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To cite this article: N V Fedorova *et al* 2019 *IOP Conf. Ser.: Earth Environ. Sci.* **315** 022104

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Analysis of the agroindustrial enterprise competitive strategy tools

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Abstract. The article presents an analysis of the agrarian enterprise competitive strategy. Considered ways to reduce costs. One of the most important tasks of enterprises is being solved - reducing costs. Several options have been identified for implementing this strategy, as well as difficulties in achieving this goal, and ways have been found to solve them. In addition, the main types of losses that occur in modern enterprises are highlighted and the essence of these losses is determined. The author gives a definition of cost and reveals the value of this indicator in the enterprise management system, determines the goals of cost reduction, and highlights the factors and methods of reducing the cost of production in the enterprise. He gives advice on how to start saving, how to reduce the cost of production and how to produce better products, while reducing the number of defects. Today, innovation has become a crucial tool for competing in global markets. To improve the skills in the field of innovation, it is necessary to ensure consistently high results by constantly introducing innovations and get high returns on them. The article reveals the peculiarity of introducing total innovations, their influence for organizations and the most important tools for introducing innovations, and considers five "puzzle pieces".

1. Introduction

In the current conditions of tough competition, the problem of the increasing enterprise competitiveness is becoming extremely important [1]. The development of a competitiveness improvement strategy is not a feature of individual leading enterprises, but an objective necessity of all economic entities seeking to progressive development and maintaining a stable position [2]. The need for rapid response and adaptation to changing market conditions requires from the management of the company to master modern methods and tools to ensure and improve the competitiveness of the enterprise, as well as the formation of its competitive advantages [3]. The strategy to improve the competitiveness of the enterprise is a plan of measures for obtaining higher profits in comparison with competitors [4]. An effective competitive strategy can increase the enterprise attractiveness for consumers, reduce the cost of attracting and retaining customers, and obtain a higher rate of return on sales [5].

2. Quality system as a tool for continuous cost reduction

Cost reduction has always been and will be one of the most important tasks of most enterprises, since it provides many perspectives. There are several options for implementing this strategy, but there are some



difficulties. For example, if an organization considers its employees and the payroll as the highest value, then it is not possible to reduce costs at their expense. The main goal of such organizations is to maximize the wage fund, to stimulate employees' work and their promotion. Therefore, it is necessary to continuously improve all aspects of the activity and find ways to reduce costs not related to employees and the payroll.

One option is to use modern quality systems. Modern quality systems related to the ideas of TQM (Total Quality Management), Kaizen, to a large extent ISO 9000: 2000. Such systems are aimed at increasing the difference between the sale price and the cost of production. Thus, this amount can be used for the benefit of employees. You can, for example, unilaterally reduce sales prices, thus entering into price competition. You can unilaterally increase procurement prices, thus stimulating the development of the supplier [6].

To reduce the cost needed quite specific objects. For example, the Japanese consider losses as such objects. They are called "muda" and classified them for analysis.

In table 1 you can see the types of losses that experts identify.

Table 1. Loss types.

Loss types	The essence
Loss of overproduction	Excess products provoke excess stocks, and those represent the cost of storing and immobilizing capital.
Inventory Losses	Excess margin reduces such an important indicator as the turnover ratio of working capital. The way to deal with stocks - the organization of production on the system Just-in-time.
Losses from repair or rejection	Repair of equipment and products is one of the obvious losses. The Japanese deal with this using a system Total Productive Maintenance (TPM).
Losses due to irrational movements	Economical and precise movements contribute to the accuracy and quality of all operations.
Waste production	There are types of production where waste is unavoidable, but even in such cases it is possible to minimize their level and weaken the associated negative consequences (minimizing the use of packaging, optimization of technology).
Downtime	Downtime is unacceptable in any case. The lack of raw materials or components - one of the main problems.
Losses related to transportation	From the point of view of the user, all types of transportation of raw materials, intermediate products or finished products are losses, since they do not create any added value for the consumer, which must be taken into account when developing supply chains.
Loss of time	All types of direct or indirect loss of time also turn into losses. Wasting time is almost irreplaceable.

