DEVELOPMENT OF MANAGEMENT IN THE CONDITIONS OF INTERNATIONAL INTEGRATION PROCESSES

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According to the scientific edition
Doctor of Economics Sciences
Professor Nataliya Stoyanets

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The monograph is devoted to the current topic of research on the impact of international integration processes on the theory and practice of management. The authors examine the theoretical foundations of international management, analyze the peculiarities of its functioning in different countries and integration groups, and also give practical recommendations for effective management in the conditions of globalization. It is extremely relevant, because international integration is becoming an increasingly important factor in the development of the world economy. This makes it necessary to constantly improve the theory and practice of management, taking into account new challenges and opportunities that arise in the conditions of globalization.

For scientists, lectors, graduate students and students, managers of enterprises and management bodies of various levels, entrepreneurs and everyone who is interested in issues of management, sustainable development and the impact of international integration processes.

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INTRODUCTION

The world is becoming increasingly interconnected, which leads to the growth of international trade, investment and cooperation, in turn, presents new challenges and opportunities for managers who must be able to effectively manage their companies in the context of globalization. On the world market, companies face tough competition from their foreign competitors, which forces them to constantly improve their work, introduce innovative technologies and management methods. New sales and production markets are emerging, which opens up new opportunities for business development, which in turn requires managers to have a deep understanding of the features of these markets and the ability to develop effective strategies for entering them.

The relevance of the monograph is due to the urgent need to understand the transformational processes that management is currently experiencing in the context of international integration processes and is a very important aspect of modern business. During international integrations, management plays a key role in ensuring business success on the international market. Growing globalization and integration of markets create new challenges for management that require adaptation to new conditions and management strategies. The conditions of international integration processes require managers to understand the cultural, economic and legal features of different countries, as well as the ability to work in a multicultural environment. Managers need to have communication skills, be able to manage risks and make strategic decisions based on the analysis of global trends and market conditions. The very development of management in the conditions of international integration processes also involves the search for innovative approaches to management, the introduction of the latest technologies and the creation of flexible strategies aimed at achieving competitive advantages in the international market. Only under the condition of constant improvement and adaptation to changes can the stable success of the company in the conditions of international integrations be ensured.

The work contains the provisions of the collective of authors, the totality of which allows solving an important scientific and practical problem regarding the aspects of innovative development of enterprises, strategic management of agricultural enterprises, development of management and its role in the context of Ukraine's integration into the European community, raising issues of land resource management, social business responsibility, digital transformation and business models of modern energy and, most importantly, the role of human capital in the formation of intellectual potential.We express our sincere gratitude to the reviewers of this edition, Yuriy Danko, Doctor of Economic Sciences, Professor of the Department of Marketing and Logistics, Vice-Rector for scientific and international activities of the Sumy National Agrarian University; Ihor Rekunenko, Doctor of Economic Sciences, Professor, the head of the Department of Management named after Oleh Balatsky BiEM of Sumy State University; Mykola Zheldubovsky, director of the private agricultural enterprise Garant.

CONCEPTUAL PRINCIPLES OF MANAGING THE SUSTAINABLE DEVELOPMENT OF THE AGRICULTURAL SECTOR OF THE ECONOMY IN THE CONDITIONS OF INTERNATIONAL INTEGRATION PROCESSES

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Modern society faces a number of unprecedented economic, social and environmental challenges. Financial crises, income inequality, environmental pollution and depletion of natural resources are especially acute among them. In these conditions, the importance of forming a new, innovative worldview, which would unite the goals and priorities of development in all spheres of life, is growing. The most promising way to achieve sustainable development is the concept of sustainable development, which involves a harmonious combination of economic, social and environmental components. This means not only meeting the needs of the present generation, but also preserving resources and opportunities for the future.

The agricultural sector of Ukraine plays a key role in ensuring the sustainable development of the country. It has a significant potential for agricultural products and is one of the main sources of export income of Ukraine, which contributes to the development of the economy and the well-being of the population.

Social development, as the agricultural sector provides jobs and stimulates the development of rural areas, which makes it an important factor of social stability. Preservation of the environment through the use of environmentally friendly practices and innovative technologies in the agricultural sector can significantly reduce its negative impact on the environment and contribute to the preservation of natural resources.

Activation of the agricultural sector can become a locomotive of sustainable development of Ukraine, stimulating economic growth, improving social welfare and protecting the environment. For this, it is necessary to support small and medium-sized farmers: Creating favorable conditions for the development of farms will contribute to the diversification of the agricultural sector and increase its sustainability; implementing innovations through the use of modern technologies and practices will increase the productivity and environmental friendliness of agricultural production. Providing government support for investing in infrastructure, research and education in the agricultural sector can significantly stimulate its development. The agricultural sector of Ukraine has a unique potential for ensuring the sustainable development of the country. Thanks to the activation of the agricultural sector and the implementation of innovative solutions, Ukraine can not only overcome modern challenges, but also create a solid foundation for the prosperity of future generations [1].

The agricultural sector plays a crucial role in ensuring the sustainable development of Ukraine. Here are some key reasons why? Agriculture is a significant contributor to Ukraine's economy, accounting for a significant portion of the country's GDP and employing a large percentage of the population. A strong and sustainable agricultural sector can help boost economic growth, create jobs, and reduce poverty in rural areas. Ukraine is known as the "breadbasket of Europe" due to its fertile soil and favorable climate for agriculture. A well-developed agricultural sector is essential for ensuring food security for the country's population. By producing enough food domestically, Ukraine can reduce its reliance on imports and ensure a stable food supply for its citizens. Sustainable agriculture practices are essential for preserving the environment and natural resources in Ukraine. By adopting practices such as crop rotation, organic farming, and agroforestry, the agricultural sector can mitigate the negative impact of climate change, protect biodiversity, and maintain soil health for future generations. Agriculture is a key driver of rural development in Ukraine, providing employment opportunities and supporting local economies. By investing in modern farming techniques, infrastructure, and education for farmers, the country can improve the livelihoods of rural communities and reduce rural-urban migration. Ukraine's agricultural products, such as grains, sunflower oil, and poultry, are in high demand in international markets. By focusing on quality, innovation, and sustainability, the country can increase its exports and generate foreign exchange earnings, contributing to economic growth and development. The agricultural

sector is indispensable for the sustainable development of Ukraine. By promoting innovation, sustainable practices, and investment in rural areas, the country can harness the full potential of its agricultural sector to drive economic growth, ensure food security, and protect the environment for future generations [2].

The world is no longer a collection of isolated nations. Today, countries are increasingly interconnected through a complex web of international integration processes. These processes involve the growing interdependence of economies, societies, and cultures across borders. Understanding these integrations is crucial in today's globalized world. There are several key drivers of international integration in table 1.

Table 1. Key drivers of international integration.

Trade:	The reduction of trade barriers through free trade agreements and regional trade blocs like the European Union (EU) and the North American Free Trade Agreement (NAFTA) fosters deeper economic ties. Freer movement of goods and services stimulates economic growth and competition.
Investment:	International investment allows for the flow of capital across borders, enabling companies to expand their operations and access new markets. Foreign Direct Investment (FDI) plays a significant role in job creation and technological advancements.
Finance:	Financial integration involves the liberalization of financial markets, allowing for the free flow of capital and financial instruments. This can provide greater access to funding for businesses and foster deeper financial cooperation.
Labor:	Migration of workers across borders is another facet of integration. Skilled labor can address shortages in specific sectors, while remittances sent back home by migrant workers can contribute to development in their origin countries.
Technology:	The rise of the internet and communication technologies has revolutionized communication and collaboration across borders. This has facilitated the growth of international trade, investment, and cultural exchange.

Source: forced by the author.

Here's a breakdown of some key drivers of international integration. Trade is a big one. Free trade agreements (FTAs) and regional trade blocs like the European Union (EU) or the North American Free Trade Agreement (NAFTA) act like bridges between economies. They reduce trade barriers, allowing for smoother movement of goods and services, which in turn fuels economic growth and competition on a global scale. Investment of it as a two-way street. International investment allows capital to flow freely across borders. Companies can expand their reach, access new markets, and contribute to job creation and technological advancements in the host country. Foreign Direct Investment (FDI) is a prime example of this kind of integration. Financial markets are becoming increasingly interconnected. This means freer movement of capital and financial instruments. Businesses gain easier access to funding, and international cooperation in finance deepens. International integration isn't just about goods and money. The movement of skilled labor across borders plays a vital role. It can address labor shortages in specific sectors of a country, while also contributing to development in the home country through remittances sent back by migrant workers. The internet and communication technologies have been game-changers. They've revolutionized how we connect and collaborate across borders. This has significantly boosted international trade, investment, and cultural exchange.

Globalization, characterized by the growth of interrelationships and interdependence between countries, significantly affects all spheres of life, including the activities of enterprises. The impact of globalization on enterprises can be divided into positive and negative aspects. Positive aspects are expanding markets opens up access to new markets for goods and services, which can lead to significant increases in sales and revenue for businesses. Cost reduction has created opportunities to shift production to countries with lower labor costs, which can lead to lower costs and increased profitability. Access to new resources opens up access to new resources, such as raw materials, technology, and human resources, which can help businesses improve their competitiveness.

Increasing competition increases competition in the world market, which stimulates enterprises to introduce innovations and improve the quality of products. Increased opportunities for cooperation creates new opportunities for cooperation between businesses from different countries, which can lead to the joint development of new products and services.

Negative aspects are increasing competition in the global market can make it difficult for domestic enterprises to maintain their positions in the market. Relocation of production to countries with lower labor costs can result in job losses in the country where the company is headquartered; globalization requires enterprises to constantly adapt to new business conditions, which can be associated with significant costs. In order to be competitive in the global market, enterprises must meet strict requirements for the quality of products and services. Globalization increases risks for businesses related to currency fluctuations, political instability and other factors. The impact of globalization on a specific enterprise will depend on its field of activity, size, competitive advantage and other factors [5].

In order to function successfully in the conditions of globalization, enterprises need: it is important to thoroughly research new markets to assess their potential and risks. Businesses must constantly improve their products and services to remain competitive in the global market. The introduction of new technologies and work methods can help businesses improve their efficiency and competitiveness. Collaboration with other businesses, both domestic and foreign, can help businesses expand their market presence and gain access to new resources. Businesses need to develop and implement strategies to manage the risks associated with globalization. Globalization creates both new opportunities and new challenges for businesses. Those enterprises that will be able to effectively adapt to new business conditions will be able to succeed in the global market.

Ukraine is a country with agricultural potential, therefore, one of the true directions for sustainable development is the development of the country's agricultural sector. That is why it is expedient to analyze in detail the performance indicators, influencing factors and main characteristics of the agricultural sector of Ukraine.

Summarizing all of the above, let's analyze the strengths and weaknesses of agriculture, promising directions of development and barriers to their implementation. We propose to formalize the results in the form of a scheme (Fig. 1.).

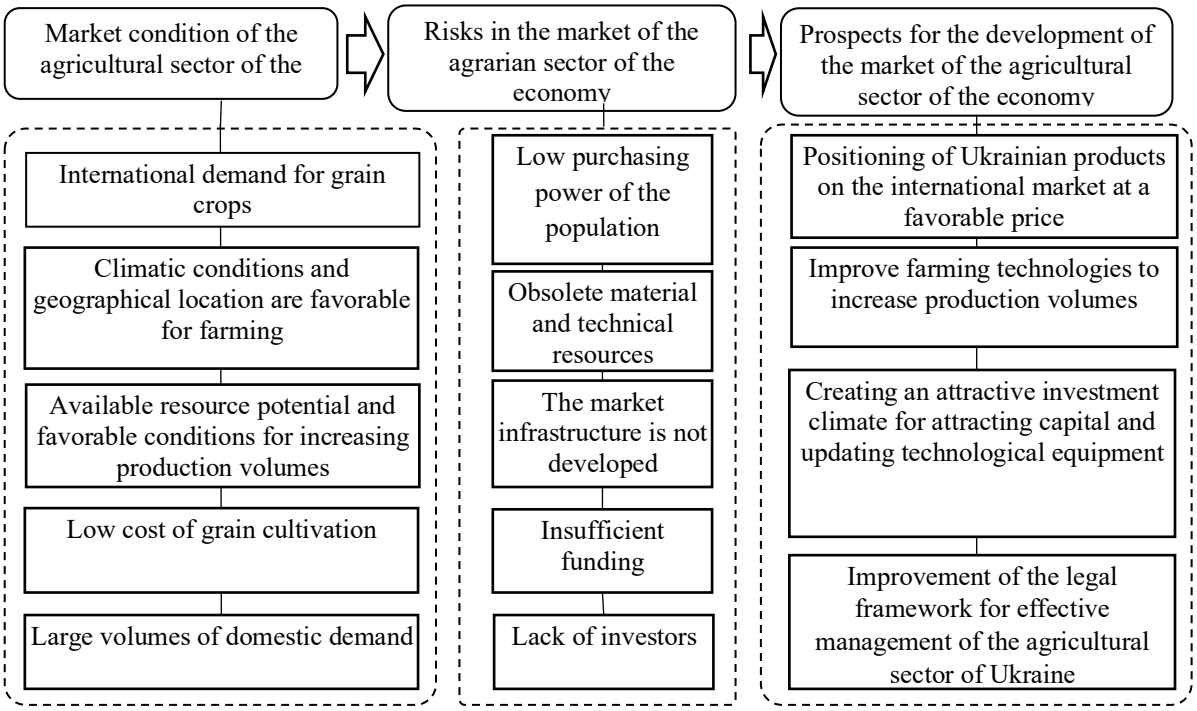

Figure 1. Analysis of the state of the market of the agricultural sector of Ukraine and prospective directions of its activity.

Source: compiled by the author on the basis of [4, 8].

Based on this analysis, it can be stated that certain problems exist in agriculture: price uncertainty, outdated material and technical resources, underdeveloped market structure, lack of investors, etc. Let's consider some of them in more detail.

An important problem is the uncertainty of prices, which leads to the fact that manufacturers cannot establish the volume of products manufactured in the future and forecast the amount of products sold. Such a situation subsequently causes rapid supply fluctuations. Another phenomenon that interferes with the normal functioning of the agrarian sector market is that enterprises often produce a surplus of grain, the cost of cultivation of which significantly exceeds its market price. The underproduction of grains also threatens the loss of the budget for grain imports, while domestic producers will not receive a profit.

Consequently, such problems lead to uneven production volumes, which in turn leads to fluctuations in price and supply and can lead to large losses. All this forms the economic failure of farming. Such goodwill of enterprises in the agricultural sector may be doomed to bankruptcy and decline. To conduct business in the agricultural sector, it is very important to maintain a high level of economic preparation and a significant position of competitiveness among competitors.

As a result, a decrease in investment by foreign investors and mistrust of other business entities. Lack of investors is another weakness that requires careful investigation. The agrarian sector of the economy and farming requires high costs and significant funding (which is usually lacking). A lot of resources are used to run an efficient and stable agrarian business. That is why the issue of investors is very important. Enterprises must create an attractive investment environment for investors so that they support the development of the agricultural sector of Ukraine.

Despite a number of weaknesses, the agricultural sector has a large number of strengths, namely: favorable climatic conditions and geographical location for farming; large volumes of domestic demand; international demand for grain crops; available resource potential and favorable conditions for increasing production volumes. Let's consider some of them in more detail.

One of Ukraine's competitive factors for agriculture is large land reserves. Not every country has such a stock of the most important resource for activities in the agricultural sector. Another significant advantage is favorable climatic conditions and available human capital.

The agricultural sector of the economy is able to provide jobs for 17.7% of the population.

The next advantage is that the most exported product from Ukraine is grain, and therefore Ukrainian agricultural products are in demand on the international market.

Having identified the weak and strong aspects of the agrarian sector of the economy, we can form promising directions for the improvement and development of the agrarian sector.

Innovative activity should play an important role. The priority of innovations in the agricultural sector is the introduction of the most promising agricultural technologies and, on this basis, the increase of production productivity with the aim of reducing the unit cost of production and strengthening its competitiveness on the domestic and world markets.

Thus, the directions of innovative development of the agricultural sector should be determined:

1) emergence and introduction into production of high-yielding varieties and hybrid crops, new breeds of animals and poultry;

2) stimulation of agroecological activities, in particular the development of alternative organic agriculture;

3) creation of highly educated professional personnel [7].

Despite the problems associated with the current stage of agricultural production, Ukraine must develop the production capacity of the agricultural sector so that in the coming years our agricultural products can enter the world market and compete with the products of other developed countries.

The study of the agricultural sector of Ukraine and its main indicators is an integral part of successful economic activity and sustainable development, in particular. At the same time, it is important to be able to collect and process large amounts of information regarding the clarification of market conditions and, as a result, the formation of further prospects and ways of development. Thus, the analysis of market conditions is a combination of the results of economic, scientific,

technical, social, political and other research. However, the need for regulation and control of all processes of economic activity in all spheres of activity is essential. For this, the state needs to create a mechanism for regulating the process of activity in the agricultural sector in order to obtain maximum benefits and effective sustainable development in the country.

A comprehensive study of the situation on the market of agricultural products involves the collection, analysis, evaluation and interpretation of data on the current state and potential prospects for the development of the agricultural market as a whole and its individual elements, in particular. This analysis of the market situation, which provides qualitative information about its condition and determines the quantitative parameters of demand and supply. Such indicators make it possible to rationally and effectively evaluate the market and implement methods of state regulation of it.

In addition, the analysis of the current state of development of the agrarian sector of the economy made it possible to identify a number of problematic aspects, as well as to identify a number of potential directions, the work of which will enable the activation of a complex of important qualitative transformations that will help ensure the sustainable development of the agrarian sector of the economy. Thus, the formation of a holistic concept of managing the sustainable development of the agrarian sector of the economy should be aimed at revealing the hidden potential by eliminating the problems described above, as well as using the existing potential as fully as possible for the further development of the agrarian sector of the economy [3].

First of all, it should be noted that the substantive and organizational aspects of managing the sustainable development of the agrarian sector of the economy are formed under the influence of certain prerequisites and factors. Thus, the prerequisites in the work are systematized according to the criterion of sustainability, namely: 1) permanent - the subjects of economic relations have practically no influence on these prerequisites (natural resources, climatic conditions, sources of renewable energy, etc.); 2) conditionally constant – the influence on these prerequisites for subjects of economic relations is limited (for example, a balanced demographic and migration policy will allow, with a certain lag, to influence the state of human resources, in particular, their qualitative and quantitative characteristics); 3) dynamic – economic agents can significantly influence this block of prerequisites (agricultural production capacity, investment climate, level of innovation implementation, etc.). Accordingly, an in-depth and comprehensive analysis of quantitative indicators, allowing to assess the initial state of these prerequisites in a specific country, allows to identify strengths and weaknesses, as well as threats and prospects of the process of ensuring the sustainable development of the agricultural sector of the economy, which is an integral stage of the management process.

At the same time, effective management of the sustainable development of the agrarian sector of the economy must take into account the effect of a set of internal and external factors. Thus, external factors include the level of international competitiveness in the agricultural sector of the economy, the level of international demand for national products, the level of international supply of products of the agro-industrial complex, etc., while internal factors are formed as a result of the implementation of social, environmental and economic policies of the state [6].

Conceptual frameworks have a number of advantages over existing approaches. First of all, it is a clear specification of the elements of the controlled and controlling subsystems of managing the sustainable development of the agrarian sector of the economy, as well as the institutional environment, the components of which can simultaneously act as elements of the controlled and controlling subsystems. Thus, the managed subsystem is a combination of those objects to which the management efforts of management subjects are directed. In particular, this subsystem consists of the following components: 1) a set of target parameters that reflect the effective perspective of ensuring the sustainability of the development of the agricultural sector of the economy (its elements), which is represented by four food security projections defined by the Food and Agriculture Organization of the United Nations, namely: the availability of food products , access to food, food stability and food consumption culture; 2) the block of determinants of the sustainability of the development of the agrarian sector of the economy, which are subgroups of factors that affect the target indicators (the first block of elements of the managed subsystem); they include

environmental, economic and social determinants, which, in turn, are formed from individual factors within each of the above channels. Thus, economic agents directly or indirectly involved in the process of managing the sustainable development of the agrarian sector of the economy can directly influence both the target indicators of the sustainability of the development of the agrarian sector of the economy and their determinants.

At the same time, the management subsystem is a set of economic agents that have the authority to implement management measures on the objects of the managed subsystem. These include, in particular, state authorities, local self-government bodies and self-regulatory organizations. Thus, state authorities determine and ensure the implementation of strategic and operational provisions in the field of agrarian, as well as related policies. In turn, local self-government bodies are authorized to implement relevant state policy at the local level. Instead, self-regulatory organizations are designed to protect the interests of participants in the agrarian sector of the economy, as well as to lobby for the promotion of legislative initiatives aimed at ensuring the sustainable development of the agrarian sector of the economy[8].

At the same time, the element that integrates the managed and managing subsystems is the institutional environment, since parts of the components of the institutional environment, such as institutional support (state authorities, local governments and self-regulatory organizations), form the managing subsystem, while the rest of the components, and namely: formalized rules of interaction of economic agents in the economy, i.e. regulatory and legal support, as well as non-formalized rules of interaction of economic agents (business ethics, traditions of business behavior, code of corporate integrity, etc.) are objects of purposeful influence, i.e. by their by nature belong to the elements of the managed subsystem. Thus, the institutional environment becomes the unifying link of the subject-object system of managing the sustainable development of the agrarian sector of the economy.

The second advantage of the conceptual foundations is the separation of the structural (detailing the directions of influence relevant for the target orientations of the sustainable development of the agricultural sector of the economy in terms of ecological, economic, social and institutional determinants), functional (definition of the functions and principles on which the management process should be built) and hierarchical (comparison management levels with appropriate regulatory and legal support) approaches to managing the sustainable development of the agrarian sector of the economy. Thus, the implementation of specific management measures should be carried out comprehensively, taking into account the aspects identified in each of the approaches [3].

First of all, the structural approach assumes that the management of the sustainability of the development of the agrarian sector of the economy is largely focused on four groups (ecological, economic, social and institutional) determinants that affect the target performance indicators represented by quantitative indicators of food security projections. In turn, the generalization of empirical studies on the determination of relevant factors of influence on the level of sustainability of the agricultural sector of the economy made it possible to formalize separate blocks of determinants within each of the four channels, namely:

- ecological channel (emissions of pollutants; production of electricity, its supply and consumption; use of forest and land resources; use of fertilizers; productivity, etc.);
- economic channel (foreign trade operations; investment attractiveness; scientific research activity; technological modernization; availability of credit resources; purchasing power of the population, etc.);
- social channel (quality and length of life; health care system; decent working conditions and wages; self-employment and number of small farms; level of education and awareness of the population, etc.);
- institutional channel (normative and legal support; level of corruption; political freedom and democracy; government efficiency; quality of state regulation, etc.) [6].

It is through purposeful influence on the determinants defined within each of the channels that it is possible to achieve the desired positive feedback from the target indicators of the

sustainability of the development of the agrarian sector of the economy, which is why the quantitative formalization of the nature and strength of the influence of these factors on the performance parameters is of great theoretical and practical importance, as well as (if available) detection of time lags in the delay of their action.

In turn, the functional approach to managing the sustainability of the development of the agrarian sector of the economy involves defining the functions and principles of this process. The analysis and systematization of the work of domestic and foreign researchers, presented in the previous paragraphs of the dissertation work, made it possible to distinguish the following functions of managing the sustainability of the development of the agrarian sector of the economy: supply, distribution and regulation. Thus, the supply function assumes that the key target priority of this process is to provide the population with high-quality food products in sufficient quantity, while minimizing the destructive impact on the surrounding natural environment. Instead, the distributive function assumes that the process of managing the sustainability of the development of the agrarian sector of the economy is designed not only to ensure the production of a certain amount of food products, but also to create the necessary conditions for their effective allocation through the use of existing and construction of new supply infrastructure facilities. It is worth noting that the implementation of this function is no less important than the previous one, since the unjustified concentration of agricultural producers in certain regions negatively affects the level of food security of the country as a whole, because the target indicators of the level of sustainability of the agricultural sector of the economy include not only the availability of food, which reflects physical availability of food products, but also access to food, which actually characterizes the population's ability to obtain food produced by the agricultural sector. At the same time, the regulatory function assumes that the management process should be built and implemented in such a way as to form a favorable regulatory environment, the main focus of which is to activate the functioning of agricultural enterprises and ensure the sustainable development of the agricultural sector of the economy.

In addition, the generalization of the work of leading economists also made it possible to form a set of principles on which the process of managing the sustainable development of the agrarian sector of the economy should be built, namely:

- the principle of scientific validity - the management of sustainable development of the agricultural sector of the economy should not be carried out spontaneously, but should be implemented in a balanced and comprehensive manner according to a plan determined in advance, which is based on real and objective analytical data and empirically confirmed patterns;
- the principle of publicity and transparency - the process of managing the sustainable development of the agrarian sector of the economy should be transparent and as understandable as possible for the end consumer of food products and other stakeholders; following such an approach will speed up the achievement of target performance indicators, as well as contribute to the coordination of efforts of state authorities, the population and representatives of agribusiness to achieve the sustainability of the development of this sector of the economy, because each of the parties will understand the importance of their role in this process;
- accountability and hierarchy implies that the subjects of the managed subsystem of managing the sustainability of the development of the agrarian sector of the economy should function in a coordinated manner, as well as bear joint responsibility to stakeholders for the achievement or failure of the relevant target performance indicators; at the same time, the process of managing the sustainability of the development of the agrarian sector of the economy itself must be synchronized with the process of managing the sustainability of the development of the economy as a whole, as well as be coordinated with the directives and recommendations adopted by the international community at the supranational level;
- the principle of coordination implies that effective management of the sustainability of the development of the agrarian sector of the economy of a specific country is impossible without international cooperation in this direction, because only complex and coordinated efforts of all representatives of the countries of the world, as well as specialized international organizations, can

crystallize into a positive synergistic effect;

- the principle of involvement means that all economic agents should be maximally involved in the process of managing the sustainability of the development of the agrarian sector of the economy, because understanding their importance and role in this process helps to form the right motivation and improve the efficiency of their activities;
- the principle of consistency implies that the management of the sustainability of the development of the agrarian sector of the economy must be carried out according to a clear plan, which allows to gradually achieve a global positive effect through the fulfillment of tasks at each subsequent stage;
- the principle of preventiveness is one of the most important principles of managing the sustainability of the development of the agrarian sector of the economy, because the prevention of environmental damage is a more rational and economical strategy than the elimination of large-scale destructive consequences of environmental disasters, that is, the system should be built in such a way as to timely detect various risks of disrupting the sustainability of the development of the agrarian sector sectors of the economy, monitor potential threats and respond to them at the early stages of their development;
- the principle of regenerative means that, on the one hand, the activities of agricultural enterprises should not cause more negative consequences than the ecosystem can absorb relatively safely, and on the other hand, the functioning of regulatory bodies in the field of sustainable agriculture should be aimed at restoring those resources that can be renewable, as well as preservation of non-renewable natural resources;
- the "polluter pays" principle provides that the main burden for pollution of the natural environment in the course of agricultural activity should fall precisely on the initiator of the eco-destructive impact;
- the principle of adaptability means that the management system for the sustainable development of the agrarian sector of the economy must be flexible to changes in ecological, economic, and social determinants, as well as to the transformation of target orientations and priorities of sustainable development at the supranational, national, and regional levels;
- the principle of rationality reveals the need to build a management system for the sustainable development of the agrarian sector of the economy on the basis of rational nature use and consumption of food products;
- the principle of innovativeness assumes that an integral element of the management system for the sustainable development of the agricultural sector of the economy is the development and implementation of various innovative technologies designed to reduce the negative impact on the ecosystem from the activities of enterprises in the agricultural sector of the economy, as well as innovations aimed at maximizing the production of food products while minimizing the cost of this process.

Adherence to these principles in the process of managing the sustainable development of the agrarian sector of the economy will allow it to be optimized and achieve the maximum positive result.

In turn, the hierarchical approach to managing the sustainability of the development of the agrarian sector of the economy involves the implementation of management measures at four interrelated levels, in particular:

- supranational - establishing the main targets, priorities, global action programs, as well as various directives and recommendations in the sphere of achieving sustainability of the development of the agricultural sector of the economy in declarations, UN development programs, international conventions, EU directives, framework agreements and other similar documents;
- national - determination of the main functional and organizational principles of managing the sustainability of the development of the agrarian sector of the country's economy, as well as the development of a corresponding strategy (concept) with further detailing it within the target guidelines and time horizons for their achievement, which are enshrined in the Constitution, relevant laws, presidential decrees, resolutions of the Cabinet of Ministers, etc., which, at the same

time, are consistent with the provisions set forth in normative documents of the supranational level;

- sectoral - management of the sustainability of the development of the agrarian sector of the country's economy should provide for coordination and cooperation in the context of this process between various branches of the national economic complex, which should be detailed and fixed in specific sectoral laws and resolutions of the Cabinet of Ministers, interdepartmental documents and orders of relevant ministries;
- regional - the detailing of specific targets for the sustainability of the development of the agrarian sector of the economy, which must be achieved at the level of a specific administrative-territorial unit, taking into account the initial characteristics of its ecological, economic and social potential, which is fixed in interdepartmental documents, orders of relevant ministries, decisions of local self-government bodies, etc.

All these levels, as well as the target parameters and organizational and functional features of the process of managing the sustainability of the development of the agrarian sector of the economy must be coordinated with each other, which will ensure the achievement of the maximum positive synergistic effect. At the same time, violation of the principle of coordination at least between any pair of adjacent levels of the hierarchy can become a significant obstacle on the way to achieving the planned target parameters, which is why all the most important aspects should be fixed in the relevant regulatory documents.

It is fair to note that another advantage of those shown of the conceptual principles of managing the sustainability of the development of the agrarian sector of the economy compared to already existing approaches is the specification of the vectors of ensuring the sustainability of the development of the agrarian sector of the economy in hierarchical and structural-functional dependence on the identified problems and the existing potential of the development of the agrarian sector of the economy. Such a comprehensive approach to the formation of the management concept is designed to optimize the process of achieving its target benchmarks with minimal expenditure of all types of resources [5].

So, the generalization of the regularities of the development of the agrarian sector of the economy in Ukraine and the countries of the world, the target orientations of the sustainability of its development at the national and supranational levels, as well as the results of empirical research in this direction made it possible to formalize several priority vectors of ensuring the sustainability of the development of the agrarian sector of the economy, which should be directed to efforts of management subjects, namely:

- synchronization of supranational, national and regional sustainability targets for the development of the agrarian sector of the economy;
- determination of relevant ecological, economic and social determinants of the sustainability of the development of the agrarian sector of the economy, taking into account national specificities;
- formalization of the time lags of the delayed response of the target parameters of the sustainability of the development of the agrarian sector of the economy to the action of relevant environmental, economic and social determinants;
- development of recommendations on the transformation of the country's institutional environment, taking into account the importance of the impact of its individual characteristics on ensuring the sustainability of the development of the agrarian sector of the economy;
- formation of a comprehensive concept of sustainability management of the development of the agrarian sector of the economy with specification of environmental, economic and social tools for achieving target performance indicators;
- development of a matrix of sustainability strategies for the development of the agrarian sector of the economy at the regional level, taking into account the value of the input parameters of the ecological, economic and social potential of the corresponding administrative-territorial unit.

Sustainable development makes it possible to ensure the successful functioning of society in the long-term perspective. The main goal is to achieve social justice, economic stability and

rational use of natural resources to preserve the environment. It is worth emphasizing that the concept of sustainable development refers to overcoming hunger and poverty, reducing the differentiation of the living standards of the population, ensuring the well-being of the population, preserving marine resources, protecting eco-systems, etc. A comprehensive assessment of all components of sustainable development and ensuring the fulfillment of its objectives is paramount. However, it is also advisable to focus on specific goals for a more in-depth examination.Completing the above tasks, taking into account the provisions defined by the conceptual principles, will bring Ukraine significantly closer to the establishment of sustainable development of the agrarian sector of the economy. Sustainable development is a concept that emphasizes meeting the needs of the present generation without compromising the ability of future generations to meet their own needs. This applies to all aspects of life, including the economy, society and the environment. What can we do to promote sustainable development? You need to change your lifestyle by making conscious choices in your everyday life. This can include reducing energy and water consumption, recycling and composting, using environmentally friendly products and transport, and supporting sustainable businesses. Support sustainable development policies by contacting your elected representatives, voting for candidates who share our values, and joining organizations that work on sustainable development issues. Invest in sustainable development by investing in environmentally friendly companies and technologies, as well as supporting charitable causes organizations working on sustainable development issues.Sustainable development is a shared responsibility. Working together, we can create a better future for ourselves and for future generations.

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METHODOLOGICAL ASPECTS OF DEVELOPMENT AND ANALYSIS OF THE INNOVATION STRATEGY OF ENTERPRISE DEVELOPMENT IN THE CONTEXT OF INTERNATIONAL INTEGRATION PROCESSES

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In today's difficult conditions of development and operation of enterprises, there is a need to improve the system of economic management of the organization, which is able to adapt to the unstable external environment. One of the options for solving this problem is the formation of effective strategic management.

Strategic management is a theoretical strategy for a large number of enterprises, although crisis phenomena, globalization, increased competition, environmental variability and the growing complexity of internal business processes necessitate that enterprises take on their functioning in a more comprehensive and purposeful manner [11].

Every enterprise should have a clearly developed plan for its activities, as having a plan contributes to the growth of profitability and efficiency. In the absence of such a plan, it is difficult for an enterprise to respond to rapid changes in the external environment and make the right management decisions; incomplete awareness of the importance of planning may be a sign that the enterprise is being managed poorly. An efficiently built strategic management system ensures financial stability, competitiveness and effective functioning of the company in the market.

In order to develop an effective and efficient innovation development strategy, it is necessary to determine the aspects and features that are reasonable to develop and those that should be completely eliminated or partially reduced in their negative impact on the overall activities of the organization. Such conclusions can be drawn only after a comprehensive analysis of the internal and external environments, determination of the position held by the enterprise at the time of diagnostics, strengths and weaknesses, threats and opportunities for further sustainable development.

An innovation strategy is an important and necessary component of the competitiveness of every enterprise in today's environment. In recent years, the economy has changed significantly: the emergence of new technologies, increased competition, the formation of new markets and other challenges for business. Innovations are becoming a key tool for solving these problems.

Developing an effective innovation strategy is an important task for any company that wants to succeed. However, this task is also very complex and requires a systematic approach and knowledge from various fields.

One of the key challenges in developing an innovation strategy is identifying market needs and focusing on those needs. This problem arises because the market is constantly changing and evolving, and therefore companies need to research these changes and adapt their strategies to them.

Insufficient market research and incorrect identification of consumer needs can lead to the company developing an innovative product or service that will not find its consumer in the market or will not meet its needs and requirements. This may result in wasting resources on the development of unnecessary or unpopular products, loss of competitive advantage, and even threaten the existence of the company.

Therefore, it is important to consider methodological approaches to market research and consumer involvement in the process of developing a product or service. The article will discuss such approaches as conducting market research, analyzing competitors and consumers, applying consumer behavior research methods and other methods that will help an enterprise identify market needs and develop a product that will meet those needs.

In the works of modern scholars who have studied the innovation strategy of an enterprise - Johna M. A., Stadnyk V. V., Gutorov O. I., Kashchena N. B., Grinev A. V., Kovtun O. I., Melnyk Y. M., Rogosa M. E., Vergal K. Y., Semenyuk O. M., et al, and others - reveal the general principles of the

latest innovation strategy, characterize its role and essence in the field of economics and other issues related to the design of the economic mechanism of the organization's innovation activity. At the same time, the issues of developing a comprehensive approach to determining the key stages of implementation of the optimal strategy for innovative development of enterprises remain insufficiently disclosed.

The basis of each enterprise's activity is its development, and accordingly, there is a need for continuous improvement of all processes, both outside the production process and in production. The processes of such improvement are called innovations, which in turn are formed into innovations.

The task of the study is to determine the essence of the innovation strategy, its necessity at the enterprise and to improve the approach to the phased development and implementation of the optimal innovation strategy at the enterprise.

Modern global and national development is influenced by severe transformation processes that affect all areas of activity. In the system of industrial relations, the challenges of our time increase the need to find ways to improve the efficiency of an industrial enterprise, which are most fully capable of meeting the constantly changing needs of consumers, and at the same time optimally use all types of resources necessary to increase the level of competitiveness of an industrial enterprise in the market of goods and services. One of the main factors in ensuring this is the continuous introduction of innovations into the enterprise management system.

However, a large number of managers in Ukraine do not consider it necessary to spend financial and human resources for the formation of long-term forecast documents, mistakenly claiming that in today's unstable operating conditions it is impossible to ensure high-quality forecasting and develop an effective set of measures to address promising development issues and minimize the consequences of transformational phenomena.

The lack of a strategic vision, mission and development goals of the enterprise, the inability to determine the degree of influence of the internal and external business environment and to formulate an adequate response to it, as well as the lack of the ability to adapt and actively influence this environment, all lead to the futility of the enterprise. Implementing innovative strategies optimizes technology and business organization to maintain a high competitive status of an industrial enterprise in the domestic and international markets. Practical experience of many successful economic entities proves that ensuring competitiveness in the real market is conditioned by their ability to develop and implement innovative strategies.

Many scientists have used the definition of "innovation strategy" in their works, for example, Pavlenko I.A. believes that innovation strategy is a component of the overall strategy of the enterprise and is a targeted activity to identify the most important areas, select priorities for the prospective development of the enterprise and develop comprehensive measures necessary to achieve them [11, p. 95].

Johna M.A. and Stadnyk V.V. note that the innovation strategy is a strategy aimed at anticipating global changes in the economic situation and finding large-scale solutions aimed at strengthening market positions and sustainable development of the enterprise [6, p. 233].

Melnyk Y. M. interprets the concept of innovation strategy as a purposeful process of developing and implementing management decisions aimed at creating and developing product and technological innovations, the principles of which are formed by the general business strategy of the enterprise [9, p. 70].

Thus, summarizing the above definitions, we can conclude that an innovation strategy is a comprehensive model of enterprise management aimed at setting priorities and determining the main directions for further development of the enterprise, aimed at successful implementation of the mission and achievement of long-term goals of the enterprise, as well as at taking into account the consequences of possible events in the business environment with maximum accuracy.

There is no single optimal and successful innovation strategy for any company, so first of all, you need to determine its type. There are various classifications of innovation strategies, and we suggest that you familiarize yourself with their most common types (see Table 1).

When justifying the choice of the type of innovation strategy, it is imperative to take into account its compliance with the overall development strategy of the enterprise, the acceptability of the level of risks and the market's readiness to accept the new product.

Table 1. Classification of innovation strategies.

Type of strategy	Characteristics
Traditional innovation strategy	is characterized by improving the quality of existing products with the technological base available at the enterprise.
The offensive innovation strategy	is typical for enterprises whose activities are based on the principles of "entrepreneurial competition" and are developed to implement the overall growth strategy [3, p. 313].
The defensive innovation strategy	is aimed at maintaining the enterprise's competitive position in the market. It is developed to implement the overall stabilization strategy. This innovation strategy requires intensive research and development [3, p. 313].
The imitative innovation strategy	is characterized by copying innovations that have been launched by leading firms by purchasing licenses from them. However, for the successful functioning of this strategy, imitator enterprises must have some advantages in the production of analogues, improving and modernizing the imitated products [4, p. 25].
Dependent innovation strategy	is characterized by the fact that the nature of technological changes in the enterprise depends on the policy of other companies that are the main ones in cooperative technological relations. Such companies do not make independent attempts to change their products, as they are closely related to the requirements of the leading company [16, p. 82].
The "niche" innovation strategy ("by chance")	is aimed at finding market opportunities that open up to the enterprise in new circumstances, identifying special niches in existing markets for goods and services that have consumers with atypical but significant types of needs [16, p. 83].
The diversification innovation strategy	is characterized by the development of complex innovations in various fields: improvement of old products, expansion of the modification range, technologies in various fields of activity of the enterprise, etc.
A mixed innovation strategy	is characterized by a combination of several strategies. It is chosen by companies operating in different business areas and markets. Different types of strategies are chosen for different types of business.

Source: [3, 4, 16].

After choosing the most appropriate type of innovation strategy for the enterprise, the stage of its development follows.

The development and implementation of an effective innovation strategy of an enterprise further becomes the basis on which their management, investment support of innovation processes, updating of the information, material and technological base, and transformation of innovation into the main factor of sustainable development of the enterprise are based.

There are a large number of scientific approaches to the process of creating an enterprise's innovation strategy, but there is no single, fixed sequence for creating this strategy.

American scientists M. Mescon, F. Hedowry and M. Albert propose to carry out the process of strategic management of the enterprise in 9 stages [10]: 1) choosing a mission; 2) formulating goals; 3) analyzing the external environment; 4) management review of internal strengths and weaknesses; 5) analysis of strategic alternatives; 6) choosing a strategy; 7) implementing a strategy; 8) managing and planning the implementation of the strategic plan and monitoring its implementation; 9) evaluating the strategy.

Given the existing approaches to developing an innovation strategy, we propose to optimize and combine them in the following areas (see Fig. 1).

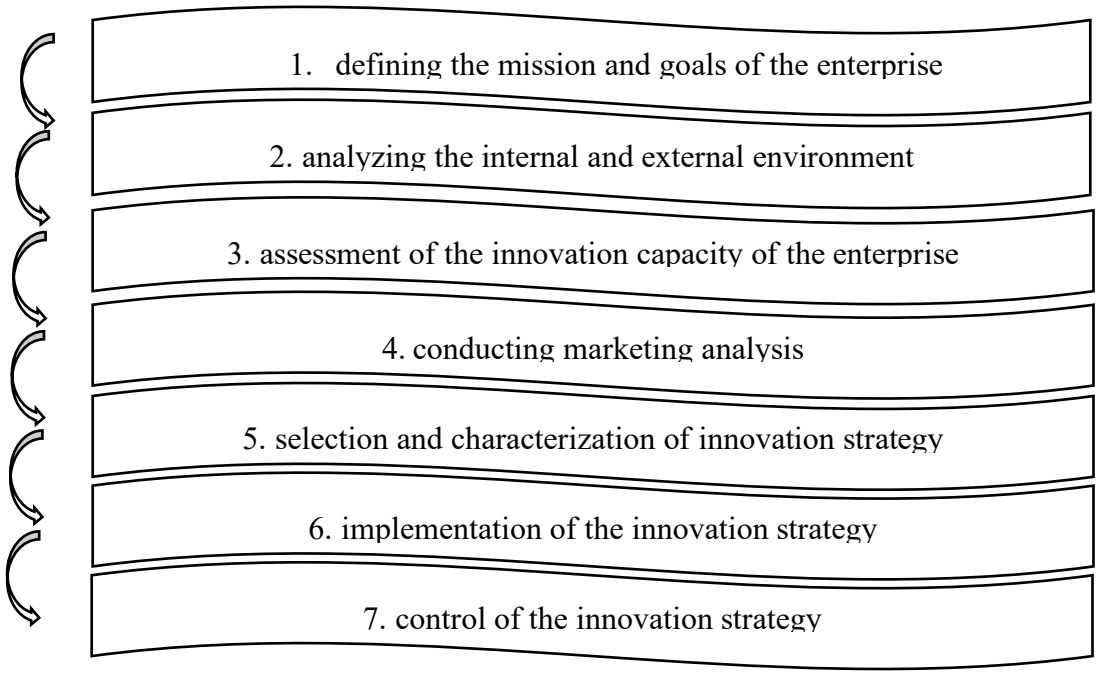

Figure 1. Stages of developing an enterprise innovation strategy.

Therefore, in order to develop an innovation strategy at an enterprise, first of all, it is necessary to define the mission and corresponding goals of the enterprise in order to form an idea of how these goals can be achieved. The general goals of the enterprise should take into account the areas of its activity, the operating principles of the enterprise in the external environment, as well as the culture, traditions and working climate at the enterprise. It is also necessary to take into account the clientele of the enterprise and what needs it can meet. After the company has defined its general goals, they need to be detailed. In order to be achievable, goals must be clearly stated, have specific units of measurement, and have a time frame within which the goals must be achieved. Over time, goals can be adjusted and refined to take into account the results of ongoing monitoring and situational changes. Also, the goals should not contradict each other and should be such that they can be achieved [3, p. 311].

The second step is to analyze the internal and external environments. This stage involves assessing changes that may occur in the planning period, studying factors that may be favorable for the enterprise, finding factors that may threaten the position of the enterprise. The external environment factors include the company's market position, socio-economic situation, development and characteristics of the industry, projected demand for products, and the behavior of competitors. The factors of the internal environment of the enterprise include the type of activity, mission and goals of the enterprise, experience in implementing previous strategies, the availability and development of innovative potential at the enterprise, and financial capabilities for implementing an innovative strategy. Particular attention should also be paid to those factors that are directly related to the ability of the enterprise to implement the chosen innovation strategy. To conduct an effective analysis of the internal and external environments of an enterprise, SWOT analysis is most often used. It will help to identify the main problems and threats of the enterprise and, based on the strengths and opportunities, determine the main actions to improve the efficiency of the enterprise. A logical complement to the SWOT analysis is the PEST analysis. It is used to diagnose the external environment based on the assessment and analysis of the political, legal, economic, socio-cultural and technological environments [12, p. 168].

The third step in developing an innovation strategy is to assess the innovation capacity of the enterprise. This includes an analysis of the financial stability of the enterprise, an assessment of the readiness of personnel for change, and an analysis of organizational and managerial changes. Assessment of the financial stability of an enterprise involves an objective analysis of the amount and structure of the company's assets and liabilities and determination of its independence and financial stability on this basis, as well as analysis of the compliance of the company's financial and economic

activities with the objectives of its statutory activities. It is necessary to analyze the readiness of the staff to introduce new innovations: to find out whether the staff has sufficient qualifications, necessary knowledge and skills, as well as motivation to develop and perform new tasks related to the development and implementation of the innovation strategy. This can be checked by conducting a questionnaire. The introduction of new technologies often requires a revision of the management structure, such as the creation of new departments, hiring more employees, changing the powers of employees, etc. Therefore, when analyzing organizational and managerial changes, it is necessary to find out what changes should take place in the management structure, powers, distribution of functions and powers for successful innovation activities [12, p. 169].

The next stage includes marketing analysis, which is an important thing in the development of an enterprise's innovation strategy. Market research provides a complete understanding of the current state of the market, nuances and segmentation of the target audience, incentives and motivation that should be involved in attracting and promoting the company's products and services.

The fifth step is the selection of an innovation strategy. This involves determining the basic development strategies and their innovative components, developing and evaluating alternative innovative strategies, and justifying the choice of the preferred innovation strategy.

The sixth stage is the implementation of the innovation strategy. At this stage, a strategic project and its implementation plan are developed, strategic control of the project implementation process is organized, the effectiveness of the implementation process is evaluated, and the necessary adjustments to the project, strategies, or goals are made.

And the last stage of developing an enterprise's innovation strategy is control. In general, control plays an important role in the process of forming an innovation strategy. Control ensures high-quality monitoring of the implementation of strategic plans and programs, monitoring the implementation of strategic changes and evaluating their effectiveness, making appropriate adjustments and regulating actions to improve strategic alternatives and technology for their implementation [5, p. 39].

The use of the proposed sequence of steps in management practice will make it possible to model the innovative strategies of the enterprise, to form a set of their options and to choose the most suitable options.

Thus, we believe that it is the observance of the proposed stages that will ensure effective strategic management for an enterprise. It is proved that the approach of American scientists to the stages of strategic management is the main one, and it is this approach that other scientists have begun to modify in their scientific works [10].

In the process of strategic management of an enterprise, there are a large number of principles that have an impact on this system. Among the key principles of this process are the following: the principle of purposefulness, the principle of systematicity, the principle of flexibility and the principle of effectiveness (see Table 2).

Thus, the importance of strategic management for organizations is determined by a large number of factors. First of all, it can identify and develop market advantages that are crucial for the competitive race of enterprises and build the right relationships with competitors.

In addition, strategic management is the basis for the development of the enterprise and provides it with the following advantages [14].

- increasing the level of adaptability of the enterprise to the changing environment;
- ensuring that the entire enterprise is focused on achieving the main goals and the main mission;
- timely detection of favorable and unfavorable changes in the environment of the enterprise;
- greater controllability of the enterprise due to the implemented strategy with a detailed set of tasks;
- timely detection of deviations from the plan, which allows to make the necessary adjustments to change the situation, etc. Implementation of strategic management by enterprises allows them to assess economic, technical and organizational prospects of production, their maximum capabilities and timely coordinate the work on the formation of business plans for corporate development.

Table 2. Principles of the strategic management process.

The principle of purposefulness
the strategy is aimed at a certain goal and at achieving a specific result.
The principle of continuity
strategic management is not a steady process, it must constantly evolve and adapt to changes in the organization's environment.
Systematic, comprehensive approach to strategy development and strategic management system in general
The need to achieve goals of different levels and different origins also entails different ways of achieving them, so it is necessary that the goals and the ways in which they are achieved do not contradict each other and are systematic.
The right sequence of stages
In general, some stages can be completed in parallel, but the general direction and the presence of a complex feedback system is a general principle that can lead to negative consequences if not followed.
Cyclicity
the stages of strategic management are repetitive in nature.
Uniqueness of strategic management systems
it is impossible to apply the same strategic management systems to enterprises with different activities and different structures and organization of work.
Flexible adequacy
of the strategic management system to changes and conditions of the enterprise. The strategic management system should be improved.
Use uncertainty of the future as a strategic opportunity
when planning strategic management, both a positive plan for future development and a negative plan should be available.
Efficiency and effectiveness
Aiming the strategic management system at achieving high results in the most efficient way possible.

Source: created by the author.

In general, strategic management coordinates the activities of an organization to prepare it for unpredictable changes. However, the use of strategic management requires a continuous analytical assessment of the potential and prospects for its use and goal setting.

When developing an innovation strategy, it should be remembered that there is no single correct approach to choosing a specific strategy, which necessitates constant adjustments to the chosen innovation strategy of the enterprise through the prism of a dynamic environment. At the same time, a clear understanding of the essence of the innovation strategy and its elements will make it possible to make the right choice, and the proposed strategy development plan will help to form an optimal strategic set, which, in turn, will contribute to the effective development of the enterprise.

We propose to consider the system of strategic planning measures on the example of BBM Trading LLC, whose main activity is the wholesale trade in mineral fertilizers imported from Poland. The main partners of BBM Trading LLC are such leading Polish factories as Fosfan, Grupa Azoty, Syarkopol and Alvernia. By importing their products to Ukraine, BBM Trading enables farmers to use only high-quality mineral fertilizers. In recent years, the company's operations have been characterized by a decline in sales, lower profits and, consequently, lower profitability.

Constant rapid changes in the company's environment, continuous improvement of information technology, increasing consumer demand, and the emergence of new offers in the target market determine the strategic development of the company. It is the strategy that determines the choice of possible ways of development and methods of action of the enterprise for the long term.

The strategic potential of an enterprise is a systemic reflection of its internal environment and consists of a system of resources, sources of their replenishment, capabilities and managerial abilities, so its formation should be based on the strategy of its development.

Assessing the state of the enterprise and the effectiveness of the chosen direction of development involves a study of the quality of management at the enterprise. For this purpose, a survey of managers of the enterprise was conducted to determine the level of use of management methods (Table 3).

Table 3. Results of the study of the level of strategic management of "BBM Trading" LLC.

Using the elements of strategic management	"BBM Trading" LLC
Mission statement	no
Enterprise development strategy	no
Long-term financial planning	yes
Long-term planning of activities	yes
Strategic planning - Modeling of economic activity of the enterprise - Calculation of enterprise development scenarios	no no no
Strategic analysis - analysis of financial indicators - conducting economic analysis of activities - analysis of the external environment - analysis of weaknesses and strengths of the enterprise	no yes partially partially partially

Source: created by the author.

"BBM Trading" LLC operates under conditions of limited use of strategic management tools. The company does not have an agreed mission and strategy. However, the company uses long-term planning of economic and financial activities.

In our opinion, in the short term, the use of long-term planning allows for an effective product sales policy, as evidenced by the growth of profitability and solvency, but it does not allow for planning activities for 3 to 5 years, which is a limiting factor for the company's development at an accelerated pace.

There are several strategic directions of the company's activities. Translating them to the enterprise under study, the first one is aimed at selling goods at the highest prices under the existing conditions, but with the smallest required quantity of supply of this product. The second direction is fundamentally different from the previous one, it consists in setting the lowest possible selling price, and the volume of supply, due to the growth of demand for products, increases.

Other strategies can be offered to the company. For example, the golden mean strategy. Its essence is to set the price somewhere in between the two positions mentioned above. There are other possible strategies with a shift in the price of the product and its production volume (in our case, the volume of supply) from the middle to one side or the other. The process of profit management depends on the application of existing factors and their consequences. The main task of economically competent management of the final result of production is to develop information support for planning and management decisions.

First, let's build an actual profile of the enterprise (Table 4). To do this, we need to determine which of the criteria is weaker (5) and which is stronger (1) for the enterprise under study, and we will depict this on the current enterprise profile. For example, we give 2 points each to the quality and distribution channels criteria, because the company imports only high-quality fertilizers from leading Polish plants and has a large established customer base of traders; 4 points to the financial position criterion, because the financial condition of the company is low and needs to be improved.

Having built the profile, it can be noted that the main problems of "BBM Trading" LLC are financial condition, advertising, competitiveness and image of the enterprise. Therefore, in order to further choose strategies, the company should pay attention to these aspects of its activities for further future development. That is why it is necessary to improve the financial situation and find new partners; conduct research and analysis of pricing policy; improve product promotion for a successful advertising campaign.

Table 4. Current profile of “BBM Trading” LLC.

Criteria	1 (strength)	2	3	4	5 (weakness)
Pricing policy					
Advertising					
Financial condition					
Personnel					
Competitiveness					
Image of the company					
Quality of goods					
Distribution channels					
Assortment items					

Source: created by the author.

Based on the current profile, let's build the necessary profile of the company “BBM Trading” LLC. After analyzing and setting the main goals and objectives of the enterprise, we can build the required profile using the same parameters and set new estimates for the future development and improvement of the enterprise (Table 5).

The next stage of strategic analysis is SWOT analysis. Its main purpose is to obtain accurate data on the company's capabilities and threats to its promotion in the market. To achieve this goal, the SWOT analysis has the following tasks: identifying opportunities that correspond to the company's resources; identifying threats and developing measures to neutralize their impact.

In general, SWOT analysis can be applied in a crisis situation, to a particular product, location or industry, etc. In general, it is about establishing the goal of the enterprise or project under analysis and identifying internal and external factors that are considered favorable or unfavorable for achieving the main goal [15].

SWOT analysis is used to establish the status and position of an enterprise in relation to its external environment and current role. This tool can be used as a basis for long-term planning or as a strategic management tool [15].

In today's unstable and constantly changing environment, in crisis situations, it is important to correctly identify the factors that need to be addressed immediately. To find these critical factors, consider the benefits of using SWOT analysis, a structured planning method used to assess the strengths, weaknesses, opportunities, and threats of an enterprise.

The advantages of this method include the ability to identify the strengths of the enterprise and compare them with market opportunities; identify the weaknesses of the enterprise and develop strategic directions to overcome them; determine competitive advantages and formulate strategic priorities of the enterprise.

Table 5. Required profile of “BBM Trading” LLC.

Criteria	1(strength)	2	3	4	5 (weakness)
Pricing policy					
Advertising					
Financial condition					
Personnel					
Competitiveness					
Image of the company					
Quality of goods					
Distribution channels					
Assortment items					

Source: created by the author.

Another advantage of SWOT analysis is the systematization of knowledge about internal and external factors that influence the strategic planning process; the ability to establish competitive advantages and formulate strategic priorities, and periodic diagnostics of the market and company resources.

Table 6. Evaluation of the external and internal environments of “BBM Trading” LLC by SWOT-analysis.

Strengths (S)	Weaknesses (W)
Trained staff; Long-term partnerships with regular customers; Presence in the emerging market Availability of warehouses across the country.	Mediocre delivery speed; Lack of strategic management; Dependence on suppliers; Supply disruptions.
Opportunities (O)	Threats (T)
The use of advertising; Steady demand for products; Import of new types of fertilizers; Cooperation with new suppliers.	Deterioration of the overall economic situation in the country; Severance of partnerships with regular customers; New competitors entering the market; Seasonality of activities.

Source: created by the author.

The analysis of the internal and external environment factors made it possible to form a clear list of the company's strengths and weaknesses, opportunities and threats. Thus, the company's strengths are: trained staff; long-term partnerships with regular customers; presence in the emerging market; availability of warehouses throughout the country.

The opportunities of "BBM Trading" LLC include the use of advertising; steady demand for products; import of new types of fertilizers; cooperation with new suppliers.

Weaknesses include the lack of strategic management; low delivery speed; dependence on suppliers; product supply failures.

Threats to the company under study include: deterioration of the general economic situation in the country; breakdown of partnerships with regular customers; entry of new competitors; seasonality of activities.

SWOT analysis has both advantages and disadvantages. Its main advantage is simplicity and the ability to spend little money to conduct it, as well as flexibility and the availability of many options. The disadvantages are: the inability to take into account absolutely all strengths and weaknesses, as well as opportunities and threats; some subjectivity in the choice and ranking of internal and external environment factors.

After analyzing the internal and external environments of the enterprise, creating a list of strengths and weaknesses, opportunities and threats, it is necessary to establish lines of communication, i.e. pairwise combinations. To do this, we build a SWOT matrix (Table 7).

Table 7. Matrix of SWOT-analysis of the enterprise "BBM Trading" LLC.

External environment / Internal environment	Opportunities:		Threats:	
	1. The use of advertising; 2. Steady demand for products; 3. Importation of new types of fertilizers; 4. Cooperation with new suppliers.	2 3 1 4	1. Deterioration of the overall economic situation in the country; 2. Breakdown of partnerships with regular customers; 3. New competitors entering the market; 4. Seasonality of activity.	1 2 4 3
Strengths:	SA: Increasing the number of regular customers by finding new suppliers and increasing the number to expand the product range. SP: More efficient use of warehouses to bring in more fertilizers, including new ones, to ensure constant availability of goods and increase sales.		SA: Loss of long-term partnerships with regular customers due to the deteriorating economic situation in the country. SP: Creating an advantage over competitors through better and cheaper logistics due to the availability of warehouses across the country.	
1. Trained staff; 2. Long-term partnerships with regular customers; 3. Presence in the developing market 4. Availability of warehouses throughout the country;		2 4 3 1		
Weaknesses:	SA: Creating a strategy to increase the range of products to increase the company's profit. SA: Finding more suppliers to reduce overall dependence on them.		SA: Creating a strategy that takes into account the possibility of changes in the external environment and makes it possible to reduce the impact of the economic situation in the country on the company. SP: Possible loss of some advantage over competitors due to lack of control over fertilizer supply.	
1. The speed of delivery; 2. Lack of strategic management; 3. Dependence on suppliers; 4. Supply disruptions;		3 1 4 2		

Source: created by the author.

Vertically, we enter the list of strengths and weaknesses of the enterprise with an assessment of their importance, horizontally we record the identified opportunities and threats of the external environment, also with an assessment of their importance for the enterprise. On the basis of the constructed matrix, to identify strategic problems and alternatives for the development of the enterprise in each field of the matrix, it is necessary to identify and analyze all pairwise combinations of strengths and weaknesses with opportunities and threats in the external environment, based on the assessment of the importance of these factors.

Diversification of services is an effective way to strengthen the competitive advantages of “BBM Trading” LLC. This will make it possible to improve the areas of activity on the basis of an expanded range of products that meet today's consumer demand.

Therefore, in the process of researching the SWOT analysis of the internal and external environments of the functioning of “BBM Trading” LLC, it was found that the following strategies should be applied to more fully realize the opportunities and strengths:

1) The strategy of further development of the program for establishing the supply of the commodity base and sales network with an increase in the company's market share, rapid growth of the market share and a positive change in market conditions.

2) A strategy to reduce the impact of seasonality by increasing demand for products, intensifying the advertising campaign, and rapid market growth.

3) A strategy for diversifying services, using competitive advantages to gain a larger market share.

The next stage of the strategic analysis of the enterprise is the SPACE-analysis. SPACE-analysis is a comprehensive method of assessing the company's position in the market and choosing the right development strategy, which allows the company to analyze the existing strategy of the company even when it exists in an uncertain form [1].

In the SPACE-analysis, there are 4 groups of systemic criteria for evaluating an enterprise (Table 8).

Table 8. SPACE-analysis of “BBM Trading” LLC.

№	Criterion	Evaluation, points	Weight	Weighted score, points
1	2	3	4	5
Financial position				5,05
1	Rate of return	6	0,2	1,2
2	Return on equity capital	4	0,3	1,2
3	Financial independence	6	0,1	0,6
4	Stability of profit generation	5	0,2	1,0
5	Fixed assets renewal rate	4	0,2	0,8
6	Resistance to financial risk	5	0,05	0,25
Competitiveness of the enterprise				4,25
1	Profitability of sales	3	0,2	0,6
2	Pricing policy	6	0,2	1,2
3	Quality of services	6	0,1	0,6
4	Customer loyalty	5	0,05	0,25
5	Level of marketing development	5	0,2	1,0
6	Market share	2	0,3	0,6
Attractiveness of the industry				3,9
1	Level of government influence on the industry	2	0,05	0,1
2	Stage of the industry life cycle	4	0,25	1,0
3	Overall attractiveness of the industry	4	0,3	1,2
4	The level of competition	3	0,2	0,6
5	Stability of profits	5	0,2	1,0

Table 8. Continuation.

1	2	3	4	5
Stability of the environment				4,8
1	Inflation	6	0,1	0,6
2	Variation in demand	5	0,3	1,5
3	Marketing and advertising opportunities	5	0,4	2,0
4	Level of innovation activity	3	0,2	0,6
5	Degree of influence of foreign capital	1	0,1	0,1

Source: created by the author.

Next, let's display the results of the weighted evaluations in the xy coordinate system, where each half of the x and y axes represents a corresponding group of criteria.

In order to calculate the vector of the recommended strategy, it is necessary to find the coordinates of the point P (x; y):

x = Attractiveness of the industry - Competitiveness of the enterprise = 3.9 - 4.25 = - 0.35

y = Financial condition - Stability of the environment = 5.05 - 4.8 = 0.25

The next step is to build the vector of the recommended strategy using the SPACE-analysis method at two points: O (0; 0) and P (-0.35; 0.25). The construction of this vector is shown in Figure 2.

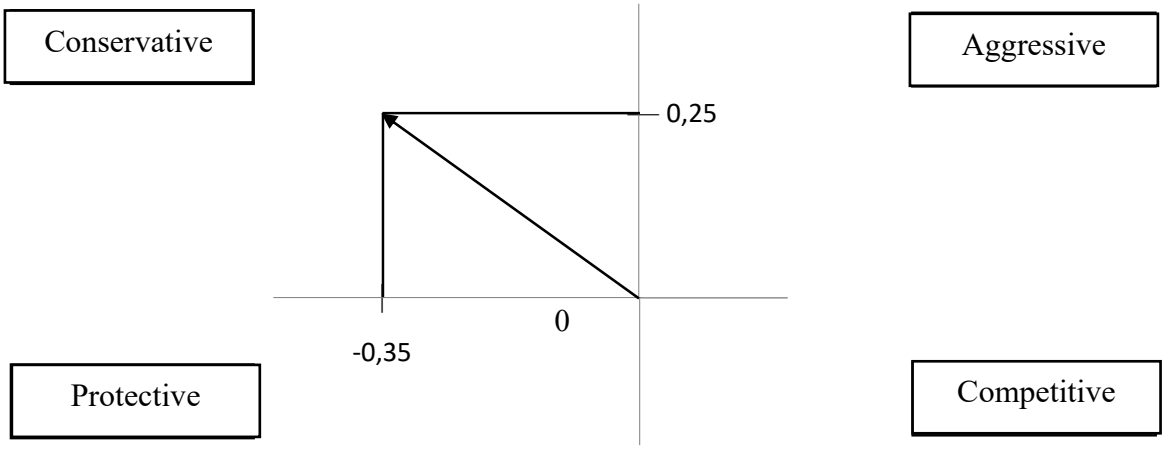

Figure 2. Diagram of the SPACE-analysis of "BBM Trading" LLC.

Source: created by the author.

The graph shows that the recommended strategy for the company "BBM Trading" LLC is conservative.

For the normal operation of the enterprise and its future development, it is necessary to: maintain the financial position; introduce new ways of selling and promoting goods; review and improve the pricing policy; improve the skills of employees.

To ensure the implementation of the chosen strategy, the following measures should be taken: increasing sales of the most profitable products; developing and implementing new strategies to attract potential consumers; organizing sales and exhibitions; improving the service culture; ensuring the completeness of the product range; optimizing inventory management; taking measures to speed up sales of goods, paying special attention to goods that are not in demand; ensuring a higher profit margin on the most profitable products.

In the case of low profitability on sales of goods, it is necessary to strive to accelerate the turnover of capital and its elements. In addition, the low level of business activity of the enterprise can be compensated only by reducing procurement costs or increasing prices for the goods, which will lead to an increase in sales profitability.

It should also be noted that the ways to improve performance depend on the type of activity of the company and the market in which it operates. Therefore, there are no universal, clear models for increasing profitability in the main areas of activity of a given company.

We believe that there are the following key problems in the formation of the profit management strategy of "BBM Trading" LLC:

- imperfect principles for determining the target profit amount;
- there is no effective turnover strategy that would really meet people's demand for goods;
- ineffective pricing policy, i.e. poor functioning of the system for determining the optimal price of goods, which results in optimal turnover and maximum profit;
- the lack of diversification of "BBM Trading" LLC's activities.

To improve the approach to creating a profit management strategy at the researched enterprise, we propose to use the following ways:

- integration of marketing and logistics to achieve competitive advantages;
- to create an online store as a way to diversify the enterprise's functioning.

In our opinion, the most priority and optimal for implementation, and the most attention should be focused on, are the cooperation of marketing and logistics and the creation of an online store. These two areas can have the most positive impact on increasing the company's profit in the shortest possible time.

The main reasons and phenomena that make cooperation between marketing and logistics essential for an enterprise are:

- Increased market diversification;
- increased competition;
- combination of economic processes with decision-making processes;
- development of new technologies.

The concept of logistics and marketing management is based on three elements: customer satisfaction, integrated marketing and logistics activities, and profit from the enterprise (Fig. 3).

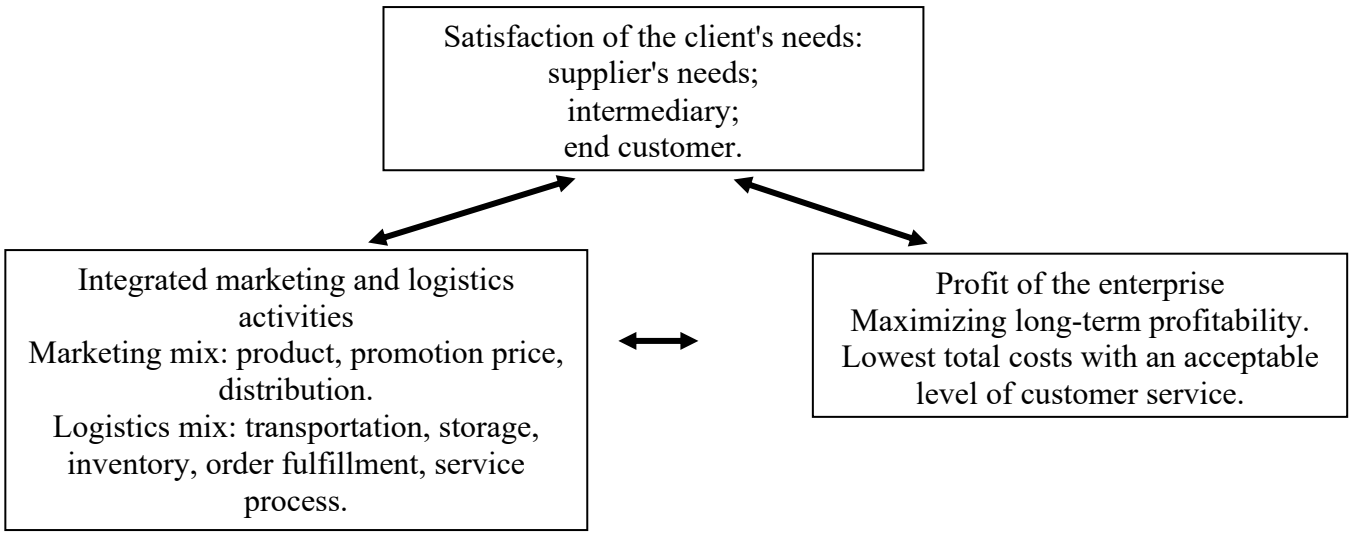

Figure 3. Marketing and logistics management concept at "BBM Trading" LLC.

Source: built by the author.

The goal of integrated management of the entire enterprise is to achieve the desired level of customer satisfaction at the lowest possible cost. Logistics and marketing management is, in its way, an expression of feedback and a combination of two management concepts: logistics, which is focused on the movement of material flows, and marketing, which is focused on market requirements. These two management concepts define the company's market strategy. The goal is to maximize the effect of each of these management concepts to gain a competitive advantage.

The precise prospects and effects of integrating logistics and marketing into a competitive strategy depend on the calculation of costs and market effects that form the basis for a long-term favorable market position. The cooperation of logistics and marketing strategies provides a number of strategic and competitive options.

These strategies can help to achieve competitive advantages, for example, through technological leadership, product innovation, service differentiation, lower operating costs, and lower prices. Various combinations of the above strategic and competitive elements can be used in the market or in certain market segments [2].

As a result, the combined effect of marketing and logistics contributes to the efficiency of strategic management at the enterprise. The common component of both of these types of enterprise activities is, first of all, the market. The task of marketing is to create a constructive dialog with the customer and develop strong relationships with him, which will allow logistics to contribute to the achievement of the company's goals, which are to provide the highest quality of service at the lowest cost. This leads to the fact that the distribution industry is the link between marketing and logistics. Distribution channels involve flows of goods and information, accompanied by various technical, economic, or administrative activities that require coordination and a holistic logistics approach.

The transition period to a market economy necessitates rapid changes in all subsystems of organizational entities and also leads to an increase in their competitiveness. All this can be achieved through the introduction of effective management systems at the enterprise that effectively use the opportunities and strengths of the enterprise, as well as eliminate its threats and weaknesses. A performance management system can help solve these problems. The effectiveness of using the potential capabilities of an enterprise is determined by the efficiency of the enterprise management system and its strategic level.

In order to develop the logistics and marketing strategy of "BBM Trading" LLC, we will build a tree of goals of the enterprise and depict it in Figure 4, which is created taking into account the overall strategic goal of the enterprise.

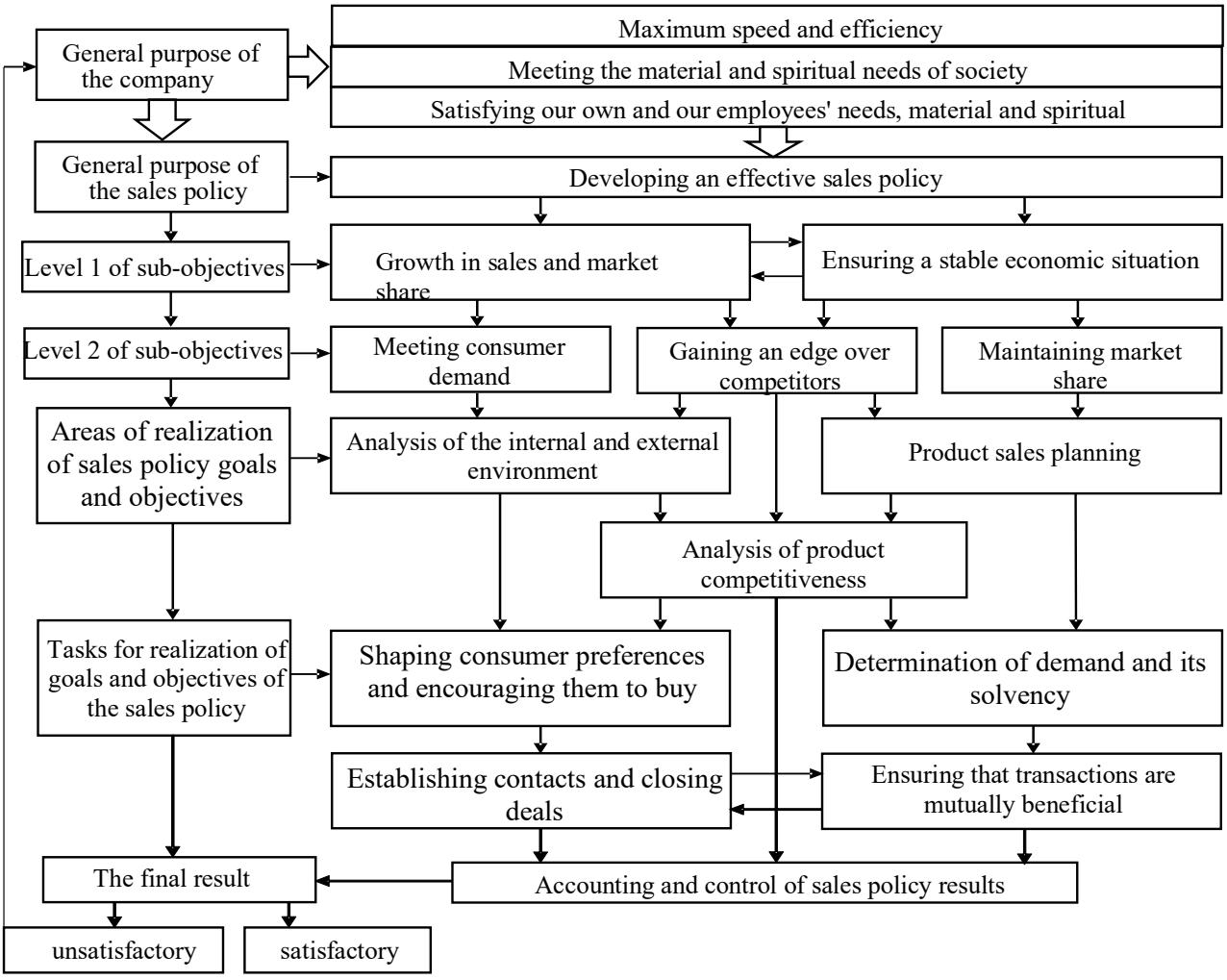

Figure 4. Goal tree of "BBM Trading" LLC for the formation of a logistics and marketing strategy.

Source: built by the author.

The main goal of the company's commercial policy has two sub-goals of the first level:
- turnover and market share growth;
- ensuring a stable economic situation for the enterprise.

Three sub-objectives of the second level are also necessary:
- satisfaction of customer demand;
- gaining advantages over competitors;
- maintaining a share of the regional market.

These goals are no less important for the company's sales activities and are further specified by instructions on how to achieve them, specific tasks, and monitoring of the results of the sales policy.

The main stages of developing a marketing and logistics strategy in the context of the company "BBM Trading" LLC should be (Fig. 5):

1) forecasting the market situation;
2) creation of long-term plans that describe the commercial activities of the enterprise;
3) creating a budget for trading activities;
4) determination of the rate of costs for sales activities;
5) reasons for choosing specific sales channels;
6) planning the entire process of product sales.
7) development of information support for trading activities;
8) statistical analysis of sales.

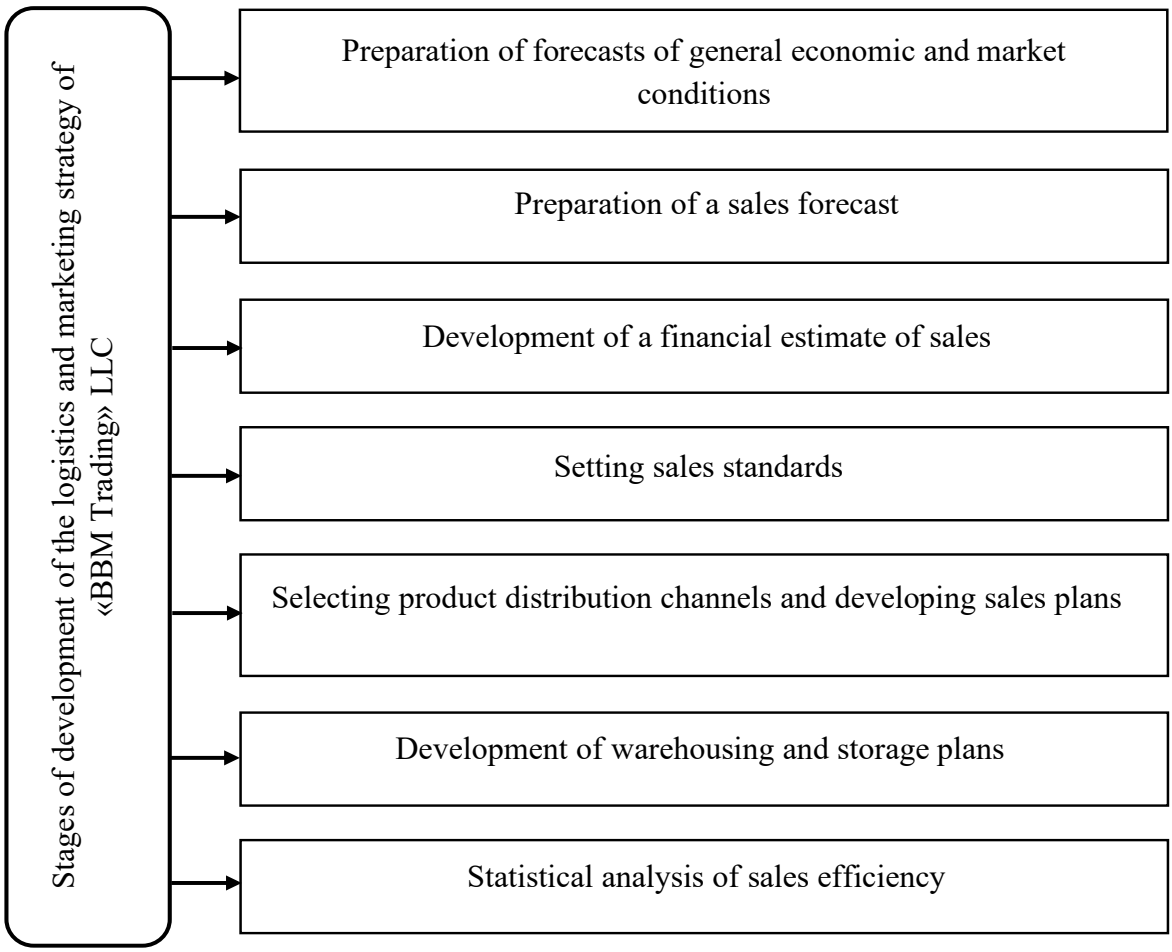

Figure 5. Stages of development of the logistics and marketing strategy for "BBM Trading" LLC.

Source: built by the author.

The development of logistics and marketing strategies of “BBM Trading” LLC is mandatory for

- Increase in income as a result of increased sales in physical terms;
- creating and maintaining a positive reputation of the company's products among regular and potential customers.
- creation and implementation of innovative products;
- integrated use of all promotion methods.

When developing a logistics and marketing strategy, the company's management must make several decisions, including

- determine the degree of stimulation and promotion of goods;
- segment groups to determine the directions of the incentive program;
- determine the timing of this program;
- draw up an action plan in accordance with the program designed for 60 specific groups;
- create a budget for the implementation of the proposed measures;
- evaluate the effectiveness of the selected sales promotion program;
- conduct a retrospective analysis of the planned activities and evaluate their effectiveness.

It is suggested that “BBM Trading” LLC use several methods of promotion simultaneously. The highest effect is achieved through the exchange of advertising and promotional materials. As sales increase, there are several things to keep in mind [8]:

1) the effect of production stimulation measures is achieved by the company only if the goals are correctly chosen and the product life cycle is taken into account;

2) the sales promotion program should have a specific duration. A short program is more effective.

Creating a strategy to stimulate logistics and sales in the researched enterprise will contribute to:

1) increase consumer interest in the company “BBM Trading” LLC and its products and increase the number of regular customers;

2) encouraging wholesale and retail consumers to cooperate with the enterprise;

3) increase sales in the future.

As the next step, we propose to introduce a mechanism for designing a promising product range, which will prevent the development of negative trends and processes that are possible if this aspect of the company's work is ignored. The general policy of producing a promising product range of the enterprise is as follows:

1) introduction of a system of restrictions on the supply of the enterprise's products;

2) conducting ABC analysis;

3) consideration of the set of elements of the nomenclature obtained as a result of the above actions as a potential variation of the intended product range of the enterprise;

4) calculation of estimates for each type of product and calculation of the total estimate and, depending on the cost, each type of product is assigned a certain place [13].

When restructuring the assortment, an external factor is taken into account, which is then used to identify those products that do not meet the requirements.

In its strategic planning activities, the enterprise should clearly describe the goal for each consumer, seller and retailer and take into account the potential consequences discussed above.

Thus, we have identified the expediency of parallel application of marketing and logistics strategies of the enterprise in the competitive struggle. In order to make this problem easier to solve, it is necessary to take into account the marketing strategy of the enterprise when developing the logistics strategy. The key stages of marketing and logistics development for “BBM Trading” LLC should be: forecasting market conditions, planning sales, budgeting sales activities, rationing trade costs, establishing sales channels, training in information support of sales activities, analytical processing of sales activities.

If the company finds new sources of income in other areas of economic activity, it is beneficial to apply such a direction of profitability policy as diversification. When the market in which an enterprise operates is declining and the business entity is forced to look for other types of activities, a diversification strategy is used.

In rare cases, this strategy is a necessity. A diversification strategy involves, first of all, the entry of an enterprise into new areas of activity for it.

E-commerce is the process of selling goods through specialized electronic platforms that allow consumers to place an order remotely.

The benefits of e-commerce development at the global level and at the enterprise level are obvious. Thus, government programs to support the development of technical support, the growth of health and education of the population provide an incentive for active trading activities, and economies of scale form a global trading platform that significantly increases the level of competitiveness of enterprises. Moreover, e-commerce stimulates the transformation of a number of activities, such as education, audit, marketing, and logistics.

We believe that the creation of an online store is a good solution to diversify our business. The percentage of online sales of various products is growing at a tremendous rate every year. The best solution is to order the creation of a website from an experienced IT company. Additionally, after the creation of the website, it is necessary to hire an experienced website administrator (with an education in the IT field and several years of experience) to ensure the quality operation of the online store. There are different types of websites, and depending on the type, the price for creating a website will differ.

Table 9. Cost of website development depending on its type.

Type of site	Website price
Landing or one-page website	up to 15 000
Business card site	up to 25 000
Corporate website	up to 45 000
Catalog site, product showcase	up to 60 000
Online store	up to 70 000

Source: developed by the author.

Creating an online store will help your company to solve such issues as:
- automation of the procedure for selling goods;
- acting as a showcase of the company's products;
- establishing an inventory of goods;
- an additional means for sales and increasing customer loyalty;
- the ability to see key profitability indicators.

The company's management expects that by 2024 the online store will have sales of goods equal to 25% of the total volume of goods and services, and by 2025 it will reach 35% of the total volume of goods and services provided.

The benefits of creating an online store are both for the company: reaching a wide target audience, analytics, automation, and for customers: the ability to shop 24/7, the ability to compare products, filtering, notifications of new products, and reviews.

In order for the created and proposed directions for increasing the efficiency of the profit management strategy of BBM Trading LLC to be actually implemented and contribute to the further successful operation of the enterprise, a high-quality and balanced financial and economic assessment of the developed recommendations is required. The action plan proposed for the company to implement the proposed recommendations should be assessed for the economic feasibility of its implementation. It is also important to analyze the impact of the proposed actions to improve the company's functioning over the next year. This will allow the company to avoid possible mistakes and negative consequences in the future.

We have determined that the main source of improving the efficiency of profit management at the enterprise is
- diversification of activities;
- development of a turnover strategy;
- research of market conditions;

- implementation of assortment policy;
- implementation of pricing policy;
- analysis of competitors;
- advertising campaigns.

In order to achieve this, we proposed to introduce a logistics and marketing strategy and an online store at BBM Trading LLC.

Thus, the use of long-term planning by this enterprise is due to the fact that it does not use strategic analysis, but only partial financial analysis and economic analysis, which, in turn, we believe, reduces the efficiency of management decision-making, which could be much better due to a full analysis of the internal and external environment.

In summary, it should be noted that the use of strategic management tools is extremely important in the current changing environment. One of the key issues in the use of strategic management is the development of business strategies for their further activities. These include stabilization, further development and reduction strategies.

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MODERN ASPECTS OF STRATEGIC MANAGEMENT OF AGRICULTURAL ENTERPRISES ON THE BASIS OF ACHIEVING SUSTAINABLE DEVELOPMENT GOALS

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Successful development of agricultural business in Ukraine in the current environment requires attention to key trends related to environmental, social and economic issues. The country is striving to improve its competitiveness in global markets, become a member of leading economic communities, and ensure a high level of quality of life and food security for its population. These tasks cannot be achieved without implementing the strategic principles of sustainable development, which are keys for most countries in the world, in the practice of agricultural management. To ensure a decent standard of living for present and future generations, it is important to introduce the concepts of sustainable development into the economic activities of Ukrainian agribusinesses now.

The agricultural sector has traditionally played an important role in the development of the Ukrainian economy, generating about 10 % of the country's gross domestic product (GDP) annually, attracting significant foreign investment in the development of the industry, playing a leading role in exporting products from Ukraine and meeting the demand for agricultural products on global markets, attracting tens of billions of dollars. The players in the sector are very diverse, both in terms of their business activities and size: from individual farms with a few hectares of land under cultivation to large agricultural holdings operating on areas of hundreds of thousands of hectares. The impact of the latter cannot be understated, given the scale of their operations, their contribution to the national economy and local economic situation, and their environmental impact.

The agrarian sector of the economy covers all types of agricultural production, processing and marketing of products, agro-service provision to producers, management of agricultural resources, etc. The modern operation and development of agricultural enterprises is impossible without the use of modern technologies, scientific achievements, innovations and quality standards to increase productivity, quality and profitability. This requires agribusinesses to continuously improve, learn and adapt to changes in global agriculture. In addition, agribusiness plays an important role in meeting the need for food and contributes to the sustainable development of the sector and the economy as a whole.

Determination of promising directions of enterprise development, analysis and selection of effective strategies and development of a set of specific actions for their implementation aimed at achieving the set tasks and ensuring the viability of the enterprise in dynamic conditions is a process of strategic management (Zheludenko, 2017). Strategic management of agricultural enterprises in a broad sense is a management activity aimed at defining the main goals and objectives of an agricultural enterprise; a set of decisions that ensures the achievement of certain goals or the fulfilment of certain tasks within a specified period, as well as provides appropriate rapid responses to changes in operating conditions.

In September 2015, as part of the 70th session of the UN General Assembly, the UN Summit on Sustainable Development and the adoption of the post 2015 Development Agenda took place in New York, where new development benchmarks were approved. The outcome document of the Summit, Transforming Our World: The 2030 Agenda for Sustainable Development, approved 17 Sustainable Development Goals (SDGs) and 169 targets (National Report "Sustainable Development Goals: Ukraine", 2017).

The SDGs are a universal call to action to reduce poverty, protect the planet and ensure that by 2030 all people live in peace and prosperity:

1. Eradicate poverty.
2. Ending hunger.
3. Good health and well-being.
4. Quality education.
5. Gender equality.
6. Clean water and proper sanitation.
7. Affordable and clean energy.
8. Decent work and economic growth.
9. Industry, innovation and infrastructure.
10. Reducing inequality.
11. Sustainable development of cities and communities.
12. Responsible consumption and production.
13. Mitigating the effects of climate change.
14. Conservation of marine resources.
15. Protection and restoration of terrestrial ecosystems.
16. Peace, justice and strong institutions.
17. Partnership for sustainable development.

Ukraine, like other UN member states, has joined the global process of ensuring sustainable development. To establish the strategic framework for Ukraine's national development until 2030, an inclusive process of adapting the SDGs was launched based on the principle of "Leave No One Behind". Each global goal was reviewed taking into account the specifics of national development. During the first year after the adoption of the SDGs (2016), a number of national (4) and regional (10) consultations were held in Ukraine. The results of the consultations suggest that the national SDGs will serve as a basis for integrating efforts to ensure economic growth, social justice and environmental management (National Report "Sustainable Development Goals: Ukraine", 2017).

An inclusive process of defining the national SDGs and targets for achieving them by 2030 took place in 2016 in four areas: equitable social development; sustainable economic growth and employment; good governance; and environmental balance and resilience building. The social vision of Ukraine's development until 2030 includes such benchmarks as the welfare and health of the population, which will be ensured by innovative economic development based on the sustainable use of natural resources. The structure of exports is expected to change to shift from raw materials and primary processing products to products and services with a high degree of added value. Economic growth will be based on a green economy model. Energy saving measures and the use of energy-efficient practices should significantly reduce the energy intensity of GDP. The share of clean energy production will steadily increase, primarily replacing traditional technologies, which will significantly reduce greenhouse gas emissions. This will help to improve the quality of life of the population without harming the environment and will be a significant factor in increasing life expectancy (National Report "Sustainable Development Goals: Ukraine", 2017).

In September 2019, the Decree of the President of Ukraine "About the Sustainable Development Goals of Ukraine for the period up to 2030" declared that the SDGs for the period up to 2030 are guidelines for the development of draft forecast and programme documents, draft regulatory acts to ensure the balance of economic, social and environmental dimensions of sustainable development of Ukraine (About the Sustainable Development Goals of Ukraine…, 2019). Integration of the SDGs targets into public administration contributes to the development of the capacity of state institutions responsible for national development in the thematic areas of the SDGs.

On 25 September 2019, during the Leaders' Dialogue at the UN Summit on the SDGs at the 74th session of the UN General Assembly, the President of Ukraine Volodymyr Zelenskyi noted that Ukraine is committed to its commitments to the Sustainable Development Goals, has created a national strategic framework for their achievement and developed mechanisms for implementing the SDGs targets and monitoring them. When Ukraine started the inclusive process of achieving the SDGs, each global goal was considered taking into account the specifics of national development and 86 targets were identified (UN Summit ..., 2019).

The goal of ensuring sustainable development in the EU in an institutional format is achieved through a combination of vertical and horizontal approaches to governance. Horizontal coordination involves a holistic view and coordination of common agricultural, social and environmental policy mechanisms. The central body of the EU Commission defines political commitments and a common strategy for sustainable development, while interagency groups are formed at the working level under the leadership of the General Secretariat. A special working group, the Council's 2030 Agenda for Sustainable Development ("Council WP 2030"), was established in 2017, as well as a system of partner organisations and platforms such as the Sustainable Development Observatory (SDO), digital platforms (MSP), information and analytical associations and expert groups. Online consultation platforms are becoming a widespread tool for horizontal institutional influence, bringing together government, society, think tanks and business (Institutional Mechanisms ..., n. d.).

The vertical approach to institutional governance of sustainable development includes specialised agencies and ministries of European countries responsible for implementing sustainable development goals and programmes. The institutional mechanism within the EU operates in three main areas: defining commitments, developing strategies and monitoring their implementation.

The key instruments of the mechanism are:

1) leadership;
2) horizontal and vertical coordination;
3) active participation of stakeholders;
4) transformation and improvement of the knowledge system;
5) budgeting;
6) evaluation of the impact of factors and results;
7) a system of social responsibility and standards.

In 1962, the EU adopted the Common Agricultural Policy (CAP). This policy deals with food, the environment and the countryside. The CAP is a partnership between society and agriculture, and between Europe and its farmers, which ensures a stable food supply, guarantees farmers' income, protects the environment and supports rural livelihoods. The CAP aims to:

- supporting farmers and improving agricultural productivity to ensure a stable supply of affordable food;
- protecting EU farmers so they can earn a reasonable living;
- helping to combat climate change and to manage natural resources sustainably;
- supporting rural areas and landscapes in the EU;
- keeping rural economies alive by promoting job creation in agriculture, agricultural food industry and related sectors.

The CAP is a common policy for all EU countries, managed and financed at the European level from budgetary resources (Korinets, 2023). On 2 December 2021, the CAP reform agreement was officially adopted. The new legislation, which came into force in 2023, paves the way for a fairer, greener and more productivity-oriented CAP. It will aim to secure a sustainable future for European farmers, provide more targeted support to small farms and give more flexibility to EU countries to adapt measures to local conditions. Agriculture and rural areas are central to the European Green Deal, and the new CAP will be a key tool in achieving the ambitions of the Farm to Fork Strategy and the 2030 Biodiversity Strategy (The European Green Deal, n. d.; Biodiversity strategy for 2030, n. d.).

In implementing the targets and achieving the SDGs in the European area, it is important to increase financial support for agriculture and rural areas. Under the EU CAP, these goals are supported through the European Agricultural Fund for Rural Development (EAFRD). The EAFRD budget for the period 2022–2027 is more than EUR 95.5 billion and provides for the transition to a new common agricultural policy of the EU in the period from 2023 to 2027. This policy is focused on key sustainable development goals and is in line with the concept of further development of the agricultural sector "Green Deal".

In line with long-term global goals, objectives and priorities, each member state of the European Union is developing a new strategy for the development of the agricultural sector and rural areas. In addition to joint budgetary funding from the European Agricultural Fund for Rural Development

(EAFRD), each country makes commitments to institutional financial support for sustainable rural development. These commitments include the allocation of 10 % of national budget expenditures for income redistribution in favour of small and medium-sized farms, at least 3 % of payments for investment support for young farmers, 10 % of funds for biodiversity support and 15 % of operating costs for environmental protection (The common agricultural policy: 2023–27, n. d.).

The financial component of the mechanism of institutional support for sustainable agricultural development in the EU is supplemented by Horizon Europe funds in the amount of an additional EUR 10 billion (Horizon Europe, n. d.).

The institutional mechanism of state support for the implementation of the principles of sustainable development in practice is based on a combination of several key principles. These principles include a commitment to achieving the set goals, coordination between different agencies and stakeholders, participation in partnerships to achieve the goal together, financial support for projects and initiatives based on knowledge and expertise, continuous monitoring of results and continuity of implementation of measures (Europe's approach to implementing..., 2019).

