

According to the Ellen MacArthur Foundation, there is a set of six actions to be taken in order to reach a circular economy: Regenerate, Share, Optimize, Loop, Virtualize, and Exchange – together, the ReSOLVE framework. The ReSOLVE framework offers businesses and governments a tool for generating circular strategies and growth initiatives. In different ways, these actions all increase the utilization of physical assets, prolong their life, and shift resource use from limited to renewable sources. Each action reinforces and accelerates the performance of the other ones.

The basic model of circular economy is made up of four building blocks:

- circular design product design and production;
- new business models;
- reverse cycle;
- enablers and favorable system conditions (education, financing, collaborative platforms, new economic framework).

Several countries, such as Brazil, China, India, Kenya, Morocco, South Africa, Turkey, Uruguay, Vietnam and the European Union, are already successfully exploring circular strategies. At micro level the most prominent examples are Michelin, Caterpillar, Renault, Ricoh, and Desso.

Of course, implementation of circularity is difficult and time-consuming as it needs restructuring of the whole economic system, but, still, it needs to be a basis and underlying condition while building “green” economy on the way to sustainable development.

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FUNDAMENTAL ASPECTS OF LEAN MANUFACTURING AS AN IMPROVEMENT OF PRODUCT QUALITY

ФУНДАМЕНТАЛЬНЫЕ АСПЕКТЫ БЕРЕЖЛИВОГО ПРОИЗВОДСТВА КАК УСОВЕРШЕНСТВОВАНИЕ КАЧЕСТВА ПРОИЗВОДИМОЙ ПРОДУКЦИИ

The priority aspect which a consumer takes into consideration when buying a product or service is the ratio "price = quality". In view of the ever-growing range of goods and services, businesses are more than ever excited by lower costs which directly affect the prime cost of goods or services, and hence the competitiveness of the organization. Consequently, enterprises need constantly improve their efficiency and use different methods during the production process.

Enterprises regularly evaluate their production potential and come to the conclusion that they need to reduce unnecessary costs. Consequently, the concept of lean production has become relevant. Lean production is aimed at optimizing the work of employees and the utmost commitment to the interests of the consumer.

The founder of lean manufacturing is Taiichi Ohno. Taiichi Ono put forward 7 types of losses of the enterprise: losses due to overproduction; losses of time due to waiting; losses due to unnecessary transportation; losses due to unnecessary stages of processing; losses due to excessive stocks; losses due to useless movements; losses due to the fault of the release of defective goods [1]. The main form of losses is the costs arising from overproduction, because in the future, they entail all of the previously listed.

The issues of resources saving, cost reduction, quality improvement, increasing productivity are becoming more and more relevant. The development of the lean production system can be an effective solution to these tasks. Lean production is implemented in Belarus in the following companies: "Bial", "Kompo", "Belkommunmash", "Fenox", "Radiovolna".

The adaptation of the lean manufacturing concept in each individual enterprise is a key factor. The main difficulties arise with one of the main principles of lean production, according to which absolutely all employees of the enterprise, from the ordinary worker to the top manager, should be interested in the success of their enterprise.

"Belkommunmash" uses the lean production technique, which includes the basic principles of its work, the planning system and the organization of the lean line, the organization of its provision. The technique is based on the construction of a lean line on which the welding of trolleybus bodies is carried out.

Companies that use the lean production system throughout a specified period, achieved the following results: they developed and maintained a good system of staff motivation; increased productivity by 20-25% annually; reduced equipment changeover time to 90 %; reduced production cycle to 30 %; increased customer satisfaction to 100 %; decreased volume of work in process and inventory of material values by 10-15% annually; increased turnover cash by 10-15 % annually.

The company will develop successfully if the methods are used comprehensively and taking into account the characteristics of the enterprise [2].

The words of American entrepreneur Warren Buffett are imbued with a remarkable motivational mood: "It is Better to be in the company of people better than you... Choose friends whose behavior is better than yours and you will strive in this direction". This quote is a great help to action, development, all you need to choose the right direction...but this choice will be decisive, the most responsible and serious.

References

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2. Holostei, K. Production Management: tools that work / K. Holostei, I. Matveev. – SPb : Peter, 2008. – 251 p.

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INNOVATIVE ACTIVITY OF SMALL AND MEDIUM BUSINESSES IN THE REPUBLIC OF BELARUS

ИННОВАЦИОННАЯ ДЕЯТЕЛЬНОСТЬ СУБЪЕКТОВ МАЛОГО И СРЕДНЕГО БИЗНЕСА В РЕСПУБЛИКЕ БЕЛАРУСЬ

The economic development of the national economy, increase of the level of competitiveness of small and medium businesses in the domestic and foreign markets of goods and services are closely related to innovation. State interest in enhancing the innovation activities of small and medium-sized businesses is reflected in a number of regulatory and legal acts. The purpose of the research is to assess the effectiveness of the innovation activities of businesses and the possibility for its development.

Successful entrepreneurial activity is possible in the synthesis of creative and search activity, which, according to J. Schumpeter, reforms and revolutionizes production. It is difficult to create competitive products without using innovations [1]. The share of high-tech (including medium-tech (high level)) and knowledge-intensive industries in the GDP of the Republic of Belarus in 2017 increased by 0.9 points compared to 2016 and amounted to 36.6% [2].

In 2017, at the stage of development of the innovation sector of the economy, the share of small and medium-sized business structures was 24.7%, which is 1.1% higher than in 2016. A positive balance of 0.2% in 2016 in comparison with 2015 indicates the dynamics growth of the use of innovative ideas in the activities of Belarusian enterprises.

The investment attractiveness of the Republic of Belarus has improved over the last five years, which is confirmed not only by an increase in the number of foreign companies in the country, but also by the total amount of foreign investment. During the first half of 2018 5.499,272.9 thousand dollars were received, while the volume of investments directed from the Republic of Belarus amounted to