Also, do not forget about the losses associated with inadequate staff qualifications.

Having identified the objects of improvement, it is necessary to use the process approach to addressing business processes to solve many problems. Thanks to a clear visualization of the activities, the stages of business processes that limit the enterprise efficiency, stages of business processes that do not add value to the buyer or even not caused by the urgent need of the manufacturer can be identified.

Thus, within the framework of the management accounting system, the following interrelation will be reflected: the decision on the production of products to meet the consumer's order gives rise to a decision on the actions to be taken for this production, sale of products and after-sales service, and actions generate costs. The cost information collected in this way will enable the improvement work to be ranked in terms of expected cost savings.

However, you must also use complete budget systems. The cyclical nature of the budget process leads to their use, but there are some points. First, it is necessary to replace the financial goals with a

balanced scorecard, as it reveals a strategic vision. In addition, it is necessary to expand the list of factors affecting the amount of revenue in order to see a transparent picture of the relationship between market behavior and cost accounting techniques. In this case, it is advisable to use the methodology for calculating cost, budgeting and management based on activities.

As a result of applying ISO 9000:2000, a connection is made between the actions aimed at output and customer satisfaction, and the costs directed at it, and the problem of overhead costs is also gone. Most of the overheads become variable, allowing you to really reduce them.

3. Cost price and its importance for the enterprise

The use of a quality system is a variant of the cost price reduction strategy; other options are discussed below.

The cost price is one of the most important quality indicators of the enterprise. The size of the net profit that the entrepreneur receives depends on its value. Reducing the production cost price, you can increase the profitability of the enterprise.

In order to understand how to reduce the cost price of services or the cost of goods, it is necessary to understand what the word "cost price" means.

The cost price is the total amount of costs that was spent on the production of products and its promotion on the market. Expressed in monetary form and refers to the cost of production. The cost price reduction objectives are shown in figure 1.

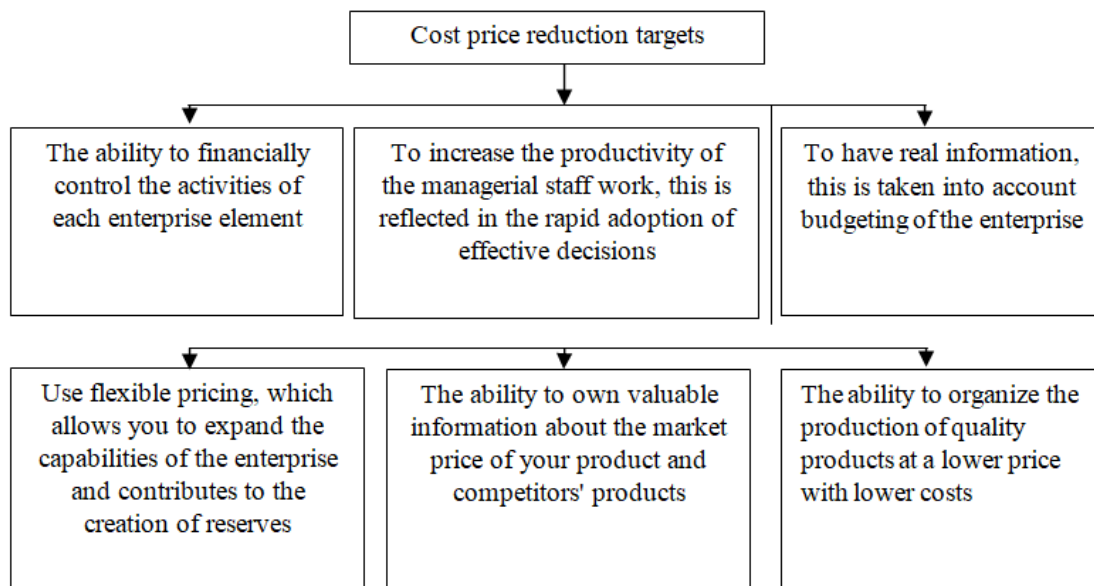


Figure 1. Purpose of reducing the cost of production.

4. Factors affecting cost reduction

Reducing the cost of production entails a reduction in the price of goods, so that products can compete more successfully in the market. A lot of factors affect the cost reduction, which can be seen in figure 2 [7]. In-production - those that business leaders can have a direct impact. These include: staff reduction, automation of individual processes, staff motivation, etc.

Non-production - those that cannot affect the company. This is the cost of fuel, raw materials, tariffs, the amount of tax deductions, etc.

5. Ways to reduce production costs in the enterprise

An entrepreneur who has decided to reduce the cost of production must clearly understand that this is not a single business. All production will be involved in this process. All who are involved in this process

are interrelated. The success of the struggle to reduce costs decides primarily the growth of labor productivity of workers.

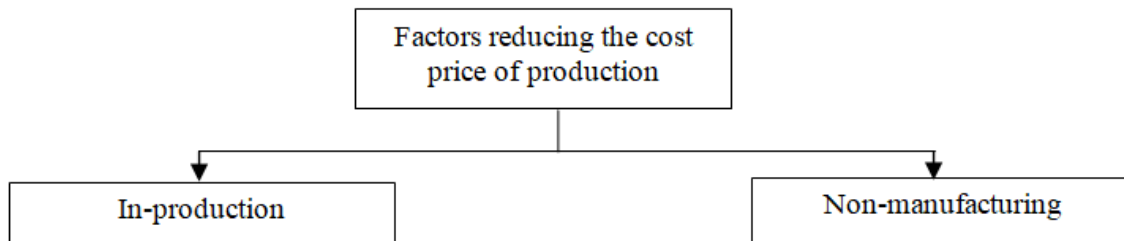


Figure 2. Factors to reduce production costs price.

By reducing costs, it is possible to reduce the price of products, becoming a more competitive and attractive company in the market, while not reducing their profits, raise wages for key personnel, and also significantly improve the financial stability of the company.

Labor productivity shows how much work each employee performs per unit of time. Most often, the staff is not interested in the rapid performance of their duties. Employees receive a fixed salary, regardless of the quality and quantity of work performed. In this case, the manager is faced with the task of getting the workers to perform a larger volume in the shortest time. This can be done with the help of motivational conversations, material incentives, etc. You can also change the payment system. That is, the employee will not receive a fixed salary every month. The size of his payments will directly depend on the quantity and quality of the products manufactured by him. Thus, each employee will strive to do as much work as possible.

Figure 3 below shows the main cost reduction methods.

It is important in all processes to automate production as much as possible for reducing the cost of goods produced. This will reduce the number of employees, which entails a reduction in costs associated with the payment of wages. With the involvement of technology, labor productivity and the volume of goods produced increases several times.

In the process of saving should be involved all stages of production. It is necessary to calculate where and how much money can be saved, at the same time, so that product quality does not deteriorate.

Any production process implies close cooperation with a large number of organizations. These are raw material suppliers, carriers, etc. It is very important to competently approach the selection of each of them.

Some enterprises have “bloated” staff, where almost every employee has one manager. In order to start saving, it is necessary to review the duties of each employee of the administrative apparatus and, if possible, combine several posts into one. In this case, employees may rebel, but you can offer a salary or bonus in the amount of 25-30% of their salary. Thus, reducing one position, but paying bonuses to other employees, and this can significantly save the budget of the enterprise [8].

It is necessary to regularly improve the qualifications of employees so they will produce higher quality products with reducing the number of marriages. For example, you are the head of a private medical center. Your employees will not be harmed by refresher courses, medical seminars, etc. This is where specialists exchange experience, learn new things, and get acquainted with innovative equipment. Due to this, they apply their knowledge in practice, and the number of grateful patients increases. They create advertising for you and attract other customers.

