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ON THE IMPORTANCE OF MUTUAL UNDERSTANDING OF THE LEADER OF THE ENTERPRISE ABOUT THE VALIDITY OF HIS DECISIONS WITH THE IMPLEMENTATION OF SOFTWARE FOR THE PRODUCTION OF DEMANDED AND COMPETITIVE PRODUCTS

Abstract: *In the article, the authors motivate the manufacturer to recommend to the market through their motivation, by managing quality, to produce import-substituting products for the consumer, to revise their concept of forming the market with popular and competitive goods, taking into account their attractiveness. Such an understanding will fully correspond to the desire of the consumer to satisfy his desire to make a purchase, taking into account his social status, to provide manufacturers with the sale of their products in full and guaranteeing themselves stable TPs from their activities and financial stability. And here it is important not to admit a serious methodological mistake - to reduce economic policy to economic analysis, and to maintain the spirit of solidarity in the team - one for all and all for one - and success will surely find the seeker.*

Key words: *quality, import substitution, demand, competitiveness, market, profit, demand, buyer, manufacturer, financial stability, sustainable TPP, attractiveness, assortment, assortment policy, demand, sales. paradigm, economic policy, economic analysis.*

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Introduction

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For a footwear company seeking a strong position in the market, setting the price of footwear for sale is key to the success of the chosen strategy. Price is a tool to stimulate demand and at the same time is a major factor in long-term profitability. Getting the maximum profit, possibly with the optimal combination of sales volume and prices for manufactured products. However, it is not possible to sell an unlimited number of shoes for the same price. An increase in sales leads to market saturation and a drop in effective demand for products. At some point in time, in order to sell a large number of shoes, you will need to lower the price. In addition, the enterprise can initiate price reductions in case of underutilization of production capacities, a decline in market share under the onslaught of aggressive competition from competing enterprises, etc. The choice of a pricing strategy depends not only on the type of product, but also on the market in which the company operates. Two types of strategy can be applied: "high prices - sale - high prices" or "flat prices" strategy.

The first strategy is used by companies selling expensive fashionable footwear, the markup for which in the season can exceed 100%, which makes a profit. But usually these are types of shoes with a short life cycle. If the sandals are not sold in the summer, then most likely they will lie in the warehouse until next spring. Therefore, it is very important in this case to get rid of the leftovers as soon as possible and free up the warehouse for new models, reducing storage costs, effectively using the area. Such enterprises can afford to hold a sale once or twice a year, selling shoes at a discount of 30 to 70%, working without profit, but earning money during the period when the new collection is sold at normal prices. If the types of shoes have a long life cycle and are not subject to moral aging, it makes no sense to arrange sales. These types include classic men's shoes, comfortable models made using proven technologies and designed for people who prefer a strict style. Collections of classic men's shoes are produced, tk. she is not strongly influenced by fashion trends. In this case, the discounts are 15-20%. In addition, any sale is a kind of information campaign, during which new customers are attracted, who often purchase shoes at a discount and at regular prices, which also allows you to more effectively sell the entire range of shoes. A decrease in prices occurs when an enterprise uses a system of discounts to increase sales. Their need is best tracked at the break-even point. The break-even point shows the behavior of total costs and the role of the influence on them of variable costs,

The growth in production and sales is accompanied by a constant decline in prices. The minimum allowable unit price to cover the total cost will be the second break-even point; the maximum allowable is the first break-even point. This means that there are two levels of production and sales of products, at which the total costs are equal to the proceeds from sales, that is, two break-even points. The behavior of total costs is most strongly influenced by variable costs that change in accordance with changes in the volume of production and sales of products. On the field between two break-even points, there is an area within which the optimal ratios of volume, selling price and, accordingly, profit are achieved. As noted above, the maximum profit will be obtained from the sale of products with a margin of over 100%. For a breakeven operation of the enterprise, the selling price should not be less than the cost of a pair of shoes, but if the price is less than the cost, losses will immediately arise.

When assessing the consequences of a price decrease on a change in the break-even point, it is necessary to additionally assess the effect of a price decrease on an increase in sales. In other words, an increase in price can thus affect a decrease in sales volumes, so that the additional profit per unit of production obtained as a result of the influence of the price factor will be offset by the sum of losses from a decrease in sales. Conversely, a decrease in the amount of the difference between revenue and variable costs per unit of production caused by a decrease in price can be fully compensated for by profits from the sale of additional volume of products at lower prices.

Thus, the calculated threshold values of products set the area of the volume of production and sales of products, within which the breakeven activity of the enterprise is ensured.

