



Ergodesign and “Specific”, "Measurable", "Achievable", "Relevant", and "Time-Bound" (SMART) Technologies as Tools for The Formation of Innovative Leadership Programs

Valery Vladimirovich Glushchenko*

Department of SAMRT Technologies and the Center for Project Activities, Moscow Polytechnic University,
Russia Federation

*Correspondence: E-mail: valery.v.glushchenko@gmail.com

ABSTRACTS

We studied ergodesign and “Specific”, "Measurable", "Achievable", "Relevant", and "Time-bound" (SMART) technology as tools for the formation of innovative leadership programs of organizations. The purpose of the article is to increase the effectiveness of the paradigm of innovative leadership of the organization in the process of transition of organizations to a new technological way. The article considers the following questions: clarification of the concept and content of ergodesign and SMART technologies in management, descriptions of the paradigm of innovative leadership of organizations in the conditions of formation of the 10th technological order, substantiation of promising directions of innovative leadership of Russian economic entities in the conditions of transition to a new technological order, and formation of an algorithm for designing innovative leadership of organizations based on the use of ergodesign and SMART technologies. Scientific methods in this article are ergodesign theory, management theory, SMART technology theory, goal setting, conceptual approach, and heuristic methods.

ARTICLE INFO

Article History:

Submitted/Received 29 Aug 2022

First revised 28 Sep 2022

Accepted 06 Oct 2022

First available online 07 Oct 2022

Publication date 01 Mar 2023

Keyword:

Approach,
Criterion,
Efficiency,
Ergodesign,
Innovation,
Leadership,
Methodology,
Organization,
Paradigm,
SMART technology,
SWOT analysis,
Tool.

1. INTRODUCTION

The relevance of this article is related to the fact that the global economy faces the task of transitioning to functioning in a new technological order. In the process of such a transition, it is necessary to increase the pace of socio-economic development with a simultaneous increase in the level of technological development of economic entities in the context of the ongoing scientific and technological revolution and the global crisis, accompanied by the expansion of the regime of international sanctions against several countries. The national economy, regional economy, corporations, clusters, technology platforms, and enterprises can be considered subjects of the economy.

We hypothesized that when developing the concept of innovative leadership of economic entities, a "Specific", "Measurable", "Achievable", "Relevant", and "Time-bound" (SMART) technological approach can be effectively applied, the application of which will allow synthesizing the methodology for developing such a concept of innovative leadership of an economic entity in the conditions of transition to a new 10th technological order and determining the criteria for the effectiveness of such a concept.

The purpose of the article is to increase the effectiveness of the concept of innovative leadership in the process of the transition of an economic entity to a new technological order by forming a methodology and determining criteria for evaluating the effectiveness of the concept of innovative leadership based on a SMART technological approach.

To achieve this goal, the following issues are considered in the article:

- (i) Clarification of the concept and content of SMART technologies, concerning solving the problem of synthesis of the concept of innovative leadership of the subject of the economy.
- (ii) Definition of the concept of innovative leadership of an economic entity in the conditions of the formation of the 10th technological order.
- (iii) Substantiation of promising directions of innovative leadership of economic entities during the transition of the economy and society to a new technological order.
- (iv) Formation of an algorithm for designing innovative leadership of economic entities based on the use of SMART technologies.
- (v) Substantiation of criteria for evaluating the effectiveness of the concept of innovative leadership of an economic entity.

The object of consideration in the article is the competitiveness of an economic entity in the conditions of transition to a new technological order.

The subject of the article is the synthesis of methodology and justification of the criterion for evaluating the concept of innovative leadership of an economic entity based on the SMART approach in the conditions of the formation of a new technological order.

An analysis of the literature on the topic of the article revealed the following. Scientists investigate the essence and content of SMART technologies (Plotnikova, 2016). Experts analyze the prospects of using SMART technologies in production (Ivanenko, 2020). At the beginning of the 21st century, SMART technologies are used in higher education, urban development, the Internet of Things, and order management in small businesses (Litvinov & Koroleva, 2019). Practitioners use SWOT analysis to study product innovations in the industry (Soegoto, 2021). To increase business efficiency, new forms of doing business are being created. Scientists consider innovative leadership to be an important scientific and practical problem (Romanenko, 2015). Scientists consider it important to ensure the innovative behavior of organizations. Personnel policy can be considered an important condition for the development of innovations (Bolieva & Surkhaeva, 2017). The effectiveness of innovative

activity can be increased by creating innovative teams as groups of people united by one goal. Researchers believe that labor economics and staff motivation play an important role in innovation management (Glushchenko & Glushchenko, 2016). Experts believe that innovations can influence the stability of the country's monetary system (Glushchenko & Glushchenko, 2016). The complex nature of innovation activity leads to the need to form a conceptual approach in the field of innovation (Glushchenko & Glushchenko, 2019). Additionally, as a result of research, it was found that analyzing the mission, vision, and goals of an organization reduces the likelihood of a crisis of this organization (Glushchenko *et al.*, 2017); the quality of the goal can determine the success (or failure) of the organization's activities, it is believed that for companies that do not have clear goals, there are no favorable conditions and/or performance result. Ergodesign is actively used in production systems in 2022.

2. METHODS

Summing up, in the process of analyzing scientific publications, there was no description of the experience of joint use of ergodesign and intelligent technologies in the field of creating innovative leadership of organizations. This allows us to recognize the topic of this article as relevant.

3. RESULTS AND DISCUSSION

The paradigm of innovative leadership of organizations (technological platforms, clusters, corporations, etc.), we agree to call a system association: philosophy, ideology, and culture of the organization in the process of creating its innovative leadership programs. The formation of the paradigm of innovative leadership of an organization (economic entity) creates a systematic basis for the subsequent development of mission and vision, ideology, organizational culture, and policy, as well as strategies and tactics of innovative leadership of an economic entity.

The mission of innovative activity of an economic entity can be understood as: firstly, the main purpose of such activity of organizations (economic entity); secondly, the benefits that the innovative activity of this entity will bring to society (Glushchenko *et al.*, 2017). In the future, such a main goal of an organization's innovation activity can be the basis for the synthesis of a tree of goals for the innovation activity of a corporation, or firm. This makes it possible to apply ergodesign and SMART (SMART) technological approaches to the synthesis of the paradigm and programs of innovative activity of organizations. Such a joint application of ergodesign and SMART technologies can generate a synergistic effect, which can be expressed in increasing the efficiency of innovation activities.

Ergodesign, as a tool for the formation of the paradigm and innovative leadership programs of organizations, allows for the harmonization of the elements of the paradigm and innovative leadership programs. Such harmonization of the elements of the paradigm and innovative leadership programs reduces the risk of conflicts of these elements, for example, during the competition for resources. In addition, the use of ergodesign makes it possible to synthesize more harmonious products and processes of innovative activity of organizations. At the same time, the use of the ergodesign methodology makes it possible to improve the perception of innovation programs of organizations by interested parties in this activity.

At the beginning of the 21st century, SMART - a technological approach covers a complex of such technologies:

- (i) SMART technologies in management, in particular when setting and achieving business goals;
- (ii) SMART technologies in distance education;
- (iii) SMART technologies in the construction and operation of "smart" houses and more;

The analysis shows that the unifying principle of all these different types of technologies can be called the following factors: the use of advanced achievements of science and technology; the intellectual nature of technology, when there is a synthesis of new knowledge from already known; optimization of the final result of the organization's activities; reduction of resource consumption for the production of products (goods and services); minimization of environmental damage, etc.

The scientific direction, called SMART technology, in particular, includes a modern approach to setting working goals. Such a "smart" system for setting the goals of an organization's innovation activity allows, at the stage of setting goals for this activity of the firm, to summarize all the information available in this area, determine rational deadlines for individual work, assess the sufficiency of the available amount of resources, and make an informed decision on the distribution of tasks in such activities. Additionally, the SMART approach in management can include a SMART analysis of the mission and vision of the innovation activity of the subject.

At the same time, the SMART approach is considered a method of creating a thoroughly grounded, understandable goal (mission and vision). Such a SMART approach allows you to track the process of achieving the goal (mission fulfillment, implementation of the vision for the development of an innovative project). In this area of management, the SMART approach helps to decompose the goal into separate tasks (plan items). This, in turn, helps the organization to focus its efforts on specific actions. This approach contributes to achieving the desired result.

Each letter in the name "SMART" for this approach corresponds to the criterion for evaluating the quality of the goal set in innovation. As is known, the abbreviation "SMART" is an abbreviation of 5 criteria that correspond to a competently set goal. These criteria are: «Specific» means that the goal is accurately described (formulated); the term "Measurable" means that the goal is measurable; the word "Achievable" reflects the quality of the goal as "achievability of the goal"; the concept of "Relevant" characterizes the goal as relevant for the organization; the combination of the words "Time-bound" means that the goal of innovation activity is "tied" to a certain deadline.

The analysis shows that in addition to these properties listed above, the goal must meet the following requirements: clarity for personnel; the ability to motivate the organization's personnel ([Glushchenko et al., 2017](#)).

In addition, within the framework of SMART goal analysis, it is proposed to check the goals (from the graph tree of goals) for the presence of a logical connection of this goal: firstly, with the goals of a higher level (Logical connection with a hierarchically higher goal); with the goals of a lower hierarchical level (logical connection with the goals of the lower hierarchical level).

When analyzing, it should be taken into account that the higher-level goal (mission) has no connection with the goals that are missing in this case at an even higher level, and the lower-level goals have no logical connection with the missing goals of an even lower level.

The methodology of anti-crisis analysis of goals was described by several researchers ([Glushchenko et al., 2017](#)). The analysis of goals within the framework of the SMART approach can be performed in such a table, similar to **Table 1**. The columns in this table correspond to the goal numbers. Because the graph tree of the organization's innovation goals has a hierarchical nature, this will be reflected in the numbering of the goals.

In the goal number, the initial digit (or group of digits) reflects the hierarchical level of goals, and the second digit (or group of digits) reflects the ordinal number of the goal at a certain level of the hierarchy. The table rows correspond to the checked properties of the goals. At the intersection of the line, put (+) (logical 1) if a certain property of the goal is confirmed by an expert. Otherwise (if a certain property of the goal is not confirmed), a (-) (logical 0) is inserted at the intersection of the row and column. For those goals in the column (which correspond to these goals), there is at least one sign (-) (logical 0) that should be revised based on the results of a SMART analysis of the goals of innovation activity of an economic entity.

The SMART analysis shown in **Table 1** is the goals of innovation activity of an economic entity can be built for the goals of each hierarchical level in the graph tree of the organization's innovation goals.

Table 1. SMART analysis of the objectives of innovation activity of economic entities.

No	Goal numbers/Properties of goals	Goal No. 1	Goal No. 2.1	Goal No. 2.2
1.	«Specific» (the goal is accurately described)	+	-	+
2.	«Measurable» (the goal can be measured)	+	+	-
3.	Achievable (the goal can be achieved)	+	+	+
4.	«Relevant» (relevance of the goal)	+	+	+
5.	«Time-bound» (availability of the deadline for the completion of the goal)	+	+	+
6.	«clarity» (clarity of purpose for staff)	+	+	+
7.	«motivation» (the ability of the goal to motivate the organization's staff)	+	+	+
8.	«logical connection of the first type» (Logical connection with a hierarchically higher goal)	-	+	+
9.	«logical connection of the second type» (logical connection with the goals of the lower hierarchical level)	+	+	+

Such a SMART analysis of goals is quite versatile and can allow you to evaluate the quality of the goal in the complex of its properties. If there is a lack of individual qualities in the goal (see, for example, the intersection of the first row and the second column of **Table 1** in goal No. 2.1), the goal should be refined to such a quality that would ensure the necessary quality of the goal. In this hypothetical example, we are talking about the need to improve such quality as "Specific" (accuracy of the description of the goal) for goal 2.1, In addition, according to **Table 1**, it is necessary to improve the quality of "Measurable" (measurability of the goal) of innovation goal No. 2.2.

In addition to the MRI analysis of the goals of an organization's innovation activity, SMART analysis can also be carried out on the mission and vision of the organization's development based on the methodology reflected in the work ([Glushchenko et al., 2017](#)).

In addition to the self-analysis of the goals of an organization's innovation activity, a SMART analysis of the mission and vision of the development of innovation activity in the organization can be carried out based on the methodology reflected in the work ([Glushchenko et al., 2017](#)). In the process of SMART analysis of the mission of an organization's innovation activity, it can be recommended to check the following characteristics of this mission: the presence of a description of the public benefit of an innovation project; a description of a specific way to create this public benefit (the way to achieve the result); an extended way of interpreting the organization's activities in its mission (extended description of the activity); the absence of separation of the mission from the nature of the organization's activities (lack of excessive abstractness - lack of excessive abstractness) and more.

