



Information and Innovation Technologies in Economics and Administration

edited by Olena Chukurna
and Magdalena Gawron-Łapuszek

**Series of monographs Faculty
of Architecture, Civil Engineering
and Applied Arts**

Katowice School of Technology

Monograph 27

Wydawnictwo Wyższej Szkoły Technicznej w Katowicach, 2019



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1.3. Development of creative abilities of the managers as a factor of increase the commodities' sales on the market

Today, the issue of competence and qualitative training of specialists in various industries becomes urgent, since the requirements for them must meet the fast pace of human development. Therefore, regardless of the branch of the enterprise, the professional standard of personnel development is the formation of a special category of employees – innovative employees. It cannot be denied that in the conditions of introduction of total automation of production and improvement of technologies, formation of a qualitatively new category of workers creates the basis for the growth of labor productivity, and hence the expansion of competitive advantages of the enterprise. Therefore, raising the level of education and awareness, practical experience and abilities of the modern worker has a significant impact on the functioning of not only the individual entity, but also the state's economy as a whole.

Society in the XXI century getting more often called the "knowledge civilization", so a new generation manager is becoming a very important factor in ensuring the successful socio-economic development of Ukrainian enterprises. Current management trends require significant changes in the preparation of future managers, the introduction of such forms of professional training that would promote personal and professional self-development, self-improvement the formation of skills to creatively solve any managerial tasks. The demand for creative personality, able to master and introduce creative style in management activity, is quite high. Creativity is supposed to be one of the important personal qualities that a candidate for a particular job should possess.

Creative potential does not arise spontaneously, but is purposefully formed during the creation and development of enterprises. It is obvious that even in organizations where strategies of creative and innovative development are not implemented, there are carriers of creative potential.

Problems of creativity are revealed in the writings of such domestic psychologists and sociologists who have made a significant contribution to management: Ya. A. Ponomaryov, D. B. Bogoyavlenskaya, R. M. Granovskaya, V. M Druzhinin, L. B. Ermolaeva-Tomina, V. M Kozlenko and others, as well as foreign scientists J. Guilford, E. Torrance, D. Taylor, M. Boden, Ege. De Bono et al. Questions of the motivational component of the creative personality were dealt with by D. B. Bogoyavlenskaya, M. U. Kuprina, A. Maslow.

In addition, the issues of creativity in the decision-making process were paid attention by such leading domestic and foreign scientists as G. I. Vanyurikhin, A. D. Dvoskin, O. E. Kuzmin, A. Yu. Maniushis, A. Patyurel, I. I. Svidruk, V. D. Smolyaninov, V. K. Tarasov, D. Yu. Khomutsky, A. V. Shevirev. Among the foreign researchers of creativity in management are Alan J. Rowe, Edward de Bono, Michael Mikalko, Robert Dilts.

Considering the concept of creativity, that it comes from the lat. Creatio is creation and means the total capacity for creativity and transformation that characterizes the individual as a whole. Appears in various spheres of activity, is considered as a relatively independent factor of talent.³⁶

Creativity is a process of overcoming backwardness in thinking, feeling and communication. The creative person is always more tolerant of others: she is ready to admit that her habitual

³⁶ Kovalenko T. M. Creativity and creativity – traits of future specialists in higher economic education / T. M. Kovalenko // Bulletin of NTUU "KPI". Philosophy. Psychology. Pedagogy: Coll. Sciences. Ave. – 2009. – No. 3 (27). – Part 2. – P. 35-41.

behavior may not be the best, but it is accepted by virtue of habit; because each person lives in his world and sees this world in his own way, not in the way dictated by those around him.³⁷

Guilford: "Creativity is a process of divergent thinking". It is interesting to note that most scientific psychological schools of the early XX century (structuralism, functionalism, and behaviorism) practically did not develop any new ideas useful for the study of creativity. Gestalt psychologists analyzed the component of creativity – intuitive understanding, but their study almost went beyond the definitions and mechanisms of intuition; the nature of intuition of Gestalt psychologists was not interested.³⁸

