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IMPROVING THE PROCESS OF MANAGING THE INNOVATION ACTIVITY OF OIL AND GAS COMPANIES

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Summary. The article explores the processes and challenges of managing innovation activities within oil and gas companies, emphasizing the importance of overcoming obstacles and developing efficient management models to ensure success. In the highly competitive and volatile environment of the oil and gas industry, innovation plays a critical role in enhancing profitability and capitalization. The success of innovation management is closely tied to identifying and addressing barriers, or "traps", that hinder the development and implementation of innovative activities. These barriers can be effectively mitigated through structured management approaches.

The proposed model of innovation management integrates key management functions, including forecasting, planning, and organization, throughout the innovation lifecycle-from setting research priorities to evaluating the practical impact of implemented innovations. The model highlights the importance of establishing a technical department within the organizational structure. This department is responsible for planning, financing, and maintaining a database of research and development (R&D) activities. A crucial output of this department is the "Register of Priority Areas for Investment in R&D", which serves as a strategic document guiding management decisions. Approval from the enterprise's Scientific and Technical Council ensures the alignment of innovation initiatives with organizational goals.

The model also employs a ranking system to prioritize research tasks based on their significance and expected impact across various fields, such as technology, economy, ecology, and society. The implementation of innovations is entrusted to specific divisions, with the heads of these divisions held personally accountable for fulfilling obligations and integrating research outcomes into production processes. Additionally, expert commissions are established to evaluate proposals for R&D projects, ensuring the competitive selection of initiatives with the highest potential for success.

By systematizing innovation processes and assigning clear responsibilities, the proposed model enhances the manageability and profitability of innovation activities. The article concludes that such structured approaches are essential for fostering sustainable innovation in the oil and gas industry, addressing both internal management challenges and external market demands.

Keywords: innovations, management, organization, planning, motivation, control, scientific research, development, technical department, ranking of innovations.

1. Barriers and the Importance of Innovation in Oil and Gas Companies

The business of oil and gas companies is characterized by its complex nature, which takes place in a volatile and highly competitive environment, which necessitates the use and generation of innovations in order to maintain high efficiency. The rational behavior of oil and gas enterprises in the field of innovative development is associated with the recognition and elimination of those obstacles that may be encountered on the way to innovation. Obstacles can be their category of barriers, or so-called traps. The main ones are shown in the figure.

It is symptomatic that the growth of profits and capitalization of oil and gas companies is associated with the optimal organization of the process of their innovative life, which necessitates the leveling of obstacles (Figure 1).

Despite the existing obstacles, those approaches that depend on the internal structure of management, on internal management actions can significantly increase the probability of success from existing and future innovations.

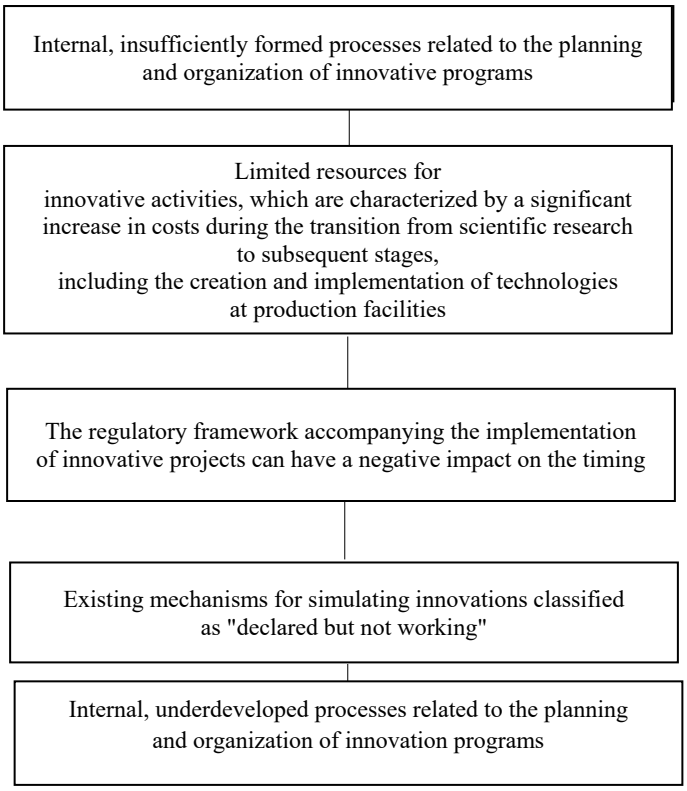

Figure 1. Characteristics of obstacles to the development of innovative Activities of Enterprises

2. A Model for Managing Innovation Activities in Oil and Gas Enterprises

So, for the growth of the efficiency of the entire enterprise, it is important to find the model of innovation management that is more likely to will lead to success. This model should contain those management conditions that will allow concentrating all resources on the path of the most successful scientific developments.

The management model begins with forecasting and planning innovations. These two management functions, as well as the organization as a management function, are considered as an innovative process that covers the entire development life cycle from determining priority areas of scientific research to assessing and taking into account the actual effect of using the development results in the practical activities of the object of management (Aletti, Crimaldi & Ghiglietti, 2023).

It is important to identify the department in the board structure that will directly deal with and supervise both the planning and financing of innovations. Most often, it is advisable to transfer such functions to the technical department, which is usually available at an oil and gas enterprise.

Such a department (technical department) must maintain an R&D database, which maintains updated information on the implementation and implementation of R&D results.

The primary product of the department will be the "Register of Priority Areas for Investment in Research and Development", as a strategic document, a kind of guideline for making all management decisions in the field of innovation. Initially, the register is subject to approval, and it cannot be implemented until the scientific and technical council of the enterprise analyzes it and gives its consent to its use.

Degree ImportanceEach trouble Can be Defined (installed rank) in Purposes Subsequent definitions Volumes and Priority Financing RESEARCH along Separate Problems.

The assignment of a rank depends on the importance of the task under consideration and the expected effectiveness of innovations (in the fields of oil, gas, economy, technology, ecology, society, management, business, etc.) (Balyberdin, Belevtsev & Bendersky, 2022).

After the analytical work has been carried out, the selected areas are assigned to those divisions (sections) whose powers include their implementation and control. Non-competitive inclusion is subject

to work on the implementation of which there are direct instructions in the administrative documents of the enterprise.

The heads of the sections of the Scientific and Technical Council are personally responsible for the implementation of contractual obligations and the application of the results of research and development work in the production process in the priority area assigned to them.

They are responsible for ensuring that agreements are implemented and that scientific developments are put into practice within their competence. Their personal responsibility ensures that all obligations are fulfilled and innovations are introduced into production.

Leaders Thematic Sections Scientific and Technical Council form and approve an expert commission for the competitive selection of proposals for research and development work on specific issues. The expert commission consists of three to five competent specialists in the relevant field.

3. Conclusions

In order to compile a list of new tasks within the R&D project program, the technical department determines the procedure and period for submitting proposals, and provides relevant information to the heads structural subdivisions. And then the model develops according to a clear scheme (Burlakov, 2024).

The proposed model systematizes the work in the field of innovation of the enterprise and with a high degree of probability will make the innovation process manageable and profitable.

Bibliography

1. Aletti, G., Crimaldi, I., & Ghiglietti, A. (2023). Interacting innovation processes. Scientific Reports, 13 (1), 17187–17187. https://doi.org/10.1038/s41598-023-17187.
2. Balyberdin, V.A., Belevtsev, A.M., & Bendersky, G.P. (2022). Applied methods of assessment and choice of solutions in the strategic tasks of innovative management (5th ed.). Moscow: Dashkov & K.
3. Management of innovative potential enterprises taking into account the latency of innovations. Moscow: Scientific Consultant Publishing House.