In order to reduce the cost of production, it is necessary to constantly monitor the rationality of the raw materials using [9]. For example, if at the sewing factory, where there is a lot of fabric for sewing, the craftsmen do not save it and cut the material mindlessly, a large amount of waste is generated. It is better to calculate in advance how much raw materials are needed to produce a unit of production and to issue it to workers in a certain quantity. Strict accounting will also avoid theft. Besides to raw

materials, it is important to save other resources, such as fuel, electricity, etc. At a minimum, you need to introduce energy-saving equipment into production and teach staff how to save electricity [10].

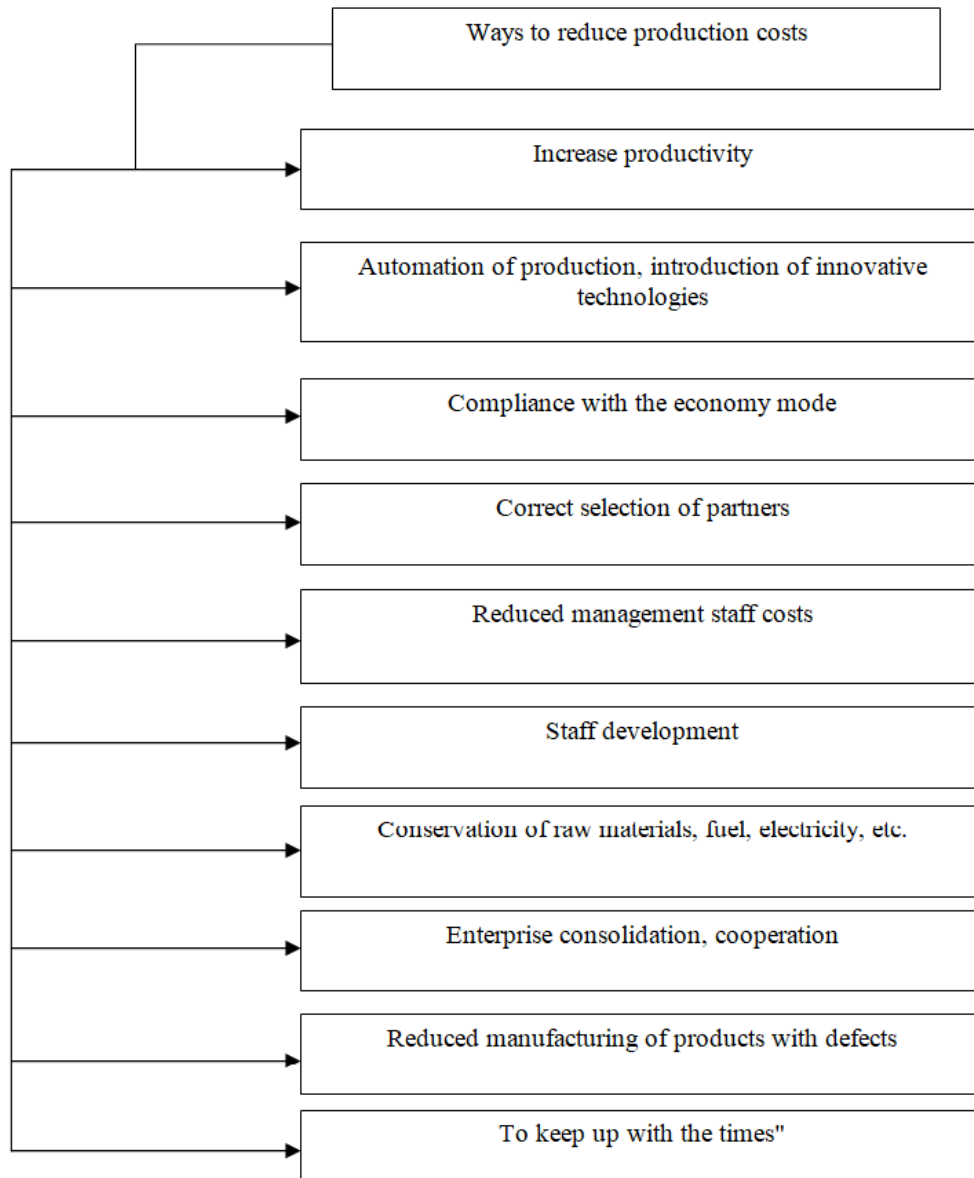


Figure 3. Ways to reduce production costs.

Expanding production, producing a larger range of products can reduce the cost of work. It is also very important to establish a mechanized release of goods. Due to this, production volumes increase and the price of this product decreases.

All enterprises have products with a marriage. The human factor or the unsettled operation of the equipment can be the reason for this. It is necessary to analyze and find out what exactly causes frequent marriages and minimize this factor.

Regular market research, tracking the demand for manufactured products, monitoring competitors, the introduction of new technologies (equipment and personnel management) - all this allows you to "keep up with the times."

An enterprise that has managed to achieve a reduction in the production cost is always fixed on the market. Consumers are more willing to buy product, if its price was reduced. The cost reduction

effectiveness can be observed on the production too. In this enterprise the staff is more interested, organized and hardworking. New equipment facilitates the work, making it safer. An enterprise where it is necessary to reduce the cost of production will have to switch to a saving mode. This process should affect all areas of production. It is important to ensure that the cost reduction of the enterprise does not cause a deterioration in product quality. In this case, the savings will be unjustified.

6. The introduction of total innovation

Organizations are often experiencing difficulties with large-scale innovation. To improve the skills in the field of innovation, it is important to collect the individual elements of the innovation process into a complete picture. The most difficult thing is to ensure consistently high results by constantly introducing innovations and getting high returns on them. Far from all companies can do this.

Since all company executives want to increase the return on innovation, it is best to use the so-called total innovation. This is necessary in order to “not play roulette”, because, as a rule, companies already have a lot to introduce innovations.

Many interpret the concept of innovation in completely different ways. We can say that innovation is a new way to use knowledge, tangible and intangible assets in order to create greater value. Innovation can be presented in different ways: it can be new and updated products, services, business models, processes or management methods.

The peculiarity of total innovation is involving managers and employees, and then the entire company, consistently and constantly in the innovation process. Success does not depend on individual talented developers or groups, because such companies develop a special corporate culture that encourages innovation, they have a well-established process of evaluating new ideas and proposals, the project portfolio is balanced, representatives of different functional areas effectively collaborate in working groups and use new tools and processes to ensure the optimal combination of creative energy and discipline. It is worth noting the important fact that for the successful implementation of total innovations it is necessary to deal with this constantly.

Do not confuse or identify innovations, inventions and R & D. R & D is only a necessary but not sufficient condition for successful innovation. Most often, the relationship between R & D costs and returns is very weak, as is the relationship between the number of patents issued and the company's financial results. Thus, an increase in R & D costs does not guarantee success, but nevertheless, R & D expenditure management is nonetheless.

It is extremely difficult to measure the benefits of innovation, although they are obvious. It is generally accepted that innovation as a whole has a positive effect on economic development indicators; there is no obvious evidence that countries where a large number of innovations are introduced ensure this due to higher economic growth, since it was a very difficult task to formulate a precise definition of innovation and measure its impact on growth. There is a correlation between the level of economic development and innovation, as it should have been supposed, but again it proved difficult to prove its existence. The findings of the Economist Intelligence Unit in 82 countries around the world say that countries like Mexico or China are rapidly improving their innovation skills. The study revealed one remarkable fact: countries with an average level of economic well-being have additional advantages in that the introduction of domestic innovative developments stimulates a more rapid mastery of foreign experience.

At the microeconomic level, the relationship is more obvious: companies actively introducing innovations create higher added value. In 2007, McKinsey conducted a Global Innovation Benchmarking Survey to compare the effectiveness of innovation in different countries of the world. Conclusion: companies that effectively implement innovations grow by 13 percentage points faster than others, and their profit volumes exceed those of other companies by 3 percentage points. Sales of the companies assigned to the upper quartile grew by an average of 24 percentage points faster than the average market level, and their profit exceeded the average market indicator by 9 percentage points. By contrast, sales of lower quartile companies were 9 percentage points lower than the market average, and their earnings before interest and taxes were 6 percentage points lower.