The Organisation for Economic Cooperation and Development (OECD) identifies the following as the main institutional factors for achieving sustainable development:

1) raising awareness of sustainable development issues among the population, business, and governments;

2) ensuring commitment to the ideas of sustainable development at all levels of management of social and economic processes;

3) achievement of leadership of governance centres and governments in the process of defining strategic priorities for development and support;

4) active motivation to achieve the goals, objectives and indicators of sustainable development;

5) close connection between goals, decisions and actions;

6) use of budgetary processes in solving the tasks set;

7) development of an administrative culture of cross sectored cooperation and dialogue.

It should be noted that currently there is no systemic legal document in the field of agricultural policy in Ukraine, so its development is of particular relevance in the context of the implementation of the EU–Ukraine Association Agreement, especially after Ukraine becomes a candidate for EU membership (Korinets, 2023).

The State Strategy for Regional Development for 2021–2027 indicates that in recent years, some regions have come close to a demographic crisis, with rural areas suffering the greatest losses, as the problem of depopulation of such areas is urgent. The risk of poverty is growing among women living in small towns and rural areas. It also emphasises the need to implement climate change adaptation measures to minimise the negative effects on agriculture (State Strategy..., 2020).

An action plan for 2021–2023 to implement the State Strategy for Regional Development for 2021–2027 was also adopted, but its implementation is currently difficult to talk about due to a lack of resources, and it is likely that both the strategy and the plan may be transformed due to the challenges posed by russia's war against Ukraine.

The keys benchmarks of internal corporate institutional support for the implementation of sustainable development concepts of domestic business entities in the agricultural sector in the near future should be:

1) change of the paradigm of thinking and perception of the concept of sustainable development by business, staff, and consumers of agricultural products;

2) forming a system of common goals, priorities and objectives for the development of agribusiness, rural areas and society;

3) creation and increase of value and its part in the sectored agro-food chain;

4) satisfaction of economic interests of owners and investors, taking into account the interests of society, personnel, rural population, present and future generations;

5) intensification of the processes of implementing social responsibility programmes to the society and the company's employees;

6) transparency, high level of trust, responsibility and social nature of agribusiness;

7) gaining long-term competitive advantages based on fundamentally new values of sustainable development of agribusiness and rural areas;

8) corporate social reporting (Pugachev, 2021).

The specification of the Global Goals for agribusiness enterprises allows us to determine that they are aimed at:

- ensuring food security;
- sustainable production based on resource-saving technologies and organic production;
- preservation of soil fertility, natural resources and biodiversity;
- development of rural areas and improvement of the living standards and quality of life of the rural population;
- promoting the development of family farms.
- compliance with social responsibility standards;
- innovative orientation of agribusiness.

In the current context, adjusting the strategic goals and objectives of agribusiness in Ukraine, especially for small and medium-sized enterprises, is fundamentally important. Large agribusinesses are actively involved in the practice of implementing sustainable development objectives, and Ukrainian agricultural holdings are already taking into account the main provisions, requirements and principles of sustainable development used by EU countries.

Today, Ukraine's agricultural sector accounts for 14 % of gross value added and over 40 % of Ukraine's exports, and Ukrainian agricultural products are known in almost 200 countries. The country holds leading positions in global markets in terms of exports in such industries as sunflower oil, corn, oilseeds, barley, wheat and others. However, due to increasing globalisation and trade liberalisation, Ukraine's agricultural sector needs to adapt to the ever-changing environment and further improve its agricultural policy. An analysis of key trends shows uneven development of the sector, accompanied by various economic and political crises. The country's economy has undergone significant changes since independence, requiring an updated system of strategic planning and forecasting of the food industry. In this context, the Sustainable Development Goals have become an important driving force influencing the direction of the agricultural sector's development (Voznesenska, 2023).

Strategic management in agribusiness based on the SDGs involves the development and implementation of strategies that promote efficient agricultural management, while ensuring food security, preserving the natural resources of agricultural ecological systems, improving product quality and complying with social standards.

We support the view that science, innovation and modern digital technologies, as well as sufficient financial support for strategic and ongoing development programmes, should become key tools for achieving the goals of sustainable development of agriculture and rural areas in the context of the Global Goals (Kriukova, Stepanenko, 2022).

With the outbreak of military aggression by the russian federation, Ukraine's agricultural business, like all other entities in the country, faced unprecedented challenges and obstacles. In the first three months of the war alone, losses in the agricultural sector exceeded USD 4,3 billion, which is 15 % of the country's capital, and indirect losses due to rapid inflation, reduced production volumes, higher prices for inputs, and blocked logistics reached USD 23,3 billion (KSE Agrocentre, 2022). Despite these circumstances, the domestic agribusiness remains a priority sector, for the restoration of which it is planned to allocate $37 billion over 10 years in the post-war period in accordance with the project for the reconstruction of Ukraine (Ukraine's recovery plan …, n. d.).

In our opinion, in the process of recovery, the importance and role of strategic management of agricultural enterprises will only increase, and the goals of sustainable development will become directly strategic goals for agricultural business representatives.

The main principles of strategic management of agricultural business on the basis of achieving the SDGs can be summarised as follows:

1. Economic sustainability: strategies should be aimed at increasing the profitability and competitiveness of agribusiness enterprises, while optimising costs and using modern economic management methods.

2. Social responsibility: management should take into account the needs and expectations of consumers and society as a whole. Ensuring quality products (primarily agrifood raw materials) and taking into account ethical aspects of production are important for building public trust and confidence.

3. Resource conservation: the use of agricultural technologies and methods that optimise the use of natural resources, reduce pollution, emissions and minimise negative environmental impact.

4. Innovations: development and implementation of new agricultural technologies and approaches that increase productivity and reduce costs (Khromushyna, 2023).

These principles of strategic management in the agricultural business take into account the balance between economic, social and environmental aspects, and their observance will contribute to the sustainable development of the industry, ensure a balanced development of society and meet the goals of sustainable development.

Let us consider the strategic directions of agricultural enterprises in the context of sustainable development. The first of them, as mentioned above, is ensuring food security. Food security is characterised by guaranteed provision of all members of society with high-quality, environmentally safe and clean food to meet physiological needs, maintain physical and mental health of the population on the principles of environmentally balanced use, preservation and reproduction of the environment (Khromushyna, Konieva, Skrypnyk, Shalyhina, 2018).

One of the most important tasks at the current stage of market relations is to ensure the sustainable development of agricultural production capable of ensuring the country's food security. Agricultural production is carried out with high energy and labour costs per unit of output, with significant losses of already produced products. A successful solution to this problem requires mobilisation of all factors of agricultural development (Oriekhova, 2018).

The current reality confirms the necessity, importance and dependence of food sufficiency and security on the effectiveness of strategic management of agricultural enterprises. In addition, food security is a key component of the national security of the state as a whole. In its turn, it depends on the level of economic and environmental security both at the level of individual agricultural enterprises and at the state level.

Strategic management of agrarian enterprises can be viewed as a process of targeted influence of the management subject (state institutions, owners, managers) on the management object (enterprise, business unit) to ensure the implementation of the agrarian business development strategy and achievement of strategic goals (both at the state and individual enterprise levels), the main of which is food security. From a practical point of view, such management is carried out on the basis of a set of measures aimed at ensuring the mission, making the necessary strategic decisions, implementing strategic plans, assessing the degree of achievement of strategic goals, and adjusting actions if necessary.

The specifics of agricultural enterprises, the possibilities of sustainable production, the quality of agricultural products, dependence on agro- and ecosystems determine the peculiarity of strategic management in the sector. There is a popular opinion in public and academic circles that the environmental state is determined by the level of economic development, environmental education and environmental management in the country. At the same time, today we can confidently say that the vector of dependence has changed its direction, i.e. a purely consumerist attitude to natural resources, and the prolonged neglect of environmental imperatives in economic activity have led to the fact that the environmental state will determine the opportunities for economic and social development.

In addition, over the past two decades, economic science has developed a trend that defines the economy as a dependent component of the natural environment within which it exists and is part of it - the “green economy”. The green economy theory is based on the following axioms:

1) it is impossible to infinitely expand the sphere of influence in a limited space;

2) it is impossible to demand that infinitely growing needs be met with limited resources (Rohozhyn, Khlobystov, Trofymchuk, 2015).

Recent years have demonstrated the need for sustainable food systems that can withstand and recover from shocks, adapt to the effects of climate change and respond to them in a way that ensures food security and provides the population with sufficient quality food.

To ensure sustainable development, the most sustainable model of the agricultural sector is organic farming. Organic farming as an independent trend started in the 1940s in the United States and Europe as a counterbalance to the dependence on synthetic fertilisers and plant protection products. Jerome Irwin Rodale, the founder of the Organic Farming and Gardening magazine (1942, USA), was one of the first to popularise the term, emphasising that organic products are the healthiest (Bonnard, 2001).

Organic production in Ukraine is also developing rapidly. The production of organic agricultural products is one of the leading and most promising forms of management in the agricultural sector of the country's economy with the most intensive development of environmentally oriented activities (Shkuratov, Chudovska, Vdovychenko, 2015). Therefore, it is worth noting the current trends in the development of organic production in the agricultural sector of the economy as a whole:

- growth of the area and producers of organic products;
- gradual increase in yields (after the end of the transition period), which indicates a more complete use of existing reserves of cultivated land and the use of innovative technologies in organic production;
- growth of domestic sales markets;
- increased environmental awareness of the population due to deterioration of health and environment;
- steady growth in demand for organic products.

As more and more countries around the world switch their agricultural production from chemicals and antibiotics to organics and biological products, the agricultural business based on organic production is not a fashion trend, but a matter of physical health, safe living for contemporaries and future generations in a habitable environment. Ukraine currently regulates the production, circulation and labelling of organic products at the legislative level (On the basic principles and requirements for organic production …, 2018). For further development of organic production in Ukraine, in addition to improving the regulatory framework in line with the requirements of the EU, it is necessary to create an effective business environment, provide professional training in line with market demands, and create an information space for potential consumers and producers about the benefits of organic products (Maslak, 2017). In our opinion, the future of agricultural business in Ukraine lies in organic production. Therefore, the main vector of the development strategy of agricultural enterprises and strategic management in the field of agribusiness should be organic production, which will ensure not only compliance with environmental imperatives but also contribute to the economic development of the agricultural sector.

Ukraine currently has untapped agricultural potential on the world market. Given its geographical, natural and climatic conditions, the country has the potential to become one of the leading suppliers of agricultural products to global markets. Given the urgency of the problem of food shortages in the world, it would be advisable to create and promote the brand "European Bread" or " "Feeder of the World", which in the long run will help transform Ukraine into a leading European agro-industrial power and consolidate the brand of a country that supplies high-quality agricultural products in the minds of the world community (Kyrylov, 2016). Of course, the military aggression of the russian federation, which threatens, among other things, global food security and uses the threat of hunger as a weapon, has become a devastating obstacle to the formation of such a brand today.

Today, it is a well-established scientific position that the foundation of balanced and sustainable development should be an organically interdependent, dialectically interconnected tandem of the environment and the socio-economic system, which can be considered as a state of ecological and economic security. Strategic management of agricultural enterprises on the basis of ecological and economic security (economic development taking into account the requirements of environmental security: environmentally friendly products, environmentally friendly agricultural ecosystems, environmentally friendly production) should be a process directed by top management to define the main goals and objectives (both from the business and food security perspectives), a set of solutions that ensure the achievement of goals and objectives within a certain period.

Against the backdrop of recent events in the context of external military aggression, it is clear that the development strategies of agricultural enterprises that have been developed and adopted for

implementation have changed, and in some places their activities have been suspended altogether, and management is carried out in conditions of surprise and uncertainty, and has moved to an anti-crisis format. Ukraine has experienced a certain loss of agro-export potential, which has put the food security of some import-dependent countries at risk. Nevertheless, it is safe to say that after the end of the aggression, during the period of economic and business recovery, the role of strategic management of agricultural enterprises will increase.

Under normal circumstances, agricultural enterprises operate in a dynamic environment characterised by uncertainty, competition, development of technological innovations, changing consumer needs and requirements of the agricultural market. At the same time, the main criterion for the performance of an agricultural enterprise is its competitiveness, which is a form of manifestation of the degree of realisation of its potential ability to form, maintain and use sustainable competitive advantages (Brodskyi, Nykoliuk, 2011). In order to ensure a high level of competitiveness and the formation of competitive advantages, business entities should develop a strategy for their activities in the form of a long-term comprehensive development plan with specific measures for its implementation.

Since agrarian production is characterised by a significant number of elements, processes and a complex form of interrelationships between them, the strategic management of an agricultural enterprise should be carried out on the basis of the formation and implementation of a strategic set, which is a certain list of interrelated strategies and generally represents a holistic development strategy. Thus, the modern strategic set of agricultural enterprises can be considered as a system of different types of strategies that determines the development of the enterprise in different directions through a set of appropriate supporting measures aimed at achieving strategic goals that will determine the competitive position in the external environment.

The guarantee of effective activity of an agrarian enterprise is a competitive strategic set of mutually agreed strategies, adapted to the conditions of functioning and aimed at achieving a high competitive position (Holik, 2015). It should be noted that there can be no two identical strategic sets used by agrarian enterprises, due to different conditions of the internal and external environment of each of them.

Generalisation of modern scientific theoretical and methodological approaches to strategic management of enterprise on the basis of formation of a competitive strategic set gives grounds to allocate existing management strategies according to the following classification criteria:

1. By hierarchy in the management system: corporate (general), competitive (business), functional and operational strategies.

2. By the stages of the business life cycle: growth (development) strategies, stabilisation (sustainability) strategies, survival strategies.

3. By competitive position in the market: leader's strategy, challenger's strategy, follower's strategy, newcomer's strategy.

4. By the nature of market behaviour: active and passive strategies.

5. By market entry status: follower strategy and innovator strategy (Yakubiv, Boryshkevych, 2017).

The follower strategy is a strategy of an agricultural enterprise that brings an already known product to the market, and the formation of such a strategy is based on the model of already developed strategies of competing enterprises. This strategy can take the form of a monopolist strategy for a particular territory, which involves bringing a new product to the market for a particular territory, as well as a general strategy when an enterprise brings to the market a product already known for a given area.

The innovator strategy involves the creation of an innovative product using innovative technologies. In the context of this strategy, one can distinguish between a unique proprietary strategy, which involves launching a unique product that has no analogues in the world, and a strategy of borrowing foreign experience, which is characterised by launching a product based on foreign experience, but which has no analogues in the domestic market.

Therefore, the formation of a strategic set of an agricultural enterprise should be object-oriented and dynamic, as it should take into account the state, changes and impact of the external and internal environment on the functioning of the enterprise.

As early as the last century, academic and business circles in Western economics believed that the economy could not be developed beyond the capacity of agriculture (Khromushyna, 2021). The resource potential of agricultural enterprises determines the possibilities of their development.

As noted above, current global trends indicate that the development of agricultural enterprises and the future belong to organic agricultural production, the functioning of which is possible only on the basis of compliance with the requirements of environmental and economic security. Therefore, the content of the strategic management of the resource potential of agricultural enterprises should be formed by management decisions aimed at expanding the reproduction of agricultural production, creating conditions for increasing its competitiveness, further development of organic production, and promoting the ideology of the "green economy" in agricultural production.

O. Ulianchenko, an authoritative national researcher, defined a strategy for the development of the domestic agricultural sector of the economy based on improving the efficiency of resource potential management (Ulianchenko, 2008). An appropriate mechanism for such management should include management tools distributed among financial, material, and labour subsystems. These instruments should be of certain integrity and interact on the basis of the functions of use, distribution, availability and reproduction of resources (Dovhal, 2016).

Strategic management of the resource potential of agricultural enterprises (as a process of making and implementing strategic decisions on the formation and use of resource potential based on the setting of strategic goals and objectives in a changing environment and uncertainty) should be based on an integrated approach, taking into account the impact of natural and climatic features, the ability of natural assimilation and should promote the self-renewal of natural resources. The implementation of strategies for the formation and use of the resource potential of agricultural enterprises should be based on the implementation of measures to green production in order to reduce the negative anthropogenic and man-made impact on the environment (Vishnevska, 2011).

The resource potential of agricultural enterprises should be represented by three components: 1) natural and biological resources; 2) labour resources; 3) property and financial resources (Zhybak, Kuzmovych, 2009). Today, it is a well-established scientific opinion that under modern conditions, the foundation of balanced development is the organically interrelated and interconnected tandem of the environment and the socio-economic system (the state of ecological and economic security). The strategy of economic development of agricultural enterprises, taking into account the requirements of environmental safety, is determined by the availability and level of use of resource potential. At the same time, achieving an environmentally safe state of economic development of agrarian enterprises will contribute to ensuring expanded reproduction, and thus to the formation of their resource potential.

Since a sign of management quality is its effectiveness (as the level of achievement of the desired state of the object of management), effective strategic management of the resource potential of agricultural enterprises can be defined as such management that will ensure the full use and reproduction of the resource potential due to the synergistic effect of using its components. This will be facilitated by a rational and appropriate ratio of financial, labour and material resources, and the use of environmentally friendly innovative technologies in agricultural production.

The strategic development of agricultural enterprises depends on the social component, which includes labour resources and staffing. At present, it is possible to note the interdependence of the possibility of strategic development and implementation of strategic management of an agricultural enterprise, on the one hand, and the level of social development, quality of life of the population, quality and quantity of personnel, on the other.

The effectiveness of the strategic management of agricultural enterprises on the basis of achieving the goals of sustainable development and in the context of rural development, improving the quality of life of the rural population should be assessed by the following criteria

- availability of quality food for all segments of the population;
- balanced nutrition;
- ensuring the energy level necessary for the human body;
- improvement of the demographic and migration situation in rural areas;
- social security of employees and their families.

The agricultural sector, in the context of modern development and intensification of production, changes the intensity and nature of its impacts on the state of the land, climate, safety and health of the population. In this context, the agricultural business is responsible for its actions, which affects the interests of many stakeholders.

Non-financial reporting is a tool for communicating how an agricultural company manages its impact on society, the economy and the environment. The impact on society arises through the activities of agribusiness enterprises, which is especially relevant for large businesses as a serious player, which have a much larger number of instruments of influence in their hands than, for example, scattered individual or small farms. With high-quality and thoughtful preparation of non-financial reporting, stakeholders can obtain information sufficient to understand how responsibly the company acts, whether it is mature in its approach to risk management, and whether it is committed to sustainable development (AgroPortal 2021).

According to the AgroPortal website, we have an opportunity to analyse what tools and formats of non-financial reporting on corporate social responsibility (CSR) and sustainable development are used by the largest companies in the Ukrainian agricultural sector in terms of land bank size. In particular, "Kernel" (with a land bank of 530 thousand hectares) is one of the leading players among agricultural companies operating in Ukraine and contributing to the sustainable development of the country as a whole and its regions. The company is working hard to implement best practices in the agricultural sector, confirming its reputation as a reliable and proactive business that cares about the future not only in terms of profitability but also in terms of positive impact on the economy, social sphere and environmental protection. The fact that the company's shares are listed on the Warsaw Stock Exchange and that it makes investments with credit funds from international financial market players plays a significant role in this regard, which imposes corresponding obligations on the company's business. For many years, Kernel has been disclosing information on sustainable development in its annual report, using the Global Reporting Initiative (GRI) approaches. The company has undergone an independent assurance procedure to ensure that the sustainability information in the non-financial part of the report complies with the GRI Standards.

"Ukrlandfarming" (land bank – 500 thousand hectares) is engaged in crop production, livestock farming and food production. Although the company does not report on its sustainability practices, it has a section on its website dedicated to sustainability.

"MBP" (land bank – 370 thousand hectares) is engaged in growing grains and oilseeds, livestock, meat processing, feed production and other activities (biogas production, reinforced concrete structures for its own needs). The company's shares are listed on the London Stock Exchange. The company has been preparing its sustainability reports since 2015 without external assurance. In preparing the report, the company has been using the standards of the Global Reporting Initiative since 2016, where it declares its contribution to the UN's global SDGs.

"Agroprosperis" (land bank – 300 thousand hectares) covers a wide range of services for the supply of goods and services for growing grains and oilseeds, financing their production, storage and sale of crops, including exports. The company does not report or disclose information on sustainable development.

"Astarta-Kyiv" (land bank – 235 thousand hectares). This agro-industrial holding is engaged in sugar and agricultural production. The company's shares are listed on the Warsaw Stock Exchange. The agro holding has been preparing annual reports on corporate social responsibility and sustainable development for a long time, including relevant sections in the company's annual report. For the past few years, the company has been preparing its reports using the GRI Standards with external assurance of the report's compliance.

In 2020, a separate sustainability report was published using the GRI Standards. The company also supports the 10 principles of the UN Global Compact and declares its contribution to the UN Global SDGs, disclosing some information on its contribution to their achievement in its non-financial reporting.

In general, the Ukrainian practice of reporting by agricultural companies according to GRI standards is such that agricultural companies from the TOP-20 are divided into 4 groups in terms of preparation of non-financial reports, coverage of CSR projects and other social activities:

- 3–4 companies have prepared GRI and Global Compact reports over the past three years. These 20% of companies are the agricultural sector's leaders in sustainable development;
- 30 % of companies prepare separate CSR reports;
- the most common practice is to post information on the website (70 % of companies);
- 30 % of companies either do not have information even on their websites or do not have a website at all.

Only four companies in Ukraine's agricultural sector (20 %) prepare non-financial reports and use GRI Standards. The corresponding figure among the 20 companies with the largest land bank in the agricultural sector is only 15 %. Such indicators are quite low compared to the global practice of reporting on sustainable development according to the GRI Standards (AgroPortal, 2021).

It is widely recognised that farms are the backbone of the agricultural economy in most countries. As a rule, they are small in size. In EU countries, 95 % of farms do not have permanent employees. In their agricultural policy, the governments of these countries, along with stimulating the concentration of production and improving its structure, promote the development of family farms (Latifundist.com, 2018). In turn, the Cabinet of Ministers of Ukraine annually provides funds to support farms in the draft State Budget of Ukraine.

Family farming is a global trend. The fact that the UN has declared 2019–2028 the Decade of Family Farming is proof of this (FAO and IFAD, 2019). The Ukrainian State Farm Support Fund is a state budgetary institution that performs the functions of implementing the state policy on supporting the establishment and development of farms (AgroPolit.com, 2017). Private peasant farms are a significant reserve for the creation of family farms. Comprehensive promotion and state support for the development of farms and private households requires a strategic approach to achieve SDGs.

In the context of the development of family farms and farming in Ukraine, it is worth paying attention to craft production, which has its own prospects and potential and is becoming increasingly important. In these challenging times, small businesses in the agricultural sector are looking for effective ways to enter and consolidate their positions in local markets. Positive factors for the development of craft production in the agricultural sector include:

- promotion of a healthy lifestyle and a more conscious approach to the personal nutrition system;
- the spread of various dietary trends related to medical indications or religious restrictions (lactose-free food, hypoallergenic food, refusal to consume certain types of meat, fish, etc;)
- the overall growth of the population's income and its differentiation;
- respect for family traditions and trust in their proven quality;
- focus on local companies near home.

These trends have led Ukrainians to increasingly pay attention to the naturalness of products, their composition and origin, and to form loyalty to local production for security reasons (in particular, during quarantine).

The introduction of new approaches to the development of craft entrepreneurship, simplification of business conditions, improvement of legislation in this area, and implementation of international experience were once aimed at creating a European quality of life for every citizen of Ukraine, which resulted in attracting foreign investment to the country and facilitated the entry of craft producers into the foreign market.

With the beginning of the Russian aggression in February 2022, a large number of small entrepreneurs abandoned their work, and consumers either changed their place of residence or had to switch to mass products, in particular due to the loss of their main sources of income. A year later, economic processes somewhat regulated themselves, and demand began to regain its differentiating features. What used to be just a small niche on store shelves is now gaining more weight in the consumer's grocery basket, with special attention being paid to craft, farm and organic products. The number of entrepreneurs looking for their own business and starting to produce unique products is also growing.

At the same time, the current state of regulation of certain areas of entrepreneurial activity lags far behind the requirements of Ukrainian society and does not meet global trends in the industry. The low level of legislative regulation of micro and small businesses, in particular craftsmanship, does not ensure

an adequate level of their development, reduces the safety of products and services, and causes an outflow of qualified personnel to other countries and those who wish to start their own small businesses in Ukraine.

The most developed areas of activity of agricultural enterprises using craft technologies include

- sale of bread, bakery and confectionery products made according to a special recipe;
- Alcoholic beverages (craft breweries, wineries and other unique locally produced beverages);
- cheese and unique dairy products;
- meat products;
- freezing, drying, canning of berries, vegetables and fruits;
- honey products (Krasnorutskyy, 2023).

The production centres of the above-mentioned areas can be found in almost all regions of Ukraine, but there are some differences in the concentration of craft producers. For example, cheese dairies are most concentrated in western Ukraine (Zakarpattia and Ivano-Frankivsk regions), where the product is made from goat's milk. In the central southern regions, there is a concentration of berry, vegetable and fruit preservation, as well as dryers for the production of organic chips. Craft winemaking is well developed in Odesa region, as evidenced by the fact that about 60 % of Ukraine's grapes are grown in the region, with 30% of wineries being private (Babaiants, 2021).

The general trend of modernisation transformations determines changes in modern economic processes and changes their vectors. The general trend of changes directly affects the organisation of agricultural business, for which the innovative way is the only way to remain among the world's exporters and increase added value by ensuring a higher level and pace of technological development. Typically, financial constraints, lack of infrastructure support, lack of tax incentives, and limited government support are identified as counterbalances to the development of innovative agribusiness. At the same time, much less attention is paid to institutional factors of ensuring innovative transformations in the agricultural sector, the introduction of a programmer targeted approach to planning innovative changes and taking into account the specific features of the national innovation process in the agricultural sector (Hordiienko, Tiahlo, 2022).

According to the analysis of innovation capacity in 2020, the national economy was classified as a “slow innovator” country, and the weakest factors were the state of financial support for innovation, state funding and support for innovation dynamics, the attractiveness of the research system, intellectual rights and assets. The prospects of the national economy in terms of the ability to introduce breakthrough technologies (“readiness for innovation”) are assessed at a low level (Pysarenko, Kuranda, Kvasha, et al., 2021).

The peculiarities of innovation in the agricultural sector stem from the specifics of the sector itself. Innovative development is based on continuous changes in the range of products, improvement of production technologies, production methods and sales organisation in line with changing market conditions. The introduction of innovative methods in agricultural production is not aimed at producing a completely new product, but only at improving it compared to similar products. This is because agricultural products are raw materials and goods for further processing.

The development of innovations in the Ukrainian agricultural sector is spontaneous, unsystematic and inefficient in terms of the growth of innovative supply of equipment and technologies. Therefore, ensuring the innovative development of agricultural businesses is a priority. The problems are caused by a lack of financial resources, qualified personnel, a gap between science and production, and insufficient provision of new modern equipment. Government programmes are needed to support agricultural producers (especially small-scale producers, farms, and farmers), and conditions need to be created to ensure that the private sector is interested in investing in the agricultural sector.

Today, the issue of post-war recovery of agribusiness in Ukraine is extremely relevant. The war has had a major negative impact on the innovation and investment activities of agribusinesses. The basis for such recovery should be the Green Deal and the SDGs, which are recognised by the international community (Popova, 2022).

Agribusiness and the government have identified the following priorities for the war period: the development of export logistics, crop storage (including the construction of grain storage facilities),

lending and access to finance. These are really urgent production and logistics needs. So are we returning to the principle of "Let's build the economy and then solve environmental problems"? Obviously, this will not work. The Sustainable Development Goals of Ukraine for the period up to 2030 № 722 of 30 September 2019, the National Priorities for the Transformation of Food Systems in Ukraine № 41 of 07 February 2022, and other acts approved before the war, which declared sustainable, environmentally friendly, inclusive principles of transformation, are awaiting implementation. In the post-war reconstruction, the modernisation of the agricultural sector should be based on the concept of ecological resource-saving agriculture, which will ensure the preservation and reproduction of agricultural land fertility, improve food quality, and expand the export potential of agricultural food (Shubravska, Prokopenko, 2022).

The draft "Ukraine Recovery Plan 2022" envisages the construction of an irrigation system, development of product processing (increased value added), seed production, livestock, vegetable and horticulture, bioenergy, agricultural machinery, and transition of the agrifood sector to green growth (Ukraine Recovery Plan, 2022).

The strategic imperative defines "synchronisation with the European Green Deal", which should have been a cross-cutting motive for all the Plan's projects, but was not always achieved. In particular, it concerns the reduction of the use of agricultural inputs. The Farm to Fork Strategy of the European Green Deal (EU Green Deal) of 2019 declares a 50 % reduction in the use of chemical pesticides and antimicrobials, a 20 % reduction in the use of mineral fertilisers, and an increase in the share of organic production to 25 % of agricultural land in the EU by 2030 (A Farm to Fork Strategy for a fair..., 2020).

Ukrainian agricultural producers should take into account the European Green Deal benchmarks in their activities in order to meet European requirements when entering the European market with their products. After all, the declared halving of chemical pesticide use may result in strict EU regulations on monitoring maximum permissible levels of pesticide residues in products exported to the EU. Local agribusinesses should promote the agro-ecological image of Ukrainian agricultural food and gain new market positions in this turbulent period.

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DEVELOPMENT OF MANAGEMENT AND ITS ROLE IN THE CONTEXT OF UKRAINE'S INTEGRATION INTO THE EUROPEAN COMMUNITY

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Ukraine's integration into the EU is happening in the context of global challenges in the socio-political sphere and socio-economic life of the country and conditioned by current military aggression of the russian federation, active military operations in the east and south of the country, and financial instability. Thus, it requires drastic changes in the organization of management, as an essential and powerful engine and accelerator of social development. That is why an in-depth study of the theoretical and practical foundations of management, modern forms and methods of governance at the enterprise level (as the main link of the national economy) remains one of the main tasks in the context of the country's integration into the EU. It requires modern knowledge and skills of their practical use in everyday activities during panel discussions, business meetings, communication, leadership style formation, combining power with the art of governance, ensuring the effective operation of enterprise personnel. This will allow mastering a thorough knowledge of management and contribute to the ability to make optimal decisions in everyday activities, find ways to improve one's own efficiency (by using opportunities to create an image of the enterprise), and further develop the country's economy.

The category of "management" and its content, which are currently used in scientific publications of theoretical researchers, can be defined as functions (types of activities), science and art, category of people, body (or apparatus) of governance, process. At the same time, it is a component of governing activities that implements in practice the theory of effective personnel management. Its main components are methods and techniques for governing the system, which aims to achieve goals (provided that material, labor, and financial resources are used optimally). The task of management is to efficiently organize the operation of the system to obtain maximum performance indicators.

Modern management can be described as a process of activity. This complex socio-economic, informational, and organizational-technological phenomenon is associated with changes in the state and qualities of the management object. The constituent elements of this category are knowledge, capacities, skills, motivation, techniques, and methods; it contains everything that is included in the concept of social and human technologies.

That is why the art of governing has become a science of governing, that is, management. In addition, as practice confirms, there are many interpretations of this concept and term used in personnel management. The term of foreign origin "management" is close to the concept of "governing". The Ukrainian word "management" is synonymous with the English word "management", although their essence is somewhat different. Thus, according to the definition of the economic encyclopedia [3], management is "a manner, a way to communicate with people; power and the art of governing; a special kind of skill and administrative skills; a governing body, an administrative unit".

Until recently, the concept of "management" was absent in governing practice. However, the ability to lead the country, the army, and production has always been considered an "art" or "talent". The fate of countries, their people, and individuals depended on it. The emergence in the twentieth century of a large number of independent countries, enterprises, organizations, institutions, and military units, and their relationships with each other became so close and versatile that the expectation and search for managerial talent for each leadership position was leveled. That is why management, as a separate branch of scientific knowledge, began its development in the XIX century. This was a

consequence of the Industrial Revolution and led to the need to transform and scientifically describe the management system through the study of practical experience. One of the main representatives of this direction was F. Taylor. This researcher-practitioner of production management published numerous papers that marked the beginning of the formation of management as a science and independent research branch. His well-known publications were "A Piece-Rate System" and "Shop Management" (1903), "The Principles of Scientific Management" (1911), etc. F. Taylor highlighted the theoretical foundations of rational scientific organization of labor, differentiated the functional responsibilities of managers and workers, and defined the goals of motivation and control of labor. Further continuation of the development of F. Taylor's ideas was carried out by Lillian and Frank Gilbert, H. Gannt, H. Emerson, and others. Their successors (in the direction of administrative or neoclassical approaches) were H. Fayol, L. Urwick, D. Mooney, and M. Weber. They elaborated on the principles, functions, and main types of business activities; they formed the idea of a manager as a skilled employee whose professional activity requires "special education". In addition, today, the words of H. Fayol "management is not an innate talent, but a skill that needs to be learned" have not ceased to be relevant. In his opinion, the work of a manager should be divided into five functions: planning, organizing, managing, coordinating, and controlling. To show managers how to perform their functional duties, H. Fayol, in "General and Industrial Management" (1916), formulated fourteen universal principles of management. That is why the concept of a "professional manager" became the basis for creating a system of business schools that actively cooperated with business structures and the public and became centers for training specialist managers. The founders of the "School of Human Relations" (1930–1950) were Parker Follett and Elton Mayo, and the representatives who developed behaviorism (a field of scientific research that studied the behavior of people in the workplace) were J. Watson, B. Skinner, A. Maslow, D. McGregor, and others. They stressed the need to develop practical approaches to employee motivation and appropriate behavior. It was noted that a manager who understands a person's needs should use "more flexible" methods of motivating subordinates. According to A. Maslow, human actions are not caused by economic factors but by needs that are not directly related to remuneration. Thus, managers must formulate development features, correctly identify internal needs at each stage, and contribute to implementing the next one. Managers are advised to consult with personnel and provide employees with opportunities to communicate and exchange experiences at work.

Since 1950, the "School of Behavioral Sciences" was formed. Its contributors were Chris Argyris, Rensis Likert, D. McGregor, and Frederick Herzberg. Its basis was establishing interpersonal relationships, improving the efficiency of human resources, forming a workforce based on psychological compatibility, and so on.

A characteristic feature of the "new" school was the replacement of verbal reasoning and descriptive analysis with quantitative values, symbols, and models. At the same time, thanks to the development and application of quantitative methods for describing mathematical models, it became possible to deepen the understanding of complex management problems.

Among management development schools, an important role is assigned to the empirical school of management, represented by P. Drucker, R. Davis, L. Newman, D. Miller, and others. Studying the content of work and the functions of managers is one of the main areas of research in this school. It defends the professionalization of management, that is, the transformation of the process of managerial activity into an independent, specific type of work, a unique profession. Representatives of this school made a significant contribution in solving issues related to centralization and decentralization in management and delegation of powers.

American scientists M. Albert, M. Mescon, and F. Khedouri in the fundamental book "Management" paid special attention to the development of management. There, the essence of this concept is "…the ability to achieve goals using labor, intelligence, motives of the behavior of other people; activities that in accordance with the goals and objectives of the business develops plans, determines not only what and when to do, but also how and who will perform what is planned; forms working procedures at all stages of governance and exercises control; not the management of objects, but the organization and management of people's work; activities to find and determine the best ways to

achieve the goals of the organization; governance science; a set of principles, methods, tools, and forms of management in order to increase effective activities and increase profits" [4].

In the 80s of the XX century, the 7S framework emerged. Its authors A. Athos, T. Peters, R. Pascal, and R. Waterman stressed that forming an effective organization is possible based on seven interrelated components, and changing any of them will lead to changing all the others. Each of these components begins with the letter "S": strategy, structure, system, staff, style, skill, and shared values. Under the influence of this framework, the "case study" method, the analysis of a specific situation, has spread in the practice of training managers. Thanks to this method, managers have developed professional skills such as situation analysis, external and internal environment of the situation, factors of influence, and flexibility in decision-making.

The generalized history of management development has defined the scientific basis for the professional training of specialists in this industry. That is why the attention was given to the priority individual and personal qualities of the manager, his functional responsibilities and professional competencies, practical skills, and abilities. All this requires further development of managerial thought and the generation of new ideas for effective management.

Management is an activity aimed at improving the forms of governance and increasing the efficiency of production through a set of principles, methods, and means that activate labor activity, intelligence, and motives for the behavior of the work team and individual employees. Management arises when people are united for the sake of the joint performance of an activity. The governing party is the subject of management, and the governed party is the object of management (i.e., individual work teams and employees). The basis of management activity is the ways how managers influence management objects. At the same time, the management object is considered to be a controlled link – an element of the management system that is managed by the other elements. In addition, in production systems, management objects are considered organizationally separate structural divisions (sites, workshops, departments, branches of organizations/companies). In this format, any socio-economic system can be represented as an organized set of a managing subsystem (i.e., a subject of management) and a managed subsystem (or an object of management). At the same time, the managed subsystem includes elements that directly support the production process, as well as economic, commercial, and other types of activities. The subject and object of management interact through communication channels through which information flows pass. These flows manage impacts and report the state of the managed object. In general, the concept of "organization" is inextricably linked with management, that is, a team of people whose activities aim to achieve set goals. Management studies the organization as a social subsystem of the market economic system and not as a technological link in social production. In the market transformations of the economy during integration processes, management remains an effective theory of the social organization of activities on an enterprise scale.

As an object of management, an organization is an integral system in the unity of its constituent elements and individual structures and their interaction, taking into account that certain changes in one element cause chain changes in others. As an integrity with unique properties, it consists of separate subsystems with specific features that interact while defining the organization's boundaries and environment. Acting as a purposeful and multi-purpose system, the organization has heterogeneous external and internal goals, independent sub-goals of individual subsystems, and a system of indicators for measuring goals and strategies for achieving them. As a dynamic phenomenon, the organization requires research of internal organizational processes of self-regulation, maintenance of socio-economic balance, analysis of adaptive evolution and growth, innovations, overall life cycle, and competencies.

The process of managing an organization as an object of management covers several consecutive stages (Figure 1).

The management process can be called the activity of combined subjects and objects of management in a certain structure, which aims to achieve the set management goals by implementing individual functions and applying specific management methods and principles. The management process comprises three main components: content, organizational, and technological.

The content component is determined by a set of problems being solved. These include a set of stages (operations) that characterize the sequence of qualitative work changes in the management process. In this regard, there are:

– methodological content of management provides for allocating certain special and regular phases and stages that reflect the specific features of management activities. Therefore, the management process can be considered as a sequence of two main stages, namely: the first is preparation and adoption of a managerial decision, and the second is implementation of a managerial decision;

– functional content, such as identifying the sequence and implementation of the main management functions, is provided through forecasting, planning, organizing, motivating, controlling and regulating;

– economic content is reflected and implemented through the definition of needs, assessment, distribution, and use of resources (material, financial, labor, information);

– social content is expressed through the criterion by which the subject and object of social management is always a person;

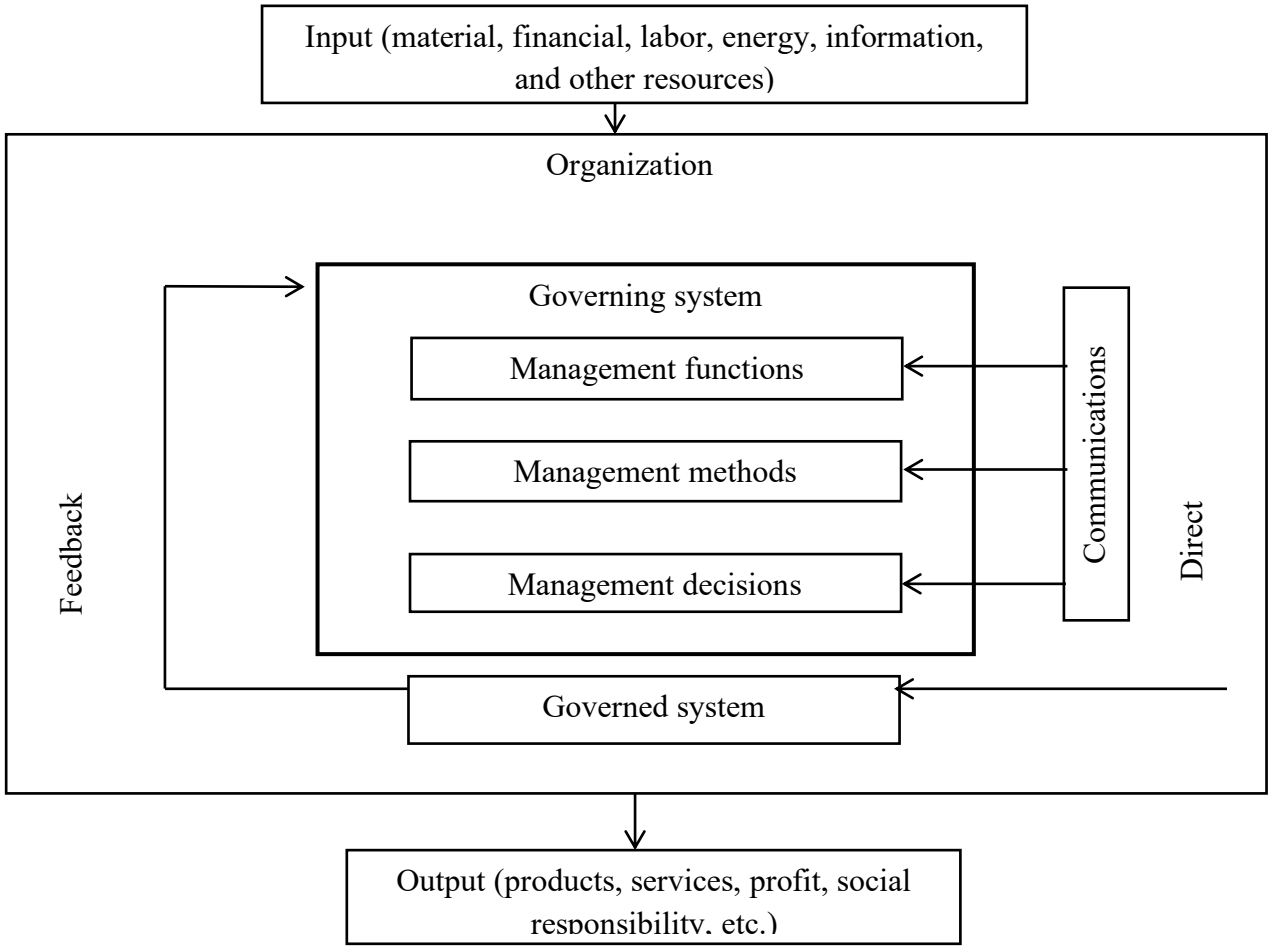

Figure 1. Graphical model of the management process.

Source: formed and built using [6].

– organizational and legal content is the sequence of using organizational levers of influence: regulation, rationing, instruction, accountability with appropriate legal norms;

– information content – its essence lies in the inseparable connection between the management process and the processes of preparing and collecting, transmitting and processing information.

The organizational component describes the participants in the management process and the establishment of the order of their interaction, along with the definition of the procedure for the

interaction of individual bodies through the adoption of certain standard management actions (their list depends on the content of the management process and the tasks assigned to it). The organizational component is phases and stages of the process that change over time. It also includes an analysis of the management process along with the adoption and implementation of a management decision.

Regarding the technological component, it is defined as:

– organization of the management information system (a set of reports on the state of the object and subject of management) and office management (document management). To rationalize the flow of documented information (orders, decrees, decisions, directions, regulations, instructions, acts, protocols, reports, etc.), they are regulated through the definition of the sender, recipient, and nomenclature of documents. The link documentation scheme should correspond to the structure of the management body and its external links;

– a list of procedures that are developed and are mandatory for all major types of management activities, namely: preparation of a plan for the main organizational activities; holding an official or operational meeting; a board meeting; holding a briefing or press conference, etc. A well-organized technology of the management process always implies the presence of a set from the list of different management procedures;

– management equipment, that is, a set of tools and means designed to carry out information transformations. Management equipment can be divided into the following groups: material media, information transformation tools, and equipping tools (equipment, premises, structures, etc.).

We can generalize that management is a specific body of modern organizations without which they cannot exist and work effectively as an integral entity. The management apparatus is a component of any divisions and is associated with the concept of management. Participants' main task in the organizational process is to effectively use and coordinate all resources (capital, buildings, equipment, etc.) to achieve the set goals. That is, management is a purposeful influence on the activities of all employees of modern enterprises (companies) to successfully solve the set tasks and achieve goals by attracting and using resources productively.

In the context of integration processes, the current development of management is accompanied not only by a set of management activities but also by their interrelated and interdependent system, which, under certain conditions and in such a figurative form, can achieve the best results. The main goal of management development is a systematically organized impact (through the use of interrelated organizational, economic, and social measures) on the formation, distribution, and redistribution of labor at the level of the organization, as well as on the creation of conditions for the use of features of (labor) qualities of the labor force (employee) in order to ensure the effective functioning of the company, increase its competitiveness, increase the efficiency of production and labor while ensuring the effectiveness of the work team's activities and the comprehensive development of its personnel. This approach is defined as systematic. A systematic approach to management considers the relationship between individual aspects of personnel management and is expressed in developing final goals, determining ways to achieve them, and creating an appropriate management mechanism. The main features characteristic of a systematic approach to personnel management are the integration of personnel policy with the organization's development strategy, adaptation to specific properties of the organization, recognition of the amorphous boundaries of influence on people, and coordination of long-term and short-term goals. The application of a systematic approach in the management of an organization allows us to study the system (a specific object) as a single whole, study the entire complex of its internal and external relations, evaluate changes in relations, as well as recommend for implementation the developed options for building and improving the system, that is, various options for management decisions, evaluate them and select the most optimal and suitable for achieving the goals of the system as a fundamental problem of our time.

When building a personnel management system, the use of structural and methodological approaches is also suggested. At the same time, in addition to mandatory components (such as hiring, personnel accounting, motivation, legal support of personnel, etc.), other relevant aspects for individual regions and enterprises/companies are considered. All the above approaches seek to form a system of management functions.

The process of management development ensures the performance of functions, that is, separate types of management activities, which allows the organization to achieve specific goals of the main types or directions of these types of activities, which are focused on meeting particular needs of the organization.

The researchers of this problem provide various lists of the main functions. According to the team of authors [4], the main among them are four primary functions (planning, organizing, motivating, and controlling), which are linked together in a single process to shape and achieve organizational goals (Figure 2).

For the development of management in the period of integration transformations, it is also advisable to form a system of functions that includes three subsystems: subject, procedural, and socio-psychological. That is, all subject, socio-psychological, and procedural aspects of management complement each other, creating, at the same time, an integral system of the main functions of

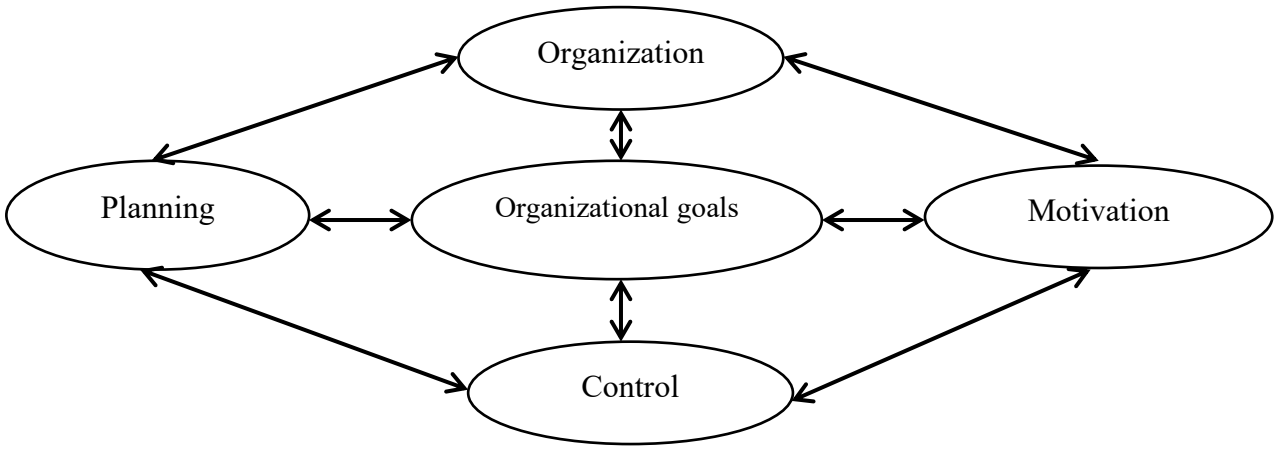

Figure 2. A system of management functions as a process for formulating and achieving the organization's goals.

Source: formed and built using [4].

administrative management, which allows differentiating methods and approaches of managerial influence on administrative processes.

Among the main functions and their corresponding tasks, the use of which allows us to implement these functions in a generalized form, are:

- the "determining the organization's need for personnel" function. It involves planning the need for high-quality personnel, choosing planning methods, and calculating the need for personnel;
- the "provision with personnel" function. Its content consists of obtaining and analyzing marketing (in the field of personnel) information; developing and using tools to meet the needs in personnel, their selection, and business assessment;
- the "use of personnel" function provides for determining the content and results of work in the workplace; specialization; recruitment (hiring) and release of personnel; their adaptation to work; ordering of personnel's workplaces and safe working conditions;
- the "personnel development" function is related to career planning and implementation; official movements of personnel; organization and conduct of their training;
- the "motivation of labor results and personnel behavior" function. Its essence is reflected in the management of the content and process of motivation of work behavior; conflicts; the use of monetary motivational and incentive systems such as remuneration, personnel participation in profits and capital of the enterprise; the use of non-material incentive systems through group organization and social communication, leadership style and methods, regulation of working hours;

- the "legal and informational support of the HR management process" function provides legal regulation of labor relations, shows accounting and statistical assessment of personnel, informs the team and external organizations on personnel issues, and develops the personnel policy of the enterprise.

Management can be considered a function, a type of activity of organizations/companies of various forms of ownership and management.

Principles of management in the context of international integration processes require rules, basic provisions, and norms that managers must adhere to in the process of personnel management. The principles of personnel management are characterized in two groups. The first group includes the following: concentration, specialization, parallelism, flexibility, continuity, and purposefulness. In the second group, one distinguishes:

- the principle of correspondence between the functions of personnel management and production goals;
- the principle of optimal correlation between management orientations due to the need to advance the orientation of personnel management functions to the development of production in comparison with the functions to ensure the functioning of production;
- the principle of efficiency provides for the most efficient and economical administration of the personnel management system, reducing the share of management costs in total costs per unit of production, increasing production efficiency. If management costs increase after the implementation of measures to improve the management system, they should overlap with the effect in the production system obtained from their implementation;
- the principle of progressiveness, which provides for compliance of the personnel management system with advanced domestic and foreign analogs;
- the principle of prospectiveness means that when forming a management system, personnel should consider the prospects for the development of the organization;
- the principle of promptness provides for timely decision-making on improving the personnel management system (in order to prevent and promptly eliminate deviations);
- the principle of optimality, so the choice of the most optimal option for the formation of a personnel management system is determined;
- the principle of scientism requires the development of measures for the formation of a personnel management system that is based on the achievements of science in the field of management and takes into account the operation of the laws of public production in market conditions;
- the principle of consistency and interaction between the links of the hierarchical vertical line and the links of the personnel management system horizontally (based on the coordination of the achievements of the main goals of the organization);
- the principle of transparency requires that the personnel management system has a conceptual unity and the activities of all other departments and managers are carried out on the same basis;
- the principle of sustainability requires ensuring the stable functioning of the personnel management system with the help of special "regulators", which, if they deviate from the set goal of the organization, encourage employees to regulate the personnel management system.

All the principles of the personnel management system highlighted above are implemented in interaction; their ratio depends on the specific conditions of the enterprise's functioning.

A critical role in the process of management development belongs to the methods that, according to Markova S. V. and Oliinyk O. M., are: "ways to influence the work team (or individual employee) to achieve the goals set, coordinate their activities in the process of functioning of the enterprise" [5].

Classification of personnel management methods (proposed by A. Kibanov) remains relevant in the context of international integration processes and provides for the use of [10]:

- administrative methods, the essence of which is the use of power, discipline, the application of sanctions or punishment, in other words, "coercion" or "stick method" (formation of the structure of management bodies; establishment of state orders; approval of administrative norms and regulations; issuance of orders, decrees; selection and placement of personnel; development of regulations and job descriptions; standards of the organization). That is, they aim to observe executive discipline, disciplinary, administrative, and material responsibility and make effective management decisions;

- economic methods that involve the use of "interest", "persuasion" or the "carrot method" (economic analysis, technical and economic planning, incentives, pricing, employee participation in profit distribution, insurance), that is, these methods demonstrate the system of values of a person, his direct and purposeful influence on the inner world and they contribute to improving the efficiency and effectiveness of the company's management team;

- socio-psychological, they are based on "beliefs" (includes social analysis in the work team, social planning, employee participation in management, social development of the team, psychological impact on employees, stimulation of initiative and responsibility, moral sanctions and incentives). That is, they form a creative attitude to the performance of official duties, initiative, and efficiency, creating conditions for the development of the individual.

In the issue of management development in the context of integration processes, it is important to highlight its organizational and functional model (Table 1), where, along with the goals, functions, methods, and processes of management, the organizational structure of the management system is also considered.

The organizational structure of a management system is a set of interrelated divisions of the personnel management system and officials. It reflects the current division of rights, powers, roles, and activities of personnel, combining them within divisions of different levels of management.

Table 1. Generalizing organizational and functional model of personnel management.

Management goals	Providing the organization with personnel, their effective use, professional and social development		
Management functions	1. Development of strategy, forecasting, and planning by personnel. 2. Recruitment, evaluation, and training of personnel. 3. Organization, motivation, and adaptation of employees. 4. Use and development of personnel and business career management. 5. Legal and informational support of the personnel management process		
Management structure	Structural and functional links of the organization's personnel management: (a) linear and functional managers; (b) staff of the personnel management service.		
Methods	Organizational and administrative, economic, and socio-psychological		
Management process	subject of labor	means of labor	the labor itself
	information	Modern information and communication technologies and multifunctional types of electronic equipment	managers specialists technical performers

Source*:* Summarized by the author based on the source [1].

The organizational structure of the personnel management model is the basis of organization management. It reflects the structural and functional links of the organization's personnel management. It is carried out by the heads of linear and functional structures of the organization and the staff of the personnel management service. Among the types of organizational structures most commonly used in practice are three types of management (types of subordination): linear, functional, and matrix. This allows us to determine the content part of business relationships.

According to the structure of a linear type of management, each division (or subordinate) is subordinate to only one higher management body and receives instructions only from it. At the same time, the manager performs delegated management functions independently. This structure is the simplest and most logical.

The functional type of management has certain features, one of which is the subordination of the linear manager in accordance with his functions. That is, only to the manager of the highest level (for example, in municipal enterprises of the healthcare system, the head of the department is subordinate to the institution's deputy director). However, there are cases when individual managers (due to the specificity of performing certain duties or production needs) extend their official powers to officials directly subordinate to other functional managers. In the management practice of some healthcare facilities, one also uses the matrix type of management. This allows us to combine and coordinate linear

responsibility vertically with responsibility for the system's functioning as a whole horizontally, which is its main difference. In other words, the matrix type of management requires a combination of two types of subordination – linear and functional.

Research of management development in the conditions of international integration processes is also associated with the study of the evaluation system of personnel management. The evaluation system can be defined as a purposefully selected and organized set of elements and relationships aimed at improving the effectiveness of personnel management in the context of implementing the goals and mission of the organization. It, according to L. B. Posheliuzhna, includes subsystems. The main ones are: "analysis and planning of personnel; selection and hiring of personnel; evaluation of personnel; organization of training and advanced training of personnel; certification and rotation of personnel; motivation of personnel; accounting of employees of the enterprise; organization of labor relations at the enterprise; creation of working conditions; social development and social partnership; legal and information support of the personnel management" [8].

Among other authors who study the issues of personnel management evaluation, some pay attention to the expediency in further theoretical research to take as a basis such elements of the structure of the personnel management system as "subsystem of HR guidelines and planning; subsystem of ensuring and organizing the work of personnel; subsystem of personnel marketing; subsystem of personnel formation and use; subsystem of development and activation of HR potential" [2].

Close attention during the development of management in the context of Ukraine's integration into the EU is also paid to the implementation of economic diagnostics of management and personnel evaluation since the labor force (personnel) has a cost assessment and, therefore, is competitive in the labor market. The effectiveness of personnel management is defined as an activity aimed at the most effective use of employees to achieve the personal goals and objectives of the enterprise. Personnel management is an important element of social development and requires the development of tools that can provide real socio-economic returns of the work of management personnel that is directly reflected in ensuring the efficiency of the enterprise as a whole and, therefore, in increasing incentives and motivation, as well as the interest of each employee in implementing the strategic direction of the company's development.

Assessment of management and efficiency of personnel is expressed in oral or written form of the labor potential of employees; the level of use of their potential; compliance of employees with the existing requirements for the position (occupation, profession); measures of the effectiveness of their work, and therefore, determining the value of employees for the organization. Since determining the value of an employee based on the analysis of his character traits does not provide fair conclusions, which are also easily refuted, referring to their "subjectivism", it is better to evaluate employees based on the results of their work and behavior. At the same time, personal contact between the manager and subordinate should also be mandatory during the assessment of the latter since such contact can become a compelling incentive for improving work.

Its implementation was made possible due to the introduction into the practical activities of organizations/companies of the mechanism for evaluating the effectiveness of personnel management, formed based on three components that are transformed into components of the mechanism (Figure 3).

Under the "mechanism" of evaluating the effectiveness of personnel management, domestic scientists proposed the use of a set of approaches, principles, measures, methods, and monitoring of the state of business processes of personnel management of the enterprise, which affect the processes of ensuring the effectiveness of personnel activities. At the same time, the elements of the mechanism for evaluating the effectiveness of personnel management, according to [1], are: the purpose of the enterprise's activity, the planning system and relations of higher administrative and managerial personnel, the organizational structure of personnel management services, indicators (criteria) of the effectiveness of the personnel management system, availability, completeness and validity of information used, and the relationship of the enterprise with the external environment.

Evaluation of management and labor efficiency in the context of market transformations in enterprises/companies of Ukraine is characterized by a system of interrelated and complementary natural and cost indicators, each of which reflects the result of work and can be used in the economic

mechanism of a market economy following its economic nature and the role that it can play in a particular link of management (analysis, planning, stimulation). Let us consider the sphere of non-material production. The indicators of work performance are the type and volume of the result, its scientific (or artistic) value, relevance, timeliness, convenience, and care, as well as the evaluation of activity in monetary terms and labor costs per unit of work performed. The efficiency of all total labor of society in many countries of the world is measured by such an indicator as gross national product, which is the market value of all final goods and services produced by national enterprises during a specific period [9].

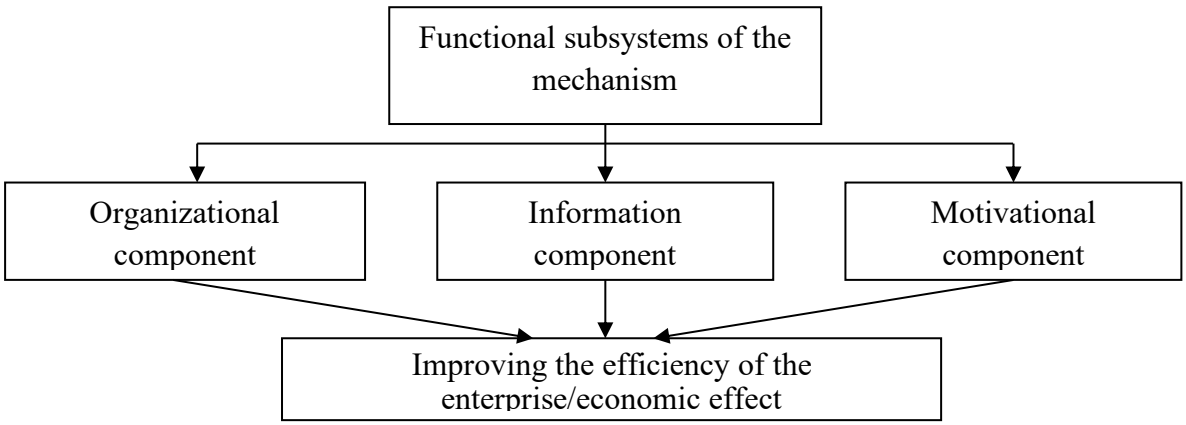

Figure 3. Components of the mechanism for evaluating the effectiveness of personnel management of enterprises.

Source: formed and built using [1].

Determining indicators is the initial stage in evaluating labor efficiency. The final assessment can be based on a criterion (evaluation measure). When indicators characterize the level and dynamics of labor efficiency, the criterion shows how much the achieved efficiency level meets society's needs. The labor efficiency criterion should have a specific quantitative expression. When evaluating labor efficiency (in terms of meeting the achieved level of needs), it is vital to determine the degree of this compliance. This criterion should be sought in models of microeconomic equilibrium of supply and demand.

It is clear that to increase labor efficiency, it is necessary to identify the driving forces that affect it (the second stage of evaluating labor efficiency). Changes in many criteria determine labor efficiency. Understanding the essence and mechanism of action of each of them is necessary for determining specific ways to improve labor efficiency, that is, scientifically based management of this process. Knowledge of labor efficiency factors and the mechanism of their action allows us to purposefully influence the achievement of the necessary results. The growth of production volume due to increased production resources in the economic theory of developed Western countries is called the scale effect. However, achieving this effect has its limits. First, each country has production capabilities (a certain population, number of enterprises, land, and natural resources), and it cannot go beyond these capabilities for a certain period. In addition, the maximum volume of GNP production is possible, provided that the resources are fully used. If the resources are not fully used, there are a large number of unemployed workers and unused equipment, society does not receive the necessary full volume of production of goods and services [9].

It is known that this situation occurs very often in countries where the market economy is well-developed. The market economy develops cyclically, which causes periodic declines in production, incomplete use of labor, and utilization of production capacities. Under such conditions, society must first choose what and in what quantity to produce and how best to use resources. In addition, obtaining the scale effect can only be achieved if the ratio of labor and capital is balanced. With the same technology, the amount of labor and capital must grow by the same amount. If this ratio is not balanced,

then the law of diminishing returns of resources occurs. According to this law, an increase in the total production volume (due to an increase in the number of resources) occurs up to a certain limit, beyond which the return on the additional attraction of labor and capital diminishes. This is explained by the fact that society as a whole and individual enterprise, manipulating resources, often violate the ratio between labor and capital. When additional labor costs are combined with constant capital, the production process will be oversaturated with labor, producing less and less additional product. Additional capital expenditures will also produce less additional product (since the amount of labor will remain unchanged because there will not be enough labor to service the growing capital).

In conditions of international integration, economic diagnostics of management and personnel evaluation should take into account the peculiarities of the development of society and industries, which can be distinguished by comparing political, economic, and social factors in Ukraine and countries with a high level of development of socio-economic relations. The essence of this approach regarding the analysis of management effectiveness consists, first of all, of the limited application of methods that are developed and used in developed foreign countries with similar problematic issues and ways to solve them, taking into account differences in conditions and systems that are at different stages of development.

The development of management in the context of international integration has contributed to the signing of some international legal acts by Ukraine in the last two decades that reflect certain requirements for the reliability, openness, efficiency, and effectiveness of management. This led to the need for further theoretical substantiation and improvement of existing methodological approaches to evaluating management effectiveness in organizations/enterprises/companies of public administration, business structures, search and determination of ways to introduce new work methods, and evaluation of management efficiency into management practice.

Implementation of management tasks in organizations/companies in the context of international integration is carried out by managers. The main task of managers, as a layer of professional managers, is to coordinate and organize the activities of work teams, taking into account objective laws and regularities of economics, sociology, psychology, conflictology, etc., that is, management on a scientific basis. With the development of management, the requirements of society for professional knowledge and qualities of a manager change. That is, earlier the main requirement for a manager was the ability to respond as quickly as possible to changes in the market situation. In contrast, today, in the context of international integration and Ukraine's accession to the EU, a professional is considered a manager who not only passively reacts to market changes, but also changes the market himself, thus creating new markets for products (goods, services) for his enterprise/company. The professional activity of a manager is defined by three concepts: "people, product, and profit". Of the three criteria, the most important in business is, of course, people. Optimal use of the human factor is the manager's most outstanding achievement.

The modern theory and practice of business management in the context of integration processes among the main requirements for a manager puts forward the following:

1. Professional competence – it is based on knowledge and skills (abilities). The manager must be able to do what is required of employees.

2. Social competence – it implies knowledge in management psychology. Since the manager achieves the result of his work through influencing other people, he first needs to know social psychology, as well as modern managerial approaches and features in the occupation and profession. The ability to motivate employees is a prerequisite for productive collaboration.

3. Conceptual competence – it characterizes the manager's ability to recognize and solve problems. The manager must distinguish the significant things in the phenomena and processes in the business from the insignificant things.

Regardless of the businesses/organizations/companies managers work for, they must master three primary skills: technical, communication, and analytical. The application of these skills in practice varies depending on the management level. However, since managers achieve this goal mainly with the help of other subordinate employees, communication skills cannot be omitted at all levels of management. Senior managers are more likely to need analytical skills, while technical skills are mostly

needed at the lower levels of the hierarchy. A manager may lack these skills at the beginning of his career, but they must be developed over time.

In general, the conditions of adaptation of the Ukrainian economy to the EU integration require a manager to have the ability to manage himself, reasonable personal values and clear personal goals, constant personal growth (development), problem-solving skills, creative approach, the ability to influence others, knowledge of management theory and organizational skills, the ability to train subordinates and form and develop a work team. Skillfully using information, time, and people, the manager must provide results that contribute to improving the competitiveness of the business.

The development of management and managerial activities in Ukraine has now defined the scientific basis for the professional training of specialists in this field. Depending on what kind of image of a specialist manager existed in society, certain scientific schools functioned or are functioning; appropriate scientific bases were chosen for their training.

World practice has confirmed that in modern conditions, the best success of business in various fields of activity is achieved in those organizations where the level of training of executives, heads, and managers is high both in the field of management in general and personnel management in particular. They are the most productive component of the company's personnel management, and their knowledge, skills, abilities, and professional and leadership competencies are aimed at increasing the competitiveness and efficiency of domestic production under the conditions of Ukraine's accession to the EU. That is why, in recent years, public interest in the knowledge field "management" has increased, which is closely related to the emergence and development of business or management schools. This question is most relevant for those who want to get the highest and generally accepted level of qualification – MBA (Master of Business Administration). Today, there is an opportunity for students to get an MBA degree in any country, but among the leaders is the United States of America, where the system of business and management education is three-stage. After completing a full general secondary education at a basic institution and an educational course for four years at a university or college, students receive a bachelor's degree. This grants academic rights during the next two years of study in certain educational programs to obtain the master's degree in "Master of Business Administration" (MBA), "Master of Management Science" (MMS), "Master of International Management" (MIM), etc. However, it should be noted that the American economic training of education managers is one of many in the world practice. Moreover, the diversity in the content of programs of higher education institutions and business schools creates a large number of areas of study choice for potential applicants. Effective management is based on using the experience of foreign countries in training personnel, improving the quality of workplace equipment, reducing the number of jobs with dangerous working conditions, and establishing cooperation between enterprises/companies.

In Ukraine, the formation of the need for professional managers in business education began only in the early 90s of the last century. The large number of people willing to take business training has also led to the creation of business school demand and the opening of educational programs for training specialists in business and administrative management in the country. Since the opening of the first schools to the present day, significant changes have occurred in such managers' training programs. They have become more diverse, and some schools in Ukraine have become quite well-known (such as the Kyiv School of Economics). However, the Sumy Business School (created at Sumy National Agrarian University) started its work recently. Its educational offers are based on several key areas that help establish and conduct a successful business in the context of Ukraine's integration into the European community. These are, first of all, planning, marketing strategy, grant activity, and modern information technologies. Today, this school offers a system of long-term, medium-term, and short-term training programs, as well as case seminars and online thematic courses for veterans of the russian-Ukrainian war and their families, persons with disabilities, and other categories of the population with the assistance of the Sumy Regional Military Administration and the Sumy Regional Employment Center. Thanks to the joint actions of those interested in the final result, seminars, pieces of training, and practices are held, and various forms of support for the professional development of future education managers are introduced (consulting, career centers, mentoring, direct cooperation with firms, etc.).

As for business schools with high ratings, their development in Ukraine was based on the concept of training a professional manager. Special attention is paid to master's programs, among which the most popular in the context of integration processes of Ukraine in the EU are professional retraining programs for "second" higher education. They include programs in financial management, public finance, administrative management, public administration and administration, regional development economics, which sufficiently fully reflect the current trends in the study of disciplines of the professional direction of students in a particular educational program. This is due to the need to train specialists of this level in the relevant specialty during market transformations due to integration processes. In other words, to work successfully and have achievements in the international market, one needs to master the art of business. In the educational process of such schools, interactive teaching methods and case studies are constantly used, work is carried out on projects, simulation games, information technologies (interactive audio-visual games, teleconferences), and multimedia tools are used.

Taking into account the trends of the last ten pre-war years in the practice of management development in Ukraine and theoretical developments in this area, the main projects and tasks aimed at developing specific skills of management include organizational development, support of change processes, professional development, coaching and guidance, mentoring, professional development, and career planning.

The current challenges in Ukraine (caused by the crises (COVID-19, financial) and martial law) have led to adapting the educational process to modern forms of organizing and conducting classes. Among them, distance (online) training has become the most common: training and online conferences, business games, and workshops that develop the individual skills of a manager and increase their level of knowledge and skills. The manager's work becomes more efficient using the recommended set of tools and technologies. Broadcasting the necessary information allows us to constantly (24/7) access the data we need. Information technologies have allowed distance education to become a key element in the development of management (regardless of its field of activity), thus reducing the cost and standardizing the quality of training of its own labor resources.

The dissemination and exchange of valuable information and foreign experience by foreign specialists is critical in developing management in international integration processes. As a rule, such information is provided in a foreign language, more often in English. This should encourage the management of Ukrainian enterprises to study and speak a foreign language, which will be the key to successful distance learning (as a form of professional development of personnel) and will allow managers to improve their knowledge, expand the circle of communication with foreign partners and integrate into the international community. This issue is particularly relevant for business owners. Therefore, managers should be able to perceive, process, and use information in practice.

Personnel adaptation is among the most important components of HR managers' work in the context of integration processes. This process is crucial for the teams of enterprises due to their replenishment with young specialists who need to "fit" the work team and further create effective teams. The modern word onboarding is actually an introductory process of a young specialist with all the organizational and production processes that take place in the enterprise/company. Adaptation of a young specialist continues until the employee fully adapts to the performance of his functions. Adaptation is the main reason for the dismissal of a new employee in the first months from the hiring date. Most people claim this is because they "cannot fit" the work team. So, the moment of adaptation of a new employee is critical, and therefore, it is necessary to create conditions in the team in which it will be convenient for the new employee to study and acquire practical skills in the chosen specialty.

An important element of management development in the context of Ukraine's integration into the EU is management personnel headhunting for organizations in different areas of activity, forms of ownership, and management. Headhunting is one of the areas of search and recruitment throughout Ukraine. Today, decentralization allows institutions and establishments funded by the local budget to search for and find highly qualified employees outside the administrative-territorial unit, the amalgamated (urban) territorial community, offering them decent living conditions and remuneration. Of course, today, the search for financial resources for recruitment can also be carried out based on crowdsourcing. This is the case when the initiator sets such tasks that can be financed from the

community. An alternative option is to look for specialists ready to perform the work on a volunteer basis. The main component of all crowdsourcing projects is talented individuals ready to invest in the development of the organization. With the help of crowdsourcing, we can implement those competencies that are almost impossible to find in such systems, which were practiced in the previous decades. Today, crowdsourcing allows us to find a person with the most unique competence, and their work can be evaluated by both a business and a team in various ways.

However, as practice shows, searching for management personnel from external sources is not always effective. This is a challenging task at the moment, that is, during the war, when many specialists left Ukraine abroad (perhaps even some of them are not planning to return), and the population was relocated inside the country. Therefore, such a long path that each candidate must go through for positions cannot be acceptable, and it is quite difficult to predict the period of finding an effective manager. In such circumstances, organizations can use the human resources potential of middle-level managers – as key employees responsible for implementing their strategy, principles, and rules, which are concluded by the formed personnel and have been working for many years. The company's management team should consist of ambitious people who are result-oriented and understand the relationship between the company's work and goals.

Thus, in developing the management system in the context of integration processes, it is worth noting that management thoughts are constantly developing and contributing to the generation of new ideas for effective management and its focus on the development of professional and managerial competencies of employees. The best effect will be when the organization has a team of managers-executives united by one goal and distributing their values. The management development program is aimed at achieving this goal. The primary mission of this program is to form a team of qualified employees with a high level of competence to ensure high-quality work and achieve the company's strategic goals.

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MANAGEMENT OF CONFLICTS IN AN ORGANIZATION THROUGH BUSINESS COMMUNICATION

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Studying the basics of business communication from the point of view of psychological peculiarities of human communication.

Human communication is a multifaceted process studied by philosophy, sociology, general and social psychology, linguistics and other sciences.

In socio-psychological terms, communication is simultaneously an exchange of actions, deeds, thoughts, feelings, experiences, it is an appeal of an individual to himself, to his own soul, conscience, dreams. It is a process of education and self-education, a form of creativity that helps to identify and develop the best aspects of personality.

In the modern world, where there is constant communication with other people and a fast pace of life, the knowledge of effective business communication skills is an indispensable advantage. In revealing the essence of "business" communication, i.e. communication in the sphere of production, the three most general categories are usually distinguished: relations, reflections, activity (money).

Business communication contributes to the establishment and development of relations of co-operation and partnership between work colleagues, managers and subordinates, partners, rivals and competitors. It is impossible to name a specialist, let alone a manager, who could successfully work without knowing the basics of business communication.

In our country for a long-time business contact in the managerial sphere were reduced mainly to giving and fulfilling orders. This was the essence of the administrative command system. The possibility of entrepreneurial activity required from novice businessmen the ability to find partners, co-operate with them, contact with officials, i.e., actively communicate. Despite the fact that each of us is constantly communicating, the lack of business communication skills has repeatedly put in a difficult position even someone who is considered a professional in his field.

Business communication is a process of interrelation and interaction, in which there is an exchange of activities, information and experience that involves the achievement of a certain result, the solution of a particular problem or the realization of a certain goal.

Business communication can be divided into direct (direct contact) and indirect (when there is a spatial and temporal distance between partners).

The concept of "business communication" emphasizes the expediency and possibility of separating subjective desires and objective conditions in the process of personal interaction.

In the case of business communication, the desire to communicate is secondary to necessity. Compulsion is the main feature that distinguishes business communication from interpersonal communication.

Distinctive features of circumstances of business communication:

1.Commonality or goals or motives or activities.

2. Presence of common social space -time: organization, group, team.

3.Interconnectedness of participants - system of social roles and hierarchy of communication.

4.Regulation of forms of communication.

The specificity of business communication can be explained by the fact that it arises on the basis of and in relation to a certain type of activity associated with the production of a product or business effect. The parties of business communication act in formal (official) statuses that determine the necessary norms and standards (including ethical) of people's behavior.

A distinctive feature of business communication is that it does not have a self-contained meaning, is not an end in itself, but serves as a means to achieve some other goals. In the conditions of market relations, it is the maximization of profit.

Business communication is a process in which there is an exchange of business information and work experience; it involves achieving a certain result in joint work, solving a particular problem or realizing a certain goal. It is also psychological and physical contacts, exchange of emotions. The ability to build relationships with people, to find a certain approach to a particular person is necessary for everyone. It seems that communication is a completely uncomplicated process, because from early childhood people communicate with each other. However, communication includes many types, functions and directions. Psychology, philosophy, sociology, ethology, ethology and other sciences that contribute to the concept of "communication" are engaged in the study of certain aspects of communication.

Direct business communication has greater effectiveness, the power of emotional impact and suggestion than indirect, it directly operates social and psychological mechanisms.

In general, business communication differs from informal communication by the fact that in its process set a goal and specific tasks that require its solution. In business communication we cannot stop interacting with a partner. In ordinary friendly communication most often no specific tasks are set, no specific goals are pursued. Such communication can be terminated (at the will of the participants) at any moment.

The essence of business communication has a regulated (target) nature and is limited to the framework of a certain topic or range of issues. It is carried out, as a rule, in the course of business interaction, in an official, working environment, both in the form of direct personal contact and through technical means.

Business communication is divided into two types by the way information is presented: written and oral.

Written forms of business communication: Written forms of business communication include almost all documents, such as agreements and contracts, orders and orders, statements and explanatory notes, minutes and acts, regulations and instructions, reports and delivery notes, and many other official documents. To all this variety of "important papers" also have their own requirements. Everything should be written competently.

It is necessary to adhere not only to the business style, but also a clear, clear statement of the essence. All documents must necessarily have a tidy appearance, this will add "points" to their compiler.

Types of oral business communication: There are two types of oral business communication: monologic and dialogic.

Monologic: involves one person addressing another person in order to present information. A striking example of such communication are lectures and reports, greetings, information, and sales speeches.

Dialogical: this type of communication is based on oral contact between two or more people in order to achieve a desired result. The following forms of oral business communication are distinguished: business negotiations, business conversation, interview, meeting.

The most popular of the types of business communication are negotiations. Their advantage is the possibility of effective communication between the participants of the parties. Interlocutors can ask questions and immediately receive answers to them, discuss the topic of conversation and listen to the opinion of several people to obtain a mutually beneficial result.

It is also worth noting public speeches, reports and press conferences. This is one of the most difficult forms of business communication. In this case, the leading role has only one person - the speaker, who must have a good command of oratory, have the ability to present himself to a large audience. Manners of such a person should correspond to the audience, and speech should be clear and competent.

The main, most commonly used type of business communication is a contact business conversation, that is a dialogue of people "live", whether it is a communication between two heads of large enterprises or simple managers. After all, two well-mannered and competent people will always be able to agree.

Functions of business communication: All types of business communication have common basic functions: Communicative function of communication. Its role is to exchange information between

interlocutors. Interactive function of communication. This function serves to organize interaction between interlocutors (exchange of actions).

Functions and types of business communication: Perceptive function of communication. Means the process of cognition or perception of each other interlocutors through communication and in order to achieve a mutually beneficial result.

All these functions of business communication are so related to each other that practically do not meet separately. The role of each function depends on the goals set by the interlocutors before the start of any business conversation. To achieve great success in the business world, you need to be orientated in all its directions and keep your finger on the pulse. To do this, it doesn't hurt to master all types of communication in the business world, set clear goals and boldly move towards achieving them.

A business conversation is a verbal contact between business partners who have the necessary authority from their organizations and firms to establish business relationships, resolve business problems or develop constructive approaches to solving them.

The main task of a business conversation is to persuade the partner to accept specific proposals. The most important functions of a business conversation include:

- mutual communication of employees from the same business sphere;
- joint search, promotion and operational development of working ideas and ideas;
- control and co-ordination of already started business activities;
- maintaining business contacts;
- stimulation of business activity.

As a form of communication, business conversation is subject to all laws and rules - psychological and ethical interpersonal communication. At the same time, business conversation has its own peculiarities. They relate primarily to the structure and types of business conversation.

As the main stages of business conversation traditionally distinguish the following:

1. Preparation for a business conversation.
2. Establishing the place and time of the meeting.
3. The beginning of the conversation.
4. Stating the problem and conveying information.
5. Argumentation.
6. Parrying the interlocutor's remarks.
7. Making a decision and fixing an agreement.
8. Concluding a business conversation.
9. Analyzing the results of the business conversation.

Group forms of business communication. Along with dialogue communication, there are various forms of group discussion of business (service) issues. The most common forms are meetings and assemblies.

Management theory offers the following most general classification of meetings and assemblies according to their purpose. Informative interview. Each participant reports briefly to the supervisor, which avoids the filing of written reports and allows each participant to get a sense of the state of affairs in the institution.

Decision-making meeting. Coordination of the opinions of participants representing different departments, divisions of the organization to make a decision on a particular problem.

Creative meeting. The use of new ideas, development of promising areas of activity.

There are also a number of other classifications of meetings, including the sphere of application: in science - conferences, seminars, symposia, meetings of scientific councils; in politics - party congresses, plenums, meetings. According to the subject matter, there are technical, personnel, administrative, financial, etc. meetings.

Based on ethical and organizational approaches, American researchers distinguish dictatorial, autocratic, segregative, discussion and free meetings.

At a dictatorial meeting, the leader usually informs the attendees of his decision on certain issues or introduces the position or order of a superior organization. There is no discussion. Participants only ask questions.

An autocratic meeting is a type of dictatorial meeting. The leader asks the participants questions one by one and listens to their answers. Invitees are not allowed to express opinions about the positions of other participants.

A segregative meeting (segregation - Latin segregation, removal) consists of a report by the leader or a person appointed by the leader. Participants speak in the debate at the direction (choice) of the presiding officer.

A discussion meeting has a democratic character. There is a free exchange of opinions, after which the decision is taken by general voting with subsequent approval by the head or is taken by the head without voting, taking into account the opinions and proposals expressed.

Free meetings are held without a clearly defined agenda. Meetings are subject to a number of ethical requirements governing the relationship between supervisors and subordinates, as well as between its participants. Thus, it is ethically justified for a superior to invite participants to a meeting where an important issue is to be considered, not by telephone through a secretary, but in writing or in person. Respect for the audience is shown by creating at least a minimum of comfort (selecting a room in accordance with the number of participants, the necessary lighting, ventilation of the room, providing the opportunity to write down the necessary information, etc.).

The main element of an assembly or meeting is a discussion of the issues to be solved, the main purpose of which is the search for truth. The discussion is effective only if it is conducted in compliance with ethically oriented norms of people's behavior in the process of business communication.

The general principles governing the processes of business communication include:

1. interpersonality;
2. purposefulness;
3. continuity;
4. multidimensionality.

1. Interpersonality: interpersonal communication is characterized by openness and multidimensional interaction of people based on their personal interest in each other. Despite the predominantly business orientation, business communication inevitably has the character of interpersonal contact, contains a certain interpersonal radical. The implementation of business communication, in any case, is conditioned not only by a specific case or business issue under discussion, but also by the personal qualities of the partners, their attitude to each other. Therefore, business communication is inseparable from interpersonal contact.

2. Purposefulness: the purposefulness of business communication is multi-purpose. In the process of communication, along with the realized purpose, the information load is carried by the unconscious (underlying) purpose. Thus, for example, the speaker, informing the audience of statistical data, wants to outline the objective situation in the problem area. At the same time, perhaps, at an unconscious level, he has a desire to demonstrate his intellect, erudition and eloquence to the audience.

3 Continuity: once we are in the field of vision of a business partner, we initiate continuous business and interpersonal contact with him/her. Since communication includes both verbal and non-verbal elements, we are constantly sending behavioral messages to which the interlocutor attaches meaning and draws conclusions. Even a partner's silence or physical absence at a given moment is included in the act of communication if it is meaningful to the other person. This is because all our behavior informs us about something. It is a reaction to the situation and to the people around us.

4. Multidimensionality: in any situation of business interaction people not only exchange information, but also regulate their relationships in one way or another.

In the course of business communication at least two aspects of relationships can be realized:

1) maintenance of business contact, transfer of business information;

2) transfer of emotional attitude to the partner (positive or negative), which is present in any interaction. Business communication, as a rule, consists of the following stages:

- familiarization with the issue to be solved and its presentation;
- clarification of the factors influencing the choice of a decision;
- choosing a solution; - making a decision and communicating it to the interlocutor.

The key to the success of a business conversation is the competence, tactfulness and friendliness of its participants. An important element of both business and social conversation is the ability to listen to the interlocutor.

Business communication is an interaction between people aimed at achieving a certain goal or a necessary result. As a rule, this interaction takes place in a business environment, and takes the form of negotiations, a call on the carpet to the boss, discussion of new ideas or development strategy, etc. A distinctive feature of this type of communication is that personal relations do not play a decisive role. No matter how the partners treat each other personally, but when negotiating they are obliged to come to a common agreement. Otherwise, the transaction will not take place, which is not necessary for either party.

Psychologists and researchers of this type of communication highlight various aspects of business communication that affect the effectiveness of achieving the result. As is known, any interaction between people occurs through two channels: verbal and non-verbal. Psychological aspects mainly concern non-verbal channels - facial expressions, gestures, general psychological state of a person, etc.

The main rule that should be observed in the process of business communication is to use non-verbal signs to get the interlocutor to come to you. Open posture, direct eye-to-eye contact, confident speech and gestures, all this makes a favorable impression on the interlocutor and increases the chances of success.

On the other hand, you need to be able to recognize non-verbal signals from the interlocutor and use them to your advantage. This weapon is always used by experienced negotiators.

Gender aspect of business communication. Separately distinguish such an aspect of business interaction as the gender characteristics of a person. This aspect suggests that the process of communication with women is very different from the same process with men. This is due to the different psychological features of the personality inherent in the different sexes. Considering the gender aspect of communication can be more successful than ignoring them completely. For example, knowing that men tend to be task-orientated, when talking to them, it is better to focus on achieving the goal. When talking to a woman, it is better to focus more on the specifics of the process, the small details, and the benefits that will accrue to everyone involved if a positive solution is reached.

Ethical aspects of business communication. The aspects discussed above are very important and should be remembered and taken into account. However, one should not forget about the ethical side of relations between people. No matter how neat a person looks, no matter how confidently he or she expresses himself or herself, but if his or her interlocutor feels discomfort and negativity, it is unlikely that the dialogue will end positively. The main principles of ethical behavior in business circles are: responsibility, punctuality, literacy, benevolence, etc.

In psychological terms, communication interaction is at the same time an exchange of actions, thoughts, emotional experiences, feelings and orientation of individuals to themselves, their own soul, conscience, dreams.

Business communication can be considered a process that is based on education and self-education. It is a form of personal creativity, contributing to the identification and development of the best aspects of the individual's personality. The most important feature of business communication is that you need to be able to build relationships with different people, achieving maximum efficiency of business contacts.

The specificity of business communication is due to the fact that it arises on the basis of and in relation to a certain type of activity associated with the production of a product or business effect. The parties to business communication act in formal (official) statuses that define the necessary norms and standards (including ethical) of human behavior.

Like any kind of communication, business communication has a historical character, manifests itself at different levels of the social system and in different forms. Its distinctive feature is that it does not have a self-contained meaning, is not an end in itself, but serves as a means to achieve some other goals. In the conditions of market relations, it is to maximize profit.

Paying attention to the above aspects, anyone will increase their chances of success, whether in business or at work. Professional skills are of course important, but the ability to communicate with people allows you to show your abilities more vividly and to reveal your potential to the fullest. Based

on all the above I can conclude that mastering business communication skills is essential for future business people: managers, economists and others. It is not easy as it seems, but it is not difficult either. These skills can play an important role in the future when making a deal or signing a contract. Therefore, I believe that we all still have a lot to learn in order not to get lost in our professional activities in the future.

The main stages of a business conversation. Conducting the negotiation process. The ability to behave properly with people is one of the most important, if not the most important, factor determining the chances of success in business, official or entrepreneurial activity. Dale Carnegie noticed back in the 30s that the success of a person in his financial affairs, even in the technical sphere or engineering, depends on his professional knowledge by fifteen per cent and on his ability to communicate with people by eighty-five per cent. In this context, the attempts of many researchers to formulate and substantiate the basic principles of ethics of business communication or, as they are more often called in the West, the precepts of personal public relation (very roughly translated as "business etiquette") are easily understandable. Jen Yager in her book "Business Etiquette: How to Survive and Succeed in the Business World" identifies the following six basic principles:

1. Punctuality (do everything on time). Only the behavior of a person who does everything on time is normative. Tardiness interferes with work and is a sign that a person cannot be relied upon. The principle of doing everything on time applies to all work assignments. Experts who study the organization and allocation of working time recommend adding an extra 25 per cent to the time you think is required to complete the work assigned.

2. Confidentiality (don't talk too much). Secrets of an institution, corporation, or a particular transaction should be kept as carefully as secrets of a personal nature. Nor is there any need to recount to anyone what you have heard from a co-worker, supervisor, or subordinate about their work or personal life.

(3) Courtesy, helpfulness and friendliness. In all situations, it is necessary to behave in a courteous, friendly, and helpful manner with customers, clients, customers, buyers, and co-workers. This does not mean, however, that it is necessary to be friends with everyone with whom you have to interact in the course of your duties.

4. Attention to others (think of others, not just yourself). Attention to others should extend to co-workers, supervisors and subordinates. Respect the opinion of others, try to understand why they have this or that point of view. Always listen to criticism and advice from colleagues, superiors and subordinates. When someone questions the quality of your work, show that you value the considerations and experience of others. Self-confidence should not prevent you from being humble.

5. Appearance (dress appropriately). The main approach is to fit in with your work environment, and within that environment, with the contingent of employees at your level. You need to look your best, i.e., dress tastefully, choosing a color scheme to match your face. Carefully chosen accessories are important.

6. Literacy (speak and write in good language). Internal documents or letters sent outside the institution should be written in good language and all proper names should be conveyed without error. No profanity should be used. Even if you are merely quoting another person's words, they will be seen by others as part of your own vocabulary.

Business (official) communication, depending on the circumstances, can be direct and indirect. In the first case, it takes place at direct contact of the subjects of communication, and in the second case - with the help of correspondence or technical means. Both in the process of direct and indirect communication various methods of influence or impact on people are used. Among the most used of them are the following - persuasion, suggestion, coercion.

Persuasion - influence by means of evidence, logical ordering of facts and conclusions. It implies confidence in the rightness of one's position, in the truth of one's knowledge, in the ethical justification of one's actions. Persuasion is a non-violent and therefore morally preferable method of influencing communication partners.

Suggestion, as a rule, does not require evidence and logical analysis of facts and phenomena to influence people. It is based on a person’s faith, which develops under the influence of authority, social

status, charm, intellectual and volitional superiority of one of the subjects of communication. The power of example plays a major role in suggestion, causing conscious copying of behavior, as well as unconscious imitation.

Coercion is the most violent method of influencing people. It involves the desire to force a person to behave contrary to his wishes and beliefs, using the threat of punishment or other influence that can lead to undesirable consequences for the individual. Coercion can only be ethically justified in exceptional cases. The choice of method of influencing people is influenced by various factors, including the nature, content and situation of communication (usual, extreme), social or official position (powers) and personal qualities of the subjects of communication.

Dialogue communication: A business conversation, as a rule, consists of the following stages: familiarization with the issue being resolved and its presentation; clarification of factors influencing the choice of solution; choice of solution; making a decision and communicating it to the interlocutor. The key to the success of a business conversation is the competence, tact and friendliness of its participants. An important element of both business and small talk is the ability to listen to your interlocutor. "Communication is a two-way street. To communicate, we must express our ideas, our thoughts and our feelings to those with whom we communicate, but we must allow our interlocutors to also express their ideas, thoughts and feelings." Questions regulate the conversation. To understand the problem, it is advisable to ask open-ended questions: what? Where? When? How? For what? – to which it is impossible to answer “yes” or “no”, but requires a detailed answer outlining the necessary details. If there is a need to specify the conversation and narrow the topic of discussion, then ask closed questions: should I? was there? is there? will it? Such questions require a one-word answer.

There are certain general rules that it is advisable to adhere to when conducting conversations in a business and informal setting. Among them, the following are the most important. You need to speak in such a way that each participant in the conversation has the opportunity to easily enter into the conversation and express their opinion. It is unacceptable to attack someone else's point of view with vehemence and impatience. When expressing your opinion, you cannot defend it by getting excited and raising your voice: calmness and firmness in intonation are more convincing. Grace in conversation is achieved through clarity, precision and conciseness of the arguments and considerations expressed. During the conversation, it is necessary to maintain composure, good spirits and goodwill. Serious controversy, even if you are confident that you are right, has a negative impact on mutually useful contacts and business relationships. It must be remembered that after a dispute there is a quarrel, after a quarrel - enmity, after enmity - the loss of both opposing sides. Under no circumstances should you interrupt the speaker. Only in extreme cases can a remark be made with all possible forms of politeness. A well-mannered person, interrupting the conversation when a new visitor entered the room, will not continue the conversation until he briefly acquaints the newcomer with what was said before his arrival. It is unacceptable in conversations to slander or support slander against those who are absent. You cannot enter into a discussion of issues about which you do not have a sufficiently clear understanding. When mentioning third parties in a conversation, you must call them by their first name and patronymic, and not by their last name. A woman should never call a man by his last name.

It is necessary to strictly ensure that tactless statements are not allowed (criticism of religious views, national characteristics, etc.). It is considered discourteous to force your interlocutor to repeat what was said under the pretext that you did not hear some details. If another person speaks at the same time as you, give him the right to speak first. And lastly, an educated and well-mannered person is recognized by his modesty. He avoids boasting about his knowledge and acquaintances with people in high positions.

Group forms of business communication: Along with dialogue communication, there are various forms of group discussion of business (office) issues. The most common forms are meetings and meetings. Management theory offers this most general classification of meetings and conferences according to their purpose.

Informational interview. Each participant briefly reports on the state of affairs to the supervisor, which avoids filing written reports and allows each participant to gain an understanding of the state of affairs in the institution.

Meeting to make a decision. Coordinating the opinions of participants representing different departments and divisions of the organization to make a decision on a specific problem. Creative meeting. Using new ideas, developing promising areas of activity. There are a number of other classifications of meetings, including by scope: in science - conferences, seminars, symposia, meetings of scientific councils; in politics - party congresses, plenums, rallies.

Meetings can be divided into technical, personnel, administrative, financial, etc. by topic. Based on ethical and organizational approaches, American researchers distinguish between dictatorial, autocratic, segregative, deliberative and free meetings. At a dictatorial meeting, the leader usually informs those present of his decision on certain issues or introduces the position or order of a higher organization. There are no discussions. Participants only ask questions.

An autocratic meeting is a type of dictatorial meeting. The leader asks the participants questions one by one and listens to their answers. Invitees do not have the right to express opinions regarding the positions of other participants.

A segregation meeting (segregation - Latin separation, removal) consists of a report by the head or a person appointed by him. Participants speak in the debate at the direction (selection) of the presiding officer.

The discussion meeting has a democratic character. There is a free exchange of opinions, after which the decision is made by general vote, followed by approval by the manager, or adopted by the manager without voting, taking into account the opinions and proposals expressed. Free meetings are held without a clearly defined agenda.

Meetings are subject to a number of ethical requirements that govern the relationship both between superiors and subordinates, and between its participants. Thus, it would be ethically justified on the part of the boss to invite participants to a meeting at which an important issue is planned to be considered, not by telephone through a secretary, but in writing or in personal communication. Respect for the audience is manifested in creating at least a minimum of comfort (selection of a room in accordance with the number of participants, necessary lighting, ventilation of the room, provision of the ability to record the necessary information, etc.). The main element of a meeting or conference is a discussion on the issues being resolved, the main goal of which is the search for truth.

