

## Modern innovative marketing technologies' practical tools analysis as a way to increase the high-technology enterprises' competitiveness

**Анализ практического инструментария современных инновационных маркетинговых технологий как способ повышения конкурентоспособности высокотехнологичных предприятий**

**Análisis de herramientas prácticas de tecnologías de marketing modernas e innovadoras como una forma de aumentar la competitividad de las empresas de alta tecnología.**

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### Abstract

The article is devoted to the features' study of the modern innovative technologies use in the marketing sphere, in order to establish the possibilities that allow modern industrial enterprises to increase their competitiveness level. The authors highlighted the theoretical and methodological foundations for modern innovative technologies application in the marketing sphere necessary for organizing the integrated management process of enterprise's competitiveness indicators. The key features incident to modern marketing of innovations are determined. The lateral marketing improvement directions as a methodology for marketing approaches development and implementation in the company's activities to increase its efficiency in the competitive market environment formation for the production and sale of goods in modern economic conditions are considered. The main innovative marketing complex components are highlighted. The issues related to research in the innovative products' marketing research field and forecasting the markets' development are considered. The role played by modern marketing research in the scenario planning mechanisms' development is determined. The factors that can have a significant impact on the industrial enterprises' innovative activity indicators are structured. At the end of the article, the authors concluded that the current economic development level makes it possible to define innovation as a unique asset capable of qualitatively influencing the modern industrial enterprises' competitiveness main indicators, which in turn will lead to the fundamentally new products, services and technologies emergence.

**Keywords:** enterprise's competitiveness, industrial innovation, marketing of innovations, novelty marketing, technologies in innovation.

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## Аннотация

Статья посвящена исследованию особенностей использования современных инновационных технологий в маркетинговой сфере с целью установления возможностей, позволяющих современным промышленным предприятиям повысить уровень своей конкурентоспособности. Авторами выделены теоретико-методологические основы применения современных инновационных технологий в маркетинговой сфере, необходимые для организации интегрированного процесса управления показателями конкурентоспособности предприятия. Определены ключевые особенности, присущие современному маркетингу инноваций. Рассмотрены направления совершенствования латерального маркетинга как методологии разработки и внедрения маркетинговых подходов в деятельность компании с целью повышения ее эффективности в условиях формирования конкурентной рыночной среды для производства и реализации товаров в современных экономических условиях. Выделены основные компоненты комплекса инновационного маркетинга. Рассмотрены вопросы, связанные с исследованиями в области маркетинговых исследований инновационной продукции и прогнозированием развития рынков сбыта. Определена роль современных маркетинговых исследований в развитии механизмов сценарного планирования. Структурированы факторы, которые могут оказать существенное влияние на показатели инновационной активности промышленных предприятий. В конце статьи авторы пришли к выводу, что современный уровень экономического развития позволяет определить инновацию как уникальный актив, способный качественно влиять на основные показатели конкурентоспособности современных промышленных предприятий, что в свою очередь приведет к появлению принципиально новых продуктов, услуг и технологий.

**Ключевые слова:** конкурентоспособность предприятия, маркетинг инноваций, маркетинг новизны, промышленные инновации, технологии в инновациях.

## Resumen

El artículo está dedicado al estudio de las características del uso de tecnologías innovadoras modernas en el ámbito del marketing con el fin de establecer oportunidades que permitan a las empresas industriales modernas mejorar su competitividad. Los autores destacaron los fundamentos teóricos y metodológicos para la aplicación de tecnologías modernas e innovadoras en el ámbito del marketing, necesarias para organizar un proceso integrado de gestión de los indicadores de competitividad empresarial. Se han identificado las características clave inherentes al marketing moderno de innovaciones. Se consideran las direcciones de mejora del marketing lateral como metodología para el desarrollo e implementación de enfoques de marketing en las actividades de la empresa con el fin de incrementar su eficiencia en la formación de un entorno de mercado competitivo para la producción y venta de bienes en condiciones económicas modernas. Se destacan los principales componentes del complejo de marketing innovador. Se consideran las cuestiones relacionadas con la investigación en el campo de la investigación de mercados de productos innovadores y la previsión del desarrollo de los mercados de ventas. Se determina el papel de la investigación de mercados moderna en el desarrollo de mecanismos de planificación de escenarios. Se estructuran los factores que pueden tener un impacto significativo en los indicadores de actividad innovadora de

las empresas industriales. Al final del artículo, los autores llegaron a la conclusión de que el nivel actual de desarrollo económico permite definir la innovación como un activo único que puede influir cualitativamente en los principales indicadores de competitividad de las empresas industriales modernas, lo que a su vez conducirá al surgimiento de productos, servicios y tecnologías fundamentalmente nuevos.

**Palabras clave:** competitividad empresarial, marketing de innovación, marketing de novedad, innovación industrial, tecnología en innovación.

## **Introduction**

The domestic and world economy development directly depends on what development stage the modern society is at. Currently, society is characterized by a significant increase in the degree of influence on it of various advanced and innovative technologies, as well as achievements' variety in the science field. World powers are successfully using various achievements in the high technologies field in order to achieve their economic, political and geopolitical goals.

Society has become more actively interested in the existing achievements in the high technologies field, which are then embodied in a variety of innovative goods and products. Ultimately, these goods' purchase and consumption by society contributes to the economy's development (Balashov, Lavrovskaya & Zheltenkov, 2014). To date, the main and most promising from an economic point of view direction for the high-tech innovations development in modern Russia are creating potential demand for various technological innovations, solving existing issues in the innovation, legal and personnel environment, and elements' modernization that make up the modern marketing complex.

These key mechanisms modernization ultimately forms the structural basis of marketing in the innovation field. Innovative marketing is necessary to establish the dependence degree, which can have two main factors on the market: the development level of scientific and technological progress (STP) and the existing needs of the innovations' end consumers. Then, modern innovative marketing can be understood as a certain type of enterprise's economic, financial, organizational and production activities, which is aimed not only at optimizing and increasing the current competitiveness level, but also at checking the enterprise for the possibility of fundamentally new and breakthrough technologies' timely introduction (Volod'ko, 2020).

## **Theoretical basis**

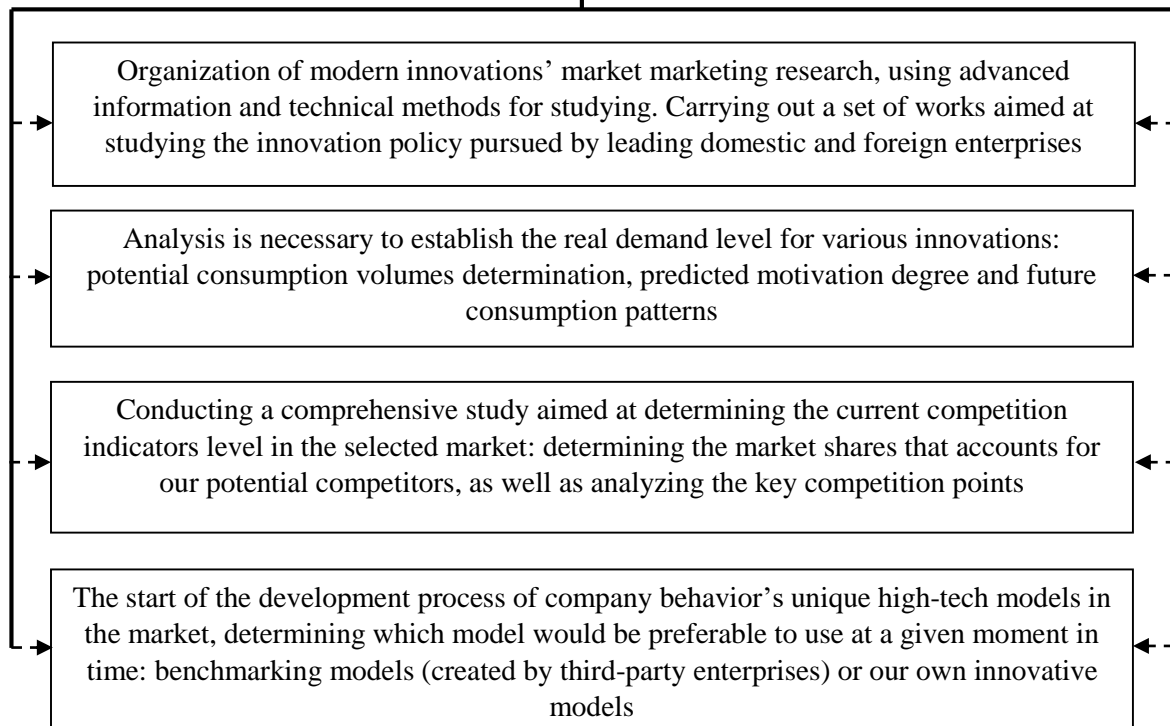
The growth of products' innovativeness, as a rule, is due to the homogeneity of the set of products and services provided on the market. As a result, companies try to create such a unique product or service that would be competitive. Unique new product's or service's creating issues is a rather complicated process and represents the implementation and improvement of the so-called lateral marketing, which is a new marketing development concept in the modern economy. According to F. Kotler, "lateral marketing is a method of searching for non-standard solutions that allow developing new products, finding new market niches and ultimately making a breakthrough in business" (Artamonova, 2016). The lateral marketing's essence is to search, on the marketing research basis, for a certain product or service that previously did not have a market niche

and were not in demand on the market by consumers. Lateral marketing methodology: an idea in the template form is laid in the innovative marketing basis in advance, which later becomes standard, and various ways of transforming it to improve the company's management efficiency as a whole. In this case, it is advisable to decide at the very beginning what needs to be changed and improved in a product or service in order to focus on the proposed idea implementation.

To date, a rather complicated social, economic and political situation has developed in the modern world, which in the most active way pushes domestic high-tech enterprises to the active and widespread introduction of various kinds of innovations in the marketing sphere. Modern marketing in the innovation field has the following distinctive features (Isakova, 2018):

1. There is a very long time period from the development process beginning to the actual use of the obtained high-tech products, and the results obtained from their use, as a rule, appear only in the future. Then the future product's competitiveness indicator will directly depend on the degree to which the direction of marketing research was correctly chosen, which was carried out during the period of scientific development work (D) (Zheltenkov & Yudin, 2017).
2. The final product's structural links composition also includes the product obtained as a result of the scientific and technical activities application, which means that when developing it, it is necessary to take into account the marketing efficiency degree, while the first product must take into account the currently existing marketing features that are inherent in the potential market. In other words, it is necessary to investigate in a detailed way the various changes that could occur in needs, not only in the final product, but also in the intellectual one. As a rule, marketing of a product of a scientific and technical type includes the collection process, as well as the subsequent analysis of the information received about its potential consumers' immediate area of work.
3. The inherent use value that is incident to any intellectual product is based on its unique ability to minimize labor and production costs. This means that marketing efforts complex should be aimed at analyzing and assessing this ability. Consequently, the intellectual product price level final indicator has a high dependence degree on how much labor costs have been optimized, than on the indicators of costs attributable to its direct development (Zheltenkov, Mottaeva & Kubrak, 2017).
4. The intellectual product has the ability to sell multiple times in different markets, to completely different end consumers, which means that distributing the created intellectual product method should be a priority task for its marketing company (Kuznetsov, Romanovskaya & Khraban, 2017).