7. The most important tools for innovation

The approach to innovation depends on the specific situation and the company. Therefore, in order for the puzzle to take shape, the company must ensure that its correct fragments exist and achieve their optimal location, taking into account all the factors of the competitive environment. Consider the five "puzzle pieces" shown in figure 4.

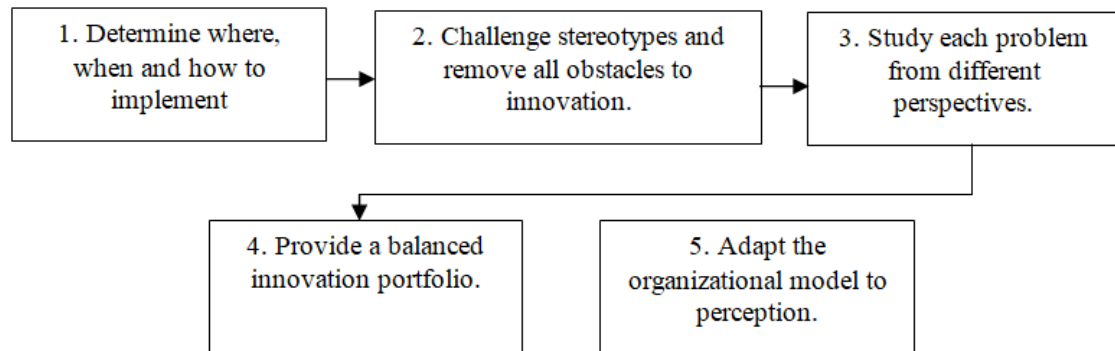


Figure 4. Stages of innovation.

The first step in assembling the puzzle is to search for fragments of the perimeter, the choice of common benchmarks for innovation determines where the company's investments will go, what time it chooses for decisive actions and how it will increase the value created. An innovation strategy should answer all the important questions – in which area should we act, when should we enter the game and how can we win. The organization should be clear about what innovations will provide the greatest return. Should companies be the first to present innovative solutions on the market or is it enough to just keep up with the competitors? There are many different approaches to the development and implementation of innovations, but the most successful in this way are those who have a clear idea of exactly which approach they will implement.

In order to properly invest in innovation, organizations should make full use of their knowledge of industry specifics, technology, and customer behavior. Successful benchmarks reveal areas in which customers are not satisfied with existing solutions or in which they have new needs. In the presence of such guidelines, companies can conduct an additional analysis of the situation, identify the underlying problems that can be solved with the help of innovations. As a result, as a rule, it is possible to create a useful value both for the target segment of the client base and for the company itself.

Stereotypes are peculiar to any organization. Patterned thinking and well-established behavioral patterns inevitably arise as a result of successful past experience. Stereotypes become some kind of rules - familiar processes and procedures help a company to work effectively, to achieve success by analogy with past achievements and to avoid mistakes. From such rules, the corporate culture of attitudes toward innovation, which has both positive and negative sides, is formed unconsciously. Companies must make an informed decision to eliminate stereotypes that impede innovation. A study of the relationship between the companies' executives attitude to innovations and the success of their implementation, conducted by McKinsey, showed that there is a strong correlation between these two aspects: the higher the priority for top management is the introduction of innovations, the greater success the company achieves in this area. Managers must demonstrate by personal example the way of thinking and the behavioral model that they want to achieve from their employees. Employees need to obtain permission from management to discard those rules that have been in place in the past. Everything that surrounds them in their daily work only supports the established stereotypes of doing business. Only with clear instructions, primarily from the CEO, can companies disrupt the usual course of events and create space for radical transformations.

Communication is a very important element that helps to coordinate the attitude to innovation across the company. It is necessary to describe future success in simple and understandable words. Many

companies cannot cope with the simplest task - to formulate what innovations mean for them and what types of innovations they intend to implement. The company's management can stop these endless arguments, giving everyone their opinion about the importance of innovation, while using simple and understandable to everyone language and links to values that everyone can understand. Two values that are often forgotten are patience and perseverance. Meanwhile, they are vital for the very ability to experiment, since it takes a lot of time and effort to realize the potential of a number of innovations - especially in the business model. But companies need the courage to close the project if an objective study of the facts says that the project has not met expectations.

