-step implementation of these directions of innovative development in the agricultural sector of the regional economy will reduce the negative impact of the war on the industry's performance and provide conditions for its rapid recovery in the country. All stakeholders should unite their efforts, and state support should be ensured to achieve this goal.

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#### GREEN CAMOUFLAGE" AS A NEGATIVE FORM OF MARKET-BASED ECO-TECHNOLOGIES

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The global trend of a healthy lifestyle and care for the environment is felt more and more every day. Environmentally friendly products are gaining more and more popularity. Moreover, environmentally friendly are understood as those goods and services that: are useful (or at least do not harm) human health; their production is environmentally friendly; after consumption, the product (or its packaging) can be recycled.

But, unfortunately, the world of marketing is cruel, and sometimes you have to deal with not completely honest manufacturers. Today, more and more often, ordinary consumers have to doubt the «environmental friendliness» of some products.

This paper considers one of the acute problems of eco-marketing – «green camouflage», or the so-called greenwashing.

Eco-marketing is a modern marketing trend in the market of goods and services. It

teaches consumers to consume ethically. But in order to prove environmental friendliness, products must receive an eco-label, and this is a complex and costly process. A manufacturer who wants to put the coveted eco-label badge on their products must pass a multi-stage and multi-criteria certification. For this reason, some manufacturers who want to save money use their own labeling, which supposedly indicates the approval of the environmental friendliness of products [1, 2].

The term Greenwashing dates back to the end of the 80s, when journalists and public figures in the West began to notice that many commercial companies that position themselves and their products as environmentally friendly and safe for humans and the environment primarily aim to significantly increase their profits. If a company spends much more money on advertising and PR of its own environmental friendliness than on actually improving the consumer properties of the product and reducing the degree of harm caused to nature during its production.

Greenwashing methods range from simply «promoting» an insignificant environmental factor of a product to outright deception of consumers, when an eco-label is placed on a product containing hazardous substances. Greenwashing today is becoming a major problem for conscientious manufacturers who invest a lot of money in the development of truly environmentally friendly production technologies, in the development of self-degradable or easily recyclable eco-packages. How can they resist unscrupulous competitors who want to cash in on the sincere desire of consumers to preserve their health by buying even more expensive, but less harmful products?[3-5].

The most effective measure, in our opinion, should be social advertising that informs consumers, firstly, about existing certification systems, and secondly, about the most obvious signs of greenwashing, which include[1, 3, 4]:

- 1. Ambiguous statements. For example, «Coca-Cola», in one of its advertising campaigns, claims that their bottle is «up to 30% recycled». The question arises is it 1% or 29%?
- 2. Silence of shortcomings, while highlighting the greater environmental friendliness of the technology compared to others. So, advertising of electric cars says that they harm the environment less. But, with less gasoline emissions, they require more electricity to be produced for recharging, which is not exactly an environmentally friendly process.
- 3. Highlighting the advantages while hiding the shortcomings when the company focuses the attention of consumers on small advantages, while hiding significant product shortcomings. For example, «Nestle» launched Pure Life water in a redesigned bottle that supposedly uses 15% less plastic. Most likely, the producer's motive is to reduce production costs, and not at all to help nature.
- 4. Irrelevant statements. Information due to which the product is positioned as environmentally friendly is true, but useless. For example, the company claims that their product is «free of ozone-depleting CFCs», but the substance has long been banned and no one is using it.
- 5. Unsubstantiated claims. One of the most common examples is fabric manufacturers stating their use of recycled materials without providing evidence. In the course of an independent examination, it turned out that the clothes of the H&M brand contain not only environmentally friendly raw materials, but also GMO cotton.
- 6. Non-existent labels when a manufacturer puts a label on its product that indicates the approval of the product's environmental friendliness by a third party, even

though such an approval or a third party does not exist.

Thus, we found out all the tricks that manufacturers resort to with the help of greenwashing. To solve this problem, first of all, we propose the adoption of appropriate measures in the field of legislation. Introduction at the initial stage of recommendations on eco-standardization for manufacturers, followed by mandatory implementation, the establishment of penalties for companies using greenwashing, and finally, the creation of an official «black list» of eco-products with a description of manufacturing companies and ways to mislead the consumer. Greenwashing for Ukrainian manufacturers today is an acute problem and one of the most serious obstacles to the development of the domestic market. We hope that the above measures to solve this problem in the future will be able to increase consumer loyalty to domestic products and, as a result, will cause a steady growth in the economy of our country.

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## GEODETIC MONITORING OF DEFORMATIONS OF UNDERGROUND REAL ESTATE OBJECTS

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Geodetic monitoring of underground objects is an important component of the safety of underground works, construction of tunnels, subways, mining operations, as well as natural phenomena such as landslides, volcanic eruptions and earthquakes (Petrakovska, 2010). The main directions of geodetic monitoring of underground objects can be the following:

- monitoring the depth of the landslide and its movements;
- monitoring of deformation processes occurring in rocks and soils;
- monitoring of geodynamic phenomena such as landslides, mass movements, volcanic eruptions and earthquakes;
- monitoring of soil and rock movements under the influence of loads, such as freight transportation, construction, etc;
- monitoring of the water balance of groundwater in the subsoil, including monitoring of changes in the groundwater level.

All these areas of monitoring require the use of modern geodetic devices and methods, such as laser rangefinders, high-precision geodetic receivers, and computer programs for data analysis and processing.

Technologies for geodetic monitoring of underground real estate objects may be different, depending on the purpose and volume of monitoring. The main technologies of geodetic monitoring of underground real estate objects include the following (Mingming, 2019):

- observation of changes in the groundwater level and comparison with the standard. For this, you can use groundwater level sensors that provide constant monitoring of changes in the level;
- monitoring of deformations using geodetic devices. Optical devices (eg levels), electronic devices (eg GPS receivers) and laser rangefinders can be used for this. Such devices allow monitoring deformations in real time and obtaining accurate data on changes in object dimensions;
- monitoring of stresses and endurance of structures. For this, special sensors are used that measure the stress and deformation of structures under load;
- temperature and humidity monitoring. For this, you can use temperature and humidity sensors, which allow you to ensure constant monitoring of climatic conditions in underground rooms.

All these technologies for monitoring underground objects can be automated with the help of computer programs that allow collecting, analyzing and visualizing data about the state of objects in real time.

Monitoring of deformations with the help of geodetic instruments consists in the implementation of constant monitoring of changes in the size and shape of any object. For this, geodetic instruments are used, which allow measuring the coordinates of points of the object at different moments of time (Nesterenko, 2019).

Optical instruments such as levels and theodolites measure horizontal and vertical angles between points and provide measurements accurate to within a few tenths of an angle. These instruments are used to measure distances and heights between points on the surface of the earth or any other object.

Electronic devices, such as GPS receivers, measure the coordinates of object points with high accuracy. GPS receivers use signals from satellites to determine the coordinates of points with an accuracy of a few millimeters.

Laser rangefinders measure the distance between object points with millimeter accuracy. These devices are used to measure distances between points at short distances.

After measuring the coordinates of the points of the object at different points in time, the data are processed using special programs that allow determining changes in the size and shape of the object. This data can be used to analyze the condition of the facility and identify potential problems that may arise in the future. Monitoring deformations with the help of geodetic instruments is an important component of the safe and effective functioning of buildings, structures, roads, railway lines and other engineering structures. This allows timely detection and elimination of problems that can lead to accidents and unforeseen consequences. In addition, monitoring deformations allows you to control the quality of building materials and the execution of construction works, as well as helps to establish the causes of deformations and avoid them in the future.

The main purpose of deformation monitoring is to determine how well any object maintains its shape and size during operation, and to detect and respond to any changes in this process in a timely manner. This allows to ensure the safety and efficiency of the operation of buildings and other objects during their entire service life.

When monitoring deformations with the help of geodetic devices, various mathematical methods are used, in particular:

- the method of three-dimensional geometric modeling. This method is used to determine the three-dimensional coordinates of the points being monitored and to calculate changes in these coordinates over time;
- the method of differential geometry. This method is used to determine changes in the shape and size of monitored objects. It is based on mathematical models that are used to describe the shape of an object and on data processing algorithms that allow determining changes in these parameters over time;
- method of geodesic networks. This method is used to determine changes in the geometric parameters of the monitored object. It is based on the use of geodetic networks, which consist of monitored points and reference points. With the help of geodetic instruments, the coordinates of these points are measured, and changes in these coordinates over time are determined;
- the method of statistical analysis. This method is used to analyze the data obtained during deformation monitoring. It is based on the use of various statistical methods, which allow to determine the dependencies between various parameters, as well as to identify anomalies and outliers in the data;
  - interpolation method. This method is used to determine changes in the parameters

of the monitored object based on data obtained at a limited number of points. It is based on mathematical models that describe the dependencies between parameters and on algorithms that allow interpolation of these dependencies on the entire monitored object;

- filtering method. This method is used to process the signals received during deformation monitoring. It is based on the use of various filters that allow you to select useful signals and remove them from noise and other interference;
- method of correlation analysis. This method is used to determine the dependence between various parameters of the monitored object based on the analysis of correlations between them. It is based on mathematical models that describe correlational dependencies between various parameters, and on algorithms that allow performing correlation analysis of these parameters over time.

These methods are used to process data obtained in the process of geodetic monitoring of deformations, and allow to determine changes in various parameters of the monitored object over time, as well as to detect anomalies and outliers in the data.

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## METHODS AND TOOLS OF SYSTEM ANALYSIS FOR ORGANIZING PASSENGER TRANSPORTATION IN A SMART CITY

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The problem of organizing passenger transportation in a smart city is closely related not only to the implementation of existing information systems but also to their development. The complexity of the process of organizing passenger transportation in a smart city is enhanced not only by the tasks of efficient passenger transportation. Here it is difficult both to realize the advantages of a smart city and to create a new modern concept of passenger movement in it [1]. And so the difficult task of organizing passenger transportation becomes even more difficult given the need to build a modern information system for managing passenger flows within the concept of a smart city.

The team of developers should include not only specialists in the management of

transport systems but also professionals in system analysis, design, development and support of information systems [2-3]. This indicates the urgency of finding methods and means of managing the organizational process of passenger transportation. The possibilities of system analysis during the development of information systems make it possible to accumulate all the needs of transport companies, passengers and administrations of settlements, as well as to realize the advantages and achievements of information technologies, generating new opportunities for the innovative use of information technologies. It should be taken into account that the systematic analysis of information systems during their design is a complex cyclical process of gradual improvement. Each subsequent iteration of information system improvement should achieve greater value for end users, which are passengers, companies and city administrations. For this, when creating the final IT product (information system for organizing passenger flows), it is important to take into account the needs, goals, mission and vision of all stakeholders of the process. Naturally, the main players in the transport technology market are transport organizations, for which the achievement of business goals (profit growth, for example) is key. The organizational structure and business processes of transport companies should be adapted to the emergence of information technologies to obtain competitive advantages.

Today, it is impossible to do business without the Internet, cloud technologies and various means and methods of the digital economy (digital marketing, electronic money, mobile applications, Internet platforms, blockchain, etc.).It is difficult to imagine searching for goods and resources on electronic trading platforms, placing an order for goods there, paying for delivery services, forming payment documents for the supplier, sending payments from customers, placing orders for materials and resources from the supplier, implementing business relationships, as well as the very existence of electronic trading platforms for companies, etc. without information technologies.

Although the Internet and digital technologies have changed the way of doing business, their key principles have not changed, namely: paying employees, forming business relationships with suppliers and customers, promoting your goods and services in sales markets, making payments and payments, etc. The essence of business, the principles of its functioning, and key indicators of success remain unchanged in the digital technological environment. Companies have and continue to have as their goal the maximization of profits, to achieve which modern information systems are needed in a high-tech environment. The design and implementation of information systems are implemented by various methods and means of system analysis.

The organization of passenger transportation is one of the most important tasks in a smart city. Among the methods that ensure the efficiency and economic profitability of the organization of transportation, the most well-known are [4-9]: 1) expansion of the fleet of electric vehicles and development of its infrastructure; 2) development of smart routes for public transport; 3) building a smart network of transport interaction; 4) use of smart payment systems; 5) creation of pedestrian zones and prohibition of car traffic in certain parts of the city; 6) expansion of the car, bicycle and scooter rental network; 7) creation of a network of delivery of goods using drones.

Practically each of these ways of organizing passenger transportation in a smart city cannot be implemented without the use of existing and the development of new, more effective information systems and technologies. To ensure the effective implementation of these ways of organizing passenger transportation, appropriate investments,

technological innovations and the readiness of the city population to accept such innovations are necessary.

Among the methods and means of system analysis for the design of information systems for the organization of passenger flows in a smart city, it is possible to single out [10-12]: 1) data flow diagrams (DFD); 2) UML diagrams (Unified Modeling Language); 3) modelling of business processes; 4) BPMN (Business Process Model and Notation) methodology; 5) ER (Entity-Relationship) methodology; 6) RAD (Rapid Application Development) methodology; 7) TOGAF methodology (The Open Group Architecture Framework); 8) Lean Six Sigma methodology; 9) SWOT analysis method, etc.

These methods and tools can be used separately or in combination with each other to develop information systems for the organization of passenger flows in a smart city. The choice of methods and tools depends on the specific requirements of the project, the characteristics of the city and its infrastructure, as well as the budget and the project implementation period.

The tools that can be used to design information systems for organizing passenger flows in a smart city include [1, 3, 13-18]:

- 1. BPMN methodology Camunda, Bizagi, Bonita, IBM BPM, Microsoft Visio, Signavio, TIBCO BPM and others.
- 2. Lean Six Sigma method Minitab, JMP, QI Macros, SigmaXL, Excel, Tableau and others.
- 3. TOGAF methodology Enterprise Architect, Ardoq, BizzDesign, Visual Paradigm, Sparx Systems and others.
- 4. SWOT analysis method MindManager, ConceptDraw, Gliffy, SmartDraw, Lucidchart and others.
- 5. Method of system analysis iThink, Vensim, AnyLogic, Simulink, NetLogo and others.
- 6. Forecast modelling method IBM Cognos, Oracle Hyperion, Tableau, Microsoft Power BI, QlikView and others.
- 7. Method of expert evaluations AHP (Analytic Hierarchy Process), Expert Choice, SuperDecisions, Decision Lens and others.
- 8. Project management methodology Microsoft Project, Asana, Trello, Basecamp, Jira and others.
- 9. Software development methodology Agile (Scrum, Kanban), Waterfall, Lean, XP, RAD and others.

In addition to these system analysis tools, software products that combine several methods can also be used, for example, IBM Blueworks Live or ARIS (Architecture of Integrated Information Systems).

Therefore, the described methods and means of system analysis help to ensure the effectiveness of the development and operation of the information system for the organization of passenger flows in a smart city, as well as to realize the advantages of a smart city and create a new modern concept of passenger movement in it.

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## MODERN INFORMATION AND COMMUNICATION TECHNOLOGIES AS AN IMPORTANT COMPONENT OF SUSTAINABLE DEVELOPMENT

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The relevance of theses is substantiated by the current state of theoretical and practical researchon the concept of "sustainable development" for the further functioning of important components of the post-industrial society, optimization of the e-document circulation system, especially in terms of personal data preservation and document archiving.

Review of literary sources. As of today, the study of sustainable development in Ukraine is available in many publications, namely: Chaikovska H., Yankovych O., Levchyk I., Kuzma I., Rozhko-Pavlyshyn T, Dankanuch A., Nikitenko V. and many other scientists.

The purpose of theses is to emphasize the need for further introduction of electronic document circulation into the activities of enterprises of state, private and communal forms of ownership as the Best Practices, which is an important component of information and communication technologies not only in Ukraine, but also in the world.

Basic content. In our opinion, further improvement and optimization of electronic document management systems is a process that models the ecological component of sustainable development [2]. Today, Ukraine has a powerful regulatory and legal framework that regulates the e-document circulation system for enterprises of various types of ownership: state, communal and private. Thanks to e-documents, it was possible not only to significantly reduce the time-consuming processes associated with the creation, processing and sending of a large number of organizational and administrative documents, which in paper form quite often duplicated each other. It was e-documents that made it possible to significantly reduce the use of paper, and, therefore, the processes for its production were reduced. In addition to convenience, accelerated passage through all instances, reduction of the bureaucratic component, the e-document has a fairly easy life cycle: from the process of its creation through pre-programmed templates, prompt passage to archiving.

E-document circulation that made it possible to significantly reduce paper archives, which, in turn, led to a decrease in the area required for the preservation and storage of a large number of paper documents. The only archive database created in a modern enterprise with the help of e-document metadata contains all the necessary information

through the requisites, which help not only to easily read the document, but also, if necessary, to find it.In addition, in practice, taking into account the conditions of the martial law, it is the storage of the e-document in the cloud that allows specialists, if necessary, for example, in the event of an alarm or a DDoS attack, to quickly transfer the document/file to a folder using the configured synchronization parameters. Existing e-programs in Ukraine can synchronize the passage of a document with different gadgets, when you can start work from one device and finish it on another.

Also, it was the work with e-documents that proved that in the event of unforeseen situations, in particular, an emergency power outage, the work of e-document circulation programs continues, since the documented information is not lost, but saved in the relevant program applications. In turn, there is no such possibility with electronic processing of the document. That is why we have all the available advantages of further work with information and communication technologies. Another advantage of edocument management as a component of sustainable development is file protection. However, in this case, it is rather a comprehensive approach that depends on both the cloud model and the financial capacity of the enterprise. A significant advantage of edocument management over electronic document processing is protection against data interception, as modern systems encrypt files during transmission. Of course, in edocument circulation, especially when working with financial documents, additional protection is needed by modules related to the rapid transfer of unplanned contact, which often leads to the penetration of phishing messages. The way out of this situation is to follow the urgency of providing a response with an urgent demand for confirmation of confidential information.

Conclusion. Therefore, the coordinated work of the structural divisions of a modern enterprise is connected with the optimal reception and transfer of information at different levels (from ordinary to confidential) contained in organizational and administrative, financial and other documents. Further stages of sustainable development of information and communication technologies may be associated with limiting the use of natural resources, reorientation to "green" document circulation, which completely excludes paper documents.

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## MODERN TRENDS IN ECOLOGICAL PRESERVATION OF TEXTILE MATERIALS IN THE FASHION INDUSTRY

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**Abstract.** Society is increasingly aware of the environment, conservation of natural resources and the general state of ecology in the world. Conscious consumption is currently the most relevant trend in the fashion industry. Conscious manufacturers use more ecological, recycled materials, and energy-saving technological solutions when manufacturing products. Textile is the most common material from which various products are made in the fashion industry, so it is the most demanded and expensive. The increase in the consumption of clothes and accessories, the reduction of their useful life due to the rapid change in fashion and consumer preferences cause an increase in environmental pollution with fibers of synthetic origin and industrial waste. Excessive consumption of things is increasing more and more, which, as a result, has a negative impact on the environment and its ecological indicators. One of the ways to improve the ecological situation in the world and preserve natural resources is a more conscious attitude to the production of products and extending the period of their use. Therefore, the need to reduce the volume of use of "fast fashion" products and extend the operating time of existing ones in order to reduce environmental pollution by waste from industrial production of the fashion industry is one of the main tasks that modern production and consumers face.

Mass media and social networks force people to buy more and more new clothes, and not to use the ones out of fasion. A large amount of it is thrown away every day, and the production of new clothes pollutes water and causes significant emissions of CO<sub>2</sub> into the atmosphere. The model of "fast fashion" widespread today has become the reason that twice as much clothing is produced annually compared to the beginning of the 2000s: about 62 million tons of clothing and other textile products per year, and by 2030 this indicator may reach 102 million tons [1]. Every year, the average inhabitant of our planet throws away 32 kg of clothes and shoes. According to the estimates of the US Environmental Protection Agency, since 1960, the amount of textile waste in the world has increased by 811%, and the fashion industry is already officially recognized as the second largest polluter of the environment after the oil and gas industry [2].

Among the various problems associated with "fast fashion" and how the fashion industry has boomed, the various destructive effects on the environment remain a major

concern. The textile industry is second only to aviation in the level of  $\rm CO_2$  emissions into the atmosphere, accounting for about 10%, which is more than 1.7 billion tons of  $\rm CO_2$  per year.

According to a study of the state of the problem of the fashion industry's impact on the environment, the industry is considered one of the "biggest polluters in the world" and is responsible for 20% of global industrial wastewater and 10% of carbon dioxide emissions [3]. The textile industry is constantly increasing the rate of production, while at the same time reducing the period of their use. As a result, the environment is polluted and natural resources are depleted. According to Greenpeace [4], over the past 15 years, people have bought 60% more clothes and kept them for a two times shorter term.

According to the head of the study, professor of design at Finland's Aalto University Kirsi Niinimaki, the average time of use of clothes has decreased by 36% compared to 2005, because impulsively bought clothes are often thrown away after a short period of time [1].

The transfer of production to less developed countries without strict environmental standards caused untreated water to enter the oceans. Nearly a quarter of the world's wastewater from textile dyeing contains highly toxic chemicals that accumulate because, in many cases, they cannot be treated to make the water safe again.

In addition, synthetic materials are the main source of plastic fiber pollution in the oceans, with approximately 35% of all microplastics made up of these synthetic materials. To further reduce the cost of production, manufacturers can use low-quality materials.

The concept of "sustainable fashion" is relatively new - although the idea of sustainable development has been around for decades. The idea that textiles could be made in a way that supported "ecological, social and cultural diversity" and encouraged "innovative business models" was based on the premise that this would start a movement away from the "fast fashion" phenomenon. The key goal of sustainable fashion is to replace chemical materials with environmentally friendly ones and reduce the amount of textile waste by recycling textile products. To reduce the level of negative influence of "fast fashion", consumers should reconsider their approach to buying clothes, follow the principles of conscious fashion. To see fashion and clothing more as a functional product than as entertainment, and be prepared to pay a higher price for things that take into account the impact of fashion on the environment, because the production of textiles, and subsequently clothing or accessories, uses a lot of water, chemicals and human labor.

In the fashion industry, there are various trends in the preservation of natural resources and improvement of the environmental condition in the world, which are oriented towards the ecological awareness of producers and consumers (Fig. 1).