**Structural mechanisms included in the innovative marketing complex**

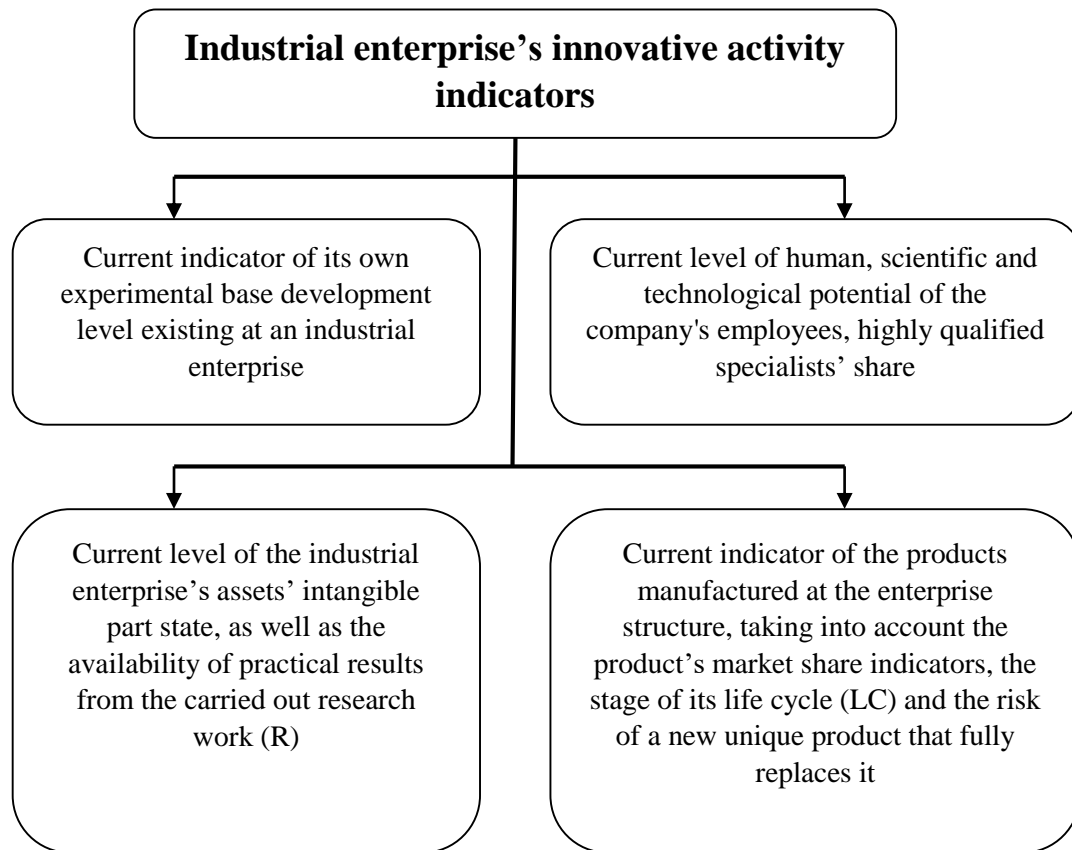


*Compiled by the authors, based on practical developments*

**Figure 1.** The main components included in the modern innovative marketing multicomponent complex.

**Research part**

The industrial enterprise's strategic and tactical orientation presented in a generalized form has a certain impact on the future innovative strategic system formation, which is necessary to take into account the multivariate marketing moves that the enterprise makes (Fig. 2) (Putyatina, Dzhamay & Lavrova, 2015).



*Compiled by the authors, based on practical developments*

**Figure 2.** Dominant groups of factors affecting the industrial enterprise's innovative activity indicators

The ability to withstand competition with similar competing goods is nothing more than the process of forming the competitive advantages of the goods sold on the consumer market [7, p.36]. In other words, the product's competitiveness is nothing more than a process based on a combination of all enterprise's resources efficiency usage and reducing production costs, on the one hand, and on the other hand, ensuring relatively low prices and goods' high quality that are in demand in the market and are quite profitably differs from similar competitors' products in terms of service level and satisfaction of the buyer's specific needs, while ensuring stability for the manufacturer in making profit and, on this basis, enterprises' sustainable development in the long term of their activities. In modern innovative marketing, specialists and experts group innovations into the following categories (Nadobnikov, 2012):