J. Guilford identified six dimensions of creativity:

- 1) ability to identify and pose problems;
- 2) the ability to generate a large number of ideas;
- 3) flexibility – the ability to produce different ideas;
- 4) originality – the ability to respond outside the box;
- 5) the ability to refine the object by adding details;
- 6) the ability to solve problems, that is, to analyze achievements and synthesis.³⁹

So creativity is the ability to respond adaptively to the need for new approaches and products. This ability also allows us to be aware of what is new in being, although the process itself can be both conscious and unconscious; the ability to generate unusual ideas, deviate from traditional thinking patterns, and quickly resolve problematic situations.

Creativity – creative abilities that can manifest in the thinking, feelings, communication and characterize both the personality as a whole and the product of the activity of that personality.⁴⁰

The effectiveness of any enterprise depends on how its main components interact and how each of them affects the others. Among the main elements of enterprise management that have an impact on its quality are the following: manpower (personnel), processes and production technology. Therefore, to evaluate the quality of the management system, it is advisable to consider and analyze the components of the managed and control subsystems.

A schematic representation of the overall process of functioning of the enterprise as an open system is shown in Fig. 1.

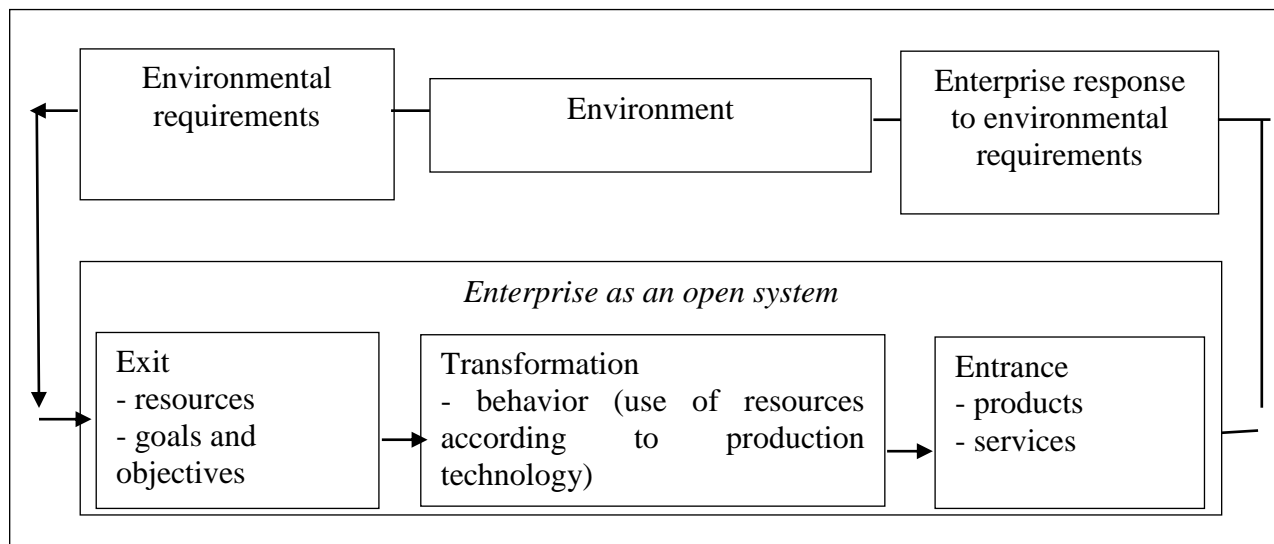


Fig. 1. The process of functioning of the enterprise as an open system

³⁷ Shurucht S. M. Adolescence: the development of creativity, self-awareness, emotions, communication and responsibility. – St. Petersburg: Language, 2006. 1, p. 87.

³⁸ Okorsky V. P. Creative management: textbook. tool. / V. P. Okorsky, A. M. Valyukh. – Exactly: NSUPP, 2011. – 211 p.

³⁹ Guilford J. Structural Model of Intelligence // Psychology of Thinking. – M.: Progress, 1965.

⁴⁰ Razumnikova O. M. Personality and cognitive properties in the experimental determination of the level of creativity / O. M. Razumnikov, O. S. Shevelin // Questions of Psychology, 1999, № 5.

Obviously, the enterprise acts as the only mechanism that has input means of transformation and output. In doing so, the company interacts with the external environment, carries out the process of functioning and transforms the available resources into products and services. The biggest influence among other factors is the organization of management at the enterprises, the functional features of which include control over production technology and support of management processes. Clear balancing of management components contributes to the process of normal functioning and stable development of enterprises.

It is important that the model of product development and marketing is feedback. The market is changing, new competitors are emerging, the strategy of the old is changing and users are changing and so on. Therefore, the marketing team should monitor the changes, adjust the marketing strategy, take some tactical steps⁴¹

Management of creative potential is a specific function of management, which is realized through common functions (planning, organizing, motivating, controlling and regulating). This function is based on a specific management object, namely creative potential. In order to ensure the expanded reproduction of creative potential, that is, to achieve its growth, management of the creative potential should start as soon as the enterprise is created. Thus, the results of the realization of the function of planning of creative potential during the creation of the enterprise is: forming the concept of creative and innovative development of the organization; development of the charter of the enterprise, definition of its creative mission, role of carriers of potential in its execution, prediction of types of activity of the enterprise and their place in realization of the concept of creative and innovative development of the enterprise; creation of a business plan for the implementation of a creative and innovative concept of enterprise development, its feasibility study, etc.⁴²

At any stage of creative potential formation, an important function of management is the function of motivation. Its essence is to make the subjects of the management subsystem of controlled influence on the subjects in order to obtain the expected results of the enterprise and compliance with the rules of employment. A characteristic feature of motivation is that motivation methods are based on the needs of management.

At the stage of creation of the enterprise the control function also plays an important role in managing the formation of creative potential. Its essence is to identify the deviations of the actual values of the indicators that characterize the current state of the management object from their the expected results. In this case, excessive control discourages controlled entities.⁴³ Already proven is the fact that excessive control discourages controlled entities.

The final function of managing the formation of creative potential at the stage of organization creation is regulation. It means the elimination of deviations of the actual values of the indicators that characterize the object of management from the expected values, namely, the elimination of the causes of delays in the enterprise registration and licensing procedures, as well as regulating the actions of the founders of the enterprise responsible for the preparation and implementation of the founding documentation.

During the creation of an enterprise the leading influence on its creative potential is manifested in the creation of the concept, business plan and feasibility study of the formation and

⁴¹ O. Solomenko Benchmarking as a marketing tool for improving business processes / O. E. Solomenko, O. A. Vinogradov // Management and marketing. Bulletin of Economics of Transport and Industry № 35. – 2011. – P. 230-234.

⁴² Khartiy O. M. Development of creative potential in future managers of the organization / O. M. Kharty. [Electronic resource]. – Available from <http://www.dissert.com.ua>.

⁴³ Prince S. V. Creative Management: Educ. manual / O. E. Kuzmin, S. V. Prince, I. V. Litvin, D. K. Zinkevich – Lviv: Ed. Center of Lviv Polytechnic National University, 2010. – 124 p.

realization of creative potential, as well as in the specification of quantitative and qualitative requirements for the carriers of creative potential.⁴⁴

The logical continuation of creative potential planning is the organization of the activities of the subjects of creative activity in the implementation of plans, developed budgets. The execution of this function by the managers of the enterprise, as a rule, boils down to: implementation of the organizational structure of enterprise management, in particular the management of creative potential; the division of functions and powers between the subjects of creative activity; creating and implementing rules and procedures; bringing to the subordinates and explaining to them their duties and powers, etc.

The dynamic of modern socio-economic conditions puts ever more demands on the personality of the manager and the basic principles of his activity. This concerns both the level of his professional competence and the development of personal qualities, which enable him to perform managerial tasks promptly and effectively. First, it is about creative potential, which plays an essential role in the activity of the manager and requires some efforts for its development in the conditions of vocational training.⁴⁵

The transformation processes taking place in Ukraine today require managers of all levels and branches of competent and reflective management of the creative and innovative potential of enterprises, organizations and institutions.

Ability to think creatively, prove and defend their opinions, implement innovative motivational activities, ability to use creative methods in their professional activity⁴⁶

Creativity in management is needed, above all, for the production of ideas and projects, while the main task of innovation potential is not to create a new one (not everyone can, and does not always need to invent something new), but to not to hinder innovations, nor to hinder their implementation. Innovative potential at the personal level will be interpreted as openness to restructuring, readiness for a new one, and at the organizational level – loyalty of management or staff to the implementation of innovations of different types, which provides an organization with the opportunity to develop and adapt quickly. Therefore, the peculiarity of the manager's activity is that he, on the one hand, must be a creative, creative personality, and on the other, equally important is his ability to support and direct the creative efforts of subordinates, to manage the creative and innovative potential of the organization.

Creative potential does not arise spontaneously, but is purposefully formed during the creation and development of enterprises. It is obvious that even in organizations where strategies of creative and innovative development are not implemented, there are carriers of creative potential. In these organizations the creative potential can be successfully realized, however, this realization depends entirely on the subjective factors, in particular on the visions, desires, beliefs of the managers of the enterprises. Creative ideas are often not perceived, especially those that require considerable effort, financial and other risks, donations to established supply, production and marketing schemes, and more. As a consequence, in such organizations creative potential is rarely realized and even less likely to grow. To ensure that creative potential is reproduced and enhanced, it must be managed. In Fig. 2 shows a graphical model of the formation and consequences of the realization of creative potential in the stages of creation and operation of the enterprise.

⁴⁴ Todorova I. S., Bulchenko D. V. Development of creative and innovative potential of future managers. Psychology and personality. 2017. No. 1 (11). – P. 258-265.

⁴⁵ Dzekun Y. Development of creative potential of future managers The origins of pedagogical skill. 2014. Issue 14. P. 63-67.

⁴⁶ Todorova I. S., Bulchenko D. V. Development of creative and innovative potential of future managers. Psychology and personality. 2017. No. 1 (11). – P. 258-265.

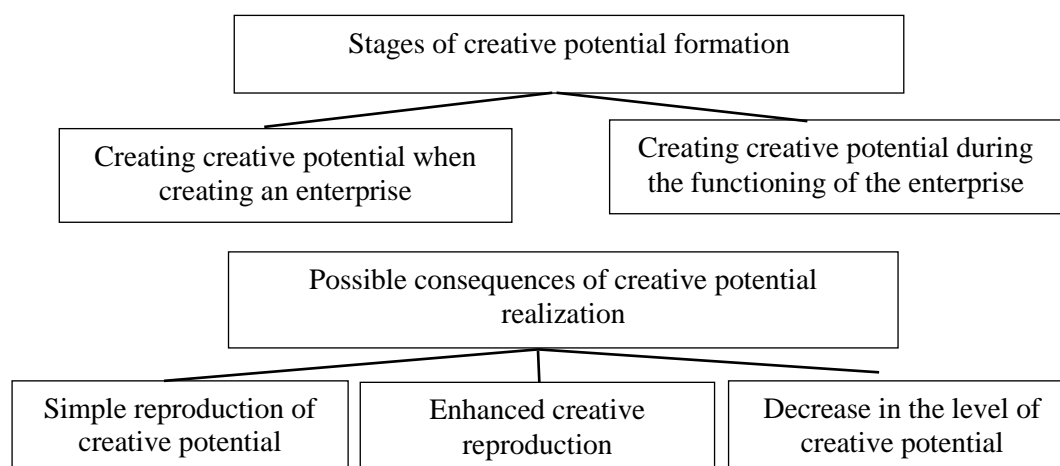


Fig. 2. Model of formation and consequences of realization of creative potential at the stages of creation and functioning of the enterprise

During the creation of the enterprise the leading influence on its creative potential is manifested in the creation of the concept, business plan and feasibility study of the formation and realization of creative potential, as well as in the specification of quantitative and qualitative requirements for the carriers of creative potential.

The logical continuation of planning for creative potential is to organize the activities of creative entities (carriers of creative potential) to implement the plans, in particular the budgets developed. The execution of this function by the managers of the enterprise, as a rule, boils down to: implementation of the organizational structure of enterprise management, in particular the management of creative potential; the division of functions and powers between the subjects of creative activity; creating and implementing rules and procedures; bringing to the subordinates and explaining to them their duties and powers, etc.

The creative potential of an enterprise is a set of possibilities for generating creative ideas, as well as developing non-traditional methods of solving production and economic problems. This potential is formed not spontaneously, but because of the deliberate influence of the heads of the organization on the carriers of creative potential. Creative management is a specific management function that is implemented through general management functions.

Innovative development of the economy of the country is impossible without the formation of quality competitive management personnel and the efficiency of its use. In the context of market transformations, the priority is given to the development of innovative activities, which require new progressive knowledge, skills and high professional skills. The basis of innovative enterprise development is the use of innovative labor, which is a labor activity with a high proportion of knowledge, intellectual, creative components, which is able to meet social needs with greater beneficial effect.⁴⁷

Currently, scientists and practitioners agree that one of the most important mechanisms that ensure the effective functioning of any enterprise and promote it in the market of domestic and foreign works and services is its competitiveness, as a continuous element of the process of formation and implementation of strategic management at an enterprise that reflects future prospects. A characteristic feature of the last five to seven years is the significant growth in strategic activity of enterprises, resulting in the development of any planning documents for each enterprise to increase competitiveness. However, the analysis shows that it is not necessary to talk about the formation of a full-fledged effective system of competitiveness management in any

⁴⁷ Khristenko O. V. Application of benchmarking in enterprise management system / O. V. Khristenko, S. A. Manshos // Financial Space No. 1 (29). – 2018. – P. 153-158.

enterprise. The main disadvantages include the low level of scientific substantiation and methodology of planned development, the imperfection of mechanisms for their implementation.

There is a need to improve the quality and effectiveness of work in the formulation and implementation of development strategies and programs to improve the competitiveness of enterprises in the market. The main areas of improvement of strategic management should include a significant increase in the responsibility of enterprises for achieving the end results. In these circumstances, the problem of improving the methods and methods of management at the enterprise is increasing. One of the promising areas of this task is to expand the practice of using corporate management techniques in the activity of enterprises, one of which is benchmarking. At the present stage of economic development, there is an urgent need for a systematic approach to the process of improving strategic management in an enterprise, which is explained by the large number of enterprises that are constantly competing with each other, but only those who reach the "higher level" survive.

"Bench" – height, level, "mark" – a mark, ie the name of the term "benchmarking" is interpreted as: "height mark", "reference mark", "comparison with the standard". Some scholars define benchmarking as a continuous process of matching products, services, and hands-on experience to the strongest competitors or firms that are recognized as industry leaders. However, such comparisons can and should be used not only between firms, enterprises, but also within the enterprises themselves, which will allow benchmarking to be calculated by the method of continuous improvement of activity of any kind and level by reference comparison. At the same time, the standard, as a conditional bar, cannot remain constant, it must correspond to changing external conditions and capabilities of the enterprise. That is why benchmarking is a tool for improving strategic management in the enterprise⁴⁸

Most experts are of the opinion that benchmarking is the constant study and implementation of management methods of others, successfully working with their help enterprises, by comparing with them after identifying the weaknesses of their enterprise. Yes, indeed, the process of comparing the results of major competitors is done by gathering information and comparing them, but benchmarking is a more efficient method than simply gathering information. This tool allows you to identify opportunities for self-improvement, identify objects of improvement and to stimulate the continuity of this process to increase the competitiveness of the enterprise.

In order to improve the process of strategic management at the enterprise and introduce the benchmarking methodology, we first need to understand who we should compare the enterprise with, and what to compare, ie, types of benchmarking (Fig. 3).

Internal benchmarking – a benchmarking process that is carried out within the enterprise itself, compares the characteristics of production units that are similar to similar processes. External benchmarking benchmarks are companies (products, services, processes) of global, national or regional level. Functional benchmarking – a comparison of a particular function of two or more enterprises in the same sector.⁴⁹

Comparisons in general benchmarking are businesses that are not within the scope of the enterprise concerned, however, they have useful experience in advertising, project implementation, IT, HR, management and planning, and other functions that not dependent on industry.

⁴⁸ O. Solomenko Benchmarking as a marketing tool for improving business processes / O. E. Solomenko, O. A. Vinogradov // Management and marketing. Bulletin of Economics of Transport and Industry № 35. – 2011. – P. 230-234.

⁴⁹ Khristenko O. V. Application of benchmarking in enterprise management system / O. V. Khristenko, S. A. Manshos // Financial Space No. 1 (29). – 2018. – P. 153-158.

Strategic benchmarking – ensuring long-term competitive advantage and strategic priorities. Process benchmarking is the activity of changing certain indicators and functionality to compare them with enterprises whose characteristics are impeccable in similar processes. So, we see that there are many types of benchmarking that an enterprise needs to apply, when practicable, effective strategic management at the same time.⁵⁰

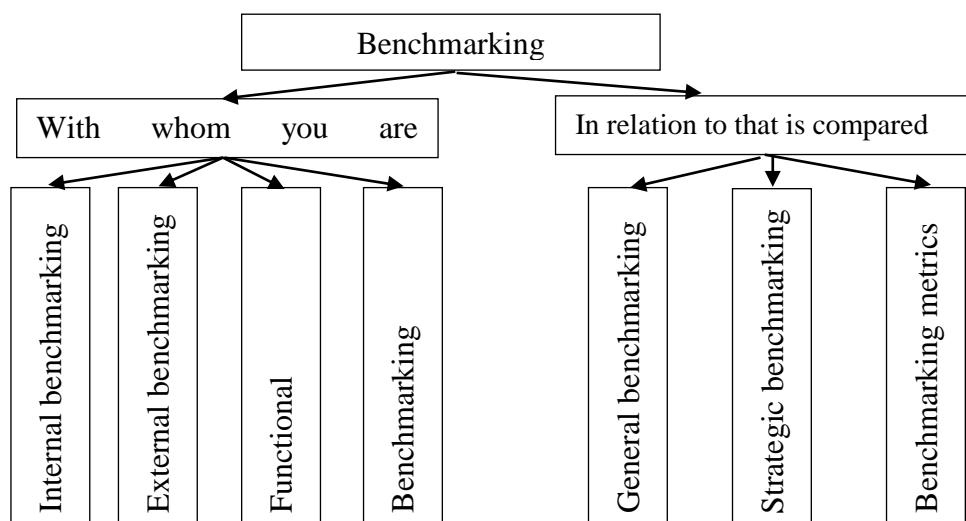


Fig. 3. Types of benchmarking

Success factors are the foundation of a successful benchmarking process: objective (hard) and subjective (soft).

With regard to the strategic management process at the enterprise, the content of these principles is as follows. Objective factors include: defining clear project boundaries; clear time planning; compliance with quality standards; taking into account budgetary constraints. Subjective factors include: a favorable climate for cooperation; result orientation (positive mood); interest; creative approach; recognizing the importance of quality; Entrepreneurship ethics (benchmarking or it is also called over-analysis is not industrial espionage). The concept of benchmarking is an auxiliary tool for gathering the information that an enterprise needs in order to constantly improve productivity, quality and be ahead of competitors⁵¹

With regard to the internal functions of strategic enterprise management, activity and experience, they are defined by the following objectives:

- to determine the best results;
- analyze your work;
- identify deficiencies in functioning;
- eliminate weaknesses;
- to create motivation for continuous improvement.

Excess analysis applies to products, services, functions, strategies, processes, etc. The object of study is determined by the enterprise itself and its employees. When it comes to strategic issues, you need to find out which factors are most important to realize your competitive advantage, set measurement criteria that describe those factors, and highlight the companies that

⁵⁰ Antonova I. V. Benchmarking as a tool for improving the competitiveness of enterprises in the market / I. V. Antonova // Bulletin of the Eastern European University of Economics and Management. Issue 2 (19). – 2015 – pp. 135-143.

⁵¹ O. Solomenko Benchmarking as a marketing tool for improving business processes / O. E. Solomenko, O. A. Vinogradov // Management and marketing. Bulletin of Economics of Transport and Industry № 35. – 2011. – P. 230-234.

achieve the best results in the sector, and then find the methods that lead for best results. Strategic enterprise competitiveness management using standard benchmarking can be represented by benchmarking models⁵²

In Fig. 4 shows the Benchmarking Wheel, which consists of a number of steps: planning, searching, observing, analyzing, adapting.

As can be seen from the figure, the first stage of the process of strategic management of enterprise competitiveness on the basis of the "Benchmarking Wheel" model is planning, which aims at determining the critical success factors, selecting the benchmarking process, documenting the process, developing indicators. In the second stage – search – the choice of partners for benchmarking is made. Understanding and documenting the partner process in terms of performance and practice is carried out in the third stage of benchmarking – observation. Identification of "gaps" in the indicators and finding their root causes is in the fourth stage of benchmarking – analysis. Choosing best practice for the process, adapting it to your business environment, implementing change, this is the final stage – adaptation⁵³.

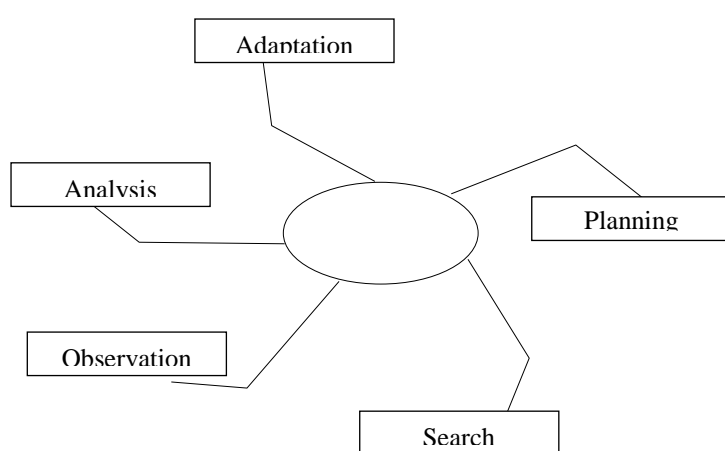


Fig. 4. Benchmarking Wheel Model

The basis of competitiveness of an enterprise in an external market environment shapes the competitiveness of its products, which characterizes its ability to satisfy better than competitors, the needs of consumers, offering them unique properties of products and optimal value for money. The second level in the hierarchical model of enterprise competitiveness is brand competitiveness, which shapes the ability to counteract competitors and attract consumers on a long-term basis. Competitive products are a prerequisite for the formation of competitive advantages of the brand (brand) and in the process of managing the competitiveness of the brand, marketing occupies a decisive place, namely – the enterprise policy in the field of advertising, communications, image formation and branding⁵⁴.

⁵² Antonova I. V. Benchmarking as a tool for improving the competitiveness of enterprises in the market / I. V. Antonova // Bulletin of the Eastern European University of Economics and Management. Issue 2 (19). – 2015 – pp. 135-143.

⁵³ Khristenko O. V. Application of benchmarking in enterprise management system / O. V. Khristenko, S. A. Manshos // Financial Space No. 1 (29). – 2018. – P. 153-158.