Finally, companies that integrate innovation into strategic plans and business plans can quickly achieve radical efficiency gains. It is not enough just to single out an article in the income statement for innovation; they must be made an integral part of the planning process. Performance targets may relate to revenue. In addition, targets can be set by source and volume. Another possible target is the timing of product launches.

Information about customers is usually not enough. Companies successfully introducing innovations try to take into account several different points of view on the problem. However, the value of information is determined by the importance of the problems it allows to highlight, and the results obtained to the availability of this information. Even using of complex data collection techniques - conducting ethnographic research, tracking the latest trends, preferences of "advanced clients" - it is impossible to succeed without the skills to correctly identify customer needs.

In addition, employees often confuse situation where it is necessary to apply the ability to analyze information and situation where they should to use creative abilities. It seems to employees that the information they possess does not allow them to realize their creative potential or are not original enough. However, this perception is deceptive: the basis of radical changes may be based on well-known facts. Of course, a creative approach also plays a certain role, but on the way to real innovations, an understanding of the problem itself, rather than the invention of a creative solution followed by a search for a way to apply it. The source of many serious innovations was an understanding of the problems that now seem obvious. Equally important is the quality of implementation. When developing new solutions, it is necessary to combine the ability to analyze information using the available technical capabilities. Companies must fully integrate new information into the product development process to ensure its optimal use. In order to develop effective solutions and create conditions for a sudden intuitive understanding of the interrelationships between phenomena and processes, companies must first of all realize which particular problems need to be solved. Large companies that need total innovations can provide interaction between different groups and form entire networks, the participants of which have the opportunity to exchange ideas and create new concepts that can become the foundation of the future company development.

Portfolio management is a vital piece of the puzzle of successful innovation. One of the strengths of a quality innovation portfolio is balance. This quality helps to manage risks, as well as gives top management the opportunity to choose business concepts that simultaneously support the company's existing strengths and allow developing new growth platforms. Important factors for effective portfolio management are the availability of transparent information about projects in development and the selection of adequate performance indicators.

There are several characteristic errors associated with portfolio management. This tendency to consider as a full-fledged innovation portfolio a base of potential business development projects or R & D, as well as separate stages of projects; inconsistency of projects with the company's strategic goals or financial situation; unclear distribution of decision-making powers and fuzzy management procedures. The combination of these factors limits the ability to find new solutions and conduct experiments. Company executives are not ready to seriously consider ideas if they are not sure of their future success. They apply harsh risk assessments too early and, as a result, refuse to implement promising projects or limit them to a gray and boring similarity from the original idea.

The need for certainty at each project stage turns the passing of project control points into an obstacle. Authors often had to see how clients in the early stages of project implementation refuse to invest in

promising business models and innovative products, since a project that has not passed a risk-free check cannot be approved. The need to present a certain quantitative assessment, consistent with the business unit plan, often hampers the implementation of projects with great potential. It is the cause innovative concepts do not even get into the portfolio. As a result, the organization never gains experience in analyzing incompletely formed concepts in the early development phase and fundamentally new business models. The most unfavorable outcome may be the complete loss of the ability to implement radical changes or introduce innovations.

Top management of companies is responsible for ensuring the innovation introducing process receives the support at the early stages, and decisions concerning the management of the innovation portfolio are made consciously. To enable employees to experiment more and search for innovative solutions, it is necessary to clearly separate the innovative project portfolio being at the initial stage of implementation and the product base that are at the development stage and full-scale implementation, prior to entering the market. Since decisions regarding portfolio development are often very difficult, the most successful companies create a clear management structure in which the CEO - or the head of the business unit - often has a decisive voice when considering whether to implement new opportunities. This structure ensures clarity in the distribution of decision-making powers and the participation of various parties, and also implies a clear procedure for holding meetings.