The discussion is effective only if it is conducted in compliance with ethically oriented norms of human behavior in the process of business communication. Thus, I. Braim notes that in a discussion it is necessary to respect the opinions of others, even if at first glance it seems absurd. In order to understand someone else's opinion, first of all, you need to be patient, mobilize your attention and listen to him; - it is necessary to stick to one subject of dispute. You cannot turn a discussion into a conflict. In a dispute, you need to look for points of convergence of opinions and judgments, strive to find common solutions. This does not mean giving up your opinion while you are confident that you are right; however, it is useful to question the correctness of your position. In any heated discussion: - you cannot use swear words and categorical statements (this is wrong, this is nonsense, you speak nonsense, etc.), and irony and sarcasm, although allowed, must be used without insulting or humiliating opponents;

- the main weapon in the discussion is facts and their conscientious interpretation;
- admit that you are wrong;
- show nobility: if your opponents are defeated in a discussion, give them the opportunity to save their reputation, do not gloat about their defeat.

Business conversations and negotiations: Negotiations are the basis for resolving disagreements and conflicts. In political, entrepreneurial, commercial and other areas of activity, business conversations and negotiations play an important role. Not only individual researchers, but also special centers study the ethics and psychology of negotiation processes, and negotiation techniques are included in training programs for specialists in various fields. Business conversations and negotiations are carried out in verbal form (English verbal - verbal, oral). This requires participants in communication not only to be literate, but also to follow the ethics of verbal communication.

In addition, what gestures and facial expressions we use to accompany speech (non-verbal communication) plays an important role. Knowledge of non-verbal aspects of communication acquires particular importance when conducting negotiation processes with foreign partners representing other cultures and religions.

Ethics and psychology of business conversations and negotiations. Business conversation involves the exchange of opinions and information and does not imply the conclusion of contracts or the development of binding decisions. It can be independent, precede negotiations or be an integral part of them.

Negotiations are more formal, specific in nature and, as a rule, involve the signing of documents defining the mutual obligations of the parties (agreements, contracts, etc.). The main elements of preparation for negotiations: determining the subject (problems) of negotiations, searching for partners to solve them, understanding your interests and the interests of partners, developing a plan and program for negotiations, selecting specialists for the delegation, solving organizational issues and preparing the necessary materials - documents, drawings, tables, diagrams, samples of offered products, etc. The course of negotiations fits into the following scheme: beginning of a conversation - exchange of information - argumentation and counter-argumentation - development and decision-making - completion of negotiations.

The first stage of the negotiation process can be an introductory meeting (conversation), during which the subject of negotiations is clarified, organizational issues are resolved, or a meeting of experts that precedes negotiations with the participation of leaders and members of delegations. The success of negotiations as a whole largely depends on the results of such preliminary contacts. Six basic rules for establishing relations between partners in preliminary negotiations and recommendations for their implementation, offered by American experts, deserve attention. These rules, by the way, retain their significance during negotiations.

1. Rationality. It is necessary to behave with restraint. Uncontrolled emotions negatively affect the negotiation process and the ability to make reasonable decisions.

2. Understanding. Inattention to the partner's point of view limits the possibility of developing mutually acceptable solutions.

3. Communication. If your partners do not show much interest, still try to consult with them. This will help maintain and improve relationships.

4. Credibility. False information weakens the strength of argumentation and also adversely affects reputation.

5. Avoid a mentoring tone. It is unacceptable to lecture your partner. The main method is persuasion.

6. Acceptance. Try to accept the other side and be open to learning something new from your partner. The most optimal days for negotiations are Tuesday, Wednesday, Thursday. The most favorable time of the day is half an hour to an hour after lunch, when thoughts about food do not distract from solving business issues. A favorable environment for negotiations can be created, depending on the circumstances, in your office, a partner’s representative office or on a neutral territory (conference room, hotel room suitable for negotiations, restaurant hall, etc.). The success of negotiations is largely determined by the ability to ask questions and receive comprehensive answers to them. Questions are used to control the progress of negotiations and clarify the opponent’s point of view. Asking the right questions helps you make the decision you want.

There are the following types of questions.

Information questions are designed to collect information that is necessary to form an idea about something.

Test questions are important to use during any conversation to find out whether your partner understands you. Examples of control questions: “What do you think about this?”, “Do you think the same as I do?”. Directing questions are necessary when you do not want to allow the interlocutor to force you into an undesirable direction of the conversation. With the help of such questions, you can take control of the negotiations and direct them in the direction you want.

Provocative questions allow you to establish what your partner really wants and whether he understands the situation correctly. To provoke means to challenge, to incite. These questions can start like this: “Are you sure that you can...?”, “Do you really think that...?”

Alternative questions provide the interlocutor with a choice. The number of options, however, should not exceed three. Such questions require a quick answer. Moreover, the word “or” is most often

the main component of the question: “Which discussion period suits you best - Monday, Wednesday or Thursday?”

Confirmatory questions are asked to reach mutual understanding. If your partner agreed with you five times, then he will also give a positive answer to the decisive sixth question. Examples: “Are you of the same opinion that...?”, “Surely you are glad that...?”

Counter questions are aimed at gradually narrowing the conversation and leading the negotiating partner to a final decision. It is considered impolite to answer a question with a question, but counter-questioning is a skillful psychological technique that, when used correctly, can provide significant benefits. Introductory questions are designed to identify the interlocutor's opinion on the issue under consideration. These are open questions that require a detailed answer.

For example: “What effect are you hoping for when making this decision?” Orientation questions are asked to determine whether your partner continues to adhere to previously expressed opinions. For example: “What is your opinion on this point?”, “What conclusions did you come to?”

Unipolar questions involve the interlocutor repeating your question as a sign that he understands what is being said. At the same time, you make sure that the question is understood correctly, and the answerer gets time to think about the answer. Negotiation-opening questions are essential for effective and engaged discussion. Negotiating partners immediately develop a state of positive expectation. For example: “If I offer you a way to quickly solve a problem... without risking anything, will you be interested?”

Closing questions are aimed at a speedy positive conclusion of the negotiations. In this case, it is best to first ask one or two confirming questions, always accompanied by a friendly smile: “Was I able to convince you of the benefits of this offer?”, “Are you convinced how simply everything is solved?” And then, without an additional transition, you can ask a question concluding the negotiations: “Which time of implementation of this proposal suits you better - May or June?” Successful business conversations and negotiations largely depend on partners’ compliance with such ethical standards and principles as accuracy, honesty, correctness and tact, the ability to listen (attention to other people’s opinions), and specificity.

Accuracy. One of the most important ethical standards inherent in a business person. The terms of the agreement must be observed to the minute. Any delay indicates your unreliability in business.

Honesty. It includes not only fidelity to accepted obligations, but also openness in communication with a partner, direct business answers to his questions. Correctness and tact. Does not exclude persistence and energy in negotiations while maintaining correctness. Factors that interfere with the flow of the conversation should be avoided: irritation, mutual attacks, incorrect statements, etc.

The ability to listen. Listen carefully and with concentration. Don't interrupt the speaker.

Specificity. The conversation should be specific, not abstract, and include facts, figures and necessary details. Concepts and categories must be agreed upon and understandable to partners. Speech should be supported by diagrams and documents. And lastly, a negative outcome of a business conversation or negotiation is not a reason for harshness or coldness at the end of the negotiation process. The farewell should be such that, with a view to the future, it allows you to maintain contact and business ties.

Psychological interaction of team members in the process of communication. In the process of communication in a team, a kind of common bank of ideas, methods and techniques for solving specific problems is created, which are used in joint activities to solve new problems. It must be emphasized that business communication contributes not only to the solution of purely utilitarian problems, but also to the spiritual mutual enrichment of those communicating, because “it is in the process of joint activity and communication that both the professional and social capacity of each individual person is most clearly manifested.”

Depending on the degree of a person’s involvement in a relationship, there are three types:

· social-role communication, during which the individual learns social norms;

· business communication that unites people on the basis of common activities, common interests of the business;

· intimate and personal communication, which presupposes special psychological closeness, empathy for a communication partner, and penetration into his inner world.

To facilitate the establishment of psychological contact with another person, the employee should take into account what kind of communication he is striving for and what level of understanding is expected on his part. The ability to choose the type and manner of communication, to bring the expression of one's emotions and one's behavior into line with them, as well as with the behavior of other people, is one of the necessary conditions for the fruitfulness of business relationships in a team. The behavior of participants in joint activities is determined by their objective interdependence, which constitutes a necessary condition for any interaction. But in order for cooperation to be established, complete and comprehensive information is needed about the conditions, tasks, methods of solving assigned tasks and other circumstances related to achieving a common goal.

Complete information about the operating conditions stimulates cooperation and the desire to help each other. It is especially important for the manager to intensify business communication in the team. In this case, it is necessary to take into account the personal qualities of employees, since each of them will be more willing to make any concessions if he is confident that in other cases his colleagues will take into account his point of view and take into account his interests. It is only important to objectively take into account the interests of each employee, try to take his place, look at the state of affairs through his eyes in order to understand whether the proposed way to solve the problem does not contradict his interests.

So, in joint activities you need:

1. sincere cooperation;
2. awareness of everything related to achieving the goal;
3. optimal behavior style.

What determines the effectiveness of interaction between a manager and subordinates? How does this interaction manifest itself in the process of business communication?

A manager usually enters into management communication to:

Ø give an order, instruction, recommend something, advise;

Ø receive "feedback", i.e. control information from a subordinate about the completion of the task;

Ø give an assessment of the performance of the task by one or another subordinate. At the same time, the leader strives to:

Ø to influence the subordinate in order to make him a like-minded person in questions about the ways to most successfully achieve their common goal;

Ø to induce him to certain actions and actions or to abstain from them;

Ø change or adjust your ideas about ways to solve the problems facing the team.

At each stage of managerial communication, the manager has a different psychological impact: by giving orders, he largely predetermines the behavior of the subordinate; receiving information about the progress of the work, he interacts with it.

When the actions and deeds of a leader correspond to the system of social expectations, his authority in the eyes of his subordinates increases, and he quickly and easily exerts an effective influence on them, without taking advantage of his official advantage. However, any team does not consist of absolute like-minded people, and contradictory ideas about what is permissible and unacceptable will inevitably arise within it. And then the leader will certainly be faced with the difficult task of determining which forces to focus on first. A strong-willed leader will solve such a problem easily and quickly, although it may not be entirely true. But an overly reflective boss always runs the risk of finding himself in a state of conflict with himself, which his subordinates will very soon sense and will not fail to take advantage of.

It will not be a big discovery to say that in communication everyone wants to be understood, but not everyone strives to understand the other, and often it is the strong-willed leader who turns out to be so "unintelligible", who is not very concerned about accepting all the arguments of his subordinates, but simply imposes his will on them, suppressing them with the "authority of the chair." This leadership style is known to be called authoritarian. This leadership style can now be considered outdated, because,

as has been confirmed a thousand times by world practice, it sharply reduces the effectiveness of business communication. Indeed, an authoritarian personality, even in its best version, listening to the arguments of subordinates and almost accepting them, still, out of false ambitions, cannot abandon his previous orders. In such cases, psychologists say that the leader cannot “join” his opponent. What does "join" mean? Joining is not just joining a fun company while remaining essentially disconnected from it. No, joining in the psychological sense is always something much more. Affiliation in a psychological sense is a spiritual interaction, a sincere search for spiritual harmony in relationships with a partner in a team.

Manipulative methods of influence and protection from them: Manipulation (from Latin manus, manipulus - hand, handful) is one of the types of business communication that a manager may encounter; This is the hidden control of a person’s consciousness and behavior, a type of influence used in the communication process, which is used to achieve a one-sided gain by inducing a communication partner to perform certain actions. Carrying out manipulation requires a certain level of skill. Manipulation differs from such outwardly similar forms of psychological influence as psychotherapy, education, social management, including industrial management, in the following features:

- desire to achieve one-sided gain;
- hidden nature of psychological intrusion;
- a sharp discrepancy between the declared and true goals of interaction;
- the possibility of implementation not only consciously, purposefully, but also spontaneously, unconsciously.

Unfortunately, old methods of manipulating human consciousness and behavior are still used today, especially in business and politics.

The psychological basis of manipulation is a property of the human psyche known as the phenomenon of suggestion. Its manifestations can be quite spectacular. Thus, the phenomenon of a “suggested burn” is known, when a person is told that he is about to be touched with a hot object, and although they are touched with a cold object, at this place the person actually gets a burn, actually caused solely by the power of suggestion and corresponding experiences.

In psychology, suggestion is defined as a phenomenon of influence, which is based on a person’s uncritical perception of incoming information.

Suggestion, like persuasion, is aimed at removing peculiar protective filters that stand in the way of new information and protect a person from misconceptions and mistakes. However, unlike persuasion, suggestion involves the assimilation of a message by the object of suggestion without requiring evidence of its truth.

During suggestion, the words spoken by the subject of suggestion evoke exactly those ideas, images, and sensations that he wants. Moreover, the clarity and unconditionality of these ideas require action with the same necessity as if these ideas were obtained through direct observation.

If accepted without proper critical reflection, the behavior instilled in a person may not be consistent with his beliefs, habits, and inclinations. While persuasion, being a predominantly intellectual influence, appeals mainly to the experience of the listener; suggestion, which is of an emotional-volitional nature, is based on faith or trust.

The degree of suggestibility of an individual is determined by the level of development of his personality, willpower, as well as the characteristics of interpersonal relationships in the group, in particular the attitude towards the subject of suggestion. Most often, an uncritical attitude to information occurs if it comes from a person who is authoritative for the object of suggestion, for example, a group leader.

It is also recognized that in countries with a totalitarian or authoritarian regime, the degree of critical attitude of people towards information received to them, whether rumors or media reports, is generally much lower than in liberal democratic states. This is due to the fact that many areas of social life in non-democratic societies are closed to criticism. Attitudes towards limiting criticism in any area inevitably affect the general level of criticism of those who are brought up in these conditions.

In the modern world, the use of manipulative methods in various areas of economic and social life is becoming increasingly important. And it led to the emergence of a special psychotype, which the famous French philosopher Herbert Marcuse called a “one-dimensional person.”

This person is completely subordinate to management, spares no effort, time and health to achieve corporate goals and his career; he is ready to do anything to fulfill the demands of his superiors.

The attractiveness of manipulation for some managers is due to the fact that its use provides the manipulative manager with the opportunity to gain the appearance of certain achievements:

• obedience of workers is achieved while maintaining objective contradictions between them and the owner of the enterprise;

• acute conflicts between employees and the management of the organization are muffled;

• faith in the correctness of management decisions temporarily increases;

• it becomes possible to manage an enterprise without spending time and effort convincing employees of the correctness of the chosen goals and methods;

• the physical and intellectual resources of employees are completely subordinated to the interests of owners and management.

This leadership system is implemented most strictly in Japan. It is no coincidence that the Japanese management model is called “economic totalitarianism.” One of the major Japanese managers admits: “We Japanese extend intra-company management to 24 hours a day.” From the point of view of modern effective management, a manipulative system is incompatible with humane management that respects the human personality. The massive use of these methods can cause the emergence of a new form of informational financial and industrial totalitarianism in society.

There are a number of general recommendations for self-defense from manipulative influences:

• understand the psychological essence of manipulation techniques that use the complexity and multidimensionality of the human psyche, which includes not only an intellectual, but also an emotional component. These components of the human psyche, although connected, can function independently of each other: feelings can sometimes prevail over reason. This is precisely what manipulators take advantage of - this is why, in particular, illiterate fortune tellers deceive people much more educated than them, often defrauding them of considerable sums;

• form a firm belief in the futility of using manipulation techniques in management activities. Of course, these techniques can bring some temporary benefits to the manipulative leader, but this tactic is futile. In the end, it will either lead to the establishment in the minds of employees of a feeling of deep apathy, indifference to the matter, or, conversely, to indignation and active protest, a rebellion against this style of leadership;

• you need to master some psychoprotection techniques well. First of all, you need to learn to recognize attempts to use manipulative techniques: overly generous promises, demands for immediate decision-making, rapid speech rates and other evidence of psychological pressure. After this, you should postpone making a final decision and carefully consider the feasibility of the proposals put forward. Finally, without entering into further discussion, you must resolutely refuse further contact with the manipulator.

The most important aspect of business communication, a reliable means of resisting manipulations of various kinds, is communication based on the collection and transmission of objective information. We should dwell on this most important component of communication in a little more detail.

Conflict in management activities; social role of conflict, its causes and forms.

Conflict (from Latin conflictus - clash) - a clash of opposing interests, views, aspirations; serious disagreement; a dispute that threatens complications. With a huge variety of conflicts - from children's quarrels to world wars - their causes and forms of occurrence have much in common. Most often, conflict is assessed by people negatively, as a phenomenon that interferes with business and causes harm to health. This is where conflictophobia arises, the fear of any conflict.

However, in reality, conflict is a complex, multifaceted phenomenon. Conflicts, if properly managed, can benefit both business and people, improve relationships, i.e. have positive consequences. With an experienced leader, conflicts can become a means of managing people, groups, and raising the level of the organization. Therefore, today in management theory, conflicts are regarded as a necessary

and natural element, as a norm of life for an organization; they are not seen only as negative phenomena. The causes of conflict are usually considered to be conflicting interests, unmet needs, lack, shortage of something, and not just something material. Of course, these may also be unmet material needs, such as unpaid wages. But there may also be pointless, internal, psychological reasons that cause conflicts, which are especially difficult to resolve and often end tragically.

The set of causes of conflicts is called conflictogens. The difficulty of regulating conflicts is also due to the fact that among the causes that give rise to them, the irrational, unconscious component, motives, and feelings are often very strong, often vaguely recognized by the participants in the conflict themselves.

Sometimes a conflict arises as if on its own, in the absence of any external causes, due to nature itself, the characteristics of the individual's psyche. People of this type are distinguished by special specific character traits; they are called conflict personalities. The manager must be able to promptly recognize people of this kind among employees and take appropriate measures towards them to neutralize their negative role.

In conflict situations, such types usually play a leading role, acting as their instigators and instigators. In modern conflictology, the following definition of the essence of conflicts is given: conflict is a system of socio-psychological interaction between individuals or groups of people in the form of a collision, confrontation, the content of which is determined by contradictions, opposing interests, the emergence of threats to the satisfaction of current needs and elements of irrational behavior.

With a single essence, the specific forms of this complex social phenomenon can be very diverse. The diversity of conflicts gives rise to the need to classify them, the purpose of which is to promote a deeper understanding of the essence of the conflict and find the most effective ways to resolve and prevent it.

By area of activity, domestic, family, labor, educational and pedagogical conflicts are distinguished; by the nature of the reasons causing conflicts - resource, status-role, ideological; according to the nature of the relationships between the participants - conflicts "vertically" (boss - subordinate) and "horizontally" (between employees of the same rank).

One of the most common grounds for classifying conflicts is their division by subjects or parties to the conflict:

- intrapersonal;
- interpersonal;
- between the individual and the group;
- intergroup.

Let's look at these types of conflicts in more detail.

Intrapersonal conflict. Its carrier is an individual, and its sides are various psychological factors of her inner world, her needs, motives, interests, value orientations. Contradictions between these psychological factors can be accompanied by negative experiences and emotional stress. One of the most common forms of intrapersonal conflict is role conflict, which is expressed in the need for a person to resolve conflicting demands placed on him by production, family, and educational institution (when combining work and study). This kind of conflict can arise for an employee when it is necessary to fulfill conflicting demands of superiors at different levels. Like any other conflict, it can have both negative and positive consequences, be both constructive and destructive.

Interpersonal conflict. Conflicts of this kind arise constantly and for a variety of reasons; they are widespread in various spheres of public life - in everyday life, in political life, in production. In production, such conflicts most often arise between a manager and a subordinate (for example, due to the number of wages, established production standards) or due to the use of limited material resources - production space, equipment, labor resources, etc.

Of course, interpersonal conflicts can arise not only on objective, but also on subjective, purely psychological grounds, based on dissimilarity of characters, hostility, etc.

Conflict between the individual and the group. The group includes a whole system of relationships: it has a formal and sometimes also an informal leader, and a structure of command and

subordination is formed. At the same time, the group consists of individual people, each of whom has his own personal needs and interests. The potential for conflicts of this type arises from the contradictions between group and personal, general and private interests. The group considers this or that deviation of a group member from generally accepted norms as a negative phenomenon. The most common conflict of this type arises from contradictions between a leader and a group whose rank-and-file members believe that the leader makes unfair demands on them. Sometimes the causes of intrapersonal, interpersonal and group conflicts are summed up, which makes the conflict between an individual and a group especially difficult to resolve. But the result of a constructive resolution of such a conflict can be very high: the individual's connections with the group are strengthened, and interpersonal contacts in the group as a whole become stronger. On the contrary, with a destructive outcome of the conflict, the connections between group members weaken, and there is a danger of breaking the individual's relationship with the group or even destroying the group, especially when it comes to a conflict between the group and its authoritarian leader.

Intergroup conflict. The parties to this conflict are separate formal or informal groups, which, as a rule, exist in organizations. Such are, for example, disagreements between the management of an enterprise and its staff, between managers at higher and lower levels, between the administration and the trade union organization of the enterprise. The main sources of intergroup conflicts are the struggle for limited material resources, as well as social contradictions.

Consideration of the typology of conflicts by their subjects helps to understand both the structure and dynamics of conflicts, as well as ways of regulating them.

Conflicts are inevitable companions of our lives; they cannot be completely eliminated from life. Therefore, the leader must be psychologically prepared for the emergence of conflicts and understand his role in regulating them.

Strategies for overcoming conflict. Any manager is interested in ensuring that a conflict that arises in his organization or division is overcome (exhausted, suppressed or terminated) as quickly as possible, because its consequences can cause considerable moral or material damage. This process can occur both without direct participation by the parties themselves, and with active intervention and management.

The conflict can be resolved as a result of three types of actions: unilateral, carried out by each participant at his own peril and risk; mutually agreed upon by them, resulting in a compromise; joint, or integrative. They may be based on the coincidence of opinions of the participants, the superiority of one of them, or the intervention of a third force (physical or legal).

As a result, three models of behavior of conflict participants are formed. One of them is destructive; the other is conformal, associated with unilateral or mutual concessions (not to be confused with non-participation or passive resistance) and constructive, involving a joint search for a solution beneficial to all parties.

A generalized classification of forms of behavior of participants in a conflict was developed by K. Thomas and R. Kilmann in 1972. Thus, when both parties have little interest in resolving it (this happens if they have a close rank, or the conflict is not mature enough), but try to maintain between a semblance of a good relationship, they may use a conflict avoidance strategy.

If the latter has subjective reasons, such a strategy is favorable, because it gives them the opportunity to calm down, comprehend the situation and come to the conclusion that there is no basis for the confrontation and its continuation is pointless. If the conflict is objective, then this strategy leads to the loss of the participants, since time drags on, and the reasons that caused the conflict not only persist, but may even worsen. In addition, maintaining the situation and unwillingness to enter into conflict can lead to psychological substitution-transfer, when an inaccessible goal is replaced by another that gives visible temporary satisfaction. If one of the parties is not interested in the subject of the conflict, and its rank turns out to be higher, it can adhere to the strategy of adaptation, allowing the other party to get what is more important for it, while remaining without a gain, but not a loser either.

"Distancing from the conflict zone" is often used in cases of deadlock. It reduces the intensity of passions and makes it possible to once again reflect on the situation and maintain good relations in the future. In the case when the rank of an interested opponent turns out to be higher, he is tempted to use the strategy of resolving the conflict by force in his favor ("reconciliation with a deadlock"), as a result

of which the other, weaker one ends up losing. The use of such a strategy is often accompanied by illicit force, intimidation, blackmail, etc.

Such a strategy can be based on a forecast of the enemy's intentions and be implemented, for example, through disinformation, provocation, transmission of true information perceived as false, etc. If it makes it possible to put oneself in an advantageous, or at least not a losing, position in advance, speech It's about reflexive defense. If the other party is given the opportunity to make a decision that would be beneficial to this subject, we are talking about reflexive conflict management.

Since, as a rule, the losing side does not accept defeat, the conflict can break out with renewed vigor at any moment and it is unknown how it will end. Thus, if one opponent loses, there can be no gain for the other, and therefore for the organization as a whole. If the rank of the opponents is the same and they are equally interested in overcoming the conflict, then they can apply the strategy of reconciliation through the search for a compromise, that is, an agreement within which the common features of the proposed solutions are highlighted with the division of benefits and losses approximately equally. Since both sides are not losers, this strategy is considered expedient and is widely used in practice, but, as a rule, it is not possible to make an optimal decision, since the problem itself remains. Sometimes opponents who are in different ranks, but are interested in reaching an agreement that helps save time and effort, preserve relationships and gain something instead of losing everything, also compromise:

The ideal is a strategy for the final resolution of the conflict, the essence of which is to find and eliminate its causes within the framework of voluntary cooperation of the parties and end the confrontation. The conditions for this are: timely and accurate diagnosis of the problem; taking into account the interests of all parties; having a common goal.

This strategy benefits everyone. Firstly, it turns opponents into partners, and, therefore, improves the situation within the organization. Secondly, the problem is not "driven deeper," but ceases to exist altogether. Third, the benefits gained by the parties, even if they are distributed unevenly, still exceed those that could be obtained with any other strategy.

This strategy is based on treating conflict as a normal phenomenon, which, however, must be eliminated as soon as possible. To do this, you need to treat each other with trust, recognize the equality of each party, and that they have their own legitimate interests and points of view.

But usually conflicts do not "resolve themselves" and if ignored, they grow and can destroy the organization, so managers have to take the matter of resolving them into their own hands, develop and implement options for overcoming the conflict.

To manage conflict, you can use prevention and resolution strategies, and the latter, depending on the situation, is implemented in two ways - coercion and persuasion.

The conflict prevention strategy is a set of activities mainly of an organizational and explanatory nature. We can talk about improving working conditions, fair distribution of resources, remuneration, changing the structure of the organization, its management system, introducing additional integration and coordination mechanisms, ensuring strict adherence to the rules of internal life, traditions, norms of behavior, and work ethics. The conflict resolution strategy is aimed at forcing or convincing the conflicting parties to stop hostile actions and, by starting negotiations among themselves, to find an acceptable solution that not only excludes someone's defeat, but also indicates the direction of mobilizing social energy.

By implementing it, the leader blocks the situation, takes control of the situation, shows the impossibility of achieving the desired goals based on the conflict, determines the reasons for its occurrence, boundaries, positions of the parties (what they insist on), interests (what they want to achieve in the end), fears, motives ; finds out what the positions have in common, if they are generally incompatible, and together with the participants tries to find a way out of the current situation (a compromise or an exchange option). If necessary, if the parties do not want to follow convictions and reasonable arguments, he uses administrative methods of influence. The possibilities of persuasion depend on the correctness of the explanation, excellent conviction, the ability to speak, formulate thoughts, and suggest.

At the same time, other, more specific methods can be used to combat cliques and intrigues. For example, cliques are corrupted from within by introducing distrust of each other into their ranks, fueling discontent and disappointment with leaders, and encouraging dissident factions and defectors. When the disintegration reaches the necessary degree, a new leader is introduced into their ranks, capable of ending the conflict and subordinating them to official leadership. Persons engaged in intrigue are threatened with public exposure, but at the same time they are helped to solve the problems that push them to such actions. If it is known that the threat is real and retribution is inevitable, and its price is higher than the gain, the conflict can be stopped in this way.

Resolution of management conflicts: There are constructive and destructive conflicts. Conflict is considered constructive when the whole that emerges from the differences is better than the accumulated differences. Conversely, when disagreements do not line up into a single whole and lead to a worse final result than the initial differences, then the conflict is recognized as destructive. Which way - constructive or destructive - the next conflict will develop depends on the atmosphere prevailing in the team.

If this is an atmosphere of mutual respect, then the conflict will certainly develop in a constructive direction, and the managers participating in it, listening to the opinions of colleagues who disagree with them, will be able to learn something from each other. This means that it is possible to achieve a synergistic effect and emerge enriched from an organizational conflict only if there is mutual respect between members of a complementary team.

There is no need to make any effort to make a conflict destructive. Developing a conflict along a destructive path is akin to driving along a straight highway. Suffering from resentment and injustice, a person rushes at high speed along this highway, and accelerates even more every minute. He raises his voice, speaks quickly, interrupts opponents, swears, can jump out of the room and even start a fight. A person cannot bear the pain caused by conflict. He wants to get to the end of the conflict situation as quickly as possible, no matter what that end turns out to be for him.

On the contrary, the development of a conflict along a constructive path is slow and difficult. Only by moving slowly and carefully can you notice the warning signs and intuitively “feel” for the right direction. Those who are calm and cool have the ability to resolve the conflict or at least understand the essence of it in order to try to cope with it. And the more difficult the situation, the less tense you should be. Understanding that arguing, especially with emotional people, takes a lot of energy, a good manager keeps his head and never gets involved in a conflict in a destructive, disrespectful manner. He always objectively assesses the situation and even expresses his disagreement with his opponent in a soft form, without showing irritation, but giving brutal arguments. Thus, to make a conflict constructive, it is necessary to focus on the human factor and achieve understanding and respect from opponents.

Conflicts of interest are common in complementary management teams. The decision made may require little effort from one member of the complementary team and complete dedication from another. Therefore, one (the other) can always refuse to do something that will “work” exclusively for the interests of the first. Consequently, those who have the authority to make decisions may experience opposition from their immediate executors. The latter can simply pretend to carry out decisions, saying that they did not fully understand them, or distort the results obtained in their favor. In turn, those with authority may initially make decisions in their own interests to the detriment of the interests of everyone else. Whenever there are conflicting interests among members of the management team, the process to ensure that the decision is implemented can be very lengthy and very costly.

It turns out that the presence of different interests among members of a complementary team is another source of management conflicts. Conflicts of interest do not provide an atmosphere of necessary cooperation in the process of making and implementing management decisions. The question arises: “How to transform the conflict into a constructive direction if members of the management team pursue different interests?”

First of all, you should not fight the conflict, but you should try to make it functional and benefit from it, i.e. make the conflict “work for you.” To do this, you and perhaps someone else involved in the conflict must sacrifice their short-term interests. At the same time, it is obvious that neither you, nor, especially, other participants in the conflict will sacrifice their interests until you believe that in the

foreseeable future, they will make a reciprocal concession to you. Thus, in order to implement the management decision, in addition to the mutual respect mentioned earlier, mutual trust is also necessary.

Moreover, trust must come before respect. A person is designed in such a way that he can trust a person whom he does not respect if he is sure that he will not deliberately harm him. However, he will never respect a person he doesn't trust. In most cases, he won't even listen to him.

Where there is mutual trust, the time lag between such exchanges may be greater than where mutual trust does not exist. The act of purchase and sale is a striking example of the absence of this lag and can be taken as the initial (zero) starting point of human relationships.

In relation to love, there is no time lag between giving and receiving a responsible gift. A truly loving person gives simply because it enriches him. The more he gives, the richer he becomes. His benefit is not in what he receives, but in what he gives.

We all have the ability to love and give love. Giving for the purpose of internal self-enrichment is primarily manifested in how parents love their children. No normal parent will spare efforts and resources aimed at meeting the reasonable needs of their children. And he does this not at all because in his declining years the children will return the favor and "give him a glass of water." Unfortunately, some parents, driven by boundless love for their children, may not notice their vicious inclinations and, being embarrassed (or unwilling) to control the intended use of allocated funds, can harm their future.

Without love, we feel a constant need to take something. And the more we take, the poorer we feel, on the one hand, and the more hostile the attitude of others we arouse toward ourselves, on the other. Over time, the need to take becomes insatiable, causing a maximum of negative emotions in human relationships. Enmity and hatred as a consequence of the insatiable need to take can have both material and moral connotations. You can "rob to the last" your business partner and thereby rightly "earn" his enmity or hatred, or you can "drink to the dregs" the love of your chosen one and, leaving him, achieve the same result.

A leader who has taken control of an economic system (enterprise, organization, community or denomination) must create and maintain win-win conditions in it, or so-called symbiotic relationships based on mutual trust. Symbiotic relationships are associated with relationships between friends who share sorrows and joys. The way to transform a potentially destructive conflict into a constructive conflict is to create a nurturing, symbiotic environment that can ultimately bring benefits to all parties involved. Since the highest degree of symbiotic relationships is love, then the formation of the spiritual basis of the managed system by cultivating love and spreading it to others becomes a desirable and worthy way of existence.

To implement such a mission, it is necessary to have at least a general idea of how the system can be changed in order to establish an atmosphere of mutual trust and respect in it. And the first thing you should pay attention to is the organizational structure. It "describes" the distribution of responsibilities, powers, power, rewards and through this determines the behavior of members of the system. Therefore, a structure is needed that allows each member of a complementary management team to work in his own style in an environment that is conducive to the development of his managerial talents.

However, structure alone is not enough to create an atmosphere of mutual trust and respect. Since people have different styles, they must learn to interact (communicate) with each other in the best possible way. Consequently, at the second rate, the leader must build the correct scheme for the participation of managers in making management decisions. In other words, to create an environment of mutual trust and respect, it will be necessary to review and, if necessary, correct the schemes for developing, adopting and implementing management decisions.

But sometimes even changes in the organizational structure and schemes for the development, adoption and implementation of management decisions do not lead to the desired result. The fact is that these structures and schemes "work" only when they are filled with high-quality human material. And some people are constantly looking for a reason to quarrel, do not inspire trust and respect in themselves and do not show them towards others. They treat others with disrespect and even formulate their agreement to cooperate in a destructive manner. In this case, the leader has no choice but to get rid of such employees and replace them with more suitable candidates. Actually, this work is the subject of the third pace (queue) of transformation of the managed system.

Thus, to transform an economic system that lacks mutual trust and respect among employees into one that has these qualities, a leader must have three sets of tools in his arsenal:

• changes in organizational structure;
• changes in decision-making and decision-making patterns;
• personnel rotation.

To what extent to use them and in what order to apply them depends on each specific situation. However, it must be remembered that in conditions of an imperfect organizational structure and incorrect schemes for developing and implementing management decisions, even good managers begin to behave destructively.

Options for resolving interpersonal conflicts.

Depending on the reasons for the conflict situation, the interests and goals pursued by opponents, the relationship of opposing forces, the conflicting behavior of the parties, an interpersonal conflict can be resolved by:

1) avoidance of conflict resolution, when one of the parties does not seem to notice the contradictions that have arisen. Such behavior may be associated either with a clear superiority in power of one of the parties, or with the fact that at the moment there are not sufficient opportunities to resolve the contradictions that have arisen;

2) smoothing out contradictions - one of the parties either agrees with the claims made against it (but only at the moment), or seeks to justify itself. Such behavior may be due to the desire to maintain normal relationships or the fact that the subject of the dispute is not of significant importance for one of the parties;

3) compromise - mutual concessions of both parties. The size of concessions, as a rule, depends on the balance of power of the conflicting parties or on the “good will” of the stronger party;

4) consensus - finding a mutually acceptable solution to the problem. With this option, the parties can turn from opponents into partners and allies;

5) escalation of tension and the escalation of the conflict into a comprehensive confrontation. Such conflict behavior is due to a mutual attitude toward an uncompromising struggle;

6) suppression of the conflict - one or both parties are forced by force (threat of force) to accept one or another outcome of the confrontation.

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MANAGEMENT OF LAND RESOURCES AS A FACTOR OF HIGH QUALITY AGRICULTURAL DEVELOPMENT OF TERRITORIES

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Land circulation is mainly to realize the circulation of land management use right, and promote the development of agricultural production to better adapt to the development trend of modern agricultural marketization. Related studies show that the provinces of the land circulation process is inconsistent, the overall performance for the east high west low spatial distribution state, and the process of land circulation difference is not mainly comes from the differences between the region, but mainly from the differences between the regional province units (TengGan, etc., 2022). The main reason for actively advocating land transfer in China is that the scale of rural land transfer in China is still small in the new period, while the scope and term of land transfer are very limited, and the effect of agricultural economy is low.

Many researchers have studied various aspects of land management, namely: Chen Bingpu [10], Chen Yubin[1], Cui Hongzhi [11], Du Bo [13], Fan Huaichao [2], He Lanlan [10], Hou Yongzhi [21], Hu Huaguo [3], Jiao Xingrui [4], Kong Deying [5], Kong Yang [4], Li Chunhua [24], Li Guozhen[8], Li Ya [19], Liao Xiaoping [24], Liu Fan [6], Liu Feixiang [7], Liu Jin[20], Liu Wei [8], Liu Xinni [9], Liu Yang [10], Ma Xiaohe [11], Nie Beng [12], Qi Yudong [13], Qu Haiyan [15], Sun Xinhua [14], Tan Linli [14], Wang Sen [1], Wang Yingrong [9], Wen Feng [17], Xu Guangping [15], Xu Jianguo [16], Xu Qing [20], Yang Ziyan [17], Ye Manfei [18], Yu Fajian [12], Zhang Handong [19], Zhang Jinhua [21], Zhang Junxuan [21], Zhang Lu [22], Zhang Wenming [7], Zhang Xi [23], Zhang Xun [16], Zhang Yingliang [8], Zhang Zhan [24], Zhao Jiaxing [9], Zhao Yajiao [25], Zhong Pingying [7], Zhou Zhenfeng [26] and others.

In existing studies, problems such as decentralization of agricultural land management and unscientific ratio of factors have been regarded as the main obstacles to agricultural progress (Han Chaohua, 2017; Liu Qiong et al., 2020). It is precisely because of these realistic backgrounds of agricultural development that the relationship between land circulation, scale management and agricultural development has always been the "agriculture, rural areas" for a long time. After the reform and opening up, the rural land transfer policy has been continuously improved, and the process of land transfer has been accelerated. According to statistics, in 2004, the circulation area of rural contracted land was 58 million mu, but in 2018, it had exceeded 530 million mu. This shows that the land transfer policy has realized the effective radiation at the geographical spatial level. Based on the theoretical perspective of agricultural development stage, the existing relevant literature mainly focuses on two aspects: one is the impact of land circulation on agricultural production efficiency (Qian Long et al., 2016; Chen Binkai et al., 2020), more emphasis on agricultural production increase; the second is the influence of land circulation on agricultural ecological efficiency (Gancone et al., 2017; Sun Jiangchao, 2019), and began to focus on agricultural quality development, especially after the "new development concept" is proposed, ecological security has gradually become an important part of the agricultural research. However, after entering the new stage of development, the research heat on issues related to high-quality agricultural development has also increased (Sun Jiangchao, 2019). In general, the systematic research on the high-quality agricultural development of land circulation is relatively lacking.

This paper thinks that the expansion of land circulation scale level helps to overcome the long-term domestic agricultural production field facing land decentralization, large cost loss and low

economic benefit reality challenges, and by promoting the agricultural increment, quality, effect development to promote agricultural high quality development, namely the land circulation scale expansion of agricultural quality development economic impact, namely the scale effect. Specifically speaking, first, the expansion of land circulation scale has agricultural incremental effect. From the perspective of food security, rural land transfer such as share cooperation and transfer has positive effects on agricultural grain production (Li Shanshan et al., 2022); meanwhile, some studies found that land transfer significantly improves agricultural production efficiency (Zhang, 2018; Shi Changliang et al., 2020). From the perspective of income increase effect, the transfer of land and the non-farm employment decision of rural labor is considered to enhance the per capita income level. Moreover, the participation of farmers in the land transfer is of great significance to effectively consolidate the achievements of poverty alleviation and comprehensively boost rural revitalization (Lu Peilu et al., 2022). From the perspective of poverty reduction effect, the rural land transfer in poor areas can significantly reduce the poverty incidence rate by about 30%, and the average increase of the land transfer level by one unit can effectively reduce the poverty level by 0.718 units (Zhou Li, 2022). Second, the expansion of land circulation scale has the effect of improving agricultural quality. Long Yun et al. (2016) believe that land circulation has a reducing effect on agricultural non-point source pollution. Compared with the stage of banning rural land circulation, the impact of land circulation on the agricultural ecological environment is improved after entering the market development stage of land circulation (Xu Shan et al., 2018). At the same time, based on the perspective of the stability of land transfer contract, the long-term stability of land transfer contract helps to reduce the intensity of agricultural fertilizer application, and then improve the environmental efficiency of agricultural production and operation (Li Bowei, 2019; Zhang Lu et al., 2021). In short, the expansion of land circulation scale has a significant positive effect on the agricultural ecological environment. Third, the expansion of land circulation scale has the efficiency effect. Cai Jian et al. (2016) pointed out that under the condition of stable land rights, land transfer promotes the application of agricultural machinery technology; moreover, Liu Minghui et al. (2019) found that agricultural mechanization service is an important way for land transfer to improve agricultural income. From the perspective of international trade of agricultural products, the expansion of land transfer scale helps to reduce the cost of agricultural production and strengthen the standardized management of agricultural products, so as to improve the competitiveness of China's agricultural products in the international trade market (Shao Guilan et al., 2010). Considering the income distribution effect and welfare level, the expansion of land transfer scale will not only contribute to the improvement of farmers' income level, but also help to reduce the income gap within farmers and urban and rural income gap, so as to improve the income distribution effect and welfare level (Wu Mingming et al., 2022).

It can be seen that the promotion effect of land circulation on agricultural output benefit, agricultural environmental benefit and agricultural technology level has been proved by relevant studies. However, agricultural output benefits, agricultural environmental benefits and agricultural technology level also reflect the goals of "incremental, improving quality and efficiency" of agriculture from different aspects, which meets the requirements of high-quality agricultural development. Therefore, it is not difficult to infer that land circulation is also very likely to have a positive effect on the process of high-quality agricultural development. So, in the domestic under the background of land circulation scale and cycle is limited, need to pay attention to the scale effect of land circulation, through land circulation scale expansion to achieve agricultural incremental quality effect development, and promote the development of agricultural quality, the scale effect is land circulation is one of the process of endogenous power in the development of agricultural high quality.

Based on the above analysis, this paper proposes a research hypothesis:

Hypothesis 3-1: The expansion of land circulation scale can effectively promote the process of high-quality agricultural development.

Policy effect

1) Macro level: land transfer policy and high-quality agricultural development

On the one hand, development is background of the land transfer policy. Land circulation is a major agricultural policy in the field of domestic agriculture, in ensuring the ownership of land and

contract right under the condition of long-term stability, its purpose is mainly in the circulation of land, and through the effective use of land resources, promote land scale management, increase food production, improve farmers' income and building beautiful prosperous rural agricultural high quality development. Relevant studies show that China's land transfer policy has obvious phased characteristics, which can be divided into four stages: the initial exploration stage from 1984-1987, the legal licensing stage from 1988-2002, the steady promotion stage from 2003-2009 and the standard implementation stage after 2010, as shown in Table 1.

Table 1. Stage evolution and contents of land transfer policies.

The phased division standard of land transfer policy	The phased content of the land transfer policy
1984-1987: The initial exploration stage	We will allow contracted rural land to subcontract, and encourage contracted land to be concentrated to experts in farming and carry out intensive management
1988-2002: Legal licensing stage	We will allow the transfer of contracted rural land management rights
2003-2009: Steady promotion stage	Farmers are allowed to legally rent and lease land, and rules for handling land lease disputes are formulated
2010-present: Standard implementation stage	To promote the use of the standard text of land transfer contracts, we should strengthen the management and services for the transfer of contracted land management rights, improve the transfer market, and develop various forms of appropriately scaled operations on the basis of voluntary and paid transfer in accordance with the law

Note: The phased classification standards and phased achievements of land transfer policies are mainly based on the research results of Fang Zhen et al. (2022) and Chen Yubin et al. (2022) in this regard, In the initial exploration phase of 1984-1987, In 1984, the No.1 central document began to propose that "allowing the subcontracting of contracted rural land, Encourage contracted land to concentrate on farming experts, Implementation of intensive management " land transfer policy orientation, It is the embryonic embodiment of the system that initially reflects the land transfer policy; During the 1988-2002 legal licensing phase, The Amendment to the Constitution of the People's Republic of China promulgated in 1988 clearly states that the key information of land transfer of "allowing the transfer of contracted rural land management rights", Thus laid the legal foundation for the land transfer policy; During the steady promotion phase of 2003-2009, The Rural Land Contracting Law of the People's Republic of China, promulgated in 2003, emphasized: "Farmers are allowed to legally lease and lease land legally, Formulate rules for handling land lease disputes" and other important expressions of land transfer policy level, This further provides legal protection for both parties to the transfer and transfer of the land; In the standard implementation phase after 2010, In 2010, the No.1 document of the CPC Central Committee issued several Opinions of the CPC Central Committee and The State Council on Strengthening Coordinating Urban and Rural Development and Further Strengthening the Foundation of Agricultural and Rural Development (Zhongfa [2010] No.1), The document clearly states that "to promote the use of the standard text of land transfer contracts, We will strengthen the management and services for the transfer of contracted land management rights, Improve the circulation market, Develop various forms of appropriate scale operation on the basis of voluntary and paid circulation according to law", This is a major turning point in the evolution of land transfer policy (Fang Zhen et al., 2022; Yu-Bin Chen, 2022).

According to "Zhongfa [2010] No.1", this document clearly points out that the standard text of land transfer contract should be promoted, the management and service of land contract management right should be strengthened, the transfer market should be improved, and various forms of moderate scale operation should be developed on the basis of voluntary and paid transfer according to law. In 2005, the former Ministry of Agriculture issued the Measures for the Management of the Transfer of Contracted Rural Land Management Rights, which made preliminary provisions on the principles of land transfer, the rights and obligations of the parties involved in the transfer, and the transfer methods. However, because the land transfer policy was just introduced at that time, the policy system was not

perfect, coupled with the impact of the financial crisis, the actual effect of the policy was not obvious. According to relevant data, in 2005 and 2006, the total area of contracted farmland circulation was 0.547 million mu and 55.5 million mu respectively, with an annual growth rate of only about 1.5%, while the total area in 2010 and 2011 was 186.7 million mu and 227.9 million mu respectively, with an annual growth rate of about 22.1%. It is not difficult to find that after the launch of Zhongfa [2010] 1 in 2010, the annual growth rate in 2011 increased by about 20.6% compared with 2006. Therefore, this paper will implement "Zhongfa [2010] No.1" as a quasi-natural experiment, and then explore the impact of the implementation of land transfer policy on the high-quality development of agriculture.

On the other hand, the theoretical analysis has implications for land turnover policy and the quality of agricultural development. First, let us consider the overall impact of land turnover policy on the quality of agricultural development. The "Zhongfa [2010] No. 1 "document clearly proposes to strengthen the management of rural land contracting, stabilize and improve the basic rural operation system, and enhance the management and service of the transfer of contracted land management rights. To be specific, accelerate the cultivation of land transfer service organizations, coordinate the grass-roots land contract management departments, improve the land transfer service system, carry out information release, policy consultation, contract signing, price evaluation and other services, to promote the process of land transfer. However, in the existing studies, the influence of land transfer policy on high-quality agricultural development by promoting the expansion of land transfer scale is mainly reflected in the influence of land transfer on agricultural output benefit, agricultural environmental benefit and agricultural technology level. Specifically, in terms of agricultural output benefits, expanding the scale of land transfer can not only improve agricultural production efficiency (Zhang, 2018), but also help to reduce agricultural production costs (Peng Jiquan, 2021). In terms of agricultural environmental benefits, land transfer not only reduces agricultural non-point source pollution (Longyun, 2016), but also improves the probability of farmers adopting green agricultural production methods (Zhang Zhaohui et al., 2021). In terms of agricultural technology level, on the premise of maintaining the stability of land rights, land transfer promotes the application of agricultural machinery technology (CAI Jian, 2016), and agricultural mechanization service is an important path for agricultural land transfer to improve agricultural income (Liu Minghui, 2019). It can be seen that the promotion effect of land circulation on agricultural output benefit, agricultural environmental benefit and agricultural technology level has been proved by relevant studies. However, agricultural output benefits, agricultural environmental benefits and agricultural technology level also reflect the goal of "incremental, improving quality and efficiency" of agriculture from different aspects, which meets the requirements of high-quality agricultural development. Therefore, the policy effect of land circulation on high-quality agricultural development needs to be verified.

Therefore, this paper holds that there may be significant differences in the effect of land transfer policy on high-quality agricultural development before and after the implementation stage of 2010 standard. According to the above discussion, compared with the implementation stage of the standard, the land transfer policy after the implementation stage of the standard has a more effective positive effect on increasing production, increasing quantity and increasing efficiency of chemical fertilizers and pesticides, and reducing the rural income gap. Therefore, the policy effect is one of the internal driving forces of the macro-level land circulation to promote the high-quality development of agriculture.

2) Micro-level: high-standard farmland policy and agricultural carbon emissions

On the one hand, the development background of the high-standard farmland policy. Some domestic land policies, such as the implementation of high-standard farmland construction policy in 2011 (hereinafter referred to as "high-standard farmland policy") and land circulation, which reflects the demands of land transfer policy from a specific level. China has initiated comprehensive agricultural development projects since 1988. Since 1994, integrated agricultural development projects have been divided into two categories, namely land management projects and multiple management projects; since 1999, comprehensive agricultural development projects have been expanded into three categories and added science and technology demonstration projects; however, since 2004, comprehensive agricultural development projects have been adjusted to two categories, namely land management projects and industrial management projects, with no science and technology demonstration projects. High standard

farmland policy as an important content of comprehensive agricultural development "is the construction of high standard basic farmland as the goal, on the basis of overall land use planning and land management planning, in rural land management key areas and major engineering construction area, basic farmland reserves, basic farmland development area of land consolidation activities". China's high-standard farmland policy is mainly manifested in two stages of development: first, the preliminary exploration stage (1997-2010). In 1997, the Notice of the Central Committee of the Communist Party of China and the State Council on Further Strengthening Land Management and Effectively Protecting cultivated Land proposed: "Actively promote land consolidation and improve land construction"; in 2001, the Ministry of Land and Resources organized the preparation of the National Land Development and Consolidation Plan (2001-2010). Although the relevant departments have put forward some preliminary development models and future construction directions of the high-standard farmland policies, no normative documents have been formed for implementation nationwide, so this stage is in the preliminary exploration stage. Second, the standard implementation phase (2011-present). In 2011, the National Land Consolidation Plan (2011-2015) (hereinafter referred to as the Plan) clearly put forward the requirements for the implementation of high-standard farmland policies, and the relevant local departments provided institutional guarantee for the effective promotion of high-standard farmland construction across the country through the connection with the Plan.

In recent years, the national policy level attaches great importance to the actual progress and effectiveness of the construction of high-standard farmland. No.207, "optimize the regional layout, highlight the construction focus, improve the construction standards and investment standards, and strive to build more than 200 million mu of concentrated contiguous, drought and flood protection, stable and high yield and high yield, ecological friendly high-standard farmland during the 13th Five-Year Plan period". In addition, according to the requirements of the National High-standard Farmland Construction Plan (2021-2030), 1.075 billion mu and 1.2 billion mu of high-standard farmland will be built in 2025 and 2030 respectively. Therefore, the construction of high-standard farmland is the core content of comprehensive agricultural development projects, which fully reflects the development requirements of land circulation and scale operation, and the ideas of "small field and field" and "land exchange" reflect the basic demands of land circulation to some extent, and also emphasizes the concept of "ecological first", which has fertilizer reduction effect (Liang Zhihui et al., 2021; Chen Jianghua et al., 2022). Accordingly, under the strategic goal of "double carbon", the reduction of agricultural carbon emission is also the micro embodiment of high-quality agricultural development. Therefore, this paper holds that before and after the implementation of high-standard farmland construction policy. Therefore, the policy effect is also one of the internal driving forces of the micro-level high-standard farmland construction policy to promote the reduction of agricultural carbon emissions.

According to the requirements of National High-standard Farmland Construction Plan (2021-2030), 1.075 billion mu and 1.2 billion mu of high-standard farmland will be built in 2025 and 2030 respectively; meanwhile, the "two-carbon" target strengthens the carbon emission reduction orientation of major industries including agriculture. Therefore, strengthening the policy of high-standard farmland and realizing the goal of agricultural carbon emission reduction are important contents in the process of modern agricultural development. In fact, the impact of high-standard farmland policy on agricultural carbon emission reflects the impact of land transfer policy on high-quality agricultural development from a more micro level of quality improvement. In existing studies, policy effects are widely regarded as one of the effective ways to achieve the agricultural carbon emission reduction target (Some et al., 2019; Costajr et al., 2019; Liu Qiong et al., 2020). From the global experience, in order to achieve the target of agricultural carbon emission reduction, the governments of various countries have formulated corresponding agricultural carbon emission reduction policies according to their place, time and potential. How is the effect of the policy implementation? Scholars at home and abroad have discussed the relevant issues.for example, Some scholars used agricultural fiscal expenditure to characterize agricultural policy variables and found that agricultural policy support was further helped to curb agricultural carbon emissions by stimulating agricultural technological innovation (Hu Chuan et al., 2018); As again, Some scholars have found that, The US carbon tax policy has not only reduced the exports of corn, sorghum and wheat and increased the exports of barley, soybeans and sunflower, And

these changes in trade patterns have also led to the redistribution of land use in other parts of the world, Further fueling global greenhouse gas emissions, Its emissions growth accounted for 1.8% of total U. S. emissions in 2017 (Dumortier et al., 2021). In view of this, the effect of "carbon emission reduction" of agricultural land policy has both theoretical and practical implications.

In fact, the high-standard farmland policy implemented in China in 2011 is an important part of the comprehensive agricultural development investment project, among which "ecological first" is the important thought that the high-standard farmland policy and land consolidation projects must be upheld, which fully embodies the ecological concept of "carbon emission reduction" in agriculture. The purpose of high-standard farmland construction is to build the farmland with high and stable crop yield and convenient field management. In addition, large-scale contiguous plots can be constructed by means of "small field combined field" and "land exchange", so as to improve the utilization efficiency of agricultural production input, realize the scientific ratio and quantity reduction and efficiency increase of carbon emission source factors such as chemical fertilizer, so as to adjust and optimize the input structure of agricultural factors. Therefore, in the context of the construction of the "two-carbon" pattern, will the implementation of the high-standard farmland policy help to reduce agricultural carbon emissions? Will the differences in economic basis, geographical location and agricultural endowment conditions among provincial units lead to heterogeneity in the impact of policy implementation on agricultural carbon emissions? These issues urgently need a scientific assessment.

On the other hand, there is a theoretical analysis of the impact of a policy of high farmland standards on carbon emissions in agriculture. The reduction target of agricultural carbon emission is the practical embodiment of agricultural "quality improvement" development, and also the inherent requirement of high-quality agricultural development in China. As a major agricultural country in the world, China has a long way to go to reduce agricultural carbon emissions. For a long time, domestic "carbon emission reduction" and other environmental policies mainly targeted in the industrial field, while ignoring the relatively backward agricultural field. However, in recent years, with the increasingly prominent negative external effects of excessive greenhouse gas emissions in the agricultural sector, relevant departments have realized the harm of environmental problems such as agricultural carbon emissions, and began to put the agricultural "carbon emission reduction" compensation work in an important position (Wu Haoyue et al., 2020; Tian Yun et al., 2021). As we all know, cultivated farmland not only has grain production value, but also has important ecological value. Therefore, strengthening the awareness of cultivated land quality protection is helpful to improve the ability of agricultural ecological "carbon sink". Although high standard farmland policy is not a complete sense for agricultural carbon emissions reduction target natural experiment, but according to the actual requirements of the construction of high standard farmland, not only in accordance with the "field, tree lines, road, canal, drought, waterlogging can row" standard, large-scale construction guaranteed high standard basic farmland, scientific and effective guide cultivated land concentrated, optimize farmland layout, to strengthen the construction of high standard basic farmland demonstration county, organize the implementation of basic farmland renovation major projects, more to strengthen the quality of supplementary cultivated land construction and management, reasonable guide agricultural structure adjustment, improve the efficiency of farmland utilization. Therefore, it is not difficult to find that its internal requirements reveal that the authorities pay enough attention to agricultural environmental issues such as agricultural carbon emissions.yet, At present, the academic research on high-standard farmland policy mainly focuses on the regional planning of policy implementation (Hu Yecui et al., 2014; Sun Yu, et al., 2016), Construction site selection (Han Shuai, etc., 2015), construction time sequence (Zhang Zhong et al., 2014; Zeng Ya, et al., 2020) and construction suitability (Cui Yong et al., 2014; Tan Shaojun, et al., 2018), etc., Although some studies have begun to focus on the impact of the implementation of the high-standard farmland policy on the agricultural environment, such as the reduction of chemical fertilizer use (Liang Zhihui et al., 2021), But in the current "two-carbon" context, There is still much room for the deepening of the impact of high standard farmland policy on agricultural carbon emissions.

Based on the above analysis, this paper proposes a research hypothesis:

Hypothesis 3-2: At the macro level, the implementation of the land transfer policy (Zhongfa [2010] No.1) helps to promote the high-quality development of agriculture.

Hypothesis 3-3: At the micro level, the implementation of high-standard farmland policies helps to help curb agricultural carbon emissions.

Steric effect.

1) A related theoretical study of the spatial spillover effects.

With the rise of space economics, the research problem of combining geographical space and economic phenomenon has continuously attracted the attention of scholars. At the same time, more and more scholars, especially those in the field of regional economy, have conducted fruitful discussions on the spatial spillover effect or the same group effect (Peer Effects) of economic issues. Spatial spillover effect means that the economic growth of the open subject is influenced by the external environment under the constraints of internal factors, which can be realized through technology diffusion, knowledge dissemination, trade exchange and population flow. In general, a region, such as a province, city or county, as a separate economic unit, often has a close connection channel with its surrounding economic unit, rather than exists in isolation (Talen et al., 1998). Many scholars, starting from the relationship between regional correlation, economic growth and economic convergence, point out that the potential of various driving factors on China's economic growth is greater under the influence of spatial spillover effect. Of course, the driving effect of various growth effects may decrease in the evolution of spatial distance from near to far; at the same time, there is no general convergence or even widening difference between regional economic development, but the convergence within the region is strengthened, showing the convergence characteristics of regional economy (Gallo et al., 2003; Zhang Xiaoxu et al., 2008; Pan Wenqing, 2012).

In the field of agricultural economy, space spillover effect is also common in agricultural production practice. Many scholars have embedded space spillover effect in the study of the influence of agricultural science and technology input, agricultural mechanization and urbanization on agricultural performance indicators (Fang Jiale et al., 2017; Zhang et al., 2017; Hou Mengyang et al., 2018; Zhang Dongling, 2019). Specifically, for example, the spatial spillover effect between the investment in agricultural science and technology and the agricultural development performance. Investment in agricultural science and technology research and development has an obvious poverty reduction effect, And there are geographical differences in this emission reduction effect, The emission reduction effect of agricultural science and technology research and development has the spatial dependence characteristics (Shen Neng et al., 2012); in addition, There is a positive spatial dependence on China's agricultural scientific research technology and agricultural production behavior, The more similar the agricultural research technology, The more obvious the spatial effect of technology spillover between provinces and regions (Scherer, 1982; Xiao Xiaoyong, et al., 2014); Studies have also shown that, Agricultural mechanization services will not only help to improve the total factor productivity of agriculture in the region, Also help to increase agricultural total factor productivity in the surrounding area, There are inter-regional spatial spillover characteristics at the latitude level (Fang Jiale, etc., 2017; Wu Haixia, et al., 2022). Another example is the research level of the spatial spillover effect of urbanization development on agricultural development indicators. Li Wei (2017) found that urbanization can not only promote the development of agricultural modernization in the region, but also have spatial spillover effect; Zhang Dongling (2019) pointed out that the quality of new urbanization and the growth of agricultural economy contribute significantly to the agricultural economic growth in the region, and the space spillover effect is weak.

From this paper the influence of land circulation on the development of agricultural quality research perspective, some scholars explore the rural land approval register the influence of agricultural production efficiency and space spillover effect, and found the agricultural production efficiency is positive space agglomeration phenomenon, a region of land approval registration of the surrounding area has incentive and demonstration effect, which makes the land approval of agricultural production efficiency promotion effect space spillover effect (Zhong Chenglin, 2019). Therefore, this paper holds

that since land circulation, as a major agricultural project, also has spatial spillover effect on the high-quality agricultural development.

2) Theoretical analysis of the spatial spillover effect of the influence of land circulation on high-quality agricultural development.

In the field of agricultural research, similar to the agglomeration effect or dependence phenomenon of the application of new agricultural technology at the spatial level, the decision of the land transfer behavior of the agricultural production subject in a region can bring the spillover effect of knowledge and technology to the agricultural production subject in the adjacent region. Combined with the consensus of relevant studies on spatial spillover effect, it can be seen that the spatial spillover effect of land circulation on high-quality agricultural development involved in this paper can be divided into two types of materialized knowledge and non-materialized knowledge (Jaffe, 1986; Lin et al., 2007). Among them, physical-chemical knowledge mainly refers to the physical carriers such as advanced agricultural equipment, green organic fertilizer and low residue pesticide that overflow and accept in the process of land transfer project and are presented by physical attributes, the non-physical knowledge such as income distribution decision thinking, technology and methods of agricultural production, scale operation and management concept and so on in the form of non-physical attributes.

In order to better understand the actual situation in different agricultural production scenarios, the concept of "same-group effect" has also been widely used to explain the spatial spillover effect in different influence mechanisms. The "same-group effect" originates from the social interaction model, which is a social interaction between individuals making decisions (Manski, 2000). In the open agricultural production system, the majority of farmers act as the same group, and the decision-making behaviors of different farmers influence each other. From the perspective of land circulation affect the development of agricultural high quality, in general, the earliest land circulation and pay attention to the development of agricultural quality benefit experience in farmers groups often can interact, again through competition between farmers imitation, learning imitation makes land circulation scale expansion and agricultural quality development to accelerate the goal, and the space with group effect is not restricted by the administrative boundary. But due to the different spatial geographical location, the process of land circulation in different provinces is not consistent, but the process of the space adjacent between provinces is often more consistent, and the earliest because of land circulation benefit from the development of agricultural high quality area and its production subject to become adjacent area and farmers "with" imitation object. Generally speaking, the geographical distance or economic distance of the imitation, learning and comparison between the neighboring provinces in the distance is stronger, which makes the spatial diffusion effect of the actual impact of the expansion of agricultural land circulation scale on the high-quality agricultural development.

In the background of high-quality development strategy, few studies have systematically analyzed the spatial spillover effect of the impact of land circulation on high-quality agricultural development. Then, what is the specific theoretical logic of the spatial spillover effect of land circulation affecting the high-quality agricultural development? In fact, this is mainly due to the following processes.

First, there is the agglomeration effect. In the early land circulation policy, the domestic market economy development mature, good agricultural basic conditions and convenient transportation area often lead to complete land approval registration and land circulation agglomeration area and the first scale management, green production and open trade and different levels of materialized type of agricultural production experience and materialized type of agricultural production experience knowledge. Therefore, these areas first became the demonstration areas for high-quality agricultural development due to the land circulation and agglomeration.

Second, there is the diffusion effect. According to the theory of "center-periphery", the demonstration effect of the high-quality agricultural development model that emphasizes increment, quality and efficiency formed by the promotion of land transfer can drive the imitation and learning of "adjacent areas" and further form the diffusion effect. Specifically, the experience of high-quality agricultural development driven by land circulation realizes spatial diffusion through competitive imitation and learning imitation between regions, agricultural departments and farmer groups, and the diffusion effect of this species is not limited by administrative boundaries (Deng Huihui et al., 2018).

Although the spatial location, economic development situation is not the same, different areas of the land circulation and agricultural process of high quality development is not consistent, but "adjacent" area, agricultural sector, farmers groups of agricultural development process is often relatively close, and the earliest because of land circulation and realize agricultural high quality development leading areas more likely to become other areas of imitation and learning object.

Third, there is the mutual-feeding effect. In open land circulation market and agricultural production system, through the macro area between, between agricultural sector, micro farmers between these levels of land circulation and agricultural high quality development experience exchange and learning, not only beneficial to promote the regional "with" between benign competition and cooperation, and can use the regional between agricultural communication platform effectively identify the bottleneck in the process of agricultural high quality development. It can be seen that land circulation has agglomeration effect, diffusion effect and mutual feeding effect in the process of high-quality agricultural development, so the spatial spillover effect in the process of this role needs to be verified. The theoretical analysis framework of the spatial spillover effect of land circulation on high-quality agricultural development reflected in the above analysis process is shown in Figure 1.

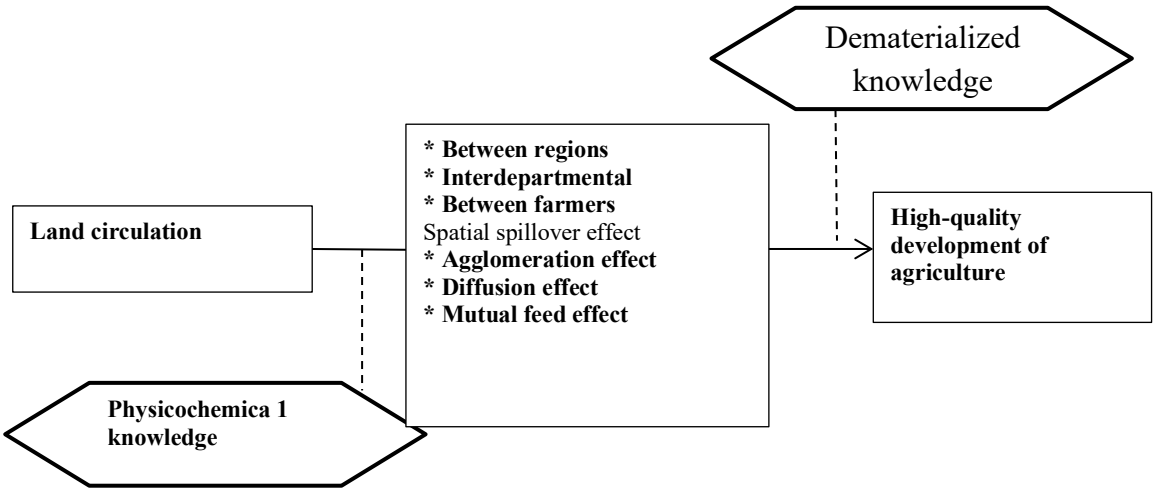

Figure 1. Theoretical analysis framework of spatial spillover effects
Source: compiled by the author.

It can be seen that the experience of land circulation in promoting high-quality agricultural development has agglomeration effect, diffusion effect and mutual feeding effect within the spatial scope, ranging from the spatial spillover effect of land circulation and high-quality agricultural development. Therefore, the spatial effect is also one of the endogenous driving forces for the land circulation to promote the high-quality agricultural development.

Based on the above analysis, this paper proposes a research hypothesis.

Hypothesis 3-4: The positive promotion effect of land circulation on high-quality agricultural development has spatial spillover effect, that is, land circulation not only helps to promote the high-quality agricultural development in the region, but also helps to promote the process of high-quality agricultural development in adjacent areas.

Action path: agricultural scale management.

Large-scale agricultural operation has wide social significance and provides important impetus for local social development. It can improve agricultural production structure, improve agricultural production efficiency, create conditions for sustainable development, ensure sufficient supply of agricultural products, reduce intermediate links, reduce social costs, and realize agricultural transformation and upgrading. Large-scale agricultural operations can also provide higher income for farmers and provide more support for local economic development. Moreover, large-scale agricultural operation is an important direction in the development of agricultural modernization with Chinese

characteristics and a key step to deepen the reform of rural land system at the present stage. It is playing an irreplaceable role in the connection of land circulation in the process of high-quality agricultural development. Therefore, this paper holds that under the scale effect and policy effect of land circulation affecting the high-quality agricultural development, agricultural scale operation is playing a transmission role.

A) Theoretical analysis of the role path of agricultural scale operation in scale effect.

Large-scale management is the direction constantly advocated in the process of high-quality agricultural development, and land circulation is the key to promote large-scale agricultural operation. Therefore, under the background of domestic land transfer policy, agricultural scale operation may play a transmission role in the process of land transfer to promote high-quality agricultural development. On the one hand, the land circulation has promoted the agricultural scale management. Specifically, land circulation is the necessary premise and foundation to promote agricultural scale operation, at present in many areas bear the rural land operators, so the voluntary land circulation and follow the rural land management main body of land transfer will principle, land circulation is important role to promote agricultural scale operation (worship, 2019). With the promotion of domestic agricultural modernization, relevant agricultural departments have strengthened the importance to the training of agricultural production. Moreover, relevant departments also strongly advocate agricultural professionals to devote themselves to the field of agricultural production. Therefore, agricultural human capital continues to sink into rural areas, forming a number of new agricultural business entities such as large grain farmers and professional farmers (Zheng Yangyang et al., 2020). Rural land circulation to professional farmers and other new type of agricultural management subject, due to the new agricultural management main body of agricultural knowledge structure than ordinary farmers more complete, so, they tend to adopt modern agricultural production technology and scientific management way, and this process not only promotes the agricultural division of labor and specialization, also help to promote agricultural moderate scale management, so as to improve the agricultural scale (Xu Jiabin, etc., 2020). Land circulation has a reallocation effect on rural land resources, activates abandoned land resources, and promotes the more effective planning and integration of dispersed land and farmland. Not only that, land circulation is not a simple turn or out, it based on prompting field integration, with some agricultural infrastructure construction project policy "combination", help to realize field, road, mountain, water, village, such as different levels of reasonable planning and layout, and form with "field communication", "field" and "tamura financing" and other distinctive characteristics of modern agricultural operation mode. In addition, the national level attaches great importance to the cultivation of new agricultural business entities, which not only helps to stimulate the demand for land transfer in the process of land transfer, but also accumulates a batch of high-quality human capital for the promotion of agricultural scale operation process (Li Jiangyan, 2022).

On the other hand, agricultural scale operation promotes the high-quality development of agriculture. Under the agricultural scale operation system, the input factors of agricultural production can also be recombined and configured. In addition to the injection of agricultural management talents and management knowledge of new agricultural subjects such as professional farmers and large grain farmers, various agricultural performance indicators have been improved and improved. Specifically speaking, first of all, agricultural scale operation helps to promote agricultural incremental development. The establishment of the food supply guarantee mechanism depends on the large-scale agricultural operation, Decentralized agricultural management mode is a major reason for the instability of domestic grain production (Zhu Ying, 2012); Agricultural scale operation has great space for the improvement of farmers' income increase effect and agricultural productivity (Luan Jian et al., 2020); Agricultural scale operation can also improve the income level of farmers by promoting the rationalization of labor force allocation and optimizing agricultural production decisions (Li Ruiqin, 2015; Chen Zhaojiu et al., 2016); besides, Agricultural scale operation mode helps to reduce unnecessary factor input, Thus saving production costs (Zhang Congying, etc., 2018). Secondly, agricultural scale management is conducive to promoting the quality of agricultural development. Agricultural scale operation is conducive to the reduction and efficiency of chemical fertilizer and agricultural pollution emissions, thus improving agricultural ecological environment and agricultural green development level (Wang Qingjun, 2014; Li

Wenhua et al., 2018; Zhao Ning et al., 2022; Chen Yubin, et al., 2022); compared to the fragmented and extensive operation mode before land circulation, agricultural scale operation mode makes the ratio of input factors more scientific, especially the reduction and efficiency of chemical fertilizer, which helps to improve agricultural green efficiency (Lu Shan et al., 2021; Zhu Wei et al., 2021). Finally, agricultural scale operation helps to promote the development of agricultural efficiency. Under the agricultural scale operation mode, traditional problems such as loose contact with the outside world and broken capital chain are easily solved, which are conducive to the management and operation of agricultural production, build agricultural production brand, improve the competitiveness of agricultural products, and promote the integrated development of the primary, secondary and tertiary industries (Zhu Junfeng et al., 2022); moreover, agricultural scale operation promotes agricultural machinery operation service, improve the organic structure of agricultural capitalization, and improve the social benefits of agriculture (Hu Wen et al., 2019; Fang Da et al., 2020). It can be seen that land circulation promotes agricultural scale operation by improving the allocation of land resources, while agricultural scale operation promotes the process of high-quality agricultural development by promoting agricultural incremental quality and efficiency development.

Therefore, the impact of land circulation on the high-quality development of agriculture is not fully achieved in one step. These are large agricultural farmers and other new agricultural business entities. Generally speaking, new agricultural business entities have more complete agricultural knowledge structure than individual farmers, so they prefer to realize scale agricultural land management through modern agricultural production technology and advanced management. Further, the input structure of agricultural elements, also helps to promote specialized agricultural production, thus affecting agricultural economic output, agricultural ecological environment and agricultural social benefits, and ultimately has a comprehensive effect on the process of high-quality agricultural development. Therefore, the land policy support for large-scale agricultural operation is still constantly strengthened, and it is likely to play a significant role in the process of land circulation affecting the high-quality agricultural development.

B） Theoretical analysis of the role and path of agricultural scale operation in the policy effect.

At the macro level, agricultural scale operation is playing a role in the process of high-quality agricultural development. Since large-scale agricultural operation is the direction of land transfer policy, and large-scale agricultural operation has a profound role on agricultural development (Li Wenming et al., 2015). Therefore, it is also the core concern of this paper to explore whether the agricultural scale operation assumes the connection mechanism in the process of land transfer policy affecting the high-quality agricultural development (Zhongfa [2010] No.1), it is proposed to accelerate the construction of tangible market for land circulation according to the requirements of clear property rights and smooth circulation, and various forms of moderate scale operation should be promoted on the realistic basis of legal, voluntary and paid circulation. Therefore, the efficiency of agricultural scale operation is likely to play the role of the connection mechanism in the process of the implementation of land transfer policy on the high-quality agricultural development. Specifically, on the one hand, land circulation, driven by policy implementation, promotes the improvement of the efficiency of agricultural scale operation. With the promotion of domestic agricultural modernization, the state attaches more importance to the training of farmers, and also strongly advocates agricultural professional related talents to devote themselves to the agricultural field. Therefore, with the continuous sinking of agricultural human capital to rural areas, a number of new agricultural business entities such as large grain farmers and professional farmers have gathered in the agricultural field (Zheng Yangyang et al., 2020). After the transfer of rural land to the new agricultural management entities, the agricultural knowledge structure of the new agricultural management entities is more complete than that of ordinary farmers, so they are more inclined to adopt modern agricultural production technology and scientific operation and management mode. Moreover, this process not only promotes the division of labor and specialization of agriculture, but also helps to realize the promotion of moderate-scale land operation and improve the efficiency of large-scale agricultural operation (Xu Jiabin et al., 2020). On the other hand, agricultural scale operation has promoted the process of high-quality agricultural development. First, agricultural scale operation helps to save the cost of land planting, There is great room for improvement in agricultural production

efficiency (Luan Jian et al., 2020); Second, compared with the fragmented and extensive management mode before the land transfer, The agricultural scale management mode makes the ratio of input elements more scientific, In particular, chemical fertilizer and other pollution factors to reduce the amount and increase the efficiency significantly, Help to improve the efficiency of resource allocation and agricultural environment (Lu Shan et al., 2021); Third, the scale of land management to promote agricultural management began to agricultural machinery operation services, It is conducive to the realization of the agricultural capitalization path, Improved the organic capital composition of the agricultural sector (Hu Wen, 2019; Fonda, 2020). Therefore, agricultural scale management, to a certain extent, promotes agriculture to the comprehensive "incremental", "quality" and "efficiency" goals and to achieve high-quality agricultural development. In general, whether the implementation of land transfer policy further realizes high-quality agricultural development by improving the efficiency of agricultural scale operation also needs to be verified.

At the micro level, agricultural scale operation is playing a role mechanism in the process of high-standard farmland policy affecting agricultural carbon emission. In fact, after the implementation of the high-standard farmland policy, the progress of comprehensive agricultural development investment, land consolidation and land transfer has been accelerated, and the goal of agricultural "carbon emission reduction" can be achieved by indirectly improving the efficiency of agricultural large-scale operation. The efficiency of agricultural scale operation mainly reflects the scientific ratio relationship between agricultural labor force input and agricultural land operating area and agricultural output. The ideal state should be to minimize the number of agricultural labor force and operating area and realize the maximum agricultural output. Therefore, starting from the logic of agricultural carbon emission reduction in the implementation of high-standard farmland policy, on the one hand, the implementation of high-standard farmland policy helps to improve the efficiency of agricultural scale operation. To be specific, first, the implementation of high-standard farmland policy can improve the efficiency of agricultural scale operation by optimizing the input system of agricultural labor force and cultivated land. The implementation of the policy promotes the "transformation of farmland into parts", the continuous management and the reasonable layout of field roads. In this process, the area of the original farmland is not substantially changed, but it substantially promotes the land circulation and improves the scale management level of agricultural land. And as the agricultural modernization process, in the process of land circulation and continuous management, planting large, professional farmers and other new agricultural operators sinking to rural areas, gradually replaced the individual farmers, this process not only contributes to the liberation of rural redundant labor, also improve the overall quality of agricultural labor force, and improve the efficiency of agricultural scale operation. Second, the implementation of the high-standard farmland policy improves the efficiency of agricultural scale operation by increasing agricultural output. The implementation of high-standard farmland policy will help to promote the improvement of soil quality and achieve agricultural production, and further improve the efficiency of agricultural scale operation. On the other hand, improving the efficiency of agricultural scale operation helps to reduce agricultural carbon emissions. First, compared with the previous fragmented and extensive operation mode, the moderate scale agricultural operation mode driven by the policy makes the ratio of input factors, especially pollution input factors such as chemical fertilizer, more scientific, which helps to achieve the goal of reducing quantity and increasing efficiency, and thus reduce agricultural carbon emissions. Second, agricultural scale operation promotes agricultural production to agricultural machinery operation services, which is conducive to the realization of agricultural capitalization path, improves the organic composition of agricultural capital and the degree of agricultural specialization, and improves the composition of agricultural mechanization technology such as irrigation and tillage (Fang Da, 2020). But it is not hard to guess that the higher level of agricultural mechanization may partly contribute to agricultural carbon emissions. In general, the implementation of the high-standard capital farmland construction policy can further reduce agricultural carbon emissions by improving the efficiency of agricultural large-scale operation.

Based on the above analysis, this paper proposes a research hypothesis:

Hypothesis 3-5: Agricultural scale operation plays a role in the process of land circulation affecting high-quality agricultural development, that is, land circulation indirectly promotes high-quality development of agriculture by promoting large-scale agricultural operation.

Hypothesis 3-6: Agricultural scale operation plays a role in the process of the implementation of land circulation policy (Zhongfa [2010] No. 1), which affects the high-quality agricultural development, and the implementation of land circulation policy indirectly promotes the high-quality agricultural development of agriculture by promoting agricultural scale operation.

Hypothesis 3-7: Agricultural scale operation plays a role in the process of high-standard farmland policy affecting agricultural carbon emission, and the implementation of high-standard farmland policy indirectly suppresses agricultural carbon emission by promoting agricultural scale operation.

External motivation: digital financial inclusion.

1） Identification of external force factors of digital financial inclusion.

Since we need to investigate the external power of the land circulation on the high-quality agricultural development, what are the important external factors that drive the land circulation and further promote the high-quality agricultural development? According to the previous research, there are many factors affecting land circulation, including farmland right confirmation, financial services and their availability, distribution of rights and interests in land circulation, differentiation of peasant class, urbanization process, non-agricultural transfer of rural labor force and agricultural socialization services, etc. Many scholars have also conducted a lot of research on this. Finance, including various activities related to money circulation and bank credit, has always been considered as the core of modern economic development. From the perspective of agricultural development capital demand, the "agriculture, rural areas and farmers" has long faced the real dilemma of financing constraints and financial exclusion. Financing constraints have been regarded as an important factor restricting land circulation, expansion of agricultural scale and agricultural progress (Wang Fei, 2014; Huang Hongguang et al., 2018; Liu Lingyun et al., 2020; Lu Xiaomeng et al., 2021). Specifically, the hindering effect of financing constraints on land circulation and high-quality agricultural development is mainly reflected in the practical difficulties of agricultural operators in terms of condition exclusion, marketing exclusion, price exclusion, evaluation exclusion, geographical exclusion and self-exclusion (Kempson et al., 1999; Wang Xiuhua et al., 2013). And, agricultural operators and information asymmetry between formal financial institutions reduces the problem of agricultural financial services availability, although part of the rural informal financial institutions can provide certain financing channels for agricultural development, but its role is very limited, is not to reduce the threshold of agricultural financial services acquired effective path (He Jing, etc., 2019).

It is worth stressing that after the agricultural economy, industrial economy, digital economy in the current stage has evolved into one of the main social and economic form, so, strengthen the integration of the digital economy and the real economy development, grasp the digital elements and digital technology of agricultural economy, industrial economy and so on the inherent role of traditional economic form is crucial. However, relying on the Internet, 5G, big data and other information technologies, digital inclusive finance emerged at the historic moment. As an important part of the development of digital economy, digital inclusive finance is a highly integrated and organic combination of inclusive finance and digital technology, and is an innovative manifestation of traditional finance in the digital era. At the same time, compared with traditional financial institutions, digital inclusive finance can better realize smooth financing channels by relying on information equipment and digital technology. It by reducing the service cost of traditional financial institutions and further improve the permeability of financial services, expand the coverage of financial services, for rural areas long by financial exclusion of the vulnerable agricultural production groups provide more efficient financing channels, help to promote land circulation, agricultural scale management and agricultural high quality development (wang, etc., 2022). At present, although many domestic studies have made great contributions to the influence of traditional rural finance on land circulation and agricultural development (Lu Shan et al., 2021, Su Lanlan et al., 2021, Wang Xiansheng et al., Lu Xiaomeng et al., 2021, Zhang Yongfeng et al., 2022, 2022, 2022), in the stage of high-quality development, as digital financial elements continue to sink to rural areas, there is still further research

on the influence of digital inclusive finance on land circulation and high-quality agricultural development.

2）Digital inclusive finance, Land transfer and high-quality Development of Agriculture: Theoretical analysis.

Land is regarded as an irreplaceable means of production in agricultural production, which is the focus of "agriculture, rural areas and farmers", and finance, including various activities related to currency circulation and bank credit, is considered to be the core of modern economic development. Under the dual background of the continuous sinking of domestic digital factors and the implementation of land policy, the role of rural land circulation in promoting the promotion of high-quality agricultural development with the help of digital inclusive finance is becoming stronger. Specifically, on the one hand, digital inclusive finance promotes the process of land transfer. Although it is difficult for farmers to obtain financial support from financial institutions under the background of traditional financial institutions "leaving the poor and love the rich", governments at all levels have been preparing digital infrastructure in rural areas and striving to embed digital financial elements into the field of "agriculture, rural areas and farmers". The development of digital inclusive finance provides an effective solution for resolving the difficulties of "financing difficulty and expensive financing" and "where does money come from" restricting agricultural land transfer and agricultural expansion production, which can effectively support the development of land circulation and promote the reasonable and fair distribution of land. Through the support of digital inclusive finance, farmers can obtain loans, realize production expansion, realize the efficient utilization of land resources, promote the development of agriculture and animal husbandry, and promote the improvement of agricultural quality. Although, farmland approval decision gradually for the land mortgage and circulation behavior of clear property rights, thus to some extent, expand the credit effect of farmers (zhou south, 2019), but in the process of professional development, when a large number of agricultural labor began to choose capital intensive career pattern and by the closed village community to modern open town, farmers financing demand will increase dramatically, which in turn may limit the choice of career conversion, thus inhibiting the development trend of land out and expand production (rice, etc., 2017). At the same time, rural financing constraints also limit the decision-making behavior of large growers who want to achieve large-scale operation through land contracting (Lu Xiaomeng, 2021). Digital pratt & whitney financial, however, through the establishment of farmers Shared credit data, focusing on the data credit, truly "and cloud borrowed", "NongXin cloud borrowed" and "borrow also" periodic short digital financial services, forming "agricultural big data + financial" financing mode, from farmers professional non-agricultural pursuit in the process of financing needs to meet and agricultural management scale financing needs to meet two aspects to promote land contracting, land circulation and agricultural engineering. In addition, in the specific effect of digital inclusive finance on land circulation, firstly, as a modern network information dissemination carrier, can effectively reduce related transaction costs and information asymmetry and promote the financial literacy of farmers to accelerate the marketization of land circulation; Thirdly, digital inclusive finance can enhance the timely transmission of network resources, so as to promote land circulation (Zhang Yongqi, 2022).

On the other hand, according to the above information, land circulation helps to promote the high-quality development of agriculture. After the transfer of agricultural land to the hands of new agricultural operators such as large growers, because the agricultural knowledge structure of large growers is more complete than that of individual farmers, they more tend to adopt modern agricultural production technology and scientific operation and management mode. This process not only promotes the division of labor and specialization, but also helps to realize the scientific ratio of agricultural factor input, so as to improve agricultural production efficiency, operation efficiency and environmental efficiency (Yao Zengfu et al., 2017; Shi Changliang et al., 2020; Kuang Yuan et al., 2021). Therefore, digital inclusive finance expands the transfer and transfer scale of agricultural land by alleviating the credit constraints of rural areas, thus promotes agricultural transformation and development, realizes the goal of agricultural increment, quality improvement and efficiency improvement, and promotes the high-quality development of agriculture.

However, from the land circulation of agricultural quality development heterogeneity, digital pratt & whitney financial through regulating the process of land circulation and land circulation on the influence of agricultural quality development differences, namely the digital pratt & whitney financial factors sinking country, under the background of the influence of agricultural quality development strengthening effect mainly reflected in different digital pratt & whitney financial development level of land circulation on the influence of agricultural high quality development may exist heterogeneity. Due to the different economic development level, location conditions and policy orientation in different regions of China, there are significant regional differences in the development of digital inclusive finance. And, with the market economy openness, domestic each provincial system internal digital pratt & whitney financial in dynamic change for a long time, different market economy development degree can obtain the digital financial service strength and efficiency, prompting the land circulation influence on the development of agricultural high quality heterogeneous characteristics. Therefore, the influence of land circulation on high-quality agricultural development under different development levels of digital inclusive finance is highly likely to have interval characteristics, which needs to be further studied.

Therefore, this paper holds that digital inclusive finance, as the external driving force in the process of high-quality agricultural development, drives the land circulation by dredging financing channels, and then regulates the influence characteristics of land circulation on high-quality development of agriculture.

Based on the above analysis, this paper proposes a research hypothesis:

Hypothesis 3-8: There is a threshold effect of digital inclusive-finance in the process of promoting high-quality agricultural development by land circulation, that is, with the improvement of the development level of digital inclusive finance, the role of land circulation in promoting high-quality agricultural development tends to be strengthened.

Conclusions.

This research topic has guiding value of agricultural development theory, the theoretical analysis framework in line with the influence of land circulation on the high-quality development of agriculture is constructed, thus to pave the way for the development of the later research. First of all, from the perspective of this paper, high-quality agricultural development is the role object of land circulation, and land circulation, as the internal driving force to promote high-quality agricultural development, can be embodied in three aspects: scale effect, policy effect and spatial effect. First, there is the scale effect of the impact of land circulation on high-quality agricultural development. Under the background of limited scale and cycle of domestic land circulation, it is necessary to pay attention to the scale effect of land circulation, realize the development of agricultural increment, quality and efficiency through the expansion of the scale of land circulation, and then promote the process of high-quality agricultural development, that is, scale effect is one of the endogenous driving forces for land circulation to promote the high-quality development of agriculture. Second, there is the policy effect of the impact of land circulation on high-quality agricultural development. The policy effect formed by the implementation of land transfer policy and high-standard farmland construction policy is one of the internal driving forces for land transfer to promote high-quality agricultural development at macro level and high-standard farmland construction policy at micro level to promote the reduction of agricultural carbon emission. The third is the spatial effect of land circulation on high-quality agricultural development. The experience of land circulation and high-quality agricultural development has agglomeration effect, diffusion effect and mutual feeding effect within the spatial scope, that is, the spatial effect is also one of the endogenous driving forces for land circulation to promote high-quality agricultural development. Secondly, agricultural scale operation is regarded as the path of action, and its cohesive role of land circulation in the process of high-quality agricultural development is analyzed. Not only at the level of scale effect, land circulation can promote agricultural scale operation and indirectly promote agricultural high quality development process, and in the policy effect level of land circulation policy or high standard farmland construction policy implementation by promoting agricultural scale management and indirectly promote the development of agricultural high quality or agricultural carbon emissions reduction optimization. Finally, digital inclusive finance is systematically studied as an external

dynamic factor in the process of land circulation affecting the process of high-quality agricultural development. Digital inclusive finance, as an external driving force in the process of land circulation affecting the high-quality agricultural development, digital inclusive finance drives the land circulation by dredging financing channels, and then regulates the influence characteristics of land circulation on the high-quality agricultural development.

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THE MANAGEMENT OF MICROBUSINESS DURING TIMES OF UNCERTAINTY AND DIGITAL TRANSFORMATION

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Microbusiness is a form of entrepreneurship characterised by a small volume of activity (production), low turnover and a small number of employees. The term “microbusiness” is often used to describe small enterprises or self-employed entrepreneurs operating in retail, services or manufacturing, with a limited scope of business activities and turnover. Small and microbusiness play a key role in entrepreneurial activity in many countries, including Ukraine. These businesses not only provide a significant share of employment, but also make an important contribution to economic development.

Small enterprises and microbusiness play a key role in the development of the national economy, representing the main component of small scale production. They contribute to the democratisation of society, ensure economic growth and shape the structure of the gross domestic product. They are an important factor in restructuring the economy, quickly returning investments based on free market choice. By creating additional jobs, small businesses contribute to the saturation of markets with goods and services, as well as to the introduction of innovations. Their rational management and high mobility allow them to operate effectively in a constantly changing environment. They also form a layer of entrepreneur-owners, which is the basis for the development of the middle class, and which weaken the monopoly of large enterprises and stimulate healthy market competition (Demianenko, Kovalchuk, 2022).

Global experience objectively proves that small businesses play a key role in the economy. They help to avoid market monopolisation, promote competitive relations and respond promptly to changes in the market. Small enterprises are the backbone of small-scale production, contribute to the democratisation of society, saturate the market with goods and services, introduce innovations, create new jobs, and are characterised by sound management practices.

Microbusiness can have different forms of organisation, such as individual entrepreneurs, partnerships or small family companies. Microbusiness plays an important role in the economy, providing jobs and contributing to the development of local communities. Microbusiness management involves a set of actions and strategies aimed at achieving success and efficiency in running the microbusiness (Lynnyk, Yershova, 2021).

Small businesses plays an important role in Ukraine's economic system, performing a variety of functions, including producing goods and services, keeping records in accordance with tax legislation, and addressing social objectives through the employment of labour and payment of wages. Even with limited resources, small businesses have a certain degree of mobility that allows them to enter the market with specific goods or services, bypassing the bureaucratic procedures that are often typical for large companies. An important feature of small enterprises is their ability to respond quickly to changes and adapt to specific market conditions (Ponomarenko, Volovnenko, 2019).

Despite their limited resources, small enterprises have a certain flexibility and ability to bring their goods or services to market within a short period of time, due to the absence of complex bureaucratic procedures in their internal operations. The mobility of small enterprises lies in their ability to respond quickly to changes in the market and adapt to new conditions.

As the market is highly competitive, microbusiness have to use a variety of strategies to attract their target audience. This may include adjusting plans and strategies to suit specific spatial and temporal conditions in order to compete effectively in the market. The ability to quickly change their plans and adapt to external conditions allows small businesses to operate successfully in a real competitive business environment.

The peculiarities of microbusiness as a form of entrepreneurship are defined in accordance with The Commercial Code of Ukraine (The Commercial Code of Ukraine, 2003). Thus, micro-enterprises,

regardless of their form of ownership, are enterprises employing less than 10 people in the reporting financial year and whose gross revenues from the sale of products for this period do not exceed the equivalent of EUR 2 million. Thus, micro-enterprises are defined by two main criteria: the number of employees and the amount of gross revenues. This refers to enterprises that are small in size and have a limited number of employees.

Microbusinesses differ in that the owner of the enterprise simultaneously plays the role of manager and owner. This means that the entrepreneur is not only the owner of the business, but also makes managerial decisions. This approach implies that the entrepreneur independently determines strategies, makes decisions and bears the risks associated with managing the enterprise. In addition, it is important to take into account the subjective nature of microbusiness management, as the owner makes decisions based on his or her own vision and experience. This can lead to situations where the solution to a problem or the direction of business development depends on the entrepreneur's personal beliefs and feelings (Linhur, Martyniuk, Yesina, 2023).

Microbusiness, like other forms of business, are characterised by traditional management activities within the framework of the main management functions. An important aspect of management in microbusiness is the constant study of market trends, analysis of competitors and identification of opportunities to improve competitiveness. The business goal is also achieved through the use of appropriate technologies to optimise processes and improve efficiency. Microbusiness is sensitive to customer satisfaction, with whom its owners are trying to maintain sustainable relationships. Microbusiness is clearly regulated by laws and regulations (The Commercial Code of Ukraine, 2003; Tax Code of Ukraine, 2010).

Successful microbusiness management requires flexibility, adaptability and continuous improvement. Entrepreneurs in microbusiness must be prepared to respond quickly to changes in the environment and market. The object of management in microbusiness is what an entrepreneur or manager tries to manage or control in order to achieve strategic goals and ensure optimal operation of the enterprise. In microbusiness, the object of management can be various aspects of the enterprise's activities: finance, personnel, marketing and sales, production and/or provision of services, technology and innovation, customer relations, compliance with legislation, analysis of results and strategic planning.

A management entity in a microbusiness is a person or group of persons who make decisions and are responsible for managing all aspects of the enterprise. The management entity is often the business owner (If it is an individual enterprise), and can also be the head of the company, partners or a team of managers (functional managers) (Frolova, 2021).

The form and specifics of small and microbusiness determine the specifics of management and decision-making. In microbusiness, the owner is the central figure in the decision-making process. The active participation of not only the owner but also other key employees is important as it provides a diversity of views and insights.

Resource-limited environments require simplicity and flexibility in decision-making. Excessive bureaucracy can become inefficient in such an environment. Decision-making takes into account the limited financial, human and other resources of microbusiness, and understanding these constraints is key to allocating them effectively. The market situation is changing rapidly, and the entrepreneur must be prepared to react quickly and make adequate decisions.

Sole decision-making in management means that one person, usually a manager, makes decisions on his or her own without extensive involvement of a group or team. This approach can be effective in certain situations, but it also has its limitations and risks. One-person decision-making can speed up the process, as there is no need to wait for the consent or input of other team members. In the case of urgent decisions or crisis situations, the owner (also known as the manager) can quickly intervene and take the necessary measures without wasting time on consultations.

The potential disadvantages of making sole management decisions in microbusiness are:

- lack of diversity of views: sole decision-making can lead to limited views and ideas, as diversity of opinion or experience is not taken into account;

- lack of support: it is important to have the support of the team; sole decision-making can cause dislike or uncertainty among team members;

- possible errors due to limited view of information: the manager may miss important information or make erroneous analyses due to a limited view.

Ukraine faces numerous challenges in the development of small and microbusiness, which significantly hinder their operation and development. The main problems include the lack of an effective mechanism for supporting and protecting such businesses: the absence of effective measures to stimulate and finance small businesses, as well as insufficient protection of entrepreneurs' rights from negative impacts from raiding and other negative phenomena (Hudz, Strelnikova, 2021).

The internal environment in which small enterprises in Ukraine operate is highly unstable and difficult to predict. The external environment, in turn, has a significant impact on their operations, which can lead to serious financial losses and, in some cases, even bankruptcy. Small businesses, unlike large corporations, have limited ability to withstand pressure from the government and local authorities.

Let us consider the reasons that hinder the development of microbusiness and small entrepreneurship in Ukraine and that necessitate the need to respond, implement and manage changes.

Obviously, the negative dynamics of key macroeconomic indicators largely determines the difficult conditions for small businesses. In particular, the decline in exports and the competitiveness of the national economy creates serious difficulties for entrepreneurs, limiting their opportunities in foreign markets.

The disturbance in the structure of the foreign trade balance and limited domestic demand are reflected in the crisis of sales in the domestic market, which is becoming an obstacle to the development of microbusiness. The decline in real household incomes and low investment activity are additional factors that limit business activity. The unfavourable economic context leads to limited credit, which makes it difficult to finance and develop new business areas. The decline in gross domestic product (GDP) adds to the problems by reducing the state's domestic financial resources and deteriorating the purchasing power of the population. Almost all of these problems are the result of the ongoing external aggression, which has exacerbated the existing problems.

In this context, it is important to take measures to improve the economic environment, provide support to small businesses, and improve the regulatory and legal framework to preserve and promote the sustainable development of small businesses in Ukraine.

Taxation issues, administrative barriers and regulatory boundaries make the day-to-day operations of microbusiness much more difficult. Small businesses, which are constantly competing for survival, must continuously evolve and adapt to changes in today's market. This requires them to be constantly efficient and have a high level of profitability, as this is essential to ensure their existence.

There are also positive aspects to the small business sector, such as the steady growth in the number of small businesses, which means new jobs, and the significant innovation of these businesses. Small businesses act as a catalyst for economic development and the formation of the middle class.

The continuity of change and the need to implement it have become a modern concept in management, a separate area of management activity in the context of entrepreneurship development. The ability to effectively adapt to change is critical for the successful operation of a business. Thus, the development and implementation of a management system and change management principles are an important part of strategic planning for small business owners and microbusiness.

This system should take into account the peculiarities of the internal and external environment of microbusiness, contribute to the achievement of specific goals and be focused on maximising value and profitability. This requires a new conceptual approach, according to which change management is a key tool for successful microbusiness development.

A change management system is essential for survival in the market and maintaining a competitive position. Its implementation requires the ability to adequately respond to changes, anticipate them and effectively manage the situation as a result of changes. The change management methodological framework is an important management technology aimed at achieving successful microbusiness development in the face of constant dynamics and uncertainty. Change management is a key aspect of an entrepreneur's effective development, as it allows him or her to adapt to a constantly

changing environment. This process involves making changes in any area of the microbusiness in order to maintain its effective functioning.

The main stages of change management include supporting, accepting and approving the necessary modifications and changes. The goal of change management is to ensure that changes are controlled while maintaining the integrity and quality of the services provided by the microbusiness. In the context of a systems approach, change management is a balanced resource management system, taking into account the human and technical resources associated with change.

Change management as a management approach has gained popularity among a large number of businesses of various sizes and ownership, as it allows enterprises to respond effectively to new conditions and implement the necessary changes with minimal losses and maximum benefits. Change management is defined as a process that helps organisations remain flexible and competitive in an unpredictable business environment.

Change management has a variety of effects, including increasing profits and reducing the risk of bankruptcy. This approach can also have a positive impact on the effectiveness of external communications. Improved communication between economic actors and government at various levels contributes to a better understanding of their needs and priorities. It is important to understand that the components of a business process interact, and improving communication capabilities allows businesses to be more aware and protected in unforeseen circumstances.

Small and micro-enterprises are in the best position to carry out innovation activities, as they can focus on developing and implementing technologies in areas that may be unpromising or too risky for large enterprises. One of the main advantages of small enterprises is their ability to take risks because they are owned by their owners. This enables small business owners to take bold steps, be more flexible and respond more quickly to changes in market conditions. They are personally responsible for their actions, which ensure a high level of control and decision making.

Small businesses also have competitive advantages, such as a higher level of mobility in adapting to new customer demands and needs. They are more willing to innovate and improve organisational business practices, as decision-making processes can be less complex and more responsive. This approach allows small businesses to be more flexible and competitive in a dynamic business environment.

In our opinion, the constraints to the development of microbusiness in the current environment include military aggression, competition, corruption, staff shortages and inflation (Fig. 1).

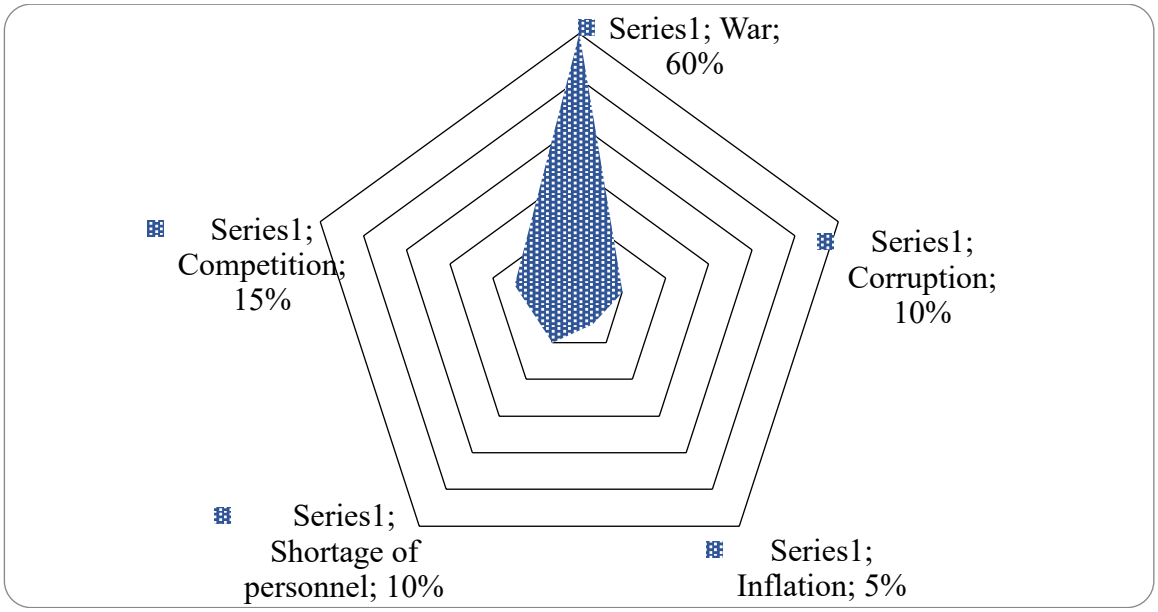

Figure 1. Constraints to microbusiness development.

Source: compiled by the author.

Most of these factors are external to the individual entrepreneur by their scope of occurrence. Therefore, their negative deterrent effect should be reduced through macroeconomic and political measures.

At present, it is very important to study and implement in the practice of domestic business the methods of state regulation that were previously used in situations of crisis management. Affordable financing can open up great opportunities for microbusiness development. It is important to study and apply those methods and strategies that have already been successfully tested in crisis conditions to support business sustainability and development.

A systematic approach to microbusiness development based on the concept of "change management" has the potential to increase the effectiveness of positive transformations. This approach is aimed at bringing most small businesses out of the shadow sector to stop the practice of concealing their real income and profits.

One of the main goals of this approach should be to create more jobs, as experts estimate that about 60 % of entrepreneurs reduce or disguise the true number of employees to avoid taxation. At the same time, this will raise the welfare of citizens and increase the country's GDP.

Thus, the conditions for the successful operation of small businesses in Ukraine are not ideal today. The development and productive operation of small businesses is hampered by a number of challenges, which mainly depend on the socio-economic and political stability in Ukraine. The current problems are caused by pandemic restrictions that once had a negative impact on business in general. currently, these are the military aggression of the "russian federation", migration processes, a decrease in business activity, changes in legislation, difficulty in accessing financial resources, bureaucratic obstacles and corruption, and other factors that complicate the life of small businesses.

In addition to subjectivity, the conditions for making and implementing decisions in microbusiness are determined by uncertainty and risk. Uncertainty indicates that an entrepreneur may face limited information or unforeseen circumstances when it is difficult to understand which decision is optimal. Risk indicates the possibility of losses or failures as a result of decisions. This approach to management is inherent in small businesses, and given the subjectivity, uncertainty and risk involved, an entrepreneur must be able to balance the various aspects of the business and make informed decisions to succeed in their business.

It is worth noting the state support for business under martial law, which also affects business decision-making, in particular, the government offers a number of proposals to stabilise the operation of enterprises: the state programme "Affordable credit 5-7-9 %"; grant programmes in the Diia app.; grant programmes through the Diia app; IEs of groups II-III are allowed to avoid paying the unified social tax for mobilised employees, and IEs of group III under the simplified taxation system are allowed to pay 2 % instead of 5 % of income (Kniazkova, Krylenko, Rudinska, 2023). Providing state support and stimulating the development of small and microbusinesses will not only strengthen the economy, but also create new jobs, expand entrepreneurial initiative, and increase economic activity in the country.

Although small enterprises play a significant role in economic and social transformation, promote entrepreneurship, provide new jobs and contribute to the development of local communities, they are less resilient and more vulnerable to negative changes in the economic and political environment of the country compared to large businesses. The activities of microbusinesses are affected by a greater number of negative factors. Firstly, they may be less financially secure, as their turnover and profits are lower. Second, microenterprises are more dependent on the local market and local conditions. This means that they may be more susceptible to negative changes in the local economic and political environment. In our opinion, to improve the resilience of microbusinesses, it is important and necessary to create a favourable environment for their operations, reduce bureaucratic obstacles, provide financial support and stimulate innovation. It is also important to maintain economic and political stability to ensure a more predictable environment for microbusiness development.

In addition, corruption is widespread and creates a serious barrier to business development. It can put entrepreneurs in a difficult position, complicating their work and limiting their growth opportunities.

Another important aspect is the shadowing of business and the ineffectiveness of laws, which lead to a loss of confidence in the state system of protecting their rights.

As a result of the "russian" invasion, events occurred that caused destructive changes, and many businesses, including microbusinesses, became hostages to the situation. A significant number of entrepreneurs were forced to relocate their businesses, partially or completely suspend their operations. In such a situation, entrepreneurs had to make efforts to solve several important tasks: relocating production, restoring and developing new areas of production, work or services. In particular, many entrepreneurs were forced to spend time and resources on retraining and adapting to new conditions.

Thus, such exceptional pressure and uncertainty about the future have forced the business community to make strategic decisions to survive and adapt to new realities: from changing production processes, searching for new markets to completely reorienting activities.

Microbusinesses are inherently risky due to uncertainty. Uncertainty arises when there is no complete and reliable information about a particular situation or event. This can be caused by various factors, such as limited availability of data, complexity and time required to process information, or uncertainty about the possible consequences of decisions. When outcomes cannot be predicted with reasonable certainty because of uncertainty, risk arises. Risk is the possibility of negative consequences or losses associated with specific management actions. Almost any management decision involves a certain risk, as there is no guarantee of its success or full control over all factors affecting the situation (Reshetylo, Fedotova, 2020).

Consequently, risk management becomes an important part of the decision making process in microbusiness, especially in times of uncertainty. An entrepreneur or manager must be prepared to take responsibility for the possible consequences of their decisions. The current crisis situation for many businesses can be not just a challenge, but also an opportunity to rethink and start a new phase of their operations. This may define a new stage of business development based on diversification and the introduction of new business projects.

The digitalisation process, modern IT, artificial intelligence, and the development of Industry 4.0 can play a key role in restoring and strengthening business activities. Traditional management processes at all levels are gradually being replaced by digital methods based on the use of advanced technologies.

The use of digital tools allows not only to manage business more efficiently, but also to find new opportunities in the face of challenges and instability. This includes automating processes, improving production efficiency and using analytics to make informed decisions. This transition to digital technologies can be a strategic response to the challenges of the modern business environment (Baranov, 2021).

The declaration of digital transformation goals by a business signals its readiness to innovate, adapt to new technologies and intentions to improve all aspects of its operations, which opens up new opportunities for the entrepreneur and creates a positive impression of customers and partners. Today, entrepreneurs are rapidly moving from traditional management methods to digital ones. This transition is not just a matter of choice for the business itself, but is necessary for the operation and maintenance of leadership positions in the market. There is a growing demand for modern digital technologies in management, and businesses that do not adapt to digital consumption are likely to face the risk of going out of business (Khromushyna, 2023).

Today, the term "digital management" is becoming increasingly common among scholars and professionals, defining a modern form of management. This management approach preserves traditional principles, but at the same time opens up new opportunities through the use of information technology in management activities. The essence of digital management lies in the application of technological development, data processing, and the use of new algorithms and software.

At the same time, there is a problem of inability to understand modern digital technologies, which may be necessary, but there is no ability to understand their operation, terminology and other aspects. This can lead to a situation where content is substituted for form, and many managers idealise the phenomenon of artificial intelligence without paying attention to its limitations. Sometimes, the idea of using AI can be overly optimistic, and some believe that it will solve all problems without further intervention.

In summary, digital technologies offer great opportunities to improve efficiency and ensure sustainable competitive development of microbusiness. This also requires a review of existing management models, communication formats, technologies and organisational structures, with a focus on new values and priorities (partnership, customer focus, innovation and synergy).

Customers live in the "here and now" mode − the online business that provides a quality product in the shortest possible time will win. Today, 90 % of non-digital businesses are facing increased competition from digital businesses, in fact, 87 % of businesses include digital transformation in their development strategy, and 40 % of leading businesses will be ousted within 5 years if they do not undergo digital transformation and reorient their management models to new values and guidelines (Hudz, 2018).

Customers are one of the main drivers of digitalisation. Every day, they interact with commercial and state-owned companies, many of which have already begun to transform their operations. In such cases, the client sees that modern technologies make processes faster and easier, so they expect such changes from other companies. Digitalisation technologies allow for the most personalised interaction possible, which is preferred by most customers. Digital communication channels, omnichannel marketing, artificial intelligence, robotics − people are already dealing with all of these in their daily lives. For example, the digital transformation of banks could not do without chatbots, and the pharmaceutical industry is actively using modern mobile devices (How will digital transformation help your organisation grow? n.d.).

For small businesses, a digital strategy is a business strategy and is implemented through digital marketing tools; digitalisation of business processes; online presence; e-commerce; and business agility management (Kirzhetska, Kirzhetskyi, 2020). Strategic directions of business development in the digital economy require legislative support, appropriate digital infrastructure, elimination of digital gaps compared to other sectors of the economy, creation of appropriate conditions for the use of network tools, ensuring digital security, and regulatory support for innovation and investment development of enterprises (Koliadenko, 2016). The digital transformation of business can also lead to new challenges. In addition to macroeconomic challenges, companies will face a situation where some of them will be able to make a breakthrough in their scientific, technical, financial and economic development, while others will face new barriers to further development and will be on the verge of a crisis (Plikus, 2021).

The greatest "value" in the digital economy is the customer, who becomes the main focus of economic activity, as without him there is no point in carrying it out. The customer chooses a product based on recommendations, personal experience and advertising, and the seller is unable to contact the customer personally. At the same time, advertising remains relevant, but it is already Internet advertising, Internet fashion, Internet friends, Internet hobbies, etc. (Kraus N., Kraus, 2017). According to the recommendations of experts from Telstra and Deloitte, the following values are considered necessary conditions for enterprises seeking to operate successfully in the digital economy:

- investment in new abilities rather than old business models;
- customer relationships;
- speed and efficiency;
- knowledge of your real competitors;
- investing in talent (Taking leadership in a digital economy, 2012).

Ukraine has become an active participant in the global processes of digitalisation of social and economic systems. The Ministry of Digital Transformation of Ukraine will be established in September 2019.

An illustrative result of the digitalisation of the economy and society is the development and implementation of the Law of Ukraine "On Stimulating the Development of the Digital Economy in Ukraine", which defines "...the organisational, legal and financial principles of the Diia.City legal regime, which is introduced to stimulate the development of the digital economy in Ukraine by creating favourable conditions for innovative business, building digital infrastructure, attracting investment and talented professionals" (On Stimulating the Development of the Digital Economy in Ukraine, 2021). In turn, Diia.City is a unique legal and fiscal space for IT companies in Ukraine (Diia.City, n.d.).

The emergence and convenient use of a qualified electronic signature (QES) is worthy of note. A digital signature is an advanced electronic signature created using a qualified electronic signature tool and based on a qualified public key certificate; it enables a full-fledged legally significant document flow with the state (reporting, tax administration) and counterparties (exchange of invoices, acts and other primary documents). A qualified electronic signature has the same legal force as a handwritten signature and is presumed to be the same as a handwritten signature (What is a qualified electronic signature (QES)? n.d.).

Currently, Diia (in the format of both a smartphone application and the Diia. State Services Online portal) offers the following services for business: e-Job; extracts and certificates, medicine and pharmaceuticals, Diia.City; transport; licences and permits; land, construction and real estate; business creation (Diia. State services online, n.d.). Business registration has become the fastest in the world: in 10 minutes, with a passport and an electronic signature, you can become an entrepreneur without leaving your home (Diia 3 years: how the app has made Ukraine the world's most convenient country in the service sector, 2023).

Currently, the digital economy includes artificial intelligence, robotics, electronic money, nano- and biotechnology, big data processing, unmanned vehicles, etc. Nicholas Negroponte defined the digital economy as “the transition from processing atoms to processing bits”. In a broad sense, the digital economy means a new level of digital services: web-banking, electronic payments, utility bills, registration for various services (queues, administrative services, making an appointment with a doctor, buying railway tickets, etc.) (Hudz, Strelnikova, 2021).

The peculiarity of domestic digital transformation is that advanced enterprises and their customers are far ahead of the state and traditional economy. Small and medium-sized businesses are mostly already online and mostly use digital technologies to promote their goods and services. At the same time, representatives of the “traditional” economy in Ukraine are lagging far behind in this area. In the large industrial sector, digital transformation is being implemented more slowly.

We will consider the practical aspects and features of microbusiness management in the context of uncertainty and digital change on the example of an individual entrepreneur (IE Voronin S.I.) who provides freight transportation services in Ukraine and abroad.

Transportation is the process of moving through space and is based on the provision of paid services. From an economic perspective, it is a production process that ensures movement in the face of limited resources in order to meet needs. Thus, freight transport creates a product in the form of a transport service. Its implementation requires various components, such as vehicles, infrastructure, qualified personnel and rules that regulate the process of providing transport services.

Transportation in the studied type of microbusiness is considered as a service to a specific group of customers who have used the transport service. This service has an intangible nature due to its specificity – the unity of place, time and volume of production and consumption. It is important to note that transport services cannot be “stored” as a finished product.

No “stocks of finished goods” can be created in the provision of transport services. This leads to a difference between the real demand for services and the ability of the relevant entities to provide them. Therefore, transport services can only be provided within a specified timeframe when there is demand for them. It is important that the transportation needs within this framework are consistent with the carrier's capabilities and do not exceed its resources.

The transport services market is characterised by uneven demand, which leads to the formation of local markets. This is due to the inability of large logistics companies to cover all territories, as well as the possibility of "lost sales", i.e. when demand exceeds the capacity to provide services.

One of the features of freight services is their subject matter – the cargo to be transported. Changing the location of this cargo determines another important characteristic - spatiality, which indicates the possibility of moving material objects.

In addition, transport services are capital intensive, which means that they require the maintenance of appropriate vehicles and the creation of conditions for proper cargo handling at distribution centres. It is important to note that these services have a low price elasticity of demand, which means that changes in prices do not significantly affect demand. This is evidenced by the fact that increases in carrier prices

do not lead to a significant decrease in demand, which is explained by the need to transport most consumer goods from the place of production to the place of sale.

During negotiations between the provider and consumer of transport services, there is a risk of conflict between the parties. This is due to the fact that any agreements relate to future periods, as transport services cannot be provided "in advance". Thus, the provision of freight transportation services requires constant and close communication between the service provider and the consumer.

The need to agree on the details and terms of transport services arises from their intangible nature and dependence on specific needs and circumstances. As it is not possible to provide these services directly in advance, both parties must have a good understanding of each other and agree on the terms of cooperation for the successful provision of transport services in the future.

The carrier must always be prepared to accept orders and calculate the use of vehicles so as to have a reserve for unforeseen orders. However, these reserves generate costs that need to be covered by the resources that are used. This also has implications for customers, such as requiring prepayment for a service that has not yet been provided and having no technical or legal basis for withdrawing from a service when it is actually being "consumed". Although many customers may not be aware of these implications, they choose among different transport service offerings those that may be less burdensome in this respect.

Transport service is a concept that involves not only the physical movement of an object in space. If we take transportation as a specific example, comprehensive customer service by a carrier should take into account the fact that this service may entail a whole range of related services that are widespread today.

In other words, when providing customer service, the carrier should consider not only the act of transportation itself, but also additional services that may arise in the context of this process. This approach allows expanding the range of services that a carrier can provide to meet the diverse needs of its customers. Thus, the transport service acts as a basis for the development of various related services in general.

The consequences of the characteristics of freight transport services are shown in Table 1.

Table 1. Consequences of the manifestation of the characteristic features of freight transport services for the IE Voronin S.I.

<table>
<tr><th colspan="2">Implications for the carrier</th><th colspan="2">Implications for customers</th></tr>
<tr><th>Organisational</th><th>Economic</th><th>Organisational</th><th>Economic</th></tr>
<tr><td>Offering freight opportunities rather than transport services.</td><td>Losses due to the need to maintain reserves of transport services.</td><td>Lack of choice in the transport service market;
instead, the need to choose its provider.</td><td>Incurrence of unforeseen expenses as a result of improperly provided transport services.</td></tr>
<tr><td>Incomplete use of transport vehicles during periods of "calm".</td><td>Costs associated with congestion during peak periods.</td><td>Lack of possibility to refuse the service in the process of its "consumption".</td><td rowspan="2">The practice of prepayment for transport services is common.</td></tr>
<tr><td>The need to maintain reserves of freight capacity in case of unforeseen demand deviations.</td><td>Poorer quality of services provided during peak periods, resulting in higher total costs.</td><td>No possibility of exchanging the service after it has been provided.</td></tr>
</table>

Source: compiled by the author.

The quality of services provided is an important aspect of business operation and competitiveness. In a general sense, quality is an object of management. The quality of freight transportation is a set of key characteristics of transport services that fully meet customer requirements and comply with international and domestic standards, norms, rules and conditions of the transportation agreement. Assessing the quality of domestic and international transport takes into account a variety of factors.

Firstly, it is important that the service fully meets the needs of customers, including aspects such as timeliness, reliability and cargo safety. Secondly, it must meet quality standards and regulations, often governed by international organisations and agreements, to ensure compliance with operational and safety requirements. Thirdly, the assessment should take into account compliance with the terms of the transportation agreement, which involves defining the rights and obligations of the parties and resolving potential problems and disputes. The main idea is that the quality, especially of international transport of goods, is assessed against a set of requirements and standards that ensure high efficiency and reliability of cargo transportation between countries.

The quality of transport services is not limited to the cost effectiveness of delivery. Successful use of transport services depends not only on the cost of delivery, but also on quality aspects such as timeliness of delivery and cargo safety. In practice, when choosing a delivery method, shippers and consignees often focus primarily on the main transport costs. However, other costs associated with poor delivery quality are often overlooked and considered as part of the overall costs. Thus, the real impact of transport on the efficiency of core production is much greater than can be measured by the sum of transport costs. This reflects the modern approach to customer service, where service is seen as a global commitment to meet all of their needs at the highest level of quality.

Improving the quality of the cargo delivery system is of interest not only to those consumers of transport services where transport costs account for a significant proportion of their product costs. They are also interested in improving the quality of the delivery system, even if this part is small, but the costs become significant due to the low level of delivery quality. This may include problems such as the inability to use efficient production technologies or the need to maintain large stocks of goods due to insufficient delivery reliability.

In order to select a cargo delivery system that will provide a high level of service, it is necessary to determine what the customer's requirements are for this system and what parameters they use to assess the degree of satisfaction of these requirements. Obviously, the requirements may change over time, and the level of satisfaction will change accordingly. However, to fully understand the selection task, it is important to identify all possible customer requirements.

To achieve this goal, it is necessary to constantly monitor changes in customer requirements and use various methods, such as questionnaires, structured interviews, focus groups, etc. In addition to continuously studying customer needs, it is also important to monitor market factors that may be subject to change.

Service standards define the list of benefits that customers can expect along with the provision of a particular service that the carrier promises. They set the rules for carriers and are based on specific time criteria, reliability indicators and loss and damage considerations. These rules are binding, ensuring that the quality of transport services is high and that customers' requirements are met.

Let's summarise the main aspects of assessing the quality of international freight transport services. The quality of a transport service should always be focused on customer satisfaction, which is one of the main principles of quality management. It is important that quality indicators reflect the interests and meet the requirements of the client. It is also mandatory that the quality of transport services complies with the standards and regulations in the field of freight forwarding, as well as the requirements of international treaties and agreements. This approach ensures that the services provided meet certain standards and meet customer expectations.

When assessing the quality of transport services, it is important to take into account the characteristics of different customer groups, as they may have different needs and expectations. To determine the quality of transport services, it is necessary to take into account the degree of customer satisfaction, which can be measured by the level of quality, which reflects how satisfied customers are with the service provided. It is important to conduct periodic assessments of transport service quality, as this allows for the identification of possible shortcomings and timely implementation of corrections. Transport service quality indicators should not include the cost of the service, such as fares. Quality assessment should focus on aspects that directly affect customer satisfaction and needs.

Effective management of the quality of road freight transport services helps to ensure reliable and efficient transportation that meets customer needs and industry standards. The main factors affecting the quality of freight transport include

- timeliness of cargo delivery;
- cargo safety;
- information content
- staff competence;
- complexity of services.

In turn, the timeliness of cargo delivery is influenced by the time for preparatory work; the time for rolling stock to be delivered for loading; the time for loading; the time for paperwork; and the time for transportation. Cargo safety means delivery without damage, loss or contamination. Informativeness means the availability of complete information about the transportation: before the start of the service and during transportation. Competence of the personnel means their appropriate qualifications, working conditions and motivation.

The factor of complexity of services means knowing and taking into account the customer's requirements before the start of cargo transportation, which helps the carrier to provide quality services. In our opinion, the above factors should be taken into account systematically and in close connection to improve the quality of transport services.

DELLA™ Freight and Lardi Trans international software systems are used to search for freight orders. DELLA™ Freight Transport has been successfully operating in the trucking market since 1995, facilitating the organisation of domestic and international freight transport. The company's customer always receives the required number of offers for the carriage of goods from different carriers, and each time chooses only the most favourable one. All DELLA carriers undergo mandatory registration, providing government documents for their type of activity, for example, a licence for international road transport or a licence for domestic transport. For companies and entrepreneurs involved in the transport of goods, we provide only high-quality information about direct customers of cargo transportation and orders for cargo transportation.

The Lardi Trans platform is a set of tools for freight transport professionals, including cargo and transport search, insurance, fleet management, electronic document management and tenders. This is a unique tool that helps to protect the freight transport business from unwanted counterparties. With the help of these programmes, the logistician selects loading opportunities and finds customers who can become regular clients in the future.

The Global Positioning System (GPS) plays an important role in freight transport, providing a variety of benefits for managing traffic flows and improving the efficiency of logistics processes. GPS is used in the management and administration of freight transport in the following ways:

1. Provides positional control, as GPS allows you to accurately determine the location of vehicles in real time.

2. Routing and route optimisation are provided. GPS can help plan the best routes for trucks, reducing journey times and saving fuel. It can also take into account objective circumstances such as traffic, road repairs and weather conditions.

3. Monitoring cargo conditions. GPS systems allow shippers to monitor cargo conditions, such as temperature and humidity (especially for food or medicines).

4. Improved safety. GPS can be used to track vehicle speed, movement, and driver compliance with traffic regulations, helping to improve safety.

5. Efficient use of resources. With GPS, you can use vehicles efficiently, avoid unnecessary mileage and minimise fuel costs.

6. Integration with logistics management systems: GPS data can be integrated with logistics management systems to provide comprehensive control over transport processes and warehousing and logistics activities.

The effectiveness of microbusiness management in the face of uncertainty and change depends on the entrepreneur's ability to think strategically and on the availability of a strategic approach to management. Developing strategic management skills in an entrepreneur is a key element of successful

leadership. Important aspects and qualities that an entrepreneur can develop for effective strategic management are:

1. Visionary thinking. An entrepreneur must have a clear vision of the future of his or her business and its development. Such thinking helps to set long-term goals and directions.

2. Strategic planning. The ability to develop and implement strategies based on an analysis of the internal and external environment allows an entrepreneur to effectively manage the development of his or her business.

3. Risk management. Risk management and willingness to take reasonable risks are important for a successful business. An entrepreneur must be ready to change and respond to unforeseen circumstances.

4. Creativity and innovation. The ability to think creatively and innovate will help an entrepreneur remain competitive in a rapidly changing market environment.

5. Leadership. An entrepreneur must be an effective leader, able to inspire and manage a team. Leadership contributes to the formation of corporate culture and the achievement of common goals.

6. Strategic analytics. The ability to analyse data and information, make informed decisions based on strategic goals determines the success of strategic management.

7. Cooperation and communication. Interaction with the team, clients, partners and other stakeholders requires high communication skills and the ability to cooperate.

8. Continuous self-improvement. Readiness for learning and continuous development is important to adapt to new technologies, market trends and strategic challenges.

9. Flexibility and adaptability. The ability to adapt to changes in market conditions and change strategies ensures long-term success.

10. Ethical leadership. Adhering to ethical standards and conducting business in a responsible manner towards society and the environment.

A strategic goal map is a powerful tool for defining and organising strategic goals in business. Let's look at the main stages of developing a strategic goal map for an entrepreneur.

1. Defining the mission and vision. At this stage, it is necessary to formulate a short but powerful definition of the business mission. It should reflect the main essence of the business and define a clear vision of what the business should look like in the future.

2. Identify key areas of activity. It is necessary to identify the main areas of activity that will help achieve the goals.

3. Formulation of strategic goals. At this stage, specific, measurable, attainable, realistic and time-bound goals for each key area of activity should be identified.

4. Creating links between goals. This involves establishing logical links between strategic goals, which will help ensure that all efforts are coordinated and focused on achieving the goals.

5. Identify key performance indicators (KPIs) for each strategic goal, which will allow you to measure progress and respond to changes in a timely manner.

6. Development of initiatives and projects. At this stage, you should identify specific initiatives and projects that will help you achieve your goals.

7. Create a strategic map. A strategic map is a graphical representation that shows all the key elements: goals, relationships, KPIs, and initiatives.

8. Implementation and monitoring. Directly implement the strategy and systematically monitor the implementation process, making adjustments as necessary.

9. Communication and team involvement will help ensure that the strategy is clear and understood by all team members.

10. Review and revision. It is necessary to periodically analyse the strategy and adjust it in accordance with changes in the internal and external environment.

The development of a strategic map will help microbusinesses to be focused on achieving key goals in the face of uncertainty and successfully adapt to change.

Therefore, we propose the following version of the mission of the IE Voronin S.I.: “Offering effective transport solutions in the road freight market and ensuring the quality of services”.

The main purpose of the activity can be defined as follows:

- improving performance to achieve the business goal;
- formation of the freight transport market;
- strengthening competitive positions.

We consider road freight transport within Ukraine and abroad to be the key areas of activity in terms of future development.

We consider it appropriate to include the following strategic goals (until 2028) of the IE Voronin S.I.:

- increasing the number of trucks, bringing the total number to 17 units;
- expanding the range of customers and increasing the number of orders by 15 % annually;
- ensuring the quality and safety of services, achieving the highest customer ratings and 100 % compliance with freight safety standards;
- ensuring profitability at a level of at least 60 % profitability.

Given the peculiarity of entrepreneurial activity by an individual, we consider it appropriate to pay attention to the formation of strategic thinking of the entrepreneur himself in crisis and uncertainty.

Thus, strategic thinking is necessary both in life and in business. If you have any goals in life and business, which is almost indivisible in the case of an individual entrepreneur and you want to achieve them faster, easier, cheaper mentally and physically, it is extremely important to master the art of strategic thinking.

Strategic thinking is a mental process aimed at achieving goals; in fact, it is a way to clearly and concretely define a goal and plan to achieve it.

The first thing that underlies this approach is a clear formulation of the vision of the future, a detailed description of what the entrepreneur wants. It is not enough to say that "I want to be successful". It is necessary to specify in what way, how it should be manifested: status, career, financial well-being, entrepreneurial success, etc.

The Strategic Map of the IE Voronin S.I. until 2028 can be summarised in the form of Table 2.

Table 2. Strategic map of goals of the IE Voronin S.I. (until 2028).

The Mission. Provide efficient transport solutions in the road freight market and ensure quality of service.			
The main purpose of the activity: - improving performance to achieve business goals; - formation of the freight transport market; - strengthening competitive positions.			
Field of activity	Objective	Measures and actions to achieve	Indicators of achievement
Operating area: provision of services	1. Increase in the number of trucks. 2. Ensuring the quality and safety of services; compliance with freight safety standards.	1. Purchase of freight vehicles at the expense of the profit. 2. Development of internal transport quality standards; compliance with industry safety standards.	1. A minimum of 17 units of automotive equipment. 2. 100 % compliance with quality and safety standards.
Finance	1. Ensuring business profitability.	1. Increase revenue. 2. Optimise costs.	1. A minimum of 60 %.
Marketing	1. Expanding the range of customers and increasing the number of orders.	1. Registration on online logistics platforms. 2. Formation of your own base of regular customers. 3. Formation of a flexible pricing policy. 4. Use of marketing communications.	1. Increase the number of orders by 15 % annually. 2. Achieving maximum positive customer ratings.
Personnel	Improving the level of staff qualification. 2. Involvement of people with professional education.	1. Develop and implement staff development programmes. 2. Implement a motivational motivational mechanism.	1. Full staffing with employees of the required level of professional and specialist training.

Source: compiled by the author.

Strategic thinking has several elements:

1. You should not be satisfied with the first way you come up with to achieve your goal. Thinking strategically means finding different solutions to your problem, having as wide a range of options as possible, then evaluating them and choosing the best, most optimal one. Very often, the best option is not the one that first came to mind.

2. Analyse available resources and anticipate risks. It is extremely important to realistically assess your own capabilities and immediately think about what barriers may arise on the way, what could go wrong, what could prevent you from achieving your goal. After that, you need to decide how to level these obstacles, i.e. be prepared for them.

3. Choose the most optimal way to achieve the goal, the available resources and the one that minimises risks. All of this needs to be adapted into a plan - step-by-step, clear, realistic, and feasible.

4. Flexibility and willingness to adapt to new conditions, even despite an established plan. In today's world, there is a lot of uncertainty, so you need to be able to adapt to the circumstances in order to move towards your goal regardless of the changes around you. Moreover, adaptability should be not only in terms of the plan, but also in terms of changing goals. It is quite normal and wise to change the goal when the context changes dramatically.

5. You need to plan the movement towards the goal with the future in mind. It is unpredictable and therefore relying on previous experience is not enough. Strategic thinking is about accepting that the future will most likely not be like the past, you cannot plan to do something in 2024 the way you did in 2023 or 2022, because everything around you is different.

Therefore, a person, manager, or entrepreneur with strategic thinking is a flexible person who knows how to plan, but is also very adaptive, able to assess the present in the context of the future. Strategic thinking is useful for everyone, especially when an entrepreneur is also a manager and a leader, so it is definitely a necessary characteristic.

In today's environment, the main task of entrepreneurs is not just to succeed, but also to “survive”, adapt to rapid changes and maintain their positions in the market. In this context, microbusiness management is being rethought and is becoming not only a practical activity, but also a real art. Business owners have to be artists, making creative and unconventional decisions. Managers use their abilities and innovative approach to find new strategies that allow their business to “survive” and thrive in the face of uncertainty and competitive instability.

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THE CONCEPT OF SOCIAL RESPONSIBILITY AS A TOOL FOR SUSTAINABLE DEVELOPMENT OF THE ENTERPRISE

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The study of modern trends in the development of the concept of CSR reveals the fact that the degree of its integration into the model of strategic management of modern enterprises is increasing. However, to date there is no single universally recognized approach to the definition of the concept of "corporate social responsibility" (CSR), the main periods of the formation of the concept of a socially oriented enterprise have not been finally formed.

The Committee for Economic Development (USA, 1971) united the economic and social block of corporate responsibility, presenting it as a combination of three elements - integration of business into the social sphere, social dimensions and values, and economic growth. The company's economic interests are the main driving force. The company should be aimed at constant growth, increasing employment and production. Changes in the social sphere are part of the company's active attention. Effective economic indicators should be partially converted into increased financing of social corporate programs. At the same time, the enterprise as a whole system must be effectively integrated into social institutions and processes.

The very concept of "company's responsibility to stakeholders" in contrast to the standard definition of "corporate social responsibility" allows you to avoid two key, according to E. Freeman, mistakes: specifying the object of responsibility to shareholders, transferring it to society as a whole does not allow you to make the right management decisions , since the vector is extremely blurred, in other words, it is not clear to which specific persons the responsibility is formed; the category of responsibility is universal and implies any format of entrepreneurial activity - from small businesses to large corporations.

The international standard ISO 26000 (International Organization for Standardization) defines social responsibility as an organization's responsibility for the social and environmental impact of its decisions through transparent and ethical behavior. Such corporate behavior promotes sustainable development, takes into account the expectations of interested parties, complies with current and international legislation, integrates into the activities of the entire organization and extends to its relations (with external agents) [4].

Thus, the interpretation of CSR is in the field of actions of the company itself, its strategy and attitude to its own personnel. In other words, it is a micro level through the lens of the company. In addition, there is an opinion among researchers that this term should be considered at the level of regional and state policy (meso- and macro-level). After all, business responsibility can act as a social innovation that contributes to the achievement of economic and social strategic indicators at the level of regions and the state as a whole.

Currently, social responsibility of business is part of the company's strategic goal-setting. Without this direction, it is impossible to imagine a successful company that strives to play the role of a market leader. Thus, it can be said that the concept of CSR is increasingly integrated into the category of strategic management of the company, becomes an international element of international policy and increases its key role.

This is confirmed by international research: a survey of world business leaders by the IBM Institute for Business Value showed that the guiding behavior in practice is increasingly a strategic approach, while more than half (54%) are confident that CSR has already brought additional competitive advantages.

There is a parallel and interdependent development of the concepts of CSR and sustainable development of the company, taking into account three aspects: economic, social and environmental.

Modern Ukrainian practice shows that, in general, domestic companies follow the main world

trend. Given the critical factor of the lack of highly qualified personnel in all areas, this concept becomes an important tool of competitive policy and a condition for survival in a turbulent economy.

Sometimes there are related concepts and definitions. Among them can be attributed "social responsibility of enterprises" understood as the fulfillment by the enterprise of legally established social obligations in relation to personnel and the development of the social and labor aspect of the enterprise's activity, as well as "corporate social activity" - a system of principles of social responsibility, processes of social receptivity and accessible for a review of the results related to the public interactions of the company.

Despite the fact that the concept of CSR as a scientific concept has existed for a long time, we cannot talk about a single developed approach to its definition, sources and role in managing an organization. However, it is possible to highlight the dominant trends that determine the development of scientific thought in the field of CSR, namely [10, p.13]:

- comprehensive approach to CSR at all levels (micro-, meso-, macro-), integration of CSR into the strategic management model and business processes of the organization;
- emphasis on long-term nature, sustainable development and continuity of values created by the company; in this regard, we can talk about CSR as a factor in the organization's long-term competitive advantage;
- focus on the specific interests of key stakeholders.

The analysis of modern Ukrainian and foreign literature made it possible to compile the author's periodicity of the formation of CSR in world practice.

It should be noted that in Ukraine the last stages are not very pronounced, rather they represent experimental sites or the experience of individual progressive companies:

- state pressure and compulsion of business to form social prerequisites of behavior, at this stage CSR as a separate function of business has moved from a dead point;
- legislative consolidation by state institutions of the right of certain social norms of business conduct: regulation of labor and working conditions, responsibility for improper fulfillment of social duties;
- transfer of social risks by state bodies to the area of competence of the regional authorities, which prompted the formation of social policy on the ground;
- unsystematic philanthropy of companies as an element of the marketing complex in the field of PR-promotion of one's own image (brand);
- formation of a system of social motivational incentives, focusing on economic instruments (reduction of the taxable base from profit when making social investments), which became derivative factors of the emergence of socially oriented behavior of companies;
- voluntary acceptance of social obligations as a policy and/or strategy, based on potential benefit (profit), which meant, on the one hand, recognition of the importance of the social function of business, on the other hand, a pragmatic scenario that obeys the laws of the economic genre (increasing capitalization, competitiveness, involvement of specialists);
- targeted social investment policy, where there is a specific development plan, performance indicators and reporting, potential dividend returns from internal projects (variations of social packages) and external initiatives (in the field of private-public partnership).

Unfortunately, in Ukrainian practice there is still no full understanding of the correct format of work with CSR. A distorted view prevails in many areas. The role of the catalyst should be established for the state, while it should not shape its policy only by sanctioning measures. It is necessary to form a separate state body responsible for the policy of dissemination of CSR ideas at the state and regional levels. It is important to transform the formal approach into a balanced state policy of environmental and social orientation.

In the conditions of constant changes in markets and business conditions, social responsibility acts as a means of competitive struggle, opens up the opportunity to widely declare oneself in society, promote one's own values, positioning itself as a reliable employer and a progressive company, and also

helps to increase the level of organizational efficiency of all business processes. On the other hand, a socially oriented approach attracts and retains highly qualified personnel with a high level of human capital development.

One of the main defining characteristics of social responsibility is that organizations want to include social factors in their strategic and tactical development and management plans, and present the results in their social reports.

Today, social responsibility has become an important factor in improving organizational efficiency, an element of employee motivation and part of corporate culture.

The growing importance of civil society aligns corporate social programs with business practices. The new public inquiry stimulated the exploration of engagement mechanisms with a wider and more diverse group of stakeholders, which we mentioned above. One of the important responses to the growth of civil concern is the wide distribution of international standards of CSR initiatives, social reporting, development of its standards and audit [14, p.154].

Currently, there is a wide variety of specific CSR reporting initiatives and standards. It is about the obligations of the enterprise that go beyond the framework established by the law. This classification of the company's obligations according to the stakeholder approach will make it possible to establish the level of voluntary initiative of companies in the direction of CSR and take into account when determining the level of development of the company's CSR.

There are situations when enterprises voluntarily increase their own obligations beyond the legally defined volume, pursuing the following interests: aggravation of the problem of limited resources; increased competition; growing interdependence of the company with the external environment under the conditions of uncertainty of growing uncertainty of the external environment; the need to respond to all changes in the socio-economic sphere, etc. [11, p. 26].

National models of CSR are determined by the features of economic, political and cultural development, which necessitates the development of regulatory documents at the state level, that is, recommendations and prescriptions apply to enterprises of this territory.

The corporate level of regulatory regulation of CSR decisions involves taking into account both basic international principles and specific requirements for business in one or another country.

Examples of normative documents of this level of development are:

- a code of corporate conduct that can be developed based on the principles of corporate governance and serve as a basis for creating corporate governance codes.
- the social charter of business is a set of fundamental principles of business practice, in many respects it repeats the international principles of socially appropriate behavior of the company, etc.

The norms of the internal corporate level of CSR regulation are based on the norms stipulated by the documents of the international, state and corporate levels of acceptance. Thus, from the standpoint of cross-level analysis, the principle of vertical regulation applies here.

At the intra-corporate level, regulatory documents reach the maximum degree of specification. Examples of normative documents of this level are: a collective agreement, a code of corporate conduct, a code of ethics, provisions on the company's mission, standards of socially responsible behavior, programs on business ethics, tariff agreements, etc.

Despite the fact that most of the regulatory documents are small in scope and are mostly general in nature, the specifics and specific goals of the company's development are reflected in them.

The most common among these internal documents, in which the enterprise's strategy in the field of CSR is established, is the collective agreement (about 58% according to expert research), which confirms the fact that most often activities in the field of CSR relate mainly to the field of personnel management.

Since 2008, the Center for CSR Development has existed in Ukraine as a leading independent expert organization uniting 40 enterprises. About 20 enterprises are partners of the CSR Center in educational projects.

During the years of its existence, the CSR Development Center: joined Ukraine in the development of the ISO 26000 international standard on social responsibility; annually holds in Ukraine the National CSR business case competition, the CSR Marketplace exhibition of social and

environmental projects, the Competition for the best non-financial report; prepared a training manual with the MES label "Corporate social responsibility: models and management practices); implemented the Initiative "Enterprise 2020: the role of business in society" [15, p.66].

As mentioned above, Ukraine has been working on the development and adoption of a national CSR strategy and the main national regulations and documents in this area for several years in a row, but these are only separate steps in this direction.

The ideology of the National Strategy of CSR in Ukraine includes the following main tasks: promoting the development of the state and society in the direction of CSR as a factor in the modernization of the economy and increasing its competitiveness; introduction of a general approach to understanding CSR; development of partnership to promote the prosperity of communities and the region; development of resource conservation and energy efficiency programs; ensuring human rights, ethics and education; development of excellence in business processes in enterprises, institutions and organizations; promotion of non-financial reporting systems, etc.

It is also advisable to consider CSR implementation activities at enterprises as a special form of innovative activity with a corresponding attitude from the state. The state could develop new forms of social partnership and hold regular meetings to develop relevant recommendations for business, etc.

As in most countries that have adopted the Ideology of the National Strategy and CSR policies are recognized at the national level, such conditions must be created in Ukraine, especially on the part of state and executive authorities, which will be beneficial for businesses to become socially responsible, and adopted documents in the field of CSR ensure the implementation of national interests, interests of business and citizens, strengthen integration international ties and ensure the competitiveness of the Ukrainian economy, ensuring the development of Ukrainian society.

Therefore, social responsibility consists in creating an effectively functioning system of social security for representatives of various groups and strata of society, providing conditions for free development, maximum disclosure of the creative potential of each individual, ensuring personal safety, maintaining an ecologically healthy living environment. No less important is the responsibility of the state to business, non-governmental organizations, trade unions and other structures of civil society.

A systematic approach to CSR research should solve the following tasks: ensuring the possibility of systematic study of regulatory objects in time and space; justification of activity goals in accordance with the state of the internal and external environment; confirmation of global, national and regional Interrelationship between the goals of social development; study of the mechanism of goal implementation, search for the most effective way of strategy implementation; identifying the system of relationships between subsystems and elements, studying the impact of each element on the entire system, and vice versa - identifying subsystems (elements of "bottlenecks" and "leading link" in the system); comparative assessment of competing alternatives that best meet system-wide goals, making timely, balanced and effective socially responsible management decisions).

The systematic research method involves the selection of research objects and tools. Objects include: interests, threats, challenges, reserves, resources, potential, capital, factors. Research tools include metrics, relationships, and interactions. Indicators (quantitative, qualitative, static and dynamic) and capabilities (social, functional and management) can be selected as measurement parameters.

In this study, CSR is considered as a set of social policy models, mechanisms and tools with a multi-level structure that includes three main levels of responsibility.

The problem of effective management is determined by the following factors: the complexity of the socio-economic system, the modern crisis process, the mechanism and technologies of management, the low level of management of the economic process by state bodies, the lack of effective management. tools that can correspond to modern economic phenomena and the complexity of the process.

According to the requirements of the system structural approach, the system considers a set of elements, components and their inherent properties, which are combined with ideas (goals) to create a new integrity in terms of essence or quality in their interaction. As an economic system that determines the direction of social transformation, the systemic characteristics of corporate social responsibility can be characterized as follows [9, p. 116]:

- the state of the system is determined by its own values over a certain period of time;

- the dynamics of the system state determines the behavior of the system;

- the process of exchanging information (energy and resources) with the external environment of the system not only through the system boundaries, but also through each point of the system (for example, the infrastructure of the territory).

Social responsibility of entrepreneurship as a socio-economic system has the following characteristics: multidimensionality; variety of system structures (networks, trees, hierarchies, etc.); multi-connectivity of system elements (horizontal and vertical connections of subsystems); structural elements.

Variety of properties; multiple changes in the composition and state of the system; multi-criteria system (the difference between the local standard of the subsystem and the global standard of the entire system, their contradictions, especially of the cross-border meso-system); scientific sense of universality.

The application of the main principles and provisions of synergy in the study of social responsibility of enterprises makes it possible to analyze the reformation process in a non-linear, sharp way, identifying opportunities for synergy and new sources of sustainable development according to the criteria of business use. potential of structures.

The complexity and dynamics of economic processes require management to think systematically when making management decisions. The decision-making process begins with rationalization and clarity of ultimate goals. Consider the entire problem as a single system, reveal the consequences and relationships of individual partial solutions and explore possible alternatives for achieving goals (the goals of individual subsystems should not contradict the goals of the system as a whole) [12, p.695].

At the macro level, it is necessary to determine the prospects for the development of the national economy (in the unification of its components, inseparable from the external and international environment), to determine the goals of interaction between economic units and the influence of economic structures.

Managers of business structures of various types of ownership are responsible for the impact of their decisions on the work of their business structures, the results of their activities and their impact on the external environment: economic, ecological and social.

Social responsibility of entrepreneurship is a chain of actions of the state, enterprises, entrepreneurs and individuals that influence the sustainable development and quality of life of society members. On the other hand, the social responsibility of business entities is activity in such ways of obtaining profit that do not harm people, nature, and society.

As a systemic concept, the social responsibility of entrepreneurship reflects the relations between subjects in the environment of functioning of entrepreneurship subjects (internal and external), carried out with economic, social and environmental goals. To conduct a systematic study of corporate social responsibility, it is necessary to determine the subjects and objects of social responsibility, the relationship between them and their compliance with the goals of sustainable development policy.

The main characteristics of the CSR system are: complexity due to sufficiently strong material and information connections between subsystems and elements; openness (with input and output channels for exchanging information and signals with the external environment) and continuity (all signal states and all elements are set by continuous parameters); between the subsystems and elements of the system there are numerous and fairly strong informational connections, continuity, dynamics, distinctiveness of development, the influence of the external environment (when the system is influenced by the external environment). the environment simultaneously experiences the reaction of the system - the action itself) [7, p. 116].

CSR as a set of interactions and mutual influences of business entities has all the features of a system, which should include the following:

- purposefulness - the competitiveness of the business system has its own goals, preliminary tasks and expected results;

- complexity - the variety of elements, components, intertwined with influencing factors, creates patterns of external and internal relationships that are directly dependent on external factors, such as economic development, geographical location, the presence of historically developed industries, etc.;

- divisibility of the system - which implies the existence of competing subsystems that are separated by individual characteristics;

- integrity - refers to a comprehensive, emergent quality that exists in the entire system, but not in its individual elements or subsystems;

- the diversity of the system is related to various autonomous elements of the competitiveness of its socio-economic system. The structure is determined by the stable connections that exist between the elements of the system and their distribution in the hierarchy;

- hierarchy - arises on the basis of decomposition and represents a relatively constant sequence of space-time relations between its elements and the external environment.

CSR management is considered as a technology, management practice and decision-making process.

CSR management as a technology involves defining a set of measures for the development of social responsibility of business entities based on research and analytical generalization of the state of the consequences of business activity for the state, region and personnel. Management technology means a set of methods, techniques for implementing management functions, taking into account certain criteria. Management technologies are based on production and information flows. Thus, under the technology of situational management of the social responsibility of entrepreneurship, it is expedient to understand the definition of a complex of organizational and economic measures to overcome the situation and reduce the level of its consequences.

The decision-making process in the national system of supervision of corporate social responsibility is a series of cyclical measures for the management subject to solve the problem, which includes analyzing the situation, forming alternatives, making decisions and organizing its implementation. That is, it is the process of forming the target behavior of the state based on the study of the effects of the activities of business entities at the macro-, meso-, and micro-levels of management.

Therefore, CSR management involves the study of relationships and relationships between social responsibility subjects and objects, taking into account the level and environment based on the principles of sustainable development.

Management of the social responsibility of entrepreneurship improves the national model of social responsibility through the use of new ways of organizing the management system, the use of new methods of solving tasks, changing management technologies and management principles.

Taking into account the principles of the Global Compact, the main objectives of CSR management can be defined as follows:

1) consumer orientation – consumer needs, quality assurance and satisfaction should be prioritized when making any management decisions regarding the business structure's activities;

2) focus on sustainable development – consider economic, environmental and social performance as a competitive advantage and should be an integral part of CSR management;

3) development orientation – the CSR management system must be flexible and quick to adapt to changes and innovations to ensure its not only adaptability, but also the ability to anticipate and/or shape changes in the external environment.

CSR management as a system of relationships and relationships between subjects and objects of social responsibility, taking into account the levels and the environment based on the principles of sustainable development, involves their identification by levels of management and levels of social responsibility.

The subjects of socially responsible activity in the economic sphere are enterprises (organizations), and their responsibility is revealed through the actions of specific individuals, which were determined by their belonging to this organization.

At the micro level, it is proposed to consider the social responsibility of entrepreneurship as a voluntary or socially oriented activity of business entities, aimed at the long-term perspective, which, in the case of effective management and use of the potential of intellectual resources, contributes to the improvement of activity results and contributes to the sustainable development of territories.

Management of corporate social responsibility is envisaged as the formation of the direction of systemic transformation of social responsibility: formation of the concept of the process, definition of the subject and object, consideration of interests, selection of methods of analysis and interpretation of facts and methods of determining the degree of satisfaction of the interests of business entities; goals and management Choice of method; definition of system boundaries (outline of system limitations that will affect the implementation of system processes); analysis of available resources, territorial potential, sustainability parameters to achieve management goals.

To assess financial and social prospects, information on the retrospective activity of business structures is necessary. For this, it is necessary to create methodological support subsystems - long-term, effective and retrospective analysis of social responsibility. However, social responsibility management requires more detailed information, taking into account the relationship between intellectual resources (technical, organizational) and production results. A subsystem that manages the analysis is intended for this purpose. The activity of business units in the field of corporate social responsibility regarding the adoption of operational, tactical and strategic decisions aimed at increasing the efficiency of social activities is studied [13, p.56].

The subsystem of CSR management analysis should solve the following issues: operational, tactical and strategic plans for scientific demonstration of social norms and standards of production, labor protection, sales and consumption and disposal of products; assessment of efficiency and development of corrective measures to ensure the impact of social investments, the achievement of goals is considered in the context of the potential of localization of deviations from the set tasks; permanent control over the formation of social costs in the field of activity; determination of methods of rationalization of these costs and effective change of their quantity and structure; using the results of the analysis to adjust the initial goals.

It should be noted that in order to implement comprehensive development based on the socialization of the economy, it is necessary to implement a number of measures, including: state support for business entities that implement social policy, in the form of tax benefits, state incentives, subsidies, etc.; openness of state authorities and general awareness of social measures; development and approval of regulatory documents (laws) regarding the conduct of social activities in the country; interest of local authorities in cooperation with commercial structures; implementation of social projects and social investment contests in the respective territories; creation of special purpose charitable funds; conducting special seminars, round tables on this issue for state authorities, with the involvement of university specialists, etc.

The concept of social responsibility in a business context means that a company works to achieve its financial goals and help society. The idea is that businesses should combine profitable activities with activities that benefit society.

That is, a socially responsible company should not work exclusively for profit maximization, but should make decisions and actions that are acceptable from the point of view of social goals and values.

Corporate social responsibility (CSR), in turn, is a management philosophy whereby companies incorporate social and environmental concerns into their business operations and interactions with stakeholders.

The principles of the enterprise in the field of social responsibility become one of the components of a successful strategy of strengthening the company's image and reputation, attracting customers and retaining the best employees.

One of the most serious problems related to CSR in Ukraine is the lack of evaluations of the effectiveness and efficiency of implemented corporate social programs. As a result, the social activity of enterprises remains in most cases one of the PR tools and cannot be fully associated with their development strategy.

Determining the assessments of social activity is related to the need to correctly compare the company's activities with the task of selecting partners for social projects.

Failure to perceive the need for corporate social responsibility at the enterprise is the main

problem of its development, as well as the absence and misunderstanding of the process of its organization. Although the issue of CSR organization depends on the attitude of the owners towards it, on the perception of its essence and necessity in the conditions of the development of modern processes.

Therefore, it is necessary to organically integrate CSR organization into the enterprise management system, to find its place in corporate management. This does not contradict the need to include CSR in the strategic management system.

The key element of socially responsible activity is its organization, which ensures the implementation of the company's strategy and plans in the field of social responsibility. It is precisely because of the lack of a systematic approach to CSR management that problems with their successful implementation arise. The main task of CSR management is to build a system of interconnected management tools that correspond to the principles of CSR, processes of corporate social perception, which are implemented on the basis of these principles and measurable results of the corresponding corporate behavior, integration of CSR principles into the activities of the enterprise [3, p.35].

As for planning the activities of the enterprise as a whole, it is a systematic process of enterprise management, the process of predicting the future, developing and justifying goals and objectives, determining the best methods and ways of achieving them with the effective use of all components of the existing potential of the enterprise, establishing their interaction and ensuring its development, with the aim of obtaining optimal results in accordance with the conditions of the environment in which it operates and satisfying the interests of all interested parties.

It is mandatory to develop a social development plan and include its main provisions in the strategic development plan of the enterprise. The main goal of its development is the formation of a system of the internal component of CSR and social values of the company's activity.

World trends are changing, if previously employees worked in one position and worried about entries in the work book, now flexible work schedule, "virtual office" and the opportunity to constantly learn and develop are becoming relevant. "Turquoise companies (enterprises)" built on equality, openness and mutual understanding appear instead of leadership qualities, where one person solves issues subjectively. The Turquoise Enterprises model assumes self-actualization, which is at the top of Maslow's pyramid. "Turquoise enterprises" consider the life of the organization as a personal and collective direction of development on the way to the true goal.

Effective work performance by employees is possible only if they know and understand the strategy of social responsibility, can position it in a broad social, business and environmental context, the strategic goals of the organization and want to achieve them. Therefore, an important prerequisite for the successful implementation of the strategy is training and raising the awareness of employees regarding the company's approach to social responsibility, its goals and projects [5, p.93].

That is why enterprises should choose new directions of personnel development, which would be based on socially responsible and ecologically oriented management of its development.

The level of the relationship of consciousness, freedom and social responsibility of the employee affects the quality of his life, which is manifested in the awakening of his interests in a new way of life and changes in behavior, attitude to work and to the people around him. A satisfactory quality of life is characterized by harmony in social and labor relations and the behavior of employees. Such harmony occurs with a certain balance in the specified ratio, which can be achieved at different levels of personality development.

We offer for consideration a new model of enterprise management - the "Turquoise Development Strategy", the main aspects of which are shown in Figure 1.

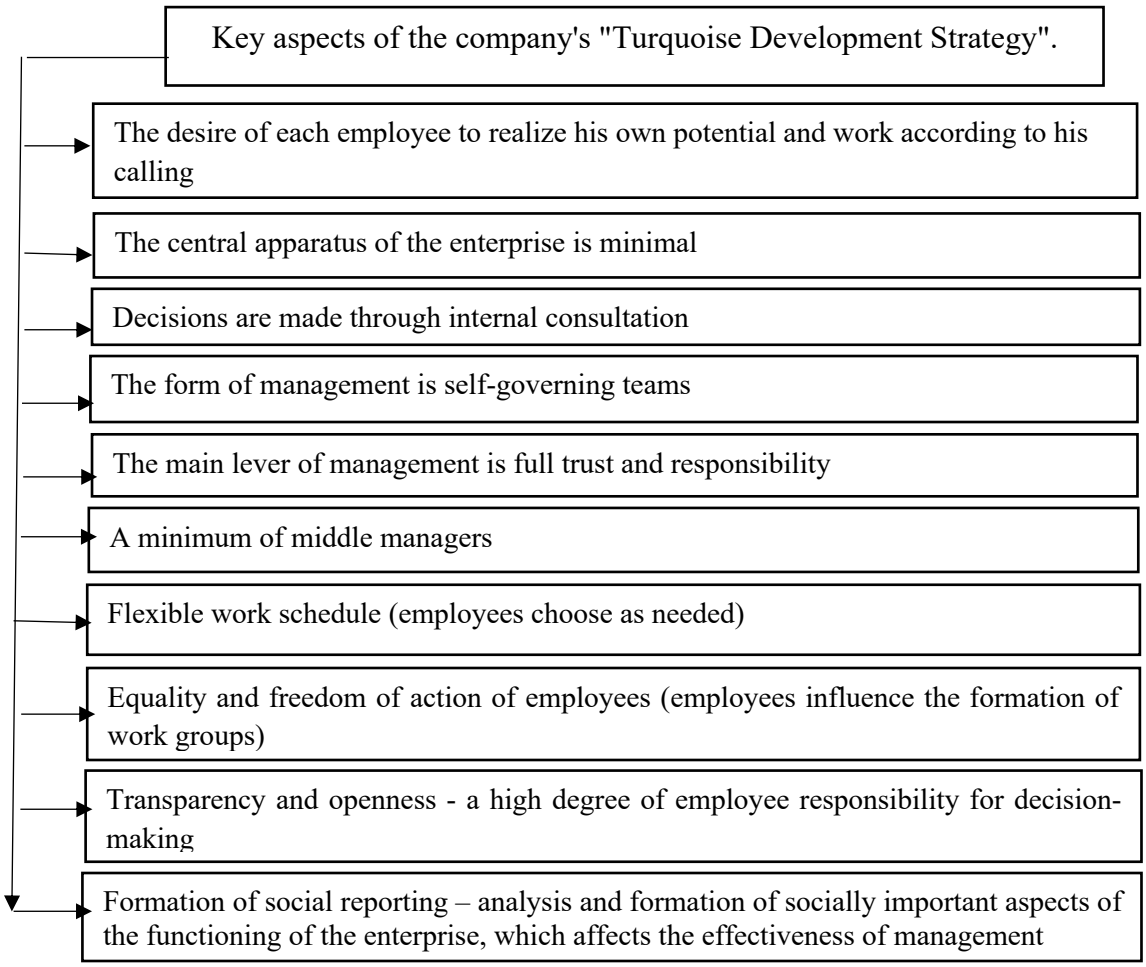

Figure 1. The main aspects of the "Turquoise Development Strategy" of the enterprise.

Important aspects of this strategy are self-governing teams, coordination and meetings mostly on demand, personal freedom and responsibility for work instead of job descriptions, clearly defined responsibilities that can be changed, fully decentralized decision-making based on a consultation process, etc.

All company information is available to employees in real time, including data on the company's financial condition and wages. The strategy appears as a result of the collective efforts of self-governing workers; innovations and developments of the enterprise are created from the inside out, because the offer is determined by the purpose of the organization (in traditional enterprises, the opposite happens, information flows from the outside to the inside). The internal measure of this strategy is integrity. As for change management in times of crisis, this strategy is designed to involve all interested parties so that a solution emerges as a result of collective intelligence.

Effective functioning of this model is possible only if the relevant principles are followed: continuous development of employees; there is no leader, but there are moderators who give advice; self-management in teams; equality and freedom in the activities of employees; social (non-financial) reporting; implementation of areas of social responsibility, etc. (Table 1).

Table 1. Basic principles that must be applied when implementing the "Turquoise Development Strategy" at the enterprise.

Principles	Characteristic
1. Continuous development of employees	Active time investment based on harmony, consensus and justice
2. Absence the leaderbut availability of a moderator who advises	Autonomous self-managed teams, all decisions are made within the company at a general meeting. Teams turn to the central office for help only when needed. Such enterprises are characterized by ochlocracy - the absence of a leader and division between organized people
3. Self-management in teams	The organizational process functions at the lower level, the teams independently decide the entire organizational and management process
4. Equality and freedom of action of employees	Team expansion. Employees influence the creation of work groups
5. Complete openness (transparency)	High level of responsibility of employees for their decisions. There is a multi-stage resolution of conflicts
6. Work is to the satisfaction of all participants in the process	Business processes are inside-out marketing: offering a product based on the company's goal
7. Realization areas of local social responsibility	Conducting the social policy of the company taking into account the interested parties (interaction with the community, interest of the company's employees in the process of activity, loyal attitude of consumers of products); transparency and publicity, etc

We note that after the implementation of the proposed "Turquoise Development Strategy" at the enterprise, changes are possible, which can be investigated on the basis of SWOT analysis (Table 2).

Table 2. SWOT analysis of the enterprise after the introduction of the "Turquoise Development Strategy".

Strengths (S)	**Weaknesses (W)**
1. Motivation and interest of employees 2. Any of the employees can propose their project 3. Exchange of duties and experience 4. Increasing the yield, profitability, profitability level of the enterprise 5. Employee cohesion 6. The interest of employees in increasing the results of their work 7. Responsible attitude of subordinates to the performance of their duties 8. Increasing labor productivity; 9. Decrease in staff turnover at the enterprise 10. Minimization of enterprise risks; 11. Timely response to external and internal factors of influence 12. Integrity of the enterprise as a system 13. Coordination of company priorities	1. Mentality, management's perception of implementing changes 2. Ambiguous perception, misunderstanding by employees of the new development model 3. Little experience and lack of management practices 4. Gradual adaptation to the new development model 5. Lack of a strategic approach to enterprise management based on self-management 6. Additional financial costs for the organization of a new development model 7. Reducing the influence of management on employees 8. Lack of full-time employment 9. Reduction of enterprise performance indicators at the beginning of operation due to the introduction of a new management model.

Table 2. Continuation.

Opportunities (O)	Threats (T)
1. Realization of the employee's potential 2. Training of employees without special costs 3. Interest key stakeholders 4. Safe space 5. Self-regulation and self-management of the enterprise 6. Adaptation to the new organizational structure	1. Changing the system of remuneration and incentives can lead to misunderstandings in the team 2. Irresponsibility of employees regarding their duties 3. A rapid upheaval of the existing organizational culture may lead to misunderstandings between department heads (middle managers) and company employees

In the structure of the identified directions after the introduction of the new development model, the greatest specific weight among the strengths is the increase in the yield, profitability and level of profitability of the enterprise, the increase in labor productivity, the decrease in the turnover of the enterprise's personnel and the minimization of risks. At the same time, opportunities are seen in the interest of key stakeholders of the enterprise, self-regulation and self-management of the enterprise.

Among the weaknesses, it is worth highlighting the lack of experience and the lack of management practices in Ukraine regarding the construction and organization of "Turquoise Strategies", the lack of a strategic approach in the management of the enterprise, which significantly increases the risks of the enterprise, the decrease in performance indicators at the initial stage of operation as a result of the introduction of a new management model.

The greatest threat is the irresponsibility of employees regarding the performance of their duties after the introduction of a new management model, because the verification and control over their performance is weakened. Regarding the stages of implementation of the "Turquoise Strategy", it is worth highlighting five main ones (Figure 2).

So, the final results of the company's activities depend on the motivation of the employees, and the interest of the employees in implementing social projects depends on the directions of social work, since sometimes it directly affects the employees themselves, their family, the community to which they belong. An enterprise that engages in social activities (various levels of social responsibility) is interested in the implementation of social projects and investments, because this directly affects the image of the enterprise, demand for products and the possibility of entering foreign markets [2, p.38].

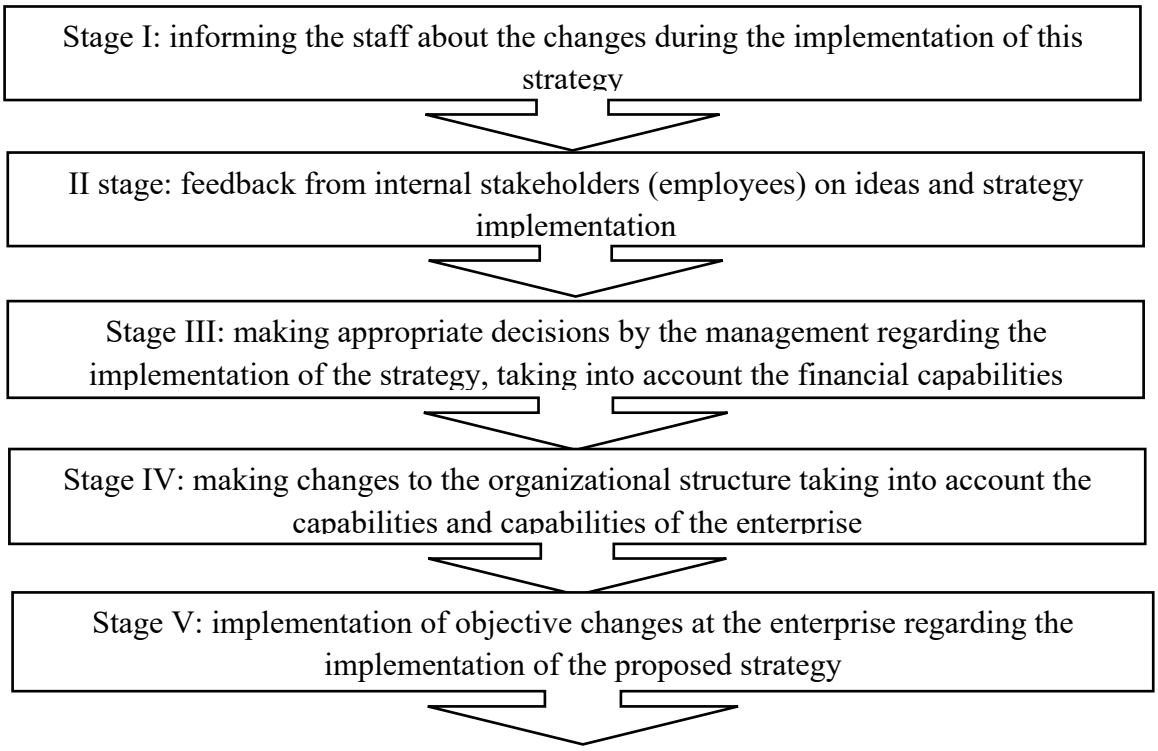

Figure 2. Stages of implementation of the "Turquoise Development Strategy".

The implementation of the program of increasing social responsibility is an iterative process that is permanent and deeply integrated into the operational activities of the enterprise. After receiving feedback from the subjects of social responsibility of the business and making the appropriate corrections to the program, it is necessary to go to the first stage and repeat all the actions.

According to the proposed methodical approach, at the first stage, the goals and objectives of the program of increasing social responsibility for the enterprise should be determined. Owners and managers must determine the priority subjects, whose needs will be addressed by activities within the framework of the program, the economic, social and environmental goals of the program and the corresponding tasks designed to ensure a stable increase in the quality of life of representatives of the local community and the population as a whole. At this stage, it is important to emphasize that increasing social responsibility becomes possible only under the conditions of using the company's own economic resources, but increasing profits and business value cannot be the only and primary goal of implementing such a program.

At the second stage, it is advisable to determine the circle of persons responsible for the implementation of the program of increasing social responsibility in general and its individual stages, as well as to establish the terms of its implementation.

At the third stage, the general level of social responsibility of the enterprise should be determined, as well as the level of social responsibility of the enterprise in each direction. This will make it possible to identify strengths and weaknesses and, at the next stage, to determine ways to increase CSR in the food market, based on the results of qualitative and quantitative analysis.

Also, at this stage, it is possible to recommend conducting an audit, which is a "formal process of reviewing the company's social policy and its results", which aims to "work out the mechanisms and documentation necessary for the organization's further work in this direction".

A social responsibility audit can be conducted by a specialized division of the enterprise or by involved experts.

There are four main stages of conducting a business social responsibility audit.

Collection and analysis of documents and information, including:- analysis of the mission and documents defining the corporate **policy**; - survey of managers and employees; -conduct employee surveys to determine whether the company's declared social mission corresponds to the achieved results; - assessment of the gap between the current state and defined tasks; -announcement of the results of the audit of subjects of corporate social responsibility; - strategy adaptation, to overcome misunderstandings, education and training for employees.

The audit results are the basis for the preparation of non-financial statements, which can be performed in accordance with the requirements of the Global Reporting Initiative standard or the Integrated Reporting Standard.

At the fourth stage, in the field of implementation of corporate social responsibility, specific measures for implementation are selected and prioritized based on the results of the analysis. For this, it is advisable to apply taxonomic analysis, which involves the calculation of a taxonomic indicator, which is a synthetic value that contains all the signs of social responsibility of business. To conduct a taxonomic analysis of the enterprise, we offer a matrix of initial data for system research (Figure 3).

The calculation of the taxonomic indicator makes it possible to identify the most developed areas of the enterprise's social responsibility. The high value of this indicator indicates a fairly harmonious development of social responsibility in all directions.

Among the least developed areas of social responsibility implementation of the enterprise are "compliance with the requirements of the current legislation" and "ensuring decent and safe working conditions". Accordingly, it is the last two areas that are prioritized for drawing up a program to strengthen the social responsibility of the enterprise.

Possible measures aimed at increasing the social responsibility of business in each direction are presented.

1. Compliance with the requirements of the current legislation: it is necessary to check the actions of the business for compliance with the norms of the current legislation on the territory of the state, as well as the countries whose entry into the markets has already been implemented or is planned (for

example, whether the company fully pays income tax, deductions for social activities and other obligations payments from taxes and fees, dividends, etc.).

To increase the transparency of the company's activities, we recommend using international methods, for example, Assountability 1000, Global Reporting Initiative, Standard SA 8000 and others.

2. The organization of decent and safe working conditions at the enterprise includes improving the health, quality of life and well-being of the enterprise's personnel, namely ensuring:

- workplace safety and decent wages,
- observance of human rights, protection and health protection,
- professional development of employees,
- improving the moral climate within the team,
- formation and development of corporate culture,
- support for employees' self-realization,
- development of social infrastructure and social security of employees, qualitative development of the social sphere at the enterprise and in the region.

3. Information openness and good faith advertising of goods is an important element of social responsibility, related to the company's communication policy and involves:

- providing information about products in good faith,
- rejection of unfair advertising,
- open and transparent reporting on the company's activities, provision of complete and true information on the company's activities and results, financial indicators, development plans, products.

On the official website of the enterprise, we recommend placing:

- information about the organizational structure of the enterprise, management staff, principles of appointment to positions and evaluation of the performance of management bodies;
- Code of ethics and results of its implementation;

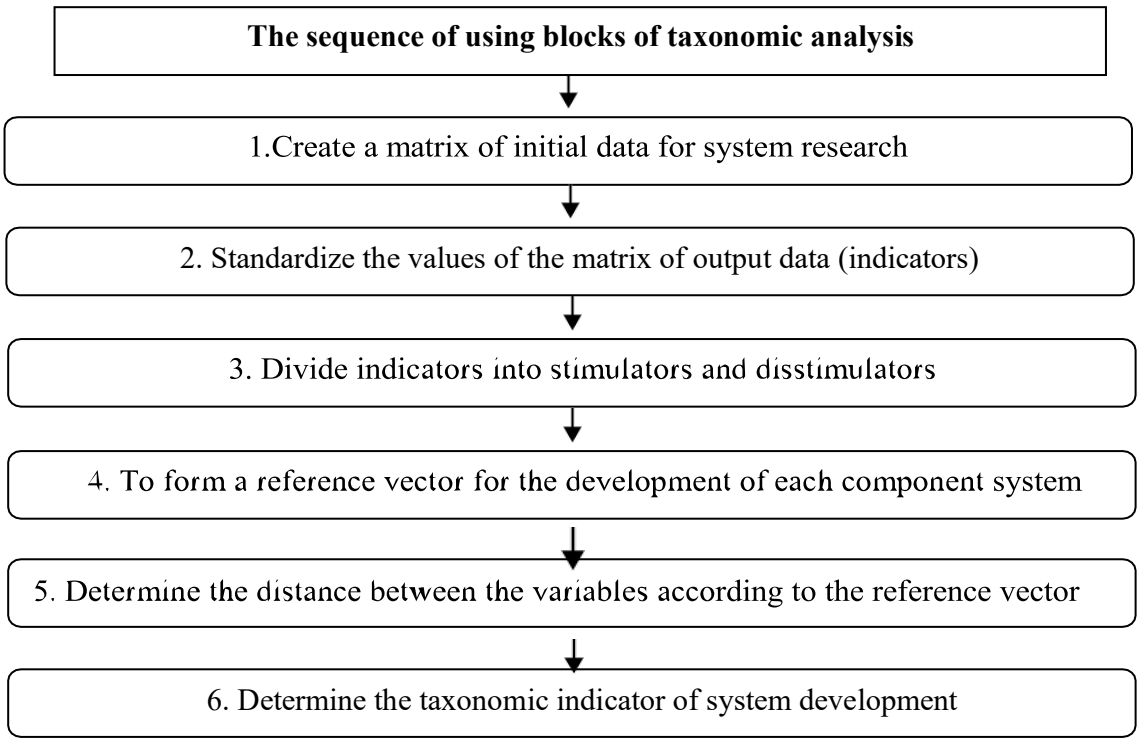

Figure 3. Algorithm for taxonomic analysis of system development.

- compliance and anti-corruption policy;
- policy on salaries, bonuses and remuneration of management;
- the principles of calculating remuneration for the management of the enterprise and members of individual management bodies, as well as its amount;

- programs for compliance with labor safety and health protection, results;
- employment policy for people with special needs;
- gender equality policy and its results;
- collective agreement;
- personnel development programs and program implementation results.

The development of the specified documents will allow for an organizational increase in the social responsibility of business, and their publication will contribute to the improvement of the image of the enterprise and trust on the part of consumers and partners.

We advise you to cooperate only with those business partners "who share similar values and adhere to clear norms of responsible behavior."

The practice of responsible behavior among suppliers, partners and contractors of the enterprise can be established in a special internal document that regulates relations with the aim of assessing and minimizing economic, social and environmental risks, and norms of cooperation can be included in the list of criteria for selecting counterparties, provisions of bilateral agreements with partners that can provide for audits to ensure compliance with these requirements. We consider it necessary to post the described document on the company's official website.

4. It is also advisable to endorse the ISO 26000 International Standard "Guidelines for Social Responsibility", according to the requirements of which a business must: be responsible not only for the production process of the product/service, but also for its further exploitation; take effective measures to prevent negative impact on the environment; implement programs to assess, reduce or prevent negative impact on the environment, products and services; pay the cost of necessary environmental restoration measures.

5. It is important to comply with the requirements of the International ISO 14001 standard, which provides for: development of procedures for measuring the impact of one's activities on the environment and compliance with the requirements of environmental legislation; definition of environmental goals and objectives and programs for their achievement; determination of the structure of responsibility and allocation of resources for the introduction of environmental management, conducting appropriate training for personnel; development of a system for monitoring the main areas of activity that can significantly affect the environment.

We believe that the use of the proposed methodical approach to ensuring the social responsibility of an enterprise in the market is an effective tool for improving its image and trust on the part of the subjects of social responsibility, which allows achieving sustainable economic, social and environmental results through the development of a detailed program of activities with an indication of the circle of responsible persons , terms of implementation, methods of evaluating the effectiveness of the implementation of measures and improving the program.

Solving social problems largely depends on the degree of development of civil society, the nature of the labor market, and the specifics of the operational redistribution of the workforce. Thus, the developed labor market responds sensitively to manifestations of social activity of business. Given the choice, a person will prefer a socially responsible business that is interested in developing loyalty and competence among staff, as well as in forming a positive image that attracts the best specialists on the market. This contributes to the evolution of corporate systems towards openness, honesty and responsibility.

CSR involves the voluntary investment of part of the profit in social development through the social investment mechanism. The latter can be understood as a wide range of resources, namely material, technological, managerial, financial, which are directed to the implementation of social programs, taking into account the fact that in the long term the company will receive a social / economic effect [1, p.98].

Investing in employees is one of the factors that increases labor productivity and employee loyalty, thereby increasing the efficiency of the entire business. Investment in human capital is purposeful investment of resources in areas that improve the quality of human parameters, such as efficiency (intelligence, education, physical and mental health, creativity, motivation systems, etc.).

The program of internal investments in personnel is built on the basis of corporate social

programs, which can be understood as the voluntary activities of the enterprise of an economic, social and environmental nature, aimed at meeting the corresponding expectations of internal and external stakeholders.

Social investments involve not just direct income of the enterprise, but a certain business effect, which means a positive effect on the activity of an economic entity, a result that is not expressed in monetary form, but has a delayed effect. In general, social investment is a long-term investment of funds with the aim of improving the quality of life of people through the creation of new technologies and mechanisms for the distribution of funds among different groups of the population, taking into account their needs.

Employees can only perform their jobs effectively when they know and understand social responsibility strategies, can adapt them to the wider social, business and environmental context, and understand the organization's strategic goals and want to achieve them. Therefore, an important prerequisite for the successful implementation of the strategy is training and raising the awareness of employees about CSR methods, goals and programs.

That is why the enterprise should choose new directions of personnel development, which would be based on socially responsible and ecologically oriented management of personnel development.

On the basis of the proposed directions for improving the development of the company's personnel, the following necessary measures for implementation have been determined (Figure 4).

Taking care of employees' health is an important indicator of compliance with the principles of social responsibility. Expanding social benefits for employees is an urgent obligation of employers who seek to retain valuable employees and motivate them to work productively.

Sorting garbage in the office. This is the main principle of a green company or Green office. Having implemented a waste sorting system, purchased the necessary containers and concluded contracts for waste removal (for waste paper, recycling, etc.), it is necessary to conduct training on separate waste collection among the staff. After all, the issues of environmental pollution, waste sorting and their rational processing are directly related to the company's social responsibility.

Formation of green groups. Identification of "green team" ambassadors at the enterprise, i.e. informal groups of employees who voluntarily transfer knowledge on sustainable development to others. Such teams, for example, work at e-Bay, Intel or Yahoo.

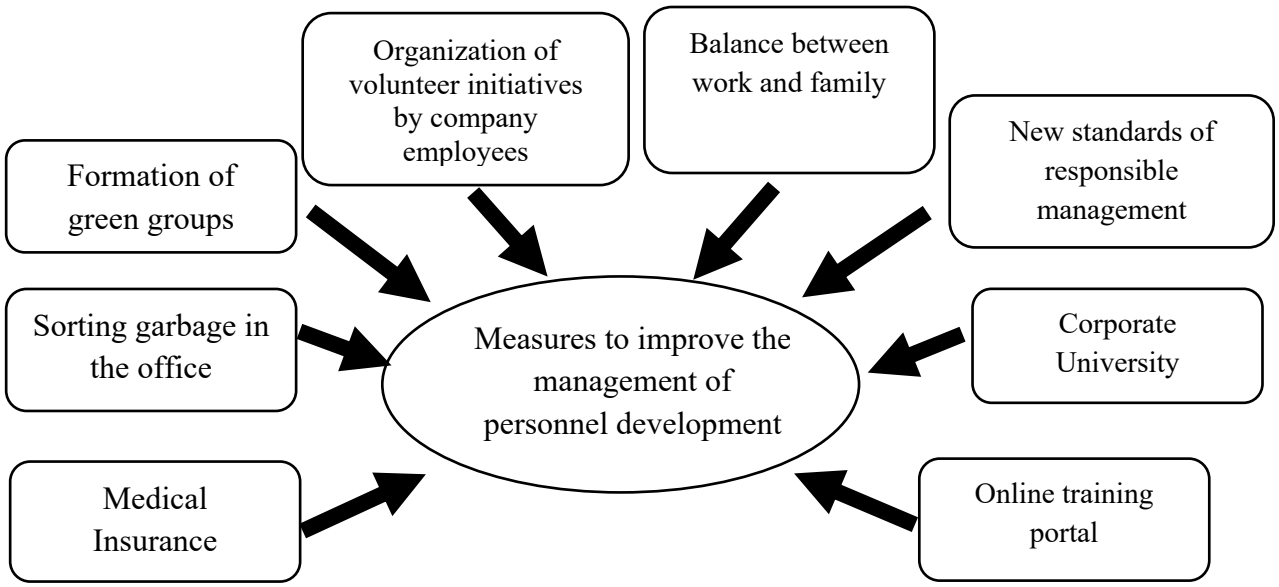

Figure 4. Components of socially oriented management of enterprise personnel development.

Formation of green groups. Identification of "green team" ambassadors at the enterprise, i.e. informal groups of employees who voluntarily transfer knowledge on sustainable development to others. Such teams, for example, work at e-Bay, Intel or Yahoo. "Green Teams" are gaining popularity as an effective tool for

raising employee awareness and demonstrating their commitment to the company. Another dynamic trend is the involvement of employees in sustainability activities outside the workplace.

Organization of volunteer activities of company employees. Against the background of the events in our country, Ukrainians are uniting and actively trying to improve the environment, the territory they live in, help the army, and improve their country. Therefore, it would be expedient for enterprises to introduce traditions of implementing volunteer initiatives of employees, which not only benefit the environment, but also unite the team.

Giving activists one working day per month to participate in volunteer activities such as cleaning or repairing medical centers, collecting food, essential items for people with disabilities, bazaars, arranging playgrounds and surrounding institutional areas for those who need it most.

Proper nutrition of employees. Introduction of a series of trainings on managing one's own health, principles of healthy eating, etc.

Balance between work and family. Today, it is a new competitive advantage for companies and employees. Among them are the introduction of a flexible schedule, working from home, giving dad 2 weeks of leave after the birth of a child, etc. 50% of employees do not have time to spend with their families, so productivity and motivation fall, and the number of errors when completing tasks increases.

Economical use of paper. Since the use of paper is growing by 35% annually, companies today usually turn to electronic document management and reduce paper transactions. Today, there is an online service "In time" that allows you to exchange documents in electronic form. This will reduce paper and courier costs, save staff time, speed up business processes, etc. So, this will instill social responsibility among employees, and they, in turn, will buy tickets for concerts and movies, not by printing, but by showing them on their phones.

New standards of socially responsible management. Today, there are many international standards for regulating CSR. One of these are the social and ethical reporting standards of the AA1000 series, which are aimed at streamlining the company's social initiatives and increasing their effectiveness; SA 8000 ("Social protection") - a responsibility standard that establishes the norms of employer responsibility in the field of decent working conditions: the emphasis is on human rights and health, sets requirements for the social aspects of the personnel policy of manufacturers and suppliers ISO 26000: seeks to help organizations promote sustainable development, encouraging them not to limit themselves to compliance with the law, recognizing that this is a fundamental duty of any organization and an integral part of its social responsibility; ensuring mutual understanding in the field of social responsibility and complementing, not replacing, other tools and initiatives in the field of social responsibility.

A corporate university is a place for training and development of company employees. Certified coaches and trainers will work here to improve the company's management and leadership results, popularize corporate culture and values, nurture talent and become a platform for creating favorable conditions for development and innovation.

Online training portal. Nowadays, self-education through the Internet is becoming an increasingly popular phenomenon, so the task of the company is to create its own platform to provide each employee with the guidance and knowledge he needs in his professional activity, according to part of the personal development plan and the development of other competencies. For example, in accordance with the rules of social responsibility, it is necessary to constantly conduct trainings, webinars on the knowledge of ecology, sustainable development, and social responsibility on the platform. On the portal, it is necessary to promote the values and tasks of the enterprise, especially in terms of social responsibility. The portal can also include a system for submitting proposals, regarding the implementation of social responsibility of the enterprise, sharing one's own experience with colleagues.

An important factor of online education is its environmental friendliness, because it reduces the cost of electricity by more than 80%, saves the use of paper, textbooks, eliminates the costs of travel, equipment, etc. And above all, it increases the level of employee satisfaction with the company, which moves in step with technologies, allows them to be aware of new and relevant information.

The leading direction of the implementation of waste sorting at the enterprise is the development of social responsibility of each employee of the company. Banal installation of baskets will not bring any results, therefore, first of all, it is necessary to prescribe new values, convey the importance of the

project to employees. Conducting monthly trainings on the topic of educating a socially responsible employee, about the consequences of irresponsible activity and the importance of the employee in achieving company success thanks to his activity.

Using theoretical knowledge, the enterprise needs to apply it in practice. For example, the involvement of workers in the mass improvement of territories, their holding lectures in schools, kindergartens and universities.

That is, the success of personnel development will be manifested in the involvement of employees in any actions related to social responsibility, which will inspire employees to adopt an environmentally safe approach to work, habits, create a positive psychological climate in the team and increase loyalty to the organization.

Companies use different strategies: some encourage employees to reduce their negative impact on the environment and train them in this direction, others share knowledge about health and nutrition, inspire physical activity, etc. Encouraging employees to change their behavior outside the workplace will contribute to their health and development, as a manifestation of CSR, on the one hand, and as a tool to raise awareness of CSR and achieve its strategic goals, on the other.

In addition to the economic effect, the implementation of the principles of social responsibility, which plays a role at each stage of the company's operation, will provide the following advantages (Figure 5).

The strategy of socially responsible management of the development of the company's personnel, which will be aimed at raising environmental awareness among employees, will contribute to the growth of employee loyalty and reputation, will form the image of a green company, will reduce the impact on the environment, which in turn will ensure the development of environmental innovations, cooperation in international directions, economic efficiency and will increase state subsidies.

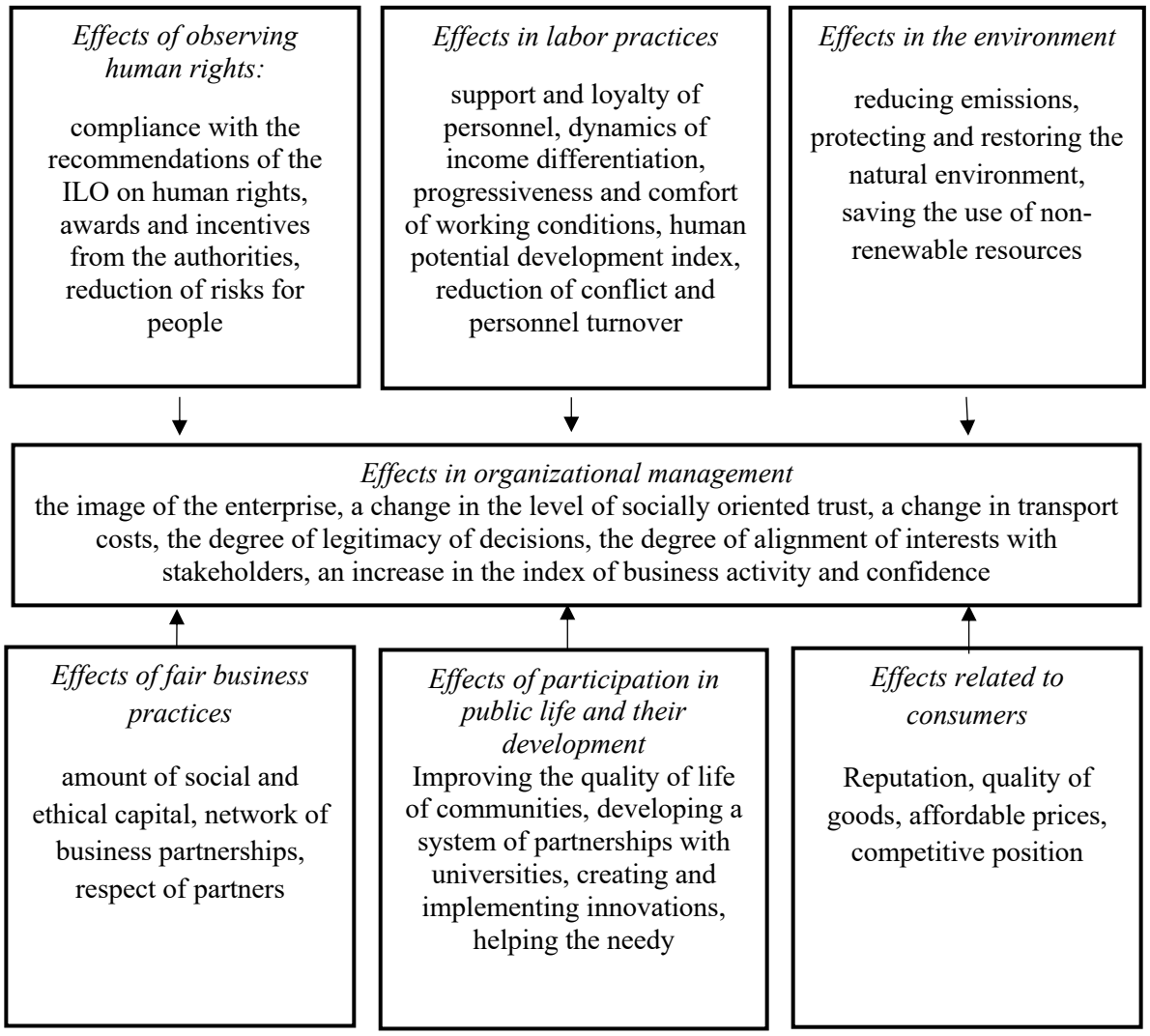

Figure 5. Effects of the introduction of social responsibility for the enterprise.

Summarizing, we can say that the development of socially responsible personnel is the primary task of an enterprise that wants to strengthen its position on the market and win the reputation of a responsible employer, and high loyalty of personnel will ensure the growth of the enterprise.

The basis for effective management of a modern organization in the long term becomes social business responsibility that affects the interests of all participants in the organization. Creation social values and long-term approach in the development of the company today is possible thanks to development and implementation of a social strategy responsibility of the enterprise.

It can be done in this way the conclusion that corporate social responsibility is becoming a strategic direction company'sactivities. CSR reporting in its comprehensive version should be considered as progressive form of strategic management and corporate culture' as the most important tool for capitalization and development of companies' business reputation, increasing efficiency operational activity. Adherence to standards and publication based on them of social report gives the company the following profits:

1. Strengthening the company's reputation.

2. Improving the quality of business management increasing labor productivity staff' reducing operating costs' increasing sales and growth customer loyalty.

3. Increasing the investment attractiveness of the enterprise financial growth performance indicators and the opening of free access to capital.

Enterprises that do not participate in corporate social responsibility miss an opportunity in business' lose competitive advantages and fall behind in management.

