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## Directions for improving the organisational system of value-based management in a high-tech company

**Abstract**

The purpose of the article is to formulate directions for improving the organisational system of value-based management in a high-tech company. *Methodology.* The methods of analysis and synthesis, comparison and grouping, conceptualisation, strategic analysis and business process reengineering were the methodological basis of the research. *Results.* The conditions under which it is possible for Ukrainian high-tech enterprises to withstand competition, to survive, to develop, to be in the process of self-improvement, in a state of constant search for new organisational forms of functioning and technologies, new strategies of functioning, new types of products and new areas of application of products are defined. The methods of existence of high-tech companies are determined – the concept of survival and the concept of breakthrough. Within the framework of creation of modern organisational and technological systems three basic types of general business strategies are proposed – leadership, differentiation, focusing. For the modern practice of value-oriented management of innovative production from the point of view of intra-company management, the main characteristics are defined – functional, process, system, elemental. The organisational management of a high-tech enterprise when creating modern organisational and technological systems must take into account the following types of modernisation: technological, social, institutional, cultural. At the same time, possible ways of restructuring the enterprise are determined. The life activity of a high-tech enterprise is analysed in relation to its business processes and business functions. In general, the change in the goals and orientation of high-tech production is reflected in the content of the management concept and management structures, as the scope of cost analysis tasks related to the search for optimal conditions for the production and sale of goods, economic risk assessment and forecasting the behaviour of competitors is expanding. There is a need for infrastructural changes determined by the organisation and functioning of special units focused on the system of strategic planning and organisational support of decisions. *Value/originality.* A model of the organisation of intra-firm management in a high-tech enterprise is proposed by optimising the value-oriented management system of a high-tech enterprise, taking into account the complexity of the modern production system, its heterogeneity, the changeability of its elements, the structural diversity and the variety of links between them.

**Keywords**

organizational system, value-oriented management, high-tech enterprise, improvement

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**1 Introduction**

The National Economic Strategy of Ukraine for the period up to 2030 defines the following target indicators for the development of the national economy: growth of real GDP not less than two times, growth of GDP per capita not less than 10,000 USD, growth of labour productivity not less than 1.7 times,

increase in net inflow of foreign direct investment not less than 15 billion USD per year from 2025, growth of export volume to 150 billion USD, decrease in growth of export volume to 150 billion USD, reduction of the unemployment rate to 6%, reduction of the gender pay gap to 10% (National, 2021). The strategy emphasises: "54% of Ukraine's exports consist of goods with low added value,

despite the existing potential for the production of high-tech goods" (National, 2021). One of the ways to achieve the goals of high-tech development of the domestic industry is seen in the implementation of the "Industry 4.0" concept, the tasks of which are: popularisation of the concept itself and its individual elements as a mandatory factor for increasing the competitiveness of industrial enterprises before the introduction of the "Industry 4.0" concept at the expense of EU funds, promotion of educational activities on the transfer of best practices from the IT sector to industrial sectors, ensuring integration in the field of "Industry 4.0" in the strategy of the defence complex and state security, formation of new competencies of personnel in industry with the aim of introducing digital technologies, full-scale digitization of key sectors of industry, ensuring clustering in the field of "Industry 4.0" – at the national and regional level (National, 2021).

The authors of this work, taking into account the foreign economic conditions (first of all, military aggression against Ukraine), insist that it is necessary to start the restoration of the high-tech sphere from the defence-industrial complex, more precisely – from the creation of modern organisational and technological systems. The Strategy for the Development of the Defence Industrial Complex of Ukraine until 2028 states: "The defence industry is of crucial importance both for the development of the national economy and for the protection of state interests, an area that today operates mainly within the framework of the fourth technological system. The strategy is aimed at ensuring the development of a defence industrial complex capable of adapting to functioning in crisis situations and threats to national security, ensuring the transition to the fifth technological system and strengthening the state's capacity within the framework of Ukraine's achievement of military-political independence." (Strategy, 2018)

## 2 Analysis of recent research

The generalisation of the conclusions in this work was made on the basis of the use of scientific works of such specialists as Amosha O., Pidorycheva L., Zemliankin A. (2021), Behma V. (2020), Holovatiuk V. (2020), Hrayson J. and O'Dell K. (1991), Grosfeld I. and Roland G. (1995), Danylenko Y. (2018), Dyba M. and Hernego Y. (2020), Kendyukhov O. (2019), Matyushenko I., Khaustova V. (2017), Meh O. (2019), Olvinska Y. (2021), Porter M. (1998), Rybakova L. (2019), Salikhova O. (2019), Semenyuk E. (2017), Sotnyk V. (2020), Welch D. (2006), Yakkoka L. (2001).

Under the influence of a number of adverse factors, the problem of survival has seriously affected even vital and competitive high-tech (HT) companies, most of which are on the verge of

financial failure. So far, the numerous problems they face are not so much reduced to finding ways to solve promising problems, but rather to the lack of appropriate conditions for solving them.

The purpose of the article is to formulate directions for improving the organisational system of value-based management in a high-tech company.

## 3 Concepts for the development of high-tech companies

In general, the problem of successful existence and development of IT companies can be solved by different methods. The final choice depends on the concept of development adopted by the management of the IT company. Experts consider the concept of survival (A) and the concept of breakthrough (B) as extreme (polar) methods.

A. The concept of survival is an evolutionary development aimed at achieving higher indicators, carried out with minimal structural and technological changes, up to the exit from the state of bankruptcy and the further maintenance of a positive trend. After reaching a certain level of capacity utilisation, number of employees, wages, etc., the HT company may remain in a stagnation mode for a long time.

A passive strategy, characterised by the development of short-term economic forecasts to solve complex problems of current economic activity, together with a certain tendency towards stabilisation, does not exclude the process of degradation of the production culture and a decline in the quality of products, due both to the need to buy cheaper and lower quality raw materials, and to the decline in production discipline as a result of constant production stoppages, wear and tear on equipment, and a decline in the qualifications of the workforce. With such behaviour, sooner or later the stagnating company will be absorbed by better adapted and more successful competitors who implement a better line of behaviour – the concept of breakthrough.

B. The concept of breakthrough refers to the orientation of achieving a leading position in the market in the shortest possible time by means of high-quality structural transformations that enable the company to achieve rapid economic growth and sustainable existence. This strategy involves a higher degree of risk, but is much more effective if successful. It is characterised by the desire of the employees to significantly improve the basic criteria of production in the shortest possible time and to achieve a leading position above the market.

Moreover, unlike the concept of survival, which takes an approach from the achieved state, through the identification of existing reserves and the use of former allotments, to possible prospects, the concept of breakthrough is characterised by a different approach: from the objectives, through

the structuring and optimisation of the internal management technology, to the means of achieving the set objectives, where the main attention is paid to supporting measures. The choice of growth strategy usually depends on the results of a three-level analysis. At the first level the possibilities are revealed, which can be used by the HT enterprise at the existing scale of activity (the possibility of intensive growth due to the creation of a modern type of organisational system). At the second level the possibilities of internal integration of various directions of development of the developed organisational system are revealed (the possibilities of growth integration). At the third level, the opportunities are identified that go beyond the functioning organisational system of the HT enterprise (opportunities for diversification growth). At the same time, intensive growth is justified in cases where the HT enterprise has not fully exploited the opportunities of traditional markets.

The general approach adopted as a basis for the development of the company's IT includes the selection of a general strategy of business activity, which must correspond to the planned goals and mission of the creation and operation of its organisational system. There are three basic types of general business strategies.

1. Value leadership means that the HT company seeks to overtake its competitors by establishing the production of products at the lowest cost. With low production costs, the HT company can afford to charge lower prices for its products, and lower prices allow it to produce more products and thus increase its sales volume.

2. The strategy of "uniqueness" (differentiation) means that the company makes its products unique from the consumer's point of view. Uniqueness can be based on several factors, such as quality standards, product features, customer service, and so on. A goal such as "uniqueness" requires a creative approach, deep scientific knowledge, conducting comprehensive marketing research and competitive intelligence activities, flexibility in responding to changes in consumer needs and product offerings, and a "high quality" reputation. But this does not mean ignoring control over production costs.

3. The "focus" strategy (the "focus" strategy) focuses on business activity in a particular market segment. This means that the HT company seeks to achieve either cost leadership or product "uniqueness" or both in a particular market segment, i.e., the HT company concentrates its efforts on one market segment rather than competing in the entire market.

It should be noted that those who have already chosen an optimal, economically justified general strategy of business activity, should stick to it for quite a long time, because it is known from practical experience that HT companies, constantly searching for their place on the market, often change their

plans and move from one strategy to another, thus leaving themselves to chance, as a rule, lose potential advantages and a part of their market value, and due to their inconsistency remain uncompetitive.

#### **4 Prerequisites for the value-based management of a high technology company**

Significant changes that have taken place during 30 years of reforms in the industrial and economic development of Ukraine and the accompanying structural restructuring of industries suggest the formation of a new economic system – the carrier of future economic growth, which requires a radical restructuring of management and production organization systems existing in enterprises, i.e. their organizational systems. In this regard, modern theory (the logic of the development of economic thought) and management practice (new approaches to organization and technology), described in detail in the works of domestic and foreign scientists (Holovatyuk, 2020; Hrayson, 1991; Welch, 2006; Yakkoka, 2001).

The direction of creative research is constantly improved in accordance with the objective requirements of production and sale of goods, complication of economic relations, increase of the role of the consumer in the formation of technical and economic parameters of other products. It should be noted that a characteristic feature of the modern period of scientific and technological progress (STP) abroad is the transition to the intensive development of production, and in Ukraine – the focus on ensuring the rational conduct of business activities in conditions of scarcity of resources necessary to achieve high final results, the introduction of modern level of organizational systems, to overcome the low efficiency of direct administrative measures applied at enterprises and natural measures of market regulation and increase the market value of the enterprise.

All this requires a radical change in the approach to the existing practice of intra-company management. From the point of view of the well-known concept of "high-tech policy", internal management is an activity consisting in the purposeful choice of IT sphere and system of actions to achieve the long-term goals of economic entities in the constantly changing conditions of the external environment. Thus, this is the sphere of activity of the top management of the enterprise, whose main task is to determine the directions and course of development of the enterprise and to increase its market value, to set the main goals, to allocate resources in an optimal way, to use everything that gives the enterprise competitive advantages. In the practice of management, the following main aspects can be named:



- functional, when management is perceived as a set of actions aimed at achieving certain results. In this case, value-based internal management assumes that in order to achieve the necessary results (increasing the market value of the enterprise), changes are possible both in the composition of types of management activities in the enterprise and in their content;
- the process in which management is viewed as an activity of identifying and solving problems (the process of preparation and decision making). The process side of value-oriented internal management is necessary for understanding the formation and functioning of management technology. The objects of research here are the stages of the management process, its stages, their sequence, organization of work, costs, and so on;
- elemental, where management is considered as an activity of organization of relations of certain structural elements. A special selection of the elemental side of anti-crisis internal management is necessary to determine the role and importance of each element of management, to study the internal structure of the organizational system. At the same time, attention is paid to the organization of work of employees, management style, technological equipment, information communication, work with personnel and others.

If modern management experience is not taken into account and adequate measures are not taken against general negative trends, in the current conditions potential bankruptcies of HT companies can and do become an objective reality. In this case, the priority element is the need to really achieve production efficiency by carrying out its comprehensive restructuring and strengthening positions on the sales markets. Restructuring as an element of anti-crisis management and prevention of critical situations: on the one hand, it is an effective tool for preservation and development of the enterprise, ensuring increase of its competitiveness; on the other hand, it is a tool that has its limits of application, potentially posing a threat to the security of the enterprise in case of insufficiently thought out or illiterate transformation program.

### **5 Development of directions for improvement of the organizational system of value-based management of a high-tech enterprise**

When considering the organizational system of value-based management, it is necessary to take into account the unbalanced processes in the economy caused by the action of NTPs, the strengthening of information flows, the increase in risky forms of activity, entrepreneurial activity and other factors, as well as in connection with the sharply

increased internal and external competition. Special importance should be attached to the provision of economic security and competitive intelligence measures of enterprises, which means the protection of confidential information and contributes to the achievement of an advantage over competitors and the extraction of profits (economic security and competitive intelligence in the enterprise are ensured by its top management and employees through the implementation of a system of measures). The absence in the organizational structure of Ukrainian enterprises of the service for the protection of economic interests and the targeted allocation of functions to ensure economic security and competitive intelligence measures is a serious deficiency of the system of domestic internal management of enterprises.

Similarly, the service of change management, which ensures the adaptation of the company to the constantly changing requirements of the external environment, deprives employees of the organizational capacity to effectively and carefully manage their own development. Researchers of modern enterprises drew attention to the fact that the average lifespan of most of them – from creation to closure – is less than 40 years. However, many companies remain successful even after 200 years of operation. Analysis of these trends leads to the conclusion that most companies die prematurely due to their inability to learn, adapt, and evolve as the environment changes, thereby failing to increase their value in the marketplace.

The archaic nature of organizational structures, expressed in the hypertrophy of the functional approach, is an obstacle to adaptation to the modern market. In addition, old-school employees, being enterprising people, left the companies when the period of their mass collapse began. As a result, most of the tasks of top managers cannot and will not be solved. Management schemes that have outlived themselves need a radical reorganization that will bring them closer to a form that is adequate to the requirements of a new age in which past approaches no longer work as they should. It is obvious that we are talking about the reorganization of the entire system of intra-company management, which does not correspond to the development patterns of the post-industrial market environment and the needs of value-oriented management.

Figure 1 shows the basic directions of improvement of the value-oriented management system at a typical Ukrainian IT enterprise in the general base of modules of programs for optimization of the organizational structure of management, which allows to create conditions for achieving stability and increasing the market value of the enterprise in the conditions of constantly growing competition of product manufacturers. As a matter of fact, the most "bottlenecks" of internal management of the

enterprise are marked here, including financial management, assortment management, cost management, change management, personnel management, economic security and competitive intelligence.

Strategic planning, investment and innovation policy, information provision, marketing, competitive intelligence, social responsibility, communication processes are also problematic at present. The tasks listed above coincide completely with the tasks of restructuring. Their solution requires a complex approach, since all elements of analytical and organizational activity in the IT enterprise are closely interconnected. Consideration of one or

several factors does not give an objective picture, which does not allow to make the right decision and to react adequately to the events or possible interruptions in the process of HT production management.

A special place is given to the problem of increasing the labor activity of workers, because in the technological process, in addition to the equipment, the talent of a specialist, his qualifications, work skills and intuition are involved. The world industrial production would not have reached the present level if the enormous energy of people had not been included in the

CHANGES MANAGEMENT	ECONOMICAL SECURITY	PERSONNEL MANAGEMENT
Organizational and resource support for the adaptation of the production and its technological process to the requirements of the NTP, to the conditions of the constantly changing external socio-economic and market environment, including the search and implementation of new promising areas of IT activity.	Protection of production, scientific and technological, intellectual and personnel potential, business reputation of HT company, its contractual base, trade and sales information, choice of business partners, etc.	Continuous development of the structure and composition of the personnel working in the HT Company in accordance with the goals of the Company, including the development of the policy and strategy, as well as the corporate culture, focused on the formation of a single team in the workforce.
Module of programs for the development and implementation of target instructions for strategic and tactical areas of activity, based on the real conditions of a set of business processes and business functions.		
<b>MAIN CRITERIA OF VALUE-ORIENTED MANAGEMENT: financial (market) stability, solvency (liquidity), business activity, profitability of the enterprise.</b>		
Module of programs for optimization of the organizational structure of the financial part of value-oriented management, the objects of which are: sources of financial resources, financial resources, financial relations.		
MANAGEMENT OF THE NOMENCLATURE	MANAGEMENT OF CAPITAL VALUE (expenses)	VALUE AND FINANCE MANAGEMENT
Strategic planning and operational regulation of nomenclature by product groups and subgroups in order to achieve the optimal value of the relationship between demand and supply, production, sales and service capabilities of the company and its part-time employees.	Introduction of permanent (operational) and strict accounting of the results of production and economic activity at the HT enterprise in order to identify the consequences of the taken anti-crisis management decisions and to optimize the general process of anti-crisis management of the HT enterprise.	Strategic financial planning (profit and loss analysis, cash flow planning, aggregated balance sheet planning) and operational inflation-adjustment to balance cash inflows and outflows.

FIGURE 1 Basic directions of improvement of the organizational system, value-oriented management at a high-tech enterprise

Source: authors' development

work. But now within the limits of the fact that "Sapiens 2.0" appears.

In the post-industrial era, the social component has become the key to increasing the efficiency and competitiveness of production. According to American experts, 85% of a company's success depends on the qualifications and level of training of its workers, and only 15% on the available technical potential. All this required the humanization of the system of labor relations, a serious change in the social status of workers, their transformation into real, not imaginary co-owners of enterprises. This circumstance forced foreign companies to apply various systems of personnel participation in capital, profits and management. They practice the sale of shares to permanent employees on preferential terms, use bonus payments in addition to salaries, which are deductions from profits, employees become owners of pension funds created at the expense of the company, the maximum delegation of powers to employees is carried out, etc. The content of such a policy in enterprises of different countries has some differences, since it is largely determined by the system of state regulation of business activity and the position of employees. In general, the process of changing the social status of employees and property relations abroad was called "participatory economy".

## 6 Conclusions

The practice of effective value-oriented management and disclosure of human resource potential reserves of the IT enterprises in the market economy in the conditions of crisis is expected to be studied by Ukrainian scientists still. However, it is already clear that the development of the foundations of human labor adaptation to the market should include not only the analysis of general problems of institutional and structural transformations of the IT industry, but also the real processes of transition to a competitive market according to social criteria, taking into account the level of development of production forces, socio-economic relations developed in society, conditions and motivational factors of labor activity.

In developed countries they have long understood and were forced to understand and consider the new objective reality, which means that the HT production enterprise must serve not only its owners, but also workers, satisfying their needs for security, for stability, for creative work, for a sense of one's own importance, for development and material benefits. Even in extremely hard Ukrainian conditions there is a tendency of gradual growth of the number of "successful" people who, getting rid of the "shock therapy" of the so-called market reforms, prefer to leave high incomes for psychological comfort and more creative work.

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