Kyiv National University of Trade and Economics
Department of Management

FINAL QUALIFYING PAPER

on the topic:
«Managing innovations in trade»

(based on the data of «Maysternya inzhenernykh rishen′» LLC, Kyiv)

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Kyiv 2019

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INTRODUCTION

Thematic justification. For Ukraine, enhancing the innovation activity of enterprises is one of the most important strategic goals, on which economic growth, business development, the level of population's well-being and the ability to effectively integrate the country's economy into the global economic system depend. The high level of competition in the world market stimulates the development of innovation processes, puts additional demands on the technical and economic characteristics of products and technologies and forces industrial and trade enterprises to actively apply innovations, develop new methods and approaches to managing innovation development.

Increasing the role of innovation in modern conditions leads to the activation of innovative activity of enterprises on the basis of improving production efficiency, sales effectiveness of a product or service, implementation of promising research developments and implementation of innovative programs. This is consistent with steady growth, improving the management of innovative development.

It should be noted that innovation is not only the use of high technology but also innovation in the field of management decisions. For the implementation of the innovative tasks facing the enterprise, it is necessary to reorganize the enterprise management system on the basis of new management technologies - innovative approaches in the management of construction enterprises.

Analysis of recent research and publications. Many scholars engaged in the innovations, innovation management and innovation management in trade among them are foreign: B. Van Ark, L. Broesma, P. Den Gertog, J. Howels A. Afuah, B. Twiss and J. A. Schumpeter; as well as domestic scientists: N. Vashchenko, L. Ivanenko, V. Lisitsa L. Fedulova and others. It should be noted that the theory of knowledge about innovation management is constantly updated, and old knowledge is quickly outdated, because as soon as innovation begins to be knowledge, it ceases to be innovation

The object of research is the management process of innovative development at the enterprise.

The subject of research is theoretical, methodical and practical foundations of innovative management process formation at the enterprise «Maysternya inzhenernykh rishen′» LLC.

The aim and tasks. The aim of this paper is a conceptual model-holistic generalization of theoretical ideas and methodological approaches to the identification of the essence of innovative activity of enterprises and the development of a mechanism for managing their innovative development.

The realization of this goal required the formulation and solution of the following basic, logically related tasks:

- to explore the essence of the concept of innovative development of the enterprise;
- to analyze methodological approaches to managing the innovative development of the enterprise;
- to analyze factors of innovative development of the enterprise;
- to evaluate the effectiveness of the management of innovative development of the enterprise;
- to substantiate directions of improvement of innovative development of the enterprise;
- to predict the innovative development of the enterprise.

The information base of the study was the works of domestic and foreign scientists, financial and operational reporting of «Maysternya inzhenernykh rishen′» LLC for the last three years, periodicals, informational resources of the Internet - the world computer information network.

Research methods. In the process of writing the author used general scientific and special methods that made it possible to systematically explore the problem of strategic management of innovative development of enterprises. In particular, theoretical generalization and comparison; historical; dialectical and structural-functional; statistical and economic; grouping; analysis and synthesis,

specific and abstract, comparative characteristics. The research methodology is based on the modern theories of strategic management of innovative development, which take into account the objectivity of changes occurring in the business environment.

The empirical basis of the work was the work of domestic and foreign scientists on the problems of motivation, strategic management, innovation, data from the State Statistics Committee of Ukraine, Ministry of Infrastructure of Ukraine, economic reviews, current legislation of Ukraine governing economic activity, research results.

The information base was presented by domestic and foreign publications, the press materials, Internet electronic sources and vital information of «Maysternya inzhenernykh rishen′» LLC.

Scientific novelty of the received results. The results of scientific investigation are to develop a system-integrated concept of managing innovative development of enterprises on the basis of effective use of innovative potential and its transformation into innovative capital.

Approbation of the results of the final qualifying paper was reflected in a scientific article on the topic: « Foundation and scientific approaches to manage innovations», which was published in the collection of scientific articles of students of KNTEU (Appendix A).

Structure of the final qualification work consists of an introduction, three parts, conclusions and recommendations, references, appendices. The total volume of work is 87 pages, of which 50 pages are the main volume. The list of references includes 44 titles. The work contains 8 appendices, 11 figures, and 10 tables.

PART 1
THEORETICAL AND METHODICAL BASIS OF MANAGING INNOVATIONS AT THE ENTERPRISE

1.1 Foundation and scientific approaches to manage innovations

In the modern world, the profitability of an enterprise depends not on natural resources or volumes of industrial production, it depends on the ability of this enterprise to modernization and introduces new ideas according to consumer demand in certain goods or services. The search for these ideas is the reaction of managers to modern competition, which requires evolution. And the implementation of these ideas in life depends on the innovative capabilities of economic entities and the overall level of scientific and technological development of the country.

The complexity and extremely high mobility of market processes, the emergence of new inquiries, changes in consumer preferences, large-scale technological changes, the rapid development of information networks, fast dissemination and reception of information, all of this not only complicates the work of enterprises, but also contributes to the emergence of new, often unexpected business opportunities based on innovative visions.

The solution to these tasks is provided by the creation of a dynamic and flexible management system, based on a broad delegation of powers to those levels of management that can produce innovative ideas and implement them. And coordination of all works on bringing innovations into the practice of the enterprise, or their own creation is carried out by the subsystem - innovative management. Innovation Management is designed to ensure the implementation of the strategic goals of the organization. Its task is to effectively manage the process of developing, implementing and commercializing innovations and coordinating relevant management decisions with other components of the management system at the enterprise Appendix D.

So, with the help of the management of innovations, an enterprise can be competitive in the modern market, and precisely successful managing innovation in trade can become the basis of much profitable entrepreneurship. But what is *innovation* and how to manage it. In general, the concept of *innovation* — a rather complex and multifaceted, his study is the subject of much scientific research, but, despite this, the generally accepted definition of innovation in science does not exist. There are three main approaches to the consideration of the term [16, P. 10]. According to Twiss, innovation — a process that combines science, technology, economics, and management, as it is to achieve novelty and extends from the emergence of the idea to its commercialization in the form of production, exchange, consumption [31]. Allan Afuah refers to innovation as new knowledge incorporated in products, processes, and services. He classifies innovations according to technological, market, and administrative/organizational characteristics [1, P. 192].

The classification of innovations has certain standards. The most commonly used substantive typology of innovation terms is the classification under the Oslo Manual prepared by experts in the field of measurement and evaluation of innovation activities from OECD member states. According to the more recent, broader approach of the Oslo Manual, two main types and four subtypes of innovation are recognized [36]. According to the Oslo Manual innovation classify by Technical and Non-technical innovations. Technical innovations separate on Product and Process types of innovations. In its turn, Non-technological separate on Marketing or Organizational innovations (OECD, 2005) [23]. A more detailed specification is given in Appendix E.

In the literature we can meet a lot of types of innovations. In general, there are two types of innovations: radical and incremental. A radical innovation focuses on products, processes or services with unfrequented performance features, while an incremental innovation focuses on cost or feature improvements of existing processes, products or services (Table 1.1) [10; 3, P. 14; 18; 30].

Table 1.1

Types of Innovations

Incremental innovations	Radical innovations
	
Exploits existing technology	Explores new technology
Low uncertainty	High uncertainty
Focuses on cost or feature improvements of existing processes, products or services	Focuses on products, processes or services with unfrequented performance features

Made by the author on the basis of material created by Baryshevskaya, Inna & Malyshenko, Yurii & Skleva, Konstiantyn.

The theoretical basis of innovation management is an economic theory that studies the laws and patterns of dynamic systems, and the theory of general management of organizations, which forms the principles, functions, forms and methods of management of purposeful activities of people in the process of implementation the goals of the functioning and development of the organization. This type of management should be considered not only as an integral part of the organization's overall management system but also as one of its functional management systems. As a system, Innovative management is a combination of economic, motivational, organizational and legal means, methods and forms of management of innovative activities of the organization in order to optimize the results of its economic activities.

Innovative management acts as a system - is a set of actions related to the substantiation, adoption, implementation of managerial decisions on the creation and implementation of innovations in an organization and aimed at identifying strategic innovation goals, formation of innovation strategy and innovation policy, development of technology of substantiation and adoption of innovative solutions, the choice of methods for influencing the behavior of participants in the innovation

process in order to form mutually beneficial economic relations. The system of innovative management of the organization is shown in Appendix F.

Consequently, the objective of innovation management is to effectively manage the innovative activity of the organization, which contributes to its ability to participate in innovation processes, to create or attract innovations that ensure its progressive, proposal development, economic stability, strong competitive positions, long-term and successful functioning in the market. So innovation is critical to creating new sources of growth. Trade is one of the framework conditions that can strengthen innovation in the business sector [14]. The main problem, in this case, is the properties of the sphere of trade. Due to the fact that it is characterized by sufficient mobility, high susceptibility to innovations of various forms (new commercial and industrial technologies, modern equipment, management systems, etc.), the use of innovations is a necessity, as other market participants will necessarily take advantage of the opportunity to take the privilege of innovation.

According to W. Nordhaus, thanks to wholesale and retail trade, about 45% of the acceleration in the US economic growth is provided. A similar result has been achieved in the Japanese economy, where trade ranked fourth among the sectors in terms of aggregate factor productivity. Consequently, trade has become one of the lands for constant innovation. Here, at the accelerated pace, new sales technologies, logistics, and management schemes are being introduced, information systems are actively being developed, leading companies that spend 2% of their turnover on innovation [40, P. 19].

The globalization of technological development leads to increased competition between companies on a global scale. As a result, trading companies around the world are forced to focus on organizing trade processes for the best technical solutions, adapting them to the conditions and needs of local markets. It is produces powerful incentives for technology trade and deepening international cooperation on the principles of strategic partnership.

Competitive advantages of enterprises in the sphere of services, including in trade, in the present conditions, are created due to the unique knowledge and competencies that the enterprise owns. This actualizes the problem of managing them in the framework of the implementation of innovative approaches to this process and stipulates the need to develop a comprehensive scientific solution for the formation of a knowledge management mechanism at the enterprise of the trade profile. The peculiarity of the innovative development of such an enterprise is the presence of developed processes of acquiring knowledge - both from the experience and abilities of employees and from other sources, including external ones, as well as the use of accumulated intellectual potential in the process of improving the efficiency of the activity.

After 2000, the study of the economic category "innovation" in the domestic economic literature has become an active phase. The content of the innovation process in Ukraine has certain characteristics compared to countries with a developed and stable economy [27, P. 120]. According to the law of Ukraine, innovations are newly created (applied) and (or) improved competitive technologies, products or services, as well as organizational and technical decisions of an industrial, administrative, commercial or other nature that significantly improve the structure and quality of production and (or) social sphere [47].

Trade is one of the sectors with high innovation potential. The Ukrainian trade industry is actively developing advanced trade and marketing technologies, various informational, technical and technological innovation projects that radically change the traditional notion of trading business. The investment attractiveness of retail enterprises in Ukraine is related to the underdevelopment of trade infrastructure, a significant shortage of retail space, the technological backwardness of trading operations in most enterprises, low competition and weak barriers to entry. At the same time, the demands of Ukrainian consumers regarding the wide range of products, the quality of goods and services of retailers, and their

approximation to the standards of similar enterprises of the European Union and the United States are increasing.

At present, the problems of the search for investments, on the basis of which innovative development of trading systems could be carried out, have come to the fore. However, economic science has so far offered development mainly for the branches of material production, so the specificity of trade in this regard is not yet well understood. Trade innovations continue to be analyzed only in the narrow range of services provided, and the issue of organizing trade innovation activities remains beyond the scope of detailed economic analysis. Nowadays, there is an increasing need for research and management of innovative activities in trading enterprises and also searching investing for developing and implementation of innovation.

Thus, the objective of innovation management is to effectively manage the innovative activity of the organization, which contributes to its ability to participate in innovation processes, to create or attract innovations that ensure its progressive, proposal development, economic stability, strong competitive positions, long-term and successful functioning in the market. The innovation is critical to creating new sources of growth in the enterprise. Trade is one of the sectors with high innovation potential. For today the Ukrainian trade industry is actively developing advanced trade and marketing technologies, various informational, technical and technological innovation projects that radically change the traditional notion of trading business. This makes the Ukrainian trade market favorable for investment management in trade. But crisis and problem with investing significantly slow down the process.

1.2 Methods of results evaluation of managing innovations at the enterprise

The old adage states: *You cannot manage what you do not measure*. This is especially true of innovation, whereby it is necessary to ensure focus, intelligibility

and discipline, particularly with regard to the initial, inventive phase of the innovation process. Innovation is a continuous process [36].

Modern global economic development is characterized by interrelated processes of increasing the socio-economic role of the service sector as a driving force for new economic knowledge and turning innovation into a priority factor for social progress. High innovation activity is an important condition for meeting public needs in the present and in the future. On the one hand, the innovative activity of trade enterprises can be expressed through the diffusion and introduction of innovative products. On the other hand, innovative development can be used through modern and unique approaches to managing commercial enterprises, which are the basis of their competitiveness and efficiency.

In the theory of management, the innovative development of enterprises is considered as an effective influence of the relevant management system of the organization on its subordinate managed. The impact of the management system can be assessed by the quality of consistent management decisions that contributed most to the implementation of the planned innovation and the efficient use of the necessary resources for the enterprise.

To evaluate the economic effectiveness of an activity, its criteria are determined. Criteria mean the most general quantitative description of management performance. In the process of expansion, there are different systems of indicators of the effectiveness of innovation and investment, as well as methods of evaluating them. The methods of evaluation of efficiency, proposed in the methodological recommendations of the State Innovation Fund of Ukraine [48], provide for determining the effectiveness of innovations of the national, commercial and budgetary. They should evaluate the performance of innovative projects when comparing them competitively (Fig.1.1).

From figure 1.3 we can see that UNIDO guidelines developed by the UN to evaluate the effectiveness of investment in innovation much more useful for the enterprise than methodological recommendations for the economic evaluation of investment efficiency in innovation developed by the State Innovation Fund of

Ukraine because for one hand, UN guidelines more detailed and for another hand, information for analyzed more simple and available. But overall, both solutions from Figure 1.1 are not good enough. Indeed, in essence, these are not so many methods as indicators. Based on the literature, the indicators for innovation are of two kinds. *Soft* metrics which are usually evaluated qualitatively and basically relate to intangible such as knowledge or vision. *Hard* metrics which can be measured quantitatively and associate with tangibles and statistics such as monetary investment or number of new products [18; 28, P. 344].

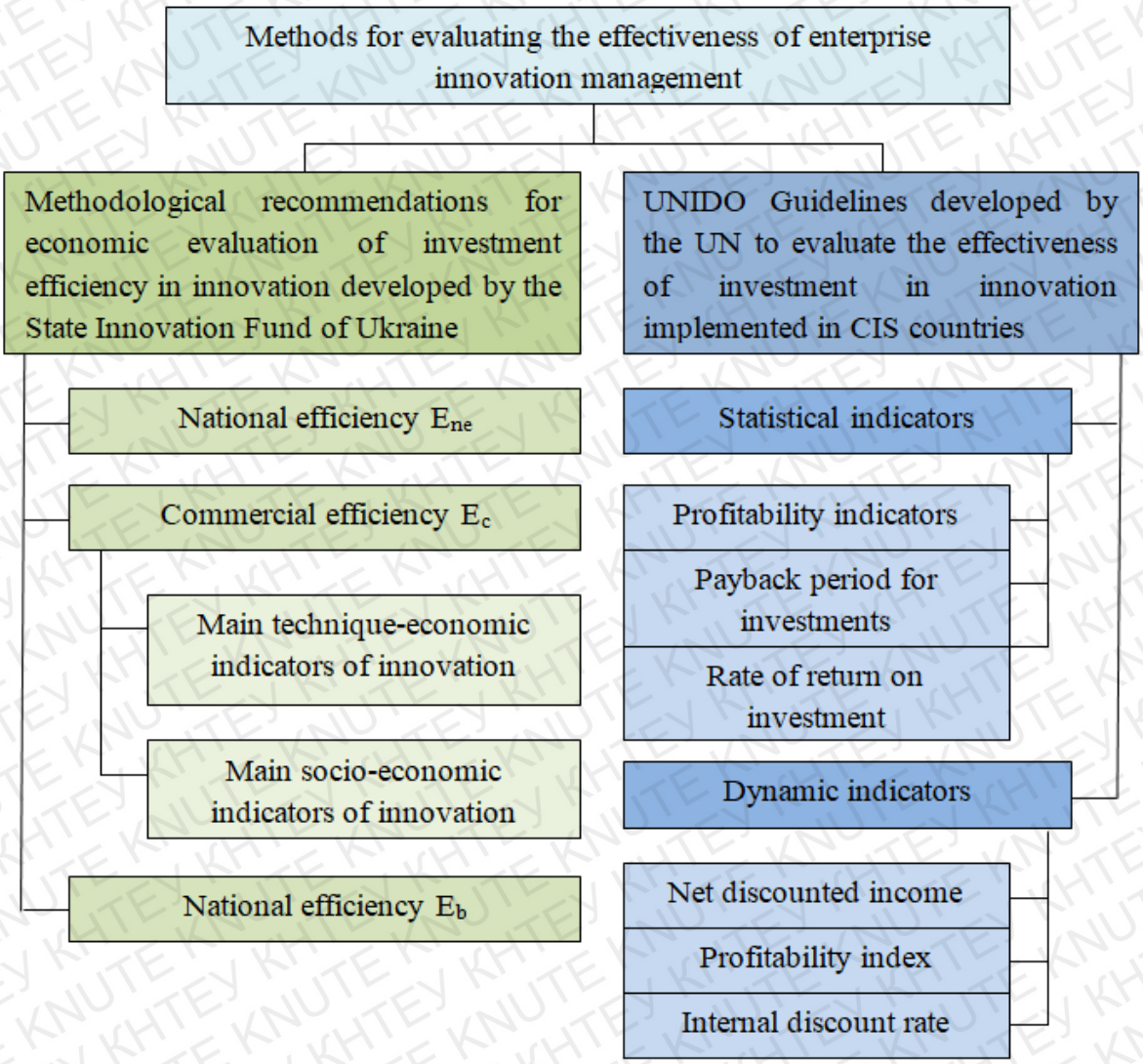

Fig.1.1: Scheme of evaluation of the effectiveness of enterprise innovation management

Made by the author on the basis of material created by Ronald Smith

The methodology for evaluating the level of innovation management processes can be the basis for further evaluating carried out also in other researches. The methodology was created based on the experience, detailed analysis, and synthesis of knowledge in the management of innovation processes, which were obtained from the scientific literature and research [17, P. 420]. In the Appendix G, in the tabular form depicted examples of methods, that scientists use to evaluate the effectiveness of managing innovations at the enterprise.

The research results indicate that entrepreneurial orientation has a positive relationship with firms' new-product innovation outcomes, architectural capabilities (value-creating lever) although positive, do not significantly alter the effect of EO on innovation, specialized capabilities (value appropriating lever) positively moderate the impact of innovation on firm profitability, and the mediating effect of entrepreneurial orientation on profitability through innovation is contingent (moderated-mediation) on the levels of both architectural and specialized capabilities. Together, these complex effects have interesting implications for advancing both theory and managerial practice [15, P. 63] and it proves the need to use simple financial indicators.

If the project concerns the competitive increase of the enterprise through modernization of production or trade system, at the pre-investment stage, it is imperative to evaluate the innovative potential of the company and adopt innovative technologies that could boost efficiency and competitive capacity of business activity [7]. The innovative potential is a multifaceted dynamic system of creation, accumulation and interpretation of scientific, management ideas and scientific and technical, marketing researches into innovative products on the basis of continuous process of enterprise management [37, P. 35].

One of the most useful and popular methods, is a SWOT analysis. A SWOT analysis is a strategic planning tool that helps a business entity identify their strengths and weaknesses, as well as opportunities and threats that may exist in a specific business situation. A SWOT analysis is most commonly used as part of a sales or marketing plan, but it is also a good tool for agile teams to use as a starting

point for projects or sprints. A SWOT analysis is usually depicted as a square divided into four quadrants. Each quadrant represents one element of the SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats) [35, P. 90].

The scale of formation and the rate of development of innovative potential depend on the investment opportunities of economic entities. The investment opportunities of the company can be calculated by the formula (1.1).

$$IF = Net\ financial\ result + Amortization \quad (1.1)$$

If necessary, the necessary capital can be mobilized by withdrawing current assets:

$$IF = A - N + K \quad (1.2)$$

where, A - availability of current assets at the beginning of the planning period; N - planned need for current assets; K - change in accounts payable during the year;

Inaccessibility of financial sources, lack of investment funds in the economy, lack of credibility of creditors reduce the ability to use the potential, even with the obvious effectiveness of innovations for manufacturers.

It is also necessary to calculate the break-even point to evaluate the investment potential of the enterprise (1.3).

$$V = \frac{FC}{1-m} \quad (1.3)$$

where, FC - Contingent fixed costs of the enterprise; m - share of variable costs in the price of products;

At the same time, innovations create conditions for broad investment attraction, since the accumulated experience in the creation and development of innovations becomes a source for its improvement, and in this connection, it is necessary to set clear tasks for managing the innovation potential of the enterprise. Intellectual capital should also be calculated for the overall assessment of the company's innovation potential. Scientists recommend recommending the calculation of intellectual capital by the method of intellectual value added (VAIC) developed by Ante Poulyk. Example of calculation in the Appendix H.

Also one of the simplest methods that are widely used is the method of evaluating innovation management through a list of criteria. Its essence is as

follows: the correspondence of the results from the introduction of innovative measures with established criteria is considered and the project is evaluated on each criterion [22]. The method reveals all the advantages and disadvantages of the project and ensures that none of the criteria to be considered is forgotten. The criteria may differ depending on the specific features of the industry or organization, their strategic orientation.

If necessary, formalize the results of the project analysis according to the list of criteria, a balanced scorecard method of project evaluation is used [29, P. 161]. For this purpose, the most important factors that determine the results of the project (form a list of criteria) are outlined. The criteria are weighted according to their relative importance. The relative importance of the factors - *very high, high*, etc. - is expressed quantitatively. The overall estimate for this method is obtained by multiplying the weights of the criteria by the relative values of the factors. The obtained estimates of the factors cannot be considered absolutely reliable. This is due to the subjectivity of approaches in determining the weighting factors of each factor and assigning numerical values to each of the criteria.

Along with the information age, the dominance of information technology and rapid technological change in almost every sector have created completely new businesses, have destroyed those who cannot adapt to this change and have made a constant need for innovation. Today, stakeholder expectations are changing rapidly and the areas of responsibility of the company are expanding day by day. The companies faced with a complex and uncertain future need to find a new direction to maintain their existence, compete and sustain their achievements. The life span of products, processes and technologies is rapidly shortening and the demands revealed by the time pressure push companies to find new creative ways and methods while making innovation. In this regard, they need to be flexible enough to respond to any change that may arise in the environment and develop a strategic view of innovation in order to sustain their existence.

PART 2
RESEARCH OF THE INNOVATION MANAGEMENT PROCESS AND FACTORS WHICH INFLUENCE ON IT AT «MAYSTERNYA INZHENERNYKH RISHEN′» LLC

2.1 Analysis of the results and factors of influence on the innovation management process at the enterprise

In the conditions of the modern development of market relations and increasing competition, innovative development is necessary for the successful financial and economic activity of enterprises, which involves the use of technologies and the creation of fundamentally new products. Innovation and innovation activity is a necessary part of the process of ensuring a successful, long-lasting and sustainable operation of the enterprise, one of the fundamental components of an effective strategy and an important tool for ensuring competitive advantage [15, P.15].

Ensuring objectivity in assessing the state of enterprise and trends of innovation activity is one of the most important tasks because they influence the important management decisions based on the information they receive. In order to evaluate the effectiveness of innovation management, process, and factors of influence on the process at «Maysternya Inzhenernykh Rishen′» LLC, it is necessary to consider the enterprise structure, functionality activity, evaluate the financial condition at the enterprise for the last three years, conduct a SWOT analysis to assess the influence of factors and evaluate innovation activity.

«Maysternya Inzhenernaya rishen′» LLC was founded in 2008 and has successful activity on the Ukrainian market. The company works in the engineering sphere namely with the indoor climate system. «Maysternya inzhenernaya rishen′» LLC was founded in 2008 and has successful activity on the Ukrainian market. The company works in the engineering sphere namely with the

indoor climate system. Also, began from 2016 company has been started working at the woodworking and green energy industries (Fig.2.1).

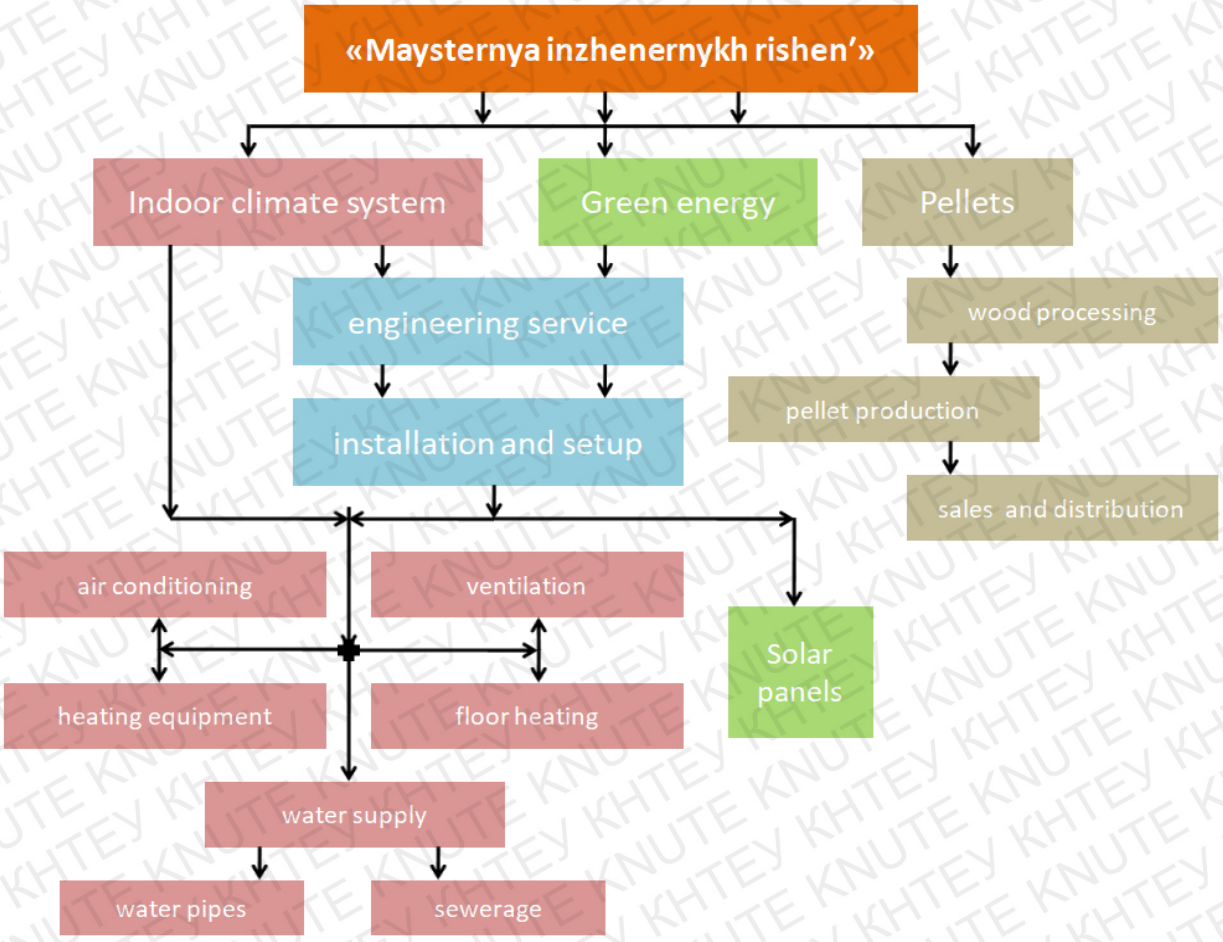

Fig.2.1: «Maysternya inzhenernaya rishen'» LLC, model stock plan
Created by the author according to the enterprise data

The organizational structure of «Maysternya inzhenernykh rishen'» LLC (Fig.2.2) has three general departments: executive staff, production department, accounting. Generally, each department represents an independent branch that is not connected with others, and controlled only by the director. The executive staff branch includes three engineers which works together and creates projects for air conditioning, ventilation, heating equipment, floor heating, water pipes and sewerage systems. They dictate the task for the three installation links. Also, this department works with green energy, specifically with solar panels. Engineer and link which doing it works separately from others employees. The only thing that unites them is the supplier manager. The production department is working, also, separately from others and concentrate on manufacturing and distributions of

pellets. The last one department is the accounting. The organizational structure is built in such a way, that it is actually a factor of negatively affects on the management of innovation, at the enterprise. All company processes are closed by a director, in addition, there is no separate specialized department or specialist who would be involved in managing innovative processes at the enterprise. As the result, innovative processes at the enterprise passing slowly.

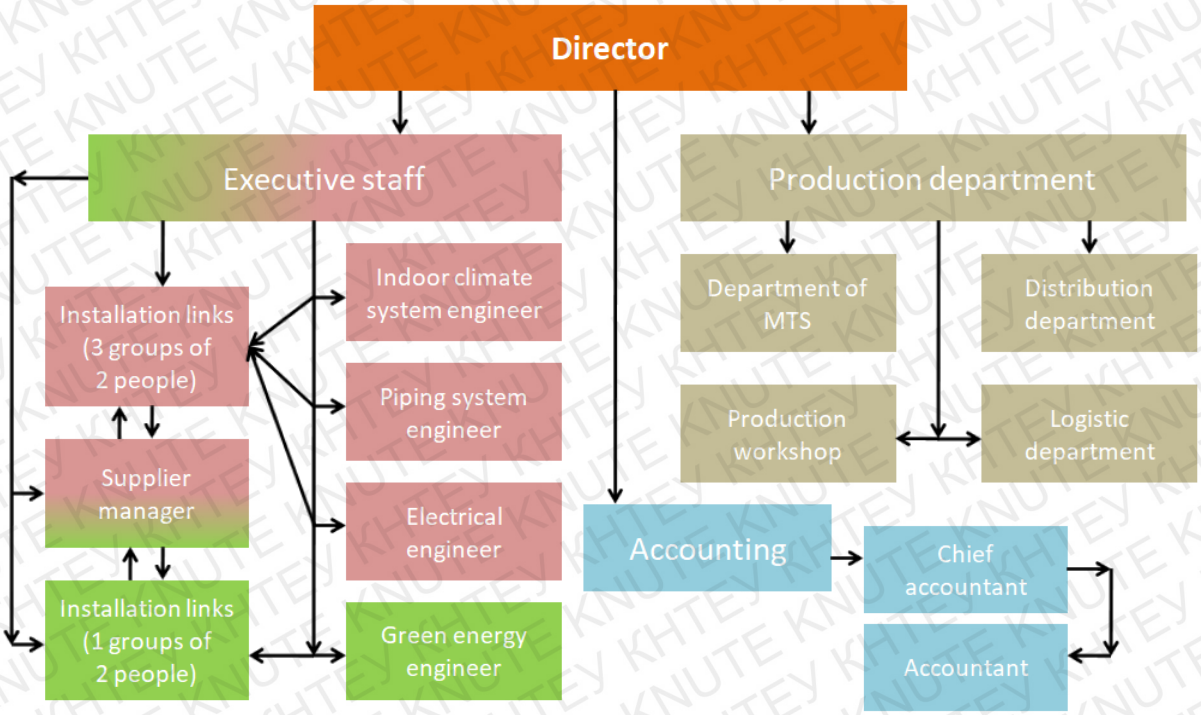

Fig.2.2: «Maysternya inzhenernykh rishen′» LLC, the overall management structure

Created by the author according to the enterprise data

To assess the results of innovative management at the enterprise, it is necessary to consider the financial condition of the enterprise, including the dynamics indicators. Namely, to calculate the dynamics of the main financial results of the activity (Table 2.1), the dynamics of financial sustainability indicators (Table 2.2). This is necessary because any innovative changes require investment. It is possible to use external financing, for example, at the expense of financial-credit organizations, or internal. These include part of the profit from the sale (of commercial products, completed engineering works, construction, and installation work, financial operations, etc.) or revenues (depreciation deductions,

proceeds from the sale of a disposed of the property, stable liabilities, earmarked receipts, other income).

Table 2.1

Dynamics of the main financial results of the activity at «Maysternya inzhenernykh rishen′» LLC for 2016-2018

Indicators	Years:			Absolute deviations, +/-		Growth rate, %	
	2016	2017	2018	2017	2018	2017	2018
1. Net income from sales of products (goods, works, services)	29 119 570	32 879 450	38 698 650	3 759 880	5 819 200	12,91	17,70
2. Cost of goods sold (goods, works, services)	21 147 980	22 587 910	28 464 540	-1 439 930	-5 876 630	6,81	26,02
3. Gross profit	7 971 590	10 291 540	10 234 110	2 319 950	-57 430	29,10	-0,56
4. Other operating income	269 250	354 250	568 250	85 000	214 000	31,57	60,41
5. Administrative expenses	730 930	710 290	8 248 470	20 640	-7 538 180	-2,82	1061,28
6. Selling expenses	5 400 510	6 861 290	96 170	-1 460 780	6 765 120	27,05	-98,60
7. Other operating expenses	1 021 340	241 700	0	779 640	241 700	-76,34	-100,00
8. The amount of expenses from operating activities	7 152 780	7 813 280	8 344 640	-660 500	-531 360	9,23	6,80
9. Other income	43 190	8 440	178 460	-34 750	170 020	-80,46	2014,45
10. The amount of profit from operating activities	1 088 060	2 832 510	1 699 990	1 744 450	-1 132 520	160,33	-39,98

Ending of the table. 2.1

11. Financial result before tax	404 100	2 825 280	1 706 160	2 421 180	-1 119 120	599,15	-39,61
12. Amount of net financial result (profit / loss)	255 290	2 314 560	1 395 980	2 059 270	-918 580	806,64	-39,69

Source: Created by enterprise data

After analyzing some of the financial indicators of the company we can conclude, the net income for the last three years has a stable increase. But the amount of net financial result is unstable, in 2017 it has a big increase and in 2018 has fallen. It is happened on one hand because of increasing the amount of expenses from operating activities and the prime cost. And for another hand because of the decrease in the amount of profit from operating activities. It is also worth noting that the amount of other income is insignificant, and weakly affects the final financial result. One of the main tasks of the analysis of financial condition is the study of indicators characterizing its financial stability. It is characterized by an excess of income over expenses, maneuvering with free cash and their effective use in the process of current (operational) activity.

Table 2.2

Dynamics of financial sustainability indicators of «Maysternya inzhenernykh rishen′» LLC for 2016-2018

Indicators	Years:			Absolute deviations, +/-	
	2016	2017	2018	2017	2018
1. The coefficient of financial autonomy	0,71	0,68	0,57	-0,03	-0,12
2. Ratio of financial debt	0,60	0,56	0,69	-0,04	0,13
3. The coefficient of financial dependence	1,41	1,47	1,77	0,06	0,30

Ending of the table. 2.1

4. Coefficient of financial stability	0,41	0,44	0,31	0,03	-0,13
5. Ratio of debt to equity (financial risk indicator)	0,004	1,18	1,40	1,18	0,22

Source: Created by Enterprise data

The optimal situation is when the coefficient of financial autonomy is at the level of 50-70%. In 2016-2018, «Maysternya inzhenernykh rishen′» LLC reduced its autonomy ratio but is still at its normal level. The decrease in the financial dependency ratio causes a decrease in the share of borrowed funds in financing the enterprise and on the contrary. As a result we can see the growth of financial risk indicator. Indicators the ratio of financial debt and the coefficient of financial dependence are in tolerance. Coefficient of financial stability falls, it is natural given the dynamics of the remaining indicators. In general, the company can be assessed as financially stable, which means that the company is able to dissipate mainly at its own expense while maintaining sufficient solvency and creditworthiness with a minimum level of entrepreneurial risk. But if the negative dynamics of indicators remain, the enterprise may prove financially unstable. Further assessment of the results and factors of influence on the innovation management process at the enterprise will be performed by using SWOT analysis.

As we can see from Figure 2.3, one of the strengths of the firm is the employee experience. This is important because today it is not uncommon to meet companies that claim to have been working in the Ukrainian market for more than 10, 15, 20 or more years, but only a small number of them have unchanged staff and as a result, are ready to solve complex non-standard projects. This is also reflected in the following two advantages. A large number of completed facilities and satisfied customers, it gives the company good advertising by "word of mouth". The main channel for getting new clients, on today. A well-trained staff can also quickly learn new technologies or teach others. A well-trained staff can also quickly learn new technologies or teach others. The same characteristic

specify for small enterprises and due to differentiation «Maysternya inzhenernykh rishen′» LLC, company especially suitable for this. Also through a long productive working time firm was built a strong relationship with a different supplier what gives space for maneuver either.

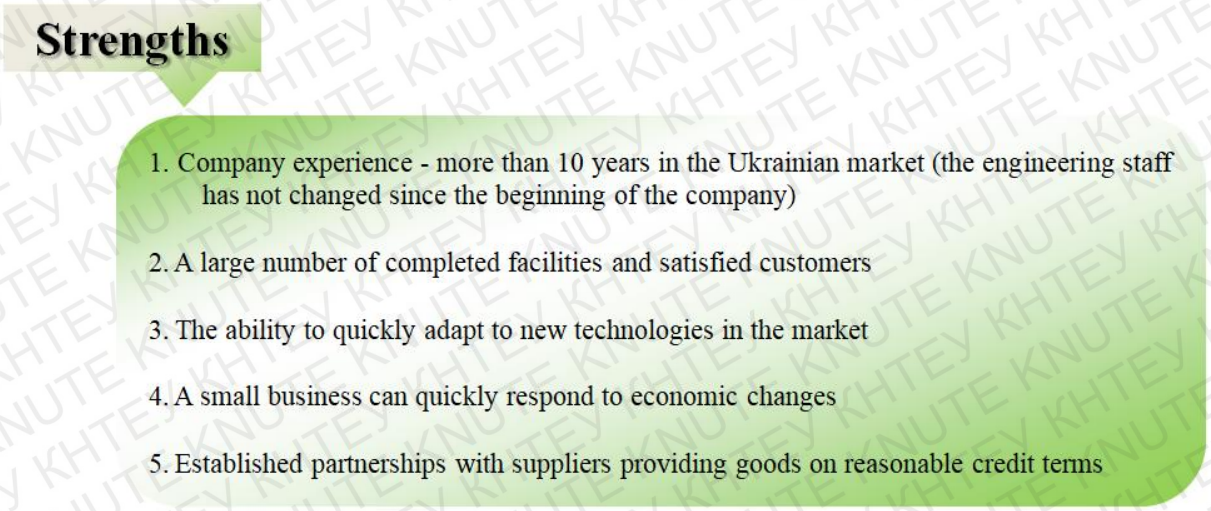

Fig.2.3: «Maysternya inzhenernykh rishen′» LLC, SWOT analysis

Source: Created by the author using MS Vision according to the enterprise

On Figure 2.4 we have the ability to see companies weaknesses. In general all of these characteristics typical for experienced Ukrainian enterprise. This means that if the company corrects all of these shortcomings or at least part of them, it will automatically become one of the best on the market.

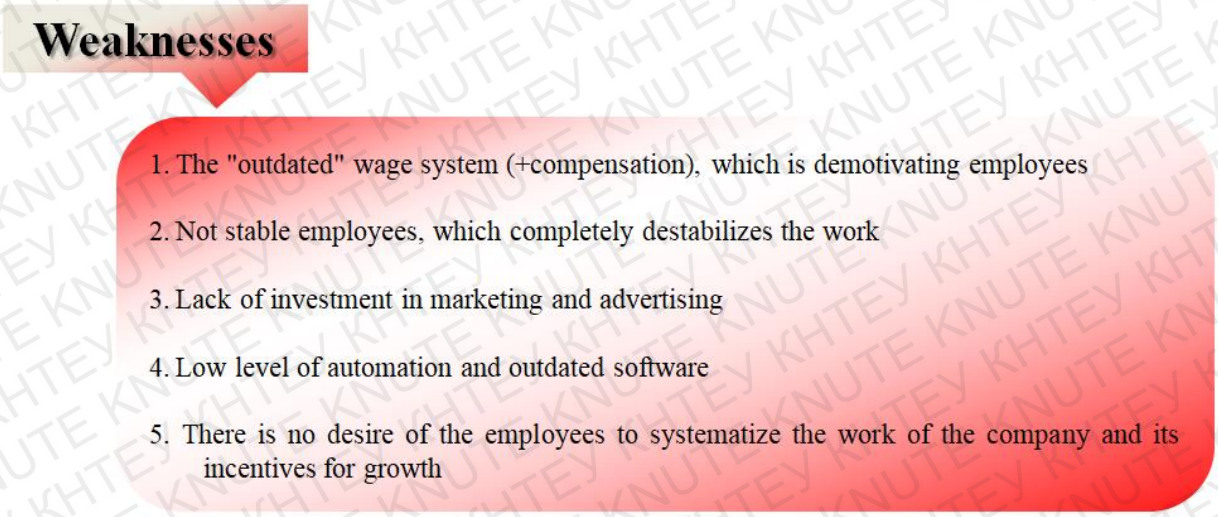

Figure 2.4: «Maysternya inzhenernykh rishen′» LLC, SWOT analysis

Source: Created by the author using MS Vision according to the enterprise

Considering the opportunities (Fig. 2.5) of the enterprise, it can be noted that over the past year the number of orders has increased and most likely this trend will continue in the near future. Innovative and technological solutions continue to appear on the market, which helps customers get a cheaper and more comfortable product. But in order to take advantage of such solutions, engineers and installers must have good baggage of knowledge and skills. The company «Maysternya inzhenernaya rishen′» LLC not doing the complex building, the firm works only with indoor climate systems. And exist other companies which doing other parts of constructions, and they collaborate with our company for the opportunity to finish the project as a whole. Partnership with such companies gives more clients. Also because of the good engineering skills of the staff, the firm has ability to search for new markets. For example, the creation of electronic networks and ventilation systems for painting car repair stations.

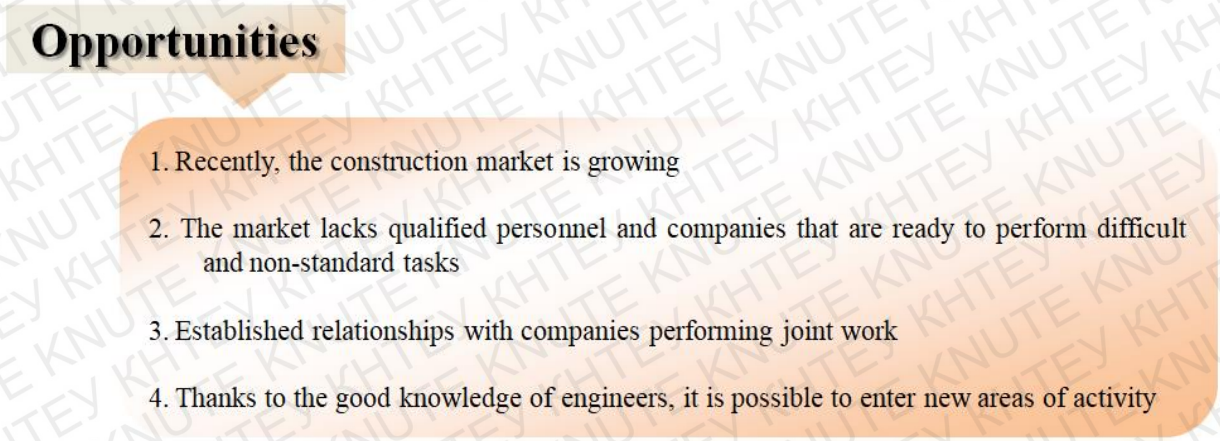

Figure 2.5: «Maysternya inzhenernykh rishen′» LLC, SWOT analysis

Source: Created by the author using MS Vision according to the enterprise

The unstable economic situation in the country, constant unpredictable changes in laws, payments, etc. The licensing system in the country also leaves much to be desired. But all these are external factors (Fig. 2.6) which the enterprise cannot essentially influence. But electronic bidding is a threat that can be turned into an advantage. Maybe defining electronic trading as a threat may seem strange, but the fact is that electronic bidding contributes to some very

serious negative trends that destroy the market. For example dumping or unfair competition. The company «Maysternya inzhenernaya rishen′» LLC, has repeatedly participated in electronic bidding and several times fell victim to unfair competition.

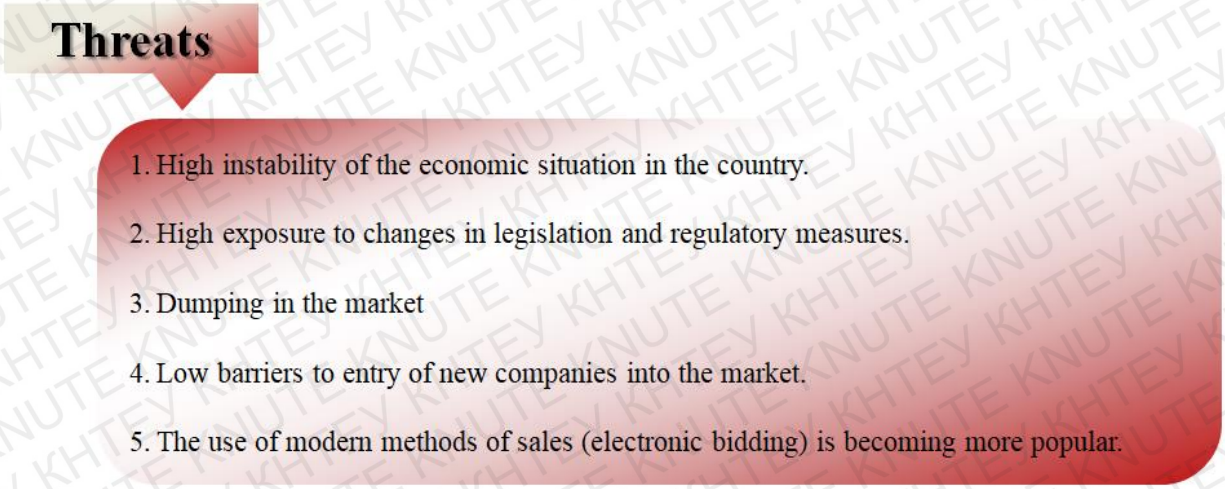

Figure 2.6: «Maysternya inzhenernykh rishen′» LLC, SWOT analysis

Source: Created by the author using MS Vision according to the enterprise

The effect of innovations can be characterized by an increase in profit obtained through cost savings, and an increase in revenue from the increase in sales of innovative products or services due to its new quality (Table 2.4).

Table 2.3

Analysis of the effectiveness of innovation activity at «Maysternya inzhenernykh rishen′» LLC for 2017-2018

Indicators	2017	2018	Absolute deviation,	Growth rate, %
1. Average number of employees	20	22	2	10,00%
2. Number of workers involved in IA	1	1	0	0,00%
3. Revenue from the sale of products (provision of services)	32879450	38698650	5819200	17,70%

Ending of the table. 2.3

4. Revenue from the sale of new products (provision of services)	80710	145360	64650	80,10%
5. Production volume	666800	1213500	546700	81,99%
7. Operating expenses	7813280	8344640	531360	6,80%
8. Costs for innovation	44600	98400	53800	120,63%
9. The size of the salary	43130	43540	410	0,95%
11. The total number of innovation processes	2	4	2	100,00%
12. The total number of technological processes	86	90	4	4,65%
13. Net profit	2314560	1395980	-918580	-39,69%
14. Profit from innovation processes	36110	46960	10850	30,05%

Source: Created by Enterprise data

1) IA Profitability (2017) = 36110 / 80710 ** 100 = 44,74%;*
IA Profitability (2018) = 46960 / 145360 ** 100 = 32.30%;*

2) Cost per IA (2017) = 44600 / 7813280 *= 0,57%;*
Cost per IA (2018) = 98400 / 8344640 *= 1,17%;*

3) Innovative profit per one IP (2017) = 36110 / 2 = 18 thousand UAH;
Innovative profit per one IP (2018) = 46960 / 4 = 11 thousand UAH;

4) $K_{\text{the development of a new service}}$ *(2017) = 80710 /* 32879450 *= 0.00245;*
$K_{\text{the development of new service}}$*(2018) = 145360 /* 38698650 *= 0.0037;*

Analyzing the efficiency of the enterprise's innovation activity, we can see significant differences that occurred in 2018 compared to 2017. Comparing the data of 2017, we will note that the profitability of innovation activity in 2018 decreased, but the share of income increased. The share in the structure of the development of new services for sales and performance of special works has increased, but the cost per IP increased.

Based on the analysis of the financial state of the enterprise, the factors influencing the innovation processes at the enterprise and the innovation processes as a whole, we can conclude that the company «Maysternya inzhenernykh rishen′» LLC has financial stability and sufficient opportunities to improve the process of innovation management, but does not pay enough attention on it. In general the innovative processes at the enterprise do not affect the overall performance of the company.

2.2 Diagnostics of innovation potential at the enterprise

A complex characteristic of an enterprise's ability to innovate is its innovation potential. This concept characterizes the ability of an enterprise to create innovation. The purpose of evaluating the innovative potential of the enterprise is the ability to determine the current level of its development, identify sources of formation of deviations in the level of development, the need for managerial intervention, the choice of directions of innovative development and the formation of innovative strategy of the enterprise in the system of strategic alternatives to its development in general, aimed at increasing sustainability and flexibility. regarding changes in the environment. It should be noted that in the course of assessing the innovative potential of the company, there are several problems. The main problem is the lack of necessary analytical information. The existence of this problem is caused by the lack of a functioning mechanism for statistical accounting of innovation activity of enterprises in different industries.

Using an integrated approach, we will conduct the first stage of innovation potential assessment (Table 2.8) of «Maysternya inzhenernaya rishen′» LLC, which involves analyzing the structure of innovation potential, studying the state of each element based on the method of expert evaluation. To evaluate the use of the potential of each of the elements of the innovative potential, we use a scale according to which:

0 - element potential is not used at all;

0 - 4.0 points - low level of use of the element's potential;

4.1 - 7.5 points - average use of element potential;

7.6 - 10.0 points - a high level of element potential utilization.

Table 2.4

The system of indicators of evaluation of innovative potential of «Maysternya inzhenernykh rishen′» LLC for 2017-2018

Group	Indicators	Conditional marking	Value
1. Indicators of personnel potential (PP)	Socio-psychological climate	P1	4,8
	The level of motivation for creative innovation activity	P2	2,5
	The level of motivation for creative innovation activity	P3	2,1
2. Indicators of production and technical potential (PTP)	The level of production capacity utilization	PT1	8,0
	Level of attraction of intangible assets	PT2	8,9
	Quality of technological equipment	PT3	7,3
3. Indicators of financial potential (FP)	The effectiveness of the organizational enterprises structure	F1	8,2
	Return on investment	F2	5,7
	Ability to raise additional capital	F3	8,9
4. Indicators of organizational and managerial component	The effectiveness of the organizational structure enterprises	OM1	6,5
	Level of organizational culture	OM2	2,0
	Effectiveness of communication performance	OM3	2,0
	Strategic planning system	OM4	2,8
	Competitors and price research	M2	8,0

Ending of the table. 2.4

5. Indicators of the promotion component	Promotion environment research	M1	3,1
	Market price research	M2	8,0
	The pace of market share expansion	M3	2,9
	Use of promotion channels	M4	3,0

Source: Created by Enterprise data

We define quantitative values of individual components of innovation potential as the sum of values of relevant indicators and display the result in the diagram (Fig.2.7):

1. Assessment of the personnel component:

$$PP =(P1+ P2+ P3)/3= (4.8+2.5+2.1)/3=3.1$$

2. Assessment of production and technical component:

$$PTP =(PT\ 1+ PT\ 2+ PT\ 3)/3= (8.0+8.9+7.3)/3=8.0$$

3. Assessment of the financial component:

$$FP =(F1+ F2+ F3)/3= (8.2+5.7+8.9)/3=7.8$$

4. Evaluation of organizational and managerial component:

$$OMC =(OM1+ OM2+ OM3+ OM4)/4= (6.5+2.0+2.0+2.8)/4=3.3$$

4. Evaluation of the marketing component:

$$MC =(M1+ M2+ M3+ M4)/4= (3.1+8.0+2.9+3.0)/4=4.3$$

To comprehensively evaluate the innovation potential of an enterprise, we used an integral indicator calculated by the formula as the arithmetic means of the sum of all components of the innovation potential:

$$IP = (PP + PTP + FP + OMC + MC)/5= (3.1+8.0+7.8+3.3+4.3)/5= 5.3$$

Therefore, the level of utilization of innovative potential by the method of expert evaluation at the «Maysternya inzhenernykh rishen′» LLC, is middling. The most effective implementation of the enterprise is the production, technical and financial component of innovation potential, and the least role is given to the personnel, organizational, management and marketing component, which could most fully serve to increase the competitiveness and sustainable development of the enterprise.

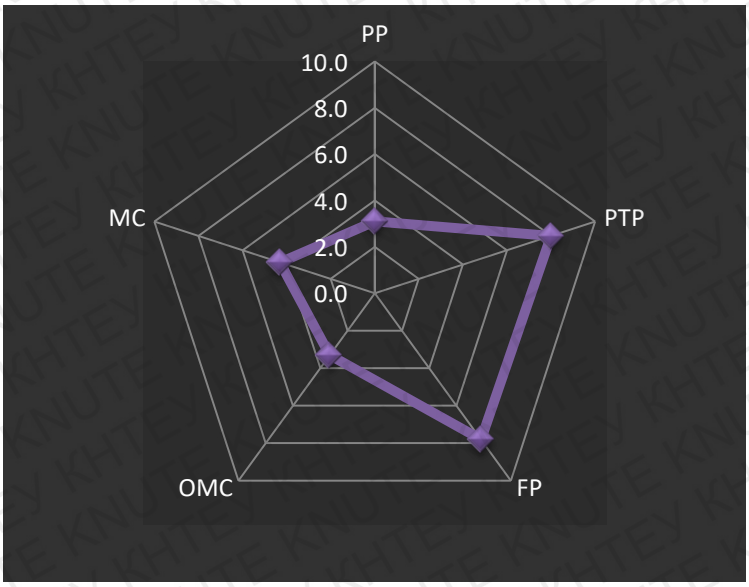

Fig.2.7: The result of the peer review of the state of innovation potential at «Maysternya inzhenernykh rishen′» LLC

Source: Created by the author according to the enterprise data

As noted, profit and depreciation are important components of calculating of the innovation potential at the enterprise. In order to compare this indicator with competing companies on the basis of a linear transformation, we propose to analyze our own sources of financing for innovation.

$$IF = 1395980 + 875030 = \ 227\ 1010\ UAH$$

According to the calculations, the investment fund of the enterprise is UAH 227 101. This amount can be increased if necessary thanks to assets and changes in accounts payable. It is possible to mobilize internal assets to increase the investment fund of the enterprise.

$$MF = 16568590 - 12313450 + 105120 = \ 436\ 0260\ UAH$$

Thus, the investment fund can be increased to UAH 6631270. But it should be remembered that the financial mechanism of mobilization is that part of the company's current assets is withdrawn from the main activity and spent on project financing. Withdrawal of current assets can make it difficult or even impossible for the company to operate. Therefore, this method of financing is not secure and

should only be used in extreme cases. Also for the safe use of funds, it will be relevant to calculate the breakeven point in value terms.

$$V = \frac{8\,248\,470}{1 - 0{,}77} = 10\,630\,667\ UAH$$

One of the key components of an enterprise's innovation potential is staffing. His involvement and willingness to participate in the innovative development of the enterprise. For this purpose, it is necessary to calculate the indicator of the innovative activity of the personnel. Since we consider only a branch of a company that works with the internal climate system (Fig.2.2), we only take into account the number of employees involved in this activity. Then:

$$Iap = 1/22 * 100 = 4{,}5\%$$

The result is low and for the innovative growth of the company, this situation is not acceptable, because, for the development of the company, employees interest is necessary. So we need to evaluate whether the staff is ready to take part in the innovative management and development of the company. For this, it is necessary to assess the impact of intellectual capital on the company's activity using the method of calculating the intellectual value-added coefficient. This indicator shows how efficiently human capital, organizational capital is used and how effectively used capital is used or the contribution of the involved capital to value-added.

And so, the first indicator that you need to calculate HCE - shows how efficiently human capital is used, in other words, the contribution of human capital to value-added. Equal to the ratio of value-added and labor costs. Value-added can be calculated as:

$$VA = 886410 + 0 + 310180 + 4637170 + 875030 = 6708790$$

Then the calculation of the effectiveness of human capital will look like this:

$$HCE = 6708790/3173990 = 2{,}11$$

Next, it's necessary to calculate the effectiveness of structural capital:

$$SCE = (6708790 - 3173990)/6708790 = 0{,}53$$

The third indicator that is necessary for calculating the intellectual coefficient of value added is the efficiency of capital employed:

$$CEE = 6708790/8523200 = 0{,}79$$

So, the intellectual value-added is equal to:

$$VAICE = 2{,}11 + 0{,}51 + 0{,}79 = 3{,}43$$

The VAIC value is estimated in the range from 2 to 15, according to the calculation, we should talk about a low level of human capital efficiency. The result is logical, taking into account past calculations, and means that the innovative potential of the company suffers greatly because of this. So the company needs to increase the efficiency of use of human capital. To do this, it is necessary to motivate staff, one of the main tools is financial motivation. We calculated the funds for financial motivation and in general for financing changes in the management of the company earlier. But in the case of workers, it will also be appropriate to assess the percentage of labor costs to total costs (Fig.2.8).

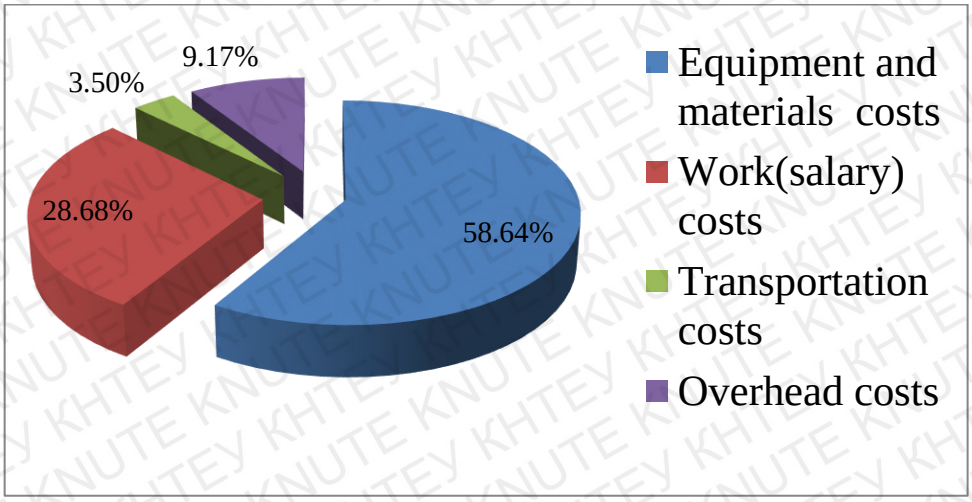

Fig.2.8: Cost sharing «Maysternya inzhenernykh rishen'» LLC

Source: Created by the author according to the enterprise data

As we can see labor costs account makeup 28,68% of all losses. This means that with an increase in salaries, the general changes in expenses will not be so significant. This means that there are more opportunities for financial motivation of employees.

In paragraph 2.1, the factors influencing the process of innovation management in the enterprise were evaluated. But no attention was paid to the analysis of the industry in which the enterprise operates.

According to Goskomstat, the volume of construction in Ukraine in 2018 amounted to 4.3 billion Euros. For comparison, in the Czech Republic, a similar figure amounted to 20 billion Euros, in Poland - 50 billion Euros (almost 12 times more than Ukraine), in Turkey - 113 billion Euros, in Germany - 351 billion euros. On the one hand, this promises further growth prospects for the Ukrainian market, and it is also possible to consider the option of the company entering the export market. Company «Maysternya inzhenernykh rishen′» LLC has already made attempts to enter the export market (in particular, the Estonian market), but unfortunately, this did not give the expected results.

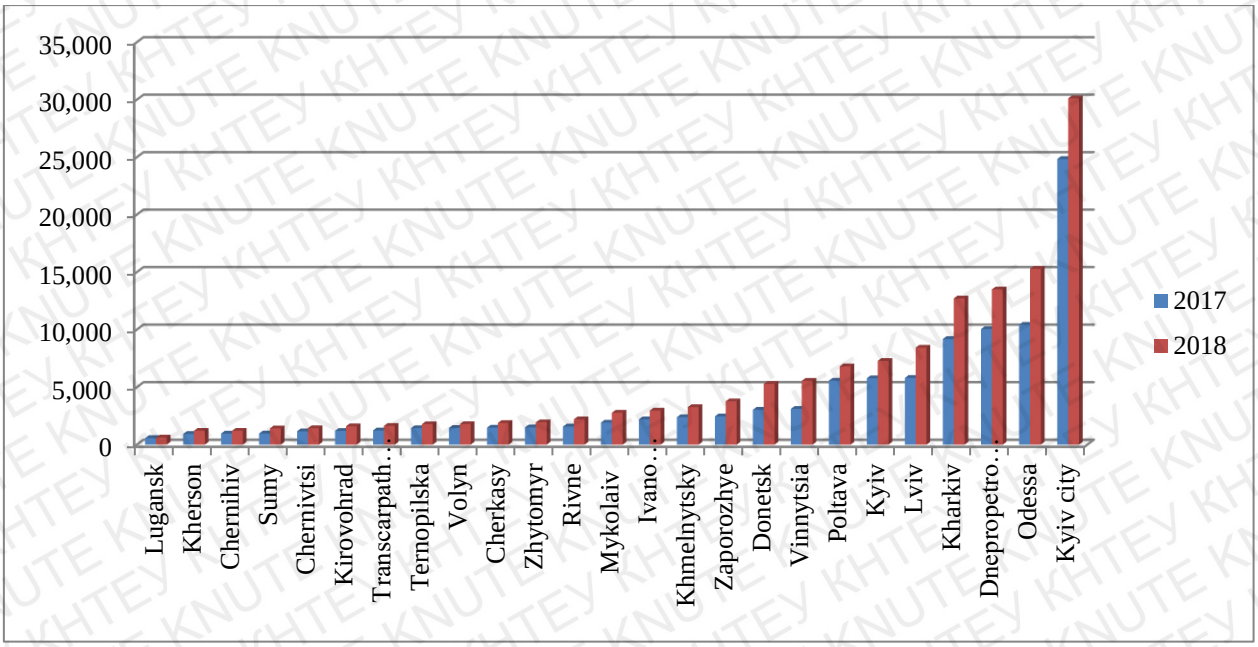

Fig.2.9: Compare by construction volumes in Ukrainian regions and Kyiv city in 2017 and 2018.

Made by the author on the basis of state statistical data

In general, the last year showed quite stable and interesting results. In January-November 2018. enterprises of the country completed construction works worth 115.0 billion UAH. January-November 2018 Construction Products Index compared to January-November 2017 was 106.3%. Construction of buildings

increased by 1.3% (residential - by 0.9%, non-residential - by 1.8%), engineering - by 11.3%. Overall increase by 4.4%.

New construction, reconstruction, and technical re-equipment accounted for 73.8% of the total amount of construction work performed, capital and current repairs - 17.4% and 8.8% respectively. Enterprises from 7 regions of the country (Kyiv, Odessa, Dnipropetrovsk, Kharkiv, Lviv and Poltava regions) completed 70.1% of the total construction volume. Overall, all indicators show the growth of the industry as a whole, and in Kyiv city, the increase in 2018 was more than 21% compared to 2017. Figure 2.9 shows compare by construction volumes in Ukrainian regions and Kyiv city in 2017 and 2018. The analysis of statistical information for 2018-2019 indicates that construction in Ukraine is in fact in a stagnant situation. This is confirmed by the statistics on the production of basic building materials.

Summing up diagnostics of innovation potential at the enterprise «Maysternya inzhenernykh rishen′», can be argued: innovation potential of the company according to the method of expert evaluation is middle. Group indicators of production and technical potential has the best mark. Group indicators of financial potential also is high enough. But indicators of personnel potential, organizational and managerial component and Indicators of the promotion component mostly low. This negatively affects the overall assessment of the enterprise, and also indicates equipped weaknesses requiring improvement. Also during the diagnostics of innovative potential at the enterprise, the following were calculated: the investment fund of the enterprise, the company's ability to raise funds, the breakeven point, and also special attention was paid to the assessment of intellectual capital. For this, the method of calculating the intellectual value-added coefficient was used. According to the calculation, we should talk about a low level of human capital efficiency. The results of the evaluation of the state of the elements of innovation potential will be taken as the basis for the development of a set of measures aimed at increasing the innovation activity of the enterprise.

PART 3.
IMPROVING THE MANAGING INNOVATIONS PROCESS AT «MAYSTERNYA INZHENERNYKH RISHEN′» LLC

3.1 Tools and measures to improve innovation management at the enterprise

An important task of innovation management is to involve all employees of the organization in the innovation activity. Such a principle is followed, for example, by the Japanese School of Management, which aims to improve everyone's work. This has facilitated Japan's leadership in the production of high quality goods and services. In addition, based on the calculations made in Paragraph 2.2, for the company «Maysternya Inzhenernykh Rishen′» LLC it is necessary. However, a simple call to employees to take the initiative to not achieve the goal. Staff should be formed capable of innovative search and creation of new, and provided conditions for the employee to feel the benefits of their own initiative.

Most practitioners, in the process of gaining hands-on experience, learn certain methods of doing the work that become established over time. And to create a new one it is necessary to move away from the stereotype, to look at things in a different way, to which many people alone are incapable or not ready, although they have sufficient qualification. In order to engage them in innovation, it is recommended to use group (team) work. The most common forms of group work that should be used for the «Maysternya Inzhenernykh Rishen′» LLC, the performance of which is stimulated through participation in the end result, are the *Japanese quality circles* (quality group) and the system of *inter-partnering*.

The quality team is typically formed of 6-12 the most qualified and initiative executive staff (workers, engineers, technologists). For the company it is recommended to form a group of 5 people, two workers and an engineer at the head. There are three teams to make up and constantly train them as a quality team, to create competition between them and as a result of increased productivity. The

work of the mug should take place in the form of meetings 1-2 times a month, mainly in the afternoons. The group leader leads the meeting, sometimes a consultation is called. The work of the groups should be clearly oriented to the solution of specific problems according to the plan approved by the administration, for which the participants of the meetings receive in advance the necessary information. Fig.3.1 shows recommended groups activity scheme.

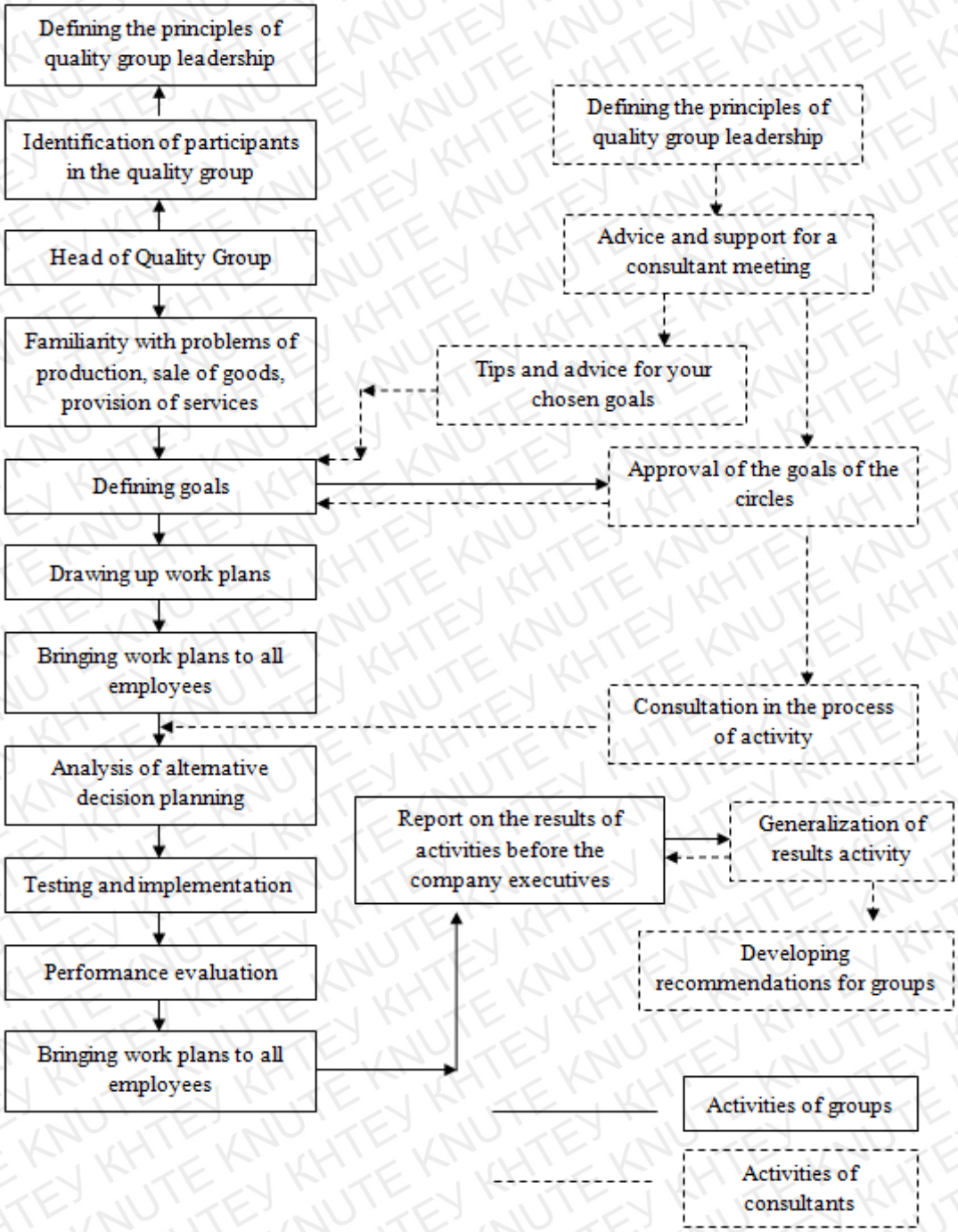

Fig.3.1: The scheme of activity recommended for quality groups

Made by the author

The most important condition for a productive work of the group is to create an atmosphere of trust. Employees should be aware that their initiative to improve the company will not lead to worsening conditions or remuneration, that each proposal will be welcomed and discussed in detail with the participation of other workers, masters of engineers, who will improve the process (or technology) with them.

The work of quality groups increases the firm's susceptibility to innovation as employees prepare for innovative changes throughout their practice. A prerequisite that ensures the effectiveness of quality circles is a balanced system of motivation. For example, in terms of bonuses, a point can be made according to which 40% of the savings obtained from the introduction of a new method of work performance is distributed among the workers who created the innovation, 30% who will apply the innovation in their activities (the remaining 30% goes to the payroll). It is important that the premium is paid not only to the idea developers, but also to those employees who use the idea in their work to get them interested in learning new ways of working. In doing so, the size of the prize should be differentiated: the authors of the idea are paid a greater amount than the users.

Employees can also be interested in participating in innovation through inter-partnering. As with quality groups, this method does not require a significant initial investment. It is worth noting that the company «Maysternya Inzhenernykh Rishen′» LLC already used inter-partnering in the past and at this time was at the stage of most active growth.

Inter-partnering is widespread in western management. Its essence is to give an employee who has a promising idea the opportunity to use the resources of the enterprise for its implementation, thereby realizing their entrepreneurial abilities. This approach will create conditions for proposing innovative ideas and allocate resources for their implementation. As a result, traditional entrepreneurship will be transformed into entrepreneurial, based on the activation and use of the creative potential of employees to implement various innovations aimed at entrepreneurship development. Underestimation of such desires in modern workers who have high

educational qualification level to create a socially useful product or service, but fear the risk associated with creating an independent business, leads to a decrease in interest in work and its productivity, which leads to the search for other opportunities for self-realization.

The system of inter-partnering gives real results, its use contributes to the creation of new services (products) or new technologies to create services that can be used on an existing resource base, and therefore contribute to an increase in overall capital efficiency and net return on assets. However, inter-partnership, as a powerful driver of innovation, is a complex mechanism of the organization and its economic elements need to be properly adjusted. On the one hand, it encourages creativity of employees and creation of conditions for creative work, and on the other - creation of conditions for entrepreneurship that take into account the availability of resources and the development of organizational forms of interaction.

The realization of the incentive innovative activity of potential employees, incorporated in the internal enterprise system, is possible under certain conditions:

1. Participation of the author of the novelty in the risk, which involves him to contribute part of the working capital needed for the project.
2. Obligatory participation of the author of the business project in the income in accordance with the invested capital. When concluding a partnership agreement, calculating not only financial resources but also the intellectual contribution of the author of the business idea will be considered as part of the capital.
3. Systematic work on evaluation and selection of perspective ideas of employees of the enterprise. To this end, a person (recommended by the director) must be assigned, who will determine prospective areas of research and consider submitted business projects. Employees are given relatively equal rights in in-house competition for resources and attention. In the presence of several promising projects, the priority of their implementation is determined in view of the possibility of allocating resources and in terms of profit maximization.

4. During the implementation of the entrepreneurial project, the inter-partners change the conditions of work in the main workplace (flexible work schedule of the main work, part-time work, part-time work, unpaid leave, etc.). In order to eliminate possible conflicts regarding the priority of current and project tasks, it is advisable to introduce an indicator of the involvement of employees of the subordinate department in the work on innovative projects in the system of evaluating the work of line managers.

Successful functioning of the inter-partnership system requires high creative potential of employees of the enterprise, not only engineers, but also workers, whose qualifications should be sufficient for new types of work. Therefore, it is necessary to encourage additional training of employees in the areas that are important for the development of the enterprise, forming appropriate motivational preferences in them, first of all because of the salary allowance for higher qualification. The system of training for workers should cover systematic certification and assignment of grades, which will restore the prestige of their qualification work.

Recommended system of incentives to stimulate the educational and qualification level of employees through establishing a personal rating (3.1), which consists of coefficients that characterize the level of education, level of work experience, and the level of importance of the employee for the enterprise.

$$\mathrm{Re} = Ked * Kex * Ks \qquad (3.1)$$

Coefficient of level education is determined by the value (0,8≤ Ked ≤2) and increases in proportion to the deepening of the knowledge of the employee, his participation in innovation and reinvention. The base level (*0.8*) is increased by 0.2 each time with a higher grade, when undergoing retraining courses or implementing an innovative proposal.

Coefficient of work experience Kex (1≤ Kex ≤4.5), the numerical value of which stimulate a decrease in staff turnover (due to low salaries) and provide an annual stable increase in wages by a certain percentage. The high initial value (1) of this factor enables a worker who does not have sufficient experience to receive

the minimum wage required to fulfill the set work schedule. For the first six years of experience, the increase in the coefficient will be 0.2, and in the following years - 0.1 for each working year.

Coefficient of significance Ks describes the employee's ability to translate their knowledge and experience into specific cases. It shows the level of employee involvement in project team work and is calculated by adding 0.1 to the baseline for each project.

The salary of each employee will be equal to the product of the basic salary on his personal rating. It will be constant throughout the year unless the coefficient of education and significance changes. Employees will have additional competition and additional incentive to get a higher rating, which in turn will stimulate the desire to improve their professional skill and performance. At the same time, stimulation of innovative activity should not impede the fulfillment of current production tasks. Therefore, to monitor and improve the dynamics of the workflow, you need to use indicators that reflect the amount and quality of current activity.

1. *Coefficient of adherence* to the scheduled work schedule Kad (or hours worked). It is determined by direct management and is equal to 1 in the absence of disruption of the timing of the tasks of current activities.

2. *Coefficient of quality* of labor Kq is formed on the basis of the current standards of the enterprise and equal to 1 in the absence of defects of the performed works.

3. The *insurance coefficient* Kin should be introduced to create a reserve of remuneration funds, which is necessary for the remuneration of those who are just hired, as well as to increase the coefficients of education and the importance of employees during the year.

Then the level of individual wages will be equal to:

$$Individual\ salary = Base\ rate * Re * Kad * Kq * Kin \qquad (3.2)$$

The use of various organizational and economic forms of motivation for innovation, recommended for the enterprise «Maysternya Inzhenernykh Rishen′» LLC, is based on stimulating the development of employees' skills, and therefore

their ability to acquire new activity, to perceive organizational changes as necessary in today's market conditions. In turn, a high level of educational qualification of employees enables them to initiate innovations that will bring economic benefits to both their organization and innovators.

The proposed systems of staff motivation also take into account the system of control of work performance. But it is impossible to carry out permanent full control due to a large amount of work and the inability to find the controlling person at the place of its implementation. In addition to internal control, there is external control. It is carried out by independent specialists who are hired by the customer to control the quality and quantity of work performed at the construction site.

In 2013, Google launched the revolutionary smart glasses technology, Google Glass. Initially, the glasses were planned to be sold to retail customers as a perfect gadget, but the project failed. But the glasses found another application, they began to be used in production. Google began to work in this direction and in 2019 introduced a new generation of smart video glasses - Google Glass Enterprise Edition 2.

The novelty received a faster processor, an increased battery capacity, plus an updated camera and frame. Moreover, the price of new items is approximately 30% lower than the cost of the first model. You can purchase a second version of Google’s video glasses for $ 999. The cost of the previous Google Glass model was $ 1499. Google Glass Enterprise Edition 2 was not designed for retail customers, but for the needs of companies.

For the company «Maysternya Inzhenernykh Rishen′» LLC, the use of such technology will be extremely useful. Because, the employees of the company that performs direct installation work, they must constantly work with the draft of the project, be in contact with the engineers, demonstrate and record the stages of work performed. Thanks to smart eyeglasses, all processes for the employees of the enterprise become easier, which on the one hand will increase the speed of work performance and also reduce the accuracy of errors during the installation work.

Glasses display a high-definition image with a resolution of 4K and a frequency of 60 frames per second. The device has 3 gigabytes of RAM, the amount of internal memory is 32 GB. Powered by Google Glass Enterprise Edition 2 on Android Oreo OS. The camera resolution is 8 megapixels. As for additional features, the manufacturer added support for new Bluetooth and Wi-Fi standards, plus a USB-C port. Google developers recommend using Glass Enterprise Edition 2 as an auxiliary gadget, a digital assistant. Users can use Glass Enterprise to view instructions, send control photos or videos, and more. Google claims that companies that have implemented devices in their work report a 20-50% increase in work efficiency.

Using this innovative technology, workers will be able to view drawings directly during the work and make the necessary changes. There will also be an opportunity, online consultations with engineers in case of any shortcomings, in turn, engineers will also be able to monitor the processes at the facilities, while not being directly at them. The process of photo and video recordings of the work done will also be simplified. At the moment, all these actions are also performed, but at the same time they tear the employee away from work, and when using Google glasses, it will be possible to perform all these actions in the course of work.

Also, for more effective innovation activity, employees of the company are encouraged to use auxiliary tools. Or rather, special programs such as *inno360* and *Accept Mission*.

Inno360 is designed to enable companies to identify disruptive opportunities for their new products, both within and outside their respective industries. To do this, inno360 provides for companies with a complete view of the competitive landscape, available and emerging technologies, potential solution partners, and other profound insights that will inspire new directions for company products. During the Information Age, innovation and progress hinged on access to information. In a new age in which innovation and progress depends on the ability to make sense of this vast sea of information. Old ways of researching problems are no longer effective. New solutions must leverage human intelligence and

automate the process. Whether it is necessary to accelerate new products or services time to market, reduce risk, identify new technologies, new product ingredients or identify partners, inno360 can be a catalyst to your product development process. The actionable intelligence provided through inno360 was created to will help companies cultivate a comprehensive product or service strategy and bring disruptive products to the market faster and more efficiently. In simple words, this software will allow you to quickly look for new opportunities for innovative development.

Accept Mission is a brand new and innovative application to help organizations generate great ideas with people, time and place independent. It is not necessary to go through the hassle of planning sessions with many people and get them in the same room at the same time. In Accept Mission possible to work together from different places and even at different times. On top of this, the software is using *gamification* to get the most out of everyone: participants in the innovation process will be a secret agent on this mission. So first, they choose their secret identity. The basic idea is based on the fact that this leads to better results because people don't know who is who and are more creative when undercover. Accept Mission is a brainstorming tool that specializes in using a *gamifying* approach to get people innovating. It makes participation in the innovation management process fun and diverse. The application is designed to increase employee interest in innovation, but the program is also an innovation management tool that should simplify and help managers.

In paragraph 2.1 was indicated threats for the company, one of them is electronic bidding, recently, more and more customers have been using them. Maybe defining electronic trading as a threat may seem strange, but the fact is that electronic bidding contributes to some very serious negative trends that destroy the market. For example dumping or unfair competition. The company «Maysternya inzhenernaya rishen′» LLC, has repeatedly participated in electronic bidding and several times fell victim to unfair competition. In order not to repeat the mistakes

made, it is necessary to change the approach of participation, or rather, apply innovative management decisions.

In fact, to make participation in tenders profitable, you need a whole range of measures aimed at analyzing the requirements of the customer and comparing them with the capabilities of the company, as well as the subsequent preparation of the tender proposal and other necessary documents. At the same time, one should not forget that the Law does not divide the violations committed by the Participants during the preparation into material or formal, and therefore even insignificant, violations can become the basis for rejecting the company as a Participant. Given the above, only the preparation of documentation and commercial proposals for participation in the tender takes a large amount of time.

This problem can be solved using special software. It will perform the following functions:

Monitoring procurement activities of customers. Do not underestimate the history of completed tenders. So, in some cases, based on the analysis of completed tenders, it is possible to foresee the outcome of the tender, determine the main mistakes of the participants and the grounds for rejection, draw up an analytical report on the winners of tenders for the past years and determine the pricing policy for the past period. All this information will be analyzed by software and provided in a convenient form for quick analysis.

Assistance in the preparation of the necessary documentation and tender proposal. Often the requirements of tender documentation are complex and bureaucratic, and sometimes do not meet the requirements of the law or have an ambiguous interpretation, in connection with which the Participants become hostages of the will of the customer. Software will conduct a thorough analysis of the tender documentation necessary for bidding and prepare recommendations for creating a tender proposal that will meet all the requirements of the customers.

Of course, the program will not be able to complete all of this tasks on one hundred percent on its own, but it will significantly reduce the necessary time costs. This will allow the company to take part in a large number of tenders, about

20-25 per month. Thus, the company «Maysternya inzhenernaya rishen′» LLC will have a great opportunity to choose which tenders to participate in order to maximize profits. The choice of priorities (which tender to concentrate on) during the tender is very important, as important as before. The fact is that in spite of all the details of the customer's analysis, there are never any guarantees which factors will affect the selection of the winner. «Maysternya inzhenernaya rishen′» LLC has a staff of highly qualified employees and is ready to perform difficult tasks, and generally provides services with the optimal balance of price and quality. So the company is not profitable to participate in tenders in which the main factor in the selection of the winner is the price. That is why such software is important for the company, will turn the threat into an advantage. Increase lead generation, increase customer flow and stabilize demand for company services.

Innovative products that the company can present to its customers are also worth choosing from existing but still innovative projects. For example, air conditioners powered by solar energy. It is Could be a very profitable innovative product for the «Maysternya inzhenernaya rishen′» LLC, as it works with both, air conditioners and solar energy.

The project was presented by the Australian company Chromasun - solar-controlled air conditioning. This system uses solar energy, which can be supplemented with natural gas as an alternative energy supply during periods when there is insufficient sunlight. This technology is not widespread, and it will probably be several years before solar air conditioners become available to customers. Nevertheless, this design promises to provide more cooling capabilities than any other modern system, and also eliminates the cost of electricity in general. The indisputable advantages of solar air conditioners include:

- possibility of using within the framework of green building technologies, which allow minimizing the impact on the environment;
- low power consumption, work on the energy of solar radiation, the receipt of which is not associated with harmful emissions and environmental pollution;
- the possibility of using solar air conditioners to warm the house in winter;

- chilled water from the air conditioning system can be used for household or industrial needs.

The only drawback of such systems is the lack of their production on an industrial scale. For various reasons, the scope of solar air conditioners is somewhat limited. These are private houses and cottages, small commercial enterprises, administrative and social buildings. But this is not a problem for the «Maysternya inzhenernaya rishen′» LLC, as it are the main customers of it. Necessary to find a reliable supplier of such products. Considering the long-term experience of the company's cooperation with various dealers of air conditioning systems, the solution to this issue will not be long.

Another project is air conditioning with a water freeze system. Air conditioning systems are open for improvements and improvements. That's why the California-based company Ice Energy created the Ice Bear model, which works by freezing water in the tank overnight, and the next day it simply condenses the cold stored in ice, providing room cooling for up to six hours. After the ice has melted, air cooling is assumed by a conventional commercial air conditioner, which is why Ice Bear works in conjunction with the standard unit. The company describes the product as an effective and economical solution for the home, because it significantly reduces energy consumption in the hottest day hours. Such an innovative product will fit perfectly into the general range of green products of the company, and will also provide the client with more options for choice.

Proposals for changes in innovation management at the enterprise «Maysternya inzhenernaya rishen′» LLC will be calculated on economic feasibility in the next paragraph.

3.2 Forecasted evaluation of the implemented measures at the enterprise

The forecasting of assessing the economic efficiency of innovative projects in the framework of innovation management planning is necessary for the more accurate

formation of the prospects, risks, and opportunities of the enterprise implementing these projects. The following are the forecast calculations of wage costs, which are designed to motivate innovative activities at the enterprise «Maysternya Inzhenernykh Rishen′» LLC. Recommended calculation of employees qualification level through establishing a personal rating, in the absence of changes, presented in the table (Table 3.1).

Table 3.1

Forecast and establishing a personal rating at the enterprise «Maysternya inzhenernykh rishen′» LLC

Surnames of employees	Coefficient of level education (Ked)	Coefficient of work experience (Kex)	Coefficient of significance (Ks)	Personal rating (Re)
Instalation links (3 groups of two people)				
Kovalenko	1	2,8	1	2,8
Bondarenko	1,8	1,6	1	2,88
Protsenko	1,4	3	1	4,2
Parkhomenko	1,4	3	1	4,2
Ovcharenko	1,6	3,2	1	5,12
Borisenko	1,4	2,9	1	4,06
Eremenko	1,6	2	1	3,2
Kirilenko	1,2	2,8	1	3,36
Engineering staff				
Romanchenko	1,6	3,5	1	5,6
Simonenko	1,8	3,8	1,2	8,208
Tkachenko	1,6	3,9	1	6,24
Savenko	1,8	4,1	1,1	8,118
Supplier manager				
Rudenko	0,8	2	1	1,6

Source: Created by the author

The base salary ($Base\ rate$) in the company «Maysternya Inzhenernykh Rishen′» LLC, for installers is 5 thousand UAH, and for engineers is 7 thousand UAH. In accordance with the developed recommendations, which are presented in

paragraph 3.1, the calculation of individual salaries per month for employees will look as follows (Table 3.2).

Table 3.2

Forecast and establishing an individual salaries at the enterprise «Maysternya inzhenernykh rishen′» LLC

Surnames of employees	Base rate (thousand UAH)	Personal rating (Re)	Coefficient of adherence (Kad)	Coefficient of quality of labor (Kq)	Individual salaries
Installation links (3 groups of two people)					
Kovalenko	5	2,8	1	0,9	12,6
Bondarenko	5	2,9	1	1	14,4
Protsenko	5	4,2	0,9	1	18,9
Parkhomenko	5	4,2	0,8	0,9	15,1
Ovcharenko	5	5,1	1	1	25,6
Borisenko	5	4,1	1	1	20,3
Eremenko	5	3,2	1	1	16,0
Kirilenko	5	3,4	1	0,9	15,1
Engineering staff					
Romanchenko	7	5,6	1	0,8	31,4
Simonenko	7	8,2	0,8	0,7	32,2
Tkachenko	7	6,2	1	1	43,7
Savenko	7	8,1	1	1	56,8
Supplier manager					
Rudenko	5	1,8	1	0,9	7,9

Source: Created by the author

By analyzing the forecast data and the establishment of individual wages at the enterprise, you can clearly see the effectiveness and honesty of the calculation of individual wages per month. For example, Simonenko is an excellent qualified engineer in the field of piping systems. But for all his highly qualified skills, he is an un disciplined employee, as a result, he makes many mistakes, which as a result reduces his total salary. Although his personal rating is 8.2 and is the highest at the enterprise. The size of the actual financial penalty (fine) Simonenko is clearly

visible in comparison with Savenko. The last, not so actively participated in innovation, but did not make mistakes and did the work on time. In paragraph 3.1, the importance of the quality performance of all work was pointed out, and not just participation in the innovative activities of the enterprise. And as a result, with approximately the same skills and the amount of work done, Savenko's salary is 43% higher than Simonenko's. So, if changes in the wage system do not lead to any changes in the company, then the general wage fund of the executive staff involved in project development and installation of the indoor climate system will be approximately 310 thousand UAH per month. But for proper planning and forecast innovations, it is also necessary to make pessimistic and optimistic calculations.

Table 3.3

Pessimistic forecast and establishing a personal rating at the enterprise «Maysternya inzhenernykh rishen′» LLC

Surnames of employees	Coefficient of level education (Ked)	Coefficient of work experience (Kex)	Coefficient of significance (Ks)	Personal rating (Re)
Instalation links (3 groups of two people)				
Kovalenko	0,8	2,9	1	2,32
Bondarenko	1,6	1,5	1	2,4
Protsenko	1,2	3,1	1	3,72
Parkhomenko	1,2	3,1	1	3,72
Ovcharenko	1,4	3,3	1	4,62
Borisenko	1,2	3	1	3,6
Eremenko	1,4	2,2	1	3,08
Kirilenko	1	2,9	1	2,9
Engineering staff				
Romanchenko	1,4	3,6	1	5,04
Simonenko	1,6	3,9	1	6,24
Tkachenko	1,4	4	1	5,6
Savenko	1,6	4,2	1	6,72
Supplier manager				
Rudenko	0,8	2,2	1	1,76

Source: Created by the author

Table 3.4

Pessimistic forecast and establishing an individual salaries at the enterprise «Maysternya inzhenernykh rishen′» LLC

Surnames of employees	Base rate (thousand UAH)	Personal rating (Re)	Coefficient of adherence (Kad)	Coefficient of quality of labor (Kq)	Individual salaries
Installation links (3 groups of two people)					
Kovalenko	5	2,3	1	0,9	10,4
Bondarenko	5	2,4	0,9	1	10,8
Protsenko	5	3,7	0,8	0,8	11,9
Parkhomenko	5	3,7	0,7	0,7	9,1
Ovcharenko	5	4,6	0,9	0,8	16,6
Borisenko	5	3,6	0,7	0,8	10,1
Eremenko	5	3,1	0,8	0,8	9,9
Kirilenko	5	2,9	0,9	0,9	11,7
Engineering staff					
Romanchenko	7	5,0	0,9	0,8	25,4
Simonenko	7	6,2	0,8	0,7	24,5
Tkachenko	7	5,6	0,9	0,9	31,8
Savenko	7	6,7	0,9	0,9	38,1
Supplier manager					
Rudenko	5	1,8	0,9	0,8	6,3

Source: Created by the author

In pessimistic calculations (Table 3.3, Table 3.4) of personal rating and individual salaries, all coefficients were underestimated except for the coefficient of work experience (Kex). Because it will always only grow. With a pessimistic approach, the general wage fund of the executive staff involved in project development and installation of the indoor climate system will be approximately 216 thousand UAH per month. Therefore, the company will abstractly win and reduce labor costs by 28%. But in general, the company will lose, because the quality of staff's work will drop significantly, and in the construction business, the quality of work is very important. As a result, the company may lose its employees, reputation and, as a result, customers. Therefore, the manager who will

be responsible for the introduction of a wage system which motivating for innovative activities, need to carefully monitor employee performance in order to avoid negative consequences.

Table 3.5

Optimistic forecast and establishing a personal rating at the enterprise «Maysternya inzhenernykh rishen′» LLC

Surnames of employees	Coefficient of level education (Ked)	Coefficient of work experience (Kex)	Coefficient of significance (Ks)	Personal rating (Re)
Instalation links (3 groups of two people)				
Kovalenko	1,2	2,9	1,1	3,828
Bondarenko	2	1,5	1	3
Protsenko	1,6	3,1	1,2	5,952
Parkhomenko	1,6	3,1	1	4,96
Ovcharenko	1,8	3,3	1	5,94
Borisenko	1,6	3	1,1	5,28
Eremenko	1,8	2,2	1,1	4,356
Kirilenko	1,4	2,9	1	4,06
Engineering staff				
Romanchenko	1,8	3,6	1,1	7,128
Simonenko	2	3,9	1,4	10,92
Tkachenko	1,8	4	1,1	7,92
Savenko	2	4,2	1,2	10,08
Supplier manager				
Rudenko	1,2	2,2	1	2,64

Source: Created by the author

In optimistic calculations (Table 3.5, Table 3.6) of personal rating and individual salaries, all coefficients were increased. As a result, the general wage fund of the executive staff involved in project development and installation of the indoor climate system will be approximately 426 thousand UAH per month. That is, company expenses on wages increase by 31% and abstractly it's bad. But based on the calculations made in the tables, you can see that increasing salaries are

justified by an increase in the innovative activity of workers, and their performance, as well as a decrease in mistakes.

Table 3.6

Optimistic forecast and establishing an individual salaries at the enterprise «Maysternya inzhenernykh rishen′» LLC

Surnames of employees	Base rate (thousand UAH)	Personal rating (Re)	Coefficient of adherence (Kad)	Coefficient of quality of labor (Kq)	Individual salaries
Installation links (3 groups of two people)					
Kovalenko	5	3,8	1	0,9	17,2
Bondarenko	5	3,0	1	1	15,0
Protsenko	5	6,0	1	1	29,8
Parkhomenko	5	5,0	1	1	24,8
Ovcharenko	5	5,9	1	1	29,7
Borisenko	5	5,3	1	0,9	23,8
Eremenko	5	4,4	1	1	21,8
Kirilenko	5	4,1	1	0,9	18,3
Engineering staff					
Romanchenko	7	7,1	1	1	49,9
Simonenko	7	10,9	0,9	0,9	61,9
Tkachenko	7	7,9	1	0,9	49,9
Savenko	7	10,1	1	1	70,6
Supplier manager					
Rudenko	5	2,6	1	1	13,2

Source: Created by the author

In accordance with the balance sheet of the enterprise, in 2018 labor costs amounted to UAH 3 173 990 per year. With no changes in the work of the enterprise but when using the new payroll system, labor costs amounted to UAH 3 720 016. The increase in the costs of the wage fund was due to incentives for participating in the company's innovative activities that were included in the salary. Calculations prove that this system clearly responds to the activities of employees. And an increase in costs is necessary to increase the efficiency of the company. But whether these changes are sufficient will motivate employees for such a

significantly increased costs, which amount to UAH 546026. Given that for 2018, the net financial result: the company's profit amounted to UAH 1395980, profit should grow by 39%. This is a serious gap. But in accordance with the table and the balance sheet results, for the last profit fell by 39.69%. And in accordance with the SWOT analysis, the main factor negatively affecting innovative management at the enterprise «Maysternya inzhenernykh rishen′» LLC and all activities, in general, is the "outdated" wage system, which is demotivating employees. In this regard, after the introduction of a new wage system, a sharp jump in profit is forecasted to be at least up to past results.

In paragraph 3.1, it was determined that for more effective innovation activity, employees of the company are encouraged to use auxiliary tools. Or rather, special programs such as inno360 and Accept Mission. Calculating the effectiveness of using such programs is as simple as using them. Both programs are easily installed on any gadget or PC. The cost of using them per month is 5 dollars or UAH 122. Given the company's turnover and profitability, such expenses do not affect its activities, and the use of this kind of software will definitely have a positive effect on the effectiveness of innovative management at the enterprise.

The next software will cost more, but this is the only proposed change to improve the innovative management of the company «Maysternya inzhenernykh rishen′» LLC, which directly affects on profit. Necessary to order software that will help with the search and preparation of documents for electronic bidding. The cost of developing such software with direct participation will cost about 175 thousand UAH. This approach will allow participating in more than 20 bargainings per month. So even with low conversion, the company will have the opportunity to choose the most interesting orders and clients. It is necessary for the enterprise to stabilize the flow of customers. Today, the company receives new clients by partnerships with other companies and thanks to word of mouth. The company does not affect the flow of customers, as a result, in some months there is not enough work, and in others, it is so much that company has to give it for

outsourcing. But thanks to this software, the company will be able to provide itself with a full load if it will win on 2 tenders per month, that is, with a 1% conversion from bargaining.

To calculate the profitability of using this innovation, we use several indicators of economic efficiency. Such as the . The expected profit growth will be 20% and nominally equal to UAH 279196, the discount rate is 17%. It is also taken into account that the profit from the use of software for the second year will grow by 5%, and the cost of finalizing the software will amount to 50 thousand UAH. In this case Net Present Value will be equal to:

$$NPV = \frac{(279196 - 175000) * 0.17 + (293155 - 50000) * 0.17}{(1 + 0.17)^1} = 50042\ UAH$$

The calculation of the net present value proves the profitability of the investment project. We can also calculate the critical value of profit by equating the NPV to zero, since the costs are predictably unchanged. This means that the critical profit value for this project in terms of NPV is UAH 109756,1. Return on investment with such a profit will be equal:

$$ROI = \frac{109756{,}1 * 0.17 + 115243.9 * 0.17}{175000 * 0.17 + 50000 * 0.17} = 1$$

Calculations of return on investment confirm that the figure UAH 109756,1 for the project is critical, since the ROI, in this case, is 1. This means that if the profit from using software exceeds the specified figure, the project will be successful, and vice versa. If the profit is below UAH 109756,1, the project will be unprofitable.

Expanding the range of innovative products like air conditioners powered by solar energy or air conditioning with a water freeze system, the most useful and profitable changes in the innovation management system. This is because the company «Maysternya inzhenernykh rishen′» LLC buys the goods only for customer money, which means it loses the risks. All expenses for retraining and retraining of personnel are incorporated in the new wage system. Therefore, the search and offer of new innovative products for the company is risk-free. And the

search for new innovative products can be done through the previously described software, the use of which is almost free.

In the conclusion of the forecasted evaluation of the implemented measures at the enterprise «Maysternya inzhenernykh rishen′» LLC, it is possible to conclude, the most profitable and convenient innovative changes will be the use of programs like inno360 and Accept Mission, as well as the expansion of the range with the help of new innovative products. Using special software to increase the effectiveness of taking part in electronic bidding is also predictably profitable. Changes in the remuneration system are the riskiest innovation, but company managers cannot ignore the company's main weakness. Plus, without changes and motivation of employees, the management of innovation and the implementation of all the above innovations will be difficult.

CONCLUSIONS AND PROPOSITIONS

As a result of the conducted research the following conclusions and recommendations should be done to improve the process of innovative management process formation at the enterprise «Maysternya inzhenernykh rishen′» LLC:

1. Along with the information age, the dominance of information technology and rapid technological change in almost every sector have created completely new businesses, have destroyed those who cannot adapt to this change and have made a constant need for innovation. Today, stakeholder expectations are changing rapidly and the areas of responsibility of the company are expanding day by day. The life span of products, processes, and technologies is rapidly shortening and the demands revealed by the time pressure push companies to find new creative ways and methods while making innovation. In this regard, they need to be flexible enough to respond to any change that may arise in the environment and develop a strategic view of innovation in order to sustain their existence.

2. Thus, the objective of innovation management is to effectively manage the innovative activity of the organization, which contributes to its ability to participate in innovation processes, to create or attract innovations that ensure its progressive, proposal development, economic stability, strong competitive positions, long-term and successful functioning in the market. The innovation is critical to creating new sources of growth in the enterprise. Trade is one of the sectors with high innovation potential. For today the Ukrainian trade industry is actively developing advanced trade and marketing technologies, various informational, technical and technological innovation projects that radically change the traditional notion of trading business. This makes the Ukrainian trade market favorable for investment management in trade. But crisis and problem with investing significantly slow down the process.

3. Summing up diagnostics of innovation potential at the enterprise «Maysternya inzhenernykh rishen′», can be argued: innovation potential of the

company according to the method of expert evaluation is middle. Group indicators of production and technical potential has the best mark. Group indicators of financial potential also is high enough. But indicators of personnel potential, organizational and managerial component and Indicators of the promotion component mostly low. This negatively affects the overall assessment of the enterprise, and also indicates equipped weaknesses requiring improvement.

4. During the diagnostics of innovative potential at the enterprise, the following were calculated: the investment fund of the enterprise, the company's ability to raise funds, the breakeven point, and also special attention was paid to the assessment of intellectual capital. For this, the method of calculating the intellectual value-added coefficient was used. According to the calculation, we should talk about a low level of human capital efficiency.

5. After analysis of the strengths and weaknesses of the enterprise, innovative systems of remuneration, staff motivation and the process of interaction with staff were recommended for implementation at the enterprise. It was also recommended to use a special program to hang staff motivation for participating in the innovation activities of the enterprise. To increase and stabilize the level of demand, it was also proposed the development of special software and innovative products recommended for use.

6. In the conclusion of the forecasted evaluation of the implemented measures at the enterprise «Maysternya inzhenernykh rishen′» LLC, it is possible to conclude, the most profitable and convenient innovative changes will be the use of programs like inno360 and Accept Mission, as well as the expansion of the range with the help of new innovative products. Using special software to increase the effectiveness of taking part in electronic bidding is also predictably profitable. Changes in the remuneration system are the riskiest innovation, but company managers cannot ignore the company's main weakness. Plus, without changes and motivation of employees, the management of innovation and the implementation of all the above innovations will be difficult.

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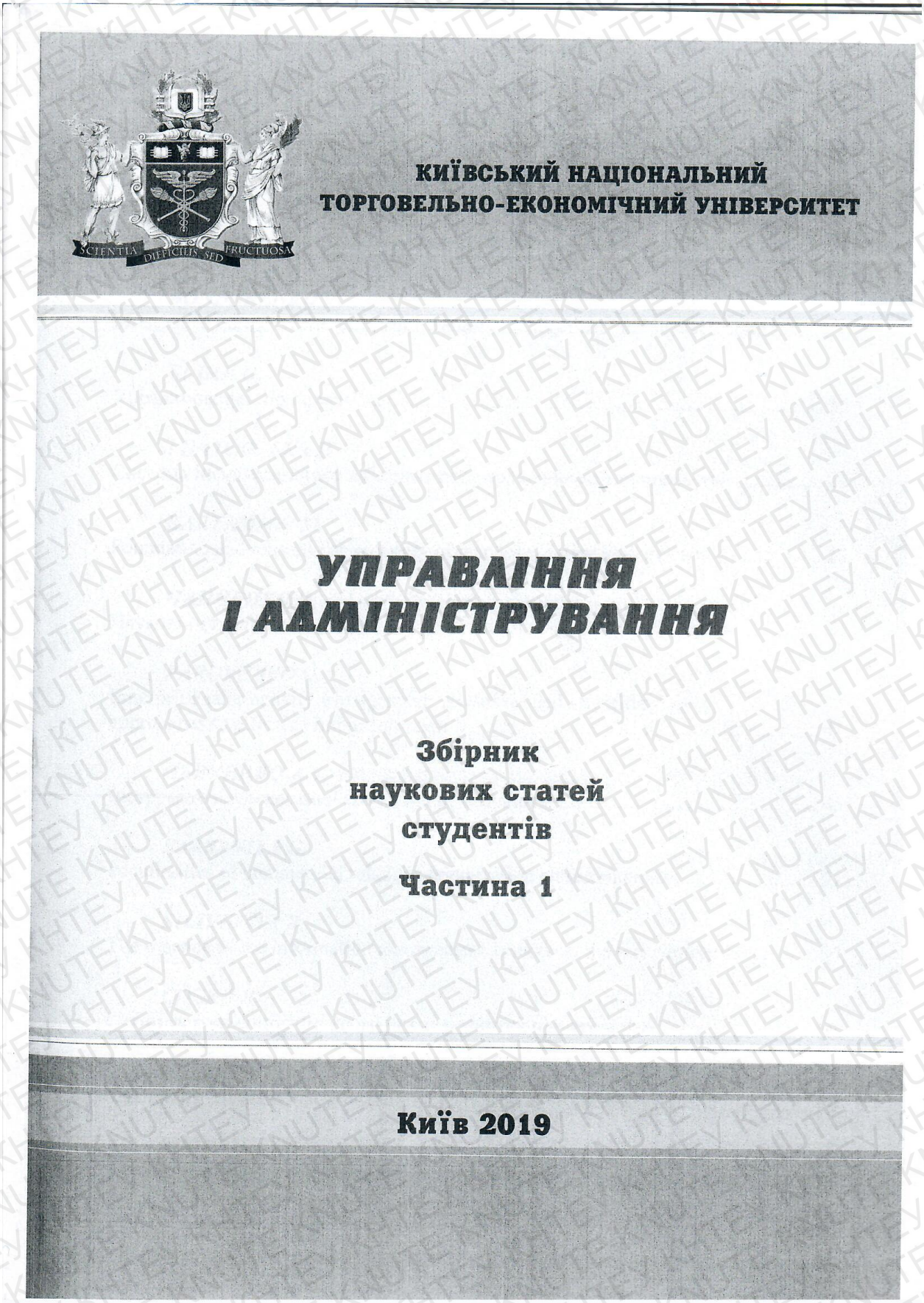
APPENDICES

APPENDIX A



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Робота виконана під науковим керівництвом канд. екон. наук, доцента ХМУРОВОЇ В.В.

FOUNDATION AND REASONS FOR NECESSITY OF MANAGING INNOVATION IN TRADE

KARTASHOV M., 5th course of FEMP KNUTE, specialty «Management»

У статті розглянуто основні засади та різні підходи до визначення інноваційний менеджмент. Визначена необхідність інноваційного менеджменту в сучасній торгівлі, а також визначені основні завдання та місце інноваційного менеджменту в системі управлінням підприємства. Розглянуті особливості використання інноваційного менеджменту в Україні.

The article considers the main principles and different approaches to the definition of innovative management. Determine the need for innovative management in modern trade, as well as identify the main tasks and place of innovation management in the management system of the enterprise. Features of the use of innovative management in Ukraine are considered.

Relevance of research. Rapid changes in the development of the enterprise associated with the emergence of new technologies, the globalization of activities, increased competition in the markets of finished products and resources, necessitates of its adaptation to changes in the environment. Due to these conditions, this direction of enterprise management as innovative management becomes the main factor of the enterprise's competitiveness. Since the trade is characterized by high mobility and a propensity to innovate in different forms, the use of effective innovation management is a priority task of a modern manager.

The aim of the paper is to study and analyze available approaches to the definition of innovative management and also learning the basics features of this type management.

Many scholars engaged in the innovations, innovation management and innovation management in trade among them are foreign: B. Van Ark, L. Broesma, P. Den Gertog, J. Howels A. Afuah, B. Twiss and J. A. Schumpeter; as well as domestic scientists: N. Vashchenko, L. Ivanenko, V. Lisitsa and others. It should be noted that the theory of knowledge about innovation management is constantly updated, and old knowledge is quickly outdated, because as soon as innovation begins to be knowledge, it ceases to be innovation.

Presentation of the main research material. In the modern world, the profitability of an enterprise depends not on natural resources or volumes of industrial production but depends on the ability of this enterprise to introduce new ideas in order to meet consumer demand in certain goods or services. The search for these ideas is the reaction of managers to modern competition, which requires to evolution, and the implementation of these ideas in life depends on the resource and innovative capabilities of economic entities and the overall level of scientific and technological development of the country.

The complexity and extremely high mobility of market processes, the emergence of new inquiries, changes in consumer preferences, large-scale technological changes, the rapid development of information networks, fast dissemination and reception of information, all of this not only complicates the work of enterprises, but also contributes to the emergence of new, often unexpected business opportunities based on innovative visions.

So, with the help of the management of innovations, an enterprise can be competitive in the modern market, and precisely successful managing innovation in trade can become the basis of much profitable entrepreneurship. But what is «innovation» and how to manage it. In general, the concept of «innovation» - a rather complex and multifaceted, his study of the subject of many studies, but, despite this, the generally accepted definition of innovation in science does not exist. There are three main approaches to the consideration of the term [4]. Schumpeter, which may be called the founder of the theory of innovation in the economy generally, as the economic impact of technological change, as the use of new combinations of existing productive forces to solve the problems of business [5]. According to Twiss, innovation - a process that combines science, technology, economics, and management, as it is to achieve novelty and extends from the emergence of the idea to its commercialization in the form of production, exchange, consumption [6]. Allan Afuah refers to innovation as new knowledge incorporated in products, processes, and services. He classifies innovations according to technological, market, and administrative/organizational characteristics [1].

Under market conditions, innovations penetrate the entire economy as a necessary condition for the development of production, expansion of production facilities of the enterprise, improvement of product quality, the emergence of new products and services, as well as a means by which organizations adapt to changes in the external environment and change themselves in their own interests. The management system of organizations that use an entrepreneurial, innovative approach to their functioning and development, is designed to solve a number of tasks, such as:

- constant updating of the assortment of products and services;
- updating and creating new production systems;
- increasing the efficiency of sales activities, primarily by increasing productivity of staff and reducing all types of costs.

The solution to these tasks is provided by the creation of a dynamic and flexible management system, based on a broad delegation of powers to those levels of management that can produce innovative ideas and implement them. And coordination of all works on bringing innovations into the practice of the enterprise or their own creation is carried out by the subsystem - innovative management. Innovation Management is designed to ensure the implementation of the strategic goals of the organization. Its task is to effectively manage the process of developing, implementing and commercializing innovations and coordinating relevant management decisions with other components of the management system at the enterprise (Fig. 1).

The theoretical basis of innovation management is an economic theory that studies the laws and laws of dynamic systems, and the theory of general management of organizations, which forms the principles, functions, forms and methods of management of purposeful activities of people in the process of implementing the goals of the functioning and development of the organization.

This type of management should be considered not only as an integral part of the organization's overall management system but also as one of its functional management systems. As a system, Innovative management is a combination of economic, motivational, organizational and legal means, methods and forms of management of innovative activities of the organization in order to optimize the results of its economic activities.

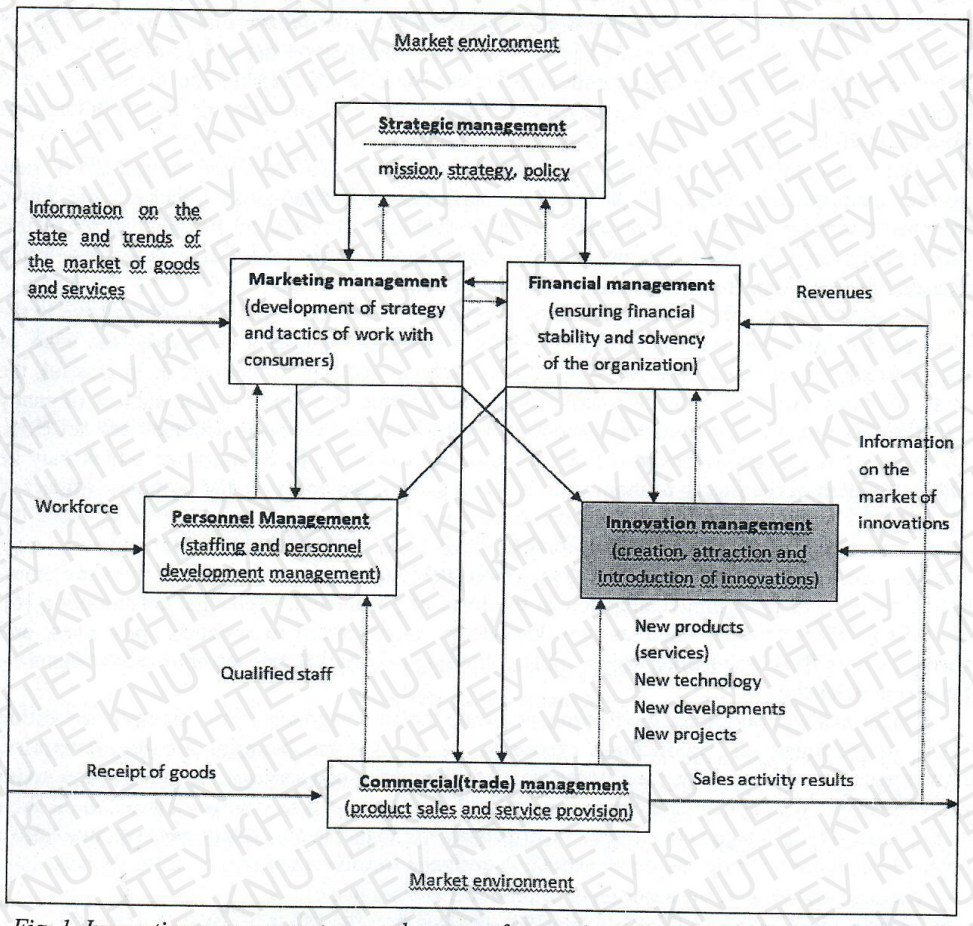

Fig. 1. Innovation management as a subsystem of general management of the organization [9]

Innovative management acts as a system - is a set of actions related to the substantiation, adoption, implementation of managerial decisions on the creation and implementation of innovations in an organization and aimed at identifying strategic innovation goals; formation of innovation strategy and innovation policy; development of technology of substantiation and adoption of innovative solutions; the choice of methods for influencing the behavior of participants in the innovation process in order to form mutually beneficial economic relations. The system of innovative management of the organization is shown in Fig. 2.

The qualitative and quantitative effectiveness of innovation activity depends on how favorable the organization will be for the implementation of the intellectual, creative potential of

employees. Therefore, when forming an innovation management system, it is necessary to take into account economic, organizational and managerial, socio-psychological factors that influence the behavior of participants in the innovation process.

Consequently, the objective of innovation management is to effectively manage the innovative activity of the organization, which contributes to its ability to participate in innovation processes, to create or attract innovations that ensure its progressive, proposal development, economic stability, strong competitive positions, long-term and successful functioning in the market. So innovation is critical to creating new sources of growth. Trade is one of the framework conditions that can strengthen innovation in the business sector [3]. The main problem, in this case, is properties of the sphere of trade. Due to the fact that it is characterized by sufficient mobility, high susceptibility to innovations of various forms (new commercial and industrial technologies, modern equipment, management systems, etc.), the use of innovations is a necessity, as other market participants will necessarily take advantage of the opportunity to take the privilege of innovation.

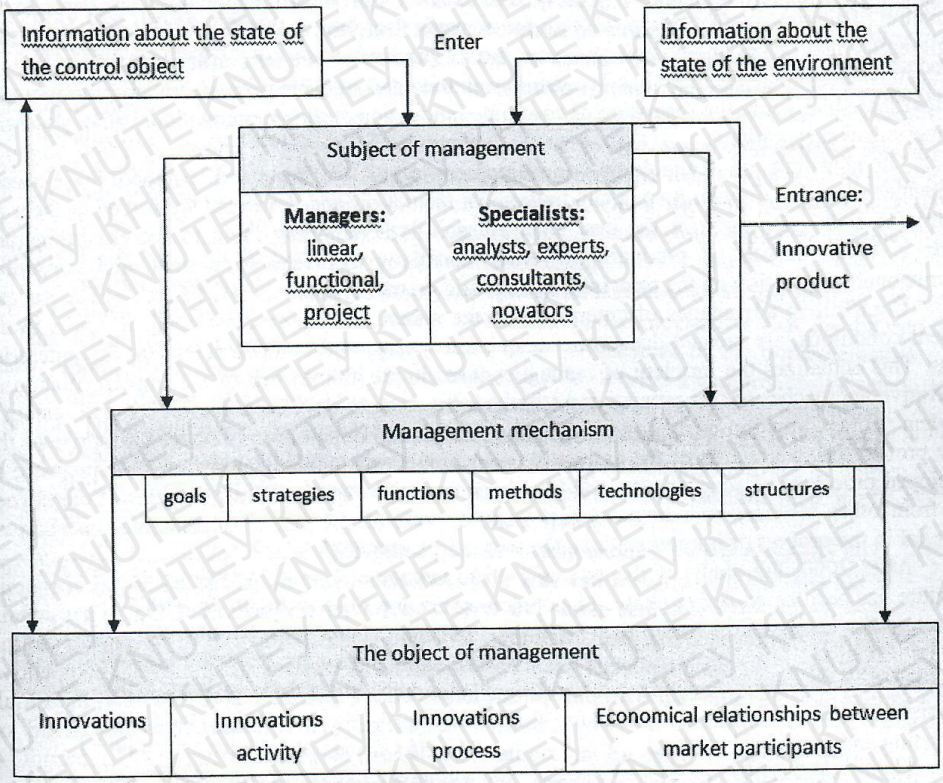

Fig. 2. Innovative management as a system of innovation management [9]

Thus, according to estimates of former IMF chief economist K. Rogoff, 75% of the American advantage in productivity growth before the EU over the past 10 years was for wholesale and retail trade. According to W. Nordhaus, thanks to wholesale and retail trade, about 45% of the acceleration in the US economic growth is provided. A similar result has been achieved in the Japanese economy, where trade ranked fourth among the sectors in terms of aggregate factor productivity. Consequently, trade has become one of the landfills for constant innovation. Here, at the accelerated pace, new sales technologies, logistics, and management schemes are being introduced, information systems are actively being developed, leading companies spend up to 2% of their turnover [10].

Global Powers of Retailing «Embracing Innovation», it is The 18th annual Global Powers of Retailing identifies the 250 largest retailers around the world, and analyses their performance based on geographic region, product sector, e-commerce activity, and other factors. It also provides a look at the world's 50 biggest e-retailers [2]. In addition, the report considers strategies retailers are taking to cope with disruptive change in the industry, provides an overview of the global economy and how it will impact the retail sector, and discusses «Q Ratio» which is a way of measuring non-tangible business assets. The report notes that today, the retail sector is characterized by a number of changes due to the noticeable main trends: duty-free retail, mobile retail, «experimental» retail, and innovative retail. Among the most important economic issues that globally affect the retail sector, there are changes in US monetary policy, energy production, the crisis in Ukraine, slowdown of investment growth by Chinese investors, changes in the demographic situation, and the consequences of the use of new technologies and the Internet [10].

The study provides an opportunity to determine the global trends in the implementation of innovative strategies for transnational companies (TTNCs): an informed choice of the need for the formation of an innovation strategy through the merger of science, technology and production into a single entity that drives innovation and uses them; creation of strategic alliances; the strategy of intellectual capital management has become key in the corporate innovation strategy; the presence of significant barriers in the formation of corporate innovation systems; unique innovative strategies for individual corporations.

Globalization of technological development leads to increased competition between companies on a global scale. As a result, trading companies around the world are forced to focus on organizing trade processes for the best technical solutions, adapting them to the conditions and needs of local markets. It produces powerful incentives for technology trade and deepening international cooperation on the principles of strategic partnership.

Competitive advantages of enterprises in the sphere of services, including in trade, in the present conditions, are created due to the unique knowledge and competencies that the enterprise owns. This actualizes the problem of managing them in the framework of the implementation of innovative approaches to this process and stipulates the need to develop a comprehensive scientific problem of the formation of a knowledge management mechanism at the service enterprise of the trade profile. The peculiarity of the innovative development of such an enterprise is the presence of developed processes of acquiring knowledge - both from the experience and abilities of employees and from other sources, including external ones, as well as the use of accumulated intellectual potential in the process of improving the efficiency of the activity.

After 2000, the study of the economic category «innovation» in the domestic economic literature has become an active phase. The content of the innovation process in Ukraine has certain characteristics compared to countries with a developed and stable economy [7]. According to the law of Ukraine, innovations are newly created (applied) and (or) improved competitive technologies, products or services, as well as organizational and technical decisions of an industrial, administrative, commercial or other nature that significantly improve the structure and quality of production and (or) social sphere.

These peculiarities are due to the fact that Ukraine is at the stage of the transformational introduction of the foundations of a market economy and, therefore, domestic innovations include, to a lesser extent, a model of scientific and technical or technological push, and in most cases it is the re-equipment of the economic space in accordance with the requirements of a market economy. This is especially true in the sphere of trade. Proceeding from the fact that innovation is an innovation, new or improved products or technology obtained as a result of the innovation process, the most important part of it in trading enterprises is the improvement of trade technology, which is a set of works that ensure the implementation of the trading process in the most efficient ways in accordance with specific economic conditions [7].

Trade is one of the sectors with high innovation potential. The Ukrainian trade industry is actively developing advanced trade and marketing technologies, various informational, technical and technological innovation projects that radically change the traditional notion of trading

business. Investment attractiveness of retail enterprises in Ukraine is related to the underdevelopment of trade infrastructure, a significant shortage of retail space, the technological backwardness of trading operations in most enterprises, low competition and weak barriers to entry. At the same time, the demands of Ukrainian consumers regarding the wide range of products, the quality of goods and services of retailers, and their approximation to the standards of similar enterprises of the European Union and the United States are increasing.

For today, trade is one of the sectors with high innovation potential. The Ukrainian trade industry is actively developing advanced trade and marketing technologies, various informational, technical and technological innovation projects that radically change the traditional notion of trading business. Investment attractiveness of retail enterprises in Ukraine is related to the underdevelopment of trade infrastructure, a significant shortage of retail space, the technological backwardness of trading operations in most enterprises, low competition and weak barriers to entry. At the same time, the demands of Ukrainian consumers regarding the wide range of products, the quality of goods and services of retailers, and their approximation to the standards of similar enterprises of the European Union and the United States are increasing [8].

Conclusions. Thus, the objective of innovation management is to effectively manage the innovative activity of the organization, which contributes to its ability to participate in innovation processes, to create or attract innovations that ensure its progressive, proposal development, economic stability, strong competitive positions, long-term and successful functioning in the market. The innovation is critical to creating new sources of growth the enterprise. Trade is one of the sectors with high innovation potential. For today the Ukrainian trade industry is actively developing advanced trade and marketing technologies, various informational, technical and technological innovation projects that radically change the traditional notion of trading business. This makes the Ukrainian trade market favorable for investment management in trade.

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Article is executed under the supervision of Candidate of Sciences (Economics), Associate Professor YATSYSHYNA K.V.

НАУКОВІ ПІДХОДИ ДО ФОРМУВАННЯ СТРАТЕГІЧНОЇ ПРОГРАМИ ПІДПРИЄМСТВА

ПАНЧЕНКО О., 1м курс ФЕМП КНТЕУ,
спеціальність «Менеджмент»,
спеціалізація «Управління бізнесом»

У статті досліджується різновиди визначень поняття «програма». Наведені спільні та відмінні риси портфеля програм і проектів та інвестиційного портфеля. З'ясовано, що виконання програми розвитку і в її межах окремих проектів цього розвитку на підприємстві можна поділити на два основні напрями: обслуговування постійного «потоку» проектів; індивідуальний супровід «важливих / ключових» проектів та програми в цілому.

The article examines the varieties of definitions of the «program» concept. The common and distinctive features of the programs and projects portfolio and the investment portfolio are presented. It was found out that the implementation of the development program and within its boundaries individual projects of this development in the enterprise can be divided into two main directions: maintenance of a constant «flow» of projects; individual support for «important / key» projects and the program as a whole.

Актуальність дослідження. За будь-яких ринкових умов, як свідчить міжнародний практичний досвід, розвиток сучасного підприємства неможливий без досконало розробленої програми або стратегії розвитку. При цьому у межах розробки такої програми або стратегії, на наш погляд, відповідно до стадій розвитку підприємства мають визначатися настанови, що фіксують особливості управлінських задач розвитку.

Мета статті полягає в обґрунтуванні наукових підходів до формування стратегічної програми підприємства.

Об'єктом дослідження є з'ясування відмінностей між портфелем програм і проектів та інвестиційним портфелем.

Предметом дослідження є теоретико-методичні рекомендації до формування стратегічної програми підприємства.

Виклад основного матеріалу. Прийнято вважати, що слово «програма» походить від грецького слова «programma», яке буквально означає «розпорядження, оголошення». В українській мові термін «програма» має декілька значень. Так, відповідно до великого тлумачного словника сучасної української мови, це наперед продуманий план якої-небудь діяльності, роботи і т. ін.; документ, в якому викладені основні положення діяльності; ідейний напрямок; план роботи підприємства на якийсь строк, що передбачає обов'язковість випуску певної кількості продукції; план наміченої діяльності та її окремих видів [9, с. 101].

На основі епістеміологічного і лексичного аналізу слова «програма» можна стверджувати, що в загальному сенсі під цим терміном доцільно розуміти «певний порядок,

APPENDIX B

Баланс (Звіт про фінансовий стан)

Актив	Код рядка	31.12.2016	31.12.2017	31.12.2018
1	2	3	4	5
I. Необоротні активи				
Нематеріальні активи:	1000	27560	23720	28350
первісна вартість	1001	80270	81490	91820
накопичена амортизація	1002	52710	57770	63470
Незавершені капітальні інвестиції	1005	22780	126050	140730
Основні засоби:	1010	8639480	7997040	7680680
первісна вартість	1011	14747190	14938660	15382130
знос	1012	6107710	6941620	7701450
Інвестиційна нерухомість:	1015	0	0	0
первісна вартість	1016	0	0	0
знос	1017	0	0	0
Довгострокові біологічні активи:	1020	0	0	0
первісна вартість	1021	0	0	0
накопичена амортизація	1022	0	0	0
Довгострокові фінансові інвестиції: які обліковуються за методом участі в капіталі інших підприємств	1030	181680	181680	6169010
інші фінансові інвестиції	1035	4	4	4
Довгострокова дебіторська заборгованість	1040	0	0	0
Відстрочені податкові активи	1045	0	0	0
Гудвіл	1050	0	0	0
Відстрочені аквізиційні витрати	1060	0	0	0
Залишок коштів у централізованих страхових резервних фондах	1065	0	0	0
Інші необоротні активи	1090	0	0	0
Усього за розділом I	1095	8871540	8328530	14018810
II. Оборотні активи				
Запаси	1100	8886440	10487280	12387000
Виробничі запаси	1101	48130	68740	73550
Незавершене виробництво	1102	0	0	3
Готова продукція	1103	0	0	0
Товари	1104	8838310	10418540	12313450
Поточні біологічні активи	1110	0	0	0

Депозити перестрахування	1115	0	0	0
Векселі одержані	1120	0	0	0
Дебіторська заборгованість за продукцію, товари, роботи, послуги	1125	1714370	695860	712910
Дебіторська заборгованість за розрахунками:	1130	21390	133750	82050
за виданими авансами				
з бюджетом	1135	0	0	0
у тому числі з податку на прибуток	1136	0	0	18360
з нарахованих доходів	1140	0	0	0
із внутрішніх розрахунків	1145	10	0	1123520
Інша поточна дебіторська заборгованість	1155	362130	548340	0
Поточні фінансові інвестиції	1160	0	0	221342
Гроші та їх еквіваленти	1165	199740	3185940	49680
Готівка	1166	26090	31150	1691820
Рахунки в банках	1167	48760	2956660	15600
Витрати майбутніх періодів	1170	39460	12850	0
Частка перестраховика у страхових резервах	1180	0	0	0
у тому числі в:	1181	0	0	0
резервах довгострокових зобов’язань				
резервах збитків або резервах належних виплат	1182	0	0	0
резервах незароблених премій	1183	0	0	0
інших страхових резервах	1184	0	0	0
Інші оборотні активи	1190	7360	15140	15730
Усього за розділом II	1195	11230900	15079160	16568590
III. Необоротні активи, утримувані для продажу, та групи вибуття	1200	0	0	0
Баланс	1300	20102440	23407690	30587400

Пасив	**Код рядка**	**31.12.2016**	**31.12.2017**	**31.12.2018**
I. Власний капітал				
Зареєстрований (пайовий) капітал	1400	15760	15760	15760
Внески до незареєстрованого статутного капіталу	1401	0	0	0

Капітал у дооцінках	1405	7894830	7894830	7891780
Додатковий капітал	1410	578630	578630	578630
Емісійний дохід	1411	578630	578630	578630
Накопичені курсові різниці	1412	0	0	0
Резервний капітал	1415	1460	1460	1460
Нерозподілений прибуток (непокритий збиток)	1420	512630	1801930	886410
Неоплачений капітал	1425	0	0	0
Вилучений капітал	1430	0	0	0
Інші резерви	1435	0	0	0
Усього за розділом I	1495	7978050	10292610	9374040
II. Довгострокові зобов'язання і забезпечення				
Відстрочені податкові зобов'язання	1500	0	0	0
Пенсійні зобов'язання	1505	0	0	0
Довгострокові кредити банків	1510	210250	0	0
Інші довгострокові зобов'язання	1515	0	0	0
Довгострокові забезпечення	1520	0	0	0
Довгострокові забезпечення витрат персоналу	1521	0	0	0
Цільове фінансування	1525	0	0	0
Благодійна допомога	1526	0	0	0
Страхові резерви, у тому числі:	1530	0	0	0
резерв довгострокових зобов'язань; (на початок	1531	0	0	0

звітного періоду)				
резерв збитків або резерв належних виплат; (на початок звітного періоду)	1532	0	0	0
резерв незароблених премій; (на початок звітного періоду)	1533	0	0	0
інші страхові резерви; (на початок звітного періоду)	1534	0	0	0
Інвестиційні контракти;	1535	0	0	0
Призовий фонд	1540	0	0	0
Резерв на виплату джек-поту	1545	0	0	0
Усього за розділом II	1595	21025	0	0
III. Поточні зобов'язання і забезпечення				
Короткострокові кредити банків	1600	0	0	0
Векселі видані	1605	0	0	0
Поточна кредиторська заборгованість:	1610	105120	0	0
за довгостроковими зобов'язаннями				
за товари, роботи, послуги	1615	10999310	11161540	14709460
за розрахунками з бюджетом	1620	148540	589970	222050
за у тому числі з податку на прибуток	1621	45330	455550	70760
за розрахунками зі страхування	1625	32230	14440	22740
за розрахунками з оплати праці	1630	75370	51120	93610
за одержаними авансами	1635	0	0	72730
за розрахунками з учасниками	1640	0	0	0

із внутрішніх розрахунків	1645	380	380	3376400
за страховою діяльністю	1650	0	0	0
Поточні забезпечення	1660	0	0	0
Доходи майбутніх періодів	1665	0	0	0
Відстрочені комісійні доходи від перестраховиків	1670	0	0	0
Інші поточні зобов'язання	1690	553190	1202640	2716370
Усього за розділом III	1695	11914140	13115080	21213360
IV. Зобов'язання, пов'язані з необоротними активами, утримуваними для продажу, та групами вибуття	1700	0	0	0
V. Чиста вартість активів недержавного пенсійного фонду	1800	0	0	0
Баланс	1900	20102440	23407690	30587400

APPENDIX C

Звіт про фінансові результати (Звіт про сукупний дохід)
за 2016-2018 роки

І. ФІНАНСОВІ РЕЗУЛЬТАТИ

Стаття	**Код рядка**	**31.12.2016**	**31.12.2017**	**31.12.2018**
Чистий дохід від реалізації продукції (товарів, робіт, послуг)	2000	29119570	32879450	38698650
Чисті зароблені страхові премії	2010	0	0	0
Премії підписані, валова сума	2011	0	0	0
Премії, передані у перестрахування	2012	0	0	0
Зміна резерву незароблених премій, валова сума	2013	0	0	0
Зміна частки перестраховиків у резерві незароблених премій	2014	0	0	0
Собівартість реалізованої продукції (товарів, робіт, послуг)	2050	-21147980	-22587910	-28464540
Чисті понесені збитки за страховими виплатами	2070	0	0	0
Валовий: прибуток	2090	7971590	10291540	10234110
Валовий: збиток	2095	0	0	0
Дохід (витрати) від зміни у резервах довгострокових зобов’язань	2105	0	0	0
Дохід (витрати) від зміни інших страхових резервів	2110	0	0	0
Зміна інших страхових резервів, валова сума	2111	0	0	0
Зміна частки перестраховиків в інших страхових резервах	2112	0	0	0
Інші операційні доходи	2120	269250	354250	568250
Дохід від зміни вартості активів, які оцінюються за справедливою вартістю	2121	0	0	0
Дохід від первісного визнання біологічних активів і сільськогосподарської продукції	2122	0	0	0
Дохід від використання коштів, вивільнених від оподаткування	2130	0	0	-757730

Адміністративні витрати	2130	-730930	-710290	-8248470
Витрати на збут	2150	-5400510	-6861290	-96170
Інші операційні витрати	2180	-1021340	-241700	0
Витрат від зміни вартості активів, які оцінюються за справедливою вартістю	2181	0	0	0
Витрат від первісного визнання біологічних активів і сільськогосподарської продукції	2182	0	0	
Фінансовий результат від операційної діяльності: прибуток	2190	1088060	2832510	1699990
Фінансовий результат від операційної діяльності: збиток	2195	0	0	0
Дохід від участі в капіталі	2200	0	0	0
Інші фінансові доходи	2220	0	0	0
Інші доходи	2240	43190	8440	178460
Дохід від благодійної допомоги	2241	0	0	0
Фінансові витрати	2250	-103810	-12220	0
Втрати від участі в капіталі	2255	-563640	0	0
Інші витрати	2270	-59700	-3450	-172290
Прибуток (збиток) від впливу інфляції на монетарні статті	2275	0	0	0
Фінансовий результат до оподаткування: прибуток	2290	404100	2825280	1706160
Фінансовий результат до оподаткування: збиток	2295	0	0	0
Витрати (дохід) з податку на прибуток	2300	148810	510720	310180
Прибуток (збиток) від припиненої діяльності після оподаткування	2305	0	0	0
Чистий фінансовий результат: прибуток	2350	255290	2314560	1395980
Чистий фінансовий результат: збиток	2355	0	0	0
II. СУКУПНИЙ ДОХІД				
Стаття	**Код рядка**	**31.12.2016**	**31.12.2017**	**31.12.2018**
Дооцінка (уцінка) необоротних активів	2400	1077960	0	0
Дооцінка (уцінка) фінансових інструментів	2405	0	0	0
Накопичені курсові різниці	2410	0	0	0

Частка іншого сукупного доходу асоційованих та спільних підприємств	2415	0	0	0
Інший сукупний дохід	2445	0	0	0
Інший сукупний дохід до оподаткування	2450	1077960	0	0
Податок на прибуток, пов'язаний з іншим сукупним доходом	2455	0	0	0
Інший сукупний дохід після оподаткування	2460	1077960	0	0
Сукупний дохід (сума рядків 2350, 2355 та 2460)	2465	1333250	2314560	1395980
III. ЕЛЕМЕНТИ ОПЕРАЦІЙНИХ ВИТРАТ				
Матеріальні затрати	2500	331430	276580	449300
Витрати на оплату праці	2505	2261050	2606230	3173990
Відрахування на соціальні заходи	2510	831270	794210	696040
Амортизація	2515	1290910	905960	875030
Інші операційні витрати	2520	2438120	3246800	3941130
Разом	2550	7152780	7829780	9135490
IV. РОЗРАХУНОК ПОКАЗНИКІВ ПРИБУТКОВОСТІ АКЦІЙ				
Середньорічна кількість простих акцій	2600	0	0	0
Скоригована середньорічна кількість простих акцій	2605	0	0	0
Чистий прибуток (збиток) на одну просту акцію	2610	0	0	0
Скоригований чистий прибуток (збиток) на одну просту акцію	2615	0	0	0
Дивіденди на одну просту акцію	2650	0	0	0

APPENDIX D

Classification of innovations

Types of innovations	Innovation type description
Technical innovations	Create new products, processes and important technical changes in products and processes. Innovation has been implemented if it has been introduced on the market(product innovation) or used within a production process (process innovation). Technological innovations can be classified by products or processes, as well as by the degree of importance of the changes achieved in each case.
Non- technical innovations	Include particularly organizational, entrepreneurial and social innovations. According to the methodology of the Czech Statistical Office, we can also place in this category environmental innovations, i.e. the introduction of new or significantly improved products (goods or services), production processes, marketing or organizational methods which create benefits for the environment
Product innovations	Can utilize new knowledge or technologies, or can be based on new uses or combinations of existing knowledge or technologies. In this paper, the term "product" covers both products and services. Product innovations can include: • The introduction of new goods and services. • Significantly improved functional or user characteristics of existing goods and services(through changes in materials, components, and other performance-improving characteristics). • Innovation in services: ▪ Significant improvements in the way they are provided (for example, in terms of effectiveness or speed). ▪ Adding new features or characteristics to existing services. ▪ Introduction of entirely new services.
Process innovations	Represent the introduction of new or significantly improved production and/or delivery methods. This includes: • Significant changes in techniques, equipment and/or software. • Reducing environmental impacts and safety risks. • New or significantly improved methods for the creation and provision of services. • Significant changes in the equipment and software used in service-oriented firms. • Procedures and techniques that are employed to deliver services. • New or significantly improved techniques, equipment, and software in ancillary support activities, such as purchasing, accounting, computing, and maintenance.

Marketing innovations	Are aimed at: • Better addressing customer needs. • Opening up new markets. • Newly positioning a firm's product on the market, with the objective of increasing the firm's sales.

Grouped and systematized by the author based on material created by [5; 7; 26; 43]

APPENDIX E

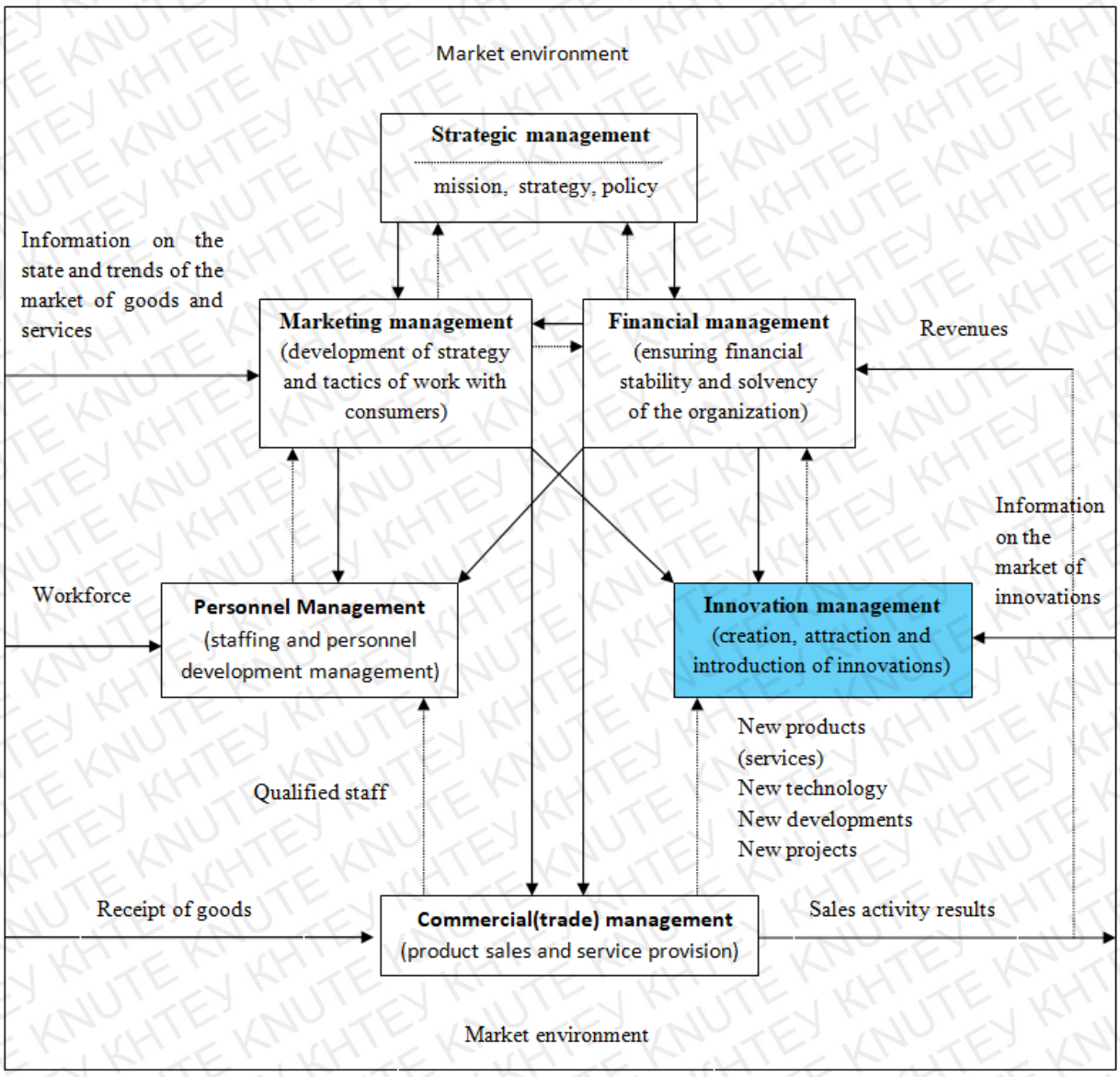

Fig.1.1: Innovation management as a subsystem of the general management of the organization

APPENDIX F

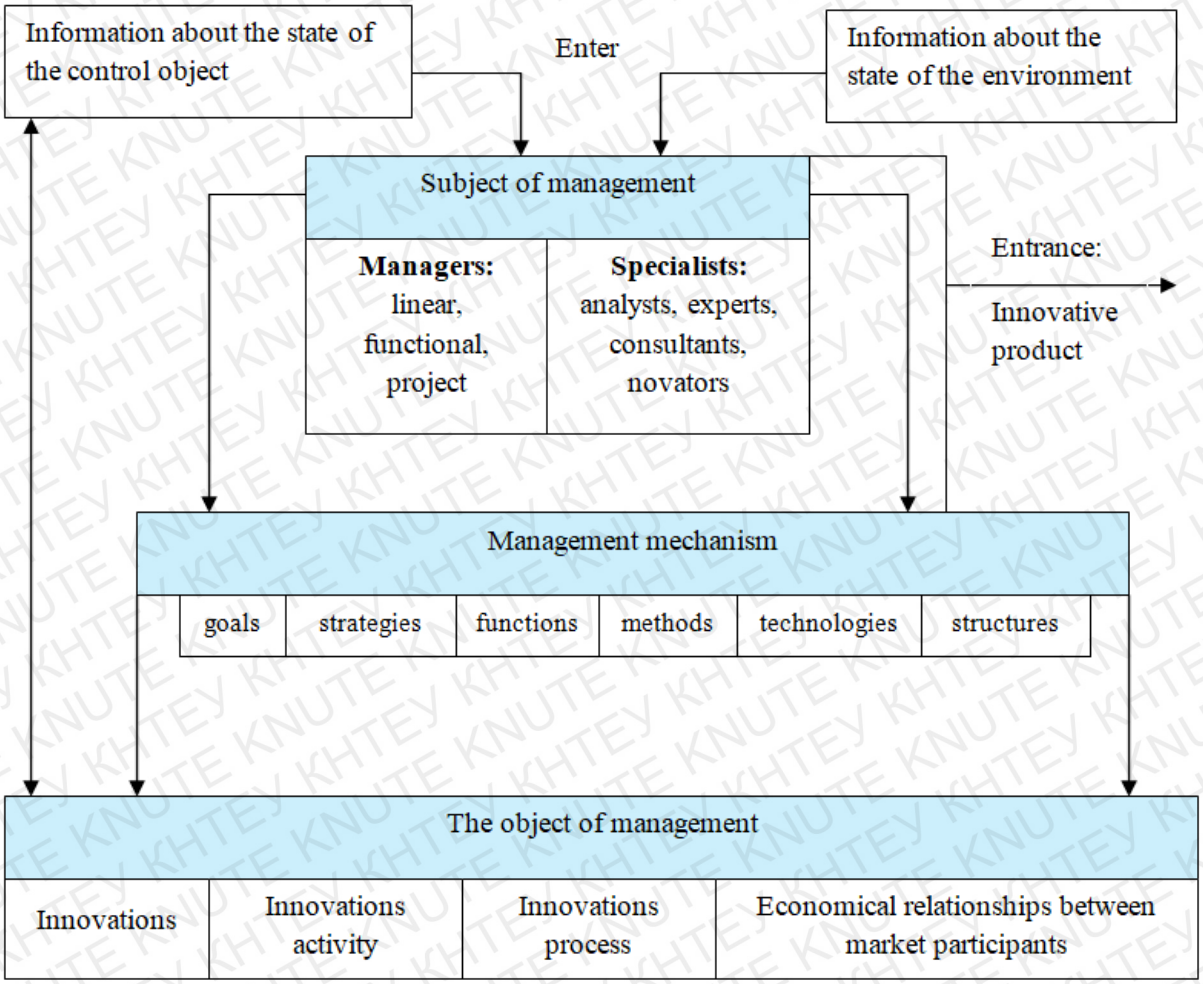

Fig.1.2 Innovative management as a system of innovation management:

APPENDIX G

List of methods to evaluate the effectiveness of managing innovations at the enterprise.

Number	Methods name	Brief characteristics of the method
1	Analysis of frequency and frequency levels of innovation flow	Analysis of changing of consecutive innovation
2	Analysis of the force field of innovation	Analysis of the driving and braking forces of the innovation field
3	Analysis of innovation life cycle	The course of innovation of a certain quality in time.
4	ARIZ-85C	Contradiction, the algorithm of creative problem solving, technical evolution laws
5	Balanced Scorecard	System of balanced indicators of business performance. Interconnection of strategy and operational management
6	Benchmarking	Comparisons and benchmarking of business performance
7	Bisociation	Linking previously mentally separate dimensions (perspectives)
8	Brainstorming	The group search for the greatest possible number of ideas (without rating)
9	CREAX	Contradiction, self-experience + using other methods of contradictions
10	Delphi method	Anonymous questioning of experts and the search for a consensus of opinion on the issue
11	Value analysis	Functional and value view of the problem
12	Inverse value analysis	How differently and better utilize existing function (property) of the object
13	Method of genetic algorithms	Use of the principle of an evolutionary algorithm to solve the problem (finding new innovations)
14	Mind map	Graphical mapping of the human thought process during problem-solving
15	Monitoring social networking and Internet diaries	Systematization and facilitating work with information from electronic networks
16	Six hats method	Parallel thinking in six different roles
17	Value Stream	Mapping Method of visual mapping the value flow in the product manufacturing from its concept to the hands of the customer

List of methods designed based on material created by Ladislav Ludvík and Jindra Peterková

APPENDIX H

VAIC calculation method for determining the impact of intellectual capital on company performance

The intellectual value added coefficient allows companies to determine the contribution to the added value, on the one hand, of tangible assets, and on the other hand, intangible assets. The better the company uses its potential, the higher the intellectual value-added coefficient of this company.

The coefficient formula is as follows:

$$VAIC = HCE + SCE + CEE$$

where: HCE - shows how efficiently human capital is used, in other words, the contribution of human capital to value added. Equal to the ratio of value added and labor costs; SCE - shows how efficiently organizational capital is used, in other words, the contribution of organizational capital to value added. It is equal to the ratio of value added minus human capital and value added; CEE - shows how efficiently the involved capital or the contribution of the involved capital to the added value is used. It is determined by dividing the value added by the invested capital.

Value added can be obtained as the difference between revenue and material costs, excluding labor costs. However, many researchers cite the assessment of intellectual capital as a result of the following six steps:

1. The added value of the company is calculated.

$$VA = R + DD + T + EC + D + A$$

Where: VA - value added; Output - total income; Input- the cost of the purchased material, service; R - retained earnings; DD Dividends T-taxes; EC - the total cost of workers; D + A - depreciation and amortization.

2. The effectiveness of human capital is calculated.

According to this methodology, human capital can be calculated as “labor costs”.

$$HCE = VA / HC$$

Where: HCE - human capital efficiency; VA - value added; NS - human capital.

3. The effectiveness of structural capital is calculated. The value of structural capital is determined:

$$SC = VA - HC$$

Where: SC - structural capital; VA - value added; NS - human capital. SC and HC are inversely proportional to VA.

Next, we determine the effectiveness of structural capital:

$$SCE = SC / VA$$

Where: SCE - structural capital efficiency; SC - structural capital; VA - value added.

4. The effectiveness of intellectual capital is calculated.

The effectiveness of intellectual capital is obtained by summing the effectiveness of human and the effectiveness of structural capital:

$$ICE = HCE + SCE.$$

5. The effectiveness of the capital employed is calculated.

$$CEE = VA / CE$$

Where: CEE - capital efficiency; VA - value added; CE - investment capital.

6. Calculated by VAIC:

$$VAIC = ICE + CEE.$$