## Trends in resource conservation in the fashion industry

#### PRODUCTION

- Energy-saving manufacturing technologies
- Use of natural energy resources
- Reducing the use of artificial and synthetic materials
- Reduction of harmful production emissions
- Secondary processing of materials
- Creation of multifunctional products
- Motivation/engagement of consumers through various measures (for example, the promotion "Get a new thing to replace a used one")

#### CONSUMER

- Conscious purchase of goods (not to be influenced by "fast fashion")
- Giving preference to clothes and accessories made of natural materials
- · Buying second-hand things
- Restoration and recycling of used items
- Exchange of things
- Careful treatment of clothing and accessories to extend the life of the product

Fig. 1. Modern environmental trends in the preservation of natural resources and improvement of the ecological state in the world

Для більш усвідомленого ставлення до моди і виробництва в цілому більшість текстильних компаній і відомих брендів все частіше переходять на кругову систему, метою якої є зниження негативного впливу на навколишнє середовище. Споживачі все більше стурбовані екологічними наслідками своїх покупок і переходять на «свідому» моду, тому підприємства починають розуміти фінансову вигоду «кругової» системи моди, яка базується на принципі «вивчи — візьми — використай — утилізуй». - підхід до відновлення». І його основний принцип полягає у створенні продукту з регенеративним життєвим циклом, тобто, щоб він мав багаторазове використання, ремонтувався, повторно використовувався та легко перероблявся [ 5 - 8 ].

Для зменшення відходів активно розвиваються тренди «sustainable fashion» у напрямку переробки текстильних виробів (upcycling та recycling), набуває поширення культура обміну речами (freecycling), зменшення кількості споживчих товарів та продовження життєвого циклу виробів.

Незважаючи на численні дослідження останніх років у сфері екологічної моди, слід зазначити, що погляди були обмеженими та не базувалися на філософських знаннях про екологічну етику та цінності. Не так давно апсайклінг став рішенням глобальної проблеми надання вживаним речам нових характеристик і перетворення їх на унікальні. Крім того, споживачі цінують речі з історією і в цьому сенсі сучасний апсайклінг близький до вінтажу, але більш креативний.

За словами дослідника культурної антропології Крістіана Палмера [9], firstly, in the assessment of moral significance, the focus should be on society, not on the individual. Secondly, ecological qualities are of primary importance. On the other hand, human actions are evaluated during environmental ethical discussions of "how humans

should act in the non-human natural world."

So, a common method of recycling in the world is upcycling, which involves the use of materials and components of used goods to transform them into new, more valuable products with the help of thoughtful design and skilled craftsmanship. This method can transform end-of-life clothing and textile waste into fashion products with high retail value, helping the industry to develop more sustainable production methods [10]. Also, the method allows applying a sustainable design option for reuse methods with the aim of greater economic and environmental benefits, in which used clothes and textiles are used for the production of new fashion goods. Many famous brands support the idea of upcycling in clothes. For example, such brands as Balenciaga, Marni, Etro (clothing from pieces of "old" things and fabrics using the patchwork technique), Coach (recycled bags from the 1970s) are experimenting with the reuse of materials.

Another well-known type of processing is recycling, when unusable things are processed using special equipment and become raw materials for new ones [11].

In the last few years, the fashion industry has been captured by a wave of social movement woke-culture and eco-activism. Woke-culture is an African-American expression from the English "wake", i.e. "woke up" - which means "realized itself", the mainstream of awakening in culture or society [12].

Brands that use cardboard or fabric packaging that is easily recycled or reusable are emerging. In addition, the methods of obtaining raw textile yarn from rice straw, bird feathers, grain husks or other ecological materials, unconventional for the fashion industry, are becoming popular. Today, for technological and economic reasons, the production of clothes from such materials cannot be put on an industrial basis, and therefore the fashion for such products and their collections exists in the context of individual developments and belongs to the direction of "artisanal fashion". Famous brands and amateur designers who create collections of clothes or accessories use recycling and upcycling as a creative source, because the recycling of used things is a popular direction among modern designers. Secondary use is a craftsman's creative approach to textile waste, which allows you to create a masterpiece with the help of your own creativity, without any technical intervention[13-15].

«Швидка мода» та індустрія моди в цілому перенасичує ринок великою кількістю товарів, на виробництво яких з кожним роком витрачається все більше природних ресурсів, завдаючи шкоди екологічній системі. Відомі бренди та дизайнери-любителі, створюючи оригінальні колекції, знаходять способи збереження навколишнього середовища різними способами: від надання речам «другого життя» та переробки матеріалів, з яких вони виготовлені, до дизайнерських рішень, які надають виробам багатофункціональності, тим самим зменшуючи кількість товарів на ринку.

Враховуючи підвищення рівня свідомості сучасних споживачів товарів, можна припустити, що тенденції збереження текстильних матеріалів у сфері модної індустрії з часом знайдуть все більше прихильників.

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#### RATIONAL LAND USE IS THE BASIS OF EFFECTIVE AGRICULTURE.

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Rational use of agricultural land is a guarantee of effective production of agricultural products, provides landowners, landusers and tenants of land plots with the opportunity to use land taking into account land protection and minimal impact on natural factors. This is achieved through the use of land use methods that do not lead to a significant decrease in the fertility of the grounds, and optimal interaction with natural factors. Providing all land users with opportunities for maximum, efficiency of the entire land use, taking into account land protection, is a key factor in successful agricultural production.

The essence of rational land use will be the efficient and competent use of land resources, ensuring the proper balance between economic, social and environmental interests.

Agriculture as a branch of public production has its own characteristics that distinguish it from other branches of the economy. Here are some of these features:

Seasonality of production: In the country, agriculture is associated with seasonality of production, which means that most of the work is done during a certain period of the year, for example during harvest.

Dependence on climatic conditions: Agriculture is highly dependent on climatic conditions such as rainfall, temperature, humidity, which can affect the quality and quantity of the crop.

A large number of small enterprises: the country's agriculture consists of a large number of small enterprises. This can lead to limited access to capital, technology and other resources, some for industry development.

Social importance: Agriculture has an important social importance, providing food to the population and creating jobs in rural areas.

High level of risk: Agriculture has a high level of risk associated with climate change, plant diseases, pests, market fluctuations and other factors that can affect yields and incomes.

Limitation: the area of agricultural land is limited both within the limits of the entire planet and individual countries, regions, at the disposal of business entities. This circumstance determines the irreplaceability of agricultural land for agricultural production [1].

The above indicates how important the rational use of available agricultural land is for agriculture. At the same time, the concept of "rational use" means:

- 1. Effective use of land resources: intelligent and competent use of land plots in order to maximize their potential and ensure a proper balance between economic, social and environmental interests.
- 2. Conservation and restoration of foundations: protection of foundations from degradation and pollution, restoration of foundations subject to erosion or other types of degradation.
- 3. Protection of natural resources: protection of water resources, forests, biodiversity and other natural resources from pollution and degradation.
- 4. Minimizing the negative impact on the environment: avoiding or reducing the harmful impact on the environment due to the use of land resources.
- 5. Social aspects: ensuring equal conditions of access to land resources for all social groups, ensuring stability and security of land use for the population and other social groups.
- 6. Economic aspects: ensuring the economic efficiency and competitiveness of the use of land resources[2].

A necessary condition for the rational use of lands is to increase the efficiency of their use in agricultural production. It is dictated by two groups of factors: economic and environmental. All these factors are mutually determined and closely related to each other.

Irrational use has led to the reduction of productive lands, a decrease in their fertility and a decrease in the production of agricultural products, and the deterioration of the ecological condition. Land continues to fall out of economic use, soil fertility is decreasing.

Serious problems of preserving the land resource potential of agriculture have arisen and are steadily increasing in the country, caused by large-scale land disturbance, soil pollution and degradation, and loss of soil fertility. These problems can be conventionally divided into three large groups, which include:

- problems related to soil degradation and loss of soil fertility as a result of improper and exhausting agricultural management;
- problems related to physical and chemical effects on soils, leading to their disturbance, pollution, flooding and other negative phenomena.
- quantitative reduction of agricultural land, caused by rejection for industrial and urban planning needs [3].

The problems of soil degradation are caused by non-compliance with crop cultivation technologies that ensure the preservation and increase of soil fertility. Several main reasons for soil degradation can be named here. These include non-observance of the crop rotation system in agriculture, predatory attitude to the land and agronomic illiteracy.

In addition to the listed negative effects on soils, irreparable damage to soil fertility is caused by over-compaction of the soil, caused by the use of heavy machinery and an increase in methods of processing crops during their cultivation; soil salinization caused by the use of mineral fertilizers in excessive quantities; an increase in soil acidity caused by the cessation of soil liming and a number of other negative phenomena.

The main negative factors of the third group of problems are:

- reduction of the area of agricultural lands as a result of their transfer to other

categories and their use for non-agricultural purposes;

- loss of the soil itself as a result of land disturbance by construction and mining works. Agricultural land is allocated for purposes related to agriculture, mainly construction and mining. As a result of mining, agricultural land is disturbed by mining[4].

Finally, we note that as a result of the practice of irrational use of agricultural lands, their degradation continues to increase. In case of growing importance of land as a factor of production, these trends are extremely negative. A rational approach to the use of land is economically and socially beneficial for agricultural producers, as it allows to obtain a long-term and sustainable effect thanks to the scientifically based exploitation of land resources that are qualitatively preserved and constantly updated. Agricultural enterprises must take into account the ecological efficiency of land use as the main element of the construction of production activities. This, in the end, will affect the efficiency of the use of land resources.

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#### REGIONAL FEATURES OF SUSTAINABLE DEVELOPMENT

## CREATIVE ECONOMY AS A TOOL FOR ACHIEVING SUSTAINABLE DEVELOPMENT GOALS

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The role of creative economy in socio-economic development, both at the national and international levels, has been steadily increasing in recent years. This popularity is explained by the synthetic origin of creative industries, which allows us to achieve economic growth in a completely different way. Exceptional turnover growth and job creation, and resilience to the economic crisis make creative industries attractive for investment at both the private and public levels. With this in mind, in 2019, the United Nations (UN) General Assembly declared 2021 the International Year of the Creative Economy for Sustainable Development. This nomination has become a kind of sign of recognition of the creative industry as the future of generations. Taking this into account, we consider creative industries to be a strategic direction for improving competitiveness, productivity, employment and sustainable economic growth. Therefore, it is fair to consider the results of the study presented for consideration as relevant and timely.

It is worth noting that from 2012 to 2020, the export of creative goods from developing countries increased by an average of 12.1% per year [1]. This indicates the active development of this industry. The creative economy improves the quality of life. Let's take an example. The cultural sector in Argentina employs about 300,000 people, representing 3.5% of the country's GDP. In Morocco, publishing employs 1.8% of the workforce, with a turnover of over US\$370 million. The market value of the music industry exceeded US\$54 million in 2009 and has been steadily rising ever since. In Thailand, there are over 20,000 businesses in the fashion industry alone, while throughout the region, young people make their living as small-time designers.

Generalization of the existing information and analytical base allows us to establish the main trends in the development of creative industries, the key of which is the steady dynamics of increase in gross value-added cost (hereinafter referred to as the GVA) (fig. 1), the number of employees, the volume of import and export of goods produced by the creative sector.

## Dynamics of the gross value added of creative industries in Ukraine in 2013-2020, %

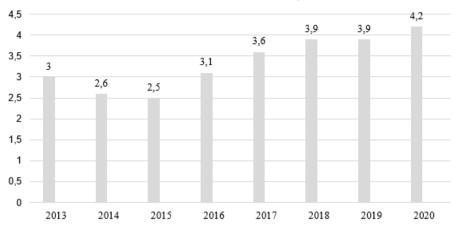


Fig. 1. Dynamics of the GVA of creative industries in Ukraine in 2013-2020, % Source: compiled by the authors based on the data of [2]

Based on the figure 1, it can be seen that GVA of creative industries in Ukraine is growing rapidly. Thus, in 2020, value added for the production costs of business entities in the field of creative industries amounted to UAH 132.4 billion, which is equal to 4.2% in the structure of the GVA of Ukraine. Based on the infographics, we read that it is fair to say that the development of a creative economy contributes to the achievement of sustainable development goals. To confirm this hypothesis, in (Table 1), the key positions of the development of the creative economy are outlined in comparison with the Millennium Goals.

## Correlation of directions for the development of the creative economy and the Millennium Goals

Creative economy development event	Directions for the implementation of sustainable development				
The creative economy generates economic benefits and intangible	This contributes to reducing inequalities within and between countries -				
value that significantly affects the inclusive and sustainable	Goal 10, to end poverty in all its forms everywhere - Goal 1, to end				
development of society and ensures the implementation of several	hunger, achieve food security, improve nutrition and promote				
sustainable development goals, including:	sustainable agriculture - Goal 2, by ensuring healthy lifestyles - Goal 3.				
If culture is made a driver of economic, social and environmental	Moving towards sustainable consumption and production patterns -				
development processes, humanity can achieve positive changes in the	Goal 12, Gender equality and the empowerment of all women and girls				
formation of cultural values, which ensures the fulfilment of goals	- Goal 5, will strengthen the means of implementation and revitalization				
such as:	of the Global Partnership for Sustainable Development - Goal 17.				
An analysis of the opportunities and challenges of the local creative	Sustained, inclusive, sustainable economic growth, full productive				
economy should form the basis for the development of programs of	employment and decent work for all - Goal 8, Build resilient				
action in the creative sector, which in turn will ensure the	infrastructure, promote inclusive and sustainable industrialization and				
implementation of such sustainable development goals as:	innovation - Goal 9, Open, safe, resilient and environmentally				
	sustainable cities and human settlements - Goal 11.				
Analysis of the factors influencing the formation of new ways of					
developing the creative economy at the local level (infrastructure,	development, ensure access to justice for all, and build effective,				
labour resources, intellectual property protection legislation, access	accountable and inclusive institutions at all levels.				
to the global market, etc.) will allow us to approach the following					
goals:					
Participation in international cooperation for mutual learning,	This contributes to the implementation of inclusive and equitable quality				
exchange of information and experience	education - Goal 4, as well as the global partnership for sustainable				
	development - Goal 17.				
Investing in all chains of sustainable creative entrepreneurship.	Contributes to the implementation of a whole range of Sustainable				
	Development Goals, including: Goal 4, 9, 11, 12, 16, 17.				

Source: compiled by the authors based on the data of [3]

Thus, it follows from the table that the development of creative industries contributes not only to economic growth and social well-being, but also ensures the achievement of almost all the Millennium Goals, which gives reason to assert that the creative economy is a tool for achieving sustainable development goals.

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#### DIRECTIONS FOR THE DEVELOPMENT OF AGRICULTURE IN UKRAINE

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Ukraine, due to its natural and climatic conditions as well as the abundance of black soil, is a country with a developed agricultural industry. This allows for a wide range of food production for both domestic consumption and export, while providing employment and income for the rural population throughout the country. All regions of Ukraine, without exception, are involved in the production of agricultural products to some extent [1]. However, the southern and central regions, due to improved natural and climatic conditions, have greater agricultural potential. Nevertheless, there are several directions for the development of agriculture in different regions of Ukraine, each with its own peculiarities.

For example, Cherkasy region specializes in growing grain, vegetables, fruits, and berries [2]. Livestock farming is also developed in the region, particularly in milk, meat, and egg production. Kherson region provides a significant part of the production of pumpkin crops, sunflowers, barley, corn, and other crops. Winemaking and vegetable growing are also developed here. Vinnytsia region is one of the leaders in milk and meat production. They also grow grain crops, sunflowers, vegetables, and fruits. Chernihiv region provides a significant part of the production of grain, sugar, and oil. Livestock farming, particularly dairy farming and pig farming, is also developed here. Mykolaiv region specializes in growing grain, sugar beets, and vegetable-pumpkin crops. Horticulture and viticulture are also developed in the region.

Unfortunately, the full-scale military aggression of a neighboring country has caused irreparable damage to the entire agricultural sector of Ukraine. Part of the fertile Ukrainian lands is occupied, part is mined and contaminated due to military operations. In order to start the recovery process, the hostilities must first be concluded and the aggressor must leave Ukrainian territory. In addition, the aggressor must provide guarantees of security for Ukraine and a commitment to no future aggression. Only under these conditions is it possible to begin the process of fully restoring the agricultural sector of Ukraine. At the same time, it is necessary to justify the measures that will allow the formation of the basis for the rapid recovery and strategic development of the industry in the post-war period. Let us list the main directions of these measures that will ensure the development of the agricultural regions of Ukraine in the near future.

As the first direction, it is necessary to mention the renewal and modernization of the agricultural machinery fleet and the implementation of innovative technologies in farming. To achieve the effectiveness of agricultural production, it is crucial to use high-productive and energy-efficient equipment. It is also essential to apply modern methods of soil cultivation and plant growing. Special attention should be paid to the implementation of contemporary methods of preserving and transporting agricultural products. It is of utmost importance to ensure the implementation of measures for the development of infrastructure to support agriculture at the regional and national levels, such as access roads and electrical networks.

As the second direction, measures aimed at improving the quality and fertility of

agricultural lands should be mentioned. Special attention in this direction should be paid to demining and restoring the agricultural land fund after the war. The safety of workers and the quality of production will depend on how quickly and effectively this is done. Therefore, scientists should already be searching for methods to eliminate the negative impact of military actions on the land cover, water bodies, and groundwater. In addition, a significant part of Ukraine's land fund is not being used due to soil fertility exhaustion. Therefore, measures should be developed to restore and improve soil fertility. For example, this can be achieved through the use of organic fertilizers and breeding of new plant varieties resistant to weather conditions. The implementation of these plans can become a reality through close cooperation between production enterprises and scientific organizations and institutions in the region.

The third direction is the development of ecological agriculture. The development of ecological agriculture involves the use of natural fertilizers, the abandonment of pesticides and other chemicals that affect soil fertility and product quality. This will ultimately reduce the impact of agriculture on the environment. This direction is very popular in developed countries, where the population is concerned about their health and has the means to support it. Ukrainians do not yet have a culture of consuming ecological agricultural products, but this culture should be gradually developed and cultivated in Ukrainian society. Popularizing a healthy lifestyle among the population, striving to implement the principles of sustainable development at the regional and national levels, and improving the well-being of Ukrainians will contribute to this. Additional funds could be obtained through the development of rural green tourism and other additional activities in rural areas. Such measures will promote the socio-economic development of the region as a whole.

The fourth direction involves the development of the cooperative movement. In Ukraine, there are many small and medium-sized agricultural enterprises that have limited opportunities for marketing their products. The development of cooperation will help these farms to increase the competitiveness of their activities by improving the efficiency of resource utilization and simplifying access to investment and financing. Overall, this will provide the groundwork for increasing the production volumes of agricultural products and will contribute to the development of the regional market.

The fifth direction should be considered the improvement of the efficiency of state management in the field of agriculture. It is crucial to improve coordination between agricultural enterprises, state management bodies, and local authorities at the state level. It is also necessary to implement modern information technologies to track the production and marketing of agricultural products. At the state level, measures should be taken to support those types of agriculture that are strategically important for the socioeconomic development of the country.

Therefore, we can state that the development of agriculture in Ukraine is possible if all necessary measures are taken to increase production efficiency, ensure high quality and competitiveness of products on the market, provide accessibility to production resources and financing, strengthen cooperation, and reduce environmental impact. In addition, this will help reduce dependence on imported food products and increase the country's self-sufficiency in the field of agriculture.

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# FEATURES OF THE RECOVERY OF UKRAINE DURING THE POST-WAR PERIOD TAKING INTO ACCOUNT THE DIRECTIONS OF SUSTAINABLE DEVELOPMENT

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Before the beginning of the full-scale invasion of Russia, Ukraine was developing according to the basic principles of sustainable development. There were positive changes in the achievement of 15 goals out of 17 approved for European integration. The changes were more positive in the questions of overcoming population poverty, carrying out structural reforms, and creating favorable conditions for doing business. However, today, in the conditions of the war, the achievements that were before the war have lost their relevance in some regions and the effectiveness of their achievements. In the postwar reconstruction of the state and regions, the issues of transformation of Ukraine for the purposes of sustainable development and reconstruction of destroyed regions according to such principles become important. Regardless of the degree of destruction, the priority directions for all of Ukraine are unified and complement the general goals of sustainable development.

Analysis of recent research and publications. Many leading foreign and domestic scientists dealt with the issue of regional and state development on the basis of sustainable development. Among the numerous scientific works, one can single out the works of such scientists as P. Samuelson, J. Clark, A. Gaponenko, J. Schumpeter, B. Burkinsky, I. Vakhovych, Z. Gerasymchuk, B. Danylyshyn, M. Zgurovsky, V. Kuhar, I Kondius, V. Kravtsiv, N. Pavlikhy, M. Khvesyka, Ya. Khomenko, and others. However, the peculiarities of the post-war reconstruction of the state and regions according to the principles of sustainable development require a more detailed review and justification.

**The purpose** of the study is to highlight the features of the recovery of Ukraine in the post-war period, taking into account the directions of sustainable development.

**Presenting of base material**. The positive trends that took place until February 2022 in the development of Ukraine had changed significantly today. Thus, according to UNDP forecast data, in the event of a protracted war, which may drag on for more than one year, 90% of the country's population will remain below the poverty line. Therefore, joint efforts of the authorities, international organizations, and businesses are needed today to ensure favorable conditions for business development. During the period of martial law, the state introduced a number of tax benefits for the development of small and medium-sized businesses. Such steps are a necessary condition for ensuring the stability of the economic and social development of the territories. In such difficult conditions of existence, the development of small and medium-sized businesses is

considered to be the driving force that can ensure economic development through the payment of taxes and fees, and increase the social security of the population, through the creation of jobs. Today, such measures are especially relevant for regions in which active hostilities and significant damage to social and residential infrastructure took place. The processes of reconstruction of economic objects should take place on the basis of energy efficiency, environmental friendliness of production, and high labor productivity. It is expedient to rebuild most of the objects according to the principles of Industry 4.0., which provides for the introduction of digital technologies in management, production, financial and social directions of the development of society. At the state level, a corresponding commission was formed, which is authorized to determine the degree of destruction of objects in the regions, and the expediency and scale of their reconstruction.