For this purpose, discounts are used in order to respond to lower prices of competitors, reduce too high costs, get rid of damaged, defective shoes, eliminate leftovers, attract more consumers of shoes. In world practice, there are about twenty types of discounts, of which the following are most often used: progressive, seasonal, for accelerating payment for trial consignments of goods, special, functional, barter, hidden, complex.

For footwear, the most common are the following types of discounts used at various levels: enterprises, their own organizations, trade.

When determining the size of discounts, it is very important to find the line when there is an opportunity to earn money, but at the same time get rid of the leftover shoes. In addition, footwear is a seasonal commodity, and adjusting prices based on the season is a challenge for business leaders. One of the constants of this task is to determine the period for establishing a discount on an item. In general, the discount is necessary if the demand for footwear falls, and, as a result, the level of sales decreases. The entire period of footwear being on the market can be represented as a hyperbole, analogous to the hyperbole of a product's life cycle. There is a period of implementation, for shoes it is very short, because the change of season in Central Russia sometimes occurs in a couple of weeks. Then a period of growth and maturity, i.e. the season itself in which shoes are most in demand (1-2 months). Then comes the recession period. It is also very short-lived (2-3 weeks).

Therefore, updating or frequently changing the assortment of footwear for domestic enterprises is one of the most important areas of their marketing activities in order to secure a stable position and prevent themselves from bankruptcy.

In enterprises, the marketing department must closely monitor the dynamics of sales and profits in order to take appropriate measures in time. For example,with a decrease in the pace of sales, you need to think about new markets, adjusting the price for the manufactured range of shoes, and improving service.

Among these elements of marketing activities, when developing a new range of shoes, special attention should be paid to:

- shape, color and materials for the range of footwear offered for sale;
- fashion, style and filling of the market with

domestic footwear;

- assessment of the market demand for new types of footwear in the sales markets;
- forecasting the sales of a new range of footwear;
- the development of the company's product policy, which, of course, is an elementary truth, but without which the success of the whole business is impossible.

When developing a new assortment, it is necessary to create a style for shoes, including its shape, color and range of materials, develop appropriate packaging to meet the demand for new types of shoes and create a modern brand and image.

Main part

The quality of products is formed by the functional characteristics of these types of footwear, the development of which is the prerogative of both designers and technologists and artists-designers, in the formation of which a marketer must also take a mandatory part. The most important means used in the development of new types of footwear, embodying the appearance of the footwear: shape, color, style of the last, more diverse and high-quality materials, corresponding to the fashion trends, from which this assortment will be realized. The South of Russia has all the possibilities for the application of various solutions. Climatic features, geographic location make it possible to focus on bright, life-affirming shades. Saturation, brightness, multicolor emphasize traditions, taste, mood among consumers. Materials for new types of shoes have an invaluable impact on the perception of finished shoes. But it should be borne in mind that some materials cause sympathy, while others, on the contrary, cause antipathy. Developing a color scheme for the appearance of shoes should be the main task of the marketing department.

Very significant importance should be paid to ensuring the quality of footwear and assessing its competitiveness, attractiveness of demand. The final stage before the launch of a new assortment of footwear into production should be devoted to the approbation of small series of the developed assortment aimed at sales markets in order to identify a price niche acceptable for the financial activity of the enterprise. Each enterprise, including footwear, needs a policy, the basis of which should be an assessment of its real capabilities, so that any footwear models newly introduced to the market would serve as its position and competitive advantage. Within the framework of the product strategy, specialists determine market demands and ways to satisfy them, based on the study of consumer demand and its characteristics. To create a specific marketing advantage, a business must analyze the needs of potential customers and determine what matters most to them. This also requires the use of a set of marketing techniques: branding, participation in industry exhibitions, the creation of various advertising options, assortment policy. Equally important for maintaining the sustainable development of footwear production, including for consumers in the regions of the Southern Federal District and the North Caucasus Federal District, is to determine the period of the economic life of the model and optimize the period of the product's existence by means of rational pricing and the correct application of marketing techniques. This also requires the use of a set of marketing techniques: branding, participation in industry exhibitions, the creation of various advertising options, assortment policy. Equally important for maintaining the sustainable development of footwear production, including for consumers in the regions of the Southern Federal District and the North Caucasus Federal District, is to determine the period of the economic life of the model and optimize the period of the product's existence by means of rational pricing and the correct application of marketing techniques. This also requires the use of a set of marketing techniques: branding, participation in industry exhibitions, the creation of various advertising options, assortment policy. Equally important for maintaining the sustainable development of footwear production, including for consumers in the regions of the Southern Federal District and the North Caucasus Federal District, is to determine the period of the economic life of the model and optimize the period of the product's existence by means of rational pricing and the correct application of marketing techniques.

In addition, so that there are no problems with the sale of shoes, the creation of new models in the design departments of the enterprise should be carried out after a preliminary study of the real market needs for these products. However, the experience of Russian shoe enterprises shows that the main reason for the sales crisis is the inconsistency of the range of manufactured shoes with the structure of consumer demand. Domestic footwear manufacturers tend to sell what they produce, rather than produce what can be sold. This is due to the fact that for most of them the problem of sales orientation is more relevant than marketing. This situation can be explained by the following reasons:

- commodity producers are forced to concentrate their efforts on the product, and not on the needs of consumers, since they have very limited investment opportunities;
- a wide range of products is possible in the presence of flexible industries, the introduction of which is constrained by technological backwardness;
- the transformation of shoe packaging into a means of generating demand is possible when creating an industry in the Southern Federal District and the North Caucasus Federal District of full-time production;

- for the production program to be determined by marketers, it is necessary not only flexible production, but also the presence of significant production reserves, including reserves' of production capacities, financial resources, etc.

- the possibility of using prices of market equilibrium and the advantage of non-price methods of competition for domestic producers are limited by the lack of professional marketers;

- the relatively narrow planning horizons for our businessmen are determined by the still persisting economic and political instability of Russian society.

This also explains the price orientation of business to maximize current profits, to hide it for taxation, and not to obtain a long-term effect from the market orientation of production.

With the transition from a seller's market to a buyer's market, the competitiveness of a shoe company increasingly depends on how perfect and viable its marketing and sales are. If an enterprise wants to operate successfully in the buyer's market, it must conduct business in such a way as not to depend on the sale of what it can produce, but to produce what it can sell at a profit. In these conditions, it is necessary to manage the enterprise, focusing on the market, and not on the product. At the center of this mindset is the customer, with their desires and expectations that should be met as fully as possible. This has become especially relevant in recent years, when seasonal production of various types of footwear and its implementation is carried out. Manufacturing is essentially the link between supply and demand.

Pricing takes into account the patterns of price elasticity of demand, when taking into account costs, a possible change in the level of demand is determined, which justifies a decrease in the price of shoes or discounts on them.

At the same time, it is important to remember that an excessively low price for shoes may not increase, but decrease demand, since in relation to these models, a stable image of a typically cheap and low-quality supply may form in the consumer. An enterprise first of all tries to establish at what price it can sell its shoes on the market, based on the nature of demand, and then determine its production, commercial and administrative costs corresponding to that price and changing depending on market conditions. In a dynamically changing market environment, the results of an enterprise, including a shoe, largely depend on the effective results of the production, sales, financial and marketing policies of the enterprise itself, which creates the basis for protection against bankruptcy and a stable position in the domestic market.

When developing a competitive range of footwear, manufacturers need to take into account many factors that affect consumer demand: compliance with the main fashion trends, economic, social and climatic features of the regions of the Southern Federal District and the North Caucasus Federal District. Supply, demand and prices are elements of the market mechanism. The supply appears as a result of production activity and represents a batch of shoes intended for sale, while, as a rule, consumption does not coincide with the volume of production of shoes. This is a solvent need.

The nature and possibilities of mutual adjustment of supply and demand are determined by the ability of these factors of the market mechanism to influence the change in the price level of retail goods and commodity groups. The quantitative side of this relationship is expressed by the concept of price elasticity of supply and demand at prices, which is understood as the degreethe corresponding reaction of supply and demand to the relative change in the level of the market price. The footwear industry is a material-intensive industry, therefore the constant value of costs in the total cost of footwear is small, therefore, the price elasticity of demand is high. This means that a decrease in the price of shoes must be accompanied by a significant increase in output.

The price of the footwear must be sufficient to recover all the costs of production, management, its implementation (fixed and variable), as well as to provide an acceptable return on investment.

In the conditions of shoe production, one of the main factors in the need to create flexible production is a lot of assortment of products. It is necessary to ensure the minimization of the time and money spent in the development of a competitive range of footwear and technology for its production. The effectiveness of the use of flexible technological processes for the production of a frequently changing assortment of products in small volumes (including single items) is possible if universal equipment and a higher level of qualifications of performers are used, which may roughly resemble the use of new forms of craft production. So that shoe enterprises do not find themselves in a situation of unprofitