Features of intellectual capital management at the enterprise

The article deals with the management of intellectual capital of the enterprise that is a set of intellectual resources, skills that a person uses for getting profit. Various approaches to the understanding of the management of intellectual capital, and the principles and approaches to building intellectual capital management systems are considered. The principles of human resource management, which are based on scientific, integrated and systemic approaches, are considered. The authors unrevealed the basic principles of the intellectual capital management system, which allow solving the main problems arising in the process of managing intellectual capital at an enterprise. The authors have considered a subsystem of intellectual capital management, which stands out along with financial, productive and other sub systems of enterprise management. The need of organization of developed network is show non which will circulate information within the organization. The chain «information - knowledge - intellectual product - intellectual capital» is highlighted, which management will enhance the effectiveness of both individual units and the entire intellectual capital of the enterprise. The interrelation of the intellectual capital of the enterprise with its innovative activity is considered; recommendations on the analysis of the internal environment of enterprise with the viewpoint of innovative potential are offered.

Keywords: intellectual capital, enterprise, management system, knowledge, intellectual product, innovative potential

Management of the intellectual capital of an enterprise is a very complex and responsible activity. The literature presents various approaches to the definition of the concept of «intellectual capital». According to Stewart's definition, intellectual capital (from the Latin. intellectus- the mind, reason, intelligence, mental ability of a person, capitalis- the main, dominant, basic) - is a set of intellectual resources and skills that a person uses for profit [1]. The analysis of the works of domestic and foreign authors shows that at present there are several approaches to understanding the essence of intellectual capital. In a narrow sense, intellectual capital is all the knowledge that an organization possesses and which can be used to make a profit. In a modern market economy, intellectual capital is one of the main factors for the creation and development of a competitive enterprise. Knowledge and everything what is associated with it, has shaped the intellectual capital of the organization. According to Kazakhstan scientists [2], the high educational level of the population is one of the main advantages of the national innovation system.

Intellectual Capital Management Approaches

Management of intellectual capital includes the management of knowledge, its flow, generation, development, preservation. The main goal of managing such assets is to strive for an enterprise to maintain its competitiveness. The main goal of the creation, development and management of intellectual
capital according to V.A. Dresvyannikov is to ensure a significant increase in the level of profit and efficiency of the company through the formation and use of the necessary knowledge, products and relationships by the enterprise [3].

The most general definition characterizing the management of intellectual capital is given by S.V. Pokrovsky [4]. In his opinion, management of intellectual capital is an action to increase not only its value, but also its effectiveness. The following definition of intellectual capital management process was formulated by the author based on the analysis of literature on the conceptual issues on the intellectual capital management: intellectual capital management is a process that affects certain objects of management, which include: economic actors of the market and structural enterprise units participating in the processes of functioning of intellectual capital. The listed objects of management are regulated with the help of special legal, economic and social tools that allow the effective use and development of intellectual capital components within the enterprise.

An analytical review of the existing scientific literature on the principles and approaches to the construction of an intellectual capital management system in the context of the development of global labor showed the presence of many points of view.

For example, the authors T.Yu. Bazarova and B.L. Yeremina [5] in their work highlighted three main approaches to the management of intellectual capital in the enterprise: organizational, economic and humanistic. The authors pay special attention to the third approach, often ignoring such important aspects of managing intellectual capital as interrelation with the company's strategy, the use of competitive management mechanisms, the achievement of synergies from management within the framework of a systems approach, etc. Their concept is based on the following principles of labor resource management:
- maintaining unity in leadership;
- strict vertical management hierarchy;
- a fixed level of the required amount of control;
- maintaining a clear separation between the headquarters and the line structure of the organization;
- maintaining a balance between authority and responsibility;
- ensuring compliance with the rules of discipline;
- development of a scheme for the subordination of individual interests to the common cause;
- ensuring equal rights to each hierarchical level of the enterprise, which will be based on goodwill and fairness;
- motivation of employees to effectively fulfill their duties.

It should also be added, in addition to all the above, that the management and development of intellectual property should be based on scientific, integrated and systemic approaches, especially in the context of interterritorial redistribution of labor.

The authors [6] identify the following basic principles on which the management of intellectual capital in an enterprise should be built (see Table).

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<tr>
<th>Principle</th>
<th>The content of the principle, which solves the problem of intellectual capital management</th>
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<tr>
<td>Principles of systematic, comprehensive and scientific issues</td>
<td>The interrelation of the elements of intellectual capital is ensured, the complexity of developing its structure and management methods is reduced, the indicators of the effectiveness of the management system are justified.</td>
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<tr>
<td>The principle of new tasks</td>
<td>This principle will facilitate the selection of the most promising ideas that will be offered.</td>
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<tr>
<td>The principle of the unity of the knowledge base</td>
<td>Creating a knowledge base within the company, based on this principle, will increase the level of information literacy of employees, a tool will appear to store and account for all components of intellectual capital</td>
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<tr>
<td>Principle of synergy</td>
<td>The principle of nonlinearity allows us to consider the management of intellectual capital from a variety of angles and determine all possible paths of development. The principle of openness will allow to solve problems with the storage and transfer of information among employees</td>
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<td>The principle of unity of command and collegiality</td>
<td>Based on this principle, it is possible to avoid problems in the distribution of functions and responsibilities, and problems in making the most important decisions.</td>
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Management of intellectual capital

The creation of intellectual capital is a constantly renewing process. So, at the beginning of this process is carried out:

- selection of employees;
- organization of collaboration;
- interaction and exchange of knowledge between employees;
- ideas are developed;
- products of intellectual labor are created.

To implement all of this, the enterprise’s funds are spent.

It is followed by the embodiment of intellectual products in the production of products. This creates surplus value. It follows when the products are realized as a commodity. Organization as a result, receives money, which again goes into circulation, participating in the process of creating intellectual capital [7].

The most urgent task in this area is the improvement of the mechanisms for creating and using intellectual capital. When managing intellectual capital, one has to deal with a number of questions:

- to provide investment in the development of intellectual capital;
- obtaining a certain result with a significant share of the risk of management decisions in this area;
- sooner renewal of the enterprise, due to rapid changes in innovation processes;
- coordinate the various functions involved in this process;
- issues related to patenting.

In these circumstances, in the case that the strategy of modern organizations should include the development and enhancement of intellectual capital, to solve these issues and improve the efficiency of managing intellectual capital, it is necessary to isolate the corresponding separate subsystem. It is intended to create in the organization the conditions for the full use of existing opportunities for the development of knowledge. Based on the knowledge constant exchange, use suitable databases, the compounds available knowledge, it appears possible achievement of positive result in the area of organizational activity.

A separate subsystem of intellectual capital management, allocated along with financial, production and other under enterprise management systems, is designed to ensure the implementation of a number of tasks.

Firstly, the management of innovation potential and development of employees. The solution to this problem is the creation and development of knowledge funds; employees of intellectual labor are required to perform work on the basis of participation and teamwork.

Secondly, the management of information and communication. A necessary condition for the implementation of this task is the improvement of the information processing and information flow management system; formation of information base on the basis of modern software.

Thirdly, the formation of a methodological basis for managing intellectual assets. This task is reduced to the regulation of the activities of various personnel involved in the development of intellectual capital based on the mutual coordination of their activities.

Fourthly, the commercialization of the intelligence of the main active in. It is proposed to analyze the options for using the results of this activity within the organization and when it is transferred to third parties on a reimbursable basis. Thus, the most efficient use of these results is achieved [8].

Fifthly, motivation and personal approach. It is necessary to improve the system of motivation and of stimulating the creative activity of employees for continuous reproduction of intellectual capital, thus it is required the corresponding attention to the staff, representing the main value in the sphere of intellectual capital.

It should be noted that the activity on the development of intellectual capital is not limited to the accumulation and augmentation of knowledge, the ultimate goal is the use of knowledge, obtaining from them, the highest return for the development of the organization, economy and society.

The structure of enterprise management should provide the most complete return on the knowledge, abilities, capabilities, skills of each employee participating in the process of creation and management and intellectual capital. The distinguished subsystem can be formed into its corresponding subdivision, designed
Features of intellectual capital management at the enterprise
togive you the necessary result when solving the assigned tasks of managing the intellectual capital of an enter-
tprise. One of the specialists in knowledge management, L. Edvinson, wrote that «it is the structure of an or-
ganization that represents what allows employees who operate knowledge to use their talents as a lever» [9].
Thus, linking the functions of managing intellectual capital with the structure of an organization is an im-
portant circumstance on which it depends how effectively the solution of problems in this area will be. It
should be noted that in different industries there are certain features for the development of intellectual capital. Enterprises function under different conditions, which predetermine the priority of certain factors in the development of innovative processes for each such enterprise.

So, the enterprises of agriculture and construction are in some dependence on the supplier companies, which have a significant part of innovations. Therefore, the creation of an intellectual product here is objectively somewhat limited.

In industries related to information, such as consulting, design organizations, the main point is the best combination of knowledge with practical activities. This moment is given decisive importance along with the development of communications [10].

Management of intellectual capital has the ultimate goal of translating accumulated knowledge and skills in a material product with maximum efficiency. The management system should influence the process of creating intellectual capital, the realization of knowledge and receive high returns. This should guide organizations in carrying out their activities.

Management of intellectual capital should be based on a number of principles:

1. Focus on results. So workers should focus on the performance of activities, on achieving the goal. In this area, the creative factor prevails in the work of employees, and here it seems optimal to manage wider and wider points.

2. Decentralization of decision making. This principle is related to the previous one. A wider field of activity of ordinary employees implies a greater measure of freedom in decision-making.

3. Fixation of information. This principle consists in systematization of knowledge in databases and extensive use of the latter for the development of intellectual capital.

4. Coordinating the process. The essence of the principle is in regulating the activities of various functional units to achieve results in the field of intellectual capital management. According to this principle, the interactions of various divisions are enhanced, and the coordination process itself is not discrete, but continuous.

Another of the significant moments in the management of intellectual capital is the measurement of its magnitude, as well as its accounting. This task is difficult, since the sphere of intellectual capital is not quite ordinary; covers many components, the magnitude of the influence of which on the position of the organization is strongly dependent on their skillful application [8]. We also note that this area is much less diverse in restrictions and thresholds associated with sales, costs, etc. In this area, it is much easier to achieve high dynamics of the relevant indicators. Speaking about the cost measurement of this capital, it is necessary to proceed from the possibilities of using appropriate resources and the final intellectual product. Creation costs should not be decisive here. Measuring and reporting factor of intellectual capital plays such a large role in strengthening the competitive access business position in the market.

Intellectual capital, knowledge is involved, if not in all areas of the organization, then in a large part of it. Managing this knowledge has many aspects and nuances, each of which can significantly affect the state of the organization. Therefore, intellectual capital management should be considered as part of a separate strategy. So organizations that highlight such a strategy and rely on it in their activities will certainly achieve more effective management of the enterprise as a whole, will be able to combine and synthesize all sorts of available resources with knowledge and ideas and will get high returns and results.

Based on all of the above, it is possible to form an idea of the strategy of an enterprise aimed at the development of intellectual capital. Speaking about the company's strategy in this area, it should be noted that this capital should be managed as a complex, proceeding from system positions, and not its scattered parts.

It is also necessary to organize a developed communication network through which information will also circulate. This is necessary to improve and accelerate all the processes of development of intellectual capital, as well as to filter information and present it in the necessary form for users. All processes related to the reproduction of intellectual capital should be managed in order to improve them, increase their effectiveness (both intra-company processes and those affecting external actors).

It is important to highlight the chain «information – knowledge – intellectual product – intellectual capital» (see Fig.). The activities of an organization can be presented in general terms, and for the
development of intellectual capital it is necessary to move from link to link along this chain with maximum efficiency. And intellectual capital management is designed to improve the quality of the link itself, to improve the links and to get a good result in the end. So, in the beginning, the information should turn into the so-called actual knowledge for workers, i.e. to provide a certain value. Then, with the help of this knowledge, ideas, developments and intellectual products are developed. They should be generated finally in intellectual capital.

![Diagram](image.png)

Figure. Chain «information – knowledge – intellectual product – intellectual capital»

For the intellectual capital management on an ongoing basis in the organization, for the relevant processes to be carried out on a systematic basis, it is necessary to make these processes continuously renewable. From this it follows that innovation processes, and innovation activity foresees the need for the development and management of intellectual capital. In this regard, we consider some aspects that are the basis for innovation activity. It is difficult to imagine how innovations, new products will be created in the framework of normal operations. Operational activities are designed to ensure the implementation of other current tasks. These tasks are quite typical, and from time to time a set of operations is repeated, which differ little in both complex and in particular, both in the objectives and in the methods. And to solve the stated problems it is necessary to bring them beyond the boundaries of this activity. Tasks must be formed in the project. Using this tool identifies opportunities that do not find a place in the usual approach to the organization of activities.

However, the innovative processes brought out a number of requirements as to the «input» of the organization, and to intra processes of the organization, for the purpose to receive innovative product on the «output».

So, among other things, we can highlight:

1) resource changes: new raw materials, technological equipment; new qualities of the labor process;
2) changes in the management mechanism: new ways of management; new connections in the system of management and organization as a whole; coordinated activity of all processes; the maximum approximation of the timing of «output».

Evaluation of the effectiveness of managing intellectual capital can be carried out by measuring indicators of innovative activity of an enterprise. For this, a complex of indicators is often used:

1) cost indicators:
   – share of R&D costs;
   – share of costs for the acquisition of patents, etc.;
2) dynamic indicators of the innovation process:
   – the duration of the production cycle of the new product;
   – the duration of the development of a new product;
3) indicators characterizing updatability:
   – the number of implemented innovations in the processes and product;
   – the share of production produced over two years or more;
   – the number of new technologies for implementation;
4) structural indicators:
   – number of R&D personnel;
   – the number of units engaged in technical and scientific research and their composition;
   – time period, from the firm’s awareness of the purchasing need for a particular product to its introduction into the market.

Intellectual capital is key to enterprise innovation. It largely determines the ability of the enterprise to solve problems in this area. Thus, intellectual capital is the starting point for innovation. Innovations can be
Features of intellectual capital management at the enterprise

said to be a kind of continuation of intellectual capital. So according to the state of innovation potential, we can conclude about the effectiveness of managing the intellectual capital of an enterprise.

It is necessary to analyze the internal environment of the enterprise from the standpoint of innovation potential:

– formulated the characteristics of all components designed to implement innovative goals; characteristics suggest both quantitative and qualitative;
– the difference between the actual and standard values of the indicators is determined;
– based on the SWOT-analysis, measures are formulated to change the innovation activity of all components of the processes. Thus, the internal system is characterized, on one hand, by resource indicators, and on the other, by functional ones. The first group of indicators correlates with the potential of an organization, that is, its resources in a broad sense. Such parameters are characterized by wear, safety margin of technical components, personnel and financial opportunities. The second group of indicators characterizes the efficiency of using the available opportunities.

Analysis of the innovation activity of an enterprise is carried out in accordance with the following set of actions:

– consideration of the effects of the management system;
– monitoring of environmental parameters;
– accounting for the state of internal parameters;
– identification of a parameter with a negative state;
– identification of the relationship between the indicator with a negative state and other parameters;
– assessment of the potential in the innovation sphere [11].

So, there is an important relationship between the management of the intellectual capital of the enterprise and innovation activities.

Conclusion

Summing up, it can be noted that intellectual capital is a versatile phenomenon that is emerging as a result of the interaction of human, organizational, emotional capital and capital relations, which leads to the acquisition of new knowledge and increased innovation at all levels of the economy.

Intellectual capital is crucial for the development of any enterprise, as it includes the employees and the knowledge they possess. It is important for an enterprise to ensure the preservation and reproduction of intellectual capital in order to ensure long-term competitiveness. Management of intellectual capital is aimed at its development. So, according to the dynamics of its elements, the results achieved can, to a certain extent, judge the effectiveness of the enterprise as a whole.

Management of intellectual capital should be based on an appropriate strategy, since its elements are key to strengthening the position of the enterprise in the market. Effectively organizing intellectual capital management activities is possible with the allocation of the corresponding subsystem.

This will allow you to optimize all the necessary processes and accumulate everything you need to get a result in a given period of time. It is also necessary to take into account that all these changes will require changes at the «entrance» of the organization, in its mechanism. Only in this way and thanks to this can intellectual power be turned into a driving force.

References

Кэспіорындагы зияткерлік капиталды басқару ерекшеліктері

Макалада азамат пайда табу ушін қолдан алатын зияткерлік ресурстардың, біліктілік пен даярдылық жынтығы болып табылатын көркемді зияткерлік капиталды басқару мәселелері ерекше қарастырылады. Макалада авторлар зияткерлік капиталды басқаруды, сондықтан зияткерлік капиталды басқару жүйесін құру көндіретін тұсын түрлі төмдірлі құйымды қолданған. Ғылыми, кешенділік және жұқе қосқылық тәсілдерге негізделген еңбек ресурстары басқару қарқындағы жұқе әрекеттілінің түрде зерттеді. Авторлар зияткерлік капиталды басқарудың негізін қарқындағы атан откен, бұл, оз кезінде, зияткерлік капиталды басқаруда пайда болатын негізгі мәліметтерді шешуге мүмкіндік береді. Авторлар кәсіпорындық қарқындық, өнір іздеу және басқа да құйымдылық басқаруы, яғни зияткерлік капиталды басқаруда ішкі жұқе көздері анықталған. Еңбек біріне ұйым ішінде ақпаратты айналдыра алуға құрылған, басқару жүйесін қоғамдық құқығын көрсету қатарында. Зияткерлік капиталды басқарудың негізін, оны басқару қызметін қолдануға толық мақсатты түсіну қажет. Оның құрылымы, зияткерлік капиталды басқару Қарқындағы атан тактады, бұл, оз кезінде, зияткерлік капиталды басқаруда пайдалану қажет. 

Кілт сөздер: зияткерлік капитал, кәсіпорын, басқару жүйесі, білім, зияткерлік онім, зияткерлік алеует.

Е. Амирова, Г. Аймович

Особенности управления интеллектуальным капиталом на предприятии

В статье рассмотрено управление интеллектуальным капиталом предприятия, который представляет собой совокупность интеллектуальных ресурсов, умений и навыков, используемых человеком для получения прибыли. Изучены различные подходы к пониманию управления интеллектуальным капиталом, а также принципы и подходы к построению системы управления интеллектуальным капиталом. Выделены принципы управления трудовыми ресурсами, которые базируются на научном, комплексном и системном подходах. Авторами приведены основные принципы системы управления интеллектуальным капиталом, которые позволяют решить основные проблемы, возникающие в процессе управления интеллектуальным капиталом на предприятии. Показана подсистема управления интеллектуальным капиталом, которая является наряду с финансовой, производственной и другими подсистемами управления предприятием. Подчеркнута необходимость организации развитой коммуникационной сети, по которой будет циркулировать информация внутри организации. Выделена целочисла интеграция интеллектуальный продукт – интеллектуальный капитал, управление которой будет способствовать повышению эффективности как отдельных звенев, так и всего интеллектуального капитала предприятия. Рассмотрена взаимосвязь интеллектуального капитала предприятия с его инновационной деятельностью, даны рекомендации по анализу внутренней среды предприятия с позиции инновационного потенциала.

Ключевые слова: интеллектуальный капитал, предприятие, система управления, знания, интеллектуальный продукт, инновационный потенциал.

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