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THEORETICAL FOUNDATIONS OF MANAGEMENT OF INNOVATION PROCESSES IN AGRICULTURE IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT

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Keywords: innovations, innovation process, agriculture, enterprises, agricultural enterprises, sustainable development, technologies, agricultural technologies.

The state of the modern economy indicates the active implementation of innovations in the business processes of enterprises, the level of efficiency of which determines their success. Innovation activity is closely intertwined with the concept of "innovation process". On the one hand, the innovation process is the internal structure of innovation activity. On the other hand, the innovation process is a broader concept than the concept of innovation activity, since in its implementation innovation activity is the "red thread" and the process is achieved through this activity. Therefore, the study of the innovation process is given a special place when working on the conceptual apparatus in the field of innovation activity.

Sometimes scientists identify the concept of "innovation process" with the concept of "innovation cycle", "innovation lag" or "innovation phases". The only significant difference is usually in the number of stages identified by scientists who deal with this issue. Let us consider in more detail the definition of this definition in Table 1. Each author makes his own interpretation of this category, which is quite complex. The lack of unity of views and the presence of disagreements introduces significant contradictions in the interpretation of this concept and its understanding in society. Taking into account the above definitions, we can emphasize that we are most impressed by the definition given by Dorin Maier [3, p. 135]. It should be emphasized that having studied and analyzed the definitions of economists on the subject matter, we have proposed our own vision of this concept. In our opinion, the innovation process is a sequence of interrelated actions during which an innovation is transformed into a specific product, technology or service and is distributed among market participants.

In general, the innovation process is complex and multidimensional, and therefore requires a comprehensive approach based on both creativity and pragmatism. In the case of the creative approach, the birth of an idea is an impulse of the soul, while in the case of the pragmatic approach; the birth of an idea often grows out of the field of specific needs and very specific things.

In addition, the market plays an important role in the innovation process: with the creative approach, the creation of new products is driven by market needs, in which case it is passive, but with the pragmatic approach, new products are created in response to market needs and demands, in which case it is active. The synthesis of creative and pragmatic approaches should ensure maximum efficiency of the innovation process, but since this process is individual, the most rational option for implementing innovations should be chosen for each specific situation. The innovation process is cyclical and usually consists of several stages (Figure 1). This is one of the characteristic features of the innovation process. We believe that the innovation process begins with the search for new needs (existing or future). Only then does the search for innovations or the generation of ideas begin.

The innovation process in a business does not always cover all phases of the business. There are cases when a company uses third-party services. However, the final result still depends on the skilful management of this process, because in today's fierce competition and high speed of change, it is increasingly difficult for organisations to maintain their innovative, high-tech level alone, especially when it comes to digital business transformation. In this case, it is necessary to turn to competent experts, specialists in engineering and technological solutions, and possibly involve new participants to implement innovative ideas. This strategy of action is called co-invention, co-creation, collaboration, and is increasingly used in business.

Table 1. Definitions of the concept of "innovation process" by different authors.

Authors/source	Definition
Alexandra Ioanid, Denisa Iliescu [1, p. 2]	is a debut with a new plan or idea that will later be implemented with a new feature, and therefore differs from the process of simple creation, but becomes a dimension of business creation.
Borodina O. M., Uvarovskiy R. D. [2, p. 76]	takes place in any complex production and economic system, is a set of progressive, qualitatively new changes that continuously occur in time and space.
Dorin Maier [3, p. 135]	is the introduction of a production method or significant changes to specific machinery, equipment and/or software in order to reduce production and distribution costs, improve quality, produce or distribute new or improved products, increase efficiency or flexibility in production or supply activities, and reduce environmental risks.
Fabiana Matos da Silvaa, Edson Aparecida de Araujo Querido Oliveira, Marcela Barbosa de Moraes [4, p. 180]	is the dissemination of a project or new knowledge, which is a necessary procedure that all companies follow, especially to meet regulatory standards, but also through customer participation.
Miroslava Prváková [11, p. 160]	depends on the elements that characterise the 4th Industrial Revolution, such as digitisation, new technologies or flexibility.
Petrenko I. P., Yaroshenko S. S., Orel S.S. [13, p. 744]	is a set of successive, interconnected stages of innovation implementation from the inception of an idea to its commercialisation, which accompany the company's business activities and result in the creation of an innovative product.
Polozova T.V., Kryvtsun D.Y. [14, p. 111]	should be viewed as the process of transforming scientific knowledge into an innovation, its development and implementation, which is a set of successive stages of work from the origin of an idea and creation of an innovation to its development and production of the innovation itself. In other words, the innovation process is a system built in a certain way, within which innovation activities are carried out, and the result of the innovation process should be an innovation for practical use and dissemination.
Tate Mary, Bongiovanni Ivano, Kowalkiewicz Marek, Townson Peter [17, p. 191]	is a non-linear cycle of divergent and convergent activities that can repeat in unpredictable ways over time. It is a highly iterative process, and organisations may enter the process at different stages and return to previous points, but engaging in innovation follows a widely agreed life cycle

Source: compiled by the author according to [1, 2, 3, 4, 11, 13, 14, 17].

It should be noted that in order to manage innovation processes, it is necessary to identify the conditions that affect their effectiveness. One of these conditions is undoubtedly the successful implementation of all stages of the innovation process. In addition, it is necessary to ensure a clear connection between them, which requires the collection of operational and current information on the implementation of a particular phase of the innovation process. The quality of implementation of each stage of the innovation process depends on the ability to set a goal, on the correct choice of methods and means of achieving it, and on the professionalism of the direct performers.

The effectiveness of implementation directly affects the final result. However, in order to achieve the desired goal, there must also be a positive attitude towards the implementation of the innovation itself. The main task of the farm manager is to invent and create such conditions, because the effectiveness of the innovation depends on skilful management. Ultimately, the introduction of innovations in the production process should lead to a reduction in costs while achieving results. The effectiveness of an innovation depends on a number of conditions, which can be met by creating a new production process management system based on modern management

theory. Society develops through innovation. Therefore, this development requires adequate changes in the production sector. The transformations should include changes in the structure of the enterprise or farm, and, above all, should be focused on increasing profits.

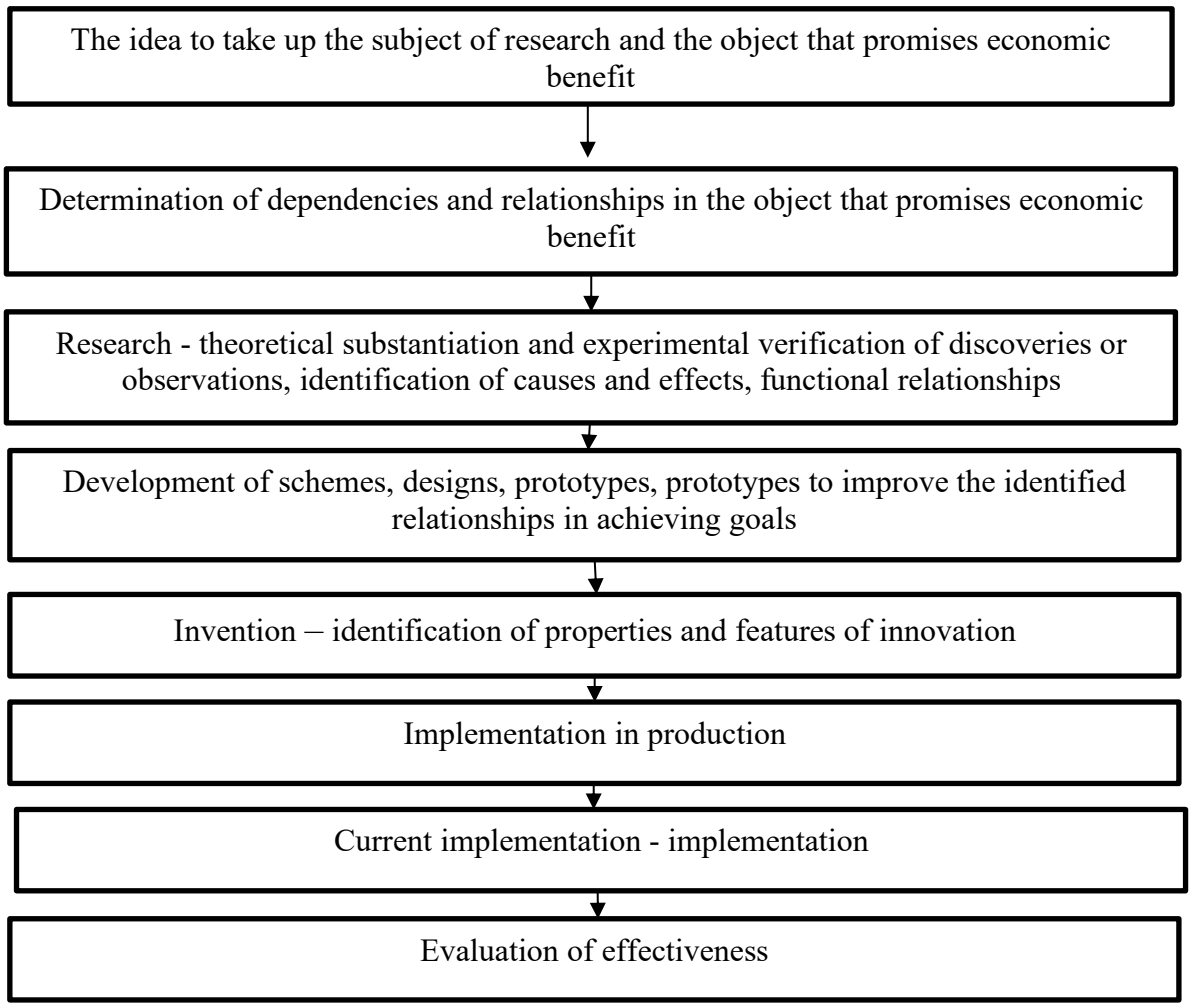

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Figure 1. Stages of the innovation process at the level of a business entity
Source: improved by the author on the basis of [5, p. 18].

We fully support the view that "an important factor in the innovation process is the computerisation of the innovation management system" [16, p. 16], and that "the most important factor at all stages of innovation management is the support and commitment of the company's manager. The company should regularly measure the results of innovations and communicate them to all employees" [16, p. 16].

An effective combination of internal and external incentives can become a particularly significant motivation for active innovation, which will increase the interest of business structures in implementing innovations. Therefore, identifying the real factors that can impede or facilitate innovation activity is an important area in the study of innovation processes (Table 2).

Table 2. Main factors influencing the implementation of the innovation process.

Group of factors	Factors hindering innovation activity	Factors that promote innovation
1	2	3
Financial and economic	Insufficient financing of scientific research, which leads to a significant limitation of innovation development opportunities; outdated methods of assessing the effectiveness of design solutions based on minimising one-time capital expenditures, which hinder the introduction of new materials and technologies; a shortage of specialists in the commercialisation of scientific and technical developments and management of intellectual property; underdevelopment of effective financial mechanisms for reducing innovation risks (venture capital financing, risk insurance, etc.).	Availability of a reserve of financial resources and provision with own financial resources; stable financial position of enterprises; availability of the necessary innovation infrastructure; state support for innovation programmes; attraction of venture capital to finance innovation projects; improvement of the system of sales of inventories; search for reserves to reduce costs of innovation activities
Production and technological	Weakness of the material and scientific and technical base, lack of reserve capacities; dominance of current production interests; lack of information on new technologies; irrational use of own production capacities; use of outdated equipment.	Availability of a reserve of material and technical resources, advanced technologies, necessary economic, scientific and technical infrastructure; replacement or repair of worn-out equipment; use of advanced equipment and production technology; growth of production capacities; growth of the level of technological processes; use of advanced methods of organising production, labour and management; improvement of working conditions.
Political	Political situation in the country, instability; politically determined low capacity of the Ukrainian market for many innovative products of the world community; lack of reliable and effective mechanisms of interaction between the state and the business sector of the regional economy; imperfection of the regulatory framework for innovation and innovation infrastructure; insufficient number of tax benefits and subsidies to stimulate innovation activity of enterprises in the region	Legislation and tax policy encouraging innovation; government creating favourable economic conditions for investment in innovation; state and regional innovation policy; government support for innovation programmes; tax breaks and subsidies to stimulate innovation
Legal	Restrictions in antitrust, tax, depreciation, patent and licensing legislation.	Legislative measures (especially incentives) that encourage innovation, state support for innovation.

Table 2. Continuation.

1	2	3
Environmental	Environmental barrier based on psychology and theories about global environmental change; restrictions on the use of new technologies and research due to attacks by anti-globalisation and green activists.	Use of different types of eco-innovation.
Social, psychological, cultural	Resistance to change, which can lead to such consequences as a change in the status of employees, the need to find a new job, the reorganisation of a new job, the reorganisation of established ways of doing things, the violation of behavioural patterns and established traditions, fear of uncertainty, and fear of punishment for failure.	Moral encouragement of participants in the innovation process, public recognition, provision of opportunities for self-realisation, and liberation of creative labour. Normal psychological climate in the labour collective. Readiness to make an innovative breakthrough
Organisational and managerial	Established organisational structure, excessive centralisation, authoritarian management style, prevalence of vertical information flows, departmental isolation, complexity of inter-industry and inter-organisational interactions, and rigidity in planning, market orientation, and focus on short-term profitability of participants.	Flexibility of organisational structure, democratic management style, prevalence of horizontal information flows, self-planning, assumption of adjustments, decentralisation, autonomy, formation of targeted working groups.

Source: modified by the author on the basis of [19, p. 78], [21, p. 192-193].

Overcoming the problems listed in the Table 2 will undoubtedly boost innovation, but digitalisation is a significant driver, as it acts as a tool for increasing the innovativeness of knowledge, as a tool for adapting and processing knowledge to be used as a resource for innovation, in other words, digitalisation acts as a "conduit" between a person and a material asset.

The state should take the lead in matters related to innovation, as all innovation processes are expensive and involve a fairly high percentage of risk. Not all entrepreneurs are ready for this, but it is almost certain that the situation will change under favourable innovation conditions. That is why the state should take on the role of a soft regulator and provide incentives through economic benefits.

Considering and taking into account all factors, individually or in combination, allows for a more complete development of an organisation's innovation strategy. Without continuous innovation and strategy revision, including changes in important factors, an organisation's effective operation in the modern competitive field will be constantly under the influence of various threats to economic security.

The peculiarities of the innovation process require the involvement of a large number of participants of various forms of ownership and types of activity, determines the specifics of its financing and the need to build complex and diverse communication flows and relationships. At the same time, these features create difficulties in the development and promotion of innovations and put barriers in the way of innovation.

We present the processes of formation of innovation utility by stages of the innovation process in Figure 2.

However, investment in innovation in our country remains low, although most companies understand the importance of developing this area for all enterprises. In order for Ukraine to move to an advanced innovative path of development, it is necessary to create conditions under which: any enterprise that develops new technologies could take out a cheap long-term loan; research teams that create new technologies could receive financial support for the implementation of their projects and the

introduction of the results obtained into production; scientists working in the main areas of the formation of a new technological mode and universities that train specialists in the relevant profile would receive the necessary funding to implement the new technologies.

Thus, systemic state policy measures are needed to influence the remaining scientific and technological potential, to timely restructure our economy on an advanced technological basis, to fully increase its competitiveness and to radically change the attitude of society towards innovation. Another important problem is the low demand for innovations, especially in agriculture, as it is more profitable for companies to buy off-the-shelf equipment abroad than to engage in their own innovation activities. Neither the private nor the public sector shows the necessary interest in implementing innovations, so production is falling due to the aging of technologies, processes and equipment. Thus, we get a stagnant economy due to the unwillingness of managers to engage in innovative activities.

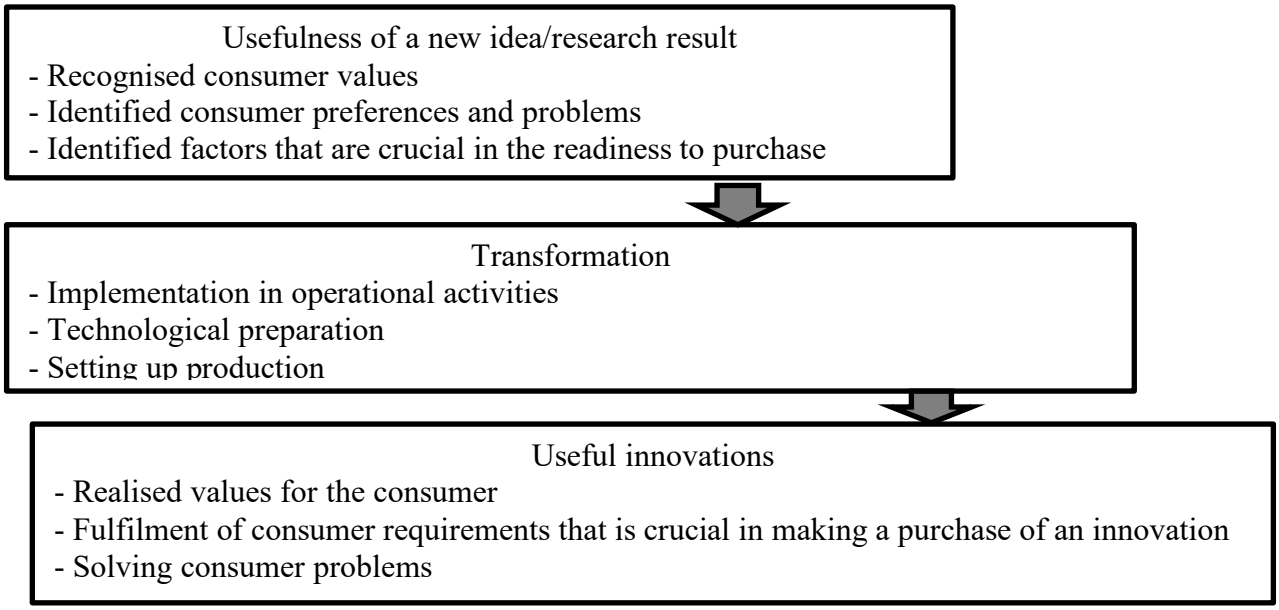

Figure 2. Processes of formation of innovation utility by stages of the innovation process.

Source: [10, p. 5].

Based on the above, it can be argued that innovations in society have a significant impact on the economy. The role of innovation in society cannot be overestimated. Innovations perform economic and social functions, cover all aspects of society, touch upon personal issues, bring positive effects and force society to change its way of life.

Agriculture is subject to the same economic processes and laws as other sectors of the economy. However, the agro-industrial complex has specific features that significantly affect not only the efficiency of its operations, but also the course of the production process itself.

The organisational and economic essence of innovation processes is related to the goals and objectives of their development, which consist in the constant organisational, economic, technical and technological renewal of agricultural production aimed at its improvement, taking into account the achievements of technology, science and international experience. The ultimate goal of these processes is to create an innovative agrarian economy, in which the achievements of science and best practices will be adopted on a proactive basis.

Innovative formations in agriculture have fundamental differences in the nature of financing and the economic basis of their operation. There are significant differences in the main purpose of such entities' activities – from a technical and technological idea to its scientific implementation, realisation (implementation) and provision of information and advisory services. There is also a significant difference in the scale of operation – from the international and national level to the level of a particular agricultural enterprise.

Innovation processes in the agro-industrial complex are characterised by a wide range of regional, sectoral, functional, technological and organisational features. The conditions and factors that influence the innovative development of the agro-industrial complex are divided into negative (hindering innovative development) and positive (contributing to the acceleration of innovative processes).

In a general sense, the innovation process is perceived as a set of successive actions taken to prepare and apply new technical, organisational, managerial, economic, marketing and other solutions. Thus, the innovation process is a chain of successive transformations of an idea into an innovation. It should be noted that innovation processes in agriculture are distinguished by a number of features and specific trends. The main feature of innovation processes in agriculture is the specificity of the organisation of agricultural production itself.

Innovations in Ukrainian agriculture can be divided into several groups. First, there are innovations related to the wear and tear or severe obsolescence of agricultural machinery. Although these investments may seem to lack an innovative component, this is not the case for a large part of the country's farms. Therefore, the introduction of machinery that is widely used in Western countries in our country can, in fact, be considered a "regional" innovation. Secondly, the introduction of elite plant varieties and highly productive breeds into production will be an innovation. Thirdly, innovation can be in the use of scientific developments to stimulate production, i.e. new fertilisers and additives in various areas of agriculture. Fourth, innovation can affect the management system of an enterprise – from new approaches to management to the introduction of electronic control and production management systems. Fifth, innovations may relate to the infrastructure of the agro-industrial complex, which is a macroeconomic decision that requires attention and support from the state. These may include measures to assess soil conditions and provide recommendations to farmers, advice on how to implement certain innovations in production, and information on various developments and opportunities. Or it could be programmes for the lease of high-performance agricultural machinery by small and medium-sized enterprises from the state. The gradual and balanced application of all these types of innovations in practice can have a positive effect on the agricultural sector.

One of the distinctive features of agriculture is that the leading resources for agricultural production are considered to be the nonman-made products of nature – plants, animals, territory, climate, weather. These resources develop according to biological laws.

The production process in agriculture involves the use of living organisms and depends mainly on their physiological characteristics. For example, failure to comply with the timing and duration of work (too early sowing, delayed harvesting, etc.) may result in the loss of some products and reduced profits. In addition, the length of the production cycle means that producers cannot respond quickly to changing market conditions.

Agriculture is characterised by seasonality of production, which is due to the mismatch between the period of work and the period of production. Seasonality significantly affects the use of resource potential, the organisation of the production process and the efficiency of the industry.

Significant is dependence on weather conditions, which cannot be sufficiently smoothed out by either a high level of agricultural technology or advanced technologies. As a result, it is difficult to reliably predict the level of agricultural income. It should be noted that deteriorating weather conditions lead to lower crop yields, which in turn is reflected in lower production volumes, higher production costs, and loss of profit by agricultural enterprises.

The level of adoption of advanced technologies in agriculture remains low. There is also a lag in infrastructure development.

Another factor affecting efficiency in agriculture is the low quality and insufficient quantity of inputs, including seed and fertilisers, which make yields more dependent on weather conditions. Production losses are also caused by defects and physical and moral obsolescence of machinery. The high cost and lack of financial capacity prevent farms from modernising their machinery and tractor fleet and reducing the impact of this factor.

Therefore, since the natural process of reproduction of plants and animals is a substantial and determining factor in the reproduction of human life, there is a need to adjust (adapt) all organisational, managerial, socio-economic, technical and production, innovation, and market processes in this sector

of the economy to the needs and patterns. When managing innovations, it is necessary to take into account not only financial laws, but also the laws of nature.

However, it should be emphasised that breeding cannot make up for the lack of fertilisers, varieties cannot fill the gaps in agricultural technology, and breeding cannot replace feed. In addition, unlike other industries, the production process in agriculture is not prone to shortening the timeframe. Different types of agricultural products have different production periods. Effective innovation can mitigate the impact of natural and climatic factors, but only to a certain extent. Therefore, when developing innovative solutions, their interconnection with biological processes should be taken into account. Thus, natural factors have a significant impact on the innovation activities of agricultural enterprises. The innovation activity of an individual agricultural enterprise is also influenced by the technological level of the agricultural sector (the speed of technological change in the sector, access to existing innovative developments, the interconnection of enterprises in the exchange of technologies, etc.) Very often, the interaction of enterprises with scientific institutions is not elaborated.

In addition to sectoral factors, innovation activity in agriculture is also influenced by the innovation potential of the region. Thus, the ability of enterprises to carry out innovative activities is influenced by the state of the regional system of training scientific and engineering personnel, the system of attracting investments to the region, regional support for innovative projects, the investment climate of the region, the development of the system of interaction between enterprises and scientific and educational institutions of the region, the presence of clusters of innovative development, agro-technological parks, and the demographic situation. The specifics of the agricultural sector also include the need for state support for the industry, which helps to overcome the unprofitability of agriculture and allows enterprises to operate in the face of losses caused by natural factors.

Thus, due to the special biological, natural, historical and socio-demographic nature of agriculture, innovation processes in the agro-industrial complex manifest themselves in a specific way, which determines the originality of approaches and methods of managing innovation processes, combining different types of innovations, and strengthening the role of the state in stimulating innovation.

The introduction of innovations into production processes is necessary both to ensure competitive advantages and to grow the national economy as a whole. The consistent development of science and technology has a significant impact on economic relations. The agro-industrial complex has a significant innovation potential, so timely implementation of innovations in this sector is a key to sustainable development.

Innovation activity in agriculture is not uniform. This is due to the different economic and financial situation of agricultural sectors and their different innovation potential. It follows that the process of innovation development is not linear and depends on various circumstances.

The low innovation level of the modern agro-industrial complex is due to a number of factors, a full analysis of which requires much more in-depth study, but even with a superficial look at the problem, there is no doubt that with the current level of funding for research in the agricultural sector, it is impossible to expect qualitative changes in the implementation of innovations in agricultural production.

Given that agricultural production in small-scale conditions have significant specifics that significantly affect all stages of the innovation process: from the production of R&D, transfer of innovation, its implementation and ending with the commercialisation of innovation and obtaining economic benefits.

Innovative processes in agriculture have a number of peculiarities due to the specifics of the industry (Figure 3).

In today's economy, innovations are found in almost all segments of agriculture. Science, knowledge-intensive technologies and active innovation activities allow for the vigorous implementation of scientific developments in practice and contribute to the growth of agricultural production. Therefore, the overall goal for the state, agricultural enterprises, and research organisations should be to create conditions under which all new technologies and developments are actively used in agricultural production and increase its competitiveness.

The following areas of innovative technologies are typical for agriculture:

- soil cultivation technologies;
- technologies for harvesting and preserving products;
- technologies for raising and keeping livestock;
- technologies for the production of agricultural machinery and equipment.
- technologies for soil drainage and irrigation.
- technologies for transporting and selling products.

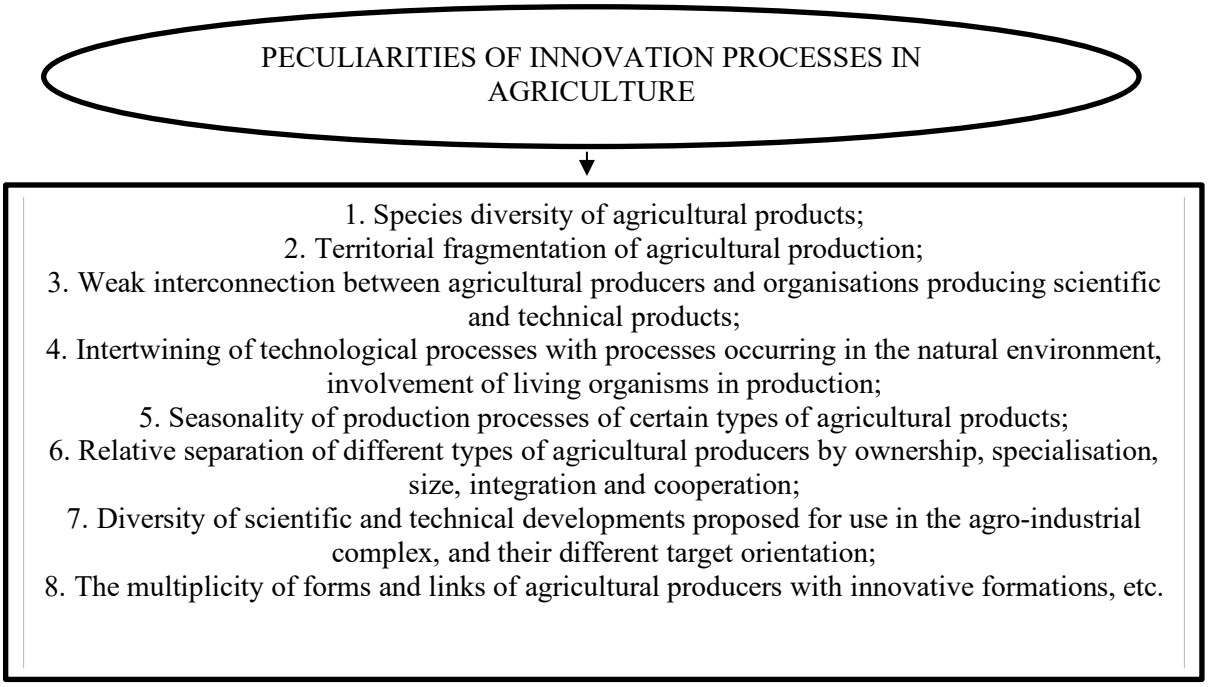

Figure 3. Features of innovation processes in agriculture.

Source: compiled by the author.

The specificity of the agricultural sector is that the development of innovative technologies in the industry is slower. The most common innovations that are actively implemented in practice in developed countries are presented in Table 3.

Table 3. Agricultural technologies.

Parameters	Crop production	Animal husbandry
Possibilities of use	Precision surveillance systems; global navigation satellite system; satellite technology; land cover maps; computer vision for planting analysis; automatic irrigation systems.	Machine vision for livestock accounting; facial recognition systems for livestock; animal rationing; veterinary services; optimisation of the agricultural machinery fleet.
Problems of application	Significant investment needs; requires a large amount of research and development; requires highly skilled personnel.	High cost of updating and modernising products; need to import modern technological means of keeping, feeding and caring for animals.

Source: compiled by the author.

The use of modern information and digital technologies facilitates operational monitoring of production processes in agriculture. This allows technologies to be adapted to the needs of the agricultural sector.

One of the most promising technologies being actively implemented in agriculture is a geographic information system (GIS) used to monitor the use of agricultural land, as the long-term use of extensive farming methods on agricultural land has led to a catastrophic decline in soil fertility, and therefore digital mapping products are increasingly being used by young and rapidly developing farms.

Geoinformation technologies are used to create thematic maps on the farm's territory, such as a map of soils (soil differences), agrochemical maps based on the results of agrochemical surveys of land plots. Using sets of thematic maps created for a given region, such as a series of agroclimatic, climatic, phenological, phytophenological, biological conditions, a wide range of analytical actions are carried out to create a number of synthetic maps designed to solve the tasks of the agricultural producer: general assessment of agroclimatic conditions of the territory, determination of the possibility of growing crops, structure of sown areas, pre-sowing soil treatment, sowing and sowing rates, doses of mineral and organic fertilisers.

Geographic information systems allow you to create convenient and flexible databases that store both spatial and semantic information and allow you to monitor crops and farming results, which allows you to make more accurate forecasts in the future. But GIS does not limit the range of its functionalities to this point. Suppose that the technology for growing and producing agricultural products is established and operates under the farmer's control, but there is a problem with processing, storage and marketing of products, and here GIS comes to the rescue. The same applies to firms that supply mineral fertilisers, pesticides, agricultural machinery, spare parts, fuels and lubricants, and other goods and services required for farming.

It should be noted that in rural areas, the level of computer users is still incomparably lower than in cities, but the introduction of geographic information technologies, even at the district level by farmers' associations or individual firms, is already yielding positive results in the use of GIS in agribusiness. Having briefly reviewed the main tasks that GIS can solve in agriculture, it should be noted that this is only a small part of the possibilities of this technology, which, due to its very flexible structure, strong mathematical platform and powerful analytical capabilities, will find many more applications in this very important time.

The agricultural market offers both foreign and Ukrainian developments. For crop production, digital products can be categorised into several areas (Table 4).

Table 4. Digital technologies for agricultural production.

The direction of using IT technologies	IT technologies proposed for use
1	2
GIS technologies and electronic field mapping with applications for portable gadgets	Farm Works Site (Pro), SST Summit, SMS Desktop Software (Advanced and Basic), JD Reports MAP, Agrarian Office, Agro-Net NG, FarmView Record Keeper, Farm Truck Mate, SST Stratus and others.
GPS systems for parallel driving	Outback, Raven, Trimble, GreenStar, TeeJet, Leica.
Field measurement and soil sampling	Agronaut (can be used for parallel driving of equipment) Farm Works Mobile, SST Stratus, SMS Mobile, AGRO-GPS Mobilbox, etc.; AgroUrban, Site, Farm Works Site Pro, SSToolbox, LandView Mapper, etc;
Universal mapping applications	Map-2011, MapInfo ArcView

Table 4. Continuation.

1	2
Agricultural production management. Accounting software	Accounting support: 1C: Enterprise 8 (Management of an agricultural enterprise, Accounting of an agricultural enterprise, etc.) Economic software: Planning in crop and livestock production, Budget planning of agricultural enterprises, software tool "Feasibility studies in crop production" (TEO-Agro), Farm Funds, Panorama-Agro, AgroHolding IAS and software "AT Agrar-Office" of the German company Land-Data Eurosoft, etc.
UAVs in agriculture	DroneUA PD1900, ITEC SKIF NDVI, Katana-Agro (Matrix UAV), DroneePLANE (Dronee), Leleka-100 (DeViRo), Flying Tractor (IT KIT), UAS6-50 (Aeroservice), AeroDrone (DR-60), etc. Unmanned Aerial System (Kray Technologies) and 3 models of UAVs of the Flirt series: Arrow, Cetus and Iron. MegaDrone has created the SkyHunter MD-1 drone, and also has two hexacopter models in its portfolio – MD-Smart and MD-Lite, as well as the VTOL Hawk aircraft.

Source: compiled by the author.

The use of robots and autonomous vehicles can reduce labour costs and increase the efficiency of agricultural production.

It is also worth considering the role of space technologies in agriculture, which are satellite navigation systems that allow controlling a large area, preventing or minimising losses from adverse weather events.

Innovations in agriculture result in the following: increased yields, financial cost savings due to the optimal use of seeds and fertilisers; improved agrochemical properties of the soil, and much more. Innovative technologies have been successfully used abroad for several decades, and in recent years, domestic agricultural producers have begun to adopt them.

However, the innovative development of domestic agriculture faces a number of challenges, including:

- low level of technological modernisation of agriculture and the existence of imbalances in it;
- low effective demand of domestic producers for innovative products;
- weak mechanism of research and development activities and lack of incentives for agricultural producers to adopt innovations;
- orientation of leading agricultural enterprises to purchase scientific and technical solutions and technologies abroad;
- lack of a well-developed concept of development and stimulation of innovation in the agro-industrial complex;
- underdeveloped domestic infrastructure;
- implementation of innovations is of a spotty nature and is aimed at modernising the material and technical base, which does not contribute to increasing the efficiency of agricultural production in general.

The following areas should be prioritised for the development of innovation processes in the agricultural sector:

- re-equipment of agricultural organisations;
- development of organic production;
- development of information and infrastructure support for innovation in the agro-industrial complex;
- development of innovation policy and strategy at both the federal and regional levels to promote advanced technological modes;

- restoration of soil fertility, prevention of all types of soil degradation, development of adaptive technologies for agroecosystems and agrolandscapes, etc.

However, a number of problems impede the pace of agricultural development and innovation, which will be discussed in more detail. Thus, the main problems that impede the effective development of the agricultural sector include:

1) limited domestic demand;

2) relatively low competitiveness of most agricultural products;

3) underutilisation of agricultural potential due to inefficient structure of the agricultural sector (uneven distribution of land resources between large agricultural producers and small agribusinesses; underutilisation of human potential);

4) lack of affordable lending for small and medium-sized agribusinesses;

5) high share of the shadow sector in the agricultural sector;

6) a decline in human resources due to the outflow of people from rural areas, especially highly skilled professionals;

7) low labour productivity in agriculture.

All of the above problems largely impede the introduction of innovations in agricultural production, but they need to be levelled so that they do not become a block to further development of the agricultural sector. The innovation process in the agricultural sector is characterised by a number of features (Figure 4).

The innovation process in the agricultural sector is characterised by a number of peculiarities. Any innovation in agriculture depends on the climatic conditions of the regions, and this applies to both the costs of the innovation process and the timing of its implementation, which makes investments in innovation projects in the agricultural sector more risky than in other sectors of the economy. However, the lengthy process of developing and implementing an innovation makes it possible to use the human resources of both research institutions and agricultural enterprises more efficiently.

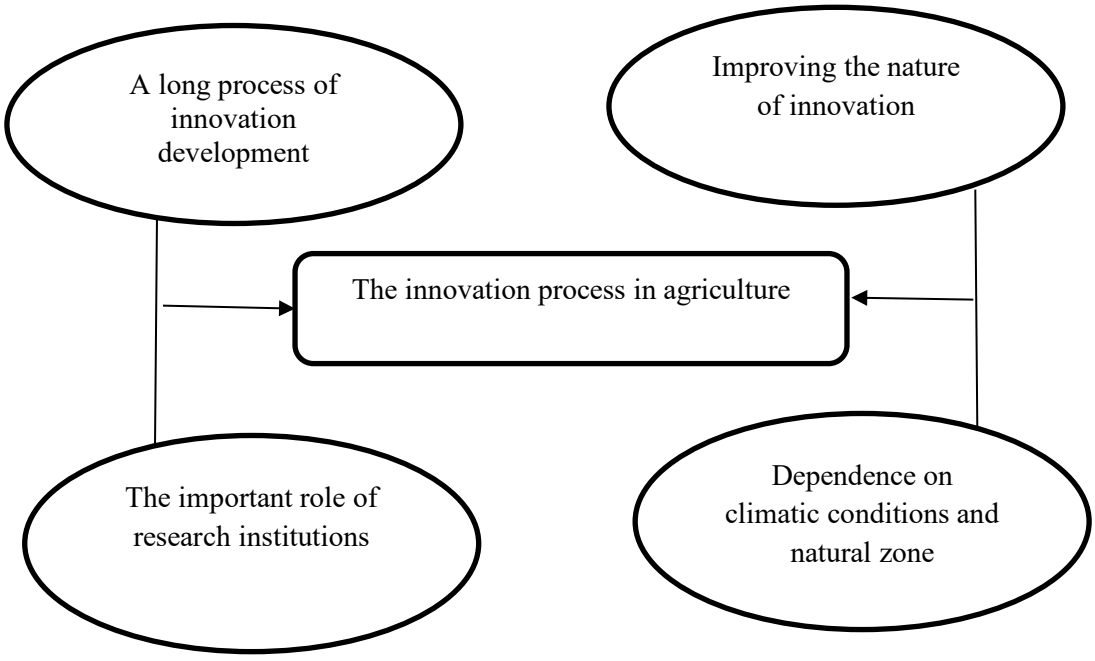

Figure 4. Specifics of the innovation process in agricultural production
Source: compiled by the author.

In the context of limited resources, scientific and technological progress and, in particular, innovation processes are priority areas for the development of the agro-industrial complex and increasing its efficiency, as they allow for continuous improvement, renewal and development of production based on the achievements of science, technology and engineering. The entire set of innovations in the agro-industrial complex can be grouped into 4 groups (Table 5).

Table 5. Classification of types of innovation in the agro-industrial complex.

Selection and genetic	Production and technological	Organisational and managerial	Economic and environmental
New varieties and hybrids of agricultural plants	Use of new equipment. Modern industrial technologies in livestock and crop production	Development of cooperation and formation of integrated structures in the agro-industrial complex	Formation of a system of personnel for scientific and technical support of the agro-industrial complex
New breeds, types of animals and poultry crosses	Science-based farming and livestock systems. New fertilisers and their systems. New plant protection products	New forms of maintenance and provision of resources for the agro-industrial complex	Improving working conditions, addressing health, education and cultural issues of rural workers
Development of plants and animals resistant to diseases, pests and adverse environmental factors	Biologisation and ecologisation of agriculture. New resource-saving technologies for food production and storage aimed at increasing the consumer value of food.	Marketing of innovations. Creation of innovation and advisory systems in the field of scientific, technical and innovation activities. Concepts and methods of decision-making. Forms and mechanisms of innovative development.	Improving the quality of the environment. Ensuring favourable environmental conditions for living, working and recreation.

Source: compiled by the author.

In today's fiercely competitive environment, economic growth and increased competitiveness of agricultural enterprises require the introduction of innovative processes into production. However, this process is hampered by the following problems: reduction of state support for the agro-industrial complex and funding of scientific and technical programmes; lack of innovation infrastructure and state innovation policy and strategy; low profitability of agricultural enterprises; lack of effective interaction between science and business; low level of training of personnel of agricultural organisations.

In general, there are currently three main areas of innovation in agricultural enterprises (Figure 5).

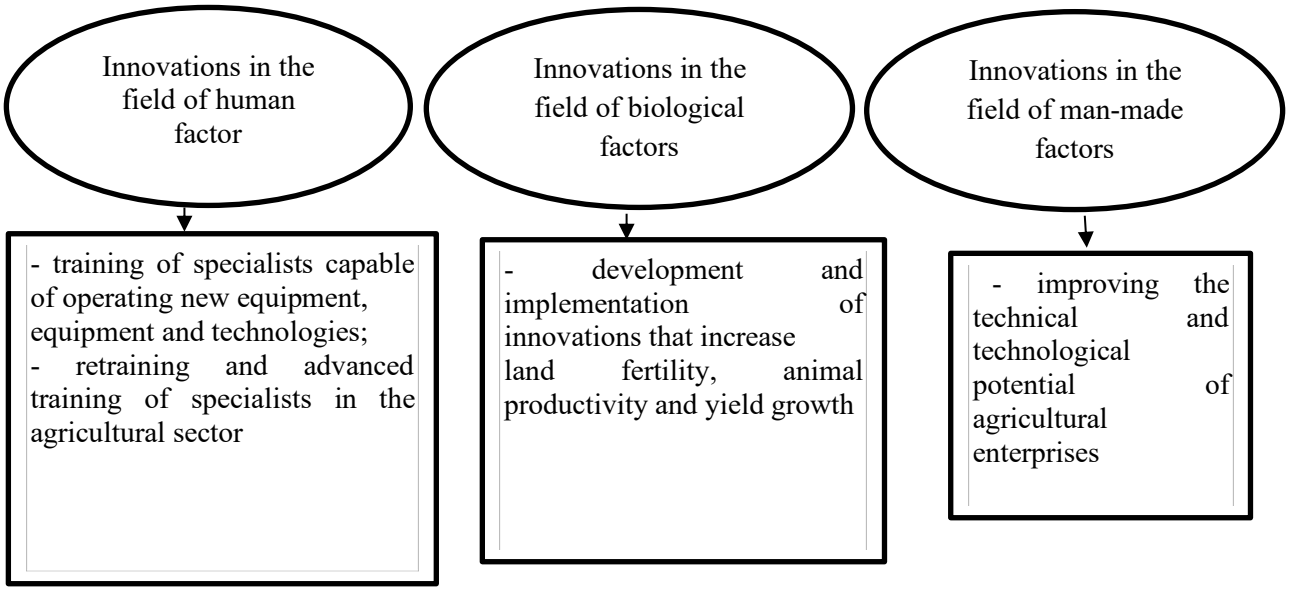

Figure 5. Areas of innovation in agriculture.

Source: compiled by the author.

In our opinion, the following innovations can be considered the most potentially effective today and can be implemented in various areas of agriculture in the short and medium term.

1) safe genetic engineering of seed material;
2) zero-runoff hydrosystem fisheries;
3) tray-condenser irrigation systems;
4) "sea" potatoes;
5) computerised cattle management;
6) bioinsecticides and pollinators;
7) cocoon-sleeve granaries;
8) precision seeding technologies;
9) smart greenhouses;
10) Craft Scanner sensors to control the depth of tillage;
11) aeroponic farms (growing plants without soil)
12) use of drones;
13) precision farming systems
14) use of cloud technologies;
15) digitalisation of accounting (collection, transmission, analysis and processing of data)
16) modernisation of machinery, etc.

Digital technological changes have a significant impact on the economic development of agricultural enterprises. The introduction of modern digital technologies into the practical activities of agricultural producers is the main driving force behind progress in the agricultural sector. A new model of economic growth of agricultural enterprises based on the information and digital type of development implies a change in the overall paradigm of production process management.

Digital technologies have a significant impact on the development of innovation processes in agriculture in general and crop production in particular. The introduction of modern digital tools into the production activities of farmers is a driving force for progress in the agricultural sector. The priorities of the digital component of innovative development are the intellectualisation of all areas of activity, environmental friendliness, use of modern technologies, digital assistants, upgrading the technical and technological base, etc. The established digital environment will help to improve the efficiency of agricultural production, namely: reducing the cost of purchasing seed, fertilisers and fuels, fully adapting the equipment used to natural and climatic conditions through the use of advanced technologies, as well as the qualitative development of the management decision-making system.

In general, new technologies open up opportunities for their non-standard application. For example, unmanned aerial vehicles have appeared on the market and have been used as a new entertainment. Let's consider the possibilities of using unmanned aerial vehicles in the agricultural sector.

The use of drones in agriculture saves time on some types of work and increases the efficiency of certain processes:

1) Helping farmers collect data on the condition of crops. Even in cloudy weather, drones take pictures of fields and provide more accurate data than satellites. This is reflected in new crop patterns, yields and, consequently, profitability;

2) Checking soil conditions for nitrogen and other substances, as well as creating three-dimensional soil analysis maps. The map can be conveniently used as a planting scheme;

3) Planting seeds. Unmanned aerial vehicles are equipped with special devices for planting seeds. The aircraft hovers above the ground and shoots a seed capsule into the soil;

4) Watering and fertilising the soil. The aircraft scan the area, descend to the required height above the ground and gradually spray fertiliser. The drones are programmed to detect dry areas of land, which they then water. Since the drone can lift a weight of just over 200 kg, watering is only carried out on a spot basis. With this understanding, it is possible to fix a crop problem before it becomes more serious. The drone can see the weeds in the field down to the bush and distinguish their types.

Then the data on their total number is entered into the database, and subsequently into the tractor's "brain". The sprayer applies the chemicals in a single spot. The consumption of expensive drugs and even fertilisers is reduced by 5-35%.

5) Notification of the appearance of bacteria. Multispectral cameras are mounted on the equipment, with the help of which the drone creates maps.

6) Counting livestock. Flying is overhead, the drone counts and inventories livestock. Each animal has its own thermal signature, which can be captured and taken into account by a thermal camera. This thermal sensor can identify livestock with abnormal body temperature, which is a strong indicator of disease or ill health. In addition to counting, the drone can also conduct regular inspections of the pasture fence to detect damage. For example, if a fence is broken, the drone will report it.

Although many practitioners are still very wary of the technology's potential for precision farming, the developers say that drones will soon be indispensable. And the point is not even that digital technology is now at every turn. From an economic point of view, drones can save a lot of money, despite the fact that the costs are high. Nevertheless, IT specialists promise to bring about a technological revolution in agriculture in the shortest possible time.

In the agricultural sector, unlike other sectors of the economy, the introduction and expansion of innovations and innovative technologies is slower, and this requires special attention and substantial support from the state. Market adoption of innovations is constrained by factors such as low solvency of farms; lack of long-term investment in innovative agricultural technologies; and lack of reliable and complete information on new scientific developments in agriculture.

Of course, it is the introduction of innovative processes in the agricultural sector and related industries that can ensure the competitiveness of the domestic agro-industrial complex. To do this, the following conditions must be met.

1. The entire production process must be built in accordance with the requirements, guidelines and regulatory parameters.

2. Technical and technological re-equipment of production along the entire chain of product promotion - from raw materials to sales of finished products.

3. Systematic updating of the range of final products, improvement of quality and consumer properties of finished food, taking into account changes in market demand.

4. Ensuring the availability of agricultural products and finished food at affordable prices to different categories of consumers.

5. Agricultural production of all forms, types and directions should have a clear and unchanging export orientation, taking into account all the most important criteria and indicators of marketing and competitiveness that are generally recognised in the world.

It should be noted that all stages of the innovation process in the agro-industrial complex should be supported in the development of innovation processes. This process includes interaction and simultaneous strengthening of technological, economic and socio-economic changes to achieve a synergistic effect. To implement an innovation development strategy, legal, economic and managerial parameters must be taken into account. Agribusinesses should work in close cooperation with scientific institutions; receive advisory information on possible changes in the concept of their production to a more promising and innovative one.

Despite all the above problems, the Ukrainian agricultural sector has a high potential for development and prospects for innovation. One of the key advantages of Ukraine's agricultural sector is access to the most important resources that support agricultural production.

Creating something new always starts with brainstorming. The company is always on a constant systematic search for innovations that can meet a specific need of society. At the same time, every business must have a well-developed management mechanism that ensures that every idea is thought through and implemented; otherwise the management will have to abandon it. This process is illustrated in Figure 6, which shows all the possible stages of an idea before it is fully transformed into an innovative project on a farm.

Ideas can come from a variety of sources. These include: consumers, wholesalers, suppliers, competitors, manufacturers, marketers, technologists, specialised innovation organisations, etc.

Sometimes competitors' activities can give rise to a new idea. New products on the market often become the starting point for finding a competitive innovation. It should be noted that sometimes innovations are copied. Sometimes an idea or development is plagiarised. This is dishonourable, but it is a real practice of market behaviour of agricultural enterprises. Another important problem is the low demand for innovations, especially in agriculture, because it is more profitable for enterprises to buy ready-made equipment abroad than to engage in their own innovation activities. Neither the private nor the public sector shows the necessary interest in implementing innovative processes, so production is falling due to the aging of technologies and equipment. This results in economic stagnation due to the unwillingness of managers to engage in innovative activities.

Innovative entities in agriculture are fundamentally different. They differ both in the form of financing and in the basis of their economic function. The differences are noteworthy. The purpose of such an entity ranges from a technical and technological idea to its scientific implementation, implementation and provision of information and advisory services. There is a big difference in the scale of activity - from international and national to the level of a particular agricultural enterprise.

Innovations in agriculture in Ukraine can be divided into several groups. First, there are innovations related to the wear and tear or severe obsolescence of agricultural machinery. Although these investments may seem to lack an innovative component, this is the situation in a large part of the country's agricultural enterprises.

Therefore, the introduction of machinery that is widely used in Western countries in our country can, in fact, be considered a "regional" innovation. Secondly, the introduction of elite plant varieties and highly productive breeds into production will be an innovation. Thirdly, innovation can be in the use of scientific developments to stimulate production, i.e. new fertilisers and additives in various areas of agriculture. Fourth, innovation can affect the management system of an enterprise – from new approaches to management to the introduction of electronic control and production management systems. Fifth, innovations may relate to the infrastructure of the agro-industrial complex, which is a macroeconomic decision that requires attention and support from the state. This may include measures to assess soil conditions and provide recommendations to farmers, advice on how to implement certain innovations in production, and information on various developments and opportunities. This could include programmes to lease high-performance agricultural machinery from the state. The gradual and balanced application of all these types of innovations in practice can have a positive effect in the agricultural sector.

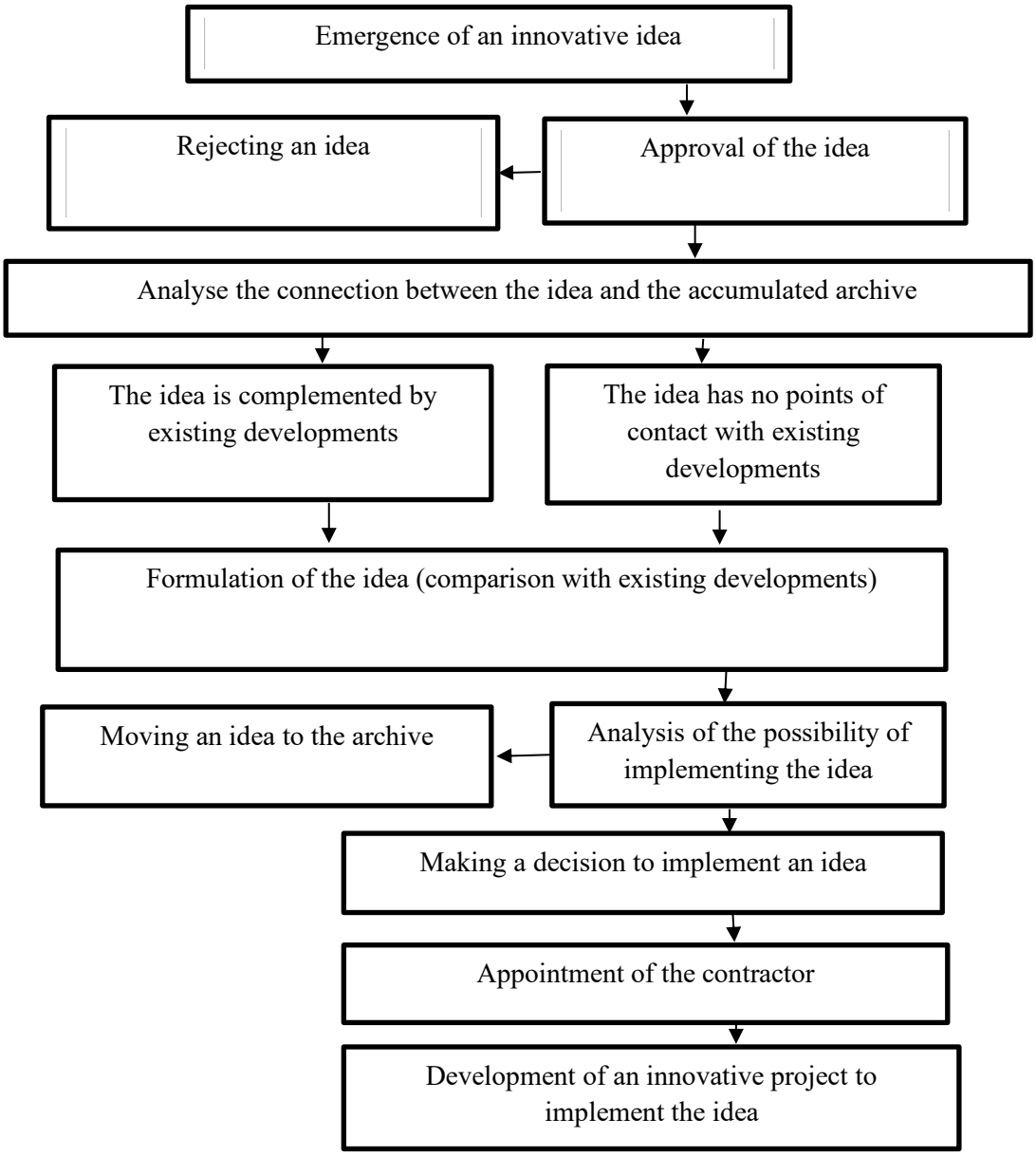

Figure 6. Schematic of the process of passing an innovative idea in a farm.

Source: compiled by the author.

Sometimes a company faces its own technical and technological problems and begins to solve them. Ideas arise, which then result in discoveries or inventions, and sometimes cause a real revolution in the industry. Following the emergence of ideas at the R&D stage, the most promising ones are selected. It is here that the foundation of a future innovation project is laid. The main task here is to ensure that the future innovation project is relevant and can be integrated into the overall development strategy of the agricultural enterprise. In addition, the idea must meet social, environmental, cultural and other standards.

The situation in the agricultural sector remains unfavourable, which also affects the state of the scientific and technological sphere. In today's globalised world, Ukraine's technological level of agricultural production is lagging behind the world's leading countries. "An analysis of five international rankings that assess the innovation of economies around the world shows that the effectiveness of Ukraine's innovation activities in 2019-2020 decreased by all indices. The reason for this unfavourable situation lie in the reduction in spending on research and development as a percentage of GDP, which

affected the quality of human capital" [15, p. 75]. It is not without reason that states pay great attention to supporting innovative business and is in many cases the initiator and engine of innovation processes.

B. V. Khakhula, having conducted a study, notes that "traditionally, new or improved technologies of agricultural production are in the first place among innovations. The second and third places are occupied by new varieties and hybrids of crops, as well as new crosses of poultry, lines and breeds of animals. Then – deep processing of products and introduction of new machinery, mechanisms and equipment" [7, p. 82]. Zapirchenko L. D., Ryabovolyk T. F. argues in their study that "agricultural enterprises transfer innovations into everyday work at a slow pace" [20, p. 82]. We cannot but agree with the opinion of these scientists, because in 2019, according to the results of the assessment of the Innovation Index of Ukrainian companies by Mind [9], only one agricultural enterprise overcame the barrier of 75 points and received the status of innovative. This is the Agroprosperis group of companies, which, according to the rating of the top 100 latifundists of Ukraine in 2022 presented on Latifundist.com, ranks 4th and cultivates 300 thousand hectares [18]. To compete with other companies, agriholding managers must effectively manage innovation processes. Managers are forced to make decisions that can affect the efficiency and productivity of their companies. Only one out of five large agricultural holdings has been granted the status of an innovative one. The others fall short of it. There is an axiom that in order to run a successful business, you need to introduce innovations into production and be able to manage the innovation process at the enterprise. We would like to emphasise that in a rather conservative agricultural market, the future of large agricultural holdings lies in creating processes for product preservation, logistics and supply for small farmers. When working on the land, they are more effective because they can respond to situations locally and are less dependent on bureaucratic processes. That is why some agriholdings work with farmers through a supply chain that provides the farmer with everything he needs: seeds, pesticides, fertilisers, loans, elevator services, railway wagon services and farmers' export contracts.

Two mistakes are commonly made in the process of selecting innovative ideas. Namely, you can either settle on a project that turns out to be ineffective or give up on a really promising idea. To minimise this risk, you need to consider as many ideas as possible. This way, the risk of failure is significantly reduced. It should be noted that in order to achieve the innovation objectives of an agricultural enterprise, a thorough non-functional analysis should be carried out during the selection of ideas, the results should be jointly verified and the idea should be evaluated. Two types of decisions are possible here: rejection of the idea or further consideration. After a brief formulation of the idea, the possibility of its implementation is analysed, and a decision is made either to move the idea to the archive or to implement it. An idea may be placed in the archive in the following cases: lack of financial resources and inability to borrow them, lack of fixed assets, significant shortage of personnel or low qualifications, high level of risk unacceptable for an agricultural enterprise, etc.

If a decision is made to implement the idea, an executor is appointed and an innovative project is developed. In our opinion, the most potentially effective innovations today are those that can be implemented in various areas of agriculture in the short and medium term, namely safe genetic engineering of seed material; zero-runoff hydrosystem fisheries; tray-condenser irrigation systems; "sea" potatoes; computerised management of cattle; bioinsecticides and pollinators; cocoon-sleeve grain storage; precision seeding technologies; "smart" greenhouses; Craft Scanner sensors to control the depth of tillage; aeroponic farms (growing plants without soil); use of drones; precision farming systems; use of cloud technologies; digitalisation of accounting (collection, transmission, analysis and processing of data); modernisation of machinery, etc. Digital technological changes have a significant impact on the economic development of agricultural enterprises.

It is worth noting that today there is already agricultural machinery with fuel level sensors, cruise control, autopilot, remote monitoring systems, autopilot systems and artificial vision technology. Digital IT companies and investors are making intensive financial investments in the agricultural sector. The level of adoption of advanced digital technologies in agricultural enterprises is still low. Over the past two decades, various companies have been introducing software for agricultural producers. There is a big gap between the technologies presented at conferences and symposia and what is actually implemented and used in the agricultural sector. The industry's transition to digitalisation of business

processes will take time: peasant farms that operate in the old-fashioned way are competitive due to cheap labour. In this regard, it is necessary to ensure an acceptable level of Internet and IT penetration in Ukrainian villages, as required for the integration of the agricultural sector in today's competitive environment. New innovative technologies are a challenge not only for agricultural producers, but also for Ukrainian start-ups that develop innovations. Jindra Peterkova, Katarzyna Černá, and Pawel Makurova conducted an interesting study on the implementation of innovations at Czech and Polish enterprises. They found that the implementation of innovations is significantly influenced by "management as the initiator of innovation in 56% of cases, rather than the owner" [6, p. 4]. The same trend is observed in Ukraine.

The introduction of modern digital technologies in the practical activities of agricultural producers is the main driver of progress in the agricultural sector, where, unlike other sectors of the economy, the introduction and dissemination of innovations and innovative technologies is slower, which requires special attention and significant state support. The introduction of innovations by agricultural enterprises (including farms) is limited by the following factors: low solvency, lack of long-term investments in innovative agricultural technologies, lack of reliable and comprehensive information about new scientific developments. Thus, under current conditions, only 4.8% of the total number of agricultural enterprises developed and implemented technological innovations, due to a reduction in investment programmes, including those for innovation, and the structural restructuring of agriculture. The state innovation policy in the agricultural sector is not properly implemented, and producers are forced to solve the issue of practical application of innovations on their own [12, p. 1900-1901].

The management process is most often positively promoted by making appropriate decisions to maximise the use of available innovation resources and to create an infrastructure to support innovation processes. Implementation of any innovative project, including the agro-industrial complex, requires the expenditure of certain resources, the cost and efficiency of which must be assessed. The project-based approach to investment activity in the agricultural sector is based on the principle of cash flow assessment. Its peculiarity is its predictive and long-term nature, which necessitates taking into account time and risk factors. The main thing is that the result of any innovative project is profit (income). All project participants should benefit from its implementation. Thus, by using and implementing innovative developments, farms will reduce costs, increase production and profits; conquer markets, which will contribute to the economic efficiency and development of the national economy [8, p. 48].

If we talk about sustainable development of agrarian enterprises, it can be ensured under the following conditions:

- limitation of economic growth, material production and consumption to the ability of ecological systems to recover;
- humanisation, introduction of a certain system of principled approaches to the issues of social activity, transformation of the social subsystem of enterprise management within the framework of human orientation, preservation of stability of social and cultural subsystems.

As for the significance of the concept of sustainable development, the study of the problems of sustainable development of agrarian enterprises will help to level the impact of challenges associated with the processes of globalisation and industrialisation of the industry, overcome its crisis state and ensure the growth of production efficiency and environmental protection. In modern conditions, sustainable development of the agrarian sector of the economy can take place only in conditions of proportional and harmonious development of interrelated components: economic, social and environmental. It is interesting to assess the trends of such interaction: as a result of recent changes in the economic and political sphere, the positive dynamics, which was previously inherent in the general integral indicator of sustainable development of the agricultural sector of the national economy, begins to level out, and the potential for sustainable development of the industry under study is only half realised. Restraining factors in the economic sphere are: reduction in the volume of investment and the number of economic entities in the sector, which resulted in a decrease in gross agricultural output; in the social sphere – a high level of unemployment among the rural population and the resulting low level of income and unfavourable social and living conditions; in the environmental sphere – insufficient financing of environmental programmes and reduction of measures to restore the productivity of

agricultural land; and in the environmental sphere – insufficient funding of environmental programmes and reduction of measures to restore the productivity of agricultural land. The assessment of the degree of balance between the three components that determine the sustainable development of the agricultural sector has revealed the insufficient development of the social component, which hinders the development of human capital, the most important factor of production in any sphere. Building up social assets of agrarian enterprises is closely connected with changes in the social subsystem of management. The social subsystem of enterprise management includes a set of its employees with professional training and certain practical experience. The efficiency and competitiveness of any subject depends to a large extent on the fixation, demographic composition of the personnel, its ability to adapt to changes in the process of realisation of the system's goals.

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OVERVIEW OF NEW TECHNOLOGIES, MANAGEMENT MECHANISMS AND BUSINESS MODELS IN THE ENERGY INDUSTRY CREATED WITH THE USE OF ARTIFICIAL INTELLIGENCE TECHNOLOGIES

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Abstract.
The world is increasingly captivated by digital technologies. They permeate every sphere of human life, and energy is no exception.

All its segments are subject to significant changes: management of power systems, response to events, data collection, consumption, generation of electricity by private and industrial sectors.

"Smart" meters are being used more and more actively to collect and process huge amounts of information. Thanks to the received data, accurate forecasts of generation, consumption and the need for maintenance are built, and new offers are prepared for customers.

Thanks to new approaches, companies and private consumers can significantly save on services and energy efficiency.

Key words: management, energy efficiency, innovation, energy industry, artificial intelligence.

Introduction.

The development of the latest energy technologies significantly affects the strategic priorities of energy development. Separate technologies, at the same time, lead to changes in the conditions and principles of functioning not only of individual energy systems, but also of socio-cultural aspects of energy consumption.

Automation of technological processes, development of smart networks (Smart-Grids), artificial intelligence (Artificial intelligence) and innovative digital business platforms will allow effective management of energy supply and consumption regimes. New technological solutions – a wide variety of generating capacities (for example, renewable energy sources or energy storage), energy-consuming installations (for example, household appliances, electric cars, etc.) will allow to balance the demand and supply of energy. Moreover, the use of artificial intelligence (AI) technologies becomes not only a way to reveal new opportunities in the organization of the energy supply process for consumers' needs, but also an effective tool for ensuring sustainable development and operational security of energy supply systems. On the other hand, the use of AI technologies, which contribute to the decentralization of the energy supply system and increase the flexibility of responding to the needs of consumers, significantly affects the functioning of existing centralized energy supply systems. This circumstance is a serious challenge and will require strategic decisions regarding the country's energy development priorities.

The large-scale armed aggression of the Russian Federation against Ukraine, which began on February 24, 2022, destroyed the planned process of gradual modernization of the country's energy assets. However, overcoming the consequences of an armed invasion can become a factor in the transformation of the country's entire energy sector. Ukraine, in the process of post-war recovery, should use the chance to rebuild the energy infrastructure immediately on the latest technological base, already adapted for the widespread use of AI.This publication offers an overview of the possibilities and ways of using AI in the energy sector, reveals new models for the organization of interaction between participants in energy markets and business models arising from the use of digital technologies. Examples are given of how new models of relations between energy producers and consumers transform

models of energy markets, creating new investment opportunities not only for energy companies, but also for third parties.

The study also analyzes the state of implementation of AI technologies in the practical activities of energy companies, and identifies obstacles to their widespread implementation. It is noted the need not only to develop and improve actual scientific knowledge and AI technologies, but also to create programs for training specialists in the field of AI for the needs of the energy industry and retraining the personnel of energy companies. A separate direction of ensuring the development of AI and its application should be the formation of reliable protection of information, both personal and commercial, that will be used by AI. Equally important is the task of overcoming society's lack of acceptance of new technologies.

Basic concepts.

Blockchain (Blockchain). In general, Blockchain is a decentralized (distributed) public (open) digital ledger that records any transaction of value: money, goods, property, work or votes. It is also an interconnected and ever-expanding list of records securely stored in a peer-to-peer network. Each member with access can view information simultaneously without a single point of failure, building trust in the system as a whole.

In the energy sector, blockchains are basic digital platforms that allow building automatic, decentralized accounting programs.

Thus, blockchain technology allows for the implementation of smart contracts (Smart Contracts, which are executed automatically according to the established algorithm), which can be used to fix the energy purchase and sale operations of many participants without an intermediary, for better management of energy systems and the integration of a greater share of RES.

Virtual Power Plant (VPP) is a cloud-based distributed power plant that combines the capacities of a network of decentralized, medium-sized power units, as well as flexible consumers and electricity storage systems in order to increase electricity production, as well as trade or sell electricity on the electricity market.

Such a system of decentralized generating capacities is only virtually connected and controlled by a single centralized control system. The components of the system can be electricity producers (for example, wind, biogas, solar, hydropower plants or thermal power plants), electricity consumers (prosumers), electricity storage (accumulators) or installations operating on the principle of "energy to X" conversion (for example, electricity-heat and electricity-gas).

Today's largest virtual power plants have already exceeded the combined capacity of the largest nuclear power plants.

Demand Side Management can be used in different ways. Most often, the service is sold in the form of a guarantee of "stability" of the consumption schedule, provided by large industrial companies, which compensate for the actual irregularity of the schedule by adjusting the equipment. Also, the demand management service is provided by energy suppliers through the use of mechanisms (price incentives) of wholesale markets and power markets applied to consumers, forcing them to change consumption volumes. Expanding the use of demand-side mechanisms can be achieved by encouraging new business models emerging from the use of digital technologies and setting standards for the controllability of smart equipment and appliances.

For example, the IEA estimates that digitalization could reduce global energy demand in the building sector by up to 10% by 2040 and could increase demand response capacity by more than tenfold. This function will be implemented by using the potential of smart equipment. By 2050, 11 billion smart devices (IoT) could be deployed, thus potentially becoming a response tool for consumer-side energy generation.

Peer-to-Peer trading (P2P) is an online trading model where consumers can trade electricity among themselves without intermediaries at an agreed price. It is a model where prosumer consumers can share their excess available/produced energy with other consumers within the decentralized network they belong to, further encouraging the consumption and deployment of distributed renewable generation.

Energy-as-a-service (EaaS) is a business model where customers pay for energy services without having to make any upfront capital investment. EaaS models typically take the form of subscribing to electrical devices owned by a service company or managing energy usage to provide a desired energy service.

Pay-as-you-go (PAYG) (Pay-as-you-go model) is a cloud-based energy payment model that charges based on resource usage, i.e. when only the resources actually needed are calculated. Such a model relieves customers in the markets of the burden of fully reimbursing the cost of investments in generating capacity in advance. Instead, ownership of the energy-generating equipment (for lighting or cooking) is transferred to the consumer over time, according to an agreed plan of periodic fixed payments.

The Internet of Things (IoT) (Smart Equipment) are smart devices that monitor, transmit and interpret information from the environment in real time. The Internet of Things (IoT) makes it possible to collect meaningful data and optimize the system, enables the creation of smart networks (Smart Grids) as it improves the visibility of energy systems that are becoming increasingly complex and decentralized and increase the speed of response to changes in the operating modes of devices connected to the network.

Smart Grids are electrical grids that use digital and other advanced technologies to monitor and manage the supply of electricity from all sources to meet the diverse needs of end-users of electricity. Smart grids coordinate the needs and capabilities of all electricity producers, grid operators, end-users and electricity market stakeholders to ensure that all parts of the system operate as efficiently as possible, minimizing network costs and environmental impact, maximizing system reliability, resilience and stability.

The world's energy companies have a strategic plan to become companies - leaders in the application of digital technologies and are directing significant resources to innovation, smart equipment and the deployment of smart electricity networks.

For example, Enel has launched Network Digital Twin, a digital platform that creates modern and accurate virtual copies of physical power supply networks and their components and system dynamics, enabling improved network operation and design, integration of distributed energy resources and workforce management. In 2020, the State Grid Corporation of China also announced plans to invest around US$3.5 billion in digital infrastructure. In 2021, it and the National Development and Reform Commission of China announced a pilot project to develop a green energy trading platform based on blockchain technology. Power grid equipment manufacturers such as Siemens, General Electric and Hitachi Energy have made digital technology the core of their business.

Distributed Energy Resources (DER) are small or medium-sized resources that can potentially provide services to the power system and are directly connected to the local distribution network or to end-user networks. DER includes distributed generation (RES), end-user energy storage (accumulators behind the meter) and load regulation services (consumption management), which is implemented by responding to the operating modes of smart equipment, household appliances, the use of electric vehicles with smart charging (EM), heating systems (heat pumps, electric boilers enabled by smart meters and data services) etc.

Dynamic line rating (DLR). Dynamic Transmission Line Rating (DLR) allows you to determine the actual (rather than predicted) carrying capacity of transmission lines, taking into account real weather conditions (ambient temperature, solar radiation, wind speed and direction, humidity, etc.) in combination with real-time line condition monitoring. DLR technology reduces congestion on transmission lines, optimizes asset utilization, increases efficiency and lowers costs. The network operator analyzes the DLR constantly in real time in order to minimize congestion in the network.

Net billing schemes are a pricing system, a way of charging and compensating consumers based on the actual market value of electricity that balances what they consume and what they feed into the grid.

Virtual power lines (VPLs) (Virtual transmission lines). VPLs provide large-scale integration of solar and wind energy without grid overload or redistribution, avoid the need for large investments in grid development due to the need to connect RES. VPLs consist of local utility energy storage systems connected to the grid at two key points: one on the supply side, storing excess generation from

renewable sources that could not be transferred due to grid congestion; the other on the demand side, charging when grid capacity allows and then discharging when needed.

Time-of-use tariffs (Multi-zone tariffs) are a system of time-varying tariffs (in Ukrainian terminology, zone tariffs) that stimulate load adjustment, whether manual or automatic. This allows customers to save on energy costs while benefiting the system.

Energy Storage (Energy accumulators, batteries) are technologies that can store excess energy in the network/producer at one point in time and return it to the network/consumer at another. Technologies help to level the system load schedule and create better conditions for RES integration into the system.

Today, large-capacity industrial stationary batteries are used by large utilities and distribution networks to balance energy supply and demand. By 2030, the capacity of small storage batteries is expected to increase significantly, complementing industrial systems.

Batteries (in the premises/on the customer's territory) are connected behind the meter of industrial or domestic consumers, primarily for the purpose of saving electricity bills.

As of the end of 2020, the total capacity of storage batteries installed in power grids was about 17 GW. In 2020, the number installations increased by 50% compared to the average year of 2019. In total, more than 5 GW of capacity was added, of which countries such as China and the US installed more than 1 GW each. The market continues to be dominated by installations installed in distribution networks.

Total investment in battery cells increased by almost 40% in 2020 to US$5.5 billion. Battery costs in grid (high-capacity) equipment increased by more than 60%, driving investment in renewable energy sources and the growing presence of digital electricity trading platforms, particularly energy storage auctions. However, investment in private (by the meter) batteries fell by 12%, as these assets tend to be financed by households and small and medium-sized companies, which have generally been more affected by the Covid-19 crisis. In Europe, there is a reverse trend, when the fall in the installation of storage devices in local networks was compensated by the installation of batteries in private premises. The leading market in Europe is now Germany, where the number of metered installations has almost doubled. A similar trend is observed in Japan, where the capacity of home battery systems has increased to 300 MW in 2020.

In July 2021, China announced plans to install more than 30 GW of energy storage by 2025 (not including pumped storage (SHP), which would provide a nearly tenfold increase in its installed capacity as of 2020. The IEA estimates that the total installed capacity of battery energy storage systems in in the world by 2030 will reach more than 500 GW.

We are standing on the threshold of decentralization of energy supply, when each village or even a separate district of the city will not depend on the general electric network, as it is now, but will have its own capacities.

These "energy islands" will be controlled by an internal system that will synchronize with the general network if necessary.

Every year, electricity consumption increases along with the unpredictability of loads. The emergence of a large number of electric vehicles, private and "green" generation, as well as the global growth in the use of various gadgets lead to the fact that it becomes more difficult for operators to predict consumption peaks.

This leads to destabilization of the network and significant costs for attracting shunting power and dispatching electricity. News about the creation of micro-networks on the basis of cottage towns is appearing more and more often.

This makes it possible to use the potential of "green" energy, electric energy accumulators and "smart" approaches in its use to the maximum. It is impossible to deny the positive impact of such systems on the cost of electricity and the stability of the power grid.

In the future, more and more communities will create their own micro-networks. Technologies of "smart" networks and high-speed data transmission play an important role in their development. A "smart" network allows you to use resources as efficiently as possible, to respond to events faster.

The "green" generation has not been a miracle for a long time. Windmills and solar panels can be seen not only in closed fields and large factories, but also in the yards of private homes and on the roofs of apartment buildings.

"Green" energy allows you to significantly save on electricity bills, and sometimes to completely refuse the services of suppliers.

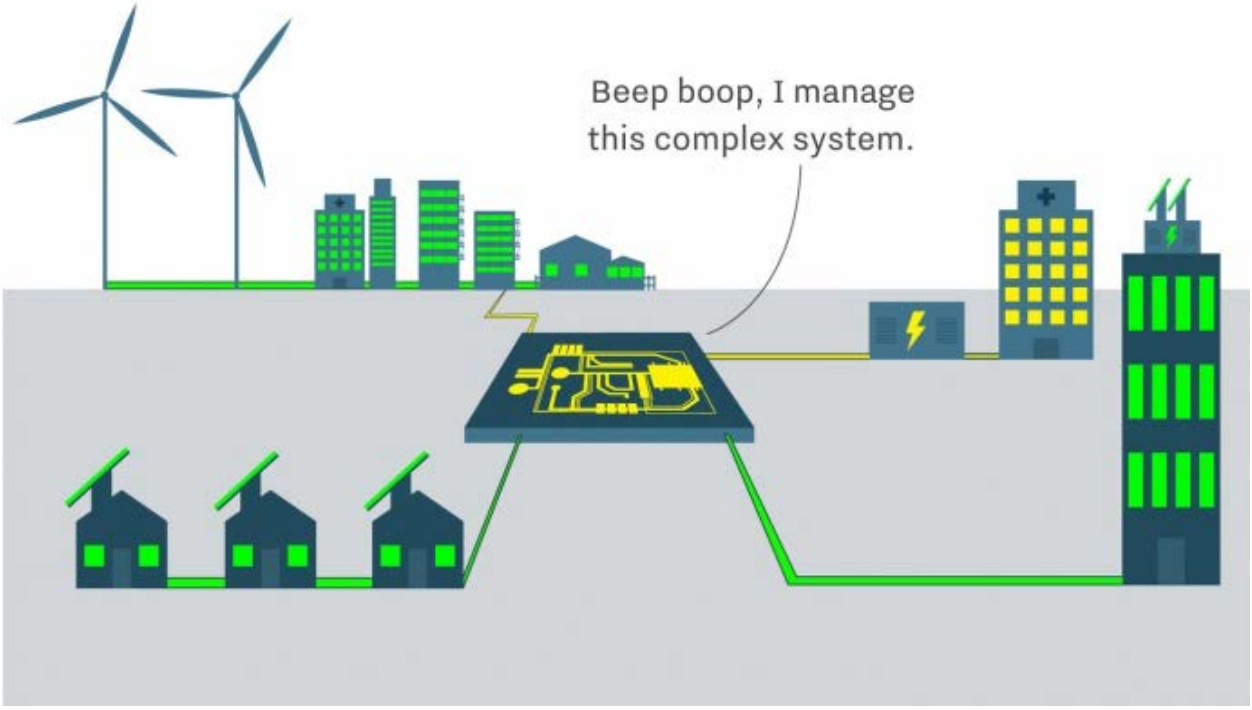

Figure 1. Energy microsystem work.

These are undeniable advantages for the private sector, but when it comes to global energy, where the "green" part wins an increasing share of generation, we face a number of large-scale problems.

Among them are excess energy in the hours of maximum efficiency and absence of a consumer, limitation of the transmission capacity of power lines, lack of generation in hours when productivity is low.

To solve these problems, solutions are being developed to optimize the generation, distribution and use of electricity within the network.

For example, the Luxoft company developed a POC (proof of concept) system for accurate management of microgrid resources with a small number of users (up to 10,000) and the ability to synchronize and work with external service providers.

Such a platform is built on the basis of "smart" meter and blockchain technologies. It allows not only to change the cost of electricity within a short time and depending on network capabilities, but also to keep safe and accurate records of all operations.

The introduction of 5G provides new opportunities in the transmission of data from the consumer to the system: faster response to events, a greater amount of useful information for building forecasting models of electricity production and consumption, operational tracking of thefts and losses.

Analysts believe that the introduction of 5G will also reduce the cost of data transmission with higher stability and quality.

This will make it possible to quickly develop "smart" microgrids and distributed generation, to create virtual electricity storages. They will allow to control a huge number of scattered energy generation installations.

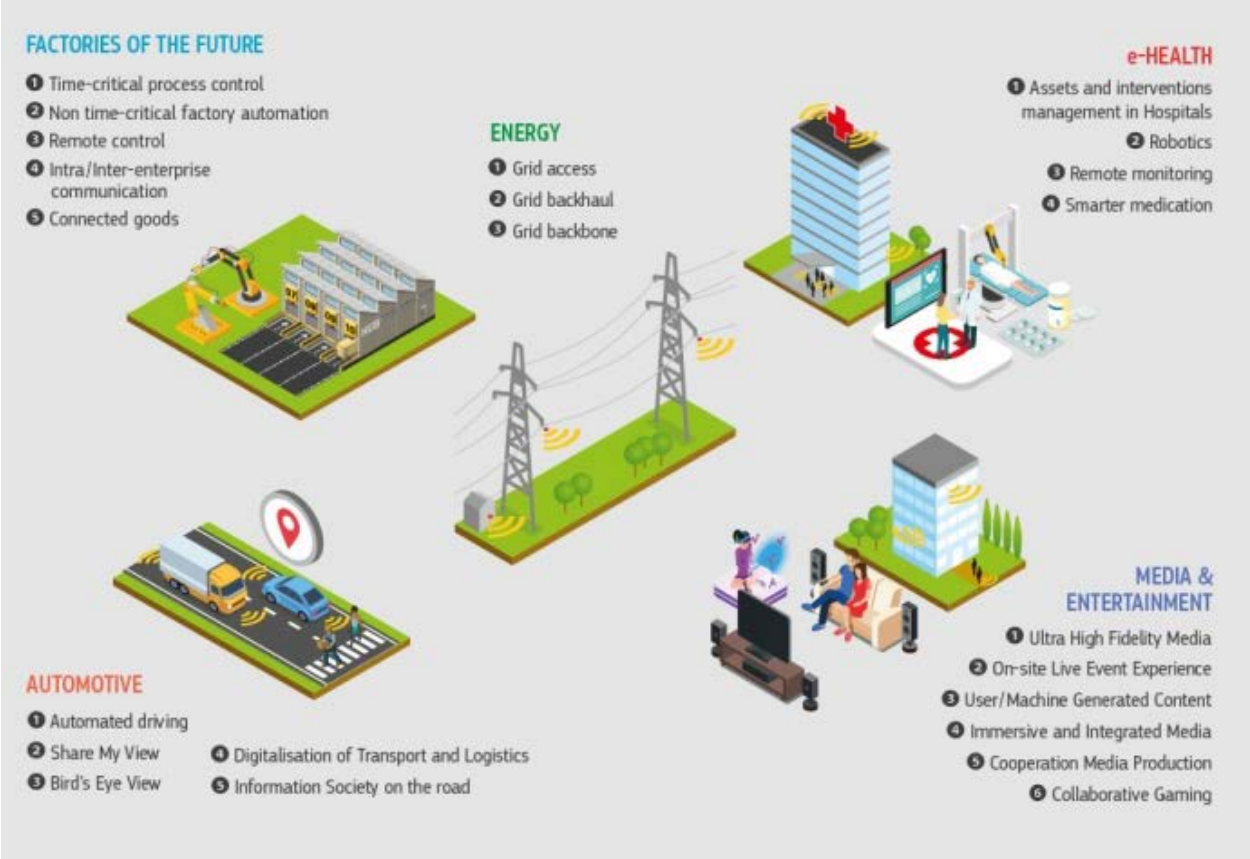

Figure 2. Areas that 5G brings to a new level. Energy is among them.

Source: 5GROWTH.EU.

In mid-November, the British edition of The Economist published a traditional puzzle cover with forecasts for the coming year. Among the top topics, as expected, the war in Ukraine, the elections in the USA and Russia, the conflict in the Middle East, artificial intelligence and much more remained.

Economists paid special attention to the "new energy geography of the world".

The key emphasis is on the transition to clean energy, which should redraw the energy map of the world and create new "green" superpowers. In them, lithium, copper and nickel will be much more important, while the role of oil and gas, as well as the regions that dominate their supply, will decrease.

This year, for the first time in three decades of various UN climate conferences, the world community called for the abandonment of fossil fuels in energy systems. And although the final decision of the last COP28 conference did not spell out a clear plan to abandon the use of coal, oil and gas, this event still became historic: before that, none of the COP documents mentioned it.

As the Bloomberg agency notes, in order to find a compromise that would satisfy the USA and the EU on the one hand, and Saudi Arabia on the other, the final text of the decision had to be changed at the last moment.

The shift away from fossil fuels to renewables has been named as one of several measures to reduce greenhouse gas emissions aimed at stopping global warming at 1.5 degrees Celsius compared to pre-industrial levels. Currently, fossil fuels account for about 80% of the world's electricity production.

The statement also set out plans to triple global renewable energy capacity by 2030 and step up efforts to reduce coal consumption.

Global coal-fired power generation will peak in 2023 as renewables continue to supplant it, according to the latest research from Rystad Energy. According to him, about 10,373 TWh of electricity will be produced this year by burning coal around the world. In 2024, this indicator will decrease to 10,332 TWh.

Coal has dominated the global energy sector for the past 30 years, but Rystad data shows that 2024 will mark the start of a decline in the use of this fuel, with the parallel rise in popularity of solar and wind generation.

It is expected that from next year, the supply of "green" electricity will outpace the overall growth in electricity demand, which will gradually lead to the displacement of coal.

The coal-fired power sector is the largest source of global pollution, accounting for about 40% of all emissions today. And this problem was only getting bigger.

Asia has added more than 40 GW of new coal capacity each year over the past five years and is expected to add another 52 GW next year. Most of the new capacity is in China, followed by India and Indonesia.

According to Rystad Energy's forecast, the increase in capacity in these countries will continue until 2027, albeit at a slower rate, after which the number of coal-fired power plants there will also begin to decline.

In parallel with the increase of coal generation in Asia in the next few years, the European Union will continue to systematically abandon this type of fuel.

In recent years, thanks to the reduction of production costs and ambitious plans for the "green" transition, global renewable energy has been growing by tens of percent every year. For example, EU countries installed a record 56 GW of solar power plant capacity in 2023, which is 40% more than last year.

In general, the European solar energy market has been growing by at least 40% for the third year in a row. According to SolarPower Europe, the record holder in 2023 was Germany, which installed 14.1 GW of new SPP capacity. It is followed by Spain with 8.2 GW, Italy with 4.8 GW, Poland with 4.6 GW and the Netherlands with 4.1 GW.

The constant decrease in the cost of producing solar modules leads to setting new records every year.

So, over the last year, the cost of production in China fell by 42% - to $0.15 per W. In India - up to $0.22, Europe - $0.3, and the USA - $0.4 per W.

Rystad forecasts that a total of about 300 GW of solar and 140 GW of wind capacity will be installed worldwide next year, more than half of which will be in Asia, where there is a more pressing need to begin displacing coal generation.

In terms of money, global capital investment in solar and wind capacity next year should exceed $600 billion.

In the coming decades, the world also plans to completely abandon fossil fuels, while at the same time increasing the capacity of renewable energy at a record pace.

The planned "green" transition requires a huge amount of metals used in the production of batteries for electric cars, charging stations, wind turbines, solar panels and energy storage (Energy Storage - EP). The most popular of them today are lithium, nickel, copper and cobalt.

Metals critical to clean technologies are scattered all over the world, but most of them are in China. Beijing today controls 60% of the world's lithium processing capacity and 80% of rare earth metals, produces 77% of batteries, 75% of solar panels and 60% of electric cars, which has made EU countries dependent on its supplies.

In order to achieve independence in "green" technologies, the EU countries set a goal by 2030 to extract 10% of critical raw materials, localize 40% of their processing, and also produce 40% of the attributes of the "green" economy: electric cars, solar panels, wind generators. To implement this plan, it will be necessary to win competition from the USA and China.

However, victory in this struggle promises considerable profits. According to the assessment of the consulting company Benchmark Mineral Intelligence, by 2035 profits from the sale of lithium-ion batteries alone will increase to 700 billion dollars.

But by that time, at least 730 billion dollars will have to be "poured" into factories, mines and other production lines in order to satisfy the demand not only for lithium, but also for other important metals - nickel, cobalt, copper, etc. "It's going to be a race to see who can develop the most advanced technology in the world," says Glen Merfeld, chief technical officer of Albemarle, the world's largest lithium company.

And the global oil giants have already joined this struggle. American ExxonMobil recently announced plans to become the leading supplier of lithium for electric vehicles by 2030.

The Great War in Ukraine, the energy crisis provoked by the actions of the Russians, and a significant increase in prices forced countries that do not have sufficient gas and coal production to look for an island of stability. And they found it in atomic energy.

A great example is Japan. After the accident at the Fukushima-1 nuclear power plant, the authorities closed most of the nuclear reactors and reduced the share of nuclear power plants in the production of electricity from 30% to 4%. The energy system was rebuilt for natural gas and coal, which were bought on the world market.

As a result, the country suffers from rising energy prices and is forced to make compromises with the terrorist state, buying Russian liquefied gas. And in the event of a military conflict in the region, the country's entire energy sector will be at risk due to the vulnerability of the ports.

All this pushed the authorities to revive atomic energy in Japan. About 20 reactors are being prepared for restart. According to the plan, in 2030, nuclear power plants will produce 20-22% of the country's electricity.

Turkey found itself in a similar situation. The country is trying to mitigate its dependence on gas and coal by implementing large nuclear projects with the Russians and Chinese.

China is constantly growing and needs more energy, but produces 60% of its electricity from coal. The authorities plan to abandon this energy carrier by 2060. To replace coal-fired power plants, the country plans to build six to eight new nuclear reactors per year. Together, China and India are currently building 29 of the 57 new reactors being built around the world.

A few years ago, the United States took a course to extend the service life of its nuclear power plants, as well as the development of small modular reactor technologies. They are expected to be cheaper, easier to build and more commercially attractive. Billions of dollars in government subsidies will be spent on their construction and testing in the US.

After heated discussions, the nuclear "break" happened in the European Union as well. A group of countries, led by France, achieved the inclusion of nuclear energy in the list of environmentally friendly, which improved the industry's access to financing from investors and governments. The "break" was facilitated by the gas war with Russia and the bloc's desire to be the first to achieve "carbon neutrality".

Of the major countries in opposition to nuclear power, only Germany is standing, which closed its last nuclear power plant this year under the pressure of the "greens". However, there is no complete political consensus on this decision. There are already calls not to dismantle the German reactors, but only to preserve them.

In general, it can be said that the whole world finally believed in nuclear energy, so its share will grow every year. According to the forecast of the World Nuclear Association, in the next 17 years, the production of nuclear energy in the world will increase by 75%.

Complex management systems that monitor and manage production are a specific case of practical application of an AI system with the "physical dimension" of implementing its solutions. Various sources of information, algorithms for its collection and processing related to a specific physical technological process are used for the operation of such a system. In the future, AI can forecast demand, optimize production goals, issue tasks for stages of the technological process, detect events/anomalies on production lines, etc.

It should be noted that more and more individual elements of the technological process are controlled by AI systems, and production processes are becoming more and more autonomous. The set of all AI algorithms/models used to manage technological processes form an analytical model of production ("digital twin" of the enterprise), which significantly increases the efficiency of management activities.

However, today not all AI capabilities are used by energy companies. For example, the EDF campaign uses AI for a limited set of tasks, namely: predicting equipment maintenance needs at power plants, identifying parameters/components to display in digital models of equipment operation processes, and to better understand consumer energy consumption behavior.

The widespread use of AI for the purpose of managing technological and management processes still requires time to eliminate technology imperfections and change business culture. Despite the above-mentioned possibilities of using AI, traditional energy companies (the energy sector based on the existing concept of large centralized systems) are cautious about the widespread use of the new technology, which is partly related to the perception by energy companies and consumers of the potential risks of its use.

At the same time, in the renewable energy sector in the development of decentralized systems, there is a trend towards a significant growth of digital energy business projects. In 2020, early-stage venture capital investments in energy-efficient and flexible startups with new or innovative business models amounted to about USD 900 million (excluding external investments of an average of USD 150 million per deal), which 20% more than in 2019 and three times the level of funding in 2016.

At the same time, the main barrier to the further implementation of AI in the energy industry is resistance to change/conservatism of employees (chosen by 85% of survey respondents24). Such inertia to the introduction of new technology is often explained by the existing organizational culture in companies, when employees are afraid of losing their jobs (AI will replace them) and entrusting AI to make important decisions that will affect the assets for which they are responsible.

Another factor in the formation of resistance to AI is the imperfection of technologies in terms of specific technical aspects of their application and interoperability with other equipment. The wide variety of "smart equipment" and the large number of manufacturers do not allow at the moment to standardize the requirements for the design, production and use of such equipment, as well as for data processing and information exchange with other equipment. Users of such equipment need to make additional efforts to choose a certain type of equipment and its manufacturer, which must be consistent with the requirements set by the operators of individual services during the connection process, for example, the requirements of distribution network operators.

In addition, quite often the main modes of operation of the equipment do not agree with the modes and procedures of the operator of distribution networks. For example, in the case of disconnection of the consumer from the network due to an emergency shutdown and when the operator subsequently restores the power supply, the smart equipment will not be included in the operation by default (appropriate settings at the software and hardware level), which will require manual connection of the equipment and adjustment of its operating modes. This can become a significant problem when consumers, especially households, do not have a sufficient level of knowledge to carry out such procedures.

Another problem is that AI systems themselves, as systems connected to digital networks, are vulnerable to cyber attacks. The number and scale of cyberattacks and the spectrum of cyberthreats to energy infrastructure are constantly growing. A cyberattack can cause loss of control over technological equipment and processes, which in turn will cause physical damage and widespread disruption of power supply functions.

In addition to affecting equipment operations (critical services, households, and businesses), a cyberattack can cost electric utilities millions or even billions of dollars, including the costs of combating a cyberattack (i.e., detection, investigation, containment, and recovery) and its aftermath (eg business interruption losses, loss of information, loss of revenue and damage to equipment).

Important aspects that today form a whole set of problems related to the application of AI are issues of security and protection of human rights, in particular in the area of personal data protection.

This also applies to household consumers. In particular, owners of "smart home" systems or smart equipment fear the disclosure of private information, which can be indirectly done by reading data from sensors installed in the house and equipment. Research has shown that the biggest barrier to smart meter adoption is the fear of exposing private information without knowing exactly how it is being used. These fears are justified, as there is still no regulation on the handling of this confidential data, which is important for the electricity system of the future.

Another direction of criticism of AI is the increase in energy consumption. Processing large amounts of data consumes a lot of electricity. When using AI to transform the energy system, it is also important to consider that the data centers themselves will affect the amount of energy consumption, accordingly, they should be designed as energy-efficient and climate-neutral as possible. The growing

use of IoT also has major implications for energy consumption. First of all, these are energy costs associated with connecting devices to the network. This is a problem that needs to be managed and ensured that the power consumption of the network connection does not become excessive as more and more devices are designed with network capabilities.

The conducted analysis demonstrates the positive aspects of the use of AI and the factors that significantly inhibit its implementation in the energy sector. In the coming years, however, the inevitable penetration of AI into various aspects of the activities of energy companies is expected. Digitization and the application of AI is a key way and tool to manage large and increasingly complex systems.

AI is a tool for the successful transformation of the energy sector, as it allows the integration of the latest and promising technological innovations in the energy sector and the resulting changes in the organization of the functioning of energy supply systems (decentralization of energy production and distribution and electrification of various technological processes).

Decentralization is driven by the increased deployment of small, geographically distributed generating capacities, such as solar and wind farms, which are connected to the local distribution network. Electrification of transport and buildings (heating and cooling), household consumption, includes a large number of new loads, such as electric transport, heat pumps and electric boilers, household works, etc. All of these new assets on both the supply and demand sides are complicating the energy sector, while making the application of AI for monitoring, management and control critical to the success of the energy transformation.

AI technologies can support the functioning of energy supply systems, taking into account the existing trends of technological development and the transformation of energy market organization models34 in several ways, including better monitoring, operation and maintenance of energy assets; more advanced system operations and real-time control; introduction of new models of energy markets and business models, etc.