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References:

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4. Khartiy O. M. Development of creative potential in future managers of the organization / O. M. Kharty. [Electronic resource]. – Available from <http://www.dissert.com.ua>.
5. Khristenko O. V. Application of benchmarking in enterprise management system / O. V. Khristenko, S. A. Manshos // Financial Space No. 1 (29). – 2018. – P. 153-158.
6. Kovalenko T. M. Creativity and creativity – traits of future specialists in higher economic education / T. M. Kovalenko // Bulletin of NTUU "KPI". Philosophy. Psychology. Pedagogy: Coll. Sciences. Ave. – 2009. – No. 3 (27). – Part 2. – P. 35-41.
7. O. Solomenko Benchmarking as a marketing tool for improving business processes / O. E. Solomenko, O. A. Vinogradov // Management and marketing. Bulletin of Economics of Transport and Industry № 35. – 2011. – P. 230-234.
8. Okorsky V. P. Creative management: textbook. tool. / V. P. Okorsky, A. M. Valyukh. – Exactly: NSUPP, 2011. – 211 p.
9. Prince S. V. Creative Management: Educ. manual / O. E. Kuzmin, S. V. Prince, I. V. Litvin, D. K. Zinkevich – Lviv: Ed. Center of Lviv Polytechnic National University, 2010. – 124 p.
10. Razumnikova O. M. Personality and cognitive properties in the experimental determination of the level of creativity / O. M. Razumnikov, O. S. Shevelin // Questions of Psychology, 1999, № 5.
11. Shurucht S. M. Adolescence: the development of creativity, self-awareness, emotions, communication and responsibility. – St. Petersburg: Language, 2006. 1, p. 87.
12. Todorova I. S. Bulchenko D. V. Development of creative and innovative potential of future managers. Psychology and personality. 2017. No. 1 (11). – P. 258-265.

Annotation

Part 1. Information Component of Innovative Management of Enterprise and State Economy

1.1. Pavlo Horyslavets, Nazar Dobosh. Formation of investment portfolios by Ukrainian non-life insurers.

The purpose of this research is to study specific features of Ukrainian insurance companies' activity as compared with the EU insurance market, review its trends and patterns and develop recommendations to improve investment policy of Ukrainian non-life insurers. It has been proved that structure of a company's investment portfolio depends substantially on internal factors generated by insurer's specific features, as well as external factors, i.e. conditions of government regulation of assets' quality and diversity, situation on financial markets and characteristics of investment instruments. Recommendations on improving insurers' investment portfolios have been developed taking into consideration "bottlenecks" of insurance business.

1.2. Artem Kazarian, Khrystyna Beregovska, Vasyl Teslyuk. Data analysis model and forms of cloud analytical functions for "smart" house systems.

The paper considers the principles of information analysis in the context of "smart home" systems and propose architectural solutions that can be applied in such systems to ensure their scaling, performance and reliability.

1.3. Olha Khaietska. Development of creative abilities of the managers as a factor of increase the commodities' sales on the market.

The article deals with the essence of the concept of creativity, the means of implementing the management process, describes the forms and features of adaptation of personnel to the conditions of the production environment, investigates the mechanisms of making rational creative decisions and assessing the quality of the management process in enterprises. The proposed pathways have introduced creative strategies for selling products on the market for the effective development of the economy produced in markets established by groups of factors that significantly require the efficiency of enterprises.

1.4. Mykola Kravets, Inna Shramko. Using information technology in accounting of working hours workers of agricultural enterprises.

The specificity of agricultural enterprises influences on constantly monitoring the workers' working hours some categories, for example, milkmaids, cattlemen, field crews. Enterprises Dnipropetrovs'k region aimed at production of the most profitable crops of wheat, sunflower and meat products. However, the percentage of computerization business area is not great. For the organization of working time staff should recommend the introduction of electronic cards for employees as a means to automatically control of working hours, first, for a numerous category of workers pig and poultry farmers easier to organize points of access control on farms. Were studied the possibilities of information technology for accounting of working hours of employees of agricultural enterprises. Modern information technologies collect and

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Part 1. Information Component of Innovative Management of Enterprise and State Economy

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