The goals of sustainable development, which were reflected in the general State Development Strategy until 2030, as well as 169 relevant tasks, form the basis for the restoration of regions due to two components: the first forms a guideline for the reconstruction of critical economic and social infrastructure, which will contribute to the return of the population to the territories of their permanent residence, the second - serves as a reference point for the development and implementation of medium-term and long-term goals for the reconstruction of the state, taking into account the orientation towards the European vector of development [3]. The Sustainable Development Goals and their key performance indicators will help shape policy at the national level.

The peculiarity of the restoration of territories will be based on their type and affiliation. The typology of restoration territories in the post-war period was enshrined in the Law of Ukraine "On Amendments to Certain Legislative Acts of Ukraine Regarding the Basics of State Regional Policy and the Policy of Restoration of Regions and Territories" 2389-IX dated 07/09/2022 [2]. According to the Law, territories were divided into four types: recovery territories, poles of economic growth, territories with special conditions for development, and territories of sustainable development. The principle of division into such groups of territories is the degree of destruction of each territory. Funding and restoration of regions will take place depending on the type of territory to which a particular region belongs. The next step was the introduction of a three-level system of planning measures for the restoration of the state, which includes state strategies, regional strategies, and community strategies, which must be coordinated among themselves in order to achieve the set goal. According to the measures proposed today, such regions, which will be classified as recovery areas, will receive the largest financial resources for their development until 2027, which simplifies the need to develop appropriate strategies for such areas. Today, it is difficult to talk about the specifics of the restoration of certain territories, since hostilities are still ongoing and the situation in all territories can change significantly at any time. However, the recovery and development plan must be developed, approved, and, where possible implemented. It is subject to the required level of the security situation [1].

The main priority is to create conditions for the return of citizens to their permanent place of residence. For this, it is necessary to restore the housing stock as a priority and to promote the availability of jobs. Larger-scale restoration will be carried out after the end of hostilities, an assessment of the damage caused, and an assessment of the expediency and rationality of restoration of certain objects, especially of industrial importance. Reconstruction of industrial facilities should be based, first of all, on the environmental friendliness of production, energy-saving technologies, and digitalization

of production processes.

Conclusions. Thus, it can be stated that the full restoration of the state's territories is not possible today due to the continuation of hostilities on its territory. However, the authorities, regional and local authorities are faced with the issue of defining and developing measures for the reconstruction of territories. The main principle of such reconstruction is compliance with the goals of sustainable development. The primary task of such reconstruction is the restoration of social and economic infrastructure to facilitate the return of the population to their regions. It is important in this aspect to support the development of small and medium-sized businesses, as the basis for the functioning and development of regions. Therefore, the government should create the necessary conditions to simplify the implementation of such activities at the expense of tax levers and incentives.

In order to implement the strategic directions for the development and recovery of business in Ukraine in the post-war period, enterprises might start the development of several options for their scenarios to attract investors. The study of international experience contributes to the use of their algorithm of actions in the strategic management of the enterprise with adaptation to the domestic realities of the functioning of enterprises.

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## PECULIARITIES OF MARKETING APPLICATIONS IN UKRAINIAN AGRICULTURE

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The current stage of agribusiness development in Ukraine is in a state of transformation and requires urgent solutions to a set of vital tasks, including overcoming the crisis in agriculture and its structural restructuring, reforming relations, and building market infrastructure, as well as increasing competitiveness. To improve and accelerate the development of agricultural enterprises, it is very important choosing an effective marketing system that serves as a basis for the development of agricultural businesses.

Agriculture is different from most other businesses because of the special considerations that apply:

- despite the importance of food production, farmers' income is about 40% lower than income in non-agricultural sectors;
  - agriculture is more dependent on weather and climate than many other industries;
- there is an inevitable time delay between consumer demand and what farmers can supply growing more wheat or producing more milk inevitably takes time.

The development of the Ukrainian economy as a whole is currently constrained by the military actions on the territory of Ukraine, including large-scale destruction, reduced investments, the need to find new foreign markets, increased fiscal burden, high risk, etc. All of these circumstances have led to a deterioration in the market positions of Ukrainian companies in recent years and shortly. On the other hand, Ukrainian agricultural production's growing influence on the food market's state in the medium and long term. This impact may be accompanied by processes that characterize potential challenges for the competitiveness of agricultural enterprises, namely:

- the emergence of new players in all price segments of food products;
- the emergence of new (or an increase in the presence of existing) agricultural corporations, which will include agricultural enterprises and food processors;
  - increased consumer demands for product quality;
  - increased requirements of investors for the quality of enterprise management;
- recognition of the ISO 9001 compliance certificate, which is a prerequisite for enterprises in the industry.

Some features inherent in agricultural production form a specific manifestation of competition:

- agricultural production is tied to the land and cannot be moved to more favorable conditions in terms of competitiveness;
- most types of products are durable goods, and their commercial characteristics deteriorate during long transport distances;
- most of the products are only raw materials for processing enterprises, so their competition takes place at intermediate stages before they reach the final consumer in the form of completely different products;

- there is almost no monopoly in agricultural production for the main types of products;
- competition in agriculture develops not only between producers of goods but also between goods and has biological and agrotechnological limitations;
- agricultural enterprises use a significant part of their outputs as inputs and have greater opportunities to manage the competition. The set of conditions for the manifestation of competition requires an analysis of the competitive environment at different stages of the promotion of goods between rural producers.

The modern concept of marketing gives the work of an enterprise based on information about consumer demand and its changes in the short term. Marketing activities will be successful if they bring value and satisfaction to target customers. The value increases with quality and service and decreases with price, although other factors can also play an important role. Currently, marketing can be seen as identifying, creating, communicating, delivering, and monitoring customer value. Satisfaction reflects a comparison of customer's perceptions of a product's performance (or outcome) relative to its expectation. If performance does not meet expectations, the customer is dissatisfied and disappointed.

Currently, marketing activities are not yet widely adopted in Ukraine, and agricultural enterprises use only certain functions and strategies of marketing activities that do not require significant financial losses and deep professional knowledge in this area, but they do not provide proper long-term effects. Establishing a marketing department at an enterprise is a necessary and important component of success. The marketing department should become the main link that collects market information on the company's commercial products, analyzes it, determines the types, volumes, and terms of product delivery, identifies customer needs, sales volumes and estimated prices, selects sales channels, complies with quality standards and regulatory provisions, carries out sales and marketing activities, and coordinates the activities of production structures. When setting up a marketing department at an enterprise, special attention should be paid to marketing research and analytical work.

An efficient marketing management system can ensure long-term profit and a stable position for enterprises in the market. Improving marketing in the agricultural sector would significantly strengthen the country's agro-industrial complex as a whole, increase the production capacity of agricultural enterprises, and allow them to produce competitive products on the international market.

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#### SUSTAINABLE DEVELOPMENT IN THE CONTEXT OF GLOBALIZATION

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In the 20th century, the development of humanity was characterized by an incessant pursuit of economic and technological growth, where the main indicator was the country's GDP growth. The most important spheres - economic, ecological, and social - were studied and operated separately from each other. Due to ignoring the need to balance economic development, society, and environmental conservation, at the beginning of the 21st century, humanity faced the need to solve global ecological problems, hunger and impoverishment of a significant part of the world's population, resistance to regional and interethnic conflicts, terrorism, and moral decline.

Further deepening of globalization processes contributed to the informatization and transition of macroeconomic systems to the post-industrial stage of development. The use of innovative development opportunities allowed developed countries to form a post-industrial society. At the same time, the development of Ukraine's economic system is mainly based on traditional technologies initiated at the early stage of industrialization, as well as partial use of modern imported technologies. This indicates insufficient compliance of Ukraine's economic development with modern globalization trends, which include expansion and improvement of the efficiency of innovation activity and mastering new production technologies.

In the context of globalization, Ukraine's socio-economic system has become open. Modern development trends have provided Ukraine and other post-socialist countries with new opportunities and prospects, including expanding access to modern technological, cultural, and intellectual achievements. However, the impact of globalization processes on developing countries is not exclusively positive, as it is characterized by the presence of significant risks and threats.

Globalization is a process of international integration that arises as a result of the exchange of worldviews, products, ideas, and various aspects of culture [1]. Today, globalization is a constant and necessary process of international economic cooperation, which, on the one hand, contributes to the growth of the global economy and the interdependence of countries, and on the other hand, requires careful attention to the risks and negative consequences of its implementation.

Various methodologies are used for quantitative assessment of the positive and negative impact of globalization on the countries that are affected by this process, which are periodically updated in accordance with modern requirements. The most well-known is the system of quantitative and qualitative measurement of globalization developed by the Swiss Institute for Business Cycle Research (KOF Konjunkturforschungsstel der

ETH Zurich) [2]. The use of this system allows for annual quantitative assessment of the globalization index, i.e., the degree of integration of any country into the global space, as well as comparison of different countries in terms of such integration.

Global rankings and rankings of some countries by components of the globalization index are presented in Table 1.

Table 1 Globalization indicators of countries by the level of the KOF Globalization Index in 2020

Country	De facto, rank			De jure, rank				
	Economic Globalization	Social Globalization	Political Globalization	Globalization Index	Economic Globalization	Social Globalization	Political Globalization	Globalization Index
World	58,4	60,33	54,5	57,63	55,98	67,69	68,24	63,69
USA	52,39	88,88	90,24	77,17	81,26	80,83	94,30	85,46
Germany	74,79	88,37	95,57	86,24	85,34	86,91	99,63	90,63
Poland	64,85	72,74	90,43	76,01	80,37	81,61	94,96	85,65
Estonia	84,10	75,33	70,22	76,55	88,59	91,92	83,12	87,88
Georgia	78,41	66,85	47	64,09	79,09	80,07	71,08	76,58
Latvia	77,94	79,48	50,85	69,42	84,37	83,98	84,11	84,15
Moldova	66,82	64,03	57,05	62,63	56,65	74,45	81,97	71.03
Ukraine	72,35	62,76	83,48	72,86	52,00	74,46	92,85	73,10

Source: compiled by the author based on data [2, 3]

According to Table 1, the indicators show significant differences between the levels of the economic, social, and political components as defined de facto and de jure. It should also be noted that there is significant variation in the levels of these indicators for different countries. In terms of globalization, Ukraine in 2020 is above the global level and all European countries, and ranked 44th out of 203 countries for which the globalization index was determined.

However, this indicator does not take into account the environmental aspect of globalization, which is very important. Therefore, the Environmental Performance Index (EPI) is an important comprehensive indicator for evaluating environmental policy. It is calculated based on 24 efficiency indicators in ten categories, including health, environment, and ecosystem vitality. Ukraine ranks 52nd out of 180 countries in the EPI. In 2018, this indicator was 52.87 points, and our country ranked 109th in the ranking [4]. This indicates a significant deterioration of the environmental situation worldwide, and Ukraine is no exception.

Despite the significant variation in the levels of development of countries in the context of globalization, one of the most important conclusions is that the concept of sustainable development remains dominant. Its essence lies in the fact that achievements in science, technology, technology, education and culture should ensure a gradual movement towards further progress of humanity in economic, social and environmental development, despite resource constraints. However, the experience of countries that

have chosen this path, especially Ukraine, shows the presence of a significant number of exogenous and internal factors that can be grouped into four groups: technical-economic factors, ecological factors, social issuesand legal front [5-10].

The technical-economic factors are characterized by a predominantly raw material export structure, insufficient development of the domestic market, undiversified imports of energy resources, inadequate level of competitiveness of Ukrainian goods on the international market, obsolescence of production buildings and equipment, low level and quality of innovations in the economy, high level of corruption, and imperfection of state economic policy.

The ecological factors include a high share of "dirty" production, significant anthropogenic load, high level of wear and tear of environmental equipment, insufficient control over compliance with environmental standards, negative dynamics of natural resources, uneven population density indicators and, accordingly, pollution of certain regions, low level of ecological awareness among the population, and the absence of the possibility to make significant investments in ensuring environmental preservation.

The social issues in the country include a low real GDP per capita, a low standard of living for a significant portion of the population, a decline in the quality of scientific and technical education, emigration of skilled workers, significant income inequality, worsening health and decreased life expectancy, a high divorce rate, low levels of civic engagement, high unemployment rates, and low wages.

On the legal front, there are issues with imperfect legislation, particularly in the area of regulating economic activity for sustainable development, taxation of businesses, and the development of modern technologies. There are also gaps in environmental legislation and a need to improve laws related to healthcare and education.

The study of scientific literature [5-10] allowed to identify among the problems that restrain the development of Ukraine in the conditions of globalization, the problems of regulation, namely: permanent crisis phenomena in the economy; reduction of the role of the state; insufficient efficiency of stimulating the introduction of environmentally safe, energy-saving and resource-saving technologies; lack of a single system for comprehensive provision of rational nature management and nature protection, etc. Studies have shown that significant factors for Ukraine that significantly restrain its development are also: lack of a clear strategy for socio-economic development; socio-political instability; structural imbalance of the economy; a significant share of the shadow economy and corruption.

The main Ukrainian national problems of the future that need to be solved today include:

- 1) environmental destruction;
- 2) state of energy;
- 3) demographic situation;
- 4) climate change.

Solving these problems is a complex task, as it requires intellectual courage, strategic thinking and responsibility towards future generations.

From the results of the analysis it can be concluded that globalization processes of economic and technological development have led to an intensification of international competition at the level of individual enterprises and entire countries. The level of macroeconomic indicators that determine the competitiveness of a country at the international level is chronically lower for Ukraine than for most countries.

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## SUSTAINABLE DEVELOPMENT OF LOCAL COMMUNITIES IN UKRAINE: REFORMS AND POTENTIAL

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Sustainable development is one of the main dimensions on the way to the development of communities and regions. Together with the institutional and political components, this direction of development is capable of bringing even grassroots territorial entities to a high level of well-being and quality of life, while taking into account the interests of future generations through careful consumption of non-renewable resources.

The administrative reform carried out in Ukraine made it possible to review the potential and development opportunities of the United Territorial Communities (UTCs), at the same time strengthening their social responsibility on the way to balancing opportunities and consumption.

If for a long-time attention was paid to the development of enterprises and the national economy as a whole through the prism of sustainable development, then with the receipt of a new push for development by the UTCs, new metrics for the implementation of this ideology at grassroots levels appeared. According to the Concept of sustainable development of settlements: «Sustainable development of settlements is the social and economic and ecologically balanced development of urban and rural settlements, aimed at creating their economic potential, a full-fledged living environment for modern and future generations based on the rational use of resources (natural, labour, industrial, scientific and technical, intellectual, etc.), technological re-equipment and restructuring of enterprises, improvement of social, industrial, transport, communication and information, engineering, environmental infrastructure, improvement of living, recreation and health conditions, preservation and enrichment of biological diversity and cultural heritage» (VerkhovnaRada, 1999).

According to the team of scientists, the economic component of sustainable development at the level of UTCs finds its manifestation through the promotion of entrepreneurship, private initiative, increasing the level of energy saving and the efficiency of the use of energy resources, increasing the level of competitiveness of UTCs, etc.; the ecological component is aimed at preserving and improving the environment, reducing harmful emissions into the atmosphere, processing solid waste, etc.; the social component is related to the improvement of working and living conditions, the improvement of the population's well-being, the improvement of the quality of the created product, the works performed, or the services provided on the territory of the OTG, the conditions of the quality of life of the population, etc. (Pylypiv N. I., Piatnychuk I. D., Sologub S. I., 2018).

For the government of Ukraine, the issue of local economic development is related to the development of infrastructure for business, effective management of local resources, creation of comfortable social infrastructure, and strategic planning. The state budget directs funds to create infrastructure for business at the community level. In

2022, the Government implemented 52 programs of state-regional support for the development of territories, for which more than UAH 150 bln were allocated. Funds for such support were directed in various directions. Central executive bodies were the main managers of such funds and responsible executors of budget programs, the beneficiaries of which were the regions, in particular, local executive bodies and local self-government bodies. The state directed all these financial resources to the local level to create conditions for the dynamic and balanced development of the territories. (Onyshchuk I., 2023) (pic. 1)

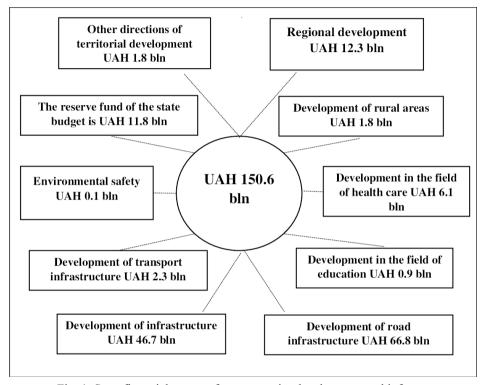


Fig. 1. State financial support for community development and infrastructure development

At the same time, due to the lack of experience and knowledge of the management of the OTG regarding the accumulation of funds with the help of financial instruments other than budget support (fundraising), the potential of the development of the OTG did not receive the proper impetus. The reasons for this situation are the lack of information databases regarding funding sources; an insufficient number of specialists who can provide quality research on this market, its monitoring, selection of a financial sponsor, submission of an application, etc. (Koviazina K.,2018).

The well-being of communities and the potential for development depends equally on the leadership qualities of the management and the available resource base. At the same time, many communities in Ukraine face problems of a social nature, such as unemployment, and therefore a low level of well-being of the population, pollution of the territory, including household waste, underdeveloped infrastructure, and therefore difficult access to basic services; low level of cooperation between local communities, and therefore lack of vision of common development prospects, etc. Each community solves a number of these problems with different results.

Thus, at the beginning of 2022, Boryspilska, Voronkivska, Girska, Zolochivska and Prystolychna territorial communities signed the Agreement on cooperation regarding the construction of a new medical building in the city of Boryspil. The launch of such an initiative was made possible by participation in the competitive selection within the framework of the project "Promoting the comprehensive development of communities through analytics, dialogue and cooperation" with the support of the U-LEAD Program with Europe (Ukraine - Local Empowerment, Accountability and Development). The signed agreement on the cooperation of the mentioned communities is unique for the Kyiv region because it involves the largest number of subjects. In the process of working on its project, active communication between communities was carried out, and several regulatory and regulatory documents were developed and approved by the requirements of the Law of Ukraine "On Cooperation of Territorial Communities", public discussions of the draft contract and e-consultations with the public were held in all communities EDEM platform (web portal "Unified platform of local e-democracy"), a concept and a preliminary registration card of the project were prepared to attract co-financing. Joining efforts will help to attract the necessary amount for the implementation of the project of building a medical building for the entire Boryspil district. The construction cost is up to UAH 200 mln. It is planned to attract about 80% of them at the expense of grant funds, and 20% will fall on the shoulders of our communities. (Boryspil city council, 2023)

The U-LEAD program, which has been operating since 2016 and combines the efforts of the government of Ukraine, the European Union and its member states Germany, Sweden, Poland, Denmark, Estonia and Slovenia in creating a multi-level management system, provided 32,538 direct consultations to communities during the period of operation; 309 communities were assisted in the preparation of local development strategies; preparation of 99 regional development projects was ensured. https://u-lead.org.ua/#our-impact "U-LEAD with Europe" is implemented by the German government

company DeutscheGesellschaftfür Internationale Zusammenarbeit (GIZ) GmbH and consists of more than 180 specialists. In this way, communities have the opportunity to receive not only funding but also European experience. Another important driving force for the sustainable development of communities is the initiative of citizens. Since 2019, the "Quarter of Cleanliness" community of ZolochivUTCs in BoryspilOblast has been taking care of the cleanliness of the territories. At first, it was a village. Hnidyn, later the initiative spread to the formed UTCs. The community has waste collection points (paper, metal, glass, layers, batteries) that are sent for recycling.

The new strategy and Action Plan of the Council of Europe regarding social cohesion include the development of social responsibility. A cohesive community that requires adherence to the principles of democracy in decision-making, develops a social dialogue with various groups of stakeholders and contributes to the creation of a safe space for existence. (Okhrimenko O., Kalika B., 2023)

Thus, ensuring the sustainable development of each community and the region as a whole requires a systematic approach to the management of all components of

sustainable development with the involvement of community members and the participation of a motivated and professional decision-making centre headed by the head of the UTCs. The strategic vision of the future of the community should become a collective document involving stakeholders and taking into account the interests of all members of the community. Raising awareness of the challenges and opportunities of sustainable development will contribute to strengthening the initiative and responsibility of each participant and contribute to achieving the goals of sustainable development.

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# INTERNATIONAL COOPERATION FOR SUSTAINABLE DEVELOPMENT

## HYDROGEN PRODUCTION AS A FACTOR OF ECONOMIC DEVELOPMENT OF LIKRAINE

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The war on the territory of Ukraine, the loss of industrial and energy capacities, business relocation and migration have all contributed to a decline in the economic potential of the state. A factor in economic development is the transition from technically worn-out and environmentally polluting thermal power plants to hydrogen production. The relevance of developing hydrogen power generation in Ukraine in the context of cooperation with the EU countries is confirmed in the current environment. This development is driven by such problems as dependence on fuel imports, deterioration of production facilities, and lack of homogeneity in the distribution of energy production and consumption among regions.

Hydrogen plays a special role in the modern economy. It can balance the ever-increasing energy consumption with the reduction of CO2 emissions. Modern hydrogen energy technologies include hydrogen production, storage, transportation and use. The most efficient way to produce hydrogen for energy needs is to use the electrolytic water decomposition method; modern electrolysis plants have high technical characteristics and are easy to maintain. As a primary source of electricity, both surplus electricity from renewable energy sources and peak energy from traditional power plants can be used. The use of renewable wind and solar energy to power entire sectors of the economy poses insurmountable challenges if not supplemented by hydrogen.

Hydrogen production technology involves the electrolytic decomposition of water. The source of electricity can be either surplus electricity from renewable energy sources or peak energy from nuclear, thermal and hydroelectric power plants. The use of solar and wind energy to supply entire sectors of the economy is not always sufficient. That is why the development of hydrogen energy is a relevant factor.

Ukraine has the potential to use the possibilities of transporting mixtures of natural gas and hydrogen through main and distribution pipelines.

Ukraine has been an associate member of the EU since 2014. International cooperation is an important part of the EU's hydrogen strategy. The EU intends to develop cooperation on green hydrogen production with neighbouring countries and regions to facilitate their transition to clean energy and their sustainable development. Ukraine has an Association Agreement with the EU and is a party to the Energy Community Treaty. In 2019, the European Commission presented a programme to transform the European Union into a carbon-neutral continent - the European Green Deal [1].This project is supposed to reduce CO2 emissions by 50-55% in 2030. The overall goal of the European Green Deal programme is to completely decarbonise the energy

sector by abandoning the use of fossil fuels (coal, oil and natural gas) and replacing them with renewable energy sources. Ukraine is an energy partner of the EU. In the future, Ukraine may become a partner of the EU in the production, transportation and storage of greener gases on the basis of the existing infrastructure.

International cooperation is an important part of the EU's hydrogen strategy. The EU intends to develop cooperation on green hydrogen production with neighbouring countries and regions to facilitate their transition to clean energy and their sustainable development. Ukraine has an Association Agreement with the EU and is a party to the Energy Community Treaty. In 2019, the European Commission presented a programme to transform the European Union into a carbon-neutral continent - the European Green Deal. The project aims to reduce CO2 emissions by 50-55% by 2030. The Kherson, Odesa, Mykolaiv and Zaporizhzhia regions of Ukraine are capable of meeting half of the EU's electricity needs.

Thus, the benefits of developing hydrogen technologies in Ukraine include

- additional investments from the EU countries;
- new opportunities for Ukrainian business;
- additional jobs;
- improvement of the environmental component;
- active participation in measures to combat climate change.

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#### THE PROBLEM OF WAR IN THE CONTEXT OF THE GREEN ECONOMY

#### Lesya Korolchuk, PhD Lutsk National Technical University, Ukraine

Since the 70th session of the UN General Assembly in New York in 2015, which adopted the final document "Transforming our world: the 2030 Agenda for Sustainable Development" (Transforming our Wor., 2015), the issue of transition to a green economy to preserve our planet for future generations has become particularly important. Having embarked on the path of sustainable development, the international community declared its intention to green all spheres of public life, but the bloody war unleashed by the russian occupiers on the territory of Ukraine and the natural build-up of the military-industrial complex by all countries of the world in this situation reverse the green initiative in their own way.

The problems of greening the economy and sustainable development are the subject of works by such domestic scholars as A. Starostina, V. Kravchenko, B. Paton, Y. Kulchytskyi, B. Kulchytskyi, S. Panchyshyn, and such foreign scholars as E. Loiseu, L.

Saikou, R. Antikainen, N. Droce, B. Hansjurgens, S. Diyar, Akparova A., Toktabayev A., Tyutyunnikova M., Adrian S. Newton, Cantarello O., Zang, Meng Hu, Huangjing Chen, Wengjinui Li, Shuiguang Chen and others, and also attract the attention of many authoritative international organizations, which is largely reflected in their working reports. However, it should be noted that in the light of the war, the study of the green economy is gaining new special significance.

The study of the definitions of the concept of "green economy" given by international organizations, as well as foreign and Ukrainian scientists, made it possible in our previous scientific works to establish the quintessence of this concept and define it as: "economic activity aimed at ensuring economic growth and social development under conditions of efficient use of natural resources and careful attitude to the environment" (Korolchuk L.V., 2022). Accordingly, we consider the greening of the economy as a process of transforming the state's economy into a green one.

In contrast to the outlined plan of action to achieve the Sustainable Development Goals and the transition to a green economy in general, a large-scale destructive war has broken out in Ukraine, which undoubtedly threatens the achievement of the economic, social and environmental dimensions of sustainable development.

Thus, as of today, tens of thousands of lives have been lost, and a deep humanitarian crisis has led to a large number of people under siege and displaced persons both in Ukraine and abroad. Economic losses are also significant. Recent estimates put the damage to infrastructure, housing, and non-residential buildings at more than 100 billion US dollars (Rayan Riener, 2023), with significant damage to homes, roads, and railways, as well as agricultural land and other productive capacity in the country.

The environment has also been particularly affected: the bombing of forests, terrestrial and marine ecosystems, industrial facilities, transportation infrastructure and homes, as well as water, sewage and waste management infrastructure, has caused widespread and severe damage with immediate and long-term consequences for human health and ecosystems.

In addition, direct risks to public health are caused by exposure to hazardous substances contained in munitions remnants, which leak toxic substances into the soil and affect the quality of surface and groundwater. The danger comes from the heavy metals and rocket fuel associated with ammunition. The fertile black soil in eastern Ukraine will likely not be able to be used for its intended purpose for a long time due to the significant presence of explosives and toxic substances. The full extent of the war's environmental damage is clearly impossible to assess objectively today.

Despite the complexity of the situation, the Ukrainian authorities are trying to follow the course set for sustainable development, take measures to prevent the devastating consequences of the war and support the transformation processes towards a green economy in every way possible.

Ukraine has already established the National Council for Post-War Reconstruction (Pro pytannia Nats., 2022), which is preparing a Plan for Post-War Reconstruction and Development of Ukraine aimed at close cooperation between all levels of government to ensure the quality of the national economy. It is important that such reconstruction does not recreate the pre-war resource- and energy-intensive economy, but instead is aimed at using the most advanced practices of applying the latest eco-technologies in all economic processes and at improving the standard of living of the population as the highest value in a law-based democratic state.

The war has shaken the entire global economic system and called into question the effectiveness of the established world order, where, contrary to international law, the behavior of states is determined by the level of their military power. Today, due to its clear numerical superiority in weapons and manpower, Russia has literally flooded Ukrainian lands with waste dangerous to human life and health, irreparably crippled the lives of tens of thousands of people, and unleashed a new wave of arms proliferation, as everyone has seen that the key to state security is the power of its army and military equipment.

In our opinion, the criticality of the situation lies in the irreversibility of the negative impact of the war's consequences on the global community and Ukraine in particular. While economic losses can be covered by Russian reparations, the social damage – people's lives and health –cannot be reversed. Also, no one will be able to accurately determine and repair the damage to the ecological system, the consequences of which will be felt for centuries. As we can see, under such conditions, there are no adequate coordination mechanisms in the world that could ensure justice and adequate punishment for the aggressor. The fact that Russia participates in the UN Security Council and even holds the presidency of the Council now, at a time when the International Criminal Court in The Hague is issuing an international arrest warrant for the Russian president, is proof of this.

Obviously, the system of global policy coordination needs to change dramatically in order to be able to respond quickly and adequately not only to violations of international law, but also to any activity that contradicts the principles of sustainable development and green economy, the conceptual foundations of which form the basis of national strategies of all civilized countries.

In turn, for Ukraine, which immediately after defeating the enemy will face a grand reconstruction, the rise of patriotism and national unity, the greening of the economy should become the basis of an "economic miracle" and the main area for attracting foreign investment, which will make it possible to overcome the devastating consequences of the war in the shortest possible time and ensure the high competitiveness of the Ukrainian economy.

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### WORLD CIVILIZATION SECURITY AND DEVELOPMENT UNDER THE PRISM OF THE WAR IN UKRAINE

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**Introduction**. Unfortunately, Ukraine is experiencing a very tough period of its civilizational development. The full-scale invasion of Russia into the territory of Ukraine since February 24, 2022 (including the threatsfrom the territory of Belarus) has already led to large-scale destruction of industrial and civil infrastructure, cultural monuments, medical and educational institutions, the termination (for example, civil aviation) or the reduction of economic activity of the enterprises of various branches of Ukraine's economy. Nowadays, we can already forecast at least a 50% drop in Ukraine's GDP in 2022.

The decline of Ukraine's GDP by the end of 2022 has been estimated by the Ministry of Economic Development of Ukraine at 30.4% [ $\pm 2\%$ ], which is a better indicator than it was expected according to previous forecasts, including the World Bank's forecast of April 10, 2022, which predicted a reduction in Ukraine's GDP by 45% [2]. The demographic problem, which consisted in the reduction of the population of Ukraine, the high level of migration, has intensified. Some of the Ukrainians who were forced to leave abroad will not return to Ukraine; this proportion will be directly correlated (increase) depending on the continuation of the war in Ukraine.

The most painful blow for all Ukrainians and people of the entire civilized world is the destinies of people crippled by war. The lost lives of people (as the highest value) are inevitable for Ukraine, in particular, as in the morning of March 28, 2023, more than 1,408 children were injured in Ukraine as a result of the full-scale armed aggression of the Russian Federation. According to the official information of juvenile prosecutors, 465 children died and more than 943 were injured of various degrees of severity [1].

The consequences of the war in Ukraine are already felt in various countries of the world. The global context of security issues is not limited by the borders of any country or spheres/sectors of influence (in particular, the threats to human health from the Covid-19 pandemic have caused consequences in various spheres of life in countries on all continents). The war of russia against Ukraine causes many threats, ranging from threats to human security in Ukraine to threats to the food, energy, etc. security of the countries of the world. Attacks on nuclear power plants in Ukraine are a threat to humanity and the continent's ecosystems as a whole; further attacks may lead to irreparable consequences. Various aspects of the coverage of security issues in terms of its components are reflected in the author's publications (see more details in [9; 10; 12; 13; 17]).

Is everything done by those who could prevent and now stop the war of russia in Ukraine? This issue needs to be examined by analyzing various aspects of the interaction and cooperation of countries in the world, assessing the role of leaders, international

institutions, etc. Undoubtedly, this issue will be a relevant subject for many in-depth studies.

The key issue today is the urgent cessation of the absurd war, criminal actions of russia in Ukraine, preservation of Ukraine's territorial integrity and sovereignty, and realization of the opportunities for civilized development of Ukraine and all the countries of the democratic world.

The aim of the article. To highlight Ukraine's struggle against russian aggression in the context of global civilization and to substantiate the main principles of innovative development.

**Presentation of the main research material**. Global civilization changes are necessary to ensure the security of the entire world! The war in Ukraine waged by russia is already changing global civilization realities. Ukrainian society demonstrates consolidation of efforts, unity, and powerful resistance in the fight against russia and its absurd slogans. The extraordinary courage of Ukrainians, their desperate struggle for democracy, sovereignty, and territorial integrity of Ukraine has impressed the world and united democratic countries in the resistance to russian aggression.

Participants of the international coalition in support of Ukraine's independence and territorial integrity include not only individual countries, but also military-political alliances (NATO, OSCE (except for the Russian Federation and some CIS countries), political unions (EU, Visegrad Group, GUAM, PACE, Council of Europe (except for the russian federation and some CIS countries), most UN member countries, economic unions (G7, G20 (except for the russian Federation), financial institutions (IMF, World Bank, European Bank for Reconstruction and Development), human rights organizations (Human Rights Watch, Amnesty International), and religious organizations (the Holy See).

Combining efforts to provide military assistance to Ukraine in the form of necessary weapons is extremely important, because unfortunately, the russian federation continues to terrorize the population of Ukraine, not accepting calls to withdraw troops from Ukraine; therefore, at present, only the use of force is an effective argument for the withdrawal (or elimination) of Russian troops from Ukraine. In this context, meetings in the "Ramstein" format are effective [6]. The first meeting in the "Ramstein" format was attended by the head of the Pentagon, US Secretary of Defense Lloyd Austin, who invited 40 allied countries. The meeting of representatives of the advisory group (defense ministers) of countries wishing to support Ukraine in its efforts to defend itself against russia's large-scale attack that took place on April 26, 2022, is historic. On May 23, 2022, representatives of more than 40 countries around the world participated in the second meeting of the defense contact group for Ukraine ("Ramstein-2"), and on March 15, 2023, the "Ramstein -10" took place, the results of which include measures to strengthen air defense, supply of ammunition, training, and formation of the "armored fist.

Security issues today are being discussed in various formats. "Words of concern" have gradually turned into actions. Sanctions packages are being introduced, but their impact on russia is not as quick as needed. Moreover, ways to bypass sanctions are being found.

Unfortunately, international institutions and countries of the democratic civilized world did not take the necessary preventive measures, did not react sufficiently to the challenges and threats, to the violations of international law that took place on the part of

russia.

The Budapest Memorandum did not provide Ukraine with security guarantees... The activities of many international institutions are ineffective and formal. "Words of concern" have not stopped russia's lies, deceitful actions, and lawlessness. The UN has long become a "naphthalene" organization, a club for exchanging ideas without constructive solutions and influence on world civilization processes. Moreover, a state that commits war crimes against civilians (i.e. russia) cannot be a member of the UN Security Council! NATO, declaring the values of democracy, freedom, and the rule of law, refused to heed calls to close the sky over Ukraine, that is, to protect the Alliance's statutory values through individual regulating articles of the Alliance's activities. The problem/paradox is that the civilized world operates within the framework of the normative-legal field.

Therefore, we can state:

- the inefficiency of norms of international law and concluded agreements (individual norms and/or ignoring/violation of them by individual countries);
- the delayed necessary decisions of international institutions or individual civilized countries;
- the absence or insufficiency of necessary preventive measures/actions to respond to the relevant challenges and threats that have occurred and continue to exist. In fact, regarding Russia's aggressive and criminal actions towards many countries in different years, we can observe the ineffectiveness and inadequacy of such measures (in particular, Moldova-1992, Georgia-2008, Ukraine annexation of Crimea, military actions in Donbas since 2014, full-scale invasion of Ukraine since February 24, 2022).

Russia is a terrorist country, commits crimes against humanity, conducts a hybrid war, spreads distorted / changed historical facts, unreliable information and invented myths to the whole world. The illogicality, irrationality of russia's war in Ukraine, russia's informational inadequacy does not fit into the framework of "common sense".

It is worth paying attention to the obvious disinformation of the population of russia and the incompleteness of all countries (including Ukraine) in the context of refuting false information and reporting real / reliable information. It was necessary to find mechanisms for reporting reliable information, as well as to respond preventively to prevent the spread of unreliable information. Russian disinformation was also freely distributed in various countries of the world (in particular, altered / unreliable historical facts were expressed through television). As a result, a significant proportion of russians and even residents of civilized Europe (in particular, Germany, Austria, France) succumbed to informational influences, believed russian propagandists, some of them look absolutely zombified, not subjecting to analysis and elementary verification of information about the founding of Ukrainian cities, etc. Some messages of russian propagandists are absolutely absurd (for example, regarding American biological laboratories in Ukraine for breeding "Bandero geese").

Therefore, world-civilizational changes capable of providing security guarantees are necessary. The reaction / actions of the entire civilized world must be adequate to the challenges and threats.

Only in the event of a full-scale war, the reorientation of countries from russian to other energy markets occurs.

Measures that would prevent threats to security, in particular, and energy security, were not taken in time. "Strategic agreements, decisions regarding the impossibility of

construction of the Nord Stream-2 project were omitted" [12].

Moreover, such a project from the very beginning carried threats not only for Ukraine, but also for the whole of Europe and the security of the world. In the conditions of Russia's dictates, inadequate attitude/relation to world civilizational orders, it was impossible to perceive this project as economic, as time has shown. Energy "dependence" on russia combined with the lack of proper response of civilized countries and international institutions to violations of international law, russia's crimes against humanity, committed by Russia in different years, led to the strengthening of russia's extremely "perverted" intentions. Only after the start of a full-scale war Germany stopped the certification of the Nord Stream-2 project.

Impunity, lack of preventive measures, and reaction from the civilized world to russia's disregard for international law norms, encroachment on the territorial integrity and sovereignty of other states, and now the full-scale invasion of Ukraine have resulted in at least economic losses for Germany (including the need to dismantle "Nord Stream-2") and other countries in the world (including high inflation rates, the need to finance various types of expenditures: military, humanitarian, etc.).

Attention should be paid to the issue of food security in many countries around the world. Ukraine, as a powerful exporter of food (primarily grains), plays an important role in ensuring food security. Ukraine consistently ranks among the top five leading global exporters of grains and legumes. According to the results of the 2020/2021 marketing year, exports of grains and legumes and their processed products amounted to 44.9 million tons. In particular, 16.6 million tons of wheat, 4.2 million tons of barley, 18.4 thousand tons of rye, 23.1 million tons of corn, and 126.9 thousand tons of flour were exported. The importance of Ukraine's role was particularly evident during the COVID-19 pandemic, when global supply chains were disrupted. Ukraine continued to fulfill its obligations and significantly contributed to the food security of its partners in the Middle East, Europe, Southeast Asia, and North Africa [5]. Ukraine's contribution to the world food market in 2021 was equivalent to providing food for about 400 million people [4].

The military actions on the territory of Ukraine have caused disruptions in the functioning of the food system, with the integrity of supply chains of agricultural and food products being affected (from primary production to consumer product realization), as well as the activity of enterprises (production, processing, distribution, consumption, and disposal of food products) that created added value in the agro-industrial complex.

The blockade of Ukrainian ports made it impossible to export Ukrainian products to

external markets. [1] Since 60% of Ukraine's agricultural products were exported by sea, the countries that depended on such imports from Ukraine experienced negative consequences.

Food security is threatened by the impossibility of conducting agricultural business (or reducing the sown area) where hostilities are active, mined or temporarily occupied. Therefore, there is a decrease in yield due to violations of agrotechnological cultivation of land/sowing, a decrease in grain harvest due to smaller areas of sowing and, as a result, a reduction in grain exports.

Such cause-and-effect relationships will not bypass the price aspect either. Because of the war in Ukraine, world food prices will rise, and high jumps in inflation should be expected not only in the underdeveloped countries of the Middle East and North Africa. High rates of inflation cover all countries in the global world.

The measures have been taken to ensure food security in Ukraine at the state level.

In particular, on March 24, 2022, the Verkhovna Rada of Ukraine [3] adopted the Law of Ukraine "On Amendments to Certain Legislative Acts of Ukraine Regarding the Creation of Conditions for Ensuring Food Security in the Conditions of Martial Law" (came into force on April 7, 2022), which aims to quickly mobilize the country's agricultural land for the production of agricultural products in the conditions of martial law. The Law is based on the priority of social (state) interests over the interests of private individuals in times of war. This means that the Law suspends the operation of certain legal mechanisms that protect private interests, which is quite understandable inthe conditions of russian aggression. Instead, the Law introduces certain legal mechanisms into the legislation that prioritize the interests of society in ensuring the urgent use of available agricultural land for food production.

The Cabinet of Ministers of Ukraine [2] has also approved a plan of measures to ensure food security in conditions of martial law. The set of actions has been developed in many directions, including monitoring the state of food security and agricultural infrastructure as a whole, as well as special government control over prices for products and regulation of food prices. The support for national food producers is provided at the state level, as well as targeted provision of food assistance to the most socially vulnerable segments of the population.

Keeping in mind the important role of Ukraine in the functioning of the global food system, the issue of ensuring food security on a global scale is also on the agenda of countries, international and intergovernmental organizations, including FAO, and also including the context of the transformation of food systems. The corresponding system of actions should contribute to reliable food provision for the population, improving the economic and physical accessibility of food products, and preventing disruptions in export contracts for agricultural products from Ukraine.

It is important to withdraw russian troops from the territory of Ukraine as soon as possible, to establish peace, to ensure the territorial integrity and sovereignty of Ukraine, which will subsequently enable effective implementation of the complex of tasks for ensuring food security in certain niches of the global food markets.

Defending the principles of freedom and democracy, Ukraine should implement necessary ideas/measures for effective reform of its economic sectors, increasing energy efficiency, and technological level of its national economy.

To activate innovative activities, it is necessary to form and implement relevant strategies at different levels. The publications [7; 8; 14; 15; 16] emphasized the need to activate investment and innovation activities, reforms aimed at achieving economic growth, and ensuring Ukraine's national security in its components. In particular, the publications [14; 15] substantiated the main principles of effective implementation of investment and innovation strategies and state investment and innovation policies. The implementation of an effective investment and innovation strategy, based on a well-founded state investment and innovation policy, is a guarantee of ensuring the competitiveness of the economy and sustainable socio-economic development based on a system of measures and tools, as described in the publication [7]. The activity of venture investment funds, as well as business angels, has an important role in activating innovative activities, which is described in more detail in the publication [16].

The key component in the system of ensuring innovative development and competitiveness of the world's economies, the main asset of competitive struggle, production and profit generation by business entities, is intellectual capital. For the

economic and socio-cultural development of any country, an effective and capable system for forming and using intellectual capital and intellectual property is necessary, as described in the article [8].

The level of innovation in the development of economies around the world today determines their competitiveness, their ability to address social needs, and overall achievement of sustainable socio-economic development goals. The innovativeness of any country's economic development is characterized by the use of progressive techniques and technologies, the production of high-tech products, and effective organizational and managerial innovations.

While acknowledging Ukraine's achievements in digital transformation, the implementation of important reforms (including decentralization), and the launch of a number of successful startups, it is unfortunately necessary to note that the low utilization of Ukraine's potential, technological backwardness in many sectors, and high energy and resource intensity of the national economy have resulted in weak competitive positions for Ukraine compared to economically developed countries, a raw material-oriented export and a high share (predominant) of high-tech, innovative products imported to the domestic market.

Therefore, effective state regulation through mechanisms and technologies that promote innovative activity is necessary, as well as the production and promotion of initiatives to achieve sustainable development goals and strengthen Ukraine's competitiveness at the international level.

Steps/measures to activate innovation activity take place under the influence of certain constraints. Such constraints/barriers to innovation development can be standard (typical for different countries or economic entities), specific (for example, restrictions or additional difficulties associated with the climate in the country, etc.), or local. Among the local barriers to the development, implementation, and dissemination of high-tech innovations in the sectors of the economy, it is worth highlighting the following:

- limited own financial, natural and material resources of economic entities for modernization and implementation of innovations.
- high cost of loans and difficulty in obtaining them; insufficient development of the venture industry:
- weak level of infrastructure development (organizational, technological, etc.) for innovation activation; limited interaction between major influential groups (business, government, science, and education) on the success of innovative development of high-tech sectors of the economy;
- hesitation/doubt of business entities regarding innovation implementation due to uncertainty in market behavior, fear of absence or insufficiency of solvent demand from consumers; limited understanding of market needs and forecasting their dynamics by top management of business entities; conservative policy of strategic investors, high risks of innovation implementation;
- insufficient information and knowledge in the field of innovation and high technologies; complicated access to highly specialized consulting services in the field of development and implementation of new technologies, knowledge transfer, and mastering new procedures and processes; limited opportunities for cooperation with other institutions from other countries, insufficient interaction between subjects of high-tech sectors of the economy, lack of realization of partnership opportunities;
  - insufficient conditions for the realization of the available intellectual and

personnel potential for producing creative and innovative ideas and projects;

- insufficiently regulated legal framework regarding investment and innovation activity and its activation; insufficient incentives and support for the development of innovative activity, high-tech sectors of the economy; problems regarding copyright protection; low level of social and cultural requirements for respect of intellectual property and respect for knowledge as key capital.

These limitations/obstacles should be perceived as conditions for innovative development and should be addressed to activate investment and innovation activity. For example, in case of resource scarcity – it is necessary to find them; if the regulatory framework on a certain issue is insufficiently regulated – it is necessary to regulate it and make decisions at the appropriate levels.

There are certain characteristics that attest to the innovativeness of economic development that need to be achieved/formed. The main characteristics of innovative development include:

- providing conditions for the formation of intellectual potential and the possibility of its implementation, conducting scientific research and development;
- creating innovative production and technological potential, modern and productive equipment and technologies;
- creating, implementing and disseminating own innovations, attracting/implementing innovations from other developers;
- development, expansion of the market share through the existing technical, technological, and organizational infrastructure; strengthening competitive positions;
  - development of product innovation, a range of high-tech products;
- financing of innovative activities and projects aimed at ensuring market competitiveness in the context of a changing market environment.

In the context of Ukraine's perspective on innovative development, its European integration is important. The monograph [11] describes the vectors of modernization of Ukraine's socio-economic system, with arguments for necessary measures and means, as well as stages of their implementation. Ukraine must demonstrate the results of its reforms, which will give it grounds to apply for EU membership. However, we must also understand that EU countries and the global community will not wait for us to catch up with their level of technology or standards of living, or for our economy to become competitive. They will also continue to develop during these years. This means that Ukraine should pursue its development through "anticipatory" strategies, rather than "catch-up" strategies, by producing and using technologies of new technological paradigms in the global economic space, among other things [11, 285-286].

The submission of Ukraine's application for EU membership became possible not due to the results of all the necessary reforms and implemented innovations, achieved living standards (comparable to the EU countries' standards), but due to the realization by other European countries of the significance and power of Ukraine in defending democratic rights and freedoms in Europe and throughout the world.

While understanding the advisory nature of the vote, it is important that on March 1, 2022, the European Parliament approved a resolution by a large majority of votes (637 in favor, 13 MEPs opposed, and 26 abstained) recommending EU member states to work towards granting candidate status to Ukraine for EU membership. Talks about membership negotiations have already begun.

The prospects for innovative development in Ukraine are high. Ukraine is a unique

country with high potential. Several countries have expressed a desire to contribute to the reconstruction of Ukraine. In particular, the United Kingdom will assist in the restoration of the Kyiv region. Denmark has taken Mykolaiv under its patronage. Sweden will take care of the restoration of Odessa. Estonia is investigating the needs of the Zhytomyr region, focusing on its reconstruction. Poland will help in the reconstruction of the Kharkiv region and support Ukrainian agriculture.

Poland is one of the countries that demonstrates an active position on the international arena at the level of the President, the Polish government regarding the necessary actions/measures to support Ukraine (European integration, military assistance, etc.). At the level of Polish citizens, there is support for refugees from Ukraine. More than 1,200 Polish companies want to participate in the post-war reconstruction of Ukraine, as voiced at the "Rebuilding Ukraine – Sectoral Consultations" forum held in Warsaw <sup>2</sup>.

There are prospects for massive renewal of Ukraine on an innovative basis, which will be provided by investment activity and the influx of foreign investment. There is discussion of a "Marshall Plan for Ukraine.

**Conclusions**. Today, Ukraine is defending its freedom and independence, and is also a "shield" for the entire civilized world. Support and aid for Ukraine exist, including the acceptance of forced refugees from Ukraine, which is a rescue for people. However, this help comes with the consequences of war. It is necessary to consolidate all efforts and stop russia's aggression. Since the civilized world cannot stop russia diplomatically, it is necessary to provide Ukraine with the necessary weapons for effective defense against russian aggressors and to impose more massive sanctions.

Every day of russia's war in Ukraine is a crime against humanity, it is killings, thousands of human destinies are crippled, massive destruction of infrastructure, education and cultural objects, and so on.

For the fastest possible global changes towards the victory of "good over evil", "light over darkness", all the forces of "progressiveness, technology, goodness, and humanity" must show even more courage, quick and adequate response to the challenges and threats of today.

The goal of "common sense" people today is the quickest possible withdrawal of russian troops from the territory of Ukraine, the establishment of peace, and effective integration of Ukraine into the world economic space.

[1] On July 22, 2022, Ukraine and Turkey agreed on the export of Ukrainian grain (from the unblocked ports of "Odesa," "Chornomorsk," and "Pivdennyy") during negotiations in Istanbul mediated by the UN. russia signed a similar agreement with Turkey and the UN

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# LOGISTICS AND TRANSPORT ISSUES OF SUSTAINABLE DEVELOPMENT

### ANALYSIS OF METHODS FOR DETERMINING THE AMOUNT OF EMISSIONS OF HARMFUL SUBSTANCES DEPENDING ON THE METHODS OF ROAD TRAFFIC ORGANIZATION

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Today, the number of cars, which are the biggest polluters of air in cities, is constantly growing in the world. The emissions of the harmful substances (EHS) from vehicles make up 70-85% of the total amount of emissions. Ukraine is no exception where a quarter of all cars are old models that do not meet any environmental standards. In addition, on the streets of cities where there is a daily accumulation of vehicles the concentration of the EHS in air exceeds the maximum permissible by 3-4 times [1].

The applicability of the problem of reducing the negative impact of automobile transport on the environment requires large-scale comprehensive measures: reducing the toxicity of emissions from each individual vehicle by improving individual units and using safer types of fuel; reduction of the concentration of harmful the EHS in the the atmosphere due to rational planning and development of main highway territories, gas protection structures and landscaping; reducing the volume of the EHS from transport flows (TF) on highways by improving the transport and planning characteristics of road network (RN) and improving road traffic organization (RTO) [2].

The composition and amount of the EHS emitted into the atmosphere depend on the type of engine and its technical condition, the type of fuel, road traffic parameters, operating conditions of vehicles, as well as the technical condition of roads. A scientifically based solution to this problem can be obtained only in a comprehensive study of these factors. One of the main directions for reducing the level of environmental pollution from automobile transport is modernization and improvement of the RN, construction of new road junction (including junctions at different levels), creation of separate highways and overpasses for the movement of passenger and cargo transport, organization of a rational scheme of routes for the movement of passenger and cargo flows on the city highways, the creation of optimal traffic management systems, the expansion of automated traffic management systems, etc.

When implementing new RTO schemes on the RN elements special attention should be paid to intersections, which are its most dangerous elements, where, according to statistics, the largest number of road accidents occur, and not only due to the negligence of drivers, but also due to imperfect RTO. Problems in the RTO affect the increase in transport delays, the formation of traffic jams, which reduces the speed of movement and unjustified overconsumption of fuel. Constant traffic jams on

intersections, frequent stops, braking and speeding up are the causes of increased pollution of the city's air and traffic noise. In connection with the specific traffic conditions at traffic junctions (reducing speed before turning to the right or left, making the actual turn, etc.) they are the most dangerous for road users and generally reduce the road capacity of the road, which negatively affects not only operational performance indicators of road transport, but also the environmental safety of the intersection.

That is why when implementing new RTO schemes on RN, their impact on the state of the environment should always be evaluated.

There are many options for calculating the size of the EHS. The assessment of the state of the air in populated areas is carried out by comparing real concentrations with the maximum permissible ones. But it all comes down to an assessment of the environmental pollution level. There is no further clear mechanism for reducing the environmental burden by implementing the necessary measures [3]. The methods of forecasting and modeling of the air pollution process in the city still lag behind the calculation methods of determining the concentrations of the EHS from stationary sources. Therefore, the main attention of specialists is directed to the creation and improvement of models for the calculation of surface concentrations of the EHS, which take into account the influence of various factors on the nature of the dispersion of these substances in the conditions of main road development. Since each calculation method includes different parameters, attention should be paid to the development of a more accurate universal calculation method.

In the field of developing more effective monitoring methods and proper control over exhaust gas emissions and traffic intensity values, especially in large cities of Ukraine, research is being conducted in the direction of developing an appropriate monitoring network that will ensure obtaining the necessary results and help to quickly carry out appropriate measures with RTO on dangerous from the ecology point of view areas of the RN. But the developed monitoring systems do not investigate the ecological and technical characteristics of the RTO schemes directly in the appropriate places on various sections of the RN taking into account the surrounding construction [4].

A lot of attention is also paid to complex RTO schemes and establishing functional dependencies of the level of environmental characteristics from RTO technical schemes. But all studies of the level of environmental characteristics come down to the fact that taking into account the cyclic nature of car traffic in cities, which is associated with stops before intersections and subsequent acceleration in the simulation model, they are carried out according to the driving cycle [5].

The most unfavorable operating modes of vehicle engines from the point of view of toxic characteristics are acceleration, deceleration and idling modes. Therefore, the availability of traffic controls on city highways, effectively solving the problem of ensuring traffic safety on the one hand, leads to an increase in the EHS on the other hand [6].

There are various methods of determining the EHS depending on traffic parameters. In the method of determining the EHS depending on the TF construction and intensity all indicators for the EHS calculations can be determined by using field observations. And although this leads to an increase in research time the obtained results will be more accurate because real data of the research object are used [7]. The widely distributed in KHNADU method of determining the EHS depending on the speed of the TF is performed in laboratory conditions, therefore, unfortunately, it is not possible to

take into account the real RTO in the sections of the RN [8]. It is possible to determine emissions depending on the movement delays of vehicles on various elements of the RN taking into account the RTO on them. But all the above-mentioned methods are not able to reduce the ecological load in the complex on ecologically dangerous areas of the RN by implementing appropriate measures with RTO.

A number of methods have gained wide popularity abroad among which MOVES, COPERT, NEDC and others have become the most popular. As a result of their analysis it should be noted that the program MOVES (Motor Vehicle Emission Simulator) developed by the US Environmental Protection Agency simulates various types of the EHS from cars [9]. But it has a limited geographic scope because it was developed for use in the US, so it cannot be directly applied to other countries with different traffic conditions and specific air pollution factors. The European model COPERT (Computer Program to Calculate Emissions from Road Transport) estimates the EHS from road transport [10], but it is focused on the countries of the European Union, so it may be less accurate for other countries and does not take into account the influence of such a factor as traffic congestions that directly have an effect on the EHS from transport. The WLTP (Worldwide Harmonized Light Vehicles Test Procedure) method is a method of measuring the EHS of passenger and light commercial vehicles. It does not take into account all the features of the engine operation in real operating conditions of the vehicle, which can lead to inaccurate results [11]. The CT-EMFAC (California Transportation-Related Emission Factors Model) software is used in California to calculate TF emissions taking into account such factors as types of vehicles, their characteristics, TF sizes and different traffic conditions, unfortunately also has a limited applicability and low accuracy. Regarding the EMEP/EEA Guidebook method of calculating the EHS from transport (very popular in Europe) is based on data of fuel consumption, types of transport, road use and other factors, but does not take into account the special characteristics of road traffic traffic jams, traffic level, nature of routes, etc. [12].

According to the "Gaussian Dispersion Model Calculator" program and the GND-86 method [13] it is possible to calculate the intensity of pollution by one of the EHS in the intersection area at a traffic light prohibiting signal. But this technique is suitable for controlled intersections, so it cannot be used as a universal method for different RTO methods.

The method of calculating the level of air pollution by car exhaust gasses suggested by the KHNADU makes it possible to determine concentrations of the EHS [14]. In contrast to the previously discussed methods this one takes into account the construction, intensity and speed of TF, as well as the RTO option embedded in the corresponding coefficient (controlled, self-controlled, uncontrolled intersection, railway crossing, intersection in different levels, etc.). But, unfortunately, it does not take into account, for example, different schemes of phase-to-phase departure at the crossing or the prohibition of maneuvers at the intersection, etc.

In modern conditions due to the constantly growing capabilities of computer machines, software for the development of various types of transport models is developing at a rapid pace. Specialized transport planning packages (Emme-3, OmniTrans, Transims, Cube, AIMSUN, TransCAD + Transmodeler, Paramics and S-Paramics, PTV VISSIM, AnyLogic) have the ability to provide a quantitative assessment of the main parameters of the transport process. One of the most popular, as well as

necessary for determining the environmental characteristics of RN elements, is PTV VISSIM - a multipurpose package for TF modeling at the micro level, which is considered an ideal tool for municipal and transport authorities working to reduce emissions and environmental regulatory compliance [15], PTV VISSIM allows to perform high-quality traffic simulation aimed at increasing the efficiency and safety of traffic, which, in its turn, allows to reduce the impact of motor vehicles on the environment. Among the environmental characteristics that are calculated in PTV VISSIM are the amount of carbon monoxide per vehicle, the amount of nitrogen monoxide, the amount of volatile organic compounds, and fuel consumption. Advantages of PTV VISSIM also include the possibility of taking into account various factors, such as the volume of TF, types of vehicles, their speed, pollution control methods, etc. In addition, the use of software allows you to more accurately take into account the construction of the TF and calculate the EHS in various traffic conditions. However, the application of PTV-VISSIM requires a fairly large amount of input data, such as traffic data, vehicle types and their characteristics. In addition, the calculation results may be inaccurate if the input data do not correspond to real road conditions. Thus, when using the PTV-VISSIM method to calculate the EHS on RN elements, it is necessary to take into account both advantages and disadvantages.

The listed methods make it possible to calculate the emissions of various types of air pollutants from motor vehicles taking into account various factors (vehicle type, fuel type, road surface condition, traffic conditions, etc.). The choice of the methodology for calculating the EHS depends on the characteristics of the pollutants, properties and features of the environment, the availability of data directly about the EHS, the availability of information about automobile transport that may be available for calculation, etc. For each specific situation it is necessary to choose such a methodology that will ensure a reliable and accurate calculation of the EHS sizes.

In any case, engineers in the field of RTO when considering different options of RTO should (assessing their environmental safety) choose such a method that would take into account the maximum characteristics of road traffic. Environmental safety assessment of the intersection based on simulation results in PTV VISSIM is currently the most optimal option, which takes into account various traffic characteristics, and some of them are more accurate than other methods (for example, construction of TF) and various traffic conditions. However, the application of PTV-VISSIM requires the collection of a fairly large amount of input data and the perfect reproduction of real traffic conditions. Therefore, the task of developing a methodology for assessing the environmental safety of RN elements, which would take into account complex RTO schemes remains relevant to this day.

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## DIGITAL MARKETING AND LOGISTICS: A SYNERGISTIC APPROACH IN THE DIGITAL ECONOMY\*

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\*Research was performed within the framework of the international research project of the scientific and technical organization Teadmus OÜ (teadmus.org), «Integrated Digital Marketing and Logistics Strategies for Enhancing Business Performance in the Digital Age».

The rise of the digital economy has brought about significant changes in the business landscape, requiring companies to adopt new strategies and approaches to stay competitive. Two critical areas that have undergone substantial transformation are digital marketing and logistics. Digital marketing has revolutionized how businesses interact with customers, providing new channels for customer engagement and expanding the reach of marketing campaigns. At the same time, logistics has become increasingly complex with the rise of e-commerce and the need for faster, more efficient delivery systems.

Despite the significant changes in these areas, there needs to be more research on the synergistic relationship between digital marketing and logistics. The literature on digital marketing and logistics has primarily focused on these areas separately, with limited research on their integration. However, evidence suggests that an integrated approach can result in significant benefits for businesses. This research aims to fill this gap by exploring the benefits of an integrated approach to digital marketing and logistics in the digital economy.

One of the primary benefits of digital marketing and logistics integration is improved customer satisfaction. Digital marketing provides businesses with new channels for customer engagement, such as social media and email marketing. By integrating these channels with logistics, businesses can provide more personalized and efficient customer experiences. For example, a customer may receive a personalized email promotion for a product they have previously purchased, with the option for sameday delivery.

In addition to improved customer satisfaction, digital marketing and logistics integration can improve operational efficiency. Businesses can optimize their supply chain and delivery systems by integrating logistics data with digital marketing campaigns. For example, by analyzing delivery data, a business may identify opportunities for route optimization, reducing delivery times and costs.

The authors present two case studies demonstrating the benefits of digital marketing and logistics integration.

Case Study 1: Amazon

Amazon is a prime example of a company successfully integrating digital marketing and logistics. Amazon provides customers with free two-day delivery through its Prime membership program and access to various digital content, including movies,

TV shows, and music. By integrating its logistics and digital marketing strategies, Amazon has provided customers with a seamless and personalized shopping experience, increasing customer loyalty and repeat purchases.

Case Study 2: Nike

Nike is another company that has successfully integrated digital marketing and logistics. By leveraging data from its Nike+ app, Nike has been able to personalize its marketing campaigns and improve its supply chain operations. For example, by analyzing data on customer running patterns, Nike optimized its production and delivery processes, resulting in faster delivery times and reduced costs.

A synergistic approach to digital marketing and logistics can significantly benefit businesses in the digital economy. By integrating digital marketing and logistics strategies, businesses can improve customer satisfaction, operational efficiency, and overall business performance. Our proposed digital marketing and logistics integration framework provides a starting point for businesses looking to adopt this approach.

The digital economy has fundamentally changed how marketing and logistics are conducted. The use of digital technologies has created new opportunities for businesses to optimize their operations and reach their customers more effectively. By integrating digital marketing and logistics strategies, firms can achieve synergistic effects that improve their overall performance and competitiveness. The presented research highlights the importance of understanding the relationship between digital marketing and logistics in the context of the digital economy. This understanding can help businesses develop more effective strategies that capitalize on the unique advantages of digital technologies.

In conclusion, the digital economy has brought about significant changes in how businesses operate, with digital marketing and logistics being two critical areas that have undergone a substantial transformation. This paper explores the synergistic relationship between digital marketing and logistics and highlights the importance of an integrated approach in achieving business success in the digital age. Through case studies, we demonstrate the benefits of digital marketing and logistics integration and propose a framework for its implementation. Our findings suggest a synergistic approach to digital marketing and logistics can improve customer satisfaction, operational efficiency, and overall business performance.

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## FORMATION TECHNOLOGY OF CARGO DELIVERY IN CONTAINERS BASED ON THE ECOLOGICAL PRINCIPLES OF "GREEN" LOGISTICS

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Prospects for the formation of a supply chain of goods in containers based on the application of the concept of "green" logistics in multimodal transportation of goods with the participation of railway transport are considered. It has been established that multimodal technologies have a lower negative impact on the environment and air compared to the delivery of goods by one mode of transport.

It should be noted that road transport accounts for 72% of all transport emissions. Therefore, it is obvious that when different types of transport are combined into a multimodal scheme, the harm from exposure to pollutants will be minimized. In particular, the indicators of CO2 emissions for railway transport are the lowest compared to road and water [1].

It has been proven that the introduction of "green" multimodal technologies is possible due to the reduction of the share of road transport over a distance of more than 300 km in accordance with the prospective requirements of the EU countries [2]. It is proposed to direct savings from environmental taxes to investments in logistics infrastructure. Under the given conditions, an economic-mathematical model of the two-stage transport problem of integer programming of optimizing the distribution of container flows between suppliers and consumers is proposed, taking into account the environmental criterion (see Fig.).

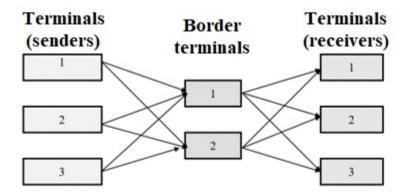


Fig. 1. Scheme of the formation of a transport network as a two-stage transport problem

In multi-stage transport tasks, containers from suppliers first arrive at intermediate points (distribution terminals, in our case - these are interstate transfer points), where, if necessary, they are reloaded or stored for a certain time. That is, the final consumers receive products not from suppliers, but from the specified intermediate points of transport networks.

It is possible to calculate the value of the environmental criterion during transportation by each mode of transport as the cost of damage from the negative impact of carbon dioxide on atmospheric air:

$$B_{\rm a} = m_{\rm TEU} \eta_{\rm a} \sum_{n=1}^{K} (L_i c_{\rm atm} i),$$
 (1)

where  $\eta a$  - is the average specific emissions of harmful substances (CO2) [3, 4]., g/TEU×km;

Li- the distance of unimodal transportation through the territory of the i-th state, km:

K- the number of transportation stations on the territory of other states (for domestic traffic K=1);

 $c_{atmi}$  – environmental tax rate on  $CO_2$  polluting emissions on the territory of the i-th state, \$/t;

m<sub>TEU</sub> - mass of cargo transported in a container (TEU),t.

The solution of the two-stage transport problem taking into account the ecological criterion (1) showed that the multimodal technology of container transportation in domestic transport provides savings on environmental tax by 6.1 times, and in international transport by 9.8 times, compared to unimodal.

It was established that the development of multimodal transportation in Ukraine based on the principles of "green" logistics requires the resolution of a number of internal organizational and legal issues, primarily the harmonization of national transport legislation with EU norms.

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### MODEL OF SUSTAINABLE OF TECHNOLOGICAL SYSTEM OF FOOD CARGO TRANSPORTATION

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Thismodeltakesintoaccount:

The transportation of food is a responsible process that requires consideration of numerous factors that ensure their safety. The supply of thisgroup of goods is always associated with a number of risks, as throughout the transport requires the creation of special conditions around it that meet the standards of its storage. For example, ensuring temperature proper control orhumiditycontrolinFreshLogisticstechnologyis"fresh"logistics,whichpromotes perishable procurement distribution goods, the market of of whichischaracterized by shortshelf life, different product quality, and significantfluctuationsinsupplyanddemand.

Considering the basic technologies of transportation of perishable foodproducts, it should be noted that regardless of whether they are transported around the country or an international supply, the set of factors and conditions is approximately the same:

- temperatureregime;
- shelflifeordeliverytime;
- packing and marking according to the type of cargotran sported;
- reliable mechanical fixing using pallets, belts, film, etc.

Atthesametime, ensuring full compliance with transport conditions throughout the journey is a much more difficult task than maintaining the same conditions in the middle of ordinary warehouses.

In this regard, we need a quality organization of transportation, which provides for unforeseen circumstances and is able to protect the cargo from theirdestructive effects. That is, the competent use of specific to each group of goodstechnology of transportation and use of technical means, under standing the peculiarities work, including those that arise during movement. After all, aspart of the technological complex of the transport and logistics system, transport own production process, which is called transport. It consists of a certain technological system of transportation, which has its own specifics forperishablefoodcargo.

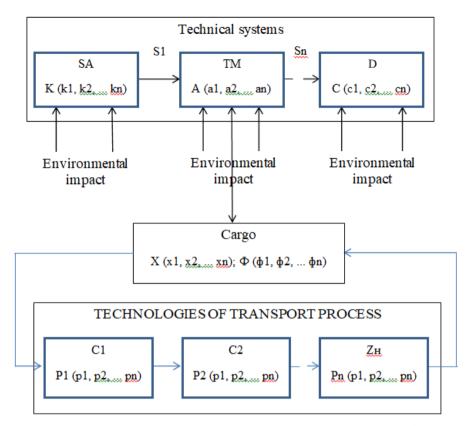


Fig. 1. Graphic model of construction of technological system of perishable food cargo transportation

Figure 1 shows a graphical model of this system. It involves technical systems of assembly (SA) or distribution (D) and transport machines (TM), which interact with each other to maintain the required climatic regime. They have their technological parameters: respectively  $K(k_1,k_2,...k_n)$ ,  $C(c_1,c_2,...c_n)$ , A (a<sub>1</sub>, a<sub>2</sub>,... a<sub>n</sub>). The suitability or conformity of these machines to each other is characterized by the indicator S. Technical systems are affected by the environment P(t)—weather, D(t)—road conditions and soon.

The list of loads X  $(x_1, x_2, ... x_n)$  with their technological properties  $\Phi(\varphi_1, \varphi_2, ... \varphi_n)$  is presented as an argument of the operation, and in the processoftransportation changes not only their location in space, but also their properties and the technological properties.

Moreover,thetechnology of the transport process consists of many transport cycles C ( $c_1$ ,  $c_2$ ,...  $c_n$ ), each of which is a function of its parameters. The following technological system of perishable food transportation can be described by a mathematical model (formula 1):

$$\begin{cases} S = f(K, A, C); \\ V_{M} = f[K(k_{1}, k_{2}, ..., k_{n}), A(a_{1}, a_{2}, ..., a_{n}), C(c_{1}, c_{2}, ..., c_{n})]; \\ \Pi_{K} = f[M(t), D(t)], \Pi_{A} = f[M(t), D(t)], \Pi_{C} = [M(t), D(t)]; \\ \Pi_{A} = f[X(x_{1}, x_{2}, ..., x_{n}), \Phi(\phi_{1}, \phi_{2}, ..., \phi_{n})]; \\ V_{TT} = \sum_{i} C_{i}(p_{j}). \end{cases}$$

$$(1)$$

- compatibility (adaptability) of transport machines (TM) with agriculturalmachines (SA,D)-the first equation;
  - technological parameters of technical systems-the second equation;
- adaptability(adaptability)oftechnical systems to environmental conditions and technological properties of perishable foodstuffs the third and fourth equations;
  - parameters of transport-technological cycles-the fifth equation.

Therefore, the model takes into account all the most important factors oftechnological conditions.

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## MONITORING OF TUNNEL CONSTRUCTION BASED ON WIRELESS IOT SYSTEMS AS A WAY TO DEVELOP SUSTAINABLE CITIES

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The city in the XXI century is a perfect, almost fully automated engineering mechanism, with a well-established system for providing comfortable living conditions for millions of residents. Hundreds of kilometres of all kinds of communications permeating the "urban organism", continuously supply the residents of the city with everything necessary, thereby creating comfortable conditions for the existence of not only society, but also the city itself. Speaking about the development of cities today, we primarily mean high-tech provision of transport, social, market and civil infrastructure, which is based on innovations that are the basis of competitiveness, as well as global environmental, economic, social rules, laws that make up a new world model - sustainable planetary development.

The concept of sustainable development was positively perceived at the end of the twentieth century, first as a theory, and then as an economic and social guideline for the development of future generations. The basic principles of sustainable development have been widely disseminated thanks to the activities of the United Nations, which, having established World Commission on Environment and (Brundtland Commission) in 1983 introduced the concept of sustainable development for the first time [1]. Currently, this issue has covered all spheres of life. In modern science, many new concepts and definitions have appeared. Construction was no exception. Relying on the relevance and timeliness of the chosen research direction, we state that the purpose of the results presented for consideration is to substantiate the need for monitoring the construction of tunnels based on wireless IOT systems as a way to develop sustainable cities.

Empirical research carried out as part of the R&D work has found that about 47% of Ukrainian construction managers still use manual methods to gather information about the project, both in the planning and implementation stages [2], although it has been proven that process automation based on wireless monitoring systems improves efficiency by reducing costs and risks, the construction and industrial sectors remain hesitant to adopt new approaches. The fact that the construction sector is slowly mastering new technologies is also noted in the annual research of "Future Media", which together with the partner platform of innovations Re and KPMG company in Ukraine are preparing the country's first Index of innovation of Ukrainian business [3].

Tunnel projects are one of the riskiest geotechnical construction sites. The ability to monitor the stability of surrounding structures and underground workings in real time is of great importance to maintain a low-risk potential. Operators who rely on manual readings work with outdated information, which negatively affects the quality of management decisions made. This creates serious risks as potential incidents cannot be easily detected. Despite significant advances in instrumentation and monitoring, the

death of workers and the population as a result of incidents during the construction of tunnels is still a serious threat. In this regard, in order to reduce the risk, we consider it appropriate to use new technologies, in particular real-time IOT monitoring technology.

IOT (Internet of Things) is a complex of devices that interact with each other and with the external environment through a communication network [4]. Thanks to IOT, it is possible to automatically monitor the operation of various systems and processes in real time, for example, to check the serviceability of equipment or to see the movement of trucks. Despite the fact that wireless communication is no longer something new, the monitoring system for tunnel construction within the framework of Ukrainian realities can still be considered an innovation, since monitoring of the Internet of Things is not based on 3G or Wi-Fi, but on low-power wide-area networks (LPWA), such as Sigfox and LoRa, which improves the accuracy and reliability of data. With the help of wireless IOT monitoring systems, sensors such as multipoint borehole extensometers used in a construction project can be connected to wireless data nodes that transmit sensor data through gateways to servers on site. This allows operators to monitor operations in real time.

Systems operating in LPWA IOT networks, such as Sigfox and LoRa, provide increased data accuracy and reliability. They allow operators to remotely collect and transmit data over long distances (depending on the use case at a distance of up to 14 kilometres) without the need for high power. The systems are usually battery powered and can be operated for up to eight years, which makes them easy to maintain. It should be noted that tunnel construction monitoring based on wireless IOT systems is actively used in North America. Thus, during the expansion of the metro in Toronto, wireless IOT monitoring was used to ensure the reliability and accuracy of their risk management systems. These systems were also used in the implementation of the Purple Railway Line projects in Washington and Los Angeles, DC.

Thus, the popularity of using tunnel construction monitoring based on wireless IOT systems is explained by a number of advantages of technical, economic, environmental and social orientation, which are grouped in Table 1.

Table 1 Advantages of tunnel construction monitoring based on wireless IOT systems

Parameter	Characteristic
Technical advantages	
Improving data availability	Within the tunnel, the most interesting data correspond to the first days after the excavation. The data collected manually during this period contains a lot of hidden or undecipherable information, since they cannot track events exactly as they occurred. While the IOT system and LoRa technology allow for effective communication in conditions where other data reading systems or approaches are not applicable.
Wear resistance	Cables that are used in tunnel construction projects, unlike wireless ones, are vulnerable to physical impact during tunnelling due to ground movement. It is also difficult to install cables in hard-to-reach places, they wear out after a while.
Reliability and adaptability	The IOT monitoring system using low-power wireless equipment is much more adaptable to specific environmental conditions, which reduces the error of the results and improves their quality. This applies to sensors, network and software. Longrange, low-power wireless technologies such as LoRaWan, used by IOT networks around the world, are the most reliable.
Flexibility and durability	In order to withstand the harsh working conditions on tunnel construction sites, the devices used to measure the situation on the site must be durable. Wireless data nodes are just designed for installation in harsh conditions.
Economic advantages	
Minimizing maintenance costs	The need for regular monitoring system support in the form of cable replacement disappears.
Environmental benefits	
Versatility of use	Sensors facilitate the deployment of data recorders, thereby contributing not only to the fixation of technical parameters during the implementation of tunnel construction projects, but also to the acceleration of the implementation of environmental projects, such as animal tracking and surveillance, poaching prevention, ecosystem monitoring and pollution detection. Wireless nodes are very mobile, which means that they can be easily removed if another type of work needs to be done in the same place.
Social benefits	
Employee safety	The risk of injury disappears, and the degree of safety of workers increases. Since the presence of a person directly at the monitoring site is eliminated.

Source: compiled by the authors

The advantages presented in the table create prerequisites for the development of sustainable cities, since tunnel construction monitoring systems based on wireless IOT systems can be used not only for their intended purpose. Due to their versatility, monitoring systems solve certain problems that allow many companies to reach a new technological level. Sustainable development orientation functions are already built into it. As an example, we can cite the Open Platform IOT in Project 15 from Microsoft, the algorithmization of processes in the general form of which is shown in the figure below (Fig. 1).

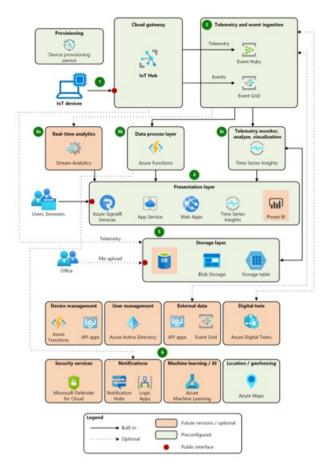


Fig. 1. Algorithmization of data monitoring processes based on wireless IOT systems [4]

The mission of the Open IOT Platform in Project 15 is to empower scientists, practitioners and environmentalists around the world. The project connects conservation teams with the community of Microsoft developers, students and partners and helps teams collect, analyse data and is supported by the capabilities of the open IOT platform. Thus, digitization of construction projects using intelligent sensors not only allows operators to track the progress of work in real time, but also creates prerequisites for predicting future results, displaying real, planned and projected production needs, thereby ensuring the achievement of the global millennium goals.

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### EDUCATIONAL INSTITUTIONS AND PEDAGOGY FOR SUSTAINABLE DEVELOPMENT

### COMMENTARY AS A TOOL FOR REFLECTING THE LINGUISTIC WORLD PICTURE

Oksana Tepla, Oleksii Osadchyi, 1st year student The National University of Life and Environmental Sciences of Ukraine, Ukraine

In modern linguistics, the problem of reconstructing a holistic world picture, i.e. an image of the world based on language data, is a task of theoretical semantics, lexicography and linguistic and cultural studies. The interest in the linguistic picture of the world can be traced back to the works of the nineteenth-century German scientist W. von Humboldt, who wrote that different languages are the organs of a nation's original thinking and perception. Humboldt emphasises the dependence of language on thinking and its determination by each specific language, which contains its own national classification system that determines the worldview of native speakers of a given language and shapes their picture of the world. When Humboldt said that by mastering other languages, a person expands the "range of human existence", he meant understanding through language through the "linguistic worldview" - the worldview of another people.

Language is an integral and important part of any national culture, and a full-fledged acquaintance with it necessarily involves not only studying the material component of this culture, not only knowing its historical, geographical and historical culture, but also an attempt to penetrate the way of thinking of the nation, an attempt to look at the world through the eyes of the bearers of this culture, from their point of view. The only way to do this is to learn the language spoken by representatives of a particular cultural society, i.e. to penetrate the foreign language worldview.

The linguistic worldview is a part of the general worldview that is specific to a particular nation, which includes a set of concepts and ideas. Despite the fact that the world around us is one, the worldviews of different nations can be very different. In order to compare worldviews and identify possible gaps, we compared the commentaries on J. Austen's Mansfield Park in English and German. We got the following results: the English version has 164 commentary items on 360 pages, and the German version has 33. Of these, 27 are general, meaning that only 27 items are commented on in both versions.

Comparing the comments on all the above-mentioned works, we can say that the most frequently commented on objects are nouns (toff, tart, purser, hearse, arteli, Cossacks). Among the objects of commenting, proper names are the most common (Triumphal Arch, Witte, Antigua, Westminster, Cambridge, W.Scott).

The linguistic world picture is a part of the cultural (conceptual) picture. The cultural and linguistic worldviews are closely interconnected, are in a state of continuous interaction and go back to the real worldview, or rather, to the real world surrounding a

### DIFFERENCES BETWEEN INTERNET AND SMS COMMUNICATION AND OTHER TYPES OF COMMUNICATION

Oksana Tepla, Kateryna Kovtun, 1st year student The National University of Life and Environmental Sciences of Ukraine, Ukraine

Internet and SMS communication, i.e. online communication, complements offline communication in much the same way as written language complements oral communication. Communication (speech, smile, look, gesture, etc.) has long relied on intermediaries - animate (hounds, pigeons) and especially inanimate (a chain of fires, a bottle with a note thrown into the ocean, the semaphore alphabet, the postal service, the telephone and all modern telecommunications). Mediators use written language (notes) more often. Today, various intermediaries are known for the transmission of spoken language (telephone, radio, sound cinema, now Skype or YouTube).

Communication on the Internet takes place in the context of mass communication and has its own peculiarities, unlike traditional direct communication in everyday life. The Internet has taken a particularly strong lead in the structure of virtual communication among modern youth. Today, it is impossible to imagine a student audience without netbooks, mobile phones and other devices that allow them to be online anywhere in the world. With the development of Internet communication and social networks, young people have significantly increased the number of friends, the frequency of friendship practices, regardless of their location and language, active communication takes place in English-language social networks (Facebook, Twitter, MySpace, etc.), personal blogs are created, and webinars are held.

Thus, Internet communication is characterised by a number of features that make it unique and equate it to a "sign of the times". First, this communication is very polyphonic; it combines a large number of different types of discourse and speech practices. Secondly, the hypertextual and interactive capabilities of the web completely change or extremely modify the generation and perception of text.

### FORMATION OF LOGICAL AND MATHEMATICAL COMPETENCE OF SENIOR PRESCHOOL STUDENTS USING INNOVATIVE TECHNOLOGIES

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Abstract. This article highlights the problem of forming logico-mathematical competence of older preschool children by means of innovative technologies.

Special

attention is paid to the use of logical blocks by Z. Dienes, colored sticks by J.

Kuisener, property cards by Z. Semadeni, educational and developmental

technologies of "Logics of the World", correction tables by N. Gavrish, "Eidetics for babies" by O. Pashchenko.

Keywords: logical-mathematical competence, innovative technologies, upbringing, development, preschool education, skills.

Nowadays education determines the need for and importance of upbringing a generation focused on solving complex intellectual problems. The concept of preschool education development, guidelines and requirements for updating its content outlines several quite serious requirements for the cognitive development of preschool children, an important part of which is logical-mathematical intelligence.

The logical and mathematical competence of a child of senior preschool age is an important prerequisite for their general intellectual development and the formation of life competence. Logical and mathematical competence will contribute to the formation of a complete picture of the world for the child and activate cognitive abilities, the ability to reason, establish cause-and-effect relationships, justify their opinion, and draw simple conclusions.

Scientists consider logical and mathematical competence as the final result of the mathematical development of a preschool child and interpret it as the ability to independently perform (within the age period) classification of geometric shapes, objects, and sets; perform the simplest calculations and seriation (arranging by size, mass, volume, location in space and time) in their heads; calculation and measurement of quantity, distance, length, width, height, volume, mass, time; show interest in logical and mathematical activities, etc. [1, p. 31].

The main place of logical and mathematical competence is given in the Basic component of preschool education, where it is interpreted as the ability to perform mathematical and logical operations: calculation, classification, seriation, and measurement; competence in orientation in space and time, solving simple arithmetic operations that are important in everyday life [4, p. 71].

Logical and mathematical competence of a child of senior preschool age consists of three main components: motivational, content and action: motivational includes the internal motivation of the child and their interests in performing logical and mathematical tasks; content consists of a complex of mathematical knowledge, skills and abilities; action covers the skills of educational activity: independence, self-assessment, and self-control [2, p. 155].

The formation of logical and mathematical competence in older preschool children is one of the most important methodological problems of modern preschool education.

The main tasks of forming logical and mathematical competence in older preschool children are to familiarize them with the shape, colour, size, and thickness of objects, and form ideas about mathematical concepts – algorithm, information encoding, development of the ability to identify properties and features of objects, name them, abstract, compare, classify, generalize, explain the similarity and difference of objects, justify their judgments, development of spatial representation, ability to model and construct, development of logical thinking, implantation of independence, initiative, perseverance in achieving goals, overcoming difficulties in solving tasks, etc.

Innovative effective methods of developing logical and mathematical competence

in older preschool children are:

-Z. Dienes' logical blocks for the development of logical thinking. The Z. Dienes' Block Set consists of 48 geometric shapes that differ in shape, colour, size, and thickness. Blocks help to form mental operations and intellectual development. The main purposes of Dienes' blocks in the formation of logical and mathematical competence of older preschool children are: to familiarize children with the shape, colour, size, and thickness of objects; to develop the ability to identify the properties and features of objects, name them, abstract, compare, classify, generalize, explain the similarity and difference of objects, justify their judgments; development of spatial representation (orientation on a piece of paper); development of the ability to model and construct; development of logical thinking; implantation of independence, initiative.

-Cuisenaire rods promote the development of fine motor skills, spatial and visual perception, and counting skills, stimulate imagination, teach order, and develop the thinking and creativity of the child.

-Z. Semadeni's property cards - a set of cards with different properties: colour, size, shape, thickness, and additional characters. According to this method, children have to encrypt or decode information by placing cards in a row. This innovative technique allows older pre-schoolers to move from visual-figurative to visual-schematic and verbal-logical thinking, and teaches them to model the features of objects, encode and decode information, and characterize and compare geometric shapes.

-educational and developmental technology of "Logic of the world", which offers such tasks as constructing, finding patterns, comparing, using algorithms, logical operations "and", "not", perform operations with sets. The "Logic of the world" technology aims to develop divergent thinking, creativity, abilities for research, flexibility and originality of thinking.

-spotting tables by N. Gavrysh. A spotting table is an information and game board with a different number of squares (from 9 to 25), which contain subject pictures (numbers or letters, symbols or signs, geometric shapes). Children must find the same pictures, colour them, etc. The purposes of working with spotting tables are to develop attention, the ability to focus attention for a long period of time, to give children an idea of the consistency and integrity of the real world; to maximize the cognitive activity of children, independence, etc.

-"Eidetic for Kids" by O. Pashchenko, the techniques of which are graphic transformations (pictograms), tactile and object associations (sound, olfactory, gustatory), and visual associations associated with object images (colour, geometric, droodles). Eidetic promotes the development of logical and associative thinking, and memory, and facilitates the processing of information.

It is worth noting that for the formation of logical and mathematical competence, it is important that the educational environment of a modern preschool education institution is variable, and diverse, provides the child with opportunities to feel like a discoverer of new knowledge, and is accessible for familiarization [3, p. 194].

Thus, the formation of logical and mathematical competence of a child of senior preschool age is a powerful tool for cognition of the environment, which stimulates the independent development of means of logical reflection of objects and comprehension of relations between them, which ultimately ensure the cognitive development of the child's personality in unity. Effective and innovative methods of forming the logical and mathematical competence of older preschool children are Z. Dienes' logical blocks,

Cuisenaire rods, Z. Semadeni's property cards, educational and developmental technology of "Logic of the world", spotting tables by N. Gavrysh, "Eidetic for Kids" by O. Pashchenko and others.

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### FORMS OF WORK OF THE INSTITUTION OF PRESCHOOL EDUCATION DURING DISTANCE EDUCATION

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At the present stage of development of preschool education there are active changes in organization of education, education and development of children of early and preschool age in institutions of preschool education. This is due to the introduction of a remote form of training through the Covidien-19 pandemic and the military situation caused by Russian aggression.

Rapid development of society, the need for immediate solutions also requires urgent development of real methods for introduction of innovative forms in the pedagogical process of all educational institutions, including pre-school (Emchik, 2020). Therefore, the issue of organization of distance education at the initial stage and in the context of formation of information and digital literacy of participants of educational process is urgent. The problem of using information and communication technologies in educational purposes is also established in modern psychological-pedagogical and didactic-methodical theories and technologies of organization and management of educational process, which are based on the concept of activity-personal approach, which bases formation of knowledge and skills of the child through its independent, active and self-controlled cognitive activity. (Yemchyk, 2020).

The introduction of distance learning technologies, in particular, the prospects of the

development of distance education, the possibilities of modern information and communication technologies of education and creation of computer learning systems are studied by many scientists: D. Dzynchuk, O. Yemchyk, N. Lazarovich, O. Polevkova, V. Shvets, T. Sysoeva C., Chumak V.

Distance learning is the process of education, which takes place mainly in the context of indirect interaction of distant participants of the educational process in the specialized environment, which operates on the basis of modern information-communication and psychological-pedagogical technologies. (Yemchyk, 2020).

According to the order of the Ministry of Health of Ukraine "on Approval of the Sanitary Regulations for Pre-School Educational institutions" dated 24.03.2016 № 234 "lessons with the use of computers are allowed to be held for children of the senior preschool age twice a week (no more than once during the day). The working time of a child with a computer should not exceed 10 minutes" (Sanitary regulations for preschool educational institutions, 2016).