In the SMART analysis of the vision of the development of innovation activity of an economic entity, this article proposes to check: the presence of a description of the initial situation; a description of the final state of innovation activity in the organization (description of the final situation); compliance of such a vision with the concept of "scenario" (existence of a development scenario); the ability to cause the inspiration of the organization's staff (inspiration); the ability of vision to motivate the staff (the ability to motivate) and more. At the same time, the vision (as a scenario for the development of an organization's innovation activity) should represent a logical sequence of events that translates the current state of innovation activity into the future desired state (the future goal of innovation activity).

It should be borne in mind that the actual basis for setting the goals of innovation activity (presented in **Table 1**) of an organization can be the results of a SWOT analysis previously performed concerning an innovation project (or the entire activity of the organization). As you know, such a SWOT analysis of a project is a joint analysis of the state of the internal and external environment of an economic entity. The methodology of such a strategic analysis is the study and comparison with each other: the strengths (advantages of the organization); the opportunities provided by the external environment; dangers and threats from the external environment; weaknesses (shortcomings of the organization).

An example of such an analysis is presented in [\(Glushchenko & Glushchenko, 2019\)](#).

Based on the results of such an analysis, ergodesign can be used: firstly, to compensate for threats by using the strengths of the organization's activities; secondly, to reduce the influence of weaknesses in the process of using the development opportunities available to the organization.

The possibilities of the SMART approach should be used in the formation of the concept of innovative leadership of enterprises. The use of the SMART approach will reduce the existing practical shortcomings in this area in the interest of increasing the competitiveness of economic actors. One of the areas of application of the SMART approach for improving the efficiency of innovative activities of organizations can be considered public-private partnership in the formation of the concept of innovative leadership of organizations of the national economy. At the same time, the main organizational forms of innovative leadership development in the economy can be corporate and regional ecosystems, scientific and technological platforms, clusters, business incubators, etc.

The tasks and structure of the SMART- approach in the development of the mechanism of public-private partnership in the process of forming the concept of innovative leadership of organizations may include joint work on the formation of the mission, vision, goals, concept of innovative leadership strategies of key economic entities; work on optimizing the composition of participants and the architecture of public-private partnership; equity financing of development and implementation the concepts of innovative leadership of the organization in certain sectors of the economy; provision of state guarantees to participants of large-scale innovative projects; formation of pools of underwriters of securities issuance to finance the implementation of large ones; identification and analysis of organizational culture values that ensure innovative leadership, etc.

Within the framework of the SMART approach, such an algorithm for the synthesis of the concept of post-industrial innovative leadership of an economic entity can be proposed:

- (i) Search for potentially useful achievements of science and technology to meet human needs;
- (ii) Description of the essence of a person's need, which can be satisfied based on the use of a certain scientific and/or technological achievement;

- (iii) Study of the specifics and capacity of the market segment for which a new product (product or service) may be potentially interesting;
- (iv) Synthesis of the idea of an innovative project;
- (v) Formation of the concept of an innovative project, including the synthesis of philosophy, definition of the type (violence, patients, explorers, commutators) of the strategy and tactics of innovative leadership of a particular organization;
- (vi) Formation and selection of methodological techniques of ergodesign aimed at harmonizing the ratios of various elements of the innovation process;
- (vii) Synthesis and selection of smart management tools for innovative behavior of the organization's personnel;
- (viii) Joint use of ergodesign tools and smart technologies to improve the effectiveness of innovative programs of organizations;
- (ix) Implementation of the innovative project and the concept of innovative leadership of the organization;
- (x) Evaluation of the effectiveness of the concept of innovative leadership in the organization.

The use of such an algorithm for the execution of works will allow forming the concept of innovative leadership of economic entities using a SMART technological approach.

The tasks of innovative leaders are considered to be the constant search for new ideas and effective work aimed at their implementation. The features of the concept of innovative leadership in the implementation of innovative policies, strategies, and tactics are expressed in the performance of various groups of functions. At the same time, a SMART technological approach may be in demand. The complexity of the concept of innovative leadership leads to the need to study this concept from its different sides.

Under innovative leadership, it is permissible to understand the focus and ability of an organization to increase its competitiveness by designing more competitive and cost-effective products and services, systems for their distribution and promotion, and a more perfect organization of technical services for high-tech products.

The use of ergodesign in the formation of innovative leadership programs can make it possible to harmonize the elements of such a program to increase the effectiveness of its results.

At the same time, the SMART technological approach in substantiating the concept of innovative leadership can be applied in practice to select the types of innovative leadership in various areas of the organization.

Due to the active development of innovations and the acceleration of the pace of scientific and technological progress, an individual economic entity cannot ensure its innovative leadership in all technological directions of the development of a new technological order. Therefore, each economic entity should customize its innovation activities concerning its place in the international and national process of specialization and division of labor. The main directions of technological development in the period of the new technological order can be considered: nanotechnology; resource-saving technologies; neurotechnologies; environmentally friendly technologies; digitalization technologies and information technologies, SMART technologies, etc. At the same time, SMART technologies can be considered simultaneously from two points of view: firstly, as an integral direction of technological development in the period of a new technological order; secondly, as a managerial tool for influencing the process of technological development. In this article, SMART technologies are considered precisely as a management tool.

As elements of the concept of innovative leadership (or its element) can be considered: firstly, the choice of the philosophy of innovative leadership in certain sectors and/or following the catch-up philosophy of innovation in other sectors; secondly, we can talk about the choice of one of the types of innovative behavior. According to the types of innovative behavior, the following types of behavior are distinguished: violence, patients, explorative, and commutes. It can be assumed that the optimal concept of innovation activity of an economic entity is a systematic combination of all these types of innovative leadership of one organization in various areas of its innovation activity. At the same time, different types of innovation activity should first be differentiated, and then systematically combined into a single concept of innovation in the organization.

At the same time, these types of innovative activity (violence, patients, explorative, commutes) are associated with the forms of innovative behavior of the organization's personnel. With this approach, additional difficulties arise due to the existing uncertainty of the term "innovative behavior".

Therefore, we agree that in this article, under the innovative behavior of employees of an economic entity, we will call the interaction of employees with the external and internal environments of the organization in question surrounding them, including all managerial (decisions), executive, motor, communication activity and orientation of employees in the professional and social environment in the process of their innovative activity.

The features of innovative behavior have an impact on the permissibility and effectiveness of an employee's manifestation of an initiative in the field of innovation, the process, and nature of innovation, and the technical and financial results of the implementation of the concept of innovative leadership of this organization.

When forming the concept of innovative leadership, it is recommended to take into account that innovations represent the active self-consciousness of a group of employees or an individual employee, their awareness of their innovation initiative as a socially acceptable basis for their professional behavior and existence, a subjectively possible way of behavior in the organization.

The innovative behavior of an organization and its employees is based on the ability of employees to perceive, create, implement and support innovations; timely abandon outdated experience; creatively show their initiative in the field of innovation; support the initiatives of colleagues to transform the processes of the organization's production activities (Glushchenko & Glushchenko, 2019).

The innovator, as an employee of the organization, will be organizationally supported, and his innovative behavior will be positively supported in such situations: if the organizational culture of the organization considers the innovative behavior of the organization to be the value of this organization; the perception by the management of the organization of the innovative activity of team members as a key factor in ensuring the competitiveness of the organization in a new technological order; the presence of informal creative institutions, including managers and employees.

Ergodesign can be used to harmonize the complex application of various types of innovative behavior in an organization. In addition, ergodesign can be used to harmonize various elements of each specific type of innovative behavior.

To increase the activity of innovative behavior of employees of the organization, it can be proposed to build a system of personnel motivation in such organizations based on William Ouchi's Z-theory (Glushchenko & Glushchenko, 2016). At the same time, there is reason to believe that the type of innovative behavior of an employee (included in certain categories of the personnel structure, professional groups of employees) largely depends on such factors:

the existing methods of recruitment, selection, hiring of employees in this organization; the adopted personnel policy of the organization; the system of motivation of innovative activity of personnel; goals of innovative development of the organization, etc.

Economic entities, taking into account the concept of their innovative leadership, implement (customized) innovation processes related to their activities. At the same time, their innovative concepts differ in the degree of activity and style of behavior. Several classifications are known according to the types of innovative behavior ([Glushchenko & Glushchenko, 2019](#)). At the same time, the innovative behavior of the corporation's employees is studied as the process of introducing the innovative potential of the corporation's personnel. When forming the concept of innovation development, an analysis of the types of innovative behavior of large economic entities can be carried out, including based on their response to the development of a crisis in the market.

When forming the concept of innovative leadership of a firm, it is necessary to describe the philosophy of such leadership. This philosophy should become the basis for managing the type of innovative behavior of the organization as a whole. The classification of types of behavior (violence, patients, explorative, commutes) is reflected in ([Glushchenko & Glushchenko, 2019](#)).

Economic entities belonging to the category of "violence" prefer to introduce innovations "from top to bottom" using the power of the bureaucratic apparatus. These are firms that specialize in large-scale and mass production of goods and services. In the structure of this class of innovatively active organizations, the following types of behavior are distinguished: "proud lion", "mighty elephant", and "unwieldy behemoth".

Organizations that are engaged in patient (niche) innovation activities are characterized by a narrow specialization of innovation activities to meet the needs of a narrow segment of customers. They are called the "cunning foxes of the economy."

Firms' commutes (connectors) carry out their activities within the framework of small and medium-sized businesses within a certain region. Their innovative activities are aimed at meeting the needs of regional customers.

Innovation actors belonging to the category of "explorative (pioneers)" embody the philosophy of creating new customer needs, and new markets, conducting deep transformations of existing market segments. Explorers are pioneers in the development and practical implementation of inherently revolutionary innovative projects.

It can be assumed that the optimal from the point of view of the minimum costs for achieving a certain competitive position in the field of innovation will be the concept of innovative activity of the firm, which includes all these four types of innovative behavior, but in different, specific areas of its activity.

Within the framework of the SAMRT concept of innovation activity, the organization must determine the optimal ratio of all four types of innovative behavior of this organization, customized to the areas of activity of this organization. As part of the SMART approach to the formation of the concept of innovation activity, each organization must justify and decide to apply a certain type of innovative behavior in specific areas of its functioning (concerning certain groups of its business processes). Optimization of the concept of innovation activity is carried out based on a criterion that provides for minimizing the costs of innovation activity, provided that a certain competitive position of the organization is ensured among similar organizations.

A necessary condition for the effectiveness of a specific concept of innovative leadership of an organization, we will consider the correct ratio of the specifics of the market demand for innovations of a certain type and the capabilities of this organization in the field of

innovation. Each concept of innovative leadership of the company forms its philosophy, culture, policy, strategy, and tactics of innovative leadership of this organization. The choice of a specific type of innovative leadership concept for an organization is determined by several factors: the scale of the corporation's activities; the nature and ratio of the corporation's tangible and intangible assets; the nomenclature of manufactured mechanical engineering products; the type of market (most often oligopolistic); market conditions (industry, global, etc.); geopolitical and other risks, etc.

When forming the concept of innovative leadership of an organization, it is necessary to take into account such a factor as the position of an economic entity in a hierarchical technological pyramid. When forming the concept of innovative leadership of an organization, it is recommended to take into account the existence of such levels of the technological pyramid in the real economy:

- (i) at the highest (first) level of the technological pyramid, some organizations are engaged in the synthesis of new technological principles; the products of such organizations practically do not apply on the open market, they mainly take the form of intangible assets, in particular, patents, models, production methods, etc. (at this level of the technological hierarchy, innovations are aimed at the synthesis of new production concepts and technological principles);
- (ii) at the second level of the hierarchy in the technological pyramid there are economic entities that synthesize innovative technologies for the production of goods and services in the field of means of production based on conceptual developments (technological principles) and patents previously developed at the first level (at this level of the technological hierarchy, innovations are aimed at the synthesis of new and modernization of existing technologies);
- (iii) at the third level of the hierarchy in the pyramid under consideration are organizations that are engaged in the design and production (based on the results of the activities of organizations of the previous level) of material technological complexes for the production of consumer goods (at this level of the hierarchy, innovations are aimed at inventing new technical devices);
- (iv) at the fourth level of the technological pyramid, there are economic entities that, using the means of production created at the previous level, produce consumer goods (at this level, innovations aimed at improving production and manufactured products are the main ones);
- (v) at the fifth level of the technological pyramid, firms engaged in the extraction of raw materials and producing agricultural products are placed (at this level, innovations focused on improving technologies, means of extracting raw materials, and synthesis of new ways of growing agricultural products are most frequent).