- pronounced radical nature innovations, means that these are unique brand new advanced technologies and products / goods. A characteristic feature of innovations of this nature is that they are usually limited and for their consumption a new sales market is formed with new consumers;
- innovations based on the combinatory principles, means that they are based on a certain combination of previously studied properties and elements. The direction vector of this innovation type is the process of attracting fundamentally new



consumer groups, or, for example, the development of a new (for an industrial enterprise) sales market;

- innovations based on modifications of a certain type, means that to a certain extent they complement the product already existing on the market. Typically, this type of innovation is aimed at strengthening or maintaining the industrial enterprise's current market position.

Innovative marketing deals not only with the study and market analysis, but the direct segments' formation on it, organizes, optimizes and forms future demand, which subsequently foresees the potential consumers' behavior. A special place in it is given to the moment when a new unique product appears on the market, its comprehensive studies and a forecast of its demand among potential consumers will be carried out (Novikov, 2018). Important points that should be considered by project managers in the innovation field are: the manufactured product's quality, its appearance and the groups of consumers who need this product. Innovative marketing is not limited by market research; it also collects and processes various information about consumers, for example, indicators of their income and ability to pay.

Innovative marketing technologies allow paying attention to the issues of studying various technological novelties' import and export, while the information necessary for this is taken from a large number of open statistical data, business and specialized journals, as well as from numerous chambers of commerce reports. By analyzing the buyers' current needs, and then dividing them into structured groups, i.e. by segmenting, one can easily determine a particular product's attractiveness degree, as well as the level of the product's current competitiveness. After successfully carrying out the above measures, it is possible to develop an effective strategy in the field of innovation, which will guide the industrial enterprise's marketing activities in the right way, which ultimately will speed up the implementation of the goals set in the enterprise's business plan (Podoprigora & Pivovarova, 2016).

## **Results**

Innovative marketing is characterized by the presence of both price strategies and non-price strategies, with the following types of non-price strategies:

- “skimming” strategy as a rule is used in the process of implementing the innovative product to the consumer market, while the product has a fairly high price; this method works in the absence of company's competitors and lack of information about the product for consumers, as well as the need for quick profit;
- market penetration strategy, when relatively low prices are set for an innovative product, with a large number of competitors in the consumer market;
- prestigious prices strategy is applied subject to the new products' availability, taking into account the high quality and prestige achievement, that is, a situation is envisaged when a high price for consumers also means high quality products.

The domestic economy current development level considers the concept of innovation as one of the most effective means necessary to increase the industrial enterprises' competitiveness level, since the emergence of innovations leads to the emergence of unique and often even breakthrough technologies, services, goods and

products, which ultimately leads to the conquest of new sales markets by the enterprise. The innovative marketing practical value lies in the fact that it allows to determine the consumers' changing needs over time, monitor changes in demand indicators for manufactured products, as well as track and take into account, when formulating a future strategy, various changes in the competition field in the international market.

Thus, it can be concluded that the created product as a result of a lateral shift does not segment the market deeper, but creates a new one, that is, not a kind of product or service provided, but a completely new product that contributes to an increase in the company's rating and competitiveness and, as a result, gives the ability to capitalize the company's profitability as a whole. At the same time, lateral marketing sometimes contributes to the consumer fatigue formation from the constant innovations' implementation; the novelty of the product does not always cause increased interest, therefore it is advisable to provide a monitoring system in the process of implementing innovations in marketing, and when creating a new product or service and its usefulness for the consumer. Therefore, innovative marketing is the enterprise's activity, which is aimed at improving production and influencing the enterprise's market conditions.

Each innovation life cycle stage requires different methods and approaches, different marketing strategies and tactics. The system of innovative marketing measures is closely related not only to production renewal systems, but also to the dynamics of capital accumulation and overflow.