According to the updated basic component of preschool education, such competence of the child of preschool age is called digital, including "ability to use information-communication and digital technologies to meet their own individual needs and to solve educational, game tasks on the basis of acquired elementary knowledge, skills, positive attitude to computer and digital techniques (sanitary regulations for preschool educational establishments, educational establishments). 2016).In the formation and development of such competence, a significant part is entrusted to parents, who should provide "responsible and moderate use of computer as a modern means of activity of the child of preschool age", "days of games and cognitive programs", "acquaintance of the child with peculiarities of use of digital technologies in everyday life and permits", To familiarize the child with the rules of behavior and to explain the dangers if these rules are violated (Basic component of preschool education, 2021).

One of the components of the pedagogical understanding of the issue is The position Of S.Sisoeva concerning the modernization of education, namely finding new ways of development of educational systems; development and experimental testing of models of advanced development of educational institutions according to the development of society; Finding balance, optimal correlation between "market" of education and its main task – education, training, development of personality, preparation of its life in modern society (Lazarovich, 2015; Polevkova, Shvets, 2020).

The main ways of effective realization of educational activity at the initial stage of educational system:

- provision of offline training, which is carried out in the process of direct interaction of participants of the educational process in real conditions and in real time in a specially created educational environment;
- organization of distance education, which considers different ways of interaction of participants of educational process, which are at a certain distance from each other, distant educational process;
- Provision of a mixed form of educational activity, which combines real direct interaction of participants of educational process with remote technologies (Emchik, 2020).

In the researches of many scientists the distance form of training provides for the presence of two obligatory components: Use of information and information-computer technologies of training and provision of communication of participants of educational

process. The characteristic features of this form are the main features of which are: The disloyalty of subjects of study from each other in space and (or) in time; independence of the pupil, student or student in the control of the results of education and training; Communication between the participants of educational interaction is non-contact, indirect technical means (Chumak, 2020).

Among the elements of the educational process with children of preschool age are the methodical literature on the use of presentations, video games, fragments of films and cartoons. In practical activity tutors separate video games as one of the components of interaction with preschool rings in special educational conditions.

Implementation of special organizational and pedagogical conditions: Providing a mixed form of organization of educational process, which provides for the combination of real direct interaction of teachers of pre-school education with children with remote technologies; specially organized educational information network environment of the pre-school education institution, provided with necessary methodological materials, electronic manuals, electronic didactic games, recommendations developed in accordance with the requirements of the educational process with children of preschool age; Taking into account age and individual characteristics of children (Emchik, 2020).

Therefore, the use of the remote form of education by the institution of preschool education in work with children of preschool age will be effective only through implementation of special organizational and pedagogical conditions.

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### INFLUENCE OF LOGICAL AND MATHEMATICAL COMPETENCE ON A CHILD'S LIFE

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The problem of forming logical-mathematical competence, mathematical abilities, and skills of preschool children is the subject of research by Ukrainian and foreign scientists (A. Beloshysta, O. Hrybanova, T. Kovalenko, G. Leushyna, O. Mozgova, A. Stolyar, F. Khaletska, K. Scherbakova and others). The value of logical-mathematical competence of preschool children was revealed in the research of domestic and foreign scientists (E. Agaeva, L. Artemova, S. Lebedeva, N. Salmina, E. Sapogova, A. Stolyar, O. Suvorova, etc.).

Logical-mathematical competence of preschool children includes the ability to solve problems using logical thinking and mathematical knowledge. Children are able to note the relationships between various objects and phenomena, to explain the objectivity of concepts. Logical-mathematical competence also includes practical skills, such as working with logical puzzles, finding solutions, applying mathematical knowledge in real life situations. Children need the opportunity to explore, manipulate, experiment with objects and knowledge in order to develop their logical-mathematical competence [1; 20 p.].

Logical-mathematical competence is one of the key competences that is formed in a child in preschool age. It includes such elements as the development of mathematical abilities, logical thinking, awareness of basic mathematical concepts, the ability to perform simple mathematical operations, or solve problems.

Teaching logic and mathematics is part of the Basic component of preschool education, which will help children develop their mathematical and logical abilities, also contributing to the formation of critical and analytical thinking, attention, memory and other cognitive functions [2; 59 p.].

Teaching logico-mathematical skills in preschool age can be implemented through games, creative tasks, experiments, problem solving, mapping, logical constructions. In the process of developing logical-mathematical competence in children, at their level of development, exercises are carried out on calculation operations, on solving simple problems that distinguish mock-up from reality, logical games, testing with the demonstration of pictures, the development of perspective and proportional thinking [3; 64 p.].

This approach supports the development of logico-mathematical competence in preschool children, and contributes to their success during further education.

Logical-mathematical competence can have a very big impact on a child's life. This competence covers the ability to think analytically, solve problems and questions, think logically and develop mathematical skills

Logical-mathematical competence has an impact on other types of mental activity of children, namely:

1. Development of mental skills: ability to analyze, solve problems and make decisions.

- 2. Improving math skills: including solving simple and complex math problems.
- 3. Development of creativity and imagination: the ability to create new ways of solving problems and developing original ideas.
- 4. Increasing attentiveness and concentration: through solving mathematical problems, a child can learn to be more attentive and more focused.
- 5. Increasing independence: logical-mathematical competence can help a child become more independent and confident in his abilities [4; 86 p.].

In general, logical-mathematical competence can have a positive impact on a child's life, helping him to develop in various aspects and prepare for future challenges and tasks.

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## INFORMATION AND COMMUNICATION TECHNOLOGIES IN THE CONTEXT OF LOGICAL AND MATHEMATICAL DEVELOPMENT OF CHILDREN OF SENIOR PRESCHOOL AGE

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Abstract. The theses examines the issue of psychological and pedagogical aspects of the use of information and communication technologies in the organization of the educational process of a preschool education institution in classes on logical and mathematical development. The theses reveals the features of electronic programs, resources, and services and gives specific examples of the use of these technologies by the educator in working with children of older preschool age.

**Key words:** information and communication technologies, logical and mathematical development, senior preschool age.

In the modern world, information and communication technologies are progressing rapidly. Due to the rapid changes in the information space, the educational process in preschool education institutions became impossible without the use of the latest forms and methods of work in the classroom. Information and communication technologies open up a wide range of opportunities for the educator. Especially in classes on logical

and mathematical development: interactive online games, computer programs and sites, multimedia presentations contribute to a better understanding of children of the older preschool age of the basics of mathematical science.

The issue of the use of information and communication technologies in order to effectively organize classes on logical and mathematical development is dealt with by researchers to the present, because the identified problem is currently one of the most urgent. So scientists, V. Andrievskaya, A. Berg, O. Golyuk, E. Goncharov, K. Zuev, N. Kazmirchuk, T. Kryvosheya, K. Krutiy, E. Monakhov, F. Rybakov, A. Ursul, O.Shykyrynska explore the latest forms and methods of the teacher's work under the time of organization of the educational process in the logical and mathematical direction. Scientists paid considerable attention to the study of the issue of building an effective lesson with older preschoolers in the conditions of distance learning by means of information and communication technologies.

Studies of modern scientists K. Motorina, M. Kholodna, S. Shapkina highlight the features of the use of computer technologies for the effective intellectual development of older preschoolers. So, in the older preschool age, the child quickly forms thought processes and the child performs mental logical operations, there is a transition from visual-figurative thinking to abstract-logical. Therefore, information and communication technologies are a means of powerful intellectual development of older preschoolers.

Analysis of professional publications and psychological and pedagogical literature confirms the relevance of the problem of using information and communication technologies in the logical and mathematical development of older preschoolers. The following scientists studied the problem: O. Brezhneva, G. Leushina, M. Mashovets, L. Metlina, T. Museinova, B. Nikitin, O. Funtikova, K. Shcherbakova. Thus, scientists constantly search for innovative forms and methods of working with children, theoretically outline and practically check the effectiveness of the conditions for solving this problem [1; 3; 4; 5].

The logical and mathematical development of children of preschool age is an integral part of the comprehensively developed personality of the future first grader. The basic component of preschool education specifically outlines the expected results in logical and mathematical development. On the formation of intellectually mature personality of the child, educators pay great attention during the organization of the educational process in the institution of preschool education. In classes on logical and mathematical development, teachers use a variety of methods and techniques of working with children: traditional so the latest, innovative. Special attention today is attracted to information and communication technologies [6, p. 4-5]. Thanks to their use, classes acquire an interesting direction, help the teacher to focus the attention of children on the educational material in an unusual way.

There is a wide range of computer programs, services, sites, etc. Educators can independently create didactic interactive games, exercises, presentations, sheets and share their developments with colleagues. The realities of today make preschool teachers expand their skills to work with electronic media. Educators should improve the organization of classes on logical and mathematical development with the help of information and communication technologies. For example, in the conditions of distance education, the learning process without the use of computer technology is generally impossible [7, p. 94-95]. Therefore, the educator needs to include in classes on logical and mathematical development the latest effective methods and techniques of working

with children of senior preschool age, namely: showing multimedia presentations, educational cartoons, short videos, interactive sheet, using a game or exercise to consolidate the studied material, etc.

The convenience of using information and communication technologies opens up the opportunity for the educator to encourage children to study educational material during classes in a group, and with their parents at home. For example, on the Learningapps website, an educator can easily create a game and invite children to perform this mathematical exercise with their parents [10, p. 60-61].

The electronic resource Learningapps is simple to study. The simplicity of the technical side rather facilitates the work of the educator with the independent creation of the game. On the site you can find useful game development for any topic and use in their own professional activities. A positive element in working with the resource is the presence of a significant number of templates, the possibility of using visual material. Thus, the task of parents is only to read the children the condition of the game and explain the technical side of the game. Children look at the pictures and can easily do the exercise on their own [10, p. 63].

In children of older preschool age, elementary mathematical representations have already been formed to a certain extent. Therefore, classes on logical and mathematical development educator purposefully teaches older preschoolers to solve simple arithmetic problems. After that, when the teacher taught the older preschoolers to understand the condition and questions of the problem; introduced children to the way of solving a particular type of problem. A preschool teacher can create simple arithmetic tasks, for example, in the Genially resource. It is possible to implement methodological development in the form of interactive games or presentations with answer options [11, p. 31]. The work of the tutor with the children will be built as follows: on the computer, the tutor turns on the game with simple arithmetic tasks. Each child on the desk posted visual material in accordance with the subjects of the tasks. In the process of working on solving the problem, children of older preschool age in pairs perform tasks using clarity. Then the educator asks any pair of children the answer to the problem, they choose the answer and check the correctness of their reasoning.

Another fairly simple and accessible resource in the study is Classtime. With the help of the resource, the educator can create exercises of a mathematical direction and use it in organizing the educational process in a logic-mathematical lesson. For example, a teacher can create a mathematical test on the topic "Geometric shapes." The teacher can choose the following templates for the exercise: "several correct answers," "true/false," "one correct answer," "establish a match," etc. The optimal number of questions can be determined from 5 to 8. After all, too long a test will tire the child, and too short will be too small to test the child's knowledge. The teacher will diagnose the results in order to identify gaps in the knowledge of older preschoolers and build the next lesson with a detailed repetition of the unattended material [3, p. 49]. Such tests will be effective during the formative evaluation.

In the author's technology "Logic of the World" I. Stetsenko pays considerable attention to "open tasks." The uniqueness of "open problems" distinguishes the problem from simple arithmetic problems. After all, in "open tasks" there is no unequivocally correct answer. Tasks are as close as possible to the daily life of children of older preschool age. Children solve this kind of problem: in class, on a walk, during any regime moment, the teacher can offer children an "open task" [3; 5; 10].

We want to talk in more detail about solving open arithmetic problems in classes on logical and mathematical development using the electronic resource Word Art. The educator can come up with any open task. The problem does not necessarily have numbers, such a problem does not require complex calculations. "Open task" encourages the child to think, to express his own opinion. The main condition of the problem is to listen to all assumptions about the solution of the problem and not to criticize any childish answer.

So, let's try to think about working on "open tasks." First, the teacher gives the children a push for reasoning - tells the "open task." Next, older preschoolers begin to say the answers to the task. At this time, the educator in the Word Art resource records each answer. After the ideas run dry, the educator creates a cloud of words. The teacher tells the task again and reads the answers of the children. Working with an electronic resource interests children, contributes to increasing interest in "open tasks," brings positive emotions from reasoning. Work on the task forms the ability not to be afraid to express your own opinion. [1, pp. 225-230].

We want to outline, information and communication technologies are used to attract older preschoolers to the educational process in classes on logical and mathematical development. Digital technologies help the teacher in preparing for the organization of effective work in the classroom. For example, a young teacher, there is still insufficient experience. Therefore, in preparation for the lesson, a young specialist can create a mental map. In the intelligence of the map, all the structural elements of the occupation can be noted. This card will be a benchmark for a successful lesson with effective methods of work [2, p. 503]. The following resources will be useful: Mind maps, Draw.io, Canva, XMind, EdrawMind, etc.

It should be noted: when creating a mental map, you need to take as a basis a synopsis of the lesson on logical and mathematical development. The mental map should clearly spell out the structural elements and the content of the work on each of them. Namely: didactic games, exercises, watching educational cartoons, physical education, etc. Intelligence map can be printed and during the lesson to be guided as a guide. The above recommendation opens up an opportunity for the educator to feel confident during the lesson on logical and mathematical development [9, p. 183-184].

Consequently, the use of information and communication technologies in the logical and mathematical development of older preschoolers contributes to the effective assimilation of mathematical competence. Electronic media, resources, programs, sites help the educator successfully, in an interesting way to build work in the classroom and simplify the process of preparing the educator for classes.

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#### LINGUISTIC AND STYLISTIC FEATURES OF LITERARY WORKS

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From the point of view of linguistic embodiment, artistic discourse can take different forms, and can be poetic and prosaic, classical and avant-garde, aesthetically pleasing and beyond the possibility of aesthetic evaluation. The stylistic techniques used in a literary text can be considered specific features of the text. A stylistic device is understood as a deliberate and conscious amplification of a typical structural and/or semantic feature of a linguistic unit (neutral or expressive) that has reached generalisation and typification and thus become a generative model. A stylistic device is limited to one level of language.

Stylistic devices include stylistic figures and tropes, as well as syntactic or stylistic figures that increase the emotionality and expressiveness of statements through unusual syntactic construction. The strength and expressiveness of tropes lies in their originality, novelty, and unusualness. Stylistic tropes that have lost their imagery over time do not contribute to the expressiveness of speech.

The use of stylistic devices is most clearly reflected in English fiction. All stylistic devices that are based on the interaction of contextual subject-logical and dictionary

meanings can be divided into the following groups: Relationships based on similarity of features (metaphor); Relationships based on adjacency of concepts (metonymy); Relationships based on the direct and reverse meaning of a word (irony).

Thus, a distinctive feature of literary translations is that they convey not only the meaning of the original text, but also, due to their specificity, the peculiarities of the translator's perception.

#### MODERN TRENDS FOR SUSTAINABLE DEVELOPMENT

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The international community recognizes the significant role of education and professional training in the fight against climate change, which indicates the extreme relevance of this area of research. Education is the most important tool in the fight against climate change. Having mastered the knowledge, skills, and formed the value orientations and views necessary to become agents of change, the world community will be able to understand the consequences of the climate crisis and find solutions to overcome it.

The UN Framework Convention on Climate Change, the Paris Agreement and the associated Action for Climate Empowerment ACE call on governments to formulate policies and take action to protect the climate through education, empowerment and engagement of all stakeholders and key groups related to climate change.

Through the implementation of the Education for Sustainable Development Program, the international organization UNESCO works to ensure that education plays an increasingly important and visible role in the implementation of climate protection measures at the international level [4].

UNESCO acts as a global coordinator of efforts to combat climate change, which aims to strengthen the capacity of national governments to provide quality education on climate change, builds a knowledge base, shares it, provides policy recommendations and technical support to countries, and implements projects on placesUNESCO encourages innovative approaches and promotes the improvement of the quality of nonformal education programs through media resources, networking and partnerships [4].

Climate action is one of the key priority themes addressed in the 2030 Ten-Year Framework Program on Education for Sustainable Development.

As part of its work in the field of education for sustainable development, UNESCO supports countries in integrating climate change issues into education systems, and promotes dialogue and exchange of experiences in the field of climate change education

through international expert meetings. UNESCO calls on educational institutions of all levels to conduct educational work in the field of climate change. The UNESCO Information Center on Climate Change Education provides free access to hundreds of educational resources on climate change [4].

By supporting the capacity-building of journalists and media on climate change issues, UNESCO helps States raise public awareness, improve understanding of the causes and consequences of climate change, and how countries and communities can adapt to the future effects of climate change. This work also helps highlight the actions of governments and companies to counter these threats. An example of such work is the publication "Climate change in Africa: a guide for journalists" [4].

Together with thirteen other UN agencies, UNESCO promotes climate change education and public awareness through high-level events such as the annual conferences of the United Nations Alliance for Climate Change Education, Training and Public Awareness.

In this way, each of us, regardless of where we live, can help solve the problem of climate change by reducing carbon emissions in our daily lives. For example, we can recycle waste, walk or ride a bicycle instead of using a car, unplug electrical appliances that are not in use, and this is only a small part of what can be done. At first glance, these are small steps, but they are really important, especially if it is done in all communities [1-5].

Dissemination of information is an important way to communicate the importance of climate issues to the general public. Many people are not aware of the seriousness of the climate change problem, and perhaps raising awareness will motivate them to take action, so climate change education is an important step towards a possible solution.

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#### MULTILEVEL REPRESENTATION OF THE LINGUISTIC WORLD PICTURE

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Linguists emphasise the anthropological meaning of the term "world picture". A world picture is not a reflection of the world, but the embodiment of the results of human spiritual activity in this world. It follows that the "world picture" cannot be considered in isolation from human consciousness and its ability to structure its ideas about reality.

The linguistic worldview as a set of reconstructed semantic fields, classes of interrelated and interdependent language units is a very specific linguistic category. Along with vocabulary, it also includes grammatical meanings relevant to a particular language and systems of grammatical oppositions used by native speakers to represent reality in language. If we assume that any natural language conceptualises the world around it in a certain way, then the linguistic world picture can be defined as the conceptual world picture of a person. This set of knowledge about the world reflected in language units also includes images. The researcher argues his position with both a broader understanding of what knowledge is in general and a broader understanding of lexical meaning, and rightly notes that an image is usually formed in a system of knowledge.

The information approach to culture allows linguists to consider the world picture as a multifaceted mental phenomenon that connects language with thinking, the world around us, cultural and aesthetic realities, and the content of complex abstract concepts that function in the language itself. At the same time, the language is endowed with a universal structure, the national forms of which only mutually compensate for variants of this structure.

The existence of a complex relationship between the world picture as a reflection of the real world and the linguistic world picture as a fixation of this reflection through language - a means of encoding and transmitting cultural information - is determined by the fact that the semantic system is neither structurally, functionally, nor substantively reducible to linguistic structures. The concepts included in the conceptual sphere of peoples speaking different languages are usually largely the same in nature. However, the verbal expression of the conceptual (mentally abstract) content acquired by a person in the course of his/her activity varies in the ways of nomination.

#### MULTILINGUALISM AND THE CONCEPTUAL PICTURE OF THE WORLD

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The processes that determine the linguistic situation in the world confirm the idea that language is a living organism. Gradual liberation from dependence was characterised by the emergence of more nation states and, accordingly, state and official languages. And with the gradual transition of humanity to an information society, the role of language as the main means of social interaction and the mutual influence of languages are of paramount importance.

Usually, multilingualism is considered only within a country or a part of the world. Researchers distinguish between countries with a clear linguistic majority and one or more minority languages, and countries with only minority languages without a majority. The first model dominates in Europe and the new European states. Examples include Europe with three hundred languages and Nigeria with four hundred, which are predominantly spoken only in that country. Despite the multilingualism of peoples, it is necessary to build specific language bridges between them. The problem arises of choosing how languages will help in this. This is a rather painful question, because stronger, more developed and progressive languages can displace weaker ones, sometimes by means of ethnogenocide.

The globalisation of world processes and the information space has resulted in the expansion and acceleration of political, economic and cultural exchanges. Today, the national information space is no longer seen as something limited by borders, as its important feature is openness to global information flows. Globalisation is not a threat where the national product and national language prevail in information exchanges. This is not the case in Ukraine, as the pre-airtime of TV and radio stations is still actively filled with non-Ukrainian-language products.

The current linguistic situation is characterised by the fact that, despite the large number of languages in the world (about five thousand languages spoken by humanity on five continents), there is a tendency for five to seven so-called world languages to spread significantly. Among them are English, Spanish, French, Arabic, and Portuguese. These languages are nationally heterogeneous, i.e. they distribute their functions, serving different nations and different cultures. The speaker should consider knowledge of these languages as a necessary reality and a tool for achieving certain levels of professionalism. The mother tongue will guarantee the preservation of national and cultural identity.

The language situation in the world is becoming more and more dynamic and complex. Different languages with different cultural pasts and present can function in almost the same place. For example, French is the dominant language on any street in a French city, but if you walk into a shop owned by an Arabic-speaking family, you will hear Arabic. Today's society is multiethnic, and therefore, giving rise to multilingualism, requires dialogue.

#### SPECIFICITY OF THE CHILD'S LINGUISTIC WORLD PICTURE

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Language is connected with reality through sign correlation, and the linguistic world picture, being a part of the conceptual one, reflects the world in a sign way.

In anthropocentric linguistics, the concept of a linguistic worldview comes from Humboldt's doctrine of the essence of language, the notion of language as the spirit of the people, the internal form of language and the conceptualisation of the world through language. A linguistic worldview is an image of reality reflected by means of language.

It is fair to say that language is involved in two processes related to the world picture: in its depths, the linguistic world picture is formed, but language itself expresses and explicates other human world pictures that are part of the language, bringing meaningful, interpreted, spiritually and culturally mastered.

At the present stage of development of anthropological linguistics, the peculiarities of language's reflection and recording of the surrounding reality have been studied on a large corpus of factual material. The result was descriptions of fragments of the linguistic world picture (semantic fields) represented in European languages.

Today, the study of the linguistic worldview can be divided into two areas: the analysis of concepts in a particular language and the reconstruction of a holistic, prescientific view of the world.

Children's worldviews, in particular, the linguistic worldview, are of particular interest to researchers. Scientists who study worldviews in different paradigms of scientific knowledge consider children's linguistic worldviews in two aspects: in contrast to the adult one and by analysing various facts of language on the basis of children's language.

On the one hand, the child's model (image) of the world is adopted from an adult, and, on the other hand, it is actively formed by the child himself as a result of various types of individual creative activity that are significant for a child of a certain age. The leading ones are: play, elementary labour (in preschool age); learning, reading and writing (in primary school age); and visual arts. A characteristic feature of these types of children's activities is their formalisation, ritualism and structuredness, which undoubtedly affects the peculiarities of their linguistic embodiment.

Considering the specifics of the children's linguistic picture of the world, it is worth highlighting the following provisions: -Children's linguistic world picture reflects a certain way of perceiving and organising the child's world, according to his/her experience and age. Psycholinguistic research emphasises the leading role of cognitive activity in the child's knowledge of the world and nomination of objects and phenomena of the surrounding reality; the child's view of the world through the prism of language largely depends on the leading role of the adult, imitating whose speech the child learns the language. As a child grows up, he or she acquires language through communication with adults and peers, as well as by perceiving the language environment, which can be both favourable and negative.

### THE PROBLEM OF SPEECH CULTURE FORMATION YOUNGER SCHOOL STUDENTS AT UKRAINIAN LANGUAGE LESSONS

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Speech culture is one of the indicators of a person's spiritual culture, his morality, inner and outer beauty. It shows the intelligence and level of thinking of an individual, his education and upbringing, culture and value orientations, the beauty of words and spirit as signs of spiritual wealth and unique human essence.

Today, the need to form a speech culture among younger schoolchildren is becoming particularly significant, which is connected with the intensification of information communications, with the widespread introduction of the Internet, modern publishing technologies, which to a certain extent negatively affect the creation of a culture of personal speech space, mastering the aesthetics of words, moral aesthetic self-expression in communication. Younger schoolchildren, more than adults, are subject to the influence of subculture, the fashion for simplifying the style of communication, contempt for the beauty of everyday speech, which leads to a significant clogging of their speech, deliberate brutality.

At the primary school age, the foundation of the culture of thinking, the culture of speech and communication is laid, communicative abilities, cognitive activity, imaginative and creative thinking are developed. Primary school is designed to develop children's interest in the beauty and wisdom of the living word, its significance in human life.

The problems of the speech culture of younger schoolchildren have always been in the center of attention of outstanding teachers and methodologists of the past: A. Disterweg, O. Duhnovich, M. Korf, J. Pestalozzi, S. Rusova and others. This problem occupies a significant place in the pedagogical heritage of V.Sukhomlynskyi.

Various aspects of the formation of the speech culture of schoolchildren are reflected in the works of modern researchers, namely: the issue of speech personality (M. Vashulenko, S. Yermolenko, L. Matsko, L. Palamar, G. Sagach); the interaction of language and the human world, linguistic harmonization of consciousness, language as a multifunctional spiritual phenomenon (I. Bilodid, M.Zhovtobryukh, A. Koval, O. Fedyk, etc.), speech culture in the system of personality culture (T. Ladyzhenska, L. Matsko, N. Babich, M. Pylinskyi); speech etiquette, national aspects of speech etiquette (S.Bohdan, E.Chak, M.Stelmakhovich, V. Lytovchenko, etc.); the place of the rhetorical and speech component in the pedagogical activities of teachers of various types of secondary schools (M. Vashulenko, I. Zyazyun, A. Kapska, M. Pentylyuk, G. Sagach).

Psychological and psycholinguistic aspects of the mentioned problem are presented in the works of I. Sinytsia; linguistic and didactic aspects are reflected in the studies of A. Bogush, M. Vashulenko, L. Varzatska, A. Kanishchenko, M.Pentylyuk, O. Savchenko.

At the same time, the analysis of linguistic, psychological, and pedagogical literature proved that the problem of forming the speech culture of younger schoolchildren in the context of the development of spiritual culture has not been sufficiently investigated. Systematic work on the formation and improvement of the speech culture of students of general education schools, in particular primary schools, remains relevant. Separate aspects of the development of the speech culture of elementary schoolchildren can be found by analyzing methodological research: the formation and development of orthoepic speech norms of younger schoolchildren (M. Mykytin), methods of developing Ukrainian etiquette skills in children (R.Myronyuk, M.Stelmakhovich), the formation of Ukrainian orthographic norms languages in younger schoolchildren (R.Chernovol-Tkachenko), etc.

Researchers convincingly prove that the process of forming a speech culture becomes more effective if it is based on the psychological features of its mastery, as well as on linguistic didactic foundations, which include children's assimilation of orthoepic, lexical and grammatical norms of the modern Ukrainian literary language.

The concept of «speech culture» is a complex that consists of a set and system of basic communicative features and is understood by us as the ability of speakers to express themselves perfectly, choosing linguistic and expressive units in accordance with the purpose and circumstances of communication and generally accepted speech etiquette. Determining the qualitative characteristics of speech culture, taking into account both its purely linguistic and non-linguistic features, it is possible to distinguish the following main components of the concept of «speech culture»: correctness, accuracy, logic, richness and expressiveness, purity, expediency [1].

A person is not born with a high speech culture, but learns and improves it throughout his life. The main factors that affect the culture of speech are communication in the family, on the street, at school. Acquiring the skills of perfect speech is produced effectively if the teacher provides the appropriate organization of educational and speech activities, which consists, first of all, in creating a system of exercises for mastering speech culture, special language support for this process (speech environment, positive emotional stimulation, cognitive interest, activation of speech activity ), exemplary speech of the teacher.

The content of language material must comply with the principles of communicative value, accessibility and systematicity, carry communicative and activity-content content along with linguistic and cultural ones; in a certain unity and sequence, meet the need to form the main communicative features of speech culture.

Thus, in the conditions of national and socio-cultural reproduction, the establishment of statehood and democratization of society, the revival of the intellectual and spiritual potential of Ukrainian citizens, the expansion of the spheres of functioning of the Ukrainian language as a state special importance, language culture acquires the most important means of communication, education and comprehensive development of the individual. Therefore, the work aimed at the formation of the culture of Ukrainian speech, starting from the primary level of secondary school, acquires special significance, since the linguistic knowledge and speech skills acquired at the elementary school age become the basis of communicative excellence and normative speech.

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### THE ROLE OF THE FAMILY IN ACTIVATING CHILDREN'S MOTOR ACTIVITY

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Movement is the main manifestation of life and a means of harmonious personality development. In preschool age, the level of motor reflexes is an indicator of the general state of health and personality development. According to the correct opinion of scientists [1-3], the activity of the child's movements shows the development of other aspects of the personality, in particular, the cognitive sphere and psyche. A child's motor skills develop and improve according to the conditions of the surrounding space, so the degree of the child's motor development largely depends on the parents. Among the wide range of health-improving effects on the child's body, motor activity plays a leading role, which contributes to increasing the adaptive capabilities of the body and its functional reserves.

The problem of physical education of children of older preschool age became the subject of research by scientists from various fields of science, in particular, psychologists (L.Vygotskyi, O.Leontiev, etc.). pedagogues (V.Horinevskyi, A.Onoprienko, N.Pakhalchuk, etc.), physiologists and doctors (I.Arshavskyi, G.Apanasenko, etc.). E.Bondarevskyi, V.Postoviy, S.Zhevaga, O. Kuts, V. Leonova, L.Movchan and others emphasize the need to involve all active factors of the physical education system, including the educational potential of the family.

Thus, according to N.Kucheruk and T.Stetsenko, the family determines children's attitude to physical exercises, their interest in sports, activity and initiative. The family is the first social institution, therefore the child is able to perceive the parents' beliefs, behavior model, spiritual values and way of life [6]. Therefore, the family contributes to the involvement of children in physical activity in the family environment.

The content of the active activities of the preschool education institution is the formation of the physical culture of the individual: the training of vital motor skills and abilities, the development of physical abilities with the help of general strengthening and general development exercises [4].

In his research, E.Vilchkovsky [2] emphasizes that the need for motor activity is an important condition for the full development of a child at any age, and therefore an important component of family educational influence should be the child's involvement in physical culture and sports, the formation of an active life position and focusing on leading a healthy lifestyle. The participation of the family in the development of the motor activity of the child is important because, according to many authors (D.Feldshtein, O.Zakharov, V.Zenkovskii, etc.), the family is the primary instance of socialization of the child's personality.

Based on the scientific studies analyzed by us [1; 3; 5] we will define the task of physical education in the family and the formation of motor activity:

- preservation and strengthening of the child's health;
- increasing the level of physical and mental capacity;
- hardening of the body, increasing its adaptation capabilities;
- development of motor qualities (strength, speed, endurance, dexterity, flexibility)
   due to the systematic performance of special sets of exercises;
  - education of children's persistent interest, need for systematic classes.

Thus, it is necessary to ensure the satisfaction of children's biological need for motor activity, to plan its content, focusing on the optimal ratio of different types of loads, selected taking into account age, regime and purpose (table 1).

Division of motor activity

Table 1

Type of load	Goal
Morning exercise	Awakening. Transition from sleep to a state of activity
Dynamic exercises	They develop speed, accuracy of movements, strength
Statistical loads	Accustom the body to work under conditions of oxygen deficiency, train endurance
Physical education classes	Learning the techniques of rational movements in the process of running, walking, jumping, skiing, skating, etc.
Sport	Provides sufficient daily load on the body. Able to provide a training effect

Therefore, daily physical exercises can be considered as training, which is the formation of motor skills and the expansion of the body's functional capabilities. Parents, through personal example, joint physical education and sports, form in children a valuable attitude to health, which helps them adapt to social conditions and ensures

success in the formation of children's motor activity.

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### TEACHING THE TRANSLATION OF MILITARY TEXTS TO UNIVERSITY STUDENTS

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Teaching the translation of military texts to university students requires a tailored approach that takes into account the students' language skills, cultural background, and academic goals. Moreover, teaching the translation of military texts is a specialized area within the field of translation studies that requires a specific set of skills and knowledge.

Military texts have been traditionally seen as a very special type of texts composed, translated and disseminated by professionals among professionals. Nowadays, in view of the current geopolitical situation in the world and in Ukraine, there is a growing public concern about the issues of national and transnational security.

Military materials in the broad sense of the word, which the translator-referent has to deal with, usually include military journalistic, military political, military scientific and military technical materials. It is customary to refer to the actual military materials as scientific and technical materials and governance acts related to the life and activities of troops and military institutions of the armed forces [1].

Military texts are written by professionals for professionals, who have sufficient level of thematic competence to interpret these texts according to the intentions of the sender of the message. At the same time, military-related texts aim at wider audiences

with various levels of prior knowledge, thus they often provide additional information to facilitate processing of the encoded data. These texts published in mass media are sometimes produced by nonprofessionals, who are only superficially familiar with the subject matter, and who have no first-hand experience in dealing with military vocabulary [2].

Teaching the translation of military texts is a specialized area within the field of translation studies that requires a specific set of skills and knowledge. Military texts are full of jargon and specialized terminology that may not be familiar to translators who don't have a background in the military. It's important to spend time introducing students to the vocabulary and concepts they'll encounter in military texts, so they can accurately convey meaning in their translations.

Military texts often contain cultural references and expressions that may be unfamiliar to non-native speakers of the source language. It's important to help students understand the cultural context of the text they're translating, so they can produce translations that are not only accurate but also culturally appropriate.

Military texts often contain critical information that can have serious consequences if it's not translated accurately. Students should be taught to prioritize accuracy and precision in their translations of military texts, even if it means sacrificing some stylistic or aesthetic considerations.

Finally, it's important to give students plenty of opportunities to practice translating military texts. This could include working with sample texts, collaborating with classmates, or completing real-world translation projects for military organizations or government agencies. By giving students plenty of practice, you can help them develop the skills and confidence they need to succeed in this specialized area of translation. Thus, the problem for a translator is their limited knowledge of the phenomenon being described.

Therefore, it's essential for military translators to acquire the necessary background knowledge. This, along with a solid understanding of military terminology, distinguishes military translators from those in other areas of translation. However, training a competent military translation specialist at a non-military university is challenging due to the requirement of specialized knowledge in this field.

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### THE CONCEPT OF "FOOD" IN THE UKRAINIAN AND ENGLISH WORLDVIEWS

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A language is a form and a means of a person's reflection of the surrounding reality and of himself/herself, a means of obtaining knowledge about this reality. The study of a person in the aspect of his/her interaction with the surrounding world, recorded in the mind in the form of concepts, images, associations, symbols, behavioural acts, is the subject of linguistic and cultural studies - a science that meets the modern requirements of linguistics and cultural studies. Taking into account the understanding that culture shapes the picture of the world, including our own, and that our language is permeated by culture, we are currently witnessing the rapid development of linguistic and cultural studies as a science, which studies and describes the relationship between language and culture in their synchronous interaction through the analysis of language phenomena aimed at revealing national and cultural specificity. The development of this science was also motivated by the fact that the discrepancy between semantics and a simple representation of the world picture was revealed. In linguistics, the basic unit that integrates language and culture in their interpenetration is the cultural concept, which is characterised by a set of meanings that a language sign acquires by expressing a nationally significant meaning. As an integral part of the national culture, the language conceptualises and reflects all its elements. The name of gastronomy and everything related to it belongs to the key linguistic and cultural concepts. Throughout history, food has become a holistic reflection of the cultural space of a particular nation and has developed a national culinary tradition, a set of dishes typical of a particular community.

The definition of the cultural concept "food" in the modern theory of language of the XXI century is conditioned by the study of national peculiarities through the prism of phraseology, which in turn reflects the peculiarities of the mentality and traditions of the nation in the semantics of Ukrainian linguistic culture. In addition, it should be noted that the outlined problematic in linguocultural studies is one of the least researched, despite its high cultural significance, since the cultural concept of "food" occupies a fundamental level in the system of national values.

The most widely represented category, of course, is the category of components of the cultural concept "food". Among this group we can single out the following components: - egg, the use of which in Ukrainian phraseology demonstrates a certain occupation or a kind of interference in the affairs of another: to run around like a hen with an egg, like a hen on eggs; - fish, which in phraseology usually has a positive connotation, which can be explained in terms of the popularity of fish soup among the Cossacks in a certain period: like a fish in water, catching fish and not getting your feet wet; - salt, which reflects magical properties in phraseology, as it was once considered a talisman and used in medicine. However, when analysing phraseological units with this component, it is worth pointing out the negative connotation: salt in the eyes, pour salt on the wound, salt on your tongue, eat a pound of salt. In addition, this position of motivation of paraphrases is also confirmed by the proverb "salt on the table, salt on the

head"; cheese, butter in Ukrainian culture, butter is symbolically associated with prosperity and well-being: to bathe like cheese in butter, as if butter was to your liking. - honey in Ukrainian semantics has a similar meaning: honey days; to stick like bees to honey.

The phraseological units with a culinary component, which occupy a prominent place in the English linguistic culture, include such components as: pudding, bacon, ale, eggs, porridge, toast.

Other gastronomic phrases include the following: to have somebody on toast - to have power over someone; to do porridge - to serve a sentence, to be in prison (the origin of this expression is related to the fact that oatmeal was cheap and usually fed to prisoners); like swimming through porridge - too hard; to go together like bacon and eggs - side by side (this is due to the fact that in the UK, the traditional breakfast food is fried eggs and bacon).

Thus, phraseological units with a national and cultural component in their semantics allow us to present the cultural and national specificity of phraseological units with characteristic features of the worldview of native speakers in a deeper way, to determine the role and place of phraseology in the formation of oral nomination and reflection of the cultural identity of the people, which allows us to solve the problems of further study of the phraseological composition of the language in the context of culture in a more thorough manner. These examples of phraseological units allow us to see that the phraseological structure of the language reflects cultural identity not only as a fragment of real reality given to the ethnic community in direct perception, but also the way of life, beliefs, worldview and worldview, national character, temperament, system of values, - the mentality of the people, their social identity in general.

### THE CONCEPT OF "NATURE" IN THE UKRAINIAN AND ENGLISH WORLDVIEWS

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Each language forms a certain set of ideas about the surrounding reality that does not coincide or partially coincides with the vision of the world of speakers of another language, representatives of another culture. This set of ideas is called a world picture.

The conceptual picture of the world changes much faster than the linguistic one, but it is the language that directs changes in conceptual representations. The linguistic world picture, on the one hand, forms and, on the other hand, reflects a system of mental images, views on objects of reality created by both objective and subjective factors.

It should be noted that an important feature of the concept is the presence of three components: value, conceptual and figurative. The value component is of particular importance for linguistic and cultural studies and determines the understanding of the concept as a structure of consciousness in which the values of society are fixed. The conceptual element is formed by factual information about a real or imaginary object. The figurative component of the concept includes all the naïve ideas about the object that

are fixed in the language.

The concept of "nature" is complex and multicomponent, and dictionary definitions of "nature" are not unambiguous.

The word "nature" in the Ukrainian language means the essence, quality, basic property of something that is realised in such combinations as the nature of a phenomenon, the nature of things, the nature of social relations.

The range of contact between the concepts of "nature" and "human" is very wide. The nature of a person is called both his or her innate property, quality or their combination, character, and the totality of natural properties, inclinations, and needs of the human body.

In English, on the contrary, the Latin borrowing has remained virtually unchanged. The key word representing the concept we are interested in in English is "nature".

After analysing the relevant articles in English dictionaries, we found significant differences in the meanings of the Ukrainian "природа" and the English "nature".

Nature in English is understood as: the world, the universe, with all its objects and phenomena - infinite variety of nature; elements of the natural world, such as mountains, trees, animals, rivers; natural landscape - the ecological balance of nature; the natural world as it exists without human beings or civilisation - wild nature; the power underlying all phenomena in the material world - Mother Nature; character, type, kind or sort of an object or phenomenon - books of the same nature.

In view of the above, we can conclude that the concept of "nature" contains the following key semiotic elements: abstractness; scale; originality, innateness, primacy; supernaturalness, divinity, superiority to man; proximity to man.

### THE ROLE OF THE LINGUISTIC WORLD VIEW IN THE PROCESS OF COMMUNICATION

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In the process of communication, it is very important to take into account the linguistic and conceptual worldview of the participants in the speech act. First, let's focus on the concept of "world picture", since when describing the world, it is necessary to distinguish its three components. First of all, it is the reality (or phenomenon) of the world picture, secondly, it is its concept and, thirdly, it is the term itself.

It is worth noting that the world picture reflects specific features of worldview and cognition. Thus, a worldview can be objective and subjective, general and individual, scientific and practical, real and mythological, global and limited, holistic and local. We conclude that the world view contains subjective aspects, as it is formed by each individual and is constantly changing.

In the context of our arguments, we consider it appropriate to note that the structure of a language directly affects both the way of thinking and the behaviour of speakers of a particular language. Therefore, each person perceives the surrounding reality based on his or her life experience, depending on the semantic categories and concepts embedded

in the language code.

Thus, we can say that the linguistic world picture is a general schematic representation of the real world. In addition, a linguistic world picture is a linguistic embodiment of how the world is perceived by a person. A world picture is an expression of the cognitive activity of people within a single objective world caused by various factors.

Indeed, every language has both specific and universal ways of conceptualising the real world around us. It is this psycholinguistic factor that explains the fact that representatives of different linguistic cultures categorise and conceptualise the world around them differently on the basis of the language code.

### THE VALUE PICTURE OF THE WORLD AS A LINGUISTIC AND PHILOSOPHICAL CATEGORY

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Everyone is a carrier of the culture where they grew up. In everyday life, they do not notice this. Each person has his or her own vision of the world, an idea of the world. However, regardless of whether they are aware of it or not, their world view has a lot in common with the world view of speakers of the same language they consider their native language. The world is infinitely diverse, but we are able to perceive only a small part of this diversity. Our perception is filtered by our culture, our language, unique experiences, traditions, values, and beliefs.

A person will never be able to capture the world around them in all its diversity. The world is always richer than the ideas we have about it. To comprehend the world, we have to simplify it. When studying the problem of reflecting the world picture in human language, one usually proceeds from a simple triad: the surrounding reality (the real world), the reflection of this reality in the human brain (the conceptual/cultural world picture), and the expression of the results of this reflection in language.

Let us consider how the real, cultural and linguistic worldviews are related. The real world picture is an objective non-human given. It is the world that surrounds a person.In the real world there are objects and phenomena, in language there is a word. A thinking person, a native speaker, stands between the world and the language. Perceiving and understanding the world, he/she creates his/her own system of ideas about the world. After passing them through his consciousness and comprehending the results of this perception, he transmits them to other members of his language group through language. In other words, thinking stands between reality and language.

The word reflects not the object of reality itself, but its vision, which is imposed on the native speaker by the idea, the concept of this object in his mind. The concept is formed only at the level of generalisation of some basic features that form this concept, and therefore is an abstraction. Differences in the peculiarities of the life of peoples, their history, geography, and differences in their social consciousness determine the path from the real world to the concept and then to verbal expression. Human consciousness is the

result of both the collective (way of life, traditions, customs) and the individual (specific perception of the world inherent in a particular individual). Language reflects reality not directly, but through two zigzags: from the real world to thinking and from thinking to language. Language, thinking and culture are closely interconnected. Together, they relate to the real world, reflect it, oppose it, and simultaneously shape it.

#### Scientific edition

# Sustainable Development: Modern Theories and Best Practices

Materials of the Monthly International Scientific and Practical Conference (April 28-29, 2023)

The language style and spelling of the authors are preserved. Teadmus OÜ made some changes in the design of the materials provided.

The editorial board and Teadmus  $O\ddot{U}$  are not responsible for the content of the materials provided.

The collection of conference materials was formed by the computer algorithm teadmus.org automatically based on the materials submitted by the authors after their review. RushApp OÜ developed this algorithm.

#### **Publisher:**

11412 Majaka 24-102 Tallinn, Estonia info.teadmus@gmail.com https://teadmus.org