The last piece of our “puzzle” is the organization itself; it is impossible to embody all the principles listed above without it. The optimal organizational structure, processes and human resources will vary depending on the specific company and the conditions in which innovations are developed. But whatever the conditions, structure and processes, companies should initially be set up to develop and implement innovations. In order to embody this principle, top management must take active steps.

You need to change the nature of the interaction and make the relationship more ambitious to open new opportunities which will allow partners to feel like participants in a large joint project.

In addition to structure, it is necessary to adapt to the various types perception of innovations relevant processes and tools. The standard approach designed for the existing business model will not work if the innovative development deviates significantly from the main business model.

Another success factor is the creation of an environment where the diversity of staff is encouraged. Successful innovation development requires the participation of employees of different ages, with different knowledge, attitudes and experience. Often underestimate such a source of diversity as youth. The enthusiasm, optimism and energy of youth can bring new ideas to any system and help get rid of stereotypes that have evolved over the years. The possibility of self-realization can become an inexhaustible source of innovation, since both parties will learn from each other.

Creating such a structure often requires the search for new personnel and the redistribution of existing ones. We need a willingness to change the organizational structure and transfer employees to new projects, since it is this readiness that stimulates cooperation between different departments, helps the joint search for new ideas and create resources that provide the necessary growth.

Finally, the last crucial element of an organizational model is a system of rewards and incentives for employees who succeed in developing and implementing innovations. Thus, an excessive propensity to use indicators focused on financial results, instead of a balanced set of indicators, can form a type of thinking that is focused only on the near future and gradual improvements, making impossible to use all business development opportunities.

8. Conclusion

Competitive strategies are an important and integral part of modern market relations. A firm or enterprise builds its competitive strategy based on its position in the market, i.e. whether it is a market leader, a contender for leadership, a follower or a niche inhabitant. It analyzes its competitors and assesses its capabilities, and only then chooses a competitive strategy suitable for itself.

This article has reviewed how cost reduction affects the quality system. Possible ways of reducing costs and production costs, as well as the role of total innovation in the enterprise management system are considered.

References

- [1] Kovaltchuk A P, Blinova E A and Miloradov K A 2017 Increasing the competitiveness of the Russian hotel enterprises under modern conditions *J. of Env. Man. and Tour.* **8(2)** 407-16
- [2] Valerievna S I, Vitalievich A S, Leonidovna V N and Fedorovna E I 2018 Simulation modelling in solving the problem of increasing the competitiveness of enterprise products *Proceedings of the 31st International Business Information Management Association Conference, IBIMA 2018: Innovation Management and Education Excellence through Vision 2020* 151-60
- [3] Kuznetsov Yu V, Goncharenko L P and Kochetova Yu N 2017 Innovations as a factor of increasing the competitiveness of enterprises of textile industry *Izvestiya Vysshikh Uchebnykh Zavedenii, Seriya Tekhnologiya Tekstil'noi Promyshlennosti* **370(4)** 37-40
- [4] Ivanova N 2012 Role of innovations for increasing the competitiveness of the bulgarian enterprises *Ikonomicheski Izsledvania* **21(3)** 211-24
- [5] Aminov E F 2006 Stages of development and implementation of competitive strategy *Practical marketing* **6** 30-4
- [6] Belsky V V 2015 Tools to stimulate innovation for the development of a regional market for scientific and technical products *Young Scientist* **10-2** 2-5
- [7] Domysheva M V 2017 The influence of the main factors on the cost of production *Innovation science* **5** 93-4
- [8] Encyclopedia of Economics *The strategy of reducing the cost of production* Retrieved from: <http://economy-ru.info/info/132481/>
- [9] Tynchenko V S, Kukartsev V V, Boyko A A, Danilchenko Yu V and Fedorova N V 2018 Optimization of customer loyalty evaluation algorithm for retail company *Adv. in Econ., Bus. and Man. Res.* **61** 177-82
- [10] Boyko A A, Kukartsev V V, Tynchenko V S, Nasyrov I R and Kukartsev V A 2018 Structural-functional model of investment resources formation of fixed assets reproduction *Adv. in Econ., Bus. and Man. Res.* **61** 210-4