Implementation of the energy transition, expanding the use of RES, increasing the flexibility of energy systems and energy demand requires significant investments in the modernization of the energy infrastructure. Business models based on the use of digital technologies enable this modernization in cheaper and more efficient ways.

The further development of new technologies and business models depends on the state policy of introducing AI and the corresponding legislative and regulatory framework. Energy companies need defined government priorities and legislative frameworks that can help them develop their activities in this direction.

Consumers need regulations that can protect them from abuse, ensure transparency of use and security of their personal data that they share with digital companies.

Therefore, it is necessary not only to understand the barriers to the application of AI in the practical activities of energy companies, but also to find adequate solutions.

Next, we will highlight some areas of efforts to expand the scope of AI applications.

Introduction of new business models

Analysis of the existing obstacles to the application of AI allows us to propose a number of ways to overcome them, from the point of view of business process management models (Table 1).

Digitization also leads to changes in the management and development of human capital. Government officials, energy policy makers should be informed about the latest developments in the digital world, its trends and future consequences. This can be achieved through the recruitment of digital experts to energy policy agencies, through in-house staff development programs, regular participation in conferences, workshops and trainings.

Energy sector entities and businesses in general need to invest in upskilling and training their employees to manage and operate digital energy assets and systems, otherwise the potential benefits of adopting new technologies will not be fully realized. Retraining is a means of overcoming the fear of job loss. On the other hand, training can have a positive effect on public readiness to accept and effectively use AI in production and everyday life.

For end consumers, it is advisable to introduce information companies aimed at demonstrating the capabilities of AI technologies to realize the potential of energy efficiency or the benefits of participation in demand regulation mechanisms and potential cost savings for consumers.

The analysis of obstacles to the application of digital technologies allows us to conclude that for the purposes of the managed process of expanding the use of AI in practical activities, it is necessary to form a comprehensive strategy that would cover various aspects.

The discussion, conducted by leading experts in the fields of AI and energy, made it possible to identify nine principles that will allow to activate this process69.

Table 1. Overcoming obstacles to the application of AI in energy.

Barriers to the introduction of AI	Possible digital solutions	Examples of business models
Potential benefits are limited and distributed among different organizations	Development of monitoring systems, forecasting and trading services to expand the circle of participants benefiting from the application of AI. Creation of resource "pooling" systems to achieve sufficient scale to attract investors.	Virtual power plants that aggregate distributed energy resources and allow participation in electricity markets.
Insufficient incentives, low and/or slow return on investment	Digital applications and platforms that integrate multiple value streams to improve economies of scale. This method, known as "value stacking", can increase returns and shorten payback periods.	Technological solutions such as "electric car to the grid" allow you to send electricity to the grid when they are not in use. Using decentralized systems (DER) to reduce electricity bills, reduce peak demand or regulate voltage and frequency.
High initial asset costs and/or financial risk, lack of access to financing	Applications, management platforms, or licensed software that eliminate the need to own or invest in hardware or infrastructure. Remote monitoring and control.	Applying the “energy-as-a-service” model to efficient and smart cooling or heating systems, charging infrastructure or other services.
End-users have limited access to energy, smart technologies, payment means or finance	Autonomous smart equipment. Mobile payments, virtual wallets and other digital payment applications or platforms.	Introduction of “Pay-as-you-go” service for offline users.
Lack of regulatory regulation/requirements for the use of AI in distribution networks	Multilateral agreements in the buyer-seller configuration using IT platforms.	Online (peer-to-peer) platforms that allow users to trade electricity generated by their own assets without an intermediary/network.

It is advisable to combine these principles into three groups:

- Designing.

1. Automation - it is necessary to immediately design generating and network equipment for automated work and increasing the autonomy of AI.

2. Sustainability – the most energy-efficient infrastructure should be implemented, as well as the best methods of preventing environmental damage.

3. Design - it is necessary to ensure the development of AI based on the criteria of ease of use and ease of data interpretation.

- Implementation.

4. Data – Data standards, data sharing mechanisms and platforms should be established to improve data availability and quality.

5. Incentives - it is necessary to create such a market design and legal framework that will allow to fully use the advantages of AI.

6. Education – a human-centric approach to the use of AI should be formed among consumers and personnel of energy companies, and investment should be made in education according to the level of development of AI technologies and skills for working with it.

- Management.

7. Risk management – it is necessary to agree on a general technological, methodological and educational approach to the management of risks presented by AI.

8. Standards – compatible software standards and interaction interfaces should be implemented.

9. Responsibility – Ensure that ethics and responsible use are at the core of AI development and deployment processes.

All subjects of the energy sector, primarily energy companies and state authorities, should join the development of a policy in the field of the use of AI technologies in the energy sector and ensure its implementation in order to create a favorable environment for revealing the full potential of AI.

It should be noted that the process of applying AI in Ukraine is at an initial stage. Only general conceptual approaches to the development of artificial intelligence technologies in Ukraine (December 2020) and a preliminary general plan for its development (May 2021) were approved.

The approved Concept of the development of AI in Ukraine defines the purpose, principles and tasks of the development of artificial intelligence technologies in Ukraine, although it focuses more on the field of scientific and technological research. The Concept defines the priority directions for the introduction of AI, among which, in view of its application to the field of energy, the following should be highlighted:

- implementation of artificial intelligence technologies in the field of education, economy, management and defense, and other areas to ensure Ukraine's long-term competitiveness on the international market;

- ensuring access to information (databases, registers, etc.), its use during the development of artificial intelligence technologies for the production of goods and the provision of services;

- increasing the level of professional training of specialists to ensure.

the field of artificial intelligence technologies by qualified personnel.

When applied to the energy sector, we note the following tasks of the Concept:

- stimulating the development of entrepreneurship in the field of artificial intelligence by ensuring access of innovative enterprises to investments, partnerships with venture funds, organization of business events with the participation of Ukrainian IT entrepreneurs abroad, improvement of the business climate, etc.;

- motivation of business entities to introduce AI by ensuring their access to educational programs/information portals;

- retraining of people whose work may be automated in the next five to ten years, introduction of a state order for the training of IT specialists and data researchers;

- stimulation of partnership between the state and business in the field of innovative projects, as well as improvement of legislation in the relevant field.

In turn, the Action Plan for the implementation of the adopted Concept provides for the introduction of practical tools:

- adoption of the draft law on the development of artificial intelligence;

- conducting information campaigns aimed at popularizing the basics of artificial intelligence in secondary education institutions, holding conferences and seminars on the introduction and use of artificial intelligence technologies; - provision of state support for the use of artificial intelligence technologies in priority sectors of the economy (adopting the State Program);

But so far AI technologies are implemented in practice at the initiative of only a limited circle of Ukrainian companies. The use of the latest energy technologies in general and digital technologies in particular require legislative stimulation. An example of such legislative stimulation of the development

of digital technologies in power supply systems and, accordingly, the use of AI technologies is the EU Electricity Market Directive of 201972. At the same time, Ukraine is only at the beginning of this long journey, and even the requirement to adapt Ukrainian legislation to the provisions of EU legislation does not ensure the rapid introduction of legislative incentives for the use of AI.

For example, the Law of Ukraine "On the Electric Energy Market" in the period 2019-2021 (after the adoption of the mentioned EU Directive) was only amended regarding the use of energy storage systems. It is obvious that this fact indicates the current level of technological unpreparedness and social rejection of the new mechanisms for the organization of the energy market proposed by the EU Directive, as well as fears of the use of AI technologies by experts in the electric power industry of Ukraine. Moreover, the lack of adjustment of the legislation regulating the operation of the electricity market, while certain provisions of the mysterious EU Directive are reflected in other branch legislation, demonstrates the fact of the lack of a systematic strategic plan for the transformation of the energy sector of Ukraine.

In particular, the Law of Ukraine "On Energy Efficiency" introduces the concept of "smart networks" and sets the task of approving the Concept of implementation of "smart networks" in Ukraine and the medium-term Plan of measures for their implementation. At the same time, the development of a road map for the implementation of "smart networks" in Ukraine is envisaged (Article 15 of the Law), which should include measures in the following areas: geo-information systems; power grid monitoring and control systems; systems of intelligent electricity accounting; integration of renewable energy; integration of electrical energy storage; infrastructure for electric cars; development of communication channels; cyber security.

This law also establishes a requirement for the regulator of energy markets (of the National Commission, which carries out state regulation in the spheres of energy and communal services), within the scope of competence to ensure: stimulation of participation consumers who have the opportunity to manage their consumption in the electricity market; simplify their access to participation in the balancing, reservation, auxiliary and other services markets; stimulating the introduction of "smart grids" by establishing a system of economic incentives for transmission system operators and operators of electric energy distribution systems.

It is obvious that the success of the development of "smart networks", increasing the flexibility of the system due to "demand regulation" services and expanding the use of AI for the realization of these opportunities depends on the clear coordination of the actions of all participants of the energy market. The creation of such coordination will require a clearer reflection of EU Directive 2019/944 in the sectoral legislation of Ukraine and the involvement of transmission and distribution system operators.

Industry development policy makers and system operators will need to review existing energy market practices and create truly developed and liberalized electricity markets. To do this, it is necessary to create truly equal conditions for distributed generation in relation to powerful power units and eliminate regulatory obstacles. Since many AI use cases in the energy sector concern owners of small distributed energy resources, they must have non-discriminatory access to the energy supply system and the corresponding modes of its operation (ancillary services market).

The existing problems with the introduction of a full-fledged electricity market in Ukraine, the preservation of obstacles to the free connection of consumer installations to the power grid, the preservation of the practice of administrative regulation of prices and tariffs on the energy markets of Ukraine significantly limit the specific advantages of new energy technologies and business models using digital technologies and automated trading platforms electricity.

Accordingly, the first priority of state policy in the energy sector is to correct deficiencies in the organization of energy markets and introduce competitive energy markets that are truly free from manual control.

As the energy system decarbonizes and decentralizes, the grid management model must be rethought and new and more decentralized architectures for grid access, operation, and management solutions should be considered. In particular, in regional and national energy system modeling and infrastructure planning, planners must consider the role that AI-enabled intelligent distributed energy resources (DER) can play. Today's energy modeling often ignores distribution networks and does not

take into account the possibility for them to become a source of flexibility of the energy system and become valuable participants in the process of managing its regimes.

In order to accelerate the penetration of digital technologies into the practical activities of the energy sector of Ukraine, it is necessary to review the existing legislative and regulatory framework and remove obstacles to the integration of new technological solutions into the activities of the energy markets of Ukraine. In particular, it is necessary to ensure the development of appropriate regulatory and technical support for the development of "smart networks" to facilitate the integration of distributed energy sources with the use of energy storage, the creation of a power management platform for integrated distributed energy sources, and the implementation of international standards for the functional compatibility of smart network equipment. As a first step in this direction, it is expedient to complete the development of a conceptual document on the principles of state policy on the comprehensive implementation of "smart networks" in Ukraine.

Expanding the use of decentralized energy supply systems based on the use of local generating capacities of various types and the use of digital technologies can become a component of planning regional energy supply systems, in particular local energy plans. In this regard, the metrological and regulatory framework of the National Energy Regulator (NERCP) needs to be improved regarding the preparation and approval of investment plans of regional companies for the development of energy supply systems in order to eliminate obstacles to the implementation of digital technologies, third-party access to networks and work on energy markets, application of new business models of work in the energy market.

In particular, we are talking about creating opportunities for the formation of a new category of players in the energy market, such as "energy service companies", which provide turnkey services (energy products: lighting, heat, air conditioning) to end consumers. The latest energy technologies and the use of "smart equipment", together with new business models enabled by AI, are becoming an increasingly attractive niche in the energy market.

As the management and operation of networks become increasingly complex, particularly at the level of distribution networks, grid operators must review the potential of a range of digital technologies (e.g., machine learning, quantum computing, blockchain technology, etc.) to expand the ways in which digital technologies are used in their practical operations.

Conclusions.

The latest energy technologies and business models of work in energy markets open up new opportunities for producers, suppliers and consumers of energy both in terms of increasing the efficiency of their production activities or energy consumption, and in terms of the possibility of receiving economic benefits from participation in the market. It is about expanding the use of renewable energy sources, decentralizing energy supply, participating in demand regulation, providing system balancing services, or direct online trading of electricity on exchanges.

At the same time, the use of new opportunities depends on the energy market participants mastering intelligent management and accounting systems, digital platforms for information exchange and processing, artificial intelligence and machine learning technologies. In fact, the success of the next technological revolution in energy depends on the use of artificial intelligence technologies by all participants involved in the energy supply process.

This situation creates significant challenges for any country, as it requires both the technological readiness of the energy sector, that is, the availability of appropriate intelligent equipment and software, as well as the professional readiness of personnel to apply AI technologies and their socio-cultural perception of these technologies.

Today, these directions of expanding the use of AI in energy are a priority for the sphere of public administration and the formation of the necessary strategic documents of state policy and program decisions regarding the financing of energy development projects in the country. It is necessary to adopt, at least at the level of the energy sector, a general concept of AI implementation in energy, programs for the development of AI technologies on a national basis, programs for education and training of personnel of energy companies in the field of AI.

In addition to strategic tasks, there is the problem of readiness of the current model of the energy market to use the latest technologies based on AI. This primarily concerns the transparency and stability of the country's electricity market. If the rules of the market are unstable, not to mention direct administrative intervention in its work, which will affect the price parameters and terms of execution of agreements (operations), the realization of the potential of using AI and the latest energy technologies will be leveled. This situation will continue to hold back the modernization of Ukraine's energy sector.

At the same time, Ukraine's forced need to rebuild its energy infrastructure after large-scale destruction caused by Russia's aggression, the practical integration of Ukraine's energy systems into European systems (for example, the synchronization of the work of the United Energy System of Ukraine with the European Network of System Operators of Electricity Transmission (ENTSO-E)) give Ukraine a chance to modernize the country's energy sector on a modern technological base and with the use of AI technologies.

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DIGITAL ENERGY. WHY THIS IS THE FUTURE OF ENERGY MARKETS?

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Abstract.

The rapid development of renewable energy leads to a significant increase in their share in electricity generation, therefore the issue of integrating unstable energy sources into the network without weakening the reliability of the system is on the agenda in many developed countries. In addition to the increase in the share of RES in the national energy balance, the instability of energy supply and demand is exacerbated by the development of distributed generation, the electrification of passenger transport, as well as the heating and cooling sectors. Ukraine cannot ignore the fact of global changes in the technological model in the power industry and related challenges and shifts in the development of the industry. Otherwise, the country will face a number of risks. The first of them is the risk of getting more expensive and less flexible electricity compared to other industrialized countries, losing a number of new markets (for example, the energy storage market) and significantly limiting the development of a new (digital) industry.

Basic concepts (Introduction). A comprehensive approach to energy transformation is developed in the trendy concept of "3D" (Decarbonization, Decentralization, Digitalization). Decarbonization ("decarbonization") - the transition to an ecologically clean "carbon-free" economy and energy, which is combined in an increase in the share of RES in the energy balance, an increase in the share of electric transport and high taxes on the use of fossil fuels. Decentralization ("decentralization") - the transition to a territorially distributed electric power industry with a large number of different level producers and consumers, which is expressed in the growth of the share of low-power and diverse energy sources connected to distribution networks; the emergence of prosumers - a new type of electricity industry entities that are both producers and consumers of electricity; the emergence of active consumers who use electricity flexibly, including by remote commands, capable of changing the profile of their consumption from the network. Digitalization ("digitalization") - the transition to large-scale use in the electric power industry of digitally controlled devices connected to the Internet information network at all levels of the energy system from production and electrical networks to end-user devices. Electricity consumers, which provide the possibility of implementing intelligent management of power systems, based on the basics of machine (M2M, IoT) interaction. In this article we will be using a few more new terms that describe the functioning of the 3D energy system, so let's define them to avoid conflicting interpretations and use modern definitions freely.

Blockchain is a distributed database that stores information about all transactions of system participants in the form of "chains of blocks" (that's how Blockchain is translated from English). Access to the register is available to all users of the block, who act as collective notaries, which confirms the truth of the information in the database.

Smart contract (English Smart contract - smart contract) is a computer algorithm designed for concluding and maintaining commercial contracts in blockchain technology. For the first time, the idea of a smart contract was proposed in 1994 by Nick Sabo (USA) - a scientist in the field of informatics, cryptography and law. He described a smart contract as "a digital representation of a set of obligations between parties that includes a protocol for fulfilling those obligations."

A modern example of the idea of a smart contract can be called the work format of Uber companies. Aggregators play the role of an intermediary and arbitrator, who ensures the execution of the agreement between the taxi driver and the client: the client agrees to pay for the trip at a price

determined in advance by the intermediary system (aggregator), and the driver, in turn, undertakes to perform the service of transporting the client to predetermined place.

Peer-to-peer, P2P (from English - equal to equal) is a variant of the system architecture, which is based on a network of equal nodes. Computer networks of the peer-to-peer (or P2P) type are based on the principle of equality of participants and are characterized by the fact that their elements can communicate with each other, unlike the traditional architecture, when only a separate category of participants, called servers, can provide certain services to others.

One of the possible areas of application of such an approach is the "Internet of Energy" - a type of decentralized electric power system in which intelligent distributed management is implemented through energy transactions between its users.

"Internet of energy" - according to the Navigant research "Transactive Energy Markets", which was published in 2018 - is a peer-to-peer electricity industry, in which interaction between producers and consumers of electricity, trade in electricity and various services, as well as regime management of the energy system are carried out through direct transactions between users. Simply put, the energy system becomes multi-vector, all participants of the energy market will have many functions, such as the supply of electric energy, participation in mode control and maintenance of frequency and voltage level, provision of energy equipment for "virtual" rent, provision of power reserves and any other types services that can be provided in the power industry.

Basic information. Many international energy companies are currently developing projects that in the future will unite all consumers in one network - a decentralized system. There is an opinion that in 2050, the entire global energy industry will work like this. Closer to the consumer. With a decision-making center distributed evenly among all participants. Let's do a little research. What are the advantages of such a system? With the help of smart contracts, the existing multi-level system consisting of electricity producers, distribution network operators, billing operators, a provider of payment banking services, traders and consumers themselves will be simplified. All transactions for receiving and paying for energy will be performed directly in the network, which unites equal participants - energy producers and consumers. Thanks to this, electricity will become cheap. But you and I are not simple readers, we understand that there will never be cheap energy again.

A set of such microgrids will minimize the amount of energy lost through long-distance transmission. The World Bank website has statistics on losses in main and distribution transmission lines. Interestingly, Ukraine loses 11% of the produced energy. They say this is mainly due to losses in low-voltage networks. It is neither much nor little. Leave such assessments to the "experts". This is a number. And where else is so much? Bangladesh. Botswana. Colombia. Costa Rica. Egypt. Salvador. Jordan. Oman. Peru. Romania. Sri Lanka. The lowest figures are 2-3%. Trinidad and Tobago - due to distributed generation. the place of generation and consumption coincide. Or Korea - at the expense of manufacturability. The maximum is 73% in Togo and 70% in Libya. And it's not about worn equipment. Electricity is stolen there. There is no money to pay. Microgrids provide alternative both technological chains and business models.

And if you focus on manufacturability, such an energy system will allow adding flexibility to all participants. Energy system flexibility is a new term that originates from the Western energy business environment. Two sources of flexibility are distinguished: distributed energy sources and electricity demand management. The English network operator Ofgem defines flexibility as the ability to change patterns (modes) of energy production and consumption in response to external, usually price signals for the provision of system services. The economic benefit from increased flexibility in the English energy system is estimated at £17-40 billion in 2020-2050.

The first case of energy transfer using blockchain was recorded in 2016, when a resident of Brooklyn sold excess renewable energy to his neighbor using a smart contract on the Ethereum platform. After that, many Western energy companies became interested in this technology. Over $300 million was invested in energy projects based on the blockchain during the year.

Projects like the one implemented for the first time in Brooklyn allow the community to choose a green energy alternative. That is, your coffee shop can buy electricity from a local solar power plant, instead of coal, which is unfriendly to the environment of the holding company. Another motive is the

reliability of localized sources of electricity. For example, hurricanes like Sandy caused a series of power outages in the US in 2012 and experts questioned the reliability of the network. Long power lines aren't needed for the Brooklyn Energy Cooperative, so they can't be damaged by increasingly regular extreme weather. Thanks to Brooklyn-based LO3 Energy's partnership with Siemens, the project already includes a grid management system that allows electricity to be generated when needed and delivered to hospitals, shelters and community centers.

"This whole concept is very beneficial for the region in which you live. When buying energy locally, rather than from a national authority, the money goes back into the pockets of people living in the community. We have established a transactional network platform that is largely self-powered, resulting in energy being priced automatically and consumers taking care of it. We believe that in this way we will be able to better meet the needs of consumers. Going forward, we plan to empower people, set preferences for maximum savings, do good in the community, and potentially sell energy more cheaply to lower-income residents" - Joseph Lubin, co-founder of the network. We are now considering expanding such microgrids to other communities in New York State, to reduce the cost of electricity to consumers and promote clean energy.

World trend.

On the eve of the Blockchain2Energy Asia forum, which will be held on November 27, 2018 in Singapore, a fresh "hit parade" of Asian blockchain projects in energy was released. These projects claim to become the "main caliber" of future trends.

Many of the projects are led by technological consortia, which, in addition to technological startups, include banks, large companies of the industry, retailers and universities.

The rating includes services for the sale of surpluses from RES-microgeneration, p2p electricity markets, emission reduction accounting and "carbon credits", "green" certificates and consumer ratings, "flexibility" markets and even the usual energy retail.

The business model looks like this (figure 1).

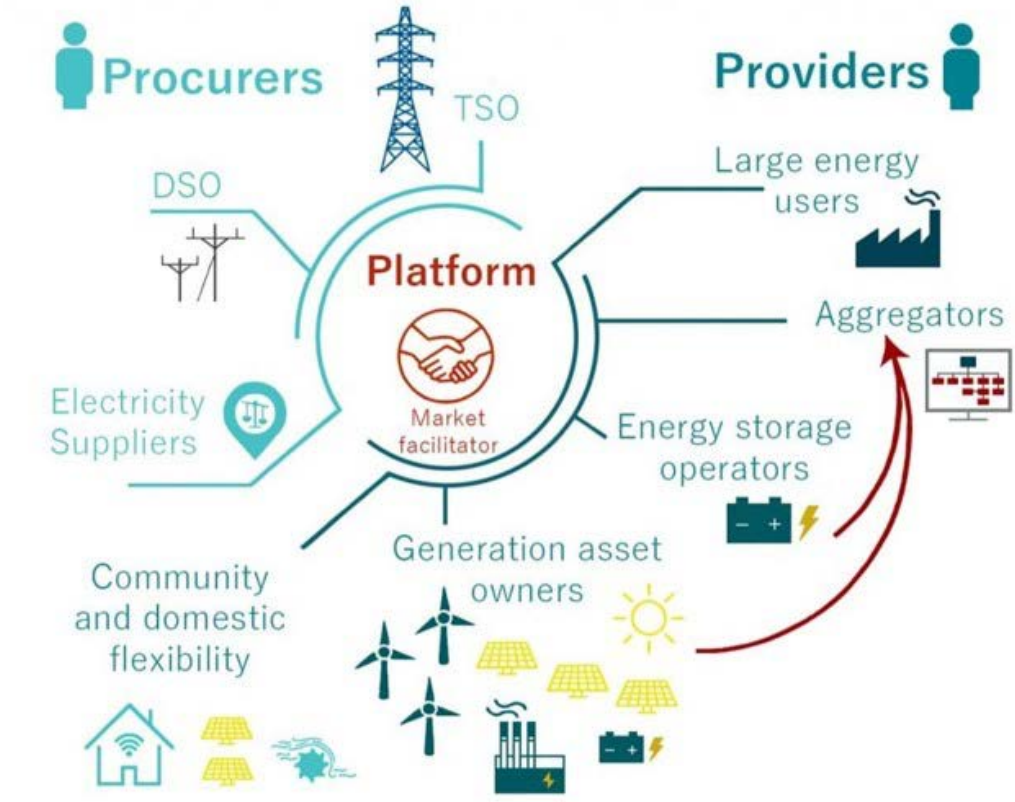

Figure 1. The structure of the local flexibility market. Source: Regen SW.

Since the start of the decision, when the Japanese government allowed retailers to sell surplus "green" energy on the open market, the number of customers of the energy company Tokyo Electric Power has fallen by 15%. In Japan, the world's largest cluster of distributed electricity storage systems, controlled by artificial intelligence, was launched. It is created by UK-based MOIXA, one of the portfolio companies of First Imagine! The system connects more than 3,500 households and 35 MW · h of battery capacity and ensures coordinated optimal charge and discharge management of batteries connected to the grid.

The project is implemented by an international technological consortium: the trading house ITOCHU manufactures and sells Smart Star storage units, the sales company TRENDE sells electricity to households at a special idenki tariff that encourages the use of storage units for offloading the energy system, NF Corp. provides an IoT platform for remote access to drives, finally, MOIXA acts as an AI service provider for coordinated management of the Grid Share network of drives.

The further plans of the consortium to deploy a p2p market for households, electric car charging networks, demand response services, including the possibility of participating in frequency support in the network and operation in the mode of a virtual power plant (VPP) are impressive on the basis of the same infrastructure.

Great prospects are seen in the development of decentralized digital energy technologies in the desert states of the Persian Gulf - Bahrain, UAE, Qatar. Well, first of all, because of the colossal potential of solar energy, which few paid attention to due to the rich, almost inexhaustible, reserves of oil and gas. Well, imagine, in Bahrain, the capacity of solar power plants is about 10 MW. This is 100 times less than in Ukraine. In the United Arab Emirates, the installed capacity of solar photovoltaic plants is only 160 MW. The SES indicators in Qatar are somewhat similar to the UAE. But, already today these countries are preparing for the implementation of grandiose plans for the deployment of solar energy and smart systems for managing these assets based on digital technologies. And this is not surprising, because the solar insolation there is one of the highest in the world, and this is their new oil.

Another interesting aspect of the development of decentralized digital energy structures is the life support systems of famous skyscrapers in the Persian Gulf. It is promising to implement integrated solutions using renewable energy in a building-to-grid approach: solar panels or wind generators as an architectural element of the structure, built-in storage devices, smart meters, demand management systems aimed at total optimization of consumption and management of the skyscraper. An example of such a system is the Burj Khalifa Tower - a "vertical city". Imagine - 35,000 visitors-residents-workers, 57 high-speed elevators, 30,000 thermal panels that equalize the temperature of the building's surface, a single system of air conditioning and aromatization (the unique aroma - an integral component of the design of the tower - was created by Armani), a water supply and water supply system cooling with a turnover of 946 thousand liters of water per day and hundreds of other unique engineering systems. All this, despite compliance with the very strict LEED energy efficiency standard, makes the skyscraper a very large consumer, the peak power of which reaches 50 MW. But 828 meters is not the limit, only two even more ambitious projects are currently being implemented in neighboring countries: The Tower in the Dubai Creek Harbor area with a height of 928 meters and Jeddah Tower in Saudi Arabia with a height of 1007 meters for 80 thousand people. And their effective and reliable livelihood system is impossible without digital technologies. Imagine a state that is a collection of energy-independent island cities, megacities formed from skyscrapers that provide themselves with energy, or buy surplus production from a neighboring skyscraper using smart contracts that function on blockchain platforms. This is significantly different from how the system works now and what we are taught by professors in universities.

Prospects and challenges.

Let's remember what we started with - the 3D energy system of the future consists of three components - decarbonization, deregulation, digitalization. The first step in the evolution of energy systems should be the transition to comprehensive planning of the development of energy systems based on the indicator of the system value of variable energy sources - value of VRE. This indicator evaluates the reduction of fuel consumption and greenhouse gas emissions, optimization of capital costs of

generation, as well as transportation and distribution of energy instead of the existing simplified approach - estimation of the normalized cost of electricity (LCOE). This is about the balanced distribution of low-emission electricity generation and the need to ensure system reliability.

As for the spread of the smart contract mechanism in unregulated markets, they are guaranteed to develop, but for their effective use, you need:

First, overcome the lack of a technological base in the form of solar panels, wind turbines, energy accumulators on a national scale. When new technologies become widespread, or are implemented concentratedly in local communities, then people will be able to use the blockchain for their own purposes, unite in conglomerates, implement mutually beneficial technological strategies and financial mechanisms.

Secondly, due to the uncertain legal status of the entire crypto industry, public and private energy companies cannot fully implement projects based on smart contracts due to the growing reputational risks, system failures, job guarantees and other aspects that can affect the functioning of power networks. That is, the system will work when the banner "To prepare your favorite dishes, we buy only ecologically clean energy from local rooftop solar power plants for bitcoins" will appear on the window of your usual restaurant.

Domestic perspectives. There are 6.5 million private households in Ukraine. As of the end of the II quarter of 2018, the total number of solar stations of private households with a "green" tariff is 4,660 stations, of which 1,650 stations were installed in the I half of 2018. Thus, even less than one percent of private households are equipped with rooftop solar power plants. In 6 months of 2018, the total installed capacity of solar stations of private households increased by 38 MW and amounted to 89 MW. Since 2015, more than 88 million euros have been invested in the installation of solar power plants by private households. The notional cost of one kilowatt of installed capacity for the average household was $1,000, although we understand that this has changed over the years. The leaders among the regions of Ukraine in terms of the total number of private households that have installed solar power plants are: - Kyiv region – 602 households; - Dnipropetrovsk region – 541 households; - Ternopil region – 365 households. Such players can become the first pool of smart contract participants based on blockchain technology.

In addition, the business community and large enterprises may be interested in their own participation in distributed generation, regulation and system optimization of financial settlements. Why so? First of all, because the cost of electricity for large consumers in Ukraine already in some places exceeds the prices for industrialists in the United States and Europe. And its quality often leaves much to be desired. This negatively affects the export potential of Ukrainian enterprises, because the high cost of electricity reduces competitiveness, especially taking into account the high energy intensity of domestic production. In many countries of the world, this situation motivates the development of new methods of energy production, the localization of networks to avoid losses during transportation, and the creation of independent financial settlement tools that will allow to ensure access to clean and reliable energy for associations of like-minded people, such climate pragmatists. People who want to use clean energy, know how to implement the latest technologies and are used to valuing their own investments.

Wars have shown that the world turned out to be more pragmatic than we thought, and the arrangement of its energy forces greatly affects the course, results and, unfortunately, the beginning of new wars. The new order of arrangement of the world and security, of course, cannot take place without the new order of the energy market.

Politically, a number of interventions have been made, which indicate that the stock markets of Europe will also change. For many years, Russia also worked on building a favorable architecture of the energy world. The EU's dependence on gas supplies allowed the aggressor to control energy prices there and influence the economy.

The jump in gas prices was the cause of unprecedented peaks in the price of electricity in the second half of 2021 and in the first half of 2022. Countries with low capacity for cross-border flows of electricity and relying on gas for its generation were the most affected.

As early as October 2021, the European Commission began to respond to the increase in the price of gas and electricity, and in August 2022, gas prices reached an unprecedented peak - 1000% compared

to prices in previous decades. It is clear that the cost of natural gas is naturally reflected in the price of electricity.

First of all, this is explained by the fact that the basis of the reliability of electricity supply is ensuring the flexibility of the electricity network, that is, its ability to respond to sudden changes in demand and supply.

Actually, for the second year, experiencing attacks on the energy sector, every Ukrainian understands well what balancing of the power grid is and how it is ensured at the expense of flexible generation. But even in peacetime, this is not an easy job, especially in periods of active generation of renewable electricity, the share of which should increase within the framework of the Fourth Energy Package.

There is another technical factor that provides a mechanism for determining the price of electricity, depending on the price of fossil fuels. Commission Regulation (EU) 2015/1222 (Article 38) introduced European market practice, according to which the unification of electricity exchanges in the day-ahead market should be based on the rule of marginal pricing.

This means that all accepted supply requests have the same price per trading area and time unit, and are satisfied at the highest rate. As a rule, this limit price is set by power plants operating on fossil fuels (coal, oil or gas).

This method should guarantee that "green" generation will receive a profit for the return of its investment, increase such green generation, which will further reduce prices.

However, the current energy crisis demonstrated the insufficient readiness of the pricing mechanism in crisis situations. Although in 2014 the Commission assessed the impact of its pricing guidance, it did not analyze the consequences or alternatives to the model in situations where the resource balance is disturbed, such as the price of gas.

Critics of the pricing model point out that the model is not able to ensure investments in low-carbon generation, because only state investments in such support have been growing in the last 10 years.

In the event of a sharp price increase, the method can generate unreasonably high profits for power producers who operate at much lower cost. Thus, gas prices increased by 400% in the second half of 2021, and average electricity prices increased by 200%. No previous analysis of long-term scenarios in the EU included such a price jump. Attacking in February 2022, Russia understood that a second wave of price shocks would occur in the EU, which, by design, should influence the EU's determination to support Ukraine. It is very easy to influence the price in conditions where demand for gas has been stable and other supply alternatives are limited (domestic EU production has fallen by 2/3 since 2010). Initially, in 2022, the increase in electricity prices was higher than for gas, so gas generation even made money from it. And then this increase in gas generation consumption provoked a jump in short-term hub prices.

The average monthly TTF in 2022 was 7 times higher than that of the previous 5 years and was 130 EUR/MWh, and in the injection season (2nd and 3rd quarter) it was 160 EUR/MWh.

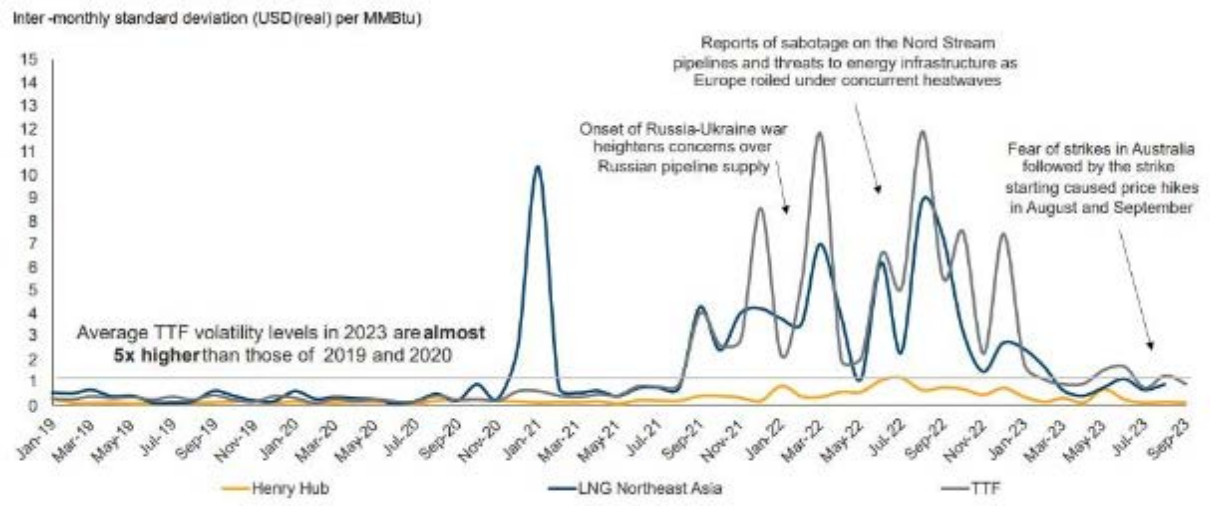

Figure 2. Current energy deviation (USD/MMBtu).

The enemy's plan did not work and the EU reacted. The series of measures implemented gives us a clear understanding that we are entering a new era of the energy world. So far it only looks like a sketch, but the basic framework is already drawn. To be able to imagine a comprehensive picture of the future, it is worth dealing with the input data.

The first thing to understand is that the EU gas market also exists far from under conditions of perfect competition. Pricing relies on two purchasing models: competitive transparent bidding on organized markets (hubs) and long-term and bilateral contracts.

At the same time, indexation to the hub is often used in the prices of direct contracts. Some experts point out that it is the dependence on short-term dynamic hub trade that made gas prices more sensitive to the factors that caused the price jump in the summer of 2022.

In March 2022, the EU agreed on a plan of measures to reduce gas dependence on Russia by reducing imports of Russian pipeline gas, reducing dependence on fossil fuels, diversifying energy supply (including LNG and infrastructure for its supply), accelerating the development of RES and hydrogen, increasing energy efficiency. Most of the measures were unveiled in May in the REPowerEU plan, covering the following aspects:

- New rules for gas storage, so that storages in the EU are filled before winter (80% of capacity for 2022/2023 and 90% for the following winter periods) and can be distributed among member states in a spirit of solidarity.

- Joint procurement of gas, LNG and hydrogen through the EU Energy Platform. Aggregation of demand should cover at least 15% of storage in each country and exclude Russian gas.

- EU Regulation 2022/2576 "Strengthening solidarity through better coordination of gas purchases, reliable price benchmarks and exchange of gas across borders" introduced a mechanism of solidarity of flows in the event of gas supply interruption, when the affected country must be supplied with gas by another country with appropriate compensation. The regulation mandates ACER to develop and publish a new daily LNG price indicator and a daily LNG benchmark. The goal is for LNG buyers and sellers to rely on the new benchmark in their contracts, instead of tying them to turbulent TTF pipeline gas prices.

- In February 2023, the Market Correction Mechanism (MCM) was introduced, which sets the gas price limit in the EU. MSM applies to one-month, three-month and one-year forward exchange derivative contracts and should be triggered automatically if the price of TTF M+1 exceeds 180 EUR/MWh for three working days and if it exceeds by 35 EUR the base price of LNG on world markets for the same three days.

- A complex of actions to reduce demand and increase energy efficiency set the goal of voluntarily reducing gas demand by 15%. As a result, the reduction was 19%, but it was partly achieved due to the high cost of gas for the consumer.

- As electricity prices will remain high while the EU refuses Russian gas, an emergency aid resolution was adopted.

The measures included accelerating the use of RES, reducing total electricity consumption by 10% and by 5% during peak hours, allowing the temporary introduction of regulated electricity prices for small and medium-sized businesses and households, limiting the income of non-gas electricity producers to 180 euros per MWh (RES, nuclear power, lignite) to pass on the surplus to consumers and the revenues of other fossil fuel producers, whose profits have increased by more than 20% compared to the average profit of the previous 4 years.

The final confirmation that the new stock exchange world will not be the same as before is given by the vision of the reform of the structure of the electricity market (Electricity Market Design - EMD). On October 17, the EU Council reached an agreement on the design change and negotiations with the European Parliament will begin.

The process continues these days and the final decisions have not yet been made, but it is clear that the stability of energy prices is the basis on which the new design is planned to be built. The reform aims at stable long-term markets by encouraging PPAs, bilateral contracts for difference (CfD) and improving the liquidity of the forward market by providing new hedging elements.

As part of this, ACER proposed a complete change in the landscape of the forward market, which involves the creation of virtual trading hubs and the issuance of transmission rights. That is, the idea is for the forward market to work as a single integrated EU market, when the price according to the generally accepted methodology is calculated at the central hub (for example, the weighted average of regional hubs), and the participants get the opportunity to hedge at the price of the regional hub, while the trade at the regional hub is supplemented trading of financial transfer rights.

The EU stock exchange community has criticized some aspects of the EMD. In particular, the nominated operators of the electricity market are against the introduction of a single legal entity to manage the unified market, which, in their opinion, may threaten the already established unified short-term electricity market (Single Day-ahead Coupling - SDAC and Single Intraday Coupling - SIДC) and may become the first step to a de facto monopoly of stock trading.

In general, the concern of our European colleagues is quite understandable, as they protect their business when they have to fundamentally rebuild their well-established markets, which nullifies their achievements in creating forward market hedging mechanisms.

EU exchanges also do not support mandatory PPA, exchange of order portfolios on the short-term physical market (currently exchange is carried out only if there is cross-border capacity), limitation of cross-border income and obligations to purchase additional flexibility products of OSP and OSR.

In 2023, the volume of exchange trading increased significantly, because lower prices required less capital to hold futures positions, and because price volatility stimulated the need for hedging and speculative trading (including the exhaustion of bilateral credit limits with most counterparties).

After the summer of 2022, some EU countries have even provided financial assistance and guarantees to support the liquidity of organized markets to help participants, in particular electricity producers, cope with margin requirements on previously exposed futures positions.

The transition from OTS to the exchange market was also caused by the need for clearing due to high risks of non-execution of transactions. The EU continues to call for new price hedging strategies, including the use of forward and long bilateral contracts to reduce price pressure, but for this there must be high liquidity outside the spot market.

Preliminary estimates indicate that prices will continue to depend on global competition for LNG with Asian markets. As such, the availability of infrastructure to be able to physically obtain gas and transparent access to new LNG terminals remains a key factor.

The redistribution of electricity producers' income will obviously continue to be used as a source of funding for decarbonization goals, the speed of which will affect the volume of sustainable LNG needs. The market for relationships with liquefied natural gas has not yet been formed.

Therefore, opinions in the EU are polarized between the understanding of some that it should be a long-term import with an appropriate legal basis, and the understanding of the fighters for the preservation of the already established order - that spot and short-term contracts on hubs remain decisive

in price formation, since such an approach can even out the disparities of equal and transparent access to the infrastructure of terminals.

There is no way back. The global world has set itself the goal of transitioning from unlimited energy use to a more environmentally friendly approach to energy resources. This approach is recorded in the Sustainable Development Goals of the United Nations until 2030, which Ukraine also supports. The existing world trend of appropriate use of energy resources is also aimed at reducing the negative impact on the environment.

However, it is one thing to declare, another to fulfill the declaration. Changing the outlook on energy production and consumption in society is not an easy task.

Ukraine is confidently following the course of energy efficiency, but it is still not enough. Ukraine's relatively small economy consumes quite a lot of energy. Thus, Ukraine's share in world energy consumption is 0.6%, which, at the same time, is three times higher than its share in the world economy, which is 0.2%.

In addition, taking into account the fact that energy consumption in Ukraine largely depends on the available volumes of gas, the price of which shows a significant increase in European markets, it is worth using all available opportunities to reduce dependence on natural gas, and use this resource only as an energy carrier for balancing capacities in the transition period.

According to the data of the State Agency for Energy Efficiency and Energy Saving of Ukraine, 45% of final gas consumption falls on the household sector, and it is here that low energy efficiency can be noted. In particular, low thermal insulation of buildings leads to irrational use of gas as a source of energy for heating. Energy efficiency measures, in turn, can reduce total gas consumption by 10-20%.

One possible way to improve the situation is to use renewable energy sources. Of course, there are challenges here as well, in particular with network integration and balancing, but this is already the path on which we should walk together with the international community, albeit somewhat catching up with it. In this direction, investors in Ukraine give priority to solar plants, which is due to a significant decrease in cost and relative ease of installation.

There are a number of opportunities for the implementation of energy efficiency measures on the ground, both for insulation and energy modernization of buildings, and for more rational consumption of electricity.

For example, since October 2014, the Government program of "warm credits" developed by the State Energy Efficiency Agency and implemented has been in effect. Since the beginning of the state program, the amount of compensation from the state budget is 3.46 billion hryvnias. This year, as of August, 131.31 million hryvnias were reimbursed from the state budget for "warm loans".

Also, as of September 17, 2021, 606 projects of energy modernization of buildings under the Energy Efficiency Fund's "Energodim" program have entered the design, implementation, or final stages. The total cost of these projects is UAH 5.2 billion. The Foundation notes that the leading regions in terms of the number of submitted applications are Volyn, Lviv and Mykolaiv.

These programs help owners of houses and apartments, condominiums, insulate buildings, install heat meters and implement other energy efficiency measures.

In turn, opportunities for the use of RES are being actively implemented by private households, which prefer the installation of solar power plants. Although a certain stagnation can be observed in this direction in the last two years. Dnipropetrovsk, Ternopil, Kyiv, Zakarpattia and Ivano-Frankivsk regions are the leaders among the regions of Ukraine, both in terms of capacity and number of installations.

At the same time, in regions that are not leaders in the introduction of energy-efficient technologies or the use of RES, they still find ways to more rational energy use.

So, for example, Kharkiv is known for its ability to consolidate the efforts of private business in achieving a certain goal. If a business decides to help, it cannot be stopped. So, a private company engaged in installing SES decided to help "Regional Children's Home No. 3". To do this, together with partner companies, they installed solar panels on the roof of the building at their own expense. The power of the installed SES is 5 kW. In less than a month and a half, the station generated 1,500 kWh of electricity. In this way, the institution can now save about 700-800 kW per month.

Another example in the city of Kharkiv already concerns the building of the Cathedral Cathedral of the Assumption of the Blessed Virgin Mary. Solar panels were also installed on the roof of the building adjacent to the cathedral, which serves as a social shelter. According to the rector of the cathedral Hryhoriy Sebankov, this will enable the institution to cover approximately 80% of its own electricity consumption needs. This project is implemented as part of the all-Ukrainian program "Energy of Unity", the goal of which is to convert all temples to solar energy. In our opinion, in addition to the obvious advantages of an economic and environmental nature, such projects have an impact on decision-making in the transition to clean energy sources of private households and small businesses, because they are examples of a modern view of energy. In addition, a similar program has been successfully implemented in the buildings of religious institutions in Germany for more than ten years.

State institutions are constantly working on new incentives for the development of clean energy sources that will contribute to efficient energy production.

In particular, the State Energy Efficiency Agency recently presented such an approach to the production of energy from RES as Net Energy Metering (NEM), i.e. - System of net metering. Net Metering assumes that the surplus of generated electricity will be consumed in the next billing period. This calculation is designed primarily for budgetary and non-profit organizations, households and small businesses and includes all types of renewable energy generation. At the same time, there will be no fee for imbalances for this category of manufacturers.

It is worth giving credit - this proposal tries to take into account both the needs of the population and business, that is, those who invest in RES and other energy-efficient technologies, as well as the capabilities of the energy system and the market in general. Of course, these proposals still require discussions in specialized committees and changes to existing legislative acts.

As they say: "What has been seen, what will be seen." While this publication was being prepared, the prices of natural gas in European hubs were rising, and the specialized committee of the VRU recommended for adoption in the second reading the long-awaited draft law "On energy efficiency", which can replace the outdated law from 1994. There is hope that with the adoption of the new draft law and the implementation of appropriate energy efficiency measures, Ukraine's path to clean energy and its efficient use will be successful.

The launch of the electric energy market takes place within the framework of the Third EU energy package. This is one of the conditions of cooperation between Ukraine and the IMF to receive macro-financial assistance from the EU in the amount of 500 million euros this year. For market players, this is a new "window of opportunity" and huge challenges, and is the end consumer waiting for another energy crisis in the country?

It is predicted that electricity prices for non-household consumers will increase by 5-6% already during the biggest month with the introduction of the new market model. This is confirmed by the official statement of the Minister of Energy and Coal Industry, who appeals to the fact that in Ukraine the tariff for both the population and industry is 2-2.7 times lower than in neighboring belarus and the russia.

At the penultimate meeting, the Cabinet of Ministers of Ukraine tried to temporarily adjust the tariff for the population, which is already significantly lower than the market rate. First of all, maintaining the tariff for the population has a political genesis and is connected with the elections to the Verkhovna Rada, which will take place this month. For the population, the tariff may increase by 40%, provided it is "allowed to float". But politically, the tariff will be maintained by both the current Government and, potentially, the new one after the election of the Parliament.

At the same time, if the cost of electricity is raised by at least 5%, the number of subsidized workers in the country will increase by at least 150-200 thousand people, which is proportional to the population of Ternopil or Lutsk. Imagine the burden on the budget from transferring an entire regional center to housing and communal subsidies.

So far, the Cabinet of Ministers has imposed special duties on compensating low prices for the population in the tariff of SE "NEC "Ukrenergo" for the transmission of electric energy. But the case is that such a decision will lead to the distribution of additional load between consumers, and not electricity producers, since electricity producers do not pay the tariff for transmission, this tariff is paid

exclusively by the consumer. According to the head of Ukrenergo, and according to the calculations of the NCRECP, this model of compensation will lead to a 42% increase in prices for the industry. According to the official information of the NCRECP, the additional burden on industry (and, therefore, ultimately on the population) and the budget as a result of the implementation of such a compensation model will amount to UAH 37 billion per year (which is twice the amount of macro-financial assistance that Ukraine expects in 2019).

Therefore, an increase in the tariff for industry is inevitable. And this will be reflected, first of all, in the increase in the cost of at least 1/3 of the "grocery basket" (such electricity-intensive food products as bread, milk, sausage) and the cost of communal electric transport services, the difference between the cost price and the price for the passenger, which municipalities are unable to cover, since the budgets are already planned, and new significant revenues are not expected.

Ukrainian TPPs, as a basis for balancing the energy system, are not a model of technical progress today. Therefore, the country's thermal power plants gradually reduce electricity production from year to year. Modernization of TPP power units is a costly and long-term process. So, for example, the transition of one of the four power units of the Zmiyiv TPP of PJSC "Centerenergo" (Kharkiv region) from anthracite coal to gas-rich coal cost 50 million US dollars. At the moment, this financing is placed on the shoulders of Ukrainian taxpayers, since PJSC does not have such funds to invest in its own energy division, and European financial institutions do not lend to projects that contradict the latest EU energy packages. Therefore, it is predicted that the generation of electrical energy at the TPP will gradually decrease. And it is necessary to find an alternative for maneuvering during peak hours of load on the power grid. The situation looks better in the field of hydropower.

First of all, PJSC "Ukrhydroenergo" is actively receiving loans from the European Investment Bank for the reconstruction of equipment and turbines, so, just in February, another tranche of a loan for 22 million euros was received. Thus, with the preservation of the development trends established today by PJSC "Ukrhydroenergo", Ukrainian hydroelectric power plants can maintain the level of electricity production both due to the maintenance of installations and due to the commissioning of the new Kaniv hydroaccumulating power plant (HAPP) and new units of the Tashlytsia HPPP.

At first glance, the situation is more optimistic in nuclear energy. A nuclear power plant is a basic generation that is permanent and designed to ensure the satisfaction of the necessary minimum needs. The total generating capacity of the Ukrainian nuclear power industry is slightly more than 13 GW. This is a lot, but not enough to meet all the needs of the state. Moreover, the NPP is unable to quickly increase/decrease electricity production. SE NAEK "Energoatom" got rid of its dependence on Russian fuel, switching to replacement of TVELs from the American Westinghouse. And here it would be possible to keep calm, counting on this basic type of electricity generation, but 12 out of 15 operating power units have practically exhausted their resource (according to the IAEA and SE NAEK "Energoatom"), but they are working, according to the decision to extend the period of operation. At the same time, this is not a panic phenomenon, since each of the reactors has a designed margin of safety, and requires a major repair of the reactor body.

However, such actions cannot be unlimited, and according to the IAEA, the 2nd reactor of the Southern Ukrainian NPP will be the first to shut down in 2025. On the power system, this will be reflected in minus 1 GW of generating capacity. During the period 2030-2035, a wave of shutdown of reactors will begin, and in 2036, only 3 GW will remain out of 13 GW of generating capacity. And this - under the condition of high-quality and professional maintenance of NPP power units. It should be noted that this is quite difficult, since, according to the data of SE NAEK "Energoatom", the power units of Ukrainian nuclear power plants had emergency shutdowns 9 times in the first half of 2016.

Taking into account the facts given above, by 2035, the generation of electrical energy in Ukraine, under a pessimistic development scenario, will decrease by three times. And this means the arrival of irreversible energy hunger. Salvation from which will be falling into energy dependence on another state. And, most likely, after getting rid of the long-term gas needle of the northern neighbor, the country will be forced to get a new historic turn in its dependence on energy resources, now on electricity. According to the scenario of the least resistance to the development of the energy industry, it is necessary to increase the generating capacity of the heat and hydropower industry.

However, Stakhanov's pace will not work here. Firstly, the hydropower resource of rivers is limited, however, the economically effective hydropower potential in Ukraine is only 60% used, so 4 GW (which is equivalent to 4 NPP power units) are available for development. At the same time, this figure is realistic, since today the unified power grids of Ukraine are able to receive 5.4 GW of electricity (according to the data of SE "NEC "Ukrenergo"). Secondly, the development of thermal power plants requires the use of additional resources of fuel minerals (scarce coal or gas) or environmentally hazardous fuel oil.

A significant obstacle to the development of heat generation is the impossibility of crediting the construction of new generating capacities at the expense of international, primarily European, financial institutions (due to environmental restrictions), so such projects will either be included in the electricity tariff as an investment component, or they can be implemented for the account of funds from the state budget and internal investments, which is a rather limited resource and will allow the construction of no more than 2.3-3 GW in the next 7-8 years.

Conclusions.

According to the technocratic scenario, the Ukrainian energy system should be enriched by the construction of new nuclear power plant reactors. On average, the construction of a power unit of 1 GW costs 5 billion US dollars. World practice shows that the construction of one power unit will take 10-12 years (these are world averages). However, such a project is credited by countries that are reducing nuclear dependence, but have a need for electricity. The foreign exchange earnings of a 1 GW NPP power unit from the export of electricity to the EU are up to 2 billion US dollars. Therefore, the repayment of such a loan does not exceed 8-10 years and is a successful state investment. However, there are social and environmental risks in the area of construction of new reactors.

At the same time, the restoration of 10 GW of NPP power units requires an investment of 50 billion US dollars, which is extremely "difficult" for the Ukrainian credit history to obtain an international loan. In addition, there is a problem with the design and construction of reactors, in which the Russian Federation has considerable success, but in geopolitical terms it is an extremely unfavorable partner. There are developed and implemented projects in China and the Czech Republic, but there are risks of operation, the American school of nuclear energy is ready to provide Ukraine with projects with a full cycle of erection, but this will increase the investment estimate of construction, almost twice.

"Green" (alternative) energy is actively spreading around the world, which in a number of countries, such as Germany, Iceland, Sweden, Denmark, is displacing, and in some cases, replacing nuclear and thermal energy. There are many advantages: from a high level of environmental safety to ease of construction (especially solar power plants) and quick payback.

We will give a simple calculation of the economic efficiency of alternative energy. Modernization of one power unit of the Zmiivska TPP of PJSC "Centrenergo" is worth 50 million USD, which will increase the production of electric energy by 10-15 MW (the project will take 2 years). Using an investment of USD 50 million, 55-60 MW of solar power plants can be installed and connected to the grid in six months.

However, this project will require 110-115 hectares of land, which is extremely difficult in Ukraine, with the highest arable area ratio in Europe. Therefore, the issue of promoting land reform, introducing an open and transparent land market is one of the most important obstacles to the development of alternative energy.

On the other hand, obstacles to development form the absence of a green light for "cheap" loans for the purpose of developing Ukrainian green energy. It should be noted that economic calculations for determining the payback period of "green" energy are made on the basis of the sale of energy to the state at the "green tariff", which today in the country varies (set for each seller separately) from 15 to 19.5 euro cents per 1 kWh. Converted to hryvnias, the cost of "green" energy on the wholesale market is approximately 5 hryvnias 63 kopecks.

For the consumer (taking into account the cost of transportation, losses and the surcharge of the selling organization), the price rises to approximately 7.5 hryvnias per kWh. It is clear that end consumers do not pay such a price - compensation of various tariffs is carried out at the expense of

cheap energy from nuclear power plants, where the cost price is kWh. is approximately 42-45 kopecks - 13 times lower than the "green tariff". If nuclear power plants disappear and their capacities are replaced by stations operating on a green tariff, then Ukrainians (both household consumers and industry) will be forced to pay for electricity at least 5-7 times more expensive (given the Government's stated plans to gradually reduce green tariff).

However, amendments to the Ukrainian legislation regarding green auctions for the generating capacity of solar power plants from 1 MW will lead to a significant slowdown of the solar energy market and reduce the inflow of foreign investments.

In 1991, when Ukraine received the power system of the Ukrainian SSR (it has not changed much since then), household consumption did not exceed 30% of the total volume. Today, with a multifold increase in the number of household appliances, the growth of the country's housing stock by 38%, led to the absorption by household consumption of up to half of the total produced electrical energy. And here arises the problem of peak load on the power grid, which occurs in the evening. On the one hand, industrial facilities continue to work, the number of city electric transport units is increasing, and water heating devices and coolants, lighting, electric stoves and TVs are being turned on in homes.

It is precisely to overcome these peaks that the generation of electrical energy increases due to the burning of a larger volume of coal at Ukrainian thermal power plants. It should be noted that in such a culture, or rather its absence, energy consumption, the issue of the country's energy independence and the threat of energy starvation is not only before the Government, but also before every citizen. So, for example, if you replace 10 incandescent lamps in 15 million Ukrainian households with energy-saving ones, this will allow you to save 2,200-2,500 MW of electricity during peak load hours - exactly as much as the Zmiivskaya TPP generates.

And such a project, with its complex financing, will have a very quick effect. At the same time, Ukraine has one of the highest shares of energy consumption per 100 dollars of GDP - as much as 42, while in China it is 14, and in Germany - only 4. Therefore, on a level with the modernization of energy-generating capacities, Ukraine should become a European leader in the trends of introducing energy-saving technologies both in industry and in everyday life, forming a culture of rational use of electrical energy. And this is already the name of a whole government program.

So, probably, Ukraine is "recovering" from the rapid increase in electricity prices due to the introduction of a new market, primarily due to the reduction of energy consumption at the household level and the energy saving policy. But - there is a big energy crisis ahead, which is connected with the obsolescence of technologies and generating equipment, which may be decommissioned by more than 50% in the next 10 years. And this is a challenge facing the energy sector and the entire population of the country.

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THE ROLE OF HUMAN CAPITAL IN THE FORMATION OF INTELLECTUAL POTENTIAL BY AGRICULTURAL ENTERPRISES

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The competitiveness of economic sectors in general and economic entities in particular as a characteristic of the assessment of the final results of activity is currently provided by the activation of innovation processes. These processes become especially important in the current conditions of aggravation of problems of food security and import substitution in agriculture of Ukraine due to the fact that extensive methods of management in the industry are practically exhausted, and natural resources as a source of advantages and benefits are limited.

The main factors of development of the agricultural sector in such a situation should be and become innovations and investments in human capital, because it is human capital that sets the upper limit of development of the economy and society as a whole. Such problems of agricultural staffing as the outflow of labour resources from rural areas, the decline in staffing and professional qualification level of employees, the low percentage of rural school graduates returning to work after education (on average no more than 18-20%), the decline in the prestige of agricultural professions, make it necessary to search for scientifically sound recommendations and mechanisms for attracting, preserving, developing and effectively using human capital in the agricultural sector of the economy. The relevance and significance of the issues under consideration increases in connection with the need to improve the quality of products of the agro-industrial complex, and, therefore, the quality of labour in the transition to state support measures, as the activities of Ukrainian agricultural producers require support in various forms.

Thus, in modern socio-economic conditions one of the main factors of economic development is human capital. This is due to many reasons, and primarily due to the rapid pace of scientific and technological progress, the introduction of its achievements in production, as well as the emergence of new knowledge-intensive industries [1, 5].

As the economy develops, the importance of the components that make up human capital is constantly increasing. First of all, the requirements to the qualitative component: education, professional competence, as well as personal characteristics of the employee, his stress resistance and desire for continuous self-improvement are increasing. The increasing complexity and tightening of requirements of employers and society as a whole to human capital is caused by the complexity of the economic environment functioning at the macro-system level and, consequently, at the micro-environment level.

If previously it was considered that the main way to achieve competitive advantages was to strengthen the material and technical base of the enterprise, now enterprises consider human capital as the main asset, they make investments in this asset to ensure their growth and increase their competitive advantages. A person in the modern economy is seen as a valuable asset of an enterprise rather than a source of expenditure.

In the economic literature of recent years, the issues of the so-called "human capital" have become topical, which implies an increase in investment in human beings due to the costs of education and training, specialised training, as well as expenditures on health care and medical care of the population. The person is put at the centre of the reproduction process of the labour force. If we compare the economists' views on the reproduction process, when the labour force decreases due to natural ageing, as well as loss of working capacity, and which in the conditions of simple reproduction should be restored by practical retired labour force, and in the conditions of expanded reproduction - by a large amount of it, this is indeed a positive point [2, 31, 4, 8].

In the countries of Western Europe, the theory of human capital began to develop quite actively in the post-war years. The solution of social issues was intensified, and with it the growth of investments in human capital, which significantly exceeded investments in industrial capital. And, as a consequence, in these countries researchers note higher rates of labour productivity and the economy as a whole [17, p. 19].

People generate, retain and use knowledge and skills (human capital) and create intellectual capital. Their knowledge expands through interaction with other people (social capital) and generates assimilated knowledge belonging to the organisation (organisational capital) [5].

It is abilities, skills, knowledge that create value, and therefore the main bias in competent management at the enterprise should be towards attracting, retaining and developing human capital. Only employees, not their employers, own this capital and decide when, how and where they will invest it. In other words, they can choose, since work is a two-way exchange of value, not a unilateral possession of an asset by the owner.

The essence of human capital is sufficiently, in our opinion, disclosed in the definition given by the author's team [1]: "Human capital is a set of potentials, moral-psychological and physical health, accumulated and incremented as a result of investment knowledge, skills and experience necessary for professional activity in this or that sphere of social reproduction, bringing income to their owner".

We agree with the authors I.V. Zhuravlova and A.V. Kudlai, who defines human capital as a stock of abilities, knowledge, skills and motivations embodied in a person [7].

There are many approaches to the definition of the category "human capital" in the studied published literature.

Analysing the existing approaches and agreeing with many of them, we highlight several principal distinctive aspects:

- one of the features of human capital is the desire and abilities of the individual himself to continuous self-improvement through self-development and self-learning, as well as the application of investments in it in order to increase its volume;
- the reproductive process of human capital functioning (including investments in health and education, professional development, etc.) lasts practically for a lifetime. Hence, it would be more correct to use the notion of "forming" rather than "formed" (as some authors, including those mentioned above);
- innate and acquired potential and abilities of a person become human capital only when they are used in the labour process and provide a certain benefit to their owner.

Taking into account these provisions, we can give the following definition: human capital is innate and acquired in the process of life activity abilities and potential, formed by a person as a result of development (including self-development), a set of accumulated experience, skills, abilities, skills, professional and universal knowledge, abilities, motivations and health, providing income to its bearer, subject of entrepreneurship and society as a whole.

In our opinion, this definition sufficiently reveals, firstly, the general concept of the category "human capital", its essence, and, secondly, the principal possibility of its use in human activity. Human capital is a system of innate qualities, received education, way of thinking, acquired and developed opportunities of a person to work, giving the ability to produce goods, and as capital - to provide income.

Depending on the number of types of knowledge and experience that form the basis of human capital, two varieties of human capital are distinguished:

- general human capital is a combination of general theoretical knowledge, the level of moral and cultural development, a set of skills and experience, which can be used by a person in any type of economic activity and, as a consequence, at any enterprise and in its structural subdivisions at workplaces;

- professional human capital (one of the components of the general human capital) is a set of skills, knowledge and experience that relates to a specific professional activity and therefore is carried out, as a rule, at a specific workplace, in certain structural subdivisions and enterprises.

The economic literature often does not distinguish between the categories of "human capital" and "human potential". It seems to us that "human potential" is all the capabilities of a person throughout his/her life, and "human capital" is the potential of a person applied in labour activity throughout his/her life and providing him/her with income. Based on the above, we can conclude that human capital is the opportunities of human potential realised by an individual in the process of labour activity.

Such approaches to the definition of human capital are based on the emergence and development in the modern economy of new forms of relationships and interactions between the processes of production and consumption as the main forms of human life activity, which determine the special role of innovation in the development of modern society.

The subject of human capital appears in modern society as a bearer of labour and intellectual property.

It is possible to improve and, accordingly, increase the potential of human capital by improving the quality of education, increasing professionalism, improving and preserving health, cultural and moral enlightenment, expanding the information base and others.

In order to effectively manage the process of reproduction of human capital and determine the strategy of its development, it is important to first coordinate its structure, which is schematically presented in figure 1.

From the point of view of management objects, we distinguish the following levels of human capital aggregation:

- Individual human capital, the owner of which is a specific individual (employee);
- aggregate human capital, i.e. the totality of individual capitals in the context of the following levels:
- at the level of labour collective;

corporate - at the level of an enterprise;

regional - at the level of a region;

national - at the level of the country.

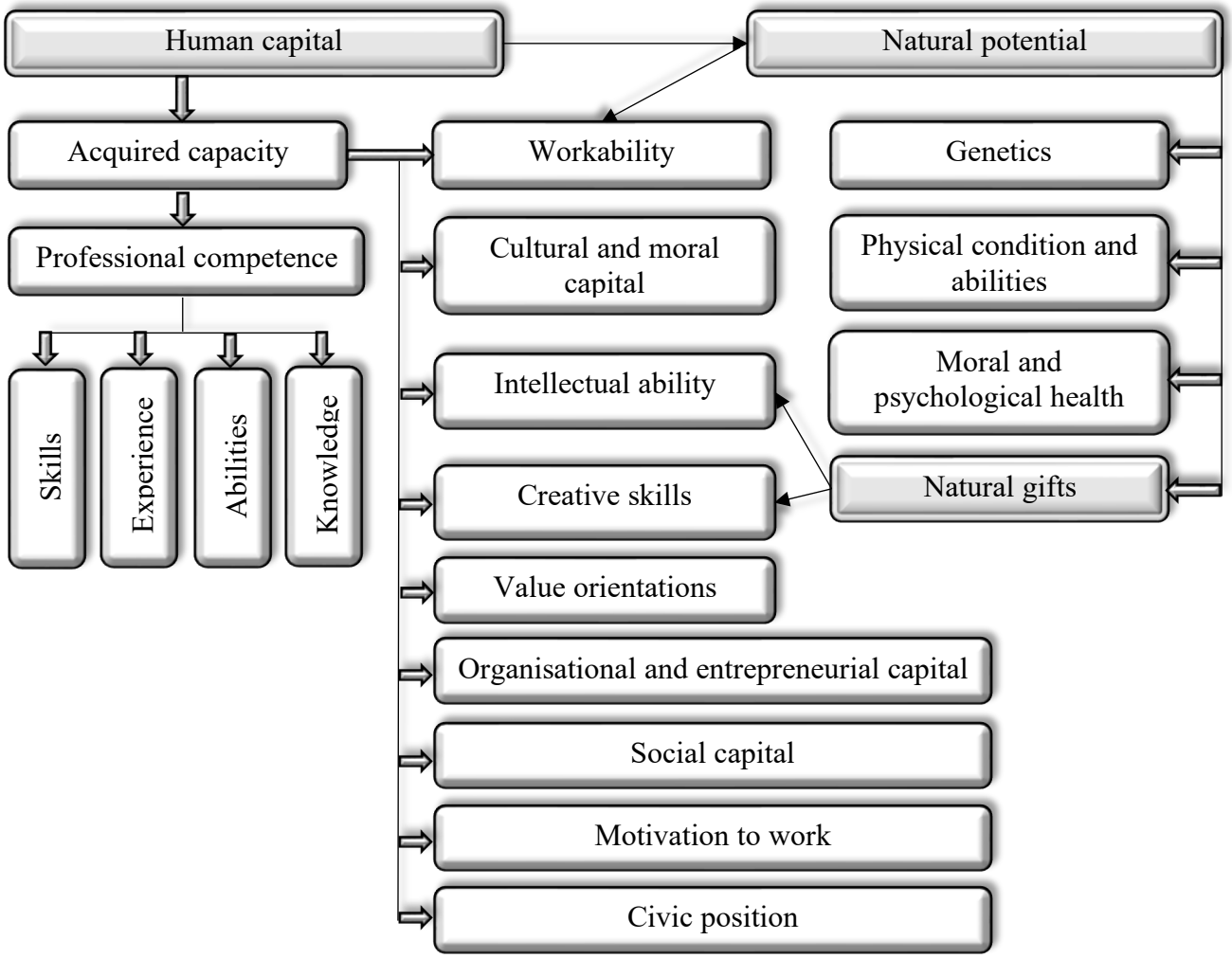

Figure 1. Structure of human capital.

Source: built by the author on the basis of [7, 11].

The individual human capital occupies the central place in this structure and predetermines all other structural components. Individual human capital is a totality of professional and personal qualities of a person relating to a particular individual, and therefore it should be given special attention in its reproduction process.

Human capital at the level of an individual enterprise is a system of individual human capitals, which has an aggregate consumer utility, a certain effect and orientation, allowing us to call it the combined human capital of the enterprise. This capital can be analysed, calculated, used, evaluated and compared. The same principle is used for the formation of sectoral, regional and national human capital, which is a set of individual and corporate human capitals, which, if certain proportions and reproduction conditions are preserved, make it possible to receive various types of income.

In order to manage any type of human capital, it is necessary to develop a scientifically sound system of indicators and evaluation parameters.

Human capital is an economic category characteristic of any individual, which can be assessed at any stage of his/her life activity. An individual can use it in various spheres of activity, including labour.

From the position of using human capital in labour activity, it can be labour capital, which is used in labour activity, and non-labour capital, i.e. not used in labour activity.

Used in labour activity with different degrees of usefulness, human capital contributes to the achievement of a certain economic effect, allowing to receive income or, in other words, to achieve certain rewarding results.

It seems to us that the identified functions of human capital may be of particular interest.

At the level of an individual, we have identified the following functions of human capital:

1) stimulating, contributes to the formation and development of the most necessary at each certain stage of development production qualities;

2) economic, which is manifested in the accelerated growth of profit due to the increase and realisation of knowledge necessary to ensure the movement of capital.

At the micro level, the following functions of human capital are distinguished:

1) prognostic. The study of human capital allows through the analysis of the relationship between opportunities and reality to assess the level of use of human capital of both individual employees and collectives and regions of the country and, on the basis of this analysis, to create conditions for improving competitiveness, innovation activity, economic growth;

2) production and economic. Human capital used by an individual is directly included in the process of production of goods and services. The higher the quality of an individual's human capital, the higher the quality of his/her labour activity, goods and services produced by him/her, necessary for normal life activity of people and satisfaction of their needs, and the higher it will bring income to the entrepreneur.

At the macro level, the following functions of human capital are distinguished:

1) strategic. Human capital acts as one of the elements contributing to the development of the state, the movement of scientific and technological progress within the state, as well as stable economic growth;

2) translational. Transfer from the past to the future of the human capital that society possesses. At the same time, only that part of the human capital that is in demand in the new time is transferred.

Many economists, comparing the accumulation of industrial and financial capital, in the definition of the essence of human capital include the process of its creation, which requires the diversion of funds from current use to achieve higher returns in the future, and also takes into account the following characteristic features [7, 11, 17] not separable from each other.

1. Unlike various types of assets, a human being cannot be a market commodity, unless we take into account the slave system. Consequently, the market provides prices only for the use of human capital in the form of rent (that is, in the form of wage rates). As a result, human capital is characterised by a minimum degree of liquidity.

2. The investment period is characterised by a longer duration. For example, education, a key form of investment in human capital, requires 20 years or more to reproduce, while industrial capital requires only three years for investment.

3. Human capital is characterised by a higher level of risk compared to the risk of investment in industrial capital. High costs of organising and controlling investments in human capital caused by migration flows, the payback period of investments, the underdeveloped labour market, and the lack of effective ways and mechanisms of risk management.

4. Investment income in human capital tends to increase. However, they are limited to the upper limit of working age, after which they are characterised by a decline, while the return on physical capital declines slowly as it accumulates. It should also be noted that returns to human capital can be in monetary and non-monetary forms. As a consequence, consumer aspects of human investments are sometimes more important than production aspects.

5. There is a saturation of the labour market with various institutional structures, due to the fact that the employer, acquiring the right to own human capital, enters into relations with a free individual who respects his rights.

6. Unlike other types of resources (natural resources, classical human resources and other types of capital), human capital needs to be invested in. Underdevelopment of human capital does not ensure high return on investment in high-tech industries as well.

7. According to the level of capital return, investments in human capital are the most attractive and efficient.

Individual human capital, according to some economists, consists of the following main components.

1. Knowledge as a set of information used in economic activity and ensuring the growth of its efficiency.

2. Skills as the ability to effectively carry out entrepreneurial and other activities.

3. Experience or professional skills that allow to perform specific labour operations for a long period of time.

4. Culture as a way of acting within the framework of knowledge, rules, traditions, morals accepted in society.

5. Motivation as purposeful activity, aspiration for development, including self-development, satisfaction with the process and results of their labour [6, 9, 11].

These components are the basis for the basic classification of types of individual human capital, including health capital, organisational and entrepreneurial capital, and intellectual capital.

Genetic capital is a set of mental, creative and general psychological qualities and gifts that play a significant role in human activity. It allows an individual to adapt to changing conditions, make the right decisions, and effectively master new knowledge and skills.

The main task of society, state and regional authorities in raising the level of genetic capital of an individual should be to assist in discovering and unlocking abilities, as well as their full utilisation in the interests of both society and each individual. At the moment, the problem is that many people's abilities remain undiscovered and unrealised, in which case society is deprived of a number of talented individuals. Consequently, the main task for preserving the existing genetic capital is to reduce such losses as well as their efficient utilisation.

Most researchers emphasise intellectual capital as one of the most important components of human capital [13, 18]. The growth of the level of labour productivity, as well as the increase in the return on capital investment is impossible without the growth of the level of intellectual capital development. Innovative economy, based on the achievements of scientific and technological progress, needs intellectual capital of a high level, this is due to the fact that with a low share of intellectual labour in human capital, investments in knowledge-intensive industries do not yield returns.

Relatively fast successes of such countries as Japan, Taiwan, Hong Kong, China, Korea, as well as new European developed countries (Spain, Portugal) prove that the development of human capital should be based primarily on a high level of culture of the population. This is also confirmed by the analysis of countries in transition, indicating that cultural traditions and mentality are the basis for the successful growth of education [15]. In the domestic economic literature, the concept of intellectual potential is identical to the concept of scientific potential.

Classification of human capital by types is possible according to different main features and for different purposes. Here it should be noted that many researchers emphasise the real and decisive role of intellectual capital. In fact, the products of intellectual labour can be fixed both in material form and as an intangible asset.

The analysis and assessment of intellectual capital are scientifically substantiated and reflected in practical recommendations for its assessment and effective use, which makes it possible to use the result of the scientific study of intellectual capital to analyse other components of human capital.

Summarising the results of the study, we can conclude that a person, possessing his human capital used in the process of professional activity, at the same time in terms of its importance is the main and in the structure of resources used. The final results of any production activity, first of all, will depend on the quality and efficiency of management and utilisation of this type of capital.

The transition of agriculture to the innovation path of development will inevitably cause changes in all the constituent elements of the economic system, providing natural transformations in the economy. In this connection, as a rule, there is a radical change in the development strategy of the agro-industrial complex, while the market changes depending on the ratio between accumulation and consumption, the production process finds its continuation in other stages (distribution, production consumption), which makes it possible to noticeably increase the price of consumption of the innovative product at a constant or even decreasing production price.

In the process of transition to the innovative way of agricultural development, there is an increase in the complexity and growth of balanced complex resource provision of the economy of the agro-

industrial complex. These trends force the authorities of various structures to develop the following directions:

- to concentrate investment resources, as well as to increase the efficiency of their use on the main directions of NTP of agro-industrial complex industries;
- to form highly qualified human capital of the world level;
- promote motivation to systematically improve the level of education and professionalism of employees;
- improve the system of financial support for innovation activities in all spheres of the agro-industrial complex;
- provide all sectors of the agro-industrial complex with the necessary information, as well as data on new technologies, market structure, innovative products, etc.;
- improve the investment climate in the regions of the country to attract foreign and domestic investment capital.

To identify the directions of innovative management of the quantity and quality of human capital as the main elements of reproduction, it is necessary to develop the scientific theory of forecasting and assessment of labour potential both in the country as a whole and at the level of individual regions.

To do this, it is first necessary to define the meaning of the category "labour potential". Labour potential is the potential quantity and quality of labour resources at the disposal of economic entities of a given region, existing in the presence and predicted in the future period. The main directions of increasing the labour potential of agro-industrial complex industries include improving the quantitative and qualitative components of human capital.

The definition of the category "labour potential" raises the question of the degree of importance of such constituent elements of human capital as quantity and quality. For this purpose, it is necessary to determine the structure and hierarchy of objectives.

The main objective of the development of labour potential of the agro-industrial complex is to meet the needs of production. Based on the set objectives, the following target benchmarks can be identified:

- preservation and development of the village, ensuring food security of the country. The disadvantage of such goal setting is that there is an outflow of capital investments from other sectors and, as a result, stagnation of economic development as a whole due to inefficient use of funds;
- creation of competitive agricultural production. In modern conditions, this is the best option for the development of the agro-industrial complex. However, even here we can identify certain disadvantages, which include the following circumstance: according to the theory of comparative advantage, the production of certain groups of goods may not be competitive due to the influence of natural and climatic features, production conditions and other factors (for example, the lack of a developed logistics system, low level of market development), and this leads to the need to create specialised production, which, in turn, may be in conflict with the policy of food and agriculture.

Hence, it follows that the last of these goals should be considered optimal, with significant inclusions of the first one in those situations where it coincides with the goal of the state, taking into account the fact that some costs arising from the production of products of the agro-industrial complex of the region, in solving the state tasks to ensure food security of the country should be reimbursed from the federal budgets.

Having defined the creation of competitive agricultural production as the main goal of agro-industrial complex development, we come to the following conclusion that the main method of increasing the competitiveness of the agro-industrial complex of the country and regions is investment in innovation, with the help of which the following results can be achieved:

- increase the level of labour productivity;
- reduce labour intensity and material intensity;
- optimise the management structure;
- make high-quality marketing decisions;
- improve the reproduction structure of human capital.

Achievement of such results is possible on the basis of a close relationship between science, production and education.

The described type of development requires giving more weight to the qualitative component of labour potential than to its quantity, so the main direction in the development of reproduction processes should be given to this component.

When developing methods for managing the system of human capital reproduction, it is necessary to identify the components of such a system by elements and analyse them. From the very definition of the category "human capital" we can identify that the main constituent elements of human capital reproduction are qualitative and quantitative components, so it is advisable to reveal each of them more specifically.

The economy distinguishes two main ways of quantitative reproduction of human capital - migration and natural reproduction.

For natural reproduction the most important elements are: - increase in the birth rate; - reduction of mortality rate; - the level of basic education.

Improvement of the migration component can occur in two ways: - increasing the number of people coming to the territory (immigrants); - reduction in the number of those leaving the territory (emigrants).

It should also be noted that human capital is subject to attrition, the main reasons for which are: - reaching retirement age; - complete or partial loss of labour capacity; - emigration to other states.

From the above, it can be concluded that in order to increase the level of human capital endowment it is necessary to: - to stimulate immigration of able-bodied persons to the region; - increase the birth rate; - create opportunities for the population to receive secondary education;- promote the health of the population; - regulate the retirement age; - increase life expectancy; - reduce the mortality rate of the working-age population, as well as morbidity and traumatism leading to disability; - limit (indirectly) the emigration of able-bodied persons.

A comparative analysis of the advantages and disadvantages of the directions of growth of human capital endowment is given in table 1.

Table 1. Advantages and disadvantages of human capital endowment growth areas.

<table>
<tr><th colspan="2">Ways to increase security human capital</th><th>Advantages</th><th>Flaws</th></tr>
<tr><td colspan="2">Increased immigration</td><td>Allows you to manage the structure of human capital</td><td>Dependence on external conditions, problems with socialization</td></tr>
<tr><td colspan="2">Birth rate growth and level of training</td><td>Allows for enhanced reproduction</td><td>Long lag between activities and effect, complex relationship between activities and effect</td></tr>
<tr><td colspan="2">Decline in emigration</td><td>Does not require extraordinary measures, it is enough to provide the necessary minimum</td><td>Does not allow increasing labor potential, but only prevents its reduction</td></tr>
<tr><td rowspan="3">Reducing natural attrition of human capital</td><td>Decrease in mortality</td><td>Gives great returns per ruble invested into education</td><td rowspan="2">The effect is limited, marginal costs per unit of effect increase rapidly (find optimal)</td></tr>
<tr><td>Reduced morbidity and disability</td><td>Reduces the burden on social security</td></tr>
<tr><td>Raising the retirement age</td><td>Saves pension costs</td><td>Negative social and political effect</td></tr>
</table>

Source: built by the author on the basis of [12, 13].

In our opinion, from the position of the ratio of effect and costs in the short term, the most expedient solution to the problems of growth of human capital provision through the immigration of highly qualified human resources (human capital). Many foreign enterprises follow this path, attracting qualified foreign workers for the period of seasonal work (sowing, harvesting, etc.).

A similar method is used by US scientific institutions, which attract experts in various fields and prominent scientists from other countries.

In the long term, the most correct way is to develop our own system of training and retraining of specialists, to guarantee domestic personnel a high level of wages, and to create decent working conditions comparable to those created for foreign specialists.

For each element of the human capital reproduction system, the main factors of influence and conditions contributing to the improvement of human capital endowment are identified (tab. 2).

The data in Table 2 show that certain difficulties are caused by attracting and managing qualified human capital, since its retention and development require not only the presence of certain factors and conditions, but also the observance of a whole set of conditions.

The previously considered elements of human capital reproduction characterise, first of all, their quantitative component. However, at this stage of economic development, the quality of human capital comes first, especially when building an innovation-type economy.

Table 2. The main elements affecting the system of human capital reproduction.

<table>
<tr><td colspan="2" rowspan="2">System elements reproduction human capital</td><td colspan="2">Impact factors and conditions for improving the provision of human capital</td></tr>
<tr><td>Labor force low qualifications</td><td>Highly qualified workforce</td></tr>
<tr><td colspan="2">Increased immigration</td><td>State of demand for labor resources.</td><td>Cultural and linguistic proximity. Relatively high wages. Relatively high quality of life. Lack of legislative and bureaucratic barriers. Tolerance towards visitors.</td></tr>
<tr><td colspan="2">Decline in emigration</td><td>State of demand for labor resources. State support for the unemployed.</td><td>Sufficient level of quality of life. Wages adjusted to their conditions are no worse than alternative ones, both by territory and by type of economic activity. Social services</td></tr>
<tr><td colspan="2">Increase in birth rate and education</td><td>Acceptable quality of life. Benefits for material stimulation of fertility.</td><td>Material security of the population. Provision of accessible educational, educational and medical institutions.</td></tr>
<tr><td rowspan="3">Reducing natural attrition of human capital</td><td>Decrease in mortality</td><td rowspan="2">Reducing crime rates, drug addiction and alcoholism. Increasing the provision of household services.</td><td rowspan="2">Injury hazard in production and transport. State of the environment. Availability and accessibility of medical facilities for prevention and treatment.</td></tr>
<tr><td>Reduced incidence rate</td></tr>
<tr><td>Raising the retirement age</td><td>Increasing life expectancy and improving the health of citizens</td><td>Job satisfaction.</td></tr>
</table>

Source: built by the author on the basis of [13, 15].

The Human Development Index (HDI) is used to compare the quality of human capital (especially in international practice).

At the moment, a system of indicators defining quantitative and qualitative socio-economic aspects of social development has been developed and scientifically substantiated, consisting of three types of indicators:

- Health (longevity) index, or life expectancy at birth (LIFE), which demonstrates differences in the level of health in different countries and regions;

- education index, which determines the extent to which the level of education of the population in one state (or region) exceeds the level of education (literacy) of the population in another country;

- income index, which determines the level of economic development of the analysed states or regions, estimated through GDP in purchasing power parity (PPP), in US dollars, per person. The human development index is calculated in the following sequence [11, 13].

Private indices are calculated using the following formula:

$$Index = \frac{X_i - X_{min}}{X_{max} - X_{min}}$$

The income index is calculated through decimal logarithm.

$$W(Y) = \frac{\log y_i - \log y_{min}}{\log y_{max} - \log y_{min}}$$

The final human development index is calculated as the arithmetic mean sum of the values of the three components.

In our opinion, it is necessary to systematise the indicators related to the quality of human capital.

One group should include indicators expressing those characteristics of human capital that directly affect the degree of their use in the production process, for example, the level of qualification of employees, while the second group should include indicators that characterise the impact on the values of the indicators of the first group, for example, the state of health.

The characteristics of human capital that have a direct impact on the efficiency of their use in production include the following:

- level of education;
- experience and professional qualification;
- economic activity of the population;
- correspondence of supply and demand in the labour market by categories of specialists;
- ability to develop, including self-development (motivation).

The values of the indicators of the first group are influenced by the following factors:

- age structure of the population;
- life expectancy;
- gross regional product per person;
- the level of drug addiction, alcoholism, etc;
- development of health care;
- provision of basic living conditions.

Among the above-mentioned indicators, the most important is the conformity of knowledge and professionalism of personnel to the basic needs of production, as well as the duration of the period during which this conformity is achieved.

The change of production requirements to the level of human capital development in the process of innovation development requires the creation of a system of ways to manage the quality of human capital.

The management of human capital quality is obviously reduced to the processes and methods of its maximisation. However, this cannot be said about the management of the quantitative component. Firstly, its increase is associated with a significant increase in costs and a higher risk that these costs will not be effective enough; secondly, there is a probability that the quantitative component will prevail over the qualitative one (such a situation may occur in case of a shortage of labour resources).

The optimal combination of quantity and quality can be called such a combination, in which the number of economically active population in any period of time was not less than the value of the

number in previous periods and is as stable as possible. Observance of this condition will make it possible to avoid instability in the labour market and thus prevent the growth of the demographic load coefficient.

Formation of the quantitative component of human capital is a rather difficult task, so it is necessary to ensure its acceptable level, and the correspondence between supply and demand on the labour market should be achieved by managing the production needs in personnel, bringing them in line with the available amount of human capital by changing, for example, labour intensity. This conclusion is also justified by the fact that approximate forecasting of the amount of human capital available in the future is a relatively simple task.

The system of human capital reproduction may undergo changes when it is affected by changes in the external environment and changes in the production environment. The sequence of these changes is schematically presented in figure 2.

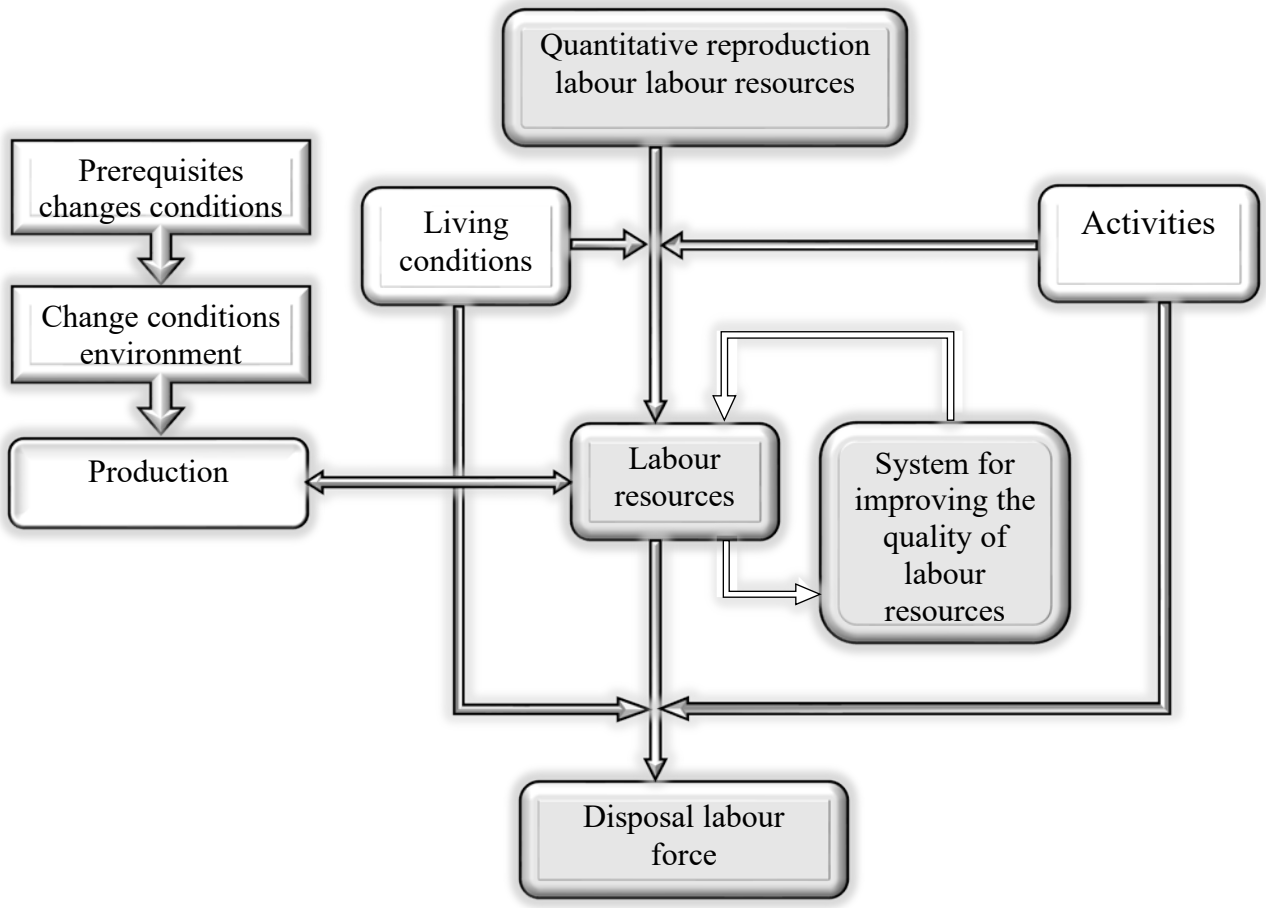

Figure 2. Human capital reproduction system.

Source: built by the author on the basis of [7, 14].

It should be noted the sequence of changes in the system of human capital reproduction under the influence of changes in the external environment and production environment.

1. Changes in the external environment will entail changes in production. 2.

2. Changes in production will lead to changes in the structure of the labour market, and these changes will affect both quantitative and qualitative aspects.

3. Changes in the structure of demand on the labour market will in turn lead to changes in the requirements for retraining and vocational education, as well as in the attraction of new skilled and low-skilled workers.

4. Changes in the requirements for retraining and vocational education will require retraining of personnel at enterprises.

5. Retraining of the workforce in enterprises will lead to an increase in the quality of labour offered.

6. Improving the quality of labour offered will satisfy the need to change production.

Having analysed this scheme of transformation of the system of reproduction of human capital, it should be noted that at each stage there will be some slowdown due to the inertia inherent in each subsystem. As a result of these processes, the speed of adaptation of production in response to changes in the environment will be insufficient.

Such a problem arising will be solved in two ways by: 1) increasing the sensitivity of each subsystem to changes occurring in each of the interrelated subsystems and reducing the inertia of the reaction of these subsystems to changes in the state of the related subsystem; 2) moving to a process of adaptation of the production system. In this case, it is necessary to create an analytical centre that would conduct analysis and help each of the subsystems to determine in advance the directions of probable changes (fig. 3).

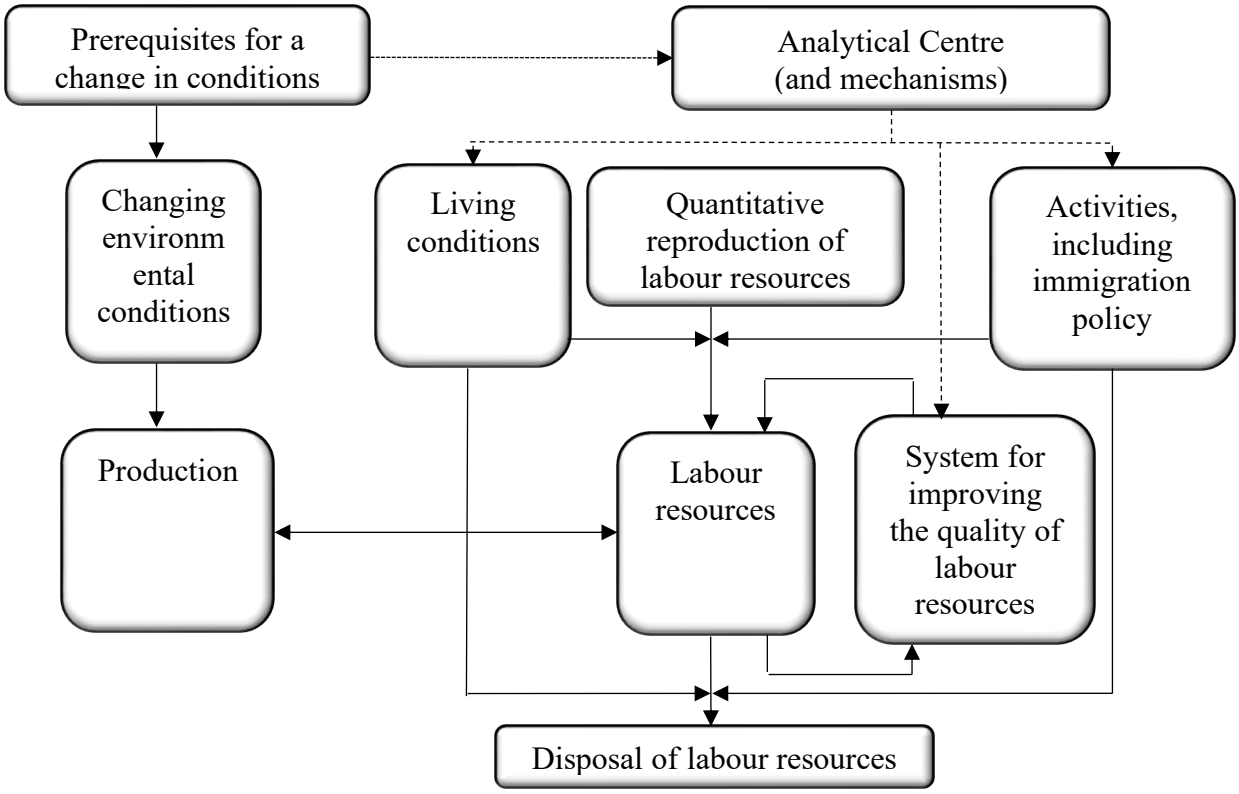

Figure 3. Human capital reproduction system with regard to the presence of a guiding analytical centre.

Source: built by the author on the basis of [8, 13, 16].

In our opinion, the think tank should not replace the market as a system of regulation due to the fact that, as historical experience shows, it is the market that allows the economy to develop optimally in the long term.

The quality of life and social infrastructure in rural areas is known to be lower than in urban areas. The factor compensating this difference may be higher profitability in agricultural production. However, at the moment the level of real money income in rural areas is lower than in the city.

From the above, we can conclude that people in rural areas are held back by several factors: low level of professional education and, consequently, the inability to find a high-paid job in the city, lack of money to move, as well as historical immobility, or unwillingness to change the usual way of life.

Undoubtedly, the attempt to improve the quality of labour potential in rural areas under the current conditions of social infrastructure development and the level of profitability is obviously a failure because improving the quality of labour resources will remove the existing conditional restrictions that keep people in rural areas, and, as a consequence, will lead to the migration of able-bodied and educated population to the cities.

In our opinion, this situation can be changed in the following way.

1. It is necessary to encourage the transfer of the most labour-intensive and least land-related agricultural production and processing to areas of high population concentration, where social infrastructure should be developed to provide the population with a high quality of life (currently, achieving such a level throughout the country is difficult and often not economically feasible).

2. For the population remaining in rural areas and whose labour activity is directly related to work on the land, it is necessary to provide increased profitability.

The implementation of these and some other measures will make it possible to carry out activities to improve the quality of human capital of the agro-industrial complex as a whole.

In modern conditions of innovation-oriented development of the economy it is important to revise the existing views on the category of "human capital" and the process of its reproduction. As is known, in the pre-reform period the problems of reproduction of human capital were mainly reduced to the denial of the properties of labour force as a commodity. It was argued that labour power had no monetary value and was represented as an aggregate labour force. Reproduction of labour force was the goal of socialism, and it was defined as the most complete and comprehensive reference point for the development of the members of society. And as a result, wages were one of the centrally established planned norms, characterising the distribution of the country's national income among workers depending on the costs of their individual labour [12, 15].

At the same time, it should be noted that this approach loses the objective basis for determining the quantitative value of wages necessary for the normal reproduction of human capital due to the fact that the planning of wage levels was not based on precise quantitative parameters that determine the level of costs of reproduction of human capital and its price, and there was no clear definition of indicators of its sectoral, intersectoral and intrasectoral, as well as territorial differences.

In the transition to a market economy, human capital begins to act as a commodity, the price of which is determined by the labour spent on the production of means of subsistence. It should be noted here that the distinction of human capital as a commodity includes the size of compulsory needs and ways of their satisfaction, which, in turn, determine the size of the value of human capital and represent a set of habits and life requirements of workers.

It follows from the above that the size of the value of human capital, unlike other types of goods, includes historical, moral and cultural aspects. At the same time, since labour remuneration should guarantee normal working and rest conditions for both the worker and his family members, the market mechanism in this situation establishes the minimum wage that will solve this problem.

Differences in the level of wages in different sectors of the economy, first of all, will depend on the situation on the labour market, i.e. the availability of supply and demand for each specific type of labour, as well as on differences in the complexity, intensity and prestige of certain types of work. The competitive market is also able to identify differences in productivity and professionalism of individual workers and express these differences through wage differentials. As a consequence, in the conditions of a socially oriented labour market on the basis of optimal wage differentials should ensure the activation of the production function of this market, and not only the reproductive function.

Having analysed the structure of labour reproduction costs, we can determine that the volume and share of wages in GDP tend to increase. To some extent, this is caused by a sharp decrease in the provision of free state social services, which mainly include: health care, education, housing. This is due to the fact that under market conditions many socially important goods and services have become commodities, and there is a need to include them in the costs of reproduction of human capital.

The analysis shows that in society in general and market relations in particular, the approach to determining the true value, quantity and quality of human capital in reproduction processes is changing dramatically, the changes come from the principle that everything has its price. In this situation, market

regulators are relatively universal and the only means of providing an opportunity to objectively measure and evaluate labour activity and labour results both at the level of an individual enterprise and society as a whole.

Undoubtedly, in order to realise this type of reproduction of human capital, it is necessary to guarantee the fulfilment of some conditions.

1) to increase the level of labour productivity and the development of production forces and relations;

2) to create a free labour market, providing opportunities for high mobility of labour force, as well as its inter-sectoral transformation.

Taking into account that overcoming the problems of formation of a competitive market and compliance with all its conditions is a rather difficult task, it is unreasonable for the state to refuse to regulate reproduction processes at the initial stages of market regulation. However, it should also be noted that a return to the previous system of human capital reproduction with a high share of state participation is no longer possible.

The peculiarity of human capital reproduction is inextricably linked to the current conditions of market functioning. Firstly, individual reproduction processes are intensifying, and secondly, the market is saturated with various regulatory institutions. These peculiarities determine the need for the formation of scientifically substantiated ratios between the costs of reproduction of human capital and the price of labour.

All this, in turn, requires a clear separation and definition of the categories of skilled labour and skilled worker. According to the authors' collective [11] it is necessary to abandon the concept of "qualified" when using the term "cadres", due to the fact that there is some contradiction in this combination. Applying the concept of "cadres", we assume that these are qualified workers who have undergone some specific training or retraining. But it should be taken into account that this is a historically established concept and therefore there is no urgent need to take it out of scientific circulation, especially when it comes to large agricultural production.

On the other hand, in modern conditions, due to the complexity of agricultural production and strong differentiation of its technical and technological equipment, there is a multivariant intertwining and combining in the labour of one worker the performance of duties of a skilled worker, specialist and manager. This situation is especially characteristic of private subsidiary farms of commodity type, households organised by those specialists who worked in collective farms of the former Soviet Union (engineers, zootechnicians, agronomists, veterinarians, etc.). The labour activity of such workers simultaneously intertwines both highly skilled and low-skilled labour. There is a need for skills in management, organisation, trade and supply. In this situation, it is difficult to classify and differentiate such labour. But, if such a worker has other workers in his subordination, then a completely different situation arises.

Nowadays, the theory of human capital management distinguishes many approaches to the classification of labour personnel or staff. Classification by categories of workers is considered to be the main one. A.V. Karpenko defines the category of "workers" as production personnel, which carries out its participation in material production with a large share of physical labour [8, p. 47-48], and production personnel is divided into the following components:

1) main workers - personnel engaged in the main production;

2) auxiliary workers - personnel, as a rule, engaged in auxiliary production;

3) service workers - personnel engaged in servicing other units of the enterprise.

The main criterion of attributing personnel to a certain type through the share of physical labour in the volume of production is, in our opinion, rather controversial due to the fact that in this situation the specific content of labour, its complexity, intensity and other other indicators will not be taken into account.

Due to the specifics of agricultural production, there are many working professions associated with the expenditure of physical labour and at the same time requiring high professional skills and extensive work experience.

At the same time, one cannot ignore the fact that the new generation of machines used in recent times in most cases considerably simplify quite complex processes and make it possible to operate such machines and processes even by unskilled workers. In our opinion, this position is quite ambiguous, and it would be wrong to adhere to such a one-sided position due to the fact that in this case there is a denial of the impact of the development of knowledge-intensive industries and increasing the level of labour mechanisation on the labour of workers in general.

In the conditions of transition to post-industrial economy, further development of all branches of the agro-industrial complex, introduction of robotised equipment and technologies, the working functions of workers are being relegated to the background due to the fact that to a large extent the specific working functions are being reduced to control over automated processes. But at the same time, such characteristics as responsibility and risks for labour results are coming to the fore, which significantly changes the nature of work itself.

In the new conditions of production from workers are required not so much the cost of physical labour as mental, as the importance of speed of decision-making in general and speed of decision-making in non-standard situations especially, increased attentiveness, ability to analyse to make optimal decisions increases.

Our research has shown that new imported machinery is easier to operate than domestic analogues, and the mechanic learns it quite easily. But at the same time, proper operation and efficient labour on this equipment is quite complicated. In some functions the labour of mechanics is increasingly intertwined with engineering, and there is a need to form a high culture and economic thinking of workers, including the need for serious general education and professional training. Consequently, the seeming simplicity of mastering new machinery and modern technologies is deceptive.

Thus, in general, technical progress in the industry puts forward new requirements to workers. At the present stage of development, while simplifying individual labour functions, a worker should correspond to the whole system of productive forces and production relations in agriculture. At the same time, the hitherto existing statement that a worker should be universal and master several related professions becomes irrelevant and should be changed taking into account the current trends in the development of agro-industrial production: the thesis under consideration should combine several provisions simultaneously: from those based on the use of low-skilled labour to high-tech, resource-saving ones.

Taking into account the multiformity that has developed in agriculture to date, in the conditions of introduction of achievements of scientific and technical progress, it becomes especially relevant to identify the basic part of training of a highly professional worker, as well as the system of advanced training.

These aspects of the problem were theoretically reflected in the works of Zhuravlov I.V., Kudlai A.V. and other researchers in the 80s of the twentieth century. They determined that multi-structure production will eventually increase the demand for workers of different levels of professional training. At present, these issues are also relevant, but some clarifications are required due to the fact that in the Russian conditions of those years it was exclusively about the development of large-scale agricultural production, and the emergence of small-scale producers along with these forms of management was not even expected [7].

L.M. Dyba also analysed the above-mentioned problems, highlighting the need for the development of specific professional standards on which the existing education system would be based [6]. In the works of this author there are no certain proposals for the construction and implementation of a set of standards in secondary, primary vocational and higher education. An essential feature of the reproduction of qualified personnel in the agro-industrial complex is the interrelation of this process with changes in the structure of capital. Having analysed the experience of developed countries, we can fully identify the trends of labour productivity growth in the industry, as well as the reduction of unemployment. At the same time, due to the specifics of agro-industrial complex development, at a certain stage there is a displacement of not only low-skilled, but also partially highly skilled workers by high-tech machines and apparatuses. In the agrarian sector, unlike in industry, these phenomena occur at a more intensive pace.

For example, in the United States, the agricultural industry, with a relatively small share in GDP, is a powerful efficient and highly productive system, where one worker engaged in agro-industrial complex provides up to one hundred residents of the country with its products. [15]. Such changes became possible only due to the improvement of professional characteristics of employees working in the agrarian sphere.

Often when analysing the available economic literature, it can be noted that there is an unfair underestimation of the role of the "working class" in increasing the level of efficiency of agricultural production. Thus, according to some authors, the main source of development of economic relations and increasing the level of efficiency in the industry are managers, as well as the staff of scientific and technical organisations. In our opinion, this opinion is erroneous. Undoubtedly, the growth of public labour productivity in the agrarian sphere is the result of the activity of all aggregate forces aimed at its achievement, nevertheless, it would be inappropriate to underestimate the importance and the need for qualitative changes in the reproduction system of qualified personnel. This position is also supported by the fact that in developed countries during the last decades measures to improve the system of primary vocational education in the branches of agro-industrial complex have been implemented [13].

Most researchers link the potential for growth of labour productivity level of skilled workers in the agricultural sector of the economy with a clearly traceable trend towards a decrease in their total number with the level of development of the material and technical base of the industry, which, in their opinion, predetermines the qualitative and quantitative structure of skilled workers' employment. In the pre-reform period, when quite a lot of scientific research was carried out in our country, it was proved that the growth of professionalism of mechanic personnel contributed to the growth of labour productivity and increased efficiency of agricultural production [9].

The sharp increase in competition from developing countries in the sphere of production of material goods, the need to continuously improve the level of labour productivity oblige large monopolies, including in the agricultural sector, to increase the level of investment in initial professional training, as well as to improve the level of qualification of existing workers.

The problem of a clear distinction between skilled and low-skilled labour in the agricultural sector is one of the principal ones within the framework of the topic under consideration. Studies and debates on this issue, which began in the late twentieth century, have not resulted in clear-cut recommendations. To this day, some economists still classify workers as skilled according to the level of mechanisation of the worker's labour. All other labour falls under the category of unqualified, although it in turn requires both great professionalism and special experience.

To a certain extent, we agree with the opinion of S.J. Vovkanich, L.K. Vovkanich and L.K. Vovkanich. Vovkanich, L.K. Semiv, who note that there is a mixing of concepts, skilled and unskilled labour is identified with mechanized and manual labour [2, p. 15]. In our opinion, this is unacceptable. There should be a division of labour according to the specific content and complexity, regardless of whether this labour is associated with the use of machines or not. In this regard, the non-mechanised labour of a shepherd, milkmaid, vegetable grower, beekeeper is not only very complex, but also requires a great deal of experience and knowledge, and often the presence of intuition, so it is unique in its own way. The loss of even a small amount of past experience in the most important agricultural jobs will lead to a rapid deterioration of product quality. At the same time, there is no need for specialised training among workers in the industry whose work is related to machines, only brief instruction.

The above does not mean that unskilled labour is completely absent in agriculture, especially when it comes to the performance of individual operations inherent in complex labour, such as the highly skilled labour of a farmer. At the same time, there is a need for additional analysis of the degree of reduction in the share of unskilled manual labour in the industry during the development of knowledge-intensive industries due to the fact that in these processes not only unskilled labour, but also, until recently, skilled labour is displaced from the industry.

Keywords: intellectual potential, employees, intellectual capital, capital, management mechanism, innovation development, evaluation, agricultural innovation system.

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ORGANISATIONAL AND ECONOMIC WAY TO ENSURE THE DEVELOPMENT OF ENTERPRISE PERSONNEL

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Introduction. The current state of Ukraine's economy is characterised by transformational changes associated with the country's chosen development vector and the transition to a market economy. Due to external factors, a significant number of businesses face the problem of adapting to the dynamic environment in which they operate. The negative impact can be attributed to frequent changes in the market rules, the emergence of new technologies and discoveries that not everyone can immediately access or adapt to, the inability to compete with more advanced enterprises, and a number of other reasons. However, one of the aspects that has a significant impact on the general state of the enterprise and its success is the staff, namely its quantitative and qualitative composition, which can both ensure the prosperity and growth of the company and, conversely, its decline.

In order to ensure profitable and efficient operation, attention is increasingly focused on such a concept as the mechanism of enterprise management, which is the creation of a management system that would provide constant management influence aimed at obtaining certain results of the organisation's activities, in other words, it is a constant interaction between the subject and object of management that ensure the production process.

The peculiarity is that any management mechanism should be individually developed for each enterprise, taking into account its peculiarities and specifics of activity, in other words, one that would fully cover all the most important aspects.

One of the key elements of a company's management mechanism is the HR management subsystem. Human resources management is an important area of the company's activities, which includes the process of recruiting and hiring the employees required by the company, ensuring comfortable and safe working conditions, developing professional skills and competences, career planning, etc. To ensure effective work with personnel, companies often develop an organisational and economic mechanism for personnel management.

The organisational and economic way of personnel management is a system of forming goals, tasks, principles, functions, models, forms and methods that allow transforming the elements of the personnel development system into its required state in the course of labour intellectual and mental activity, taking into account the factors of the external and internal environment of the enterprise aimed at achieving the efficiency of personnel management. It should include the goals and objectives of HR management, describe the relevant tools and methods, the main directions of improving the level of HR management and relevant programmes, include information on staff motivation, career development, identify areas of employee development and argue their social and economic efficiency.

HR development activities can be carried out by managers and senior executives of companies or by invited specialists. Today, the following methods of staff development are common: courses, seminars, master classes; audio and video courses; rotation of specialists; and knowledge exchange among company employees. Some time should be devoted to non-traditional methods of personnel development, such as business games, situation modelling, team building, etc.

However, in addition to training activities, it is important to properly set up a system of material incentives to increase employees' interest in improving their knowledge, skills and competencies. In other words, it is advisable to use the results that an employee can achieve by using new knowledge or engaging in a new type of activity that has been mastered during training as one of the main incentives. However, it is also necessary to ensure a close reasoned connection between the incentive and the employee's performance. That is, there should be an understanding of why the employee received a bonus or raise.

As for the retention of personnel in the company, this can only be ensured by creating a comfortable atmosphere, an appropriate level of salary and incentive system, as well as providing opportunities to develop and expand their skills and competencies, while growing not only as a professional but also as a person.

The main part. We can think of people as the greatest resource of any organisation or business. However, until recently, human resource management was not considered as important to success as other business operations such as finance, marketing or sales. This notion has changed in many ways due to the impact of new technologies, globalisation of markets and changes in organisational hierarchies. Today's business leaders place great emphasis on hiring the right people and keeping them engaged.

The research of HR management efficiency is an important part of the scientific discourse, and both domestic and foreign scholars pay attention to this topic. Let us consider the key developments in this area. Thus, M. Armstrong, one of the most famous foreign experts in the field of human resources management, in his works, in particular in the book «Human Resource Management Practice», considers comprehensive approaches to effective personnel management, including methods of motivation, evaluation and development of employees. P. Drucker, who is considered one of the founders of modern management, focused on the importance of people in an organisation and the importance of effective management for achieving high results. His ideas on goal-setting, self-management and innovation have a great influence on modern HR practices. G. Becker, a Nobel Prize-winning economist who developed the theory of human capital, demonstrates in his work how investments in employee education and development contribute to productivity and efficiency at both the macro and micro levels. Research on the effectiveness of human resource management, also conducted by domestic researchers, makes an important contribution to the development of the theory and practice of human resource management. They help to understand better how managerial decisions affect labour efficiency and what approaches can be used to increase productivity and employee engagement. For example, V. Tkachenko and V. Savchenko focus on the aspects of staff motivation and loyalty as key elements of effective management. They explore how different remuneration systems and corporate culture affect productivity. D. Boginya has devoted many works to the topic of staff adaptation in the face of changes in the workplace. At the same time, V. Lytvyn and N. Podolchak explore innovative approaches to HR management, including the introduction of IT technologies to optimise the processes of employee selection, assessment and development.

In their scientific studies, V. Weber, F. Hedouri, A. Grishnev, P. Zhuravlev, A. Kibanov, V. Savchenko, V. Kramarenko and many others [3; 9] reveal the conditions for the formation and development of personnel, certain economic and psychological aspects of personnel development, problems of rational development of personnel and their connection with the growth of enterprise competitiveness, issues of assessing the level of personnel development, methods, forms and types of personnel development. It should be noted that today there is still no agreement among scientists even on the definition of the very concept of «staff development». Thus, I. Bespalov believes that staff development is a set of measures aimed at improving the professional and managerial competence of the enterprise's staff for more effective achievement of the organization's goals and objectives.

Egorshin defined staff development as a complex and continuous process of comprehensive development of an organisation's employee's personality in order to improve the efficiency of his or her work. According to P. Schländer, staff development is a system of measures aimed at supporting the ability to train employees, disseminate knowledge and best practices, and train young employees. R. Harrison believed that HR development is a clear understanding of the abilities and potential that work within the strategic structure of the business. G. Polukhina believes that staff development is a process of combining career planning, industrial adaptation, staff incentives and professional training. According to I. Bespavlov, G. Polukhina, R. Marr and G. Schmidt, the components of the personnel development process are: staff incentives, planning and building an employee's career, industrial adaptation and professional training. We do not take into account the opinions of some researchers who believe that the main essence of the staff development process is training and professional promotion with the improvement of their qualifications. However, we also believe that limiting the process of staff

development to four components is not sufficiently relevant at the current stage of business development.

Both domestic and foreign research often focuses on such aspects as staff motivation and engagement, competence development and training, the effectiveness of communications in the organization, and the impact of corporate culture on labour productivity. Particular attention is paid to the impact of digitalization and automation on HR management.

There are many theories and approaches to measuring the effectiveness of HR management. They include a variety of techniques and concepts that help determine the extent to which human resource management goals are achieved. Let's have a look at some of them.

For example, the balance sheet approach. This approach involves measuring the effectiveness of HR management based on various aspects, such as financial indicators (for example, recruitment and retention costs), HR processes and procedures, and employee satisfaction and engagement. The balance sheet approach is considered to be one of the key methods of measuring the effectiveness of HRM and is based on the idea that in order to achieve success in an organization, it is necessary to take into account not only financial indicators, but also other factors, such as processes, procedures and staff potential.

The main principles of the balance approach include:

- financial performance: this includes the cost of managing staff, the cost of recruiting and retaining staff, and the financial contribution of staff to the organization's revenue;
- HR processes and procedures: assessing HR performance includes analysing processes and procedures such as recruitment and selection, staff assessment and development, and employee relations management;
- staff satisfaction and engagement: this is assessed through interviews and questionnaires with employees to determine their job satisfaction, motivation and engagement with the organisation;
- performance: the assessment includes both quantitative and qualitative indicators of employee performance, such as productivity, quality of work performed, error recovery, etc.

Among the advantages of the balance sheet approach, experts highlight a comprehensive assessment. It is worth noting that the balance sheet approach allows assessing the effectiveness of HR management from different perspectives, which gives a more complete picture of management processes. Another important advantage is that it ensures balance. As the balance sheet approach helps to ensure a balance between financial and non-financial aspects of HR management. Another important advantage is the improvement of strategic management, which involves taking into account a wide range of factors, allowing managers to make better strategic decisions on HR management.

Thus, the balance sheet approach to measuring the effectiveness of HR management is an important tool for organisations' management. Given the diversity of aspects of HR management, this approach helps to provide a comprehensive assessment of performance and ensure that the organisation's strategic goals are achieved.

One of the key approaches is the key performance indicators (KPI) method. This approach involves defining specific criteria that reflect the performance of personnel and are defined as key performance indicators (KPIs). These indicators may include such aspects as labour productivity, quality of work performed, staff turnover rate, etc.

KPI methods are a fundamental tool in the strategic management of a company's resources, including in the area of human resources management. KPIs allow organisations to define and measure progress towards achieving their key business objectives by setting quantitative and qualitative targets to measure staff performance.

KPI definitions should be specific, which means they are clearly defined and understood by all stakeholders; measurable, which means they can be quantified or qualitatively measured; attainable, which means they are realistic to achieve; relevant, which means they are closely linked to the company's strategic goals; and time-bound, which means they have a clear deadline.

Examples of KPIs in HR management include labour productivity, which can be measured by the amount of output per employee over a certain period of time; staff attrition rate: the percentage of employees who have left the company, which may indicate problems in the corporate culture or working

conditions; average time to hire (the time required to fill a vacant position, which reflects the effectiveness of recruitment processes); staff satisfaction, which is measured through regular employee surveys and reflects their attitude to the company's overall strategy.

It is believed that for the effective use of KPIs in HR management, it is necessary to set clear, understandable and measurable goals that are in line with the organisation's overall strategy. It is also necessary to regularly monitor the indicators and provide constant feedback and data analysis to identify and solve problems in a timely manner. Strategies should be adapted (there should be a willingness to adjust management strategies based on KPI analysis), and the team should be involved by motivating and informing employees about key indicators and their impact on the company's success.

KPIs are an extremely important tool in measuring and managing HR performance. They allow organisations to determine whether strategic goals are being met or not, and to identify areas for further improvement in HR management.

The next approach to consider is the cost of human capital. This approach involves measuring the effectiveness of human resource management by analysing the cost of investing in the development and retention of staff. This may include calculating the return on investment in training and development, staff retention costs, and other human resource management and development costs. In general, this approach is based on the notion that an organisation's employees are an important resource that has value, and that this value can be measured and assessed.

Among the main aspects of the human capital valuation approach are investments in training and development (the valuation includes an analysis of the company's investments in training and development of personnel. This may include the cost of training programmes, workshops, seminars and other forms of professional development that enhance the competence of employees); staff retention costs (this includes salaries, social benefits, health insurance and other costs associated with retaining staff in the organisation); quantity and quality of the workforce (the assessment includes an analysis of the quantity and quality of the workforce in the organisation, including an assessment of the competence, experience and potential of staff).

The main advantages of this approach include strategic planning (it helps organisations to carry out strategic planning of personnel development and rationally allocate resources), staff motivation (reflecting the value of employees can be an incentive for their more active contribution to the company's development), and productivity assessment (it allows assessing the impact of investments in personnel on productivity and efficiency).

The results of human capital valuation can be used in such areas as budget planning (based on the valuation, budgets for training and development of personnel can be developed), management decision-making (the results of the valuation can be used to make decisions on the development of personnel management strategies and resource allocation), monitoring and performance improvement (tracking changes in the value of human capital allows organisations to adapt their personnel management strategies and methods to achieve better results).

Thus, the human capital costing approach is an important tool in measuring the effectiveness of HR management. Given the importance of personnel as a key resource, this approach allows organisations to better understand and evaluate the contribution of employees to the achievement of strategic goals.

The approach of an assessment and reward system is based on determining the effectiveness of personnel management by assessing the performance of employees and rewarding them for their achievements. This may include performance-based remuneration systems, bonus programmes, bonus systems, etc. This approach helps to increase employee motivation, productivity and efficiency of the entire team.

When implementing an evaluation and reward system, it is important to consider the objectivity of the evaluation criteria, transparency of the evaluation and reward process, and fairness to avoid conflicts and distrust in the team. In addition, it is important to constantly improve the system, taking into account changes in the internal and external environment of the company.

The main advantages of such a system are that it allows you to clearly define the criteria for evaluating employees, encourages them to achieve their goals, and helps to develop and increase

employee motivation. It also helps to plan employees' career development, retain talented employees and increase their productivity.

The role of the appraisal and reward system is to assess performance (determining the level of contribution of each employee to the overall success of the organisation and identifying the strengths and weaknesses of the staff to plan their development), motivate (encouraging better performance by rewarding the achievement of goals, increasing the level of engagement and loyalty to the organisation), improve efficiency (improving the overall productivity and effectiveness of the organisation, optimising the use of human resources).

There are many types of appraisal and reward systems used in organisations:

- Scale-based appraisal: a simple and straightforward system that assesses task performance against certain criteria.
- Competency-based appraisal system: a more detailed system that focuses on assessing employees' competencies and skills.
- 360-degree appraisal system: an assessment by various stakeholders, including managers, peers, subordinates and customers.
- Performance-based remuneration system: payment of remuneration for achieving certain KPIs.
- Bonus system: additional rewards for outstanding performance.
- Benefits system: offering additional social packages and benefits, etc.

When choosing an evaluation and reward system, it is important to consider the following factors:

Organisational goals. It should be clear what the organisation wants to achieve with these systems.

The size and the type of organisation. You should choose a system that is appropriate for the scale and specifics of the organisation.

The culture of the organisation. The values and principles that underpin the organisation's work should be considered.

Budget – determine the available budget for implementing and maintaining the system.

An effective performance appraisal and reward system is believed to have the following characteristics:

- clearly defined goals (understanding the purpose and objectives of the system);
- appropriate assessment methods (use of methods that provide an objective and accurate assessment of staff);
- fairness and impartiality (ensuring equal conditions for all employees);
- linkage to the reward system (motivation for better performance through rewards for achievements);
- feedback (providing employees with information about their performance and opportunities for development);
- regular review, updating and improvement of the system to reflect changes in the organisation.

Assessment and reward systems are powerful tools that help organisations achieve their goals, increase productivity and create a positive working environment. Their proper selection and implementation is a key factor in successful HR management.

This approach to measuring the effectiveness of HR management makes the management process more transparent and contributes to the achievement of the company's strategic goals.

One of the most widely used and effective approaches to measuring the effectiveness of HR management is the 360-degree feedback methodology. This approach provides an objective and complete picture of an employee's professional performance, involving feedback not only from his or her direct supervisors, but also from employees, subordinates, colleagues and other stakeholders.

The main principles and features of the 360-degree feedback methodology include

- multifaceted view: the assessment is carried out from different points of view, including managers, subordinates, colleagues and other stakeholders, which allows to get a complete picture of the employee's professional development and behaviour;
- anonymity: the participants of the survey provide their feedback anonymously, which contributes to an open and objective assessment;

- Consideration of various aspects: the assessment may include such aspects as leadership, communication, cooperation, decision-making ability, etc., which allows for a comprehensive assessment of the employee;

- feedback: after collecting feedback, the employee receives a return and the opportunity to analyse the information received, which helps to understand their strengths and weaknesses and take constructive measures for personal and professional development;

- wide application: the methodology can be used in various fields of activity, from business and management to education and medicine.

The benefits of using the 360-degree feedback methodology include the ability to obtain a more objective assessment of professional performance, promote personal development and improve teamwork. However, it is important to take into account the need for correct interpretation of the data and open communication between all participants in the process to achieve the best results.

These theories and approaches to measuring HRM performance help organisations evaluate and improve their human resource management performance to achieve strategic goals and increase competitiveness.

Human resource management involves creating human resource policies and procedures that support business objectives and strategic plans. Central to this mission is developing a culture that reflects core values and empowers employees to be as productive as possible.

It is important to remember the basic functions of human resource management. HR functions can vary depending on the industry, the size of the business and the types of employees hired. In most cases, the main goals are to acquire and develop talent and to improve communication and co-operation between employees. Other key human resource management functions include:

1. Job Analysis: identifying the skills and experience needed to do a job well can make it easier to hire the right people, determine appropriate compensation and create training programmes.

2. Human resource operations. Creating health and safety policies, responding to employee complaints, working with unions, etc. can help ensure compliance.

3. Performance measurement. Performance measurement is important because it not only promotes employee growth through constructive feedback, but also guides raises, promotions, and terminations.

4. Incentive programmes. Recognising achievements and rewarding top performers with bonuses and other perks is a proven way to motivate employees to take responsibility for achieving business goals.

5. Professional development: from orientation to advanced educational programmes, employee training helps increase productivity, reduce turnover and minimise the need for management.

The efficiency of personnel management can be defined as the level of achieving the objectives of the organisation through the optimal use of human resources. This means not only the efficient use of existing resources, but also the development of the potential of employees, their motivation and involvement.

The key elements of efficiency include:

-labour productivity: the direct impact of each employee's work;

-quality of work: compliance of work results with established standards and requirements;

- flexibility and adaptability: the ability to quickly adapt to changes in the external environment;

- innovativeness: the ability to generate new ideas and put them into practice.

The effectiveness of HR management depends on many factors, including:

1) corporate culture: the values and norms of behaviour in an organisation have a significant impact on employee motivation and productivity;

2) motivation system: the efficiency of staff directly depends on the system of rewards and incentives;

3) leadership and management style: the style of leadership has a significant impact on the team atmosphere and the efficiency of task performance.

Rapid organisational changes and changes in management principles imply an increase in staff efficiency, higher quality of goods, better customer service, and a creative and innovative attitude to performing functional duties. The principles underlying HR management are also changing. In modern research, scientists include the following methods to innovative methods of personnel management [21]:

1) recruitment is the careful selection of applicants for a position in order to get the best employees who will help the company develop;

2) performance appraisal is the process of establishing equivalence between the requirements of the position and the characteristics of the employee;

3) staff training is the improvement of staff qualifications through trainings and seminars;

4) reward system is the motivation of personnel by means of incentives and rewards;

5) career management – achievement of goals in career growth. Thus, personnel are the driving force for solving problems of economic development of an enterprise and its effective functioning and competitiveness.

The strategic goal of personnel development management is achievement of organisational and economic efficiency of personnel development management in the context of efficient operation of an enterprise, and it is important to establish the efficiency criterion, the level of achievement of which is checked at the «output» of the mechanism.

The decomposition of the strategic goal of personnel development management is carried out in the formulation of tasks, among which the following are distinguished:

- determination of the main conditions for staff development, characterised by the influence of a number of factors, the state of the enterprise depending on the stage of the life cycle, a set of tangible and intangible resources, management efficiency, and the social and psychological maturity of the staff;

- identifying the density of the relationship between personnel development and the life cycle of an enterprise, which is manifested in the establishment of certain trends depending on the stage of the cycle. Thus, according to the research of Smirnov E. O. [2], the life cycle model includes creation, growth, stabilisation, decline and liquidation of an enterprise. The management policy in the field of development management will be based on the available tangible and intangible resources, the market position of the enterprise, strategic opportunities and guidelines, etc;

- raising the level of vocational guidance and adaptation of personnel as an effective way to choose a profession in accordance with physical, mental, intellectual, psycho-emotional characteristics of a person and peculiarities of his/her adaptation to the specifics of production, economic and social aspects of the enterprise's activity;

- identification of the professional and competence level of the personnel in accordance with the requirements of the enterprise and the position they hold on the basis of personnel assessment using a number of methods (for example, certification, interview, questionnaire, pairwise assessment, BARS method, testing, assessment by goals, etc;);

- development of a system of motivation of employees to work, which involves identification of such forms and types of incentives for each category and professional qualification group of personnel, which takes into account individual personality traits, specifics of work in a particular position, financial and economic capabilities of the enterprise and promotes close relationship between the specifics of incentives and the final results of work. This means achieving such an effect of the motivational policy that, with the least effort and resources, the highest labour productivity, reduction of defective products, and increase in the level of rationalisation as an indicator of labour and production innovation can be achieved;

- Improving the professional and competence level of staff through initial training, retraining and advanced training in educational institutions of various accreditation levels and on our own;

- ensuring career development depending on the professional and competence level and individual characteristics. Career growth is an element of the personnel development system that clearly demonstrates the employee's life and professional achievements, but under certain conditions – in close connection with the company's activities;

- the development of information, methodological and software for personnel development, which is carried out in the context of the development of the information and intellectual society and involves

the use of the latest information Internet technologies, as well as approaches to the selection and development of training programmes, their payment, subsidisation by the enterprise, and measurement of efficiency [11].

The tasks are implemented on the basis of compliance with certain principles that are closely related to the laws, but do not exist objectively in nature, and are created in the process of systematising knowledge. The principles should correspond to the general concept of management and its constituent elements: goals, methods, means and influences, as well as rules of action of the subject and object of personnel development management.

An ambiguous interpretation of the specifics of the set of principles complicates management and leads to the choice of strategies that are inadequate to the existing conditions. Solving these problems will allow choosing optimal models of personnel development, which will simplify the process of interaction between the object and the subject. The specific principles of personnel development management include the following: scientific, functional, cost-effective, adaptive, comprehensive, responsible, fair, innovative, two-vector, and continuous [1].

The basis for the formation of the mechanism's action is the management functions, which must be clearly defined and defined. Functions determine the type of management activity, regardless of the place of their manifestation, that is, from the enterprise, the nature of its activities, location, scale of activity, etc. In the process of operation of the personnel development management mechanism, it is important to take into account the following functions: the function of knowledge production; educational function; function of resource allocation; function of innovation; function of alignment of goals of employees and the enterprise [1].

The implementation of functions determines the list of actions that must be carried out by the management subsystem in order for the functioning of the managed subsystem to lead to the achievement of socio-economic efficiency of the enterprise. The choice of models of personnel development is based on the use of historical experience of personnel management, with this in mind, the following are proposed [1]: technocentric, bureaucratic, sociocentric, participatory, knowledge-oriented.

In general, the qualitative development of society should be achieved through the interconnection and interaction of economic and social factors. Positive experience in combining them is demonstrated by countries that implement a social market economy model, the main idea of which is to reconcile the principle of market freedom with the maintenance of social harmony.

Social factors influence the economy through the social organisation of society and human capital. The level of social organisation is determined by a qualitative assessment of the functioning of the system of social institutions, the nature of social mobility, motivations and interests.

Thus, the basic prerequisite for economic development and a new quality of economic growth is the increase in human capital, which is achieved by modernising the entire education system, bringing its quality closer to EU standards and the needs of the internal development of the state and society. The state must create equal and broader opportunities for quality education, regardless of income and financial status of families. It is necessary to create an environment in which the social status of a person is determined by the level of education, knowledge and skills acquired and used in practice.

Human capital development processes are closely linked to economic and innovation processes in society, the results of which lead to changes in the country's social sphere. Highly educated, creatively fulfilled employees are the source of new developments, inventions, and other intellectual property. This, in turn, determines changes in the innovation process of society, the result of which affects the formation of a high-tech structure of national production, is an important source of income for the population, ensures growth in GDP (the gross domestic product) and export potential, and reduces production costs, which ensures not only the development of economic sectors but also the qualitative transformation of the entire society.

At the micro level, it is necessary to create an effective mechanism for implementing the socio-economic development of enterprise personnel, which will create the necessary preconditions for transformational changes. In recent years, the problem of economic and social development of economic systems at different levels has become increasingly interesting to economists.

Development is a directed, natural change of matter and consciousness. There are two forms of development: evolutionary – gradual quantitative and qualitative changes; revolutionary – abrupt transition from one state of matter to another. The transition of the lower to the higher and vice versa determines the existence of progressive and regressive development.

In general, the development as a process is determined by the following factors: changes in the external environment (economy, politics, culture, etc.); changes in the internal environment (technological equipment of production, movement of employees, changes in the principles and mechanisms of management, etc.

The development is based on the laws of ontogeny, proportionality, laws of competition, economies of scale, etc. The law of the development is revealed through the achievement of the greatest total potential by the material, organisational, economic and production system during the stages of the life cycle. The principles of this law are:

1) the principle of inertia – changes in the system's potential begin some time after the impact of external and internal forces and continue for some time after their termination;

2) the principle of elasticity – changes in the system's potential are determined by the potential itself, its technical, organisational, cultural and other characteristics;

3) the principle of continuity – changes in the system's potential occur continuously, but their speed and the direction of change;

4) the principle of proportionality – the system potential can be increased by an amount that exceeds the investment to ensure the proportionality of processes by eliminating bottlenecks [8].

In terms of staff development, development is the result of the introduction of organisational structures, methods, processes and resources necessary for the effective implementation of current and future production tasks and for the optimal satisfaction of employees' needs related to self-realisation, professional training and career [9]. D. Novikov speaks of the hierarchy of enterprise personnel development: individual development – collective development – personnel development – organisational development. The processes of personnel development are defined as:

- staff adaptation;
- the process of adapting the team/employee to the conditions of the external and internal environment of the organisation;
- staff motivation;
- creation of conditions and incentives for self-development (including, first of all, the use of a motivation system that stimulates the disclosure of employees' capabilities, their professional growth and self-development);
- staff training (including in-house training, advanced training, retraining, etc;)
- personnel promotion (career management, including career planning, preparation of a reserve, etc.).

The economic development, as defined by D. Yevdokimova, is a dynamic multivariate cyclic process that has a spiral shape and is manifested through quantitative and qualitative changes in the structure of the system while maintaining its integrity, and whose sustainability is ensured only if it is controlled by the system above [10].

The economic development of society is a multifaceted process that includes economic growth, structural changes in the economy, improvement of living conditions and quality of life. Various models of economic development are known (the model of Germany, the USA, China, Southeast Asia, Japan). However, despite their diversity and national peculiarities, there are common patterns and parameters that characterise this process. According to the level of economic development, there are developed countries (USA, Japan, Sweden, France, etc.); developing countries (Brazil, India, etc.), including the least developed (mainly the countries of Tropical Africa), as well as countries with economies in transition (former Soviet republics, Central and Eastern Europe, China, Vietnam, Mongolia), most of which occupy an intermediate position between developed and developing countries.

In general, the economic development of a society is a contradictory and difficult to measure process that cannot occur in a straightforward, ascending manner. The development itself is

characterised by unevenness, including periods of growth and decline, quantitative and qualitative changes in the economy, positive and negative trends.

Social development of society, according to M. Gorin, is a complication of the social structure of society that arises as a result of people's activities to create conditions for their own development, to meet the fundamental needs of society and the social groups that make up it, and not as a goal or consequence of someone's will [1]. M. Gorin defines the tasks of social management in accordance with the classification of needs according to the theory of A. Maslow.

O. Pshenychna offers the following definition of the concept of «a social development» – a multidimensional concept that includes a number of indicators that characterise the conditions, nature and content of work, team structure, incentives to work, satisfaction of social, physical and spiritual needs of employees, moral and psychological climate in the team, social activity, etc. [7, p. 168].

Social development, according to N. Ivanitska, is the process of providing employees with social guarantees of labour, opportunities for self-realisation in their social and living conditions, constant motivation to increase labour productivity [3]. The scientist proposes to define the following as components of social development: improvement of professional qualification of employees; improvement of working conditions; health protection of enterprise personnel; provision of recreation; increase of remuneration; improvement of living and living conditions of employees; organisation of cultural events; organisation of social insurance; assistance in lending to personnel; management of conflict situations; ensuring self-realisation.

The emergence of the concept of «a socio-economic development» is associated with the process of repeating the already passed stages of historical development, but the repetition is different, at a higher level of spiral movement, with a new quality, revolutionary, associated with the global development process and the way of production [11], that is, the extraction of material goods necessary for people for personal and industrial consumption.

According to T. Kalinescu and O. Hrychyshkina, the socio-economic development of an enterprise is a set of quantitative and qualitative changes that ensure the transition of an enterprise to a higher socio-economic level. These include: growth of production and labour productivity, improvement of product quality, efficiency of the enterprise, growth of staff welfare, improvement of their qualifications and professionalism, reduction of staff turnover, increase of employees' interest in the results of their work, etc [5, c. 68].

V. Zalutskyi understands the socio-economic development of enterprises as changes in social and economic indicators under the influence of the implementation of decisions on the use of socio-economic potential [2], in other words, he connects the achievement of socio-economic development with the results of the relationship between socio-economic potential and decisions of managers on its use.

It is well known that efficiency is the ratio of results to costs incurred to achieve them. Efficiency is the basis for the existence of both the economy as a whole and a single entity (enterprise, organisation, person) and its field of activity. Its types differ mainly in the variety of results obtained from economic activity, which allows us to distinguish between social and economic efficiency. It is the economic and social effects that determine the effectiveness of economic activity.

The social effect as a result of economic activity is considered to be a social outcome manifested in the increase of new jobs and employment, improved working conditions, living conditions, environmental conditions, general life safety, etc. The level of social efficiency of the enterprise's activity expresses the degree of satisfaction of the needs of the staff and other stakeholders, which are formed on the basis of their value orientations.

Thus, the socio-economic efficiency of enterprises is determined by the ratio of socio-economic results (effects) to the costs incurred to achieve them. The socio-economic effect is the achieved result in the economic and social processes of enterprises, which is manifested in an increase in the level of economic indicators and satisfaction of social needs of stakeholders belonging to the internal and external environment. The latter is associated with the implementation of the concept of socially responsible activities, which is key to doing business in the current economic environment. The key place in it is occupied by relations with personnel, directions and scope of the enterprise's social policy, which is determined by a group of factors, including: the scale of activity, profitability of the enterprise,

the level of competition in the labour market, the need to retain and develop personnel, business development needs, image policy, etc. Implementation of the concept of social responsibility by enterprises proves their readiness to take responsibility not only for compliance with laws and provision of quality services, but also, firstly, for the fate of employees, providing them with the necessary living and working conditions, carrying out their development, material and moral incentives, and, secondly, for the welfare of other members of society, implementing environmental and innovative measures, social programmes, etc.

In the context of the concept of corporate social responsibility, the term «triple bottom line» has been coined, meaning a balanced system of company performance in three interrelated aspects: ensuring profitability, environmental care and social programmes. In this system, the components of sustainable development are economic, environmental and social.

Thus, we understand the socio-economic development of an enterprise as a process that includes the stages of ensuring, organising and servicing development, which results in quantitative and qualitative changes in the social and economic processes of enterprises, enabling their transition to a higher socio-economic level, characterised by an increase in socio-economic efficiency and competitiveness.

The socio-economic development of the personnel of enterprises is a process of qualitative improvement of the social and economic component of the personnel's life, which is ensured by their own efforts and actions of the management of enterprises, which operates in compliance with the legislation on the principles of socially oriented management. This definition emphasises the crucial role of the enterprise in solving the socio-economic problems of its staff, but does not lose sight of the need for the staff to take their own actions to ensure the socio-economic efficiency of the enterprise. In other words, we are talking about positioning the personnel in the enterprise mechanism as its integral part, on whose activities and efforts depend the results of economic activity, image formation, and achievement of competitiveness. This requires continuous self-improvement, dedication to achieving the strategic goal of the enterprise, etc.

Thus, the main requirements for employees, which allow them to be considered as part of the enterprise, are as follows: discipline; accuracy of tasks; availability of necessary knowledge; speed of tasks; responsibility; health control (degree of control over health and other impact on the work process); business relations in the team, ability to interact in the team; achievement of results (degree of persistence in the desire to achieve results); personal relations in the team; ability to assess the situation and make decisions; activity at work; self-improvement (improvement of skills, level of knowledge, etc.); understanding of the company's tasks and goals, applying efforts to achieve them; focus on increasing profits (the degree of effort applied to develop the company's efficient operations, approach to work taking into account the need for profitability).

Conclusions. The effective formation of a personnel development system is possible when its elements are structurally defined, subordinated to each other and to the system's objectives, principles, methods, laws and regularities of their formation are defined, the need for its creation is substantiated, the initial goal and the result of functioning of such a system are determined, which is possible provided that an organisational and economic mechanism for managing personnel development is built. Given the complexity of the issue under consideration, it is advisable to trace the main scientific views on focusing on certain aspects of the mechanism, outlining the contours of its operation, rules and methods of its construction.

When defining the forms and methods of personnel development, it should be noted that the form is a way of existence of the essence of the model, which serves as its expression, and the method is a sequence of actions that lead to the desired result. It is generally accepted that the forms of staff development can be divided into two: on-the-job and off-the-job. In the context of each form, there is a certain set of methods aimed at achieving results in a certain way. The methods used in the workplace include the following: mentoring, apprenticeship, rotation, instruction, and self-study. The list of methods outside the workplace is longer and includes: lectures, practical classes, modelling, training, coaching, seminars, role-playing and business games, round tables, conferences, symposia, etc. The mechanism is effective when the interaction of the managing and managed subsystems of staff

development under the influence of external and internal organisational factors leads to the achievement of socio-economic efficiency of staff development management. A special place in the work of the mechanism is occupied by the definition of the criterion of organisational and economic efficiency of staff development management, which is the direction of further scientific and empirical research of the author. Taking into account the peculiarities of the mechanism is a complex process that requires not only managerial art, but also correctly formulated goals and objectives in a changing external environment, which is currently characterised by crisis phenomena in almost all spheres of the national economy.

The various methods are used to assess the effectiveness of personnel management, including:

- analysis of key performance indicators: setting and measuring specific indicators that reflect the performance of employees;
- assessment of return on investment in personnel: calculation of the economic effect of investments in personnel development;
- questionnaires and surveys of employees: collecting feedback to identify weaknesses in HR management.

To summarise all the above, the socio-economic development of the personnel of enterprises is proposed to be considered as:

- firstly, a prerequisite for ensuring the socio-economic efficiency of enterprises;
- secondly, a factor of competitiveness of enterprises;
- thirdly, the strategic goal of enterprise management;
- fourth, the principle of socially and economically responsible activity of enterprises.

Thus, the carried out study allowed to formulate theoretical aspects of the socio-economic development of the personnel of enterprises. Prospects for further research by the author are the application of a programme-targeted approach to managing the socio-economic development of the staff of enterprises.

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IMPLEMENTATION OF ORGANISATIONAL CHANGES AND INNOVATIVE PROJECTS AS A CONDITION FOR ENSURING SUSTAINABLE DEVELOPMENT OF AGRICULTURAL ENTERPRISES

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In the current conditions of growing turbulence and dynamism of the external environment, agrarian enterprises are the most promising for the development of domestic business, and effective management of changes and innovative projects should become a tool capable of ensuring their sustainable development. Systematic implementation of changes in the development of an enterprise is reflected in various areas: production, financial, organisational culture, organisational support, business planning, etc. It is quite fair to say that change management in the context of achieving sustainable development of an enterprise necessitates modern and comprehensive changes in its activities, in particular, in the technologies used, in management methods, in the requirements for the competence of specialists and forms of interaction with the external environment [1]. The implementation of timely and active changes and innovations at the enterprise is caused by its reaction to the unprecedented variability of the external environment, the rapid development of modern technologies and the intensification of competition.

All of the above puts managers of enterprises before the need to implement the process of adaptation to changes and intensify work on innovative projects. Such tasks are especially important in the current environment of limited financial and human resources. Therefore, the more complex the challenges of the external environment, the more responsible the management's response to them should be. Thus, the relevance of implementing organisational changes by agricultural enterprises is undeniable.

In the author's understanding, organisational change is the process of mastering new ideas, forms of behaviour, implementation of effective management methods by an enterprise, i.e. transition of the economic system to a different, higher quality state. Organisational changes are based on the enterprise's reaction to the development of the environment, and therefore the main task for the enterprise is to respond to these changes in a timely and correct manner.

To clarify the methodology of organisational change and its management, let us consider a brief overview of general scientific approaches and models. It has been established that the study of organisational change as a separate area of management science began after the Second World War, when, as a result of changes in consumption characteristics, the emergence of new technologies and new markets, there was a need for companies to adapt to the new conditions of the socio-economic environment. One of the first models of change was the three-phase model proposed in the 1940 by Massachusetts Institute of Technology professor Kurt Lewin (fig. 1).

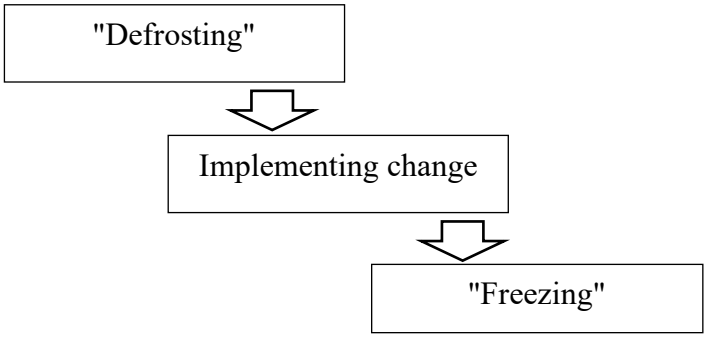

Figure 1. K. Levin's three-stage change management model.

Source: built by the author based on [5].

According to this theory, organisational change should go through three stages. The first stage, "Defrosting", means that the organisational change managers should prove to the staff that the existing situation is inappropriate and convince them of the need for change. At this stage, general conversations and group discussions should be held, demonstrating the need for organisational innovation and the rejection of old stereotypes. The aim of this stage is to convince staff of the need for organisational change and to encourage them to take action.

The second stage, "Movement", is aimed at directing the subject to a new state. At this level, the organisational change measures developed by the management are implemented in the company's activities.

The third stage is "Freezing". Its goal is to consolidate the new organisational structure, behavioural norms, and business processes in the work of the staff. Here, it is necessary to demonstrate the effectiveness of the organisational changes, using a system of corporate events, to consolidate new stereotypes and organisational values in the minds of employees (or even better, in the subconscious).

All subsequent studies of organisational change are based on this model. For example, an American management specialist, Harvard professor Larry Greiner developed a classic model of change management that includes 6 stages (figure 2) [6].

L. Greiner attaches great importance to the participation of all employees in the organisation. When implementing these stages, it is necessary to use the experience of not only top management but also lower-level employees, as these changes subsequently affect the entire organisation and all its employees. Greiner's model explains the whole process of organisational change in a simple and accessible way, which is why it still makes sense today.

Today, there are many approaches to defining and understanding the change process [6]. Organisational changes are aimed at improving management efficiency and are usually associated with business transformation, such as entering new markets, mergers and acquisitions of other companies. A modern organisation operates in an uncertain environment, as unexpected phenomena appear quite quickly, and organisations must respond to them promptly and in a timely manner.

Thus, organisational change in a company is a complex, multifaceted transformation process. In order to implement them, it is necessary to study the organisation itself - its internal environment, or rather, the interests and expectations of employees. To implement the planned changes correctly, you should carefully analyse the current stage of development of the company and its historical origins. The project of organisational changes should reflect the following: obtaining the necessary information base, describing the areas of change, organisational, technical and social planning of changes.

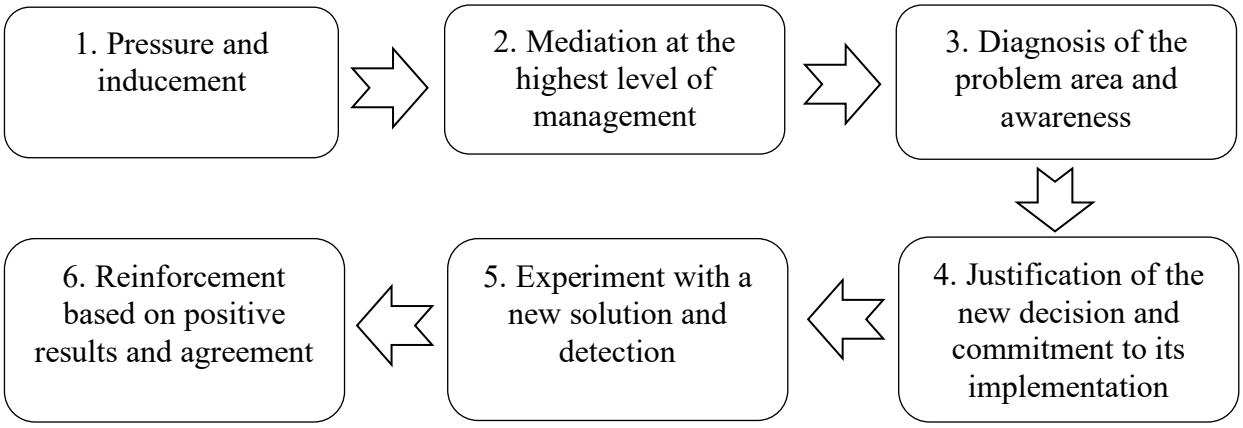

Figure 2. L. Greiner's model of successful organisational change.

Source: generalised by the author on the basis of [6].

For the implementation of organisational changes, it is important to have working groups that perform the main work during the design process. The group members must be able to solve problems that are crucial to the planned changes, and they must have the necessary useful skills and time

resources. The life cycle of such a group should also be specific. For this purpose, it is desirable to use modern technology and electronic resources that will help to properly design the work plan and the timeframe for its implementation.

An important step is to describe the desired result and identify the most likely risks. Therefore, it is advisable to develop measures to reduce and prevent them. Equally important is the modelling and experimentation stage, which identifies project bottlenecks. The implementation of the selected project will help to implement organisational changes that will help the company to remain competitive [2].

The change process can and should be managed. Before planning changes, company managers usually monitor the external environment, i.e. research and analyse market trends, identify customer needs, etc. This helps the organisation to adapt to a dynamic external environment. The model of planned changes is shown in figure 3.

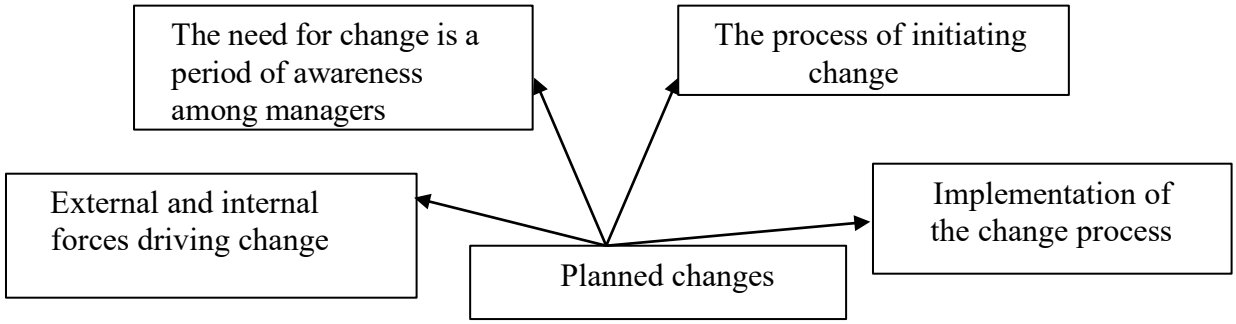

Figure 3. Model of planned changes.

Source: built by the author on the basis of [3, 8].

The specifics of each of these stages depend on the work style of the leader and managers. The reaction to change is different for all employees. Let's look at the factors that determine employees' attitudes to change (figure 4).

1. Parameters of organisational change	- focus, scale, degree of radicalism, provision of information to employees and their involvement in resolving issues related to the reorganisation, initial level of dissatisfaction
2. Characteristics of the organisation	- size of the organisation, stage of development, time of existence, climate in the team, attitude of reference groups to changes, type of organisational culture
3. Macroeconomic factors	- the impact of these factors on staff attitudes to innovation is difficult to identify
4. Characteristics of employees	- employee satisfaction with specific transformations will be determined by their socio-demographic and personal characteristics, motivation and the structure of the personality as a whole

Figure 4. Factors determining employees' attitude to change.

Source: built by the author on the basis of [10].

The organisational changes depend on the way the company's personnel change their behaviour. Therefore, a prerequisite for change in an organisation is to ensure that employees are ready for change.

Organisational change depends on the way in which employees change their behaviour. Therefore, a prerequisite for making changes in an organisation is to ensure that employees are ready for change.

The positive or negative attitude of people to change depends not only on its effectiveness, but also on whether the needs of the staff in the particular situation that led to the change were met. Also, the successful implementation of organisational changes depends on the perception of the results obtained by the company's personnel (comparing what they expected from the changes and what actually happened). In view of this, we share the scientific opinion that the issue of assessing staff readiness for change is becoming particularly relevant. For example, experts of the international consulting company McKinsey & Company argue that in order to prove to the company's staff (a particular employee) why changes are needed and "what will happen tomorrow and the day after tomorrow", communication in different ways about the same message should be repeated eight times [11].

Resistance to change can be an undesirable phenomenon that affects everyone affected by change. The organisation's management should be aware of the reasons for the reluctance to change among employees and develop measures to address resistance. The main reasons for resistance to change are uncertainty, a sense of loss and the belief that changes in the organisation will not bring improvements to employees, management becomes difficult; a sense that changes will lead to personal losses to the point of dismissal or reduction of authority. When developing a strategy to overcome resistance to organisational change, the reasons should be taken into account.

Thus, from the above, we can state that there is a relationship between organisational change and enterprise performance (fig. 5).

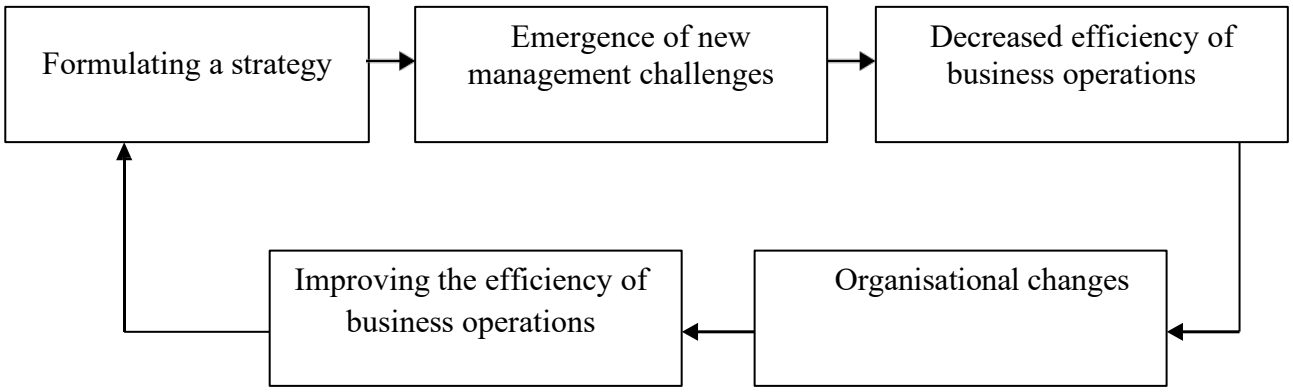

Figure 5. The relationship between organisational change and enterprise performance.

Source: built by the author on the basis of [11, 12].

In general, the study of the practical experience of Ukrainian enterprises allows us to draw a disappointing conclusion that change management in Ukraine is extremely poorly developed. Implementation of organisational changes at domestic enterprises faces a number of problems. The lack of experience and developed algorithms, models, mechanisms, methodology, taking into account the national peculiarities of doing business, also creates obstacles to the implementation of organisational changes [13].

Sharing the thoughts of scientist T. Grynko and T. Gviniashvili, we believe that change is a necessary tool for the development of business entities, and change management should ensure the competitiveness of enterprises on the basis of adaptation to the external environment [4]. When analysing the relationship between organisational change and enterprise performance, the manager must predict, as accurately as possible, the emergence of new problems, a decrease or increase in efficiency.

The author carried out an applied research of the identified issues at a modern private agricultural enterprise "Slobozhanshchyna Agro" located in Sumy region (hereinafter referred to as "Slobozhanshchyna Agro"). This business entity is an enterprise of an integrated agricultural company

(IAC), which is considered to be one of the 10 largest agricultural holding companies in Ukraine. As at the end of 2022, the area of agricultural land of the said company was 23279 hectares, with an average number of employees of 257 people. The company's business is the cultivation of the following crops: corn, sunflower and winter wheat. Slobozhanshchyna Agro is profitable and highly profitable (table 1).

The effectiveness and foresight of the organisational change management system of this enterprise is to implement innovative projects with minimal costs, constantly increasing the volume of production and, ultimately, significantly increasing profitability. Therefore, the results of the analysis confirm the fact that the management of Slobozhanshchyna Agro has full production and financial responsibility for the results of the enterprise's activities, and therefore, a significant capacity of the enterprise's management staff to be active in the implementation of organisational changes and effective innovation projects.

When discussing this topic, we focused on the fact that the management of the agricultural holding annually announces a competition among employees of all clusters, the slogan of which is "We are looking for innovators in IMC". The project was launched in spring 2021. Since then, at the end of this year, a commission set up by the company's top management, which included both representatives of the company itself and specialists from each cluster, received 18 proposals, of which five were approved and taken for implementation. These include: "Fuel flow control scheme", "Large volume boiler indirect heating system", "Solid fuel boiler modernisation", "Light trap for pests in corn crops", "Development of a cone for cutting mineral fertiliser bags" and others. All of these projects have been implemented, and their authors have received financial rewards. It is very pleasant and important to note that two of the five projects mentioned above were submitted by engineers of Slobozhanshchyna Agro. Therefore, we can confidently state that there is a significant innovative potential of the employees of the studied enterprise capable of implementing changes and active project activities.

Table 1. Key economic indicators of the development of Slobozhanshchyna Agro.

Показники	Years			Deviation of 2022 from 2020, ±.	
	2020	2021	2022	absolute, thousand UAH.	relative, %
Net revenue from sales of products, thousand UAH	868093	1037909	778090	-90003	89,6
per 100 hectares of agricultural land, UAH thousand	3737,3	4458,6	3369,1	-368,2	90,1
- per 1 average employee, thousand UAH	2662,86	3061,68	2408,95	-253,91	90,5
- per 1 UAH of fixed assets, UAH	1,05	0,95	0,58	-0,46	55,6
Cost of sales, thousand UAH	517753	491184	380940	-136813	73,6
Gross profit (+), loss (-), thousand UAH	350340	546725	397150	46810	113,4
Net profit (+), loss (-), thousand UAH	212763	405468	183993	-28770	86,5
per 100 hectares of agricultural land, thousand UAH	916,0	1741,8	796,7	-119	87,0
- per 1 average employee, thousand UAH	652,65	1196,07	569,64	-83,01	87,3
- per 1 UAH of fixed assets, UAH	0,26	0,37	0,14	-0,12	53,7
Profitability level, %.	41,09	82,55	48,30	7,21	117,5

Source: calculated by the author on the basis of the reports of Slobozhanshchyna Agro.

Innovations in an agricultural enterprise, such as Slobozhanshchyna Agro, are the implementation of research results, new plant varieties, fertilisers, plant protection products, technologies, forms of production management, etc. into production, i.e. everything that will help to increase the efficiency of production. Table 2 shows the results of the company's innovation activities.

Table 2. Innovation activities at Slobozhanshchyna Agro.

Innovative projects and types of innovations	Characteristics of innovations	Amount of innovations implemented, UAH thousand			Rate of change in %.	
		2021	2022	2023	2023/2021	2023/2022
Innovative projects for the introduction of new technologies	Use of new mineral fertilisers, new plant protection products	294	466	1619	550,7	347,4
Innovative projects for the introduction of technical innovations	Use of new machinery	25295	9805	4372	17,3	44,6
Rationalisation proposals	Use of PBN-20, PBN-30 for transporting corn and sunflower grain across the field from the combine to the truck in adverse weather conditions	37	129	254	686,5	196,9
Product innovations (new crop varieties)	Winter wheat: Akratos, Colonia, Kubus, Patras, Rumor, Bonanza. Sunflower: Kupava, Arizona, Condi, Esperto, Diamantis, Edison	217	809	1185	546,1	146,5
Innovative projects on new types of production organisation	Using a quadcopter for sunflower desiccation	-	-	92	-	-
Innovations in the field of management	Creation and transfer of electronic consignment notes using NFC; marketing innovations	181	309	654	361,3	211,7
Total		26024	11518	8176	31,4	71,0

Source: calculated by the author on the basis of the reports of Slobozhanshchyna Agro.

Table 2 shows data on the results of innovation activities, which indicate the active implementation of both individual agro-innovations and innovative projects at the level of the enterprise under study. However, the amount of implemented innovations in 2023 decreased significantly compared to 2021 - by UAH 17848 thousand (68.6%), and by UAH 3342 thousand (39%) compared to 2022. The main reason for this is the rather large amount of technical innovation projects implemented in 2021. To a greater extent, this concerned the acquisition of two new John Deere 8345R tractors worth UAH 10.8 million and vehicles (truck tractors): MAN TGA 18,440 for UAH 1.9 million and KAMAZ 45144 for UAH 1.8 million, and trailers for them for UAH 0.9 million.

When transporting corn and sunflower, the company uses rationalisation proposals to PBN-20 and PBN-30, which allows it to maximise the agronomic efficiency of the standard programme for the transportation and storage of harvested products even in the face of rapidly changing climatic conditions.

Given the importance of selecting high-quality fertilisers and other plant protection products (PPPs) in accordance with the tasks set by the company's employees, the use of new types of mineral fertilisers and new PPPs is recorded. It is known that poor-quality fertilisers cause farmers to fail to achieve the expected effect from their use. As for the quality of plant protection products, in addition to unjustified use, this can result in harm to both plants and the environment.

It is also worth noting the introduction of such important managerial innovations by enterprise managers as the introduction of the technology for creating and transmitting electronic consignment notes using the NFC (Near Field Communication) chip. NFC is a wireless communication technology that allows devices to communicate with each other at a short distance. This, on the one hand, has increased the level of safety of transportation from the field to the elevator, and on the other hand, it has greatly simplified and optimised the work and its accounting.

It has also been found that the SSE "Slobozhanshchyna Agro" actively uses marketing innovations, the incentive for the latter being the desire of the management to maintain and even increase the market share of its products, expand it to new geographical segments and expand cooperation with foreign counterparties.

The innovation process in agricultural enterprises is primarily concerned with the introduction of new varieties [14] (in our case, these are varieties of cereals, especially winter wheat) that are high-yielding and quickly adaptable to cultivation and resistant to pests and diseases. Domestic practices have shown that the use of high-quality seeds of a new high quality variety provides an additional increase in the yield of 8-10 centners of winter wheat per hectare at the same cost. The research results show that the grain quality of the newly developed varieties meets the requirements of strong and valuable wheat by some indicators. Let us consider the situation with the company's innovative development in this area (Table 3).

Table 3. Economic efficiency of introducing new varieties of winter wheat at Slobozhanshchyna Agro (2023).

Indicators	Wheat from own seeds	Kubus Kinto Duo	Frisky, 1 reproduction	Jersey, 1 reproduction	Emil, 1 reproduction
Area, ha	3661,61	22,5	60	55,4	25,9
Gross harvest, t	233691,7	1487,4	4013,7	3581,86	1722,9
Yield, c/ha	63,82	66,11	66,90	64,65	66,52
Production cost per 1 tonne, UAH.	349,18	389,78	356,30	373,17	366,71
Total cost of 1 tonne, UAH.	534,28	581,03	545,29	568,72	556,77
Expenses per 1 ha, UAH.	34098,88	38410,07	36477,27	36770,15	37036,93
Sales price per 1 tonne, UAH.	925,55	1034,89	1034,89	1034,89	1034,89
Sales revenue per 1 ha, UAH.	59070,56	68413,13	69228,97	66910,31	68842,16
Profit per 1 ha, UAH.	24971,68	30003,06	32751,70	30140,16	31805,23
Profitability level, %.	73,23	78,11	89,79	81,97	85,87

Source: author's own calculations.

Table 3 provides convincing evidence that the introduction of new varieties of winter wheat gives the company the opportunity to significantly increase the yield of this crop. Frisky was the most productive winter wheat variety, yielding 66.9 cwt/ha, followed by Emil at 66.52 cwt/ha, Kubus Kinto Duo at 66.11 cwt/ha and Jersey at 64.65 cwt/ha. As the table shows, the yield of wheat from own seeds was 63.82 centners per hectare. The additional costs of purchasing and transporting seeds were paid off by a higher selling price of UAH 109.34 per cent, higher grain grade and higher yields. The most profitable winter wheat variety was Frisky. Its profitability was 89.8%, the least profitable of the

innovative varieties was Kubus Kinto Duo with 78.11%, and the profitability of winter wheat production from own seeds was 73.23%.

In general, it can be stated that the introduction of new varieties is profitable and cost-effective, and the cost of purchasing seeds will be recouped if the sown area is expanded to accommodate new intensive varieties.

Therefore, we believe that in the current situation, there is no alternative to organisational changes and active implementation of innovative projects to ensure the sustainable development of agricultural enterprises. The current business environment is extremely challenging, but we believe that it should not in any way be a reason to abandon further development of the enterprise in terms of implementing innovative projects.

When analysing the capabilities of this enterprise, we should add the results of research by well-known scientists [7], which prove that innovations in the agricultural sector will be noticeable and effective only when companies spend on them the amount equivalent to $50 per 1 ha. Therefore, it is advisable to attract investment in green energy. After all, due to the increased electricity tariff and the constant rise in oil and gas prices, and in the current situation, unstable electricity supply, green energy is a top innovation leader. Our research has shown that both large agricultural holdings and individual farms and even households are now actively investing their own and borrowed financial resources in the creation of solar power plants, biogas power plants and wind farms.

Management of innovation activity is aimed at creating a mechanism that allows to comprehensively influence the innovation activity of an enterprise, to rationally use the existing scientific and technical potential of the enterprise, budgetary and own funds, and to obtain a useful result in the shortest possible time. However, in the context of limited resources, it is necessary to focus on those innovations that provide the highest economic effect with the least resources, and it is advisable, in our opinion, to set priorities more carefully.

World and domestic economic science and business practice [7, 9] show that the universal quantitative indicator of the effectiveness of innovation is the profit of the enterprise. A private agricultural enterprise independently develops a strategy for its activities, coordinating it with shareholders, so both profitability in particular and the level of efficiency of its activities in general depend on the correctly chosen development vector.

For a complete picture and in order to develop proposals for improving the management of innovation activities, let us consider the level of the company's profit from innovation activities (table 4).

Table 4. Profit from innovation activities of the SSE "Slobozhanshchyna Agro".

Indicators	Years			Deviation, (+;-)	
	2021	2022	2023	absolute	relative, %
Revenue from sales of innovative products, UAH thousand	48648	20297	15603	-33045	32,1
Expenditures on innovation activities, UAH thousand	26024	11518	8176	-17848	31,4
Profit, thousand UAH	22624	8779	7427	-15197	32,8
Profit per 1 UAH of expenses, UAH	0,87	0,76	0,91	0,04	104,5

Source: Author's own calculations based on the company's reports.

In the researched enterprise in 2023, compared to 2019, as shown in Table 4, there is a decrease in the volume of production and sales of innovative products by UAH 33045 thousand, or 67.9%. At the same time, the amount of expenses for innovative activities decreased by UAH 17848 thousand, or 68.6%. As a result, the amount of profit from innovation decreased by UAH 15197 thousand, or 67.2%.

The profit per UAH 1 of innovation costs increased by only 4.5% and amounted to 91 kopecks per UAH 1 of costs in 2021, which confirms their high payback.

The detailed research at Slobozhanshchyna Agro on the identified issues gives grounds to assert that ensuring effective innovation is possible only through proper management. Therefore, a systematic approach to the management of organisational changes and innovation projects has a positive impact on the bottom line of the enterprise's economic activity.

The author's vision of the system for managing organisational changes and innovation activities in general at Slobozhanshchyna Agro is presented in figure 6.

The presented model of the system of management of innovation activity of this enterprise, in our opinion, should consist of the following main elements: object of management - types of organisational changes and innovation activity at the SSE "Slobozhanshchyna Agro", management mechanism (goals of innovation activity, management functions, management methods, management decisions and communication channels).

The subjects of the management apparatus influence the objects of management through management decisions on the choice of specific mechanisms and methods of management. The object of management in this mechanism is all the processes of innovation activity of the enterprise and the employees of the agrarian private enterprise who are directly involved in the introduction of organisational changes and in the development and implementation of innovative projects. The objects of management are also the necessary means for the implementation of innovative activities.

The subjects of the innovation management apparatus influence the object of management by formulating and communicating management decisions to the executors, which are aimed at implementing the functions of planning, organising, motivating, controlling and regulating the innovation component with the help of certain management methods.

Before we make specific proposals for improving the innovation activity in the researched enterprise, we note that the SSE "Slobozhanshchyna Agro" works with top hybrids, advanced seed material, original plant protection products and intensive nutrition system, i.e. the researched entity, working in the field of crop production, has high economic results due to proper innovation development and effective management.

It is also worth noting that the key role in updating the innovation culture, using it in the management process, and forming a unified team is assigned directly to the head of the enterprise. That is, we can state that the effectiveness of organisational changes and innovative projects is significantly influenced by the perception of their perception by the head of the enterprise.

We have already mentioned above the involvement of the company's staff in the implementation of innovative projects. Moreover, the management of the agricultural holding hopes that by the end of this year there will be much more proposals. After all, at the beginning of this initiative, information letters were sent to enterprises with an invitation to participate, and in June 2023, specialists made presentations at enterprises and explained in detail the purpose and familiarisation of innovators with the opportunity to receive pleasant bonuses.

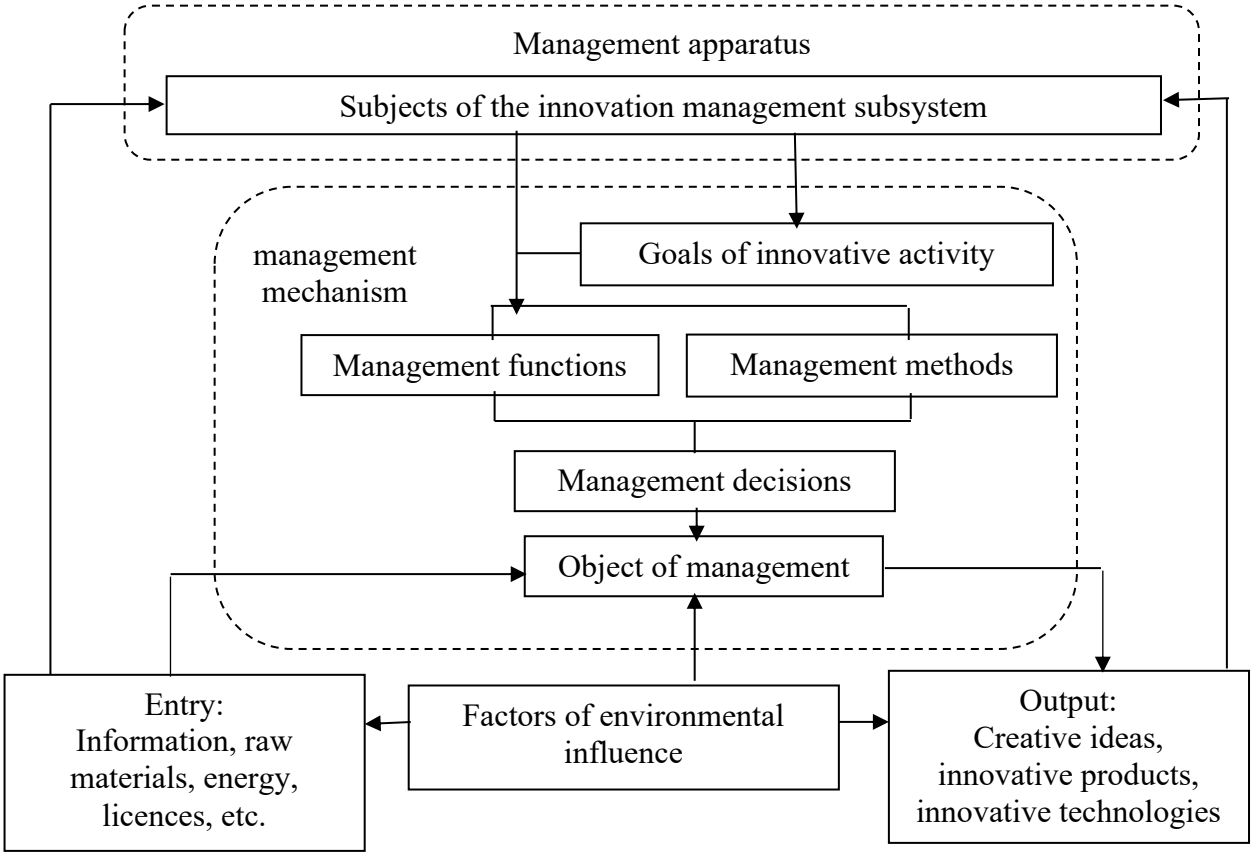

Figure 6. Management system of organisational changes and innovation activity of the enterprise

Source: built by the author on the basis of generalisations [4, 6, 10].

Talking to Bohdan Krivitskyi, Deputy CEO for Technical Affairs and Innovative Development IMC, we found out that both the agroholding as a whole and the company selected for the study are implementing several projects to develop an innovative culture in addition to production innovation projects. In fact, managers are doing serious work to inform the team about new developments and specific initiatives for their implementation.

In this regard, according to the above-mentioned representative of the company's top management, the research of the international consulting company Deloitte is very interesting, which proves that today we have to implement separate approaches to working with employees to involve them in the planned innovative changes. The company's researchers state that it is worth developing any innovations in different ways, whether unilaterally or multilaterally, and it is important to allow dialogue [10]. That is, it is important to perceive an employee as a professional, as a person who can also be involved in co-authorship, in the search for ideas, and not just perform a function. Therefore, when it comes to organisational changes and projects, we believe it is quite fair to say that people are the most important and difficult thing [9].

The psychology of perception of innovations is at least three different reactions of employees to their implementation. In our case, in the context of the economic activity of the Slobozhanshchyna Agro business enterprise in Sumy district, such a psychological problem was the attitude of the staff to the innovative ideas of the agroholding management regarding the introduction of precision farming in the enterprise. The first reaction is that some employees are interested in organisational changes and have a positive attitude to this innovative idea of using precision agriculture. Employees are fully aware of why this is necessary and are willing to participate in this process, both directly and indirectly, in order to be at the "peak of change" in the future.

The second group of employees are those who are categorically against innovation. We know from psychology that people tend to find their own integrity, coherence, balance, they have figured out what is good and what is bad for themselves, have made a balance of forces, priorities, emphasis, goals, so it is very difficult to rethink and change their moods. Some employees believe that they do not need to do this, because when implementing precision farming, for example, control can reveal irregularities in technological operations, application of agrochemicals, etc.

The third category of employees is conservatives. They are the most difficult to deal with, i.e. people who do not accept change and are ready to defend their habits quite convincingly for internal reasons that they cannot always even explain. Some machine operators, even agronomists, are used to following a well-trodden path and simply do not want to change anything in their lives.

Let's look at the perception of organisational changes on the issue of precision farming implementation by the employees of Slobozhanshchyna Agro, among whom an expert study was conducted. The results are shown in figure 7.

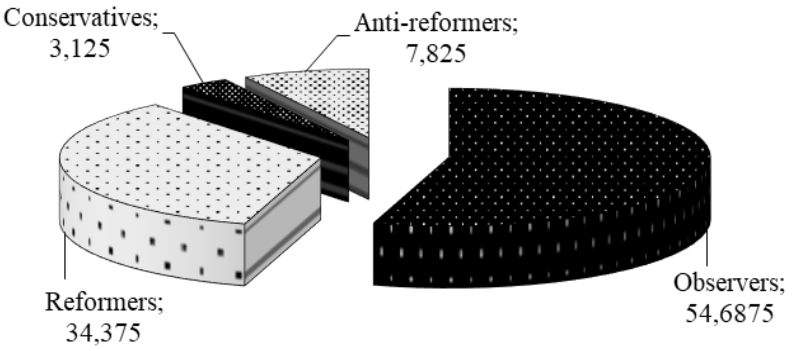

Figure 7. Composition of the labour collective of Slobozhanshchyna Agro by perception of innovations, %.

Source: Own research results.

The survey allows us to state that the majority of employees in the company have a neutral position, so we classified them as observers, however, 34.5% of employees take a management position and support organisational changes in general and in particular with regard to precision agriculture. This category of employees not only has an understanding of the innovation component, but also expresses a desire to be involved in change and innovation.

Improving organisational change and project management at the present stage has a comprehensive impact on production and is an important reserve for its intensification and efficiency. As already mentioned, Slobozhanshchyna Agro is part of the Sumy cluster of the IMC agricultural company, and most of the holding's enterprises are actively implementing, for example, the precision farming system, which is not the case with the farm we studied. Certain elements of this technology are, of course, used, but there is no balanced, permanent basis.

According to statistics, more than 80% of farmers in the US use precision farming, and 70% in Germany. European farmers use elements of precision agriculture even on 0.5 hectares, and almost 90% of farms that have tried precision agriculture technologiesRegarding the relevance and timeliness of implementing innovative projects in the precision farming system, insights can be gleaned from a publication by the director of the consulting firm AgriLab [9]. The director points out that precision farming is currently being fully implemented on 5% of all arable land. While certain elements of it enhance economic activity, they do so by no more than 20%.

The use of precision farming elements makes it possible to claim resource- and energy-saving production. Therefore, a significant number of farmers, including Slobozhanshchyna Agro, should focus on those projects that can save financial resources of the enterprise. And in our case, this should not be a reason for switching to lower quality and cheaper resources.

Thus, given the company's goal of maximising profits through the production of crops while preserving soil fertility and the environment, we believe it is advisable for the management to consider a proposal for innovative activities in the area of precision farming technology.

Let us briefly describe its main areas. The precision farming system includes the stages shown in figure 8.

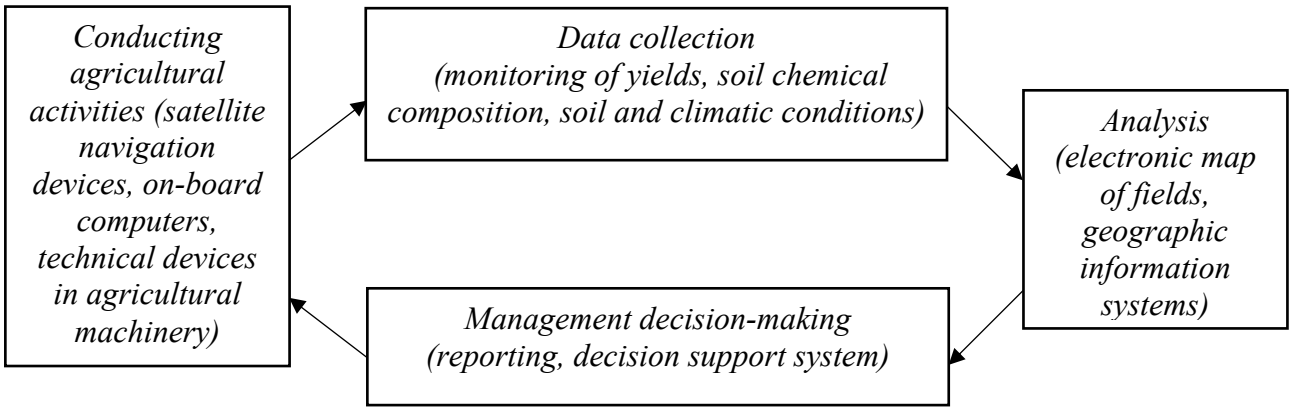

Figure 8. Main components of a precision farming system.

Source: own research.

The aim of such management is to maximise profits by optimising agricultural production and saving economic and natural resources, based on accurate data on land conditions. In addition, these precision farming systems provide for a more environmentally friendly approach to soil and the environment.

Precision farming is a promising approach to agricultural business.

The introduction of this technology:

- improves operational efficiency and labour productivity;
- increases the yield of grain and other crops;
- reduces the cost of growing them.

The first and most important thing that is required to master precision farming technology is the readiness of an agronomist. That is, his experience, understanding of the processes, understanding of the stages that will need to be worked out to move from traditional technologies to precision ones.

A precision agriculture specialist must be trusted by both the tractor driver and the agronomist. They have to work together. The agronomist should not be forced to learn the basics of precision farming. Similarly, a precision agriculture specialist does not need to know everything about agronomy. What is important is the symbiosis in the work of these people. An agronomist sets tasks with specific qualitative and quantitative parameters. And the precision agriculture worker ensures this. In fact, the precision farming unit is a service structure in the company.

In our opinion, the competence of an agronomist is a key factor in the successful implementation of precision farming on a farm. After all, you need to understand what equipment is available, its capabilities, what units are available, what can be converted to precision farming and what cannot be converted. You need to plan your crops, calculate how the technology will change. And, of course, you need to learn how to work with software tools that will become the agronomist's main assistant in his work.

One of the problems of implementing precision farming is precisely the human factor, i.e. agronomists' understanding of how to properly set up this process, how to work competently with modern IT systems. It would also be appropriate to further study the technology itself, the technical potential, i.e. the equipment for the technology, and the existing approaches to its launch.

In addition, for a complete understanding, it is necessary to establish the reasons why plants develop worse in one area of the field than in another. Even if an agronomist fully understands this, it is not enough; he or she must also be provided with the necessary tools, equipment and software. This requires money and human resources.

The innovative component and its development in agricultural enterprises involves the modernisation of fixed assets, so the search for options to solve this problem is constantly relevant. For example, today one of the most promising areas of innovation in the agricultural sector around the world is the use of unmanned aerial vehicles (drones) for agricultural production. Such technical innovations take aerial photographs, monitor fields, create 3D maps, plant seeds, apply fertilisers and plant protection products, control crops, and can also control animals in agriculture, etc [12].

Innovative activities in agricultural enterprises involve the modernisation of fixed assets, so the search for options to solve this problem is constantly relevant. As practice shows, for the further development of Slobozhanshchyna Agro, it is advisable to introduce innovative projects in the field of precision agriculture in combination with digital field monitoring using drones, which will greatly facilitate the work of agronomists and mechanical engineers.

Given that the company's land area is currently quite large, we propose to purchase two drones for Slobozhanshchyna Agro for mapping and monitoring of plant protection products (PPPs), which will be managed by a precision agriculture specialist. In order to determine the effectiveness of using drones in agriculture, the article presents a calculation of the increase in yields and the payback of the costs of their acquisition. For this purpose, a scenario is modelled in which Slobozhanshchyna Agro will be able to purchase two drones, one for mapping and monitoring, and the other for applying a complex of plant protection products with mineral fertilisers.

Consider the economic component of the proposal: the price of an AGRAS T30 drone (manufactured by DJI) for fertilisation is UAH 560 thousand, while another Mavic Pro 2 drone of the same brand will be used for monitoring, with a cost of UAH 42.5 thousand. Given that devices such as drones are classified as fixed assets of the machinery and equipment group, their depreciation period is at least 5 years. The calculated amount of annual depreciation is as follows:

A = (560 + 42.5) / 5 = UAH 120.5 thousand.

It is projected that the area that can be monitored and fertilised with plant protection products on the fields of Slobozhanshchyna Agro can reach 500 ha.

We have chosen winter wheat as a crop to study this process, with an average yield of 6.4 t/ha and a selling price of 10035 UAH/t.

The calculations do not take into account the cost of fertilisers and plant protection products, but it is worth noting that selective application by drones can save up to 40% of mineral fertilisers. Also, the cost of seed (as this indicator does not affect the assessment of the efficiency of using drones), the cost of spare parts, repairs (both of the drone and agricultural machinery), etc.

At the initial stage, let's calculate the income of a private farm, assuming that it monitors crop growth using its own means, i.e. without the use of drones, and uses agricultural machinery to apply fertilisers and plant protection products:

D = 500 x 6.4 x 10.035 = 32112 thousand UAH.

Let's calculate the income under the scenario of using drones, but without taking into account the coefficient n:

D2 = 500 x 6.4 x 10.035 - 120.5 = 31991.5 thousand UAH.

If the use of drones for applying mineral fertilisers and plant protection products does not affect the yield, the agricultural company will receive less for the season by the amount of drone depreciation, i.e. by UAH 120.5. In order to determine at what value of n it will be possible to obtain an equivalent profit from the use of drones as with the use of alternatives, i.e. agricultural machinery for applying mineral fertilisers together with plant protection products, we have the following calculation.

D3 = 500 x 6.4 x n x 10,035 - 120.5 = UAH 32112 thousand.

Let's calculate the indicator n:

31991.5 x n = 32112;

n = 32112 ÷ 31991,5;

n = 1.00376 x 100 = 100.376%.

The calculations show that the use of drones will increase yields by 0.376% (or 6.4 x 0.376 = 0.024 t/ha, or 2.4 c/ha). If this indicator is higher than the indicator of using alternative methods of monitoring and applying fertilisers and plant protection products, then the use of drones is more economically viable than the alternative (when using agricultural machinery for the above purposes).

Let's determine the impact of the use of drones on profit as a result of a 1% increase in yield.

D4 = 500 x 6.4 x 1.01 x 10.035 - 120.5 = UAH 32312.62 thousand.

k = 32312,62 / 31991,5 = 1,01004

k = 1.01004 x 100 = 101.004%

Thus, we can conclude that the yield increases by 1% due to the use of the proposed technical innovation, which, in turn, will lead to an increase in the company's income (increases by 1.004%).

In an extremely difficult political situation related to military operations on the territory of Ukraine, against the background of intensive globalisation processes and rapid development of STP, a large share of economic entities, unable to withstand competition, found themselves in a crisis. Within the framework of the topic, the author shares the scientific opinion that "organisations will survive and thrive by using prompt, flexible and effective change management" [2, 4, 6].

The main organisational changes are the reaction of the enterprise to the development of the environment and their number is constantly increasing in modern conditions. Therefore, the main task for the enterprise is to respond to these changes in a timely and correct manner. Therefore, it is necessary to use all the resources of science and practice to ensure that the management and staff of the enterprise go through this process with minimal losses. At the same time, organisational changes depend on how employees, who are an important strategic resource of the enterprise, change their behaviour. This confirms the need for careful planning of organisational changes, and a prerequisite for their implementation is to determine the readiness of the enterprise for changes, which is a key indicator for management to implement them.

Before planning organisational changes in an agricultural enterprise, we suggest launching a so-called "Bank of Ideas" to generate creative ideas. Its main provisions are shown in table 5.

Employees can submit their ideas for organisational change via the Internet, e-mail, idea boxes and catalogues, and through their departmental managers. The ideas are proposed to be evaluated by a specially created expert council, which should include representatives from management and experienced specialists. If a particular idea is selected, its author should be included in the organisational change management team.

Table 5. Main provisions of the "Bank of Ideas".

Sources of ideas	Knowledge management tool
- employees (main source) - business partners - customers - consultants - competitors - exhibitions, conferences	A tool that allows employees to share new ideas based on their experience and observations A tool that allows you to engage customers, suppliers, partners to improve the company's operations, products and services
The purpose of a knowledge management tool	Metrics of the knowledge management tool
- Search and implementation of promising ideas to optimise: products, services, technologies, business processes, structures - Development of innovation activity and innovation culture - Reducing costs by various items when implementing ideas	Number of ideas submitted Number of ideas implemented as projects Economic effect of the implemented projects

Source: compiled by the author.

Judging by the studied practice of running a profitable business, we believe that in the current environment, managers of agricultural enterprises should focus on a phased change management plan. We propose that at the beginning of the work, they should assess the readiness of the enterprise for changes, carefully plan its activities, and prevent possible resistance of the staff to organisational changes and the implementation of new projects in advance. An important role should be given to the following stages: distribution of powers between the participants of the change management process and the stage of managing the transition process and supporting changes on an ongoing basis (through communication, consultation and representation of stakeholders; conducting outreach and measuring the realisation of benefits) (fig. 9).

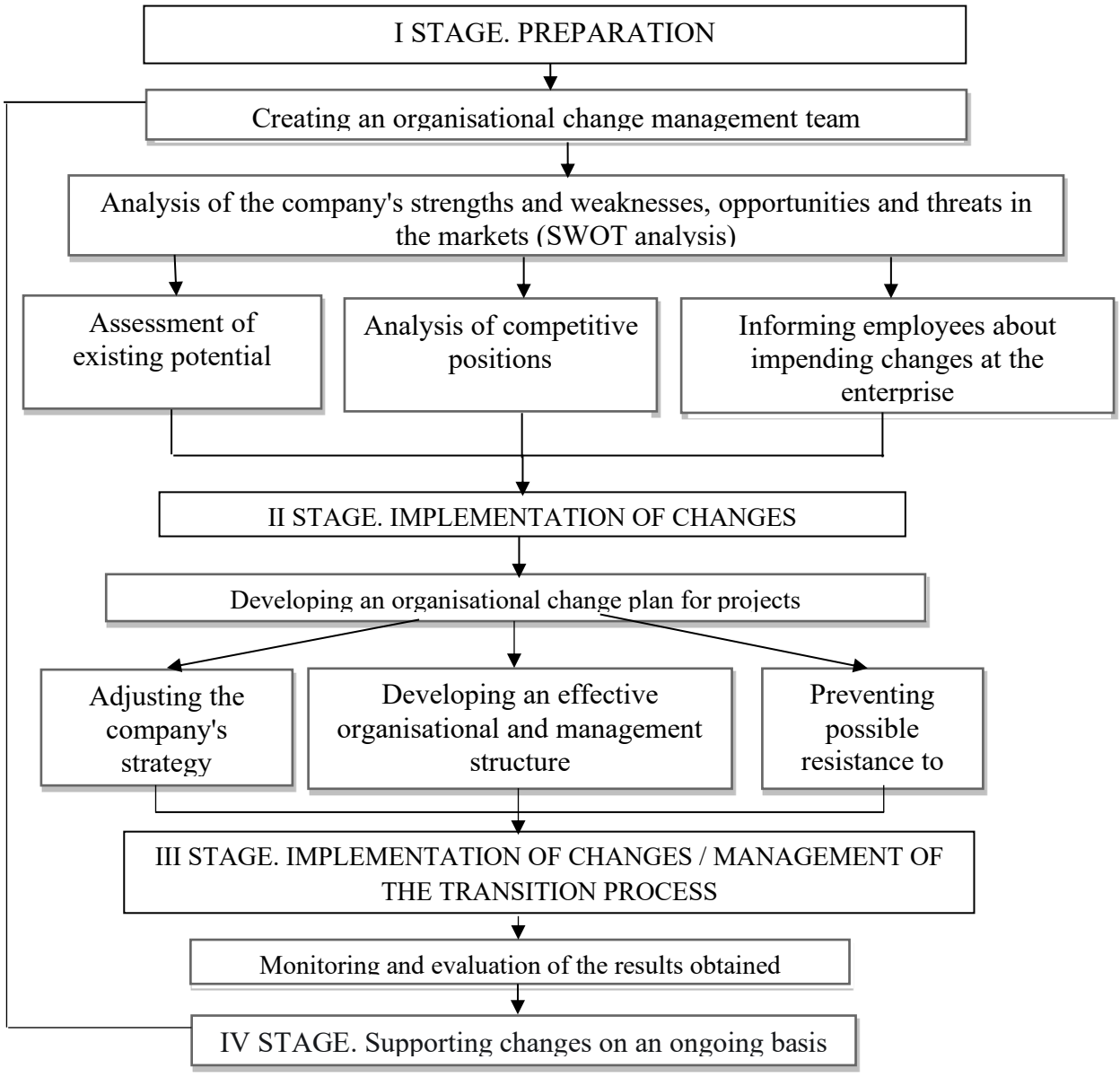

Figure 9. Stages of the process of managing organisational change and in the enterprise.

