THE ROLE OF THE TECHNOLOGICAL LEVEL IN THE COMPANY SUSTAINABLE DEVELOPMENT

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Most of the researchers as major components of sustainable development are name economic, social and environmental components. The evaluation of company's social responsibility plays a major role in the methodologies assessing the level of the sustainable development. In our opinion, the high social responsibility and sustainable development in general are impossible to achieve without the company's technology leadership. Innovative development, in fact, is the basis for sustainable development of the company. The paper proposes to divide the technologies by their effect on the development of the company. Reports about company's sustainable development generally include information about development and implementation of new technologies. The article contains recommendations for improving the selection process of new technology in order to improve their technological level and sustainability of the company in the long term.

Keywords: sustainable development, corporate social responsibility, technology leadership, technological level, the potential of technology.

Nowadays a stable development is defined as a development that provides an organization and its interested parties with successful development in present and at the same time does not limit their abilities to develop in future. Stability of development can be also explained as a company's ability to sustain its competitive positions in short-, medium-, and long-term perspective that, in its turn, implies continuous adaptation of the company to changes of environment as well as maintaining development trajectory that corresponds to trends in scientific-technical development of a sector or the whole economy.

The basic component of a company's stable development must be an opportune introduction of novelties into its operations, technological leadership in a sector, however, in practice introduction of new technologies is closely related to another aspect of stable development – social responsibility of business.

Thus, introduction of new technologies leads to:

- Creation of new workplaces and decrease in number of work places with in low-efficient outdated sectors, leads to lack of demand for specialists in specific qualifications;
- Increase in strain upon the environment and, at the same time, can represent introduction of less power-intensive, material-consuming sectors and decrease in strain upon the environment, more rational nature usage.

Technological and innovative development [3, p. 22] is a foundation of companies' competitiveness that first of all implies its technological leadership nowadays. Technological leadership in its turn implies high innovative activity of a company, opportune, and, ideally, outgoing introduction of advanced technologies, high expenses for development and research [4,p.37; 7, p.77].

An organization's ability to make a technological breakthrough and become a technological leader depends on two characteristics of the developed and introduced technology:

1. Level of a technology's significance for the development of sector (potential for achieving technological leadership);
2. Level of a technology's innovative perception (ability of a certain company to implement the technology).

Definition of technology's significance level for the development of sector is the objective of researching trends and directions of technological development within a sector in Russia and the whole world. At the foundation of analyzing perspective directions of innovative development a technology's potential in achieving and sustaining technological leadership is defined via experts' analysis and conclusion (table 1).

Table 1

Определение потенциала технологии для отраслевого развития:

Type of technology	Characteristic of technology	Potential of technology in achieving and sustaining technological leadership
Breakthrough technology	Unique efficiency in comparison to alternative technologies	Allows a company to achieve technological leadership quickly and control the taken position
Critical technology	Provides maximum efficiency in comparison to other key technologies, without implementation of it achieving and sustaining the leading position is impossible	Realization of critical technologies is a necessary condition of achieving and sustaining technological leadership
Key technology	Basic perspective technologies that are developed or introduces by the leaders of sector at the moment, implementation of them is desirable for a technological leader	Allow a company to stay among leaders of a sector in case of their opportune implementation

Perspective technology	Technologies that are developed and introduced by leaders of a sector at the moment	Allow a company to increase efficiency of operation via aligning the direction with leaders of a sector

Technological cycles of different sectors have their own features, and outlining breakthrough and key technologies should be carried out individually for each branch of economy. The difficulty of outlining breakthrough and critical technology is mostly defined by the complexity of predicting technological development, especially at the current stage of economic development. Thus, many researchers agree on the fact that usage of fossil fuel sources such as oil, gas, and coal will gradually be replaced by usage of replenished sources of power, for example, energy of wind, sun, etc. However, different sources predict various periods of such replacement, and it is possible that the role of fossil sources of power will begin to decrease by 2035, and by 2050 it will be downsized significantly [1, p.93; 2, p.465; 5, p.17]. At the same time, it is objectively impossible to state clearly which exact alternative sources of energy will replace fossils and when it will happen.

Directions of technological development for specific oil companies, Russian and foreign, can be tracked down through annual reports of companies and reports on stable development that usually contain division on basic directions of Scientific research and experiment construction developments that companies undertake, often companies disclose volume of investment, directed to research and introduction of new technologies during the reported period and technologies that are planned for perspective.

The most detailed information on directions in scientific-technical development of a company is presented by oil companies with governmental participation. Particularly, JSC GAZPROM provided free access to their program of innovative development for the period 2010-202.

Specifically, as the foundation of selecting perspective technologies for the period until 2020 JSC GAZPROM uses analysis og perspective technologies that are being developed by their major foreign competitors, according to their reports

From our point of view, the approach towards developing program of innovative development and selecting perspective technologies, formed by the company, has the following disadvantages:

1. Orientation, in the selection of promising technologies, is exclusively focused on foreign companies and their implemented technology, while the analysis is based on information provided by the companies themselves in their statements. In our point of

view, the basis for the selection of advanced technologies for the company should go thorough analysis of the stages of the industry technological development and the drawing up of its development forecast based on global trends. The study of global trends should not be limited to the analysis of scientific and technical activity of the companies by consumers of innovations (oil and gas companies), but should also include analysis of studies conducted by public and private research centers, companies - tech manufacturers, universities, etc.

2. Used in the program planning horizon, that is 10 years, so the program should be completed by 2020. Companies need to know what areas of technology development in the longer-term, ie after 2020, to a timely start to invest in the development of these technologies and to come to a new stage of modernization with a ready backlog. We recommend increasing the time horizon of technological development up to 20 or even 30 years, to determine the critical moment of the beginning of the development of new technologies for future modernization cycles. Existing programs of innovative development of the oil companies are focused more on catching-up development, the achievement of current best global level, and not on the priority development, the introduction of technologies that will have a better level of competing companies.

3. The ongoing technological audit and the preparation of forecasts of scientific and technical development is not considered the impact of individual technologies at the pace of development of the company, in the end, the decision about the choice of a particular technology is adopted in terms of net present value (performance indicators calculated on the basis of assessment to reduce operating costs, etc.). We believe that it necessary to conduct more in-depth audit and to share technological trends of technological development on technologies that provide high efficiency of current activities, and technologies, that lead to radical changes in the industry. Also, in our opinion, it should be divided by the level of technology being perceived now, and take it into account in the development of innovative development programs [6, p.99]. Different level of being perceived by technology requires different organizational solutions for implementation now.

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