### **Discussion**

To date, there is an intensified innovative development of various technical competencies, but without the use of technologies and marketing thinking methods, it will be impossible to achieve successful positioning of the created innovations on the market, even despite their unique technical and technological parameters. That is why, in modern market conditions, it is necessary to use various modern engineering marketing technologies, which is a scientific direction that allows an engineer to successfully make a variety of decisions in the areas of market research and technology, as well as to successfully solve organizational, economic, scientific and technical problems on a systematic basis. A properly organized marketing activity within the engineering activities' boundaries will be able to professionally determine the proposed innovations' feasibility and effectiveness, as well as facilitate the competent organization of expert engineering activities in the consistent development field of technological entrepreneurship mechanisms (Sorokin & Novikov, 2018).

Taking into account the Russian Federation's high-tech enterprises lag from developed countries' competitors, the state faces the need to stimulate and support innovative activity. In the context of the current economic and political sanctions limiting access to financial resources and advanced innovative technologies, this task is significantly complicated and supplemented by the import substitution program. At the moment, the Russian Federation state programs are divided into five key areas: "New quality of life"; "Innovative development and modernization of the economy"; "Effective State"; "Balanced Regional Development"; "Ensuring national security". Among these areas, the following programs and subprograms can be distinguished, aimed at supporting



and developing high-tech industries and innovative activities in Russia (Kuznetsov, Romanovskaya & Khraban, 2017):

- “Education development” program for 2013-2020, the budget is 4,134.3 billion rubles;
- “Development of Science and Technology” program for 2015-2024, the budget is 1,484.3 billion rubles;
- “Favorable investment environment formation” subprogram, the budget is 79.6 billion rubles;
- “Stimulating innovations” subprogram, the budget is 68.1 billion rubles;
- “Personnel for an innovative economy” subprogram, the budget is 3.9 billion rubles;
- “Creation and development of a multifunctional innovation center “ Skolkovo” subprogram, the budget is 122.1 billion rubles;
- “Industrial development and its competitiveness increase” program, the budget is 1,061.1 billion rubles;
- “Development of the aviation industry” program for 2013-2025, the budget is 583.1 billion rubles;
- “Development of shipbuilding” program for 2013-2020, the budget is 314.4 billion rubles;
- “Information Society” program for 2011-2020”, the budget is: 1,155.5 billion rubles;
- “Development of the transport system” program, the budget is 6,853.5 billion rubles.

One of the reasons is that in recent years, support for innovation and scientific and technological development in Russia has been aimed at creating scientific and technological groundwork, the commercialization of which will be possible only after the end of long R&D cycles. The fundamental task in drawing up an integrated marketing model is the need to attract a variety of investments at each stage of R&D, because the lack of ongoing funding is the most common reason for extending the timing of various studies. Of course, the attracting financial investments process is not the only task, because the developed marketing model is a kind of structural and logical framework for innovation, or high-tech project, which can draw attention to the benefits of R&D. The logical structuring of R&D assumes that a researcher at any time can make important adjustments to the goal, tasks or methods that are part of R&D (Podoprigora & Pivovarova, 2016).

## Conclusions

The R&D organization marketing model is of high practical importance. The value for the developer lies not only in the ability to achieve the goals set at the beginning of the research, but also in the opportunity to convey their thoughts / ideas to specific target groups. From the point of view of groups of investors or creditors, the model being created significance lies in the fact that it will be an understandable informative form necessary for the project’s presentation (Sazonov, Kolosova & Vnuchkov, 2018). The current product innovations’ development level that the private sector is able to offer to various public corporations, other buyers and entrepreneurs lags significantly behind the indicators of the most developed countries. In addition, the Agency for Strategic

Initiatives (ASI) promoting new projects also notes that the process of managing various types of innovations within the framework of the state policy implementation was carried out with a large number of mistakes. A significant part of mistakes is often caused by a lack of the necessary experience and competencies in this area and by copying the best practices of developed countries without adapting to Russian conditions.

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