Source: compiled by the author on the basis of [13].

The positive or negative attitude of staff to change depends not so much on the results of the change as on whether people's needs have been met in the particular situation that led to the change. The perception of the success of changes is not so much related to the actual situation as to the gap (in the

perception of people or enterprises) between what they expected from the changes and what actually happened, and their ability to adapt to the changing situation. Therefore, we emphasise that in order to determine the readiness of an enterprise for organisational change, it is very important to assess the importance of the human factor as one of the crucial components in the implementation of organisational change. In doing so, the mechanisms of management culture, management style, staff motivation, and incentives for advanced training and professional growth should be reviewed. For the successful implementation of changes, the HR system of the enterprise should be considered as an organisational potential that will allow adequate and timely response to external influences.

The first preparatory stage involves the creation of an organisational change management team, whose task should be to plan the creation of a development vector. It should be noted that recently a significant number of researchers have expressed the opinion that in order to increase the readiness of the enterprise for changes and ensure their effective implementation, it is proposed to create a separate unit responsible for the implementation of organisational changes. This allows to effectively coordinate and manage the process of organisational change at the enterprise. Such a unit may include a team of specialists with experience in change management, strategic planning and internal consulting. Its task should be not only to develop a strategy for implementing changes, but also to ensure interaction with all departments and levels of the organisation to implement new ideas and processes. Such a department can be created on a permanent or temporary basis. As for change specialists, they can also be hired for a certain period of time from specialised companies. In addition, in the process of implementing changes, the department's competences should be expanded by the ability to coordinate the activities of other departments of the enterprise in order to increase the efficiency of change implementation. In the organisational structure, the change management department should be directly subordinated to the top management. At the same time, it should not duplicate the functions of other departments and divisions of the enterprise. Thus, the main functions of the change management unit are:

- diagnostics and forecasting of changes in the external and internal environment, identification of the most important changes for the enterprise;
- comprehensive analysis of the changes carried out at the enterprise and their results, identification of deviations from the set parameters;
- accumulation of information on the most effective methods of change management, creation of action algorithms and methodological tools;
- development of specific actions in the event of a situation requiring immediate changes, adjustment of measures in the absence of an effective response;
- creation of an internal environment of the enterprise capable of responding quickly to external changes and using them to the best advantage for its development;
- planning changes based on existing knowledge and experience;
- identifying sources and means of providing the necessary resources and support from the staff to implement the changes;
- identifying negative reactions and developing measures to eliminate them;
- coordination of activities of other departments of the enterprise during the implementation of changes;
- control over the achievement of the set goals.

It should be noted that the functioning of the change management department can be organised on a temporary basis or on the basis of engaging specialists in the field of change management from specialised companies (critical need for immediate changes, any form of enterprise).

We emphasise that if a temporary form of organisation is used, the work of the department is coordinated by the top management of the enterprise, and its functions are prescribed in the change programme. Such a form of organisation of the department does not have a clear regulation of activities, since in addition to the main functions of change management, employees perform additional functions at their place of permanent work. Duties and responsibilities in the department are distributed among employees depending on the degree of complexity of the tasks performed, and decisions on change management are advisory in nature.

If specialists are engaged, their powers are limited to the scope of the change programme and are specified in the contract. The level of regulation is set by the specialists themselves, and the decisions made by the body are binding after approval by the management. Thus, the choice of the form of organisation of the change management department depends on many factors. First of all, it is necessary to assess the degree of need for organisational change at the enterprise. Then, the type of the existing organisational structure is established, which allows to determine the existing intra-economic relations, hierarchical subordination, scope and distribution of responsibilities between the departments. After that, a detailed description of the existing structure is given, and a list of features and properties is formed. At the last stage, the form of organisation of the change management unit is determined, which meets the needs and capabilities of the enterprise.

Increasing the enterprise's readiness for change helps to overcome resistance to change on the part of the team. Resistance to change causes destabilisation of relations between staff. Since the vision of the new, the need for change is most often understood at the top levels of enterprise management, resistance can occur at almost all lower levels. The strength of resistance largely depends on the degree of awareness of the company's members about foreign policy, on their understanding of not only the importance of the changes for the entire organisation, but also their own role. At the same time, each member of the organisation must correlate innovations with their own goals and personal benefits.

The satisfaction of employees with specific transformations will be mediated in one way or another by their socio-demographic and personal characteristics, motivation and personality structure in general.

It is worth noting that the attitude of employees towards reorganisation is positively influenced by their educational level. Some studies show no influence, while others argue that men are more inclined to external comfort and women to internal comfort when accepting changes.

The active minority involved in the design and implementation of an innovation primarily assesses the favourable consequences of changes for themselves personally, and the unfavourable ones for the enterprise as a whole. The passive majority, on the contrary, considers mainly their own disadvantages and associates the benefits with the enterprise.

Creative people are more optimistic about changes and their expected success. However, due to the expectation of more radical changes, they usually have a lower assessment of the changes that have already been made. For the changes to be successful, staff must be focused on self-development. An entity's focus on professional growth, competition and diversity of activities increases their assessment.

Implementation of changes is often associated with an increase in costs aimed at increasing productivity, capitalisation and economic efficiency. This leads to increased staff resistance, caused by the fear of losing their jobs or not being able to use their skills in another part of the production chain. To overcome resistance at the initial stage, it is necessary to involve all employees in the decision-making process, which will reduce the degree of dissatisfaction and denial of the changes taking place. When implementing organisational changes, it is necessary to ensure the staff's employment security, regularly inform employees about the progress of changes and the results achieved, establish a comfortable psychological atmosphere, and motivate staff to actively participate in the changes. There are a large number of scientific papers and opinions on the motivation of the staff during organisational changes. For example, motivation implies a synchronous coincidence of motives and incentives in the minds and behaviour of employees, which ensures the intensification of labour activity. During the period of change, it is necessary to find special incentives for employees, as at this time the resistance of the staff, which hinders the effectiveness of the changes, increases.

The successful implementation of changes is also facilitated by an increase in the level of organisational culture of the team. Therefore, the staff motivation system during the period of change should meet the following requirements:

- compensate for the increased labour costs of employees:
- timeliness and certainty of incentives:
- awareness of the criteria for assessing labour performance;
- activation of personal interest in the effectiveness of changes through selective motivation:
- determining the relationship between personal rewards and joint team achievements;

- a combination of moral and material incentives:
- flexibility and transparency of employee motivation.

The motivation system during the period of organisational change should be built by encouraging individual employees to participate in the implementation of changes, involving the entire team in being active during this period, and increasing the interest of external stakeholders in the development of the enterprise.

Employee motivation should be based on the principles of expectancy theory and equity theory, which state that a person will work and achieve results more efficiently if he or she knows that he or she will be rewarded for the results obtained. According to the theory of equity, employees should be rewarded equally for equal effort, workload and results in accordance with the costs of labour. Motivation is necessary to ensure that the interests of employees and management, as well as all stakeholders (owners, shareholders, investors) aimed at the development of the enterprise, coincide. To do this, we analyse all participants in the process, determine their characteristics, capabilities in achieving goals, deadlines for completing tasks and performance results. Based on the data obtained, each group of participants is provided with its own motivational incentives that can activate their interest in achieving the goals of the implemented changes.

For the identified research problem, the best practices of foreign agricultural companies may be instructive, the observation of which allowed the author to develop proposals for improving the innovative culture of employees of agricultural enterprises.

Developing the idea of the importance of innovation culture in the context of organisational change, we believe that first of all, a dialogue should be established between the participants regarding everything that is happening in the company and what the changes will lead to. It is advisable to have an ongoing dialogue with employees so that they understand where the company is heading and what benefits will be available to each of them. The results of the study of foreign experience show a positive impact of innovation culture on business performance. Scientists have found that when the level of innovation culture changes, economic indicators of net income can increase by 3 times [14].

Thus, since the work on developing organisational changes and innovative projects is a creative process, its management within the enterprise should be based solely on creating favourable conditions for the innovative activity of employees, developing their creativity, ability to think outside the box and solve everyday tasks of the enterprise. Therefore, we believe that managers of agricultural enterprises need to be more active in promoting innovation culture among their employees. Ideally, it would be advisable to engage a creative manager who would professionally manage organisational changes, but given the financial problems associated with military operations on the territory of Ukraine, the top management of most enterprises usually does not accept such a proposal. Therefore, we propose to periodically organise intellectual gatherings of employees in agricultural enterprises of this type, following the example of the well-known "quality circles". Thus, based on a detailed review of the business conditions of Slobozhanshchyna Agro, we believe that the head of this enterprise should invite senior and middle managers to discuss the proposal and select an experienced representative from the management team to advise the staff on existing promising domestic and foreign innovation projects, to familiarise the employees with the dynamics of innovation in progressive agricultural enterprises and to explain the dynamics of innovation in the agricultural sector.

We would like to emphasise that agro-innovations, such as GPS in tractors or other digital technologies, require employees to have the appropriate knowledge and skills to use them [7]. Therefore, it is advisable for all personnel of the enterprise to actively improve their professional knowledge and innovation literacy by participating in seminars, trainings, etc.

Achieving sustainable development of an enterprise necessitates modern and comprehensive changes in its activities, in particular in the technologies used, management methods, requirements for the competence of specialists and forms of interaction with the external environment. Depending on the depth and goals of the changes, the current situation and specifics of the enterprise's activities, and an assessment of its capabilities, it is possible to determine the need to introduce certain changes in business practices.

To summarise, we can state that organisational change management should cover all aspects of the production and economic system. Its objects should be:

- assets, capital and liabilities of the production and economic system;
- areas of activity (supply, production, sales)
- internal policy of property protection and business security;
- human resources (including issues related to HR policy, social issues, etc;)
- information support programmes (including bringing information about plans, methods and principles of management to the labour collective).

Keywords: organizational changes in agricultural enterprises, change management, project management, managers, efficiency, ensuring sustainable development.

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QUALITY OF ACCOUNTING INFORMATION IN ENTERPRISE MANAGEMENT

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High-quality accounting information is essential for the effective management of any organization. It is crucial for:

- decision-making;
- monitoring financial performance;
- compliance with legal and regulatory requirements;
- maintaining the trust of stakeholders.

Good accounting information helps organizations identify key business drivers, track progress, and identify potential problems before they become serious. It also enables management to comply with legal and regulatory requirements, including tax laws, which directly affect the financial position of the enterprise, as violations of tax accounting laws are subject to penalties. In addition, high-quality accounting information increases stakeholder confidence and improves the organization's reputation.

Conversely, poor accounting information can lead to ineffective management, poor decision-making, financial losses, and even legal liabilities. Such ineffective decisions may result in financial losses, lost opportunities, and other unfavorable consequences for the company. Inadequate accounting information can also create risks of non-compliance with legal and regulatory requirements, resulting in financial penalties and other legal obligations. In addition, inaccurate accounting information can undermine stakeholder confidence, leading to reputational risks that could harm the organization's future prospects.

To a greater extent, the problem of accounting information quality is an issue for medium and large businesses that have a large organizational structure, their own entrepreneurial (corporate) culture, and operate in different regions and even countries. For such businesses, reliable and relevant accounting is the basis for making management decisions. Unlike large enterprises, small businesses may keep simplified accounting or not at all, which forms only the basic requirements for quality accounting information - compliance with applicable law.

In recent years, both scholars and practitioners have emphasized the importance of quality accounting information for effective management. M. Bondar [1] argues that accounting is an information subsystem of management, and high-quality accounting information is necessary for making informed management decisions. N. Tsehelnyk and T. Haiduchok [13] show the process of forming accounting information and its further reflection in the reporting, emphasizing the importance of accurate and complete accounting information for effective financial management. I. Ometsinska [10] provides a critical analysis of the economic essence and quality criteria of accounting information, noting that quality accounting information is essential for effective and efficient management. L. Hutsalenko [4] emphasizes the importance of improving the quality and predictability of accounting information to ensure the company's profitability.

O. Kolisnyk [8], T.O. Gorbach et al. [3] have contributed to the study of the concept of information quality, they show the theoretical foundations of the study of the quality of accounting information in financial statements and note that high-quality accounting information is a key factor in ensuring transparency and accountability of financial statements, which is important for other users of accounting information, not only managers.

O. Budko [2] and N. Yershova [5] present a methodological approach to assessing the quality of accounting information, emphasizing the importance of objectivity and reliability in financial reporting. B. Zasadnyi [7] proposes a comprehensive approach to assessing the quality of accounting information, which takes into account not only the accuracy and completeness of information, but also the timeliness and relevance of financial statements. L. Pylypenko [11] considers different approaches to ensuring the

quality of accounting information, emphasizing the importance of the internal control system to ensure the accuracy, reliability and completeness of financial statements.

Thus, the literature emphasizes the importance of quality accounting information for effective management, including principles such as accuracy, completeness, reliability, relevance and timeliness. Establishing financial reporting guidelines and regulations, as well as implementing internal controls, are key factors in ensuring the provision of high-quality accounting information. However, along with numerous studies reflecting the theoretical aspects of quality information, there is a lack of a clearer understanding of the criterion of quality accounting information for business management in the context of transformation. This study includes the necessary quality criteria implemented by European accounting standards and allows to form a new conceptual approach to the assessment of accounting information of domestic business.

In the context of doing business, the quality of accounting information means the accuracy, reliability, relevance and timeliness of the financial data provided by a company's accounting system. To ensure the quality of accounting information, various regulatory frameworks and standards have been established in Europe. The most famous of these include International Financial Reporting Standards, EU accounting directives, generally accepted accounting principles.

1. International Financial Reporting Standards (IFRS) are a set of globally recognized accounting standards developed by the International Accounting Standards Board (IASB). They are intended to provide a common accounting language for companies to use so that they can prepare transparent and comparable financial statements.
2. The European Union Accounting Directives are designed to harmonize the accounting practices of its member states. These directives regulate such areas as the presentation of financial statements, consolidated reports and disclosure requirements.
3. Generally Accepted Accounting Principles (GAAP) are the accounting rules, standards and conventions followed by businesses in a given country. Although they may differ from IFRS, they are intended to ensure the quality and consistency of accounting information.

To ensure and maintain the quality of accounting information in Europe, various regulatory frameworks and standards are in place, such as IFRS, EU Accounting Directives, and national UAS. In Ukraine, however, the criteria for the quality of accounting information are defined by national documents, in particular, NSAU No. 1 [6] and the Conceptual Framework for Financial Reporting [9]. In these two documents, most of the qualitative characteristics of accounting information coincide, they are based on the criteria of clarity, reliability and comparability.

Table 1. Quality criteria for accounting information in accordance with national regulations.

Criteria.	NP(S)BA 1	Conceptual framework for financial reporting
Clarity and relevance	Comprehensibility	Relevance
	Relevance	Actuality
	Clarity	Credibility
Reliability	Reliability	Verifiability
Comparability	Comparability	Comparability
		Timeliness

Note: systematized by the author.

The Conceptual Framework identifies additional characteristics, such as verifiability and timeliness. However, in our opinion, reliability, comparability and verifiability are characteristics of the entire set of information - not just accounting information. All documents should be structured in such a way that they can be verified against actual data. Accounting information is the most accurate compared to other types of information because it is fully supported by primary documents, accounting

calculations, etc. Therefore, any business information that has the format of reports or primary documents can be verified.

With regard to timeliness, this characteristic is primarily the prerogative of management accounting information, as financial statements are submitted within certain timeframes and at regular intervals. The timeliness of accounting depends on the timeliness of the production, marketing, and warehouse departments, so it is difficult to shift responsibility for the timeliness of information solely to the accounting department.

Thus, the characterization of timeliness and verifiability as key criteria for the quality of accounting information is leveled. On the other hand, management accounting information must be timely, otherwise it loses its relevance.

Clarity of presentation affects understandability, and these criteria can be combined, but they depend to a greater extent on the way accounting information is presented to stakeholders. In many cases, it is the case that a manager without an accounting background cannot read accounting information and therefore needs to have it presented in a format that is more understandable to him or her. Accordingly, it can be concluded that accounting information needs to be systematized in accordance with the needs of the information consumer.

We support the position of the authors of the Conceptual Framework for Financial Reporting on the priority of such characteristics as relevance and fair presentation. For example, accounting information may be well-structured, understandable and comparable, but not relevant, i.e. unnecessary for a particular user of the information. Information should be appropriate or relevant, as stated in NP(S)BA 1.

To more accurately define the criteria for quality accounting information, let us turn to the research of domestic scholars. The quality of accounting information, according to the research of various domestic scientists, such as Bodnar M. [1], Horbach T.O. [3], Yershova N. [5], is defined as a set of objective properties and characteristics that determine the consumer value of a product (accounting information). The emphasis is placed on the practical usefulness of information, which is determined by such properties as completeness, density, value, usefulness and reliability of information. At the same time, quality should be considered from the standpoint of the consumer value of the object of accounting science under study, as suggested by N. Ershova. This perspective covers accounting systems, accounting information, financial statements, etc. and is aimed at meeting the needs of the object's consumers, such as system developers, users of accounting information, users of financial statements, i.e. the author defines the criterion of usefulness as the most important.

The understanding of the quality of accounting information has evolved over time, as the economy and society have developed. It has been recognized that information should be user-oriented, and even high-quality information loses its value if no one needs it. Thus, the quality of information is based on a set of its properties; the degree of its compliance with the needs of consumers (external and internal users); compliance with standards, norms and rules, as stated in the studies of Kolisnyk O. [8] and Ometsinska I. [10].

Although the basic principles of accounting information quality are similar in both European standards and norms and in the opinions of domestic scholars, there may be some differences in the emphasis and perceptions of various criteria.

Thus, regulatory and academic sources emphasize the importance of such characteristics as relevance, reliability, accuracy and timeliness of accounting information for effective decision-making and financial management. European standards and norms, such as IFRS, EU Accounting Directives and national UAS, are primarily focused on creating a common framework for accounting practices that ensure transparency, comparability and consistency of financial reporting. On the other hand, domestic scholars tend to emphasize the practical usefulness of accounting information, the use value and meeting the needs of various stakeholders, such as system developers, users of accounting information and users of financial statements. They also emphasize the importance of information being user-centered and compliant with standards, regulations and rules.

However, all these criteria for the quality of accounting information are largely determined subjectively, depending on the users of accounting information. To understand the criteria in more detail, let us identify the main consumers of accounting information in Table 2.

Table 2. Main consumers of accounting information.

Stakeholder	Required information
Managers	Financial statements, budgets and forecasts, cost information, key performance indicators, variance analysis, financial ratios and benchmarking, cash flow forecasting, other financial information
Investors	Financial statements, cash flow statements, auditor's reports, management's discussion and analysis, corporate governance information, information on the company's strategy, performance and risks
Creditors	Financial statements, credit reports, cash flow projections, audit reports, management's discussion and analysis, information on the company's liquidity, solvency and ability to meet its financial obligations
Customers.	Information about products, services, prices, delivery, customer service, warranties and representations of the company
Suppliers	Information on the company's financial stability and ability to pay bills on time, procurement process, product specifications and quality requirements, delivery expectations, payment terms
Employees	Information about the company's financial performance, compensation and benefits, training and development opportunities, health and safety, job security, and career opportunities
Regulatory authorities	Financial statements, audit reports, compliance reports, tax returns, environmental impact reports, information on the company's corporate social responsibility practices and policies, regulatory compliance and risk information
Government	Information on taxes, duties, regulations and laws affecting the company's activities, financial statements, audit reports, information on the company's economic and social impact on society, contribution to public welfare

Note: compiled by the author.

In order to meet the needs of all stakeholders of accounting information, accountants of domestic companies solve a number of tasks (Fig. 1).

Accountants must have a thorough understanding of both national and international accounting standards, as they can sometimes conflict with each other. The accountant's job is to apply the appropriate standards in accordance with the organization's goals and requirements, ensuring compliance and avoiding penalties.

Sometimes accountants may face pressure from management to adjust financial statements or present results in a certain way. It is the accountant's responsibility not only to comply with management's requirements, but also to maintain accurate and fair financial statements that are consistent with legal and ethical standards.

Truthful accounting plays a critical role in detecting and preventing fraud within an organization. Accountants must be diligent in identifying and reporting any suspicious transactions or financial discrepancies to preserve the integrity of the organization's financial records.

Accountants should ensure that financial reports are prepared and submitted on time, in accordance with relevant rules and standards. This helps to maintain transparency and provides valuable information to stakeholders, such as investors and creditors, for decision-making.

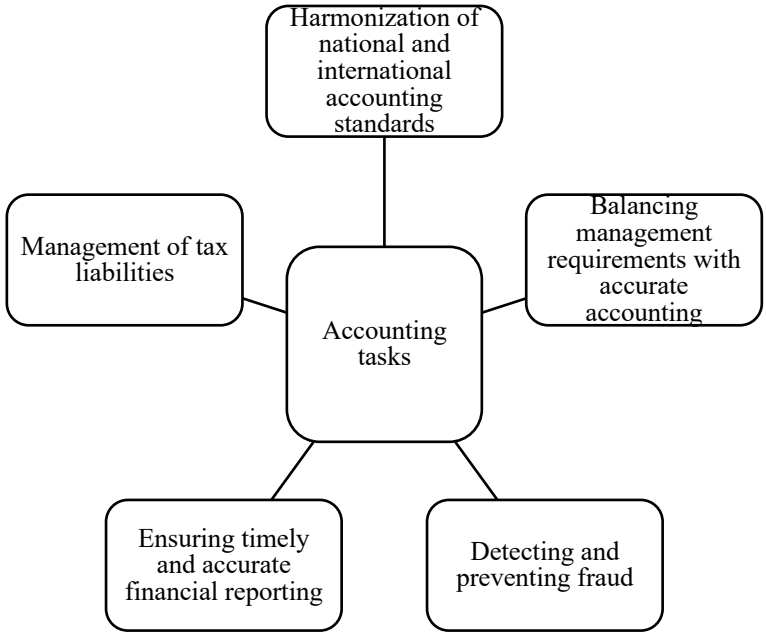

Figure 1. Tasks of accountants to prepare the necessary information for different stakeholders.

Accurate accounting is essential to accurately manage an organization's tax liabilities. Accountants must carefully track revenue, expenses, and other financial transactions to calculate and report taxes due, ensuring compliance with tax laws and avoiding potential penalties.

By accomplishing these tasks, accountants can maintain accurate and truthful accounting records, contributing to the overall success and credibility of the organization.

As a result, key criteria for high-quality accounting information can be formed, which depend solely on the work of the accountant:

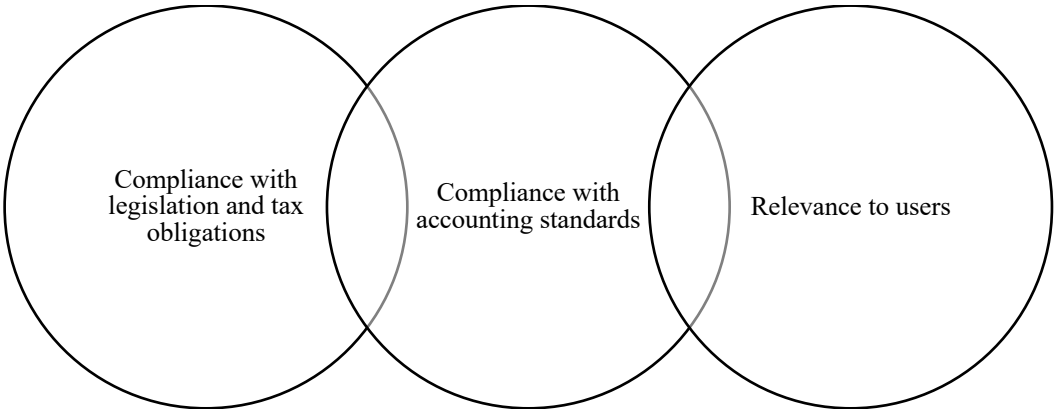

Figure 2. Basic criteria for quality accounting information prepared by an accountant.

When studying the peculiarities of building accounting information, you need to understand that the quality of accounting information can be affected by various external and internal factors. These factors require additional criteria for the accounting information to be used for enterprise management. The classification of factors is shown in Figure 3.

The regulatory environment plays a crucial role in shaping the accounting standards that organizations must follow. The use of different accounting standards in different countries can make it difficult for organizations to achieve consistency and comparability in their financial statements. This is especially important for enterprises engaged in foreign economic activity. Compliance with these standards is critical to the accuracy and reliability of accounting information. Legal and tax regulations determine how organizations must present their financial information. Changes in legislation may affect how organizations operate and what information they report. Failure to comply with these regulations can result in legal and financial penalties. Different industries have their own unique rules and requirements that may affect the way accounting information is presented. Compliance with these rules is essential to the preparation of accurate and reliable financial statements. Market conditions, such as competition, supply and demand, and economic growth, can affect an organization's financial performance. These factors can affect the accuracy and reliability of accounting information by affecting how financial transactions are recorded and reported.

Inflation can affect the value of assets and liabilities, which in turn can affect an organization's financial statements. It is important to consider the effect of inflation on financial information to ensure its accuracy and reliability. Accordingly, fluctuations in foreign exchange rates may affect an organization's financial performance, particularly for organizations operating internationally. Changes in exchange rates can affect the value of assets and liabilities, as well as revenues and expenses.

The development of accounting software can help organizations improve the accuracy and reliability of their accounting information. Accounting software can automate many accounting processes, reducing the risk of human error and increasing efficiency.

The introduction of new technologies can affect the accuracy and reliability of accounting information. These technologies can increase efficiency and reduce the risk of errors, but organizations must ensure that they use them appropriately and effectively.

Investors and shareholders are interested in the accuracy and reliability of an organization's financial information. They use this information to make decisions about investing in the organization and evaluating its financial performance.

Customers and suppliers rely on an organization's financial information to assess its financial strength and make decisions about doing business with the organization.

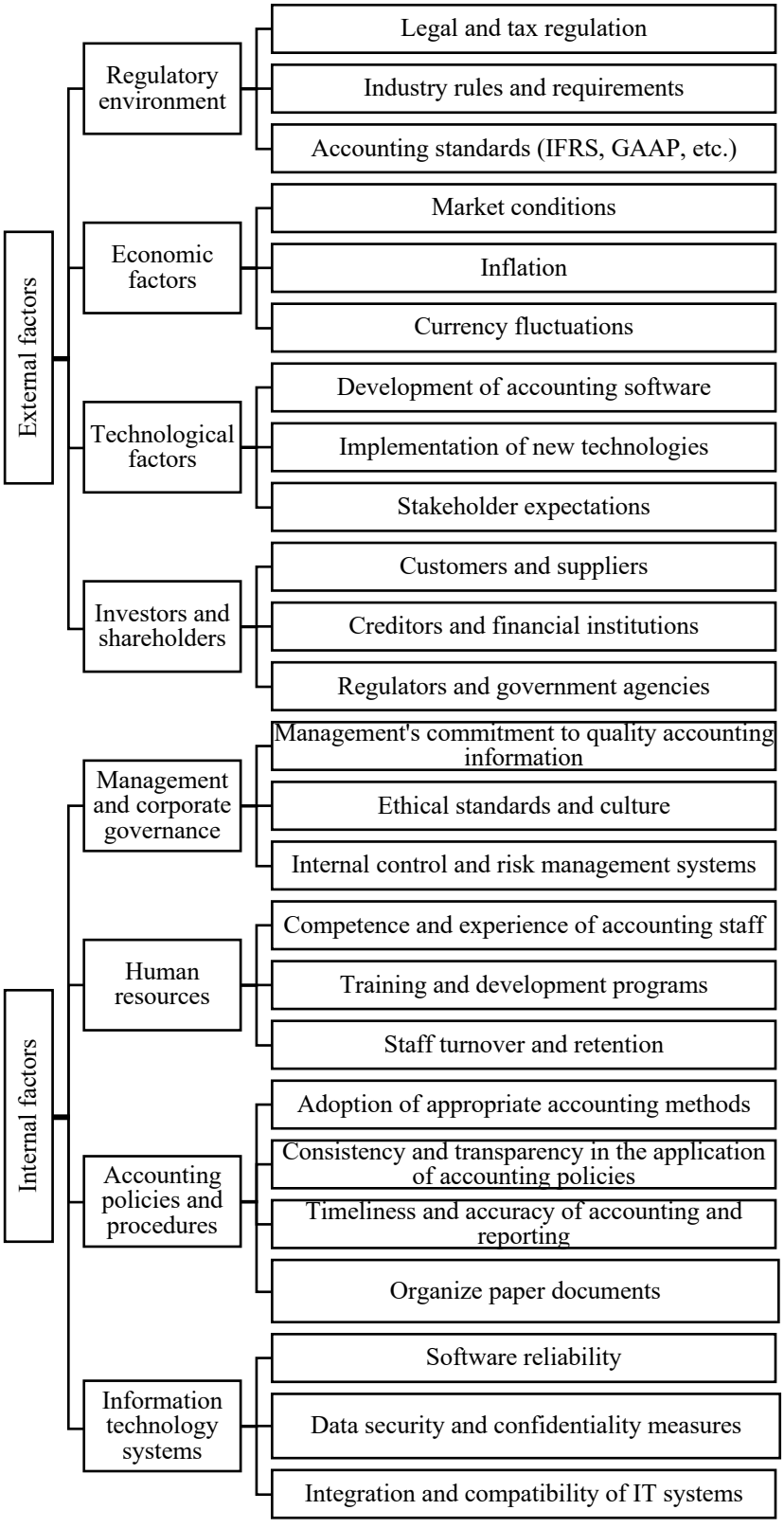

Figure. 3. Classification of factors affecting the quality of accounting information.

Note: systematized by the author.

Creditors and financial institutions rely on an organization's financial information to determine its creditworthiness and make lending decisions.

Regulators and government agencies use an organization's financial information to monitor compliance with regulatory requirements and make policy and enforcement decisions.

As for the internal factors affecting the quality of accounting information, the authors believe that they are crucial in the formation of reliable and relevant accounting information. The ability to generate quality accounting information depends on a number of factors.

Management's strong commitment to the preparation of quality accounting information is critical to ensuring the accuracy and reliability of financial statements. Management's willingness to invest in and maintain sound accounting policies and internal controls is critical to creating a culture that values accurate financial information. The additional data collection required to inform various stakeholders requires additional funding, and therefore the ability to implement a good accounting policy depends solely on management's initiative. Ethical standards and culture should be integrated into the company's policies and procedures, training programs and recruitment practices.

The effectiveness of the company's internal control systems and risk management processes is essential to ensure the accuracy and reliability of accounting information. A well-designed internal control system can prevent or detect errors, fraud, and other irregularities that could affect the quality of financial information.

The human factors available to the accounting department are also important.

The competence and experience of a company's accounting staff is critical to the preparation of quality accounting information. Proper recruitment, training, and development programs can help ensure that accounting personnel have the necessary skills and knowledge to perform their duties effectively.

Ongoing training and development programs can help ensure that accounting personnel stay abreast of changes in accounting standards, regulations and best practices. These programs should be tailored to the specific needs of each employee and focus on developing skills related to accounting, technology, and communications.

Staff retention is essential to maintaining a high level of quality accounting information. High staff turnover can lead to a loss of institutional knowledge, lower morale, and a lack of consistency in accounting practices. Companies should implement staff retention strategies that address remuneration, work-life balance, career development opportunities, recognition and rewards.

The company's accounting policies should be clearly defined, consistent and standardized. The use of proper accounting methods is essential to obtaining quality accounting information. Companies should choose accounting policies that comply with the accounting standards in their jurisdiction and accurately reflect the economic substance of transactions. Consistency and transparency of accounting policies and procedures are important to ensure high quality accounting information. Companies should document their accounting policies and procedures in a clear and concise manner, and these policies should be applied consistently throughout the organization.

The timeliness and accuracy of accounting records and reports are essential to producing high-quality accounting information. Companies need to ensure that their accounting records are complete, accurate and up-to-date, and that reports are prepared in a timely manner.

Organizing documents is one of the most important aspects of ensuring high-quality accounting information in any organization. A well-organized document storage and processing system helps ensure the accuracy and completeness of financial statements, control expenses and income, and increase work efficiency.

Running a successful business involves meeting various legal and financial requirements. The absence of relevant documents or their improper organization can lead to violations of legislation and other rules, as well as cause serious financial losses.

In today's environment, accounting information is stored in paper form. Despite the automation of accounting processes, accounting departments of Ukrainian enterprises must have all documents (copies) in paper form. The preservation of file cabinets and archives of primary documents is a key requirement for the accounting process, and therefore the speed of their processing depends on how efficiently paper documents are stored. Today, there are various methods of improving the storage of accounting information that allow you to store data in paper form safely and conveniently.

- Compact storage. Compact storage methods, such as digital storage devices (flash drives), can be used to store accounting information, which provide protection against wear and tear and damage,

and take up minimal space. These storage devices should also have a suitable storage space with labeling and grouping.

- Use of special folders and containers. Special folders and containers can be used to store accounting information, providing protection against water, dust, and wear and tear, as well as reducing the risk of document loss.
- Use a numbering system. You can use a numbering system to store accounting information, which allows you to track each document separately and provides quick access to the necessary data.
- Use of special devices. Special devices such as scanners and printers can be used to store credentials, allowing you to save and print documents quickly and conveniently.
- Regular data backup. To ensure the security of paper-based accounting information, it is necessary to regularly create backup folders on external media or in cloud storage.
- Use of encryption methods. To protect confidential information in paper form, you can use encryption methods, such as passwords or cryptographic keys.
- Use of an archiving system. To store accounting information, you can use an archiving system that allows you to reduce the size of files and save them in a secure format.
- Placement in a safe place. To ensure the security of accounting information in paper form, it is necessary to place documents in a safe place, for example, in a safe or in a room with an access control system.

Information support plays an important role in the organization of the modern accounting process. The use of appropriate and reliable accounting software and IT infrastructure is essential to producing high quality accounting information. Companies must ensure that their software and hardware meet their accounting needs, are reliable, secure and easy to use. In addition, the software should solve accounting problems in a comprehensive manner, as the use of different software shells leads to incompatibility of databases.

Data security and confidentiality measures are important to protect accounting information from unauthorized access, modification, or disclosure. It is important to ensure the protection of both electronic and paper-based documentary information.

Integration and interoperability of IT systems are critical to producing high quality accounting information. Companies need to ensure that their IT systems can effectively communicate with each other and that data can be transferred seamlessly between different systems. This requires careful planning and coordination between different departments and IT service providers.

In addition to these factors, the quality of accounting information depends largely on how well the accounting purpose is defined. Prior to the adoption of the Tax Code of Ukraine, tax accounting differed from financial accounting as it was based on the conceptual framework of accounting. The accounting information prepared in accordance with the Law "On Amendments to the Law of Ukraine 'On Corporate Profit Tax' differed significantly from the information prepared on the basis of financial accounting. Business entities were focused on complying with tax legislation, but did not always follow the conceptual framework of accounting. Although the situation has somewhat improved with the adoption of the Tax Code of Ukraine, there is still a risk of "taxation" of accounting and insufficient consideration of the information needs of users of accounting information, such as investors, banking and other credit institutions, buyers, and others. A striking example is the definition of profit as a key indicator of enterprise performance, while in developed countries the key indicator is net cash flow. It can be concluded that to a greater extent, Ukrainian enterprises still orient their accounting and analytical system towards tax legislation for the purpose of further taxation of profits, while foreign enterprises - for investment inflows, for which the key indicators are cash flows.

Indeed, proper organization of accounting is a critical factor in ensuring quality accounting information. By following the following basic criteria, a company can achieve a well-organized accounting system.

- Compliance with regulations and standards. Adherence to relevant accounting standards (such as IFRS or GAAP) and legal requirements ensures that accounting information is consistent, transparent and comparable.

- Clear accounting policies and procedures. Establishing and adhering to well-documented accounting policies and procedures helps ensure consistent and accurate accounting records and reporting.
- Effective internal controls. Implementation of effective internal controls and risk management processes minimizes the risk of errors, fraud and misstatements in accounting records, increasing the reliability of accounting information.
- Competent and trained staff. Hiring qualified accountants and providing opportunities for ongoing training and development ensures that accounting staff are up-to-date with current accounting practices and regulations..
- Effective use of technology. The use of advanced accounting software and IT systems improves the accuracy, timeliness and efficiency of accounting processes, reducing the risk of errors and improving the overall quality of accounting information.
- Regular monitoring and verification. Periodic reviews and audits of the accounting system and processes help identify potential opportunities for improvement and ensure that the system meets constantly changing standards and requirements.
- Adaptability and flexibility. A well-organized accounting system should be able to adapt to changes in the business environment, such as changes in regulations, industry requirements, or technological advances. The ability to adapt and respond to these changes ensures that the accounting system remains relevant and effective in providing high quality accounting information.
- Proper documentation and record keeping. Maintaining accurate and organized documentation of accounting transactions and records is essential for effective decision-making, regulatory compliance, and financial reporting.
- Segregation of duties. Ensuring a clear division of responsibilities between accounting staff helps prevent errors, fraud, and manipulation of financial information by creating a system of checks and balances.
- Timely and transparent communication. Open and timely communication of financial information between management, accounting staff, and other stakeholders contributes to a better understanding of the company's financial position and performance, which leads to more informed decision-making.

By focusing on these basic criteria, a company can create a well-organized accounting system that will ensure high quality accounting information, which will ultimately lead to better decision-making, improved financial management, and increased stakeholder confidence.

Let's summarize the factors that can improve the quality of accounting information and those that can deteriorate it.

Table 3. Positive and negative factors affecting the quality of accounting information.

Positive	Negatives
Compliance with accounting standards and rules	Deviations from legislative norms and accounting rules
Effective internal control	Insufficient internal control
Competent and well-trained staff	Insufficient training and competence of staff
Advanced technologies	Outdated or incompatible technologies
Clear accounting policies and procedures	Inconsistent or unclear accounting policies and procedures

For effective management, accounting information is crucial because it helps to make informed decisions and evaluate the performance of an organization. The following types of accounting information are important for effective management.

- Financial statements. These include the balance sheet, income statement, cash flow statement, and statement of changes in equity. Financial statements provide a complete picture of the company's financial position, profitability, and cash flows.

- Budgets and forecasts. Budgets outline an organization's financial goals and resource allocation for a certain period, while forecasts predict future financial performance. Both documents are important for planning and controlling the company's financial activities.
- Information on cost accounting. This includes data on the cost of products, services, and activities. Cost accounting helps managers understand the profitability of different segments, make pricing decisions, and identify areas for cost optimization.
- Key performance indicators (KPIs). These are measurable values that demonstrate the effectiveness of a company in achieving its goals. KPIs help managers track progress and identify areas for improvement.
- Deviation analysis. Comparing actual results with budgets or forecasts helps managers identify deviations and take corrective action if necessary.
- Financial ratios and benchmarking. Financial ratios help assess a company's performance, liquidity, solvency, and efficiency. Comparing these ratios with industry standards or competitors' indicators gives an idea of the competitive position of the organization.
- Break-even analysis. Helps managers determine the level of sales required to cover costs and identify the profitability potential of various products or services.
- Cash flow forecasting. These forecasts help managers plan and control cash inflows and outflows to ensure that the company has sufficient liquidity for operations and investments.
- Non-financial information. While not strictly accounting information, non-financial data (e.g., customer satisfaction, employee engagement, and sustainability performance) can also be critical to effective management, as they provide insight into the broader performance and impact of an organization.

It should be noted that most of the information is prepared by other specialists than accountants. Let us consider the sources of information necessary for management in Table 4.

Table 4. Sources of necessary accounting information.

Type of information	Responsible department of the enterprise
Financial statements	Finance and Accounting Department
Budgets and forecasts	Financial department, planning department
Information on expenses	Finance, accounting or cost accounting department
Key performance indicators (KPIs)	Finance department, HR department, operations department
Analysis of deviations from targets	Finance department, planning department, operations department
Financial ratios and benchmarking	Financial department, analytical department
Cash flow forecasting	Finance Department, Treasury
Other non-financial information	Human Resources, Marketing, Operations, IT, Accounting, and Finance departments

To ensure that the accountant can provide the necessary information for effective management, some recommendations can be made to improve the work of the accounting department. Let us consider some important steps that the accounting department should take in order to prepare high-quality accounting information for management purposes.

Cross-functional collaboration is the most important step to take to produce quality management information. It is important for the accounting department to establish strong channels of communication and collaboration with other departments (e.g., economic, finance, and operations) to collect relevant data and better understand the overall performance of the company. This can be accomplished through regular meetings, shared software platforms such as Microsoft Teams, Slack, or Asana, and shared workspaces. By fostering teamwork and knowledge sharing, the accounting

department can better understand the unique needs and goals of each department, resulting in more accurate and up-to-date financial data.

Continuous training of the accounting department. It is important that the company's policy is to provide ongoing training to the accounting staff to ensure that employees are aware of the latest accounting standards, management accounting practices, and financial reporting requirements to ensure the accuracy and relevance of the information provided. Management should encourage accounting staff to pursue professional development by attending conferences, seminars, and online courses. They can obtain certifications in specialized software such as QuickBooks, Xero, or Sage, and learn about new technologies such as blockchain and artificial intelligence. This will help them keep up with the latest industry trends and best practices.

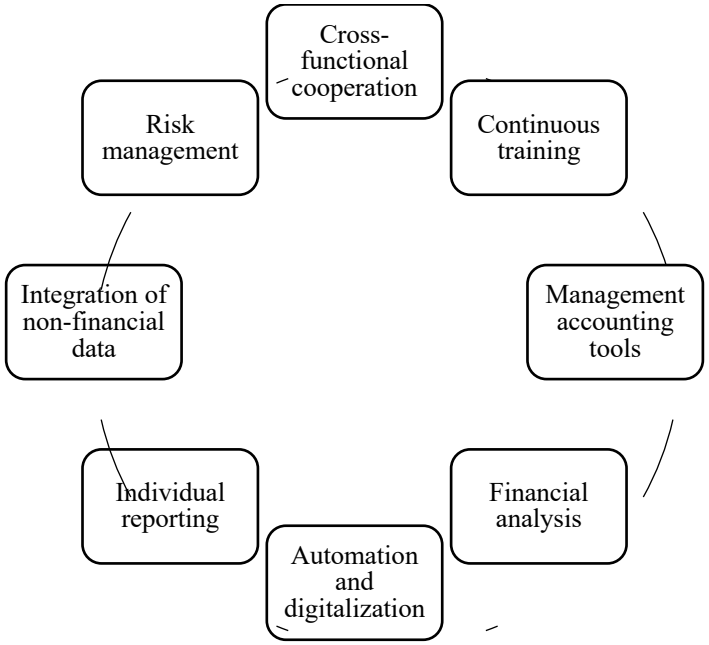

Figure 4. Necessary criteria for improving accounting processes to obtain quality management information.

Management accounting tools are the main way to integrate all information flows. At the enterprise level, it is important to use tools such as budgets, forecasts, cost analysis, and key performance indicators (KPIs) to provide management with actionable information about the company's performance and financial position. It is important to implement management accounting tools such as Activity-Based Costing (ABC), Balanced Scorecard, and Key Performance Indicators (KPIs) to improve decision-making and performance measurement. These tools can be integrated with existing accounting software or implemented using specialized software such as IBM Cognos, SAP, or Oracle Hyperion..

Financial analysis. The accounting department should provide complete and reliable data to the analytics department so that regular financial analysis can be conducted to identify trends, areas for improvement, and potential risks. This will allow the accountant to provide management with valuable information for strategic decision-making. In addition, given that financial analysis has a permanent structure and algorithms, the accounting department can independently implement the rule of reporting in the form of financial analysis on accounting results without involving outside employees. It is worth expanding the capabilities of financial analysis in accounting by using modern data analysis tools such as Tableau, Power BI, or Alteryx. These tools will help accountants to analyze financial data more effectively, identify trends and patterns, and provide valuable information for making management decisions.

Automation and digitalization are the main way to improve accounting processes and, based on them, obtain all the necessary financial indicators in the dynamics, which is important for making management decisions. Businesses need to work on implementing modern accounting software and tools to automate routine tasks, reduce manual errors, and improve the accuracy and timeliness of financial information. Automation is possible using various programs, including robotic process automation (RPA) software such as UiPath or Blue Prism. All financial documents should be digitized, and electronic invoices and payments should be implemented to reduce manual work and increase efficiency.

Table 5. The most popular software products for financial analysis at medium and large enterprises.

Program name	Description and characteristics	Advantages and disadvantages
Oracle Essbase (https://www.oracle.com)	Fast development of complex calculations, determination of business efficiency, adjusts to business tasks with modeling of complex business scenarios in a short time	Advantages: Excellent integration with MS Office. Reporting tools can satisfy a large number of user needs to obtain information about the current state of the company. Easy and intuitive understanding of the interface
Jirav (https://www.jirav.com/)	An innovative product in business planning. Allows you to develop a budget, forecast and report for companies with 5 to 500 employees	Advantages: Easy to set up and use. Possibility to use a free trial version for 14 days. User-friendly and intuitive interface. Ability to connect to NetSuite, Intacct, QuickBooks, and Xero. Disadvantages: Limited number of visualizations. It is very slow.
Fathom (https://www.fathomhq.com/)	It is a tool designed to generate management reports, financial analysis, assess business performance, track trends, and identify opportunities for improvement.	Advantages: High quality assessment of profitability, cash flow, growth and other key performance indicators (KPIs). Creation and analysis of your own KPIs. Ideal service for creating monthly, quarterly, and annual reports. Ability to combine up to 200 companies. Disadvantages: No possibility to receive non-financial information. It is difficult to create your own formulas.
Limelight (https://limelightanalytics.com/)	A service for medium-sized businesses. Automates manual information processing: collects and consolidates data for quick report generation.	Advantages: The easiest software for financial statements. The best service for budgeting. The best service for financial reporting. Reasonable price. Disadvantages: Difficult to work with building templates.
PayPie (https://www.paypie.bb/)	A set of effective tools for risk forecasting and assessment	Advantages: Easy integration with QuickBooks and Sage online, which simplifies the administration of all cash flows. Accurate forecasts for making informed financial decisions. Disadvantages: Few opportunities to interact with financial partners. Difficult first setup process.
Business Radar (https://www.businessradar.com/en/)	Financial reporting and forecasting service for corporate management.	Advantages: The most simple and intuitive service for creating reports. Disadvantages: Sometimes it is difficult to connect to the service. Long integration time, the need to constantly contact technical support.

Program name	Description and characteristics	Advantages and disadvantages
Qvinci (https://www.qvinci.com/)	A powerful additional tool for preparing reports. Displays all profits, losses, and balance sheet, with consolidated and parallel view of reports.	Disadvantages: Poor technical support. Not much different from QuickBooks except for speed. Possibility for financial users at the unit level to sabotage the comparison of financial indicators in the group.
Checkmy Books (https://www.checkmybooks.co.uk/)	A service that automatically checks customer accounting records, analyzes each transaction and highlights issues for consideration. It is possible to drill down to individual accounts and transactions.	Advantages: An ideal service for keeping track of accounting records. Disadvantages: No trial version
Financial Statement Analysis (https://www.appforfinance.com)	The service is designed for companies that use IFRS and GAAP accounting standards for in-depth assessment of business performance	Advantages: Provides a professional level of analysis of financial issues. The ability to use different software options and transfer unnecessary functions from the main to an additional field of work. Disadvantages: The additional panel is not well customized, some parameters are not available
Flexi (https://www.flexi.com)	A mobile financial management service for large corporate organizations. Implementation will help to effectively manage complex accounting operations. It can be deployed locally, in a cloud service, or in a hybrid environment.	Advantages: Eliminates manual data entry (minimizing errors). Possibility of continuous closing, which saves time for preparing financial information analysis by the closing deadline (month, quarter, year). Ability to manage finances for multiple companies simultaneously Access to real-time data for more informed decision-making. Disadvantages: Designed for large companies in specific industries, so it may not be useful for small companies. No integrated payroll management functions

Note: compiled by the author based on materials from the official websites of the developers.

The use of this software is based on accounting information, and therefore ready-made financial indicators and reports can be obtained by importing accounting data.

Individualized reporting allows you to receive clear answers to requests made by the management department. With the use of special programs, the accounting department can generate customized financial reports and dashboards to meet the specific information needs of various stakeholders, such as department heads and top management. It is advisable for accountants to customize financial reports to meet the specific needs of different stakeholders in the organization. This can be achieved by using reporting tools such as Crystal Reports, Microsoft Power BI, or Tableau, which allow you to create customized reports with relevant data for each audience.

Integration of non-financial data. It is important for the accounting department to work with other non-financial departments to integrate relevant non-financial data (e.g., operational metrics, customer satisfaction, and employee performance) into financial reports to provide a more complete picture of the company's performance. You can expand the scope of accounting information by including non-financial data, such as environmental, social and governance (ESG) factors. This can be done with the help of specialized software such as Enablon, GRI or CDP, which allows organizations to collect, analyze and report on non-financial indicators.

Risk management allows proactively identifying and assessing potential risks (financial, operational and compliance) and providing recommendations to management on how to mitigate and

control risks. This can be achieved through the use of risk management software such as RSA Archer, Riskalyze, or LogicGate, which can help organizations track and manage risks more effectively.

By following these steps, accountants can enhance their role in providing valuable and relevant information to management to make strategic decisions and improve overall company performance..

Assessment of the quality of accounting information is important for any enterprise or organization interested in improving management efficiency. The quality of accounting information can be assessed using various methods.

Normative method. In practice, it is very important to constantly monitor changes in legislation and accounting standards to ensure compliance. Companies should train their accounting staff to be aware of the latest regulations and implement internal control systems to ensure that these regulations are applied correctly. For example, the organization may hold periodic training sessions or seminars on updates to financial reporting standards or tax laws. Key indicators of the study:

- Compliance with the law. Assessing whether accounting information complies with applicable laws and regulations.
- Compliance with accounting standards. Evaluating whether accounting information complies with local and international accounting standards, such as IFRS or GAAP.
- Internal control procedures. Evaluating the effectiveness of internal control procedures in ensuring the accuracy and reliability of accounting information.

Statistical method. The practical use of statistical methods involves the application of various techniques, such as correlation analysis, regression analysis, and analysis of variance, to assess the quality of accounting information. For example, accountants can use these methods to identify trends and anomalies in financial data that may indicate errors or fraud. A practical approach to implementing a statistical method may include using Excel or specialized statistical software such as SPSS or R to perform these analyses. Key indicators:

- Variance analysis. Comparing actual results with budget or forecasted figures to identify discrepancies and potential opportunities for improvement.
- Trend analysis. Analysis of historical financial performance to identify patterns and trends that may affect the quality of accounting information.
- Ratio analysis. Calculation of financial ratios to assess the company's financial condition and the effectiveness of its accounting practices.

The expert method. In practice, organizations may engage external auditors or consultants with accounting expertise to assess the quality of their accounting information. In addition, companies may create internal audit teams or form expert review committees to analyze and evaluate accounting data. For example, a company may hire an external auditor to conduct a comprehensive review of its financial statements to ensure that they comply with required accounting standards and accurately reflect the company's financial position. Key data:

- Expert survey. Obtaining information from experienced professionals in the field of accounting and finance to assess the quality of accounting information.
- Benchmarking. Comparison of the company's accounting practices and information quality with the best industry practices and top performers.
- Peer review. Collaboration with other experts to assess and improve the quality of accounting information.

Sociological method. To effectively use the sociological method, companies can conduct surveys or interviews with their stakeholders, such as investors, customers, and employees, to obtain feedback on the quality and usefulness of accounting information. This feedback can be used to identify areas for improvement and make necessary adjustments to the company's accounting practices. For example, a company may conduct a survey among its investors to understand their preferences for financial statement presentation and disclosure and use the results to improve the transparency and relevance of its financial statements.

- User satisfaction surveys. Conducting surveys to assess the satisfaction of users (e.g., managers, investors, creditors) with the accounting information provided.

- Focus groups. Organizing a focus group with key stakeholders to collect qualitative feedback on the quality of accounting information and areas for its improvement.
- Case studies. Study the experience of other companies that have successfully improved the quality of their accounting information and implement the lessons learned.

Finally, the enterprise can create and implement a comprehensive quality indicator (CQI) that includes ratings for all relevant parameters to provide an overall assessment of the quality of accounting information. To do this, assign a weight to each parameter according to its importance and calculate a weighted average.

Here is an example of a table that will help to visualize the components of the accounting information quality indicator (Table 6).

Table 6. Components of the accounting information quality indicator.

Parameter.	**Weight**	**Rating (1-5)**	**Weighted rating**
Compliance with the law	0.15	4	0.60
Compliance with accounting standards	0.15	5	0.75
Internal control procedures	0.15	3	0.45
Analysis of deviations	0.10	4	0.40
Trend analysis	0.10	5	0.50
Ratio analysis	0.10	4	0.40
Expert opinion	0.10	3	0.30
User satisfaction	0.10	4	0.40

In this example, each parameter is assigned a weight that reflects its importance in assessing the quality of accounting information. The score for each parameter ranges from 1 (lowest) to 5 (highest). The weighted score is calculated by multiplying the weight by the rating (Table 7).

Table 7. Composite indicator of the quality of accounting information.

Indicator	**0.05**	**5**	**0.25**
Comprehensive quality indicator (CQI)	1.00	-	4.05

The Composite Quality Indicator (CQI) is the sum of the weighted scores. In this example, the CQI is 4.05, which means that the overall quality of the accounting information is good, but there is room for improvement.

Developers of the indicator can adjust the weights and ratings to meet specific management needs and priorities. By tracking CQI over time, the effectiveness of efforts to improve the quality of accounting information can be assessed.

The frequency of the CQI review depends on various factors, such as the size of the organization, the complexity of its operations, and the level of risk associated with the business. However, it is important to assess the quality of information on a regular basis to ensure effective management and make informed decisions. It is recommended to conduct quality assessments on a monthly, quarterly and annual basis.

Monthly reviews. Conducting a monthly analysis of accounting information can help identify errors or inconsistencies in a timely manner. This allows management to take corrective action, adjust budgets, or make necessary changes to the organization's financial plans.

Quarterly reviews. A more comprehensive assessment of the quality of accounting information can be conducted on a quarterly basis. This provides a broader view of the organization's financial

performance and allows management to identify trends and patterns, as well as areas that may need improvement.

Annual audit. An annual audit conducted by external auditors provides an independent assessment of the organization's financial statements, internal controls, and accounting practices. This helps to ensure that the accounting information is accurate, reliable and complies with relevant regulations and standards..

Special audits. In addition to regular audits, it is important to assess the quality of accounting information when significant changes occur in an organization, such as mergers, acquisitions, or the implementation of new accounting systems.

Thus, effective accounting information plays an important role in the business decision-making process. It provides insight into the company's financial performance, helps identify areas for improvement, and supports strategic planning. However, poor quality accounting information can have significant implications for business management, which can negatively impact a company's financial stability, reputation, and future prospects..

Misinformed decision-making. Inaccurate or incomplete accounting information can lead management to make poor decisions. This can lead to poor investments, inefficient use of resources, and missed opportunities. Such decisions can have a significant impact on the company's financial performance, undermine investor confidence and damage the company's reputation.

Legal consequences. Poor quality accounting information can lead to legal and regulatory problems for the company. This could result in fines, penalties, or lawsuits from government agencies, shareholders, or creditors. In addition, financial misstatements or omissions could lead to a loss of public confidence and damage the company's reputation, resulting in a decrease in its market value.

Limited access to capital. Inaccurate financial information can make it difficult for a company to obtain financing from investors or lenders. It can also lead to higher borrowing costs or higher interest rates. This can limit a company's access to capital, negatively impacting its ability to grow, expand or compete with other businesses.

Неефективний внутрішній контроль. Низька якість бухгалтерської інформації може свідчити про неефективність системи внутрішнього контролю. Без надійних фінансових даних керівництво може бути не в змозі здійснювати моніторинг і контроль фінансових операцій, що призводить до шахрайства, незаконного привласнення коштів або інших фінансових порушень. Це може призвести до судових або регуляторних позовів, втрати репутації та фінансових втрат для компанії.

Loss of reputation. Poor quality accounting information can damage a company's reputation, resulting in the loss of customers, suppliers and investors. It can also lead to negative publicity, which can negatively impact the company's image and long-term success.

In conclusion, it is important to understand the various aspects that affect the quality of accounting information and its role in management decision-making. High-quality accounting information must be reliable (i.e., compliant with applicable law) and relevant (i.e., based on which different stakeholders make different decisions). It should be relevant and useful for decision-making, while ensuring that the information is accurate and free from bias. In addition, the information should be available in a timely manner to assist in making timely decisions, and should be consistent and comparable to facilitate analysis and benchmarking.

The quality of accounting information can be affected by various external and internal factors. Internal factors, in particular the company's policy on accounting culture, have a greater impact. Other important factors include the competence and integrity of management and staff, accounting policies and practices, the effectiveness of internal control systems, and the use of information technology. It is very important for organizations to consider these factors to maintain the quality of accounting information and to facilitate informed decision-making.

Accounting information serves a variety of management purposes, such as planning and controlling operations, monitoring performance, evaluating the effectiveness of resource allocation, and making strategic decisions. This information includes financial statements, budgets, forecasts, key performance indicators, and various analyses that provide insight into the financial position and

performance of an organization. To obtain this information, the accounting department must work closely with other departments of the enterprise and be in a single information system with them. In order to avoid expanding the company's staff, it is advisable to use modern software that generates financial reports and forecasts based on accounting data.

Assessment of accounting information is a vital process that ensures the quality, relevance and reliability of information. The quality of accounting information can be assessed using various methods. The authors propose an indicator of the quality of accounting information that can be developed by enterprises individually, in accordance with their expectations and goals. This assessment process enables organizations to identify areas for improvement and maintain the highest standards of financial reporting and analysis.

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FORMATION AND MANAGEMENT OF CORPORATE SOCIALLY RESPONSIBLE POLICY OF MODERN ENTERPRISES

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Corporate social responsibility is one of the key areas of management in the context of sustainable development. The concept of sustainability makes it possible to strike a balance between meeting the existing needs of humanity and taking care of the interests of future generations.

Previous years of research into the labour motivation of agricultural employees have led to the conclusion that, along with economic motivation, social motivation also plays an important role. Taking care of employees, creating a favourable working environment, building harmonious relationships with stakeholders, and the responsible attitude of enterprises to the ecosystem are the basic basis for creating a policy of socially responsible business.

And in the context of raising the issue of social responsibility management, we want to emphasise that the main task of a modern enterprise or corporation is not only to make a profit, but to create certain benefits that help achieve social goals and stimulate cooperation and social investment.

Thus, Burguete et al. (2022) focuses on the call for responsibility, emphasising the transition from business goals to responsible management in the direction of environmental, social and social impact with a high-quality and effective communication model. At the same time, in their research, scientists emphasise the importance of basic management theories as a tool for developing a social responsibility management model (Coombs & Holladay, 2011).

At the same time, in their studies, researchers emphasise the importance of basic management theories as a tool for forming a social responsibility management model (Coombs & Holladay, 2011).

Along with the problems raised, the issues of state motivation of agricultural enterprises to support social responsibility, expanded and sustainable principles of agricultural sustainability, and the formation of a methodological approach to assessing the effectiveness of social responsibility management not only in the context of sustainable development, but also in the conditions of war and the post-war period remain unresolved.

Based on empirical and scientific research, we have good foreign experience in social responsibility management. As the bibliographic review shows, today social responsibility in the context of sustainability is most often considered by scholars in the UK. The communicative element with the relations of a socially responsible enterprise with its stakeholders is preferred by scholars from East Asia.

An interesting experience is seen in the studies that CSR practices do not differ by the size of enterprises (large, medium, small, micro). However, large companies are more open about their activities in the field of environment and society. And companies that have direct ties with customers focus on the community in their transparency of information. And reporting only positively stimulates an open policy of social responsibility (Dias et al., 2019).

However, given the developments, this area is being formed in a completely different context and understanding. With the help of a synthesised approach to the study of scientific literature, we have some research prospects, in particular, social responsibility is now extremely relevant within the framework of green economy concepts, which helps to increase the beneficial results of the natural environment (Khaskhelly et al., 2023); foreign experience has shown that indicators of green economy functioning have a positive impact on economic performance (Mikhno et al., 2021); Zhang et al., (2022) note that climate change is forcing entrepreneurs to make an increasing contribution to the care of the environment. The environment is therefore a key indicator of a food system that contributes to the well-being of society by implementing a greening strategy (Misso et al., 2013).

Our own vision is that by studying the management of social responsibility of agricultural enterprises in the context of sustainable development, we are reaching a new level of the care

management. This can be a separate branch (concept) of basic management, for example, socially responsible care alongside the concept of corporate social responsiveness and the concept of corporate social performance.

Within the framework of care management, it has been proven that the development of social responsibility, especially towards employees of the enterprise, contributes to the fact that the employees experience better psychological well-being due to the increase of power, prestige, resources and emotional satisfaction (Aidoo & Kwakye, 2022).

However, today there are good practices of corporate responsibility that deserve to be researched and a new model of responsible management should be developed.

The pandemic situation has really shown the urgency of further development of this direction by enterprises and companies (Kashyap, 2023). However, such an issue as managing social responsibility in wartime cannot be avoided. Thus, certain CSR initiatives must be preserved in turbulent periods: projects of local communities (Cesarino et al., 2022), environmental initiatives (Niyommaneerat et al., 2023), Improvement aof working conditions (Vadakkepatt et al., 2021), Transparency and Ethical Governance (Vadakkepatt et al., 2021).

The management of social responsibility, labor resources remain the main key point. It is people who give the impetus to move the company in the right direction (Zaitseva, 2022). They create a responsible enterprise policy (Mikhailovsky, 2024). HR practitioners can act as a translator of the organization's CSR commitments vertically and horizontally between departments (Liu et al., 2024), it is the employees who understand the role of CSR in sustainable development and will promote the implementation of CSR ethics (Jha & Dash, 2023).

It is necessary to note that social norms perform protective, regulatory and educational functions, define rational limits of human freedom. The following types of social norms are distinguished: customs, traditions, moral norms, religious (canonical) norms, ethical norms, political norms, corporate norms, norms of public organisations, technical norms, cultural norms, legal norms, etc.

Depending on the types of social norms, the following types of social responsibility are distinguished: moral, religious, disciplinary, political, legal, etc.

Moral responsibility arises in case of violation of traditions, customs, cultural norms and aesthetic norms. It is reflected in public condemnation and social separation from the entity that violates or evades the norm of behaviour.

Political liability occurs in case of violation of the norms that society expects a public politician to observe.

Corporate liability arises in case of violation of corporate rules adopted by a particular social structure and having no legal significance.

Religious liability is based on the rules governing the practice of religious worship and on belief in God. All the above-mentioned types of social responsibility are passive in nature, as the negative reaction of society in these cases does not involve coercive action against the violator of the rules (Chih, H. L., Shen, C. H., & Kang, F. C., 2008).

Legal liability is incurred in the event of a violation of state-organized law.

It is active in nature, as it involves an active psychological impact on the offender, up to and including the use of coercive physical force. Thus, social and legal liability are correlated as general and special. These types of responsibility have the following common features:

- ✓ both social and legal responsibility are a means of guaranteeing and protecting social relations;
- ✓ they are established by certain subjects and guaranteed by certain means;
- ✓ they are a means of guaranteeing human rights and public interests;
- ✓ they are dynamic, i.e. they develop and transform along with social relations;
- ✓ exist in a certain area and are regulated by a certain type of 12 social norms;
- ✓ pursue a specific goal and have a functional orientation;
- ✓ provide for certain consequences for the offender;
- ✓ promote respect for human rights and freedoms and are manifestations of the culture of society.

In the process of the development of the social system, there is an increasing influence of society

on the economy, which leads to a qualitative change in relations in society and manifests itself in the form of a change in the «economized principle» a «sociologized principle» that comes not from the maximum satisfaction of the individual's needs, but from the interests of the development of society as a whole and of an individual in it.

International practice shows that the sustainable development of the company, which is based not only on economic, but also on social factors, leads to a decrease in business risks, strengthens competitiveness, increases the efficiency of personnel and the reputation of the company.

IN scientific understanding corporate social policy (KSP) represents is a system of relations between employers, administration and employees regarding the preservation or change of their social status, or otherwise - it is an activity to satisfy social needs, coordinate social interests, provide social services to workers and members of their families (Patrick Velte, 2017).

However, reduction of the corporation's social policy to only the internal manifestation of social responsibility of enterprises does not correspond to the realities and modern requirements. Therefore, there is a point of view that interprets definition of corporate social policy as «a system of management actions, aimed at ensuring effective interaction between the enterprise, society and the state, creation of a system of social guarantees within the enterprise, its participation in the implementation of social programs and events, formation of norms of corporate culture».

Since the formation of a KSP model acceptable for Ukrainian conditions is at an initial stage, in order to determine the basis of its formation, it is important to study the specifics and features of the main models of managing the social policy of the enterprise abroad and in Ukraine.

The identification of the most effective components and directions for the development of such activities in foreign countries allows us to determine the priority directions for the formation of the optimal model of corporate social policy. In the world, there are several well-established models of KSP, each of which reflects the socio-economic system that has historically developed in one or another country. The main models of corporate social policy include: the American model, the European model, British model.

The modern economy is global, and along with national models, it is more expedient to consider general educational, global stereotypes of socially responsible behavior. These include the "traditional conflict" model, the "socially responsible investment" model, and the "social achievements" model.

The formation of the optimal model of corporate social policy for modern Ukraine should be based on taking into account the features and positive experience of foreign models of social policy (Zhao & Xing, 2024).

By implementing the functions of the institution of social responsibility, CSR is a more important mechanism for managing the development of the company's human potential. In this connection, the analysis of the structure of corporate social policy is of interest.

Methodological analysis of the structure KSP made it possible to outline the main factors determining the development of the company's social policy. In the context of summarizing various positions of the research of the real content of corporate social policy, several typical approaches can be distinguished. Thus, (Bonnedahl et al., 2022) emphasizes two main components of KSP: *internal* (personnel development; raising the professional and qualification level of employees; creation safe conditions labor; formation corporate cultures; granting medical help and sanitation employees and members their families; youth support, implementation of educational projects; conducting sports and cultural events; implementation of material assistance, provision of benefits to employees and their family members etc.) and *external* (support of educational institutions; support of socially vulnerable segments of the population; support of housing and communal services and objects of cultural and historical significance; implementation of sponsorship assistance; fight against drug addiction and alcoholism, etc (Al-Tarawneh et al., 2024)

Another methodological approach is implemented,(Pasko et al., 2024) who singles out such areas of implementation of corporate social policy as: social development (professional education, innovative potential at the enterprise, non-material motivation of employees, provision of housing for employees); social partnership (the company's policy on remuneration, material payments and compensations, the system of personal and medical insurance, non-state pension provision, sanatorium-resort provision);

social responsibility (preservation of national and cultural identity, support of culture, assistance to social groups and public associations, environmental protection activities and environmental safety, creation of normal working conditions.

Shaporenko (2019) separates the directions corporate social policy according to the structure of its object - the collective employee of the company, who is considered as: 1) personnel resources; 2) a participant in a certain labor process; 3) a professional who is studying; 4) object of protection against social risks; 5) a representative of a certain social and age group; 6) subject of social partnership; 7) an individual with cultural potential.

Accordingly, they stand out the following main directions of KSP: 1) reproduction of personnel potential (selection, motivation, evaluation and promotion, release of personnel); 2) work and wages (rationing, organization, security and payment labor); 3) teaching and development staff (assistance implementation of programs educational, secondary, higher and professional training, preparation of personnel reserve, training of young specialists); 4) protection from social risks (health care, housing programs, non-state pension provision, social and household issues); 5) support of specific social groups of the population (children, youth, women); 6) regulation of social partnership; 7) provision of social and personal development of collaborators.

It is of some interest an approach to the analysis of the structure of corporate social policy in accordance with the structure of human potential, which covers the possibility and ability of a person as a worker, consumer, subject of free time and a resident of a certain territory. At the same time, KSP is interpreted as a mechanism for managing the reproduction of the company's human potential. Based on this formulation of the question, it is proposed to single out four aggregated blocks of corporate social policy, each of which contains specific areas of activity. Yes, management of reproduction of human potential as an employee includes: wages, labor protection, working conditions, industrial training, social partnership, career planning. To the control unit for reproduction of human potential as a consumer refers to: change in the cost estimate and product content of the consumer basket, indexation nominal salary; guarantees and benefits for employees under the collective agreement, availability of household social goods and services. Playback control potential a person as a subject free time includes costs for cultural and mass work, for physical culture, sports, tourism, etc. Control unit for reproduction of human potential as a resident of a certain territory includes expenses for the maintenance and development of social infrastructure and environmental protection (Khan, A., Muttakin, M. B., Siddiqui, J., 2013).

The ILO Declaration of Principles, the OECD Principles and the UN Global Compact principles are the main references for the development of a company's corporate policy in the context of sustainability. Thus, corporate social responsibility covers the social responsibility of companies in business and human rights. However, in addition to these fixed goals, commitment to CSR often serves PR purposes. After all, if it becomes known that your organisation is voluntarily giving of itself to a higher purpose, it can significantly improve your public image.

Since the term corporate social responsibility is not defined in detail, there are different approaches to structuring the concept behind it: The area of responsibility model developed by German sociologist Professor Dr Stefanie Hiss is relatively well known. It divides corporate social responsibility into three areas, each named according to the nature of its social impact:

Internal area of responsibility. This is where all the internal policies and processes that are not publicly disclosed but that set the ethical direction of your organisation are grouped. This includes all internal processes that influence your corporate strategy as such. The internal responsibility area is therefore largely a management matter and has a decisive influence on important decisions, for example, on fair and realistic growth planning to achieve healthy profitability or cooperation with partners. It defines the company's own responsibility, for example, to avoid possible cartels and monopolistic positions.

Middle area of responsibility. The middle area of responsibility includes all areas that are generally recognised as having a direct impact on the environment, people and society, but are still part of the normal business process. This includes all actions whose impacts are more or less measurable. This includes, for example, CO2 emissions and pollution, as well as the working conditions of your employees. It also includes responsible cooperation with companies that also act ethically. The middle

area of responsibility is often the most difficult to coordinate, but it is increasingly important because it is where the most damage can be done. This affects not only the reputation of your company, the environment or society, but also your stakeholders. These include all those who have an interest in your company's processes, working conditions and, in most cases, the success of your company, such as employees, trade unions, equity and debt investors, customers, suppliers, local communities or the press.

External area of responsibility. As part of their corporate social responsibility, many organisations not only focus on internal processes, but also take on social responsibility outside their operations. This area is often identified with the term "corporate citizenship". This includes philanthropic activities (usually social commitments in the form of donations, sponsorships or social activities) for which daily work is also interrupted or adapted if necessary.

Before you think about implementing the concept of corporate social responsibility, you should consider why you are doing it and what goals you want to achieve. Even if you have already made CSR efforts, it can be useful to take a second look at the motivation behind it and reassess your own commitment. This can help you to focus and categorise your efforts, for example to see which activities are actually being implemented and how. An appropriate method for identifying material issues and stakeholder groups with their requirements is materiality analysis.

Every organisation that wants to implement corporate social responsibility or is already doing so should ask itself what the reasons are for doing so. Closely related to this is the question of what you want to achieve with CSR. The reasons are different (Choi, H., & Moon, D., 2013):

1. Economic goals. When a company introduces CSR, it is often linked to the hope of economic gain. Often, there is a desire to differentiate oneself from competitors, gain new customers and bind customers to one's organisation. Good supplier management along the supply chain from a CSR perspective also plays an important role here.
2. Self-motivation. Particularly in small and medium-sized enterprises (SMEs), personal motivation to get involved with others or sustainability often plays an important role. Here, CSR is largely not targeted or used for communication.
3. External motivation. In recent years, corporate social responsibility has become a "must-have" for many large companies. The public, customers and stakeholders now expect a certain level of commitment in this regard.
4. Employee motivation. In the battle for the best employees, positioning yourself as an attractive employer can certainly pay off. Especially in smaller organisations, employee motivation is an important factor in CSR commitment.
5. Cost reduction. A new, more resource-efficient machine can save huge costs. Reducing the number of unnecessary printouts is another example of how environmental protection and cost savings can complement each other perfectly.
6. Compliance. Legislators are becoming increasingly active at both national and European levels. Examples from Germany include the Supply Chain Act (Due Diligence Act) and the now stricter Climate Protection Act. At the European level, there is a European Parliament resolution of 10 March 2021 with recommendations to the European Commission on due diligence and corporate responsibility.

In general, it is inappropriate to pursue only economic interests when introducing corporate social responsibility. In recent years, such attempts have attracted a lot of public attention and have been criticised. Greenwashing (i.e., green laundering, mimicking an environmentally friendly company) is often quickly suspected.

If the company or its top management believes in the rightness of social or environmental commitments, it will be easier to live and implement CSR. Of course, the economic aspects cannot be ignored. Therefore, it is important to always keep the triad of economy, environment and social issues in mind.

When implementing corporate social responsibility (CSR), strategy, operational implementation and communication of CSR commitments are important success factors. In addition, the willingness to engage in dialogue, as well as the ability to adapt and learn, are important. It is worth paying attention to the following:

- ✓ Living values. Organisations with values-based leadership are more successful in terms of

corporate social responsibility. Personal contact between management and employees creates the basic conditions for the realisation of the company's own values.

✓ Real communication. A little tact is required here. On the one hand, CSR communications should not turn into a "marketing gag", but on the other hand, commitments should not be kept quiet. In many cases, a glossy brochure is not needed. Classic PR, the use of social media channels and radio broadcasting can ensure that the right message is spread.

✓ CSR as part of the business strategy. Corporate social responsibility is impossible without the support of top management. Especially in mid-sized companies, executives are the driving force behind the issue. They exemplify the values that ultimately distinguish an organisation. Activities close to the actual core business are often the most crucial. Commitment to the region is often taken for granted. If, for example, a painter helps to renovate a local kindergarten for free, this has a more lasting effect on the local level than a donation to a children's village.

✓ Measuring CSR success. To ensure that CSR is successful in the long run, it is important to talk about measures and have an overview of activities. For example, environmental indicators are now easy to collect. But other areas of CSR often require little effort as well. Surveying key stakeholders during management and planning helps you to make CSR success visible and communicate successes.

✓ While large companies and corporations are often already quite advanced when it comes to CSR, medium-sized companies still lack the right approach. First and foremost, there is a lack of strategic implementation. To achieve this, an organisation must be clear about its own responsibilities and transparently formulate and communicate its goals and activities. The following points should always be kept in mind:

✓ The top management is the backbone of the CSR strategy and should be supported by it, if possible, directly represented by the CEO. This way you can show that your CSR activities are not just a PR exercise.

According to the standards for preparing a corporate social report, it should contain the following data: key information about the organisation's activities for a certain period in the context of sustainable development and various aspects; significant attention in the report is paid to corporate governance and expanding the dialogue with stakeholders - these issues are very important for increasing the company's transparency and compliance with activities with the best international practices; presentation of information in the field of social and labour relations, improvement of working conditions, quality of life of employees, which reflects the company's desire to maintain the status of one of the of the best employers in the country; part of the of the report is devoted to the company's actions in the field of occupational safety and health of its employees; the report reflects the company's relations with local communities: the principles of social partnership, the main approaches to the company's activities in developing the areas where it operates, programmes and projects implemented; an important place in the document is occupied by information about the impact of the company's production processes of the organisation on the environment, reduction of the negative impact of production on the report describes the company's activities in the development of new technologies and new business practices in the field of sustainable development .

Ukrainian companies that have prepared reports in accordance with the GRI standards in accordance with GRI standards, are large organisations. Some of the companies that have prepared these reports, noted that in order to collect the necessary data and prepare the report, it took them at least six months to collect the necessary data and prepare the report. The limited use of GRI standards by companies in Ukraine and other countries can be explained by the large volume and complexity of its guidelines for use by small organisations. To sum up, a corporate social report demonstrates significant social aspects of the company's operations. This, in turn, contributes to business development and improves the company's image. The peculiarity of preparing such reports is that it is prepared according to certain standards and includes indicators that characterise the company's social performance.

The most common regulatory framework for social reporting is the Global Reporting Initiative - gives companies the right to choose, as it is voluntary.

CSR as part of the overall strategy. Commitment to social responsibility affects the entire organisation and its actions. It is important to publicly commit to CSR and to act and communicate

accordingly.

The first step is always to articulate your goals and make them part of the corporate culture. In a so-called "voluntary commitment", goals such as quality, consumer protection, environmental protection or diversity are written down.

Stakeholder engagement. Already at the strategic planning stage, the most important stakeholders should be involved in the CSR process and a dialogue should be sought with them. This provides the organisation with many new influences and starting points from which to obtain valuable input. Key stakeholders include employees, business partners and suppliers, capital providers, consumers, non-profit organisations, and the social, cultural and political environment (Choi, B. B., Lee, D., & Park, Y., 2013).

Communication for transparency. Communication should always be a central component of a CSR strategy - not only after successful activities, but certainly during the planning stages. You should ensure internal and external transparency by continuously documenting goals and activities and communicating them to stakeholders.

Willingness to cooperate. Corporate social responsibility does not end at the company's boundaries. Your company should also be actively involved in discussions on key issues, for example by joining associations and other initiatives. You should also influence your business partners and suppliers to implement common goals and activities.

Consideration of local and regional needs. Your company always operates in its place as part of a community, and therefore in a social, cultural and political environment. Therefore, your CSR strategy should always include responsibility for the development and actions of the community in your own region, such as integration, environmental protection, social needs, demographic changes, etc.

Introduction of the CSR concept. The development and implementation of a CSR strategy should always be based on a solid concept in which activities and objectives are clearly defined and communicated. This framework should clarify how the CSR strategy is integrated into the company's operations and core business. A good orientation here is provided by so-called management systems, which give you fixed structures and guidelines.

Further development of the CSR project. Above all, if you decide to implement a professional management system, you also commit yourself to the further development of your CSR activities. Such a project should never stand still, but should constantly adapt to new circumstances, optimise outdated standards and set new standards.

Your commitment to corporate social responsibility can be made visible not only through communication and PR. First and foremost, certificates are a strong confirmation of your achievements in this area. You also provide your customers, partners, employees and other stakeholders with proof that you are operating in a sustainable and exemplary manner. This is because certificates make it easier to understand the interrelationships within your company.

With a certificate, you can prove that your company voluntarily complies with certain mandatory regulations. These sets of rules provide you with so-called management systems that help you to implement certain measures and quality characteristics in the areas of management, product development or dealing with interest groups. If you then have the implementation of your management system certified, you can make your voluntary commitment visible and thus improve your reputation both internally and externally.

Verifying your corporate carbon footprint. From recording your greenhouse gas emissions to verifying your greenhouse gas footprint, ISO 14064 shows you the way.

However, implementing such a management system does not only regulate your CSR processes. It also commits you to a continuous improvement process (CIP).

The standards behind these certificates differ primarily in their expressiveness. If they are developed by a single company or industry, they are often less credible than if they are carried out by a service provider specialising in certification and accredited by Deutsche Akkreditierungsstelle GmbH (DAkkS), such as DQS.

As an independent third party, an accredited certification company monitors, among other things, compliance with voluntary commitments, for example, within the framework of a Code of Conduct, which further increases trust. Specific targets, transparent reporting on compliance and sanctions for

non-compliance ensure that certification also has a measurable added value.

Once your organisation is committed to achieving a particular standard, the first step is to verify compliance internally. In the subsequent certification process, an independent auditor (expert/consultant) confirms your approach. He or she visits the site, reviews documents, checks that the objectives have been met, and thus makes sure that the set of rules is being followed.

One of the examples of compliance with corporate policy and social responsibility is the national company for marketing and sales of Toyota and Lexus cars, spare parts and accessories in Ukraine and Moldova FDI Toyota Ukraine, like all enterprises of the Toyota Group, is guided by the principles of corporate social responsibility policy in carrying out its activities.

"Toyota is fully aware of its responsibility to society. In determining its development strategy and in its current operations, the company assumes that strict adherence to the principles of social responsibility is a prerequisite for sustainable business development. In accordance with these principles, the company sees its tasks not only in producing products necessary for society, but also in promoting social progress, increasing the welfare of society in general and improving the living standards of its employees in particular.

The company strives to conduct its production activities in strict compliance with the requirements of not only environmental legislation, but also its own environmental policy and the Toyota Environmental Charter.In practice, this means that every employee in the office or at the production site strives to take care of natural resources, namely to save electricity and water, and to use paper rationally, trying to use electronic reusable media to a greater extent. The relationship between the company's management and employees is based on the principles of social partnership. "Toyota provides employees with competitive remuneration. Toyota pays special attention to the professional development of its employees. Training and professional development programmes are available on an ongoing basis.

"Toyota conducts active charitable and sponsorship activities both independently and in partnership with public and government organisations, involving its employees in socially effective projects in the social and environmental spheres. As part of its social responsibility policy, Toyota promotes the development of culture, sports and education. The company pays special attention to programmes related to road safety. In particular, Toyota is constantly promoting the use of seat belts. Experts firmly believe that this simple device has helped save the lives of millions of motorists in emergency situations (*Toyota*, 2024).

Social partnership and social dialogue. Consistent systemic development of social relations based on the principles of social responsibility requires sustainability and appropriate quality in the system of interaction between the main business entities - between the state and society, business and government, owners and employees. This is a basic prerequisite for the accumulation of social and institutional capital, growth of social integration and public trust, stabilisation of the socio-political and socio-economic situation in the country and its regions (Novikova. O. F., 2016).

Today, partnership relations between employees, enterprises and employers are not always positive and sometimes have a conflictual nature. The predominant way of regulating the relations of hired labour is becoming the way of reaching an agreement between labour and capital, which is called "social partnership". However, along with the conflict of interests, there is also a commonality: ensuring the effective functioning of the organisation as a prerequisite for realising the interests of both employers and employees. Ukraine is a welfare state whose policy is aimed at creating conditions that ensure a decent life and free development of people. This gives grounds to recognise the need for the state to guarantee human rights, which leads to the recognition of the need for social cooperation or partnership.

Social partnership (SP) in the traditional sense is a system of relations between labour, capital and the state to resolve contradictions in the interaction of leading social forces (Lazarenko V.I., 2019).

The social purpose of social partnership is the practical implementation of a coherent socially oriented policy, facilitating the settlement of social conflicts, overcoming crisis phenomena, and ultimately improving the quality of life of the country's citizens in the broadest sense.

It should be noted that social partnership is carried out at different levels: international (mega-

economic), national (macro-economic), sectoral and regional (meso-economic), and industrial (micro-economic). To ensure effective social partnership, it is necessary to build an effective social dialogue. The parties and levels of social dialogue are described in more detail in Table 1.

Social partnership means that employers and employees work together to avoid conflicts and achieve common goals. For example, based on the German experience, the interests of entrepreneurs and farmers are represented by the Chamber of Commerce and the Chamber of Agriculture. The two sides often represent opposing points of view - quite strikingly, for example, when trade unions demand higher wages, while employers do not want to pay higher wages. Social partnership is therefore about finding rational compromises between both positions. This happens, for example, during annual collective bargaining. However, social partners also have a say in laws and other important economic and social policy issues (labour market, healthcare, etc.) and make suggestions. This way of cooperation is an important achievement.

In Austria, conflicts of interest have been discussed and resolved in partnership for many decades. The fact that both parties should approach each other ensures social balance. The aforementioned European Social Dialogue is part of the European social model and a recognised tool for effective governance and social subsidiarity.

In times of crisis, it has also demonstrated its importance as a social cushion, helping to mitigate the negative effects of the economic downturn. The European social dialogue consists of discussions, consultations, negotiations and joint actions involving organisations representing the two sides of the labour market - employers and employees.

It is worth emphasising that the EU and the European Commission have committed themselves to promoting European social dialogue, both at the cross-sectoral and sectoral levels. Social dialogue issues are reflected in the EU's fundamental documents - the Maastricht and Amsterdam Treaties (Articles 138-139).

Table 1. Parties and levels of social dialogue in Ukraine.

	Levels of social dialogue			
	National level	Sectoral level	Territorial level	Local level
Parties to social dialogue	All-Ukrainian trade unions and their associations	All-Ukrainian trade unions and their associations operating within a certain type or several types of economic activity	Trade unions of the relevant level and their associations operating in the territory of the relevant administrative-territorial unit	Primary trade union organisations, and in case of their absence - freely elected representatives (representative) of employees for collective bargaining
	All-Ukrainian associations of employers' organisations	All-Ukrainian associations of employers' organisations operating within a certain type or several types of economic activity	Employers' organisations and their associations operating in the territory of the relevant administrative-territorial unit	The employer and/or authorised representatives of the employer
	Bodies of executive power Cabinet of Ministers of Ukraine	Relevant central executive authorities	The party of executive authorities, the subjects of which are local executive authorities operating in the territory of the relevant administrative-territorial unit	–

Table 1. Continuation.

Agencies for social dialogue	National Tripartite Social and Economic Council	Sectoral tripartite socio-economic councils	Territorial tripartite socio-economic councils	The employee side, which is represented by the primary trade union organisations, and in their absence - freely elected representatives of employees. The employer's party, which is represented by the employer and/or authorised representatives of the employer

Source: compiled by the authors on the basis of the Law of Ukraine "On Social Dialogue in Ukraine".

At the intersectoral level, bilateral social dialogue takes place between the European Trade Union Confederation, the Council of European Professional and Managerial Personnel and the European Confederation of Management and Supervisory Personnel on the employee side and the Confederation of European Businesses, the European Centre for Employers and Public Service Providers and the European Association of Small and Medium-sized Enterprises on the employer side.

Since 1998, the European Commission has established 41 sectoral social dialogue committees to conduct sectoral social dialogue at the European level. The committees are composed of a maximum of 64 members, equally representing employees and employers. The committees meet at least once a year. In total, the sectoral committees have adopted more than 500 documents, including autonomous agreements, codes of conduct, guidelines, joint statements and projects. The main thing is that the agreements can be implemented through EU directives (Mizhnarodni profspilky Ukrainy, 2022).

According to expert Hagen Lesch, in Germany, every second employee is covered by a regional collective agreement. In the UK, on the other hand, there are no sectoral collective bargaining agreements, but there are many decentralised agreements at the company level. In France, the situation is different, as the state regulates a lot. But compared to other countries, we have few strikes. In Germany, social partnerships ensure a high level of social stability and social peace. Although about half of the companies are not bound by collective agreements, they are nevertheless governed by them: the collective agreement thus also has an impact on these companies and their employees. The freedom to decide for or against collective bargaining should remain. This is one of the reasons for the positive development of the labour market that we have seen since the mid-2000s. For example, short-term work, which was first used during the financial crisis of 2009/2010 and then again to a greater extent during the coronavirus pandemic, in cooperation with the government. In a fully decentralised system, this probably would not have worked as well. In this sense, social partnerships enhance crisis response capabilities. Experience has shown that in difficult times, social partners can quickly agree on measures that can protect jobs. During the corona crisis, it also helped that the interests of small and medium-sized enterprises covered by collective bargaining agreements were particularly taken into account through flexible regulation (U. Wirtz, 2022).

Social partnership provides security. Because without social partners, there are no collective bargaining agreements, the welfare state is fragile. The Chamber of Labour is a house of knowledge and experts where laws are reviewed, studies are prepared and much more. Trade unions The Austrian Federation of Trade Unions (ÖGB) organises works councils, youth trusts and staff representatives, trains them and supports them in their daily work. This means that the trade unions are very close to the employees of the companies and know their daily lives. Trade unions also regularly negotiate collective agreements and try to get the best possible deal for employees.

It is worth noting that the scientific literature has different approaches to classifying forms of public partnership, depending on the focus of partnership formation (for the implementation of priority infrastructure projects, for attracting private sector management expertise, partnerships with a priority to attract Build-Own-Operate, Build-Operate-Transfer, Buy-Build-Operate, Design-Build-Operate, Build-Develop-Operate, etc.

Given the foreign practice of social partnership as a tool for "healthy relations", it is worth focusing on the functions of social partnership. Scholar L. Savchuk proposes to systematise and divide the functions into two categories and seven levels. Thus, the functions of the primary level are reventive, protective, reproductive, redistributive, and controlling functions. Secondary functions can be: stimulating, stabilising functions (Figure 1).

We also share the view that in the context of social partnership, entrepreneurship, on the one hand, initiates the creation of a middle class that serves as a buffer against the development of social conflicts (microeconomic level), and on the other hand, models socio-economic policies that prioritise social protection (macroeconomic level). The prospect of developing such protection is aimed at overcoming poverty. In other words, the management of social and labour relations implies preservation of the dominant role of the state. Thus, the goal of social partnership is to solve acute social problems and tasks without compromise, and its role is based on the principles of tripartism (interaction of three parties - the state, employer, and employee - in the field of social and labour relations) (Savchuk L., 2016).

The institutionalisation of social partnership actors, their interaction and mutual influence contribute to the development of social responsibility. This is confirmed by the following provisions:

1. For representatives of society (trade unions and employers' associations), interaction with the state on the principles of social partnership serves as an important element of their own democratic development and organisational strengthening as institutions for realisation of social and political activity of their members.

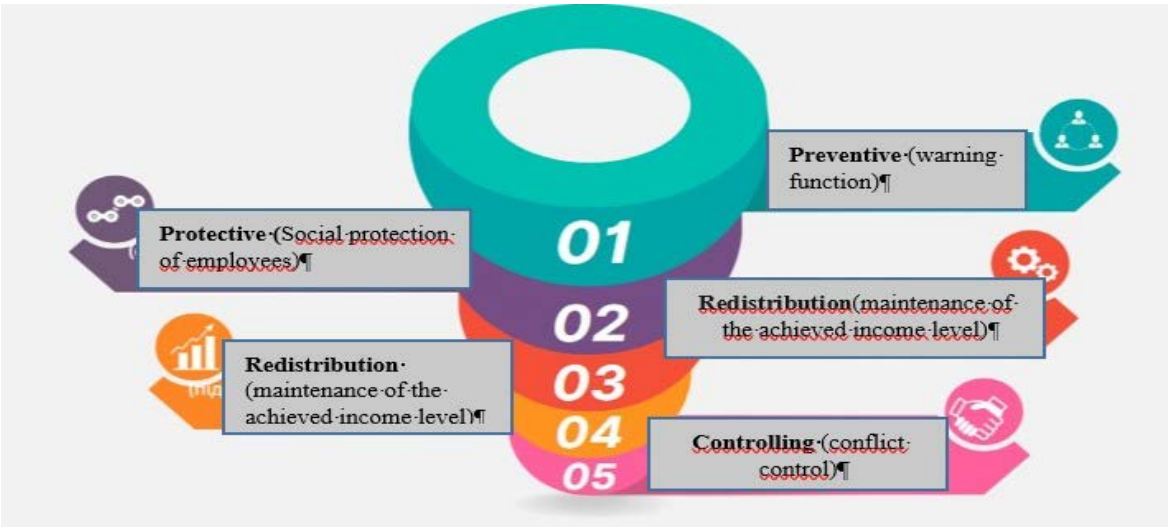

Figure 1. The hierarchical sequence of functions of the primary level of social partnership.

Source: author's construction based on (Savchuk L. M., 2016).

2. The mutual influence of employers' associations and trade unions in the system of social partnership contributes to the formation of mutual tolerance and civic responsibility necessary for democratic development.

3. The influence of trade unions and the government on employers contributes to the formation of social responsibility of business to society.

In view of the above, in their study, researchers S. Tsymbaliuk and T. Shkoda (2020) found that the level of the institution of social partnership and collective bargaining management at different levels remains low, which is confirmed by the inconsistencies in the implementation of most provisions of the

Sectoral Agreements. Among the proposed measures, we share the scientific view in the following positions:

- ✓ It is necessary to define at the legislative level the types of liability of officials for violation of the law "On Collective Bargaining Agreements" and failure to fulfil their obligations, in particular, for violation of the social rights of the partners during collective bargaining, obstruction of control over the implementation of the main provisions of collective agreements and contracts at various levels;
- ✓ It is regulation of collective bargaining, social and labour relations in the development of the content of general, sectoral, territorial agreements and collective bargaining agreements in order to provide relevant recommendations to the social partners;
- ✓ It is recommended to raise employees' awareness of their rights, in particular in the area of remuneration and social security.

Modernisation of social dialogue institutions, including specific legislation, is a priority for public authorities and other social partners. This approach will address the lack of proper regulation and prevent social partners from freely interpreting the provisions of the law. The involvement of all parties to social dialogue in the negotiation process should be carried out in two directions (Lopushniak H., Marshavin Y., Kytsak T. O., Iastremska O., 2021):

1) Ensure that "non-representative" organisations have the right to participate in social dialogue by granting them the right to an advisory vote;

2) expand the circle of social dialogue participants by engaging the general public. Non-governmental organisations cannot be an independent party to social dialogue, so their participation is possible only within the framework of tripartite bodies, and the rules of procedure should contain provisions that will provide such opportunities (Rykhli L., Prittser R., 2003). The implementation of these stages of social dialogue reform will ensure: raising its status; expanding the subject matter and sphere of influence on social, labour and other social relations; organising effective control over the implementation of the decision of the parties to the dialogue; taking into account the peculiarities of the country's socio-economic realities; transparency of decision-making by the social partners; developing a consolidated position of the parties to the dialogue; strengthening socially responsible behaviour of business organisations; and approaching the standard of such dialogue (Kharchenko T., 2012).

Thus, given the extraordinary social and economic benefits of social partnership and social dialogue as a tool for managing the corporate policy of a modern enterprise within the framework of socially responsible business, the role of the state in this process should not be the least. Since sustainable development issues are the responsibility of public authorities, it is the state that should be actively involved in balancing the parties to social partnership, ensuring compliance with laws and regulations. After all, widespread corruption, prevalence of corporate interests, and a persistent practice of ignoring and failing to comply with existing laws by various actors are significant obstacles to the creation of a civilised social and corporate partnership in Ukraine.

Therefore, social and corporate responsible partnership in the context of sustainable development is a necessary condition and quality of the system of social interaction between social actors at all levels of government. And the more such enterprises there are in the country, the higher the overall result of economic activity in the economic system, the more tangible its social effect.

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