SMART analysis of the types of innovative behavior should be aimed at establishing a correspondence between the goals and specifics of the company's innovative activity on the one hand and the practiced type of innovative behavior on the other hand. Such a SMART analysis can be based on procedures for comparing the characteristics of an organization's innovation activity and the characteristics of a certain type of behavior. For example, for companies on the first level of the technological pyramid, the most suitable is the explorative (pioneer) style of innovative behavior. For companies located at the second level of the technological pyramid, we can recommend a patient (niche) type of innovative behavior. For organizations located at the third and fourth levels of the technological pyramid, it is possible to suggest the use of a violent type of innovative behavior. For intermediary companies, a commutative type of innovative behavior is more suitable, and more.

When forming a criterion for evaluating the effectiveness of the innovation concept, it can be recommended to take into account the following indicators: the total net reduced effect (NPV) for all innovative projects implemented by the firm; the competitive position of the firm at its technological hierarchy level; the market share that belongs to this firm; the share of innovative products and others. Based on these indicators, a criterion for evaluating the effectiveness of the concept of innovation activity of an economic entity can be formed. In this context, the criterion for evaluating effectiveness is understood as the rule of choosing the best version of the concept from several possible variants of such a concept. When forming such a criterion, the task may be to maximize the total net reduced effect (NPV) for all innovative projects implemented by the company, provided that restrictions on other parameters are met. In this case, the optimization of the innovation activity concept can be carried out using the linear programming method.

4. CONCLUSION

The article explores and clarifies the concept of "the paradigm of innovative activity of the company". The paper proves that the joint use of ergodesign and SMART technologies can increase the effectiveness of innovative programs of organizations. The article examines the content of ergodesign and SMART technologies in the management of the process of formation of the concept of innovative activity of the company. The paper reflects the common features of SMART technologies from various fields of activity. Various elements of the concept of innovative activity of the organization are described. It is recommended to take into account the position of the organization within the "technological pyramid" in the real economy when forming the concept of innovative leadership. The role of public-private partnerships in the formation and implementation of the concept of innovative leadership of a certain economic entity is described. The paper proposes an algorithm for synthesizing the concept of innovative leadership of an economic entity in post-industrial conditions. The paper proposes an approach to the synthesis of criteria for evaluating the effectiveness of the concept of innovative leadership in the organization.

5. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. The authors confirmed that the paper was free of plagiarism.

6. REFERENCES

- Bolieva I. S. and Surkhaeva I. N. (2017). Priorities of modern innovation and personnel policy. *Kant*, 1(22), 106 -109.
- Glushchenko V. V. and Glushchenko I. I. (2016). Innovations as a structural element of the mechanism of monetary regulation in the economy. *Financial Law and Management*, 2, 104 – 117.
- Glushchenko V. V. and Glushchenko I. I. (2019). Formation of innovative leadership strategy of machine-building corporation. *Bulletin of Mechanical Engineering*, 7, 70-78.
- Glushchenko V. V., Glushchenko I.I., Vinokurova V.V., Ermolenko V.Yu., and Molostnov N.M. (2017). Anti-crisis analysis of mission, vision, goals of activity within the framework of the organization's crisis. *Youth Scientific Bulletin*, 5(17), 239-257.

- Ivanenko I.A. (2020). Prospects and effectiveness of smart technologies application in industry. *Information and computer technologies in the economy, education and social sphere*, 1(27), 27-34.
- Litvinov I.E. and Koroleva A. M. (2019). The impact of smart city technologies on urban development. *Economics and entrepreneurship*, 5(106), 497-500.
- Plotnikova L.A. (2016). The content and essence of smart technologies as a didactic concept. *Education and Self-Development*, 1(47), 20-23.
- Romanenko M. A. (2015). Leadership in the management of innovative projects and programs of enterprises. *Current issues of economic sciences*, 47, 64-68.
- Soegoto, F. A. (2021). Product Development using SWOT Analysis. *International Journal of Entrepreneurship and Technopreneur (INJETECH)*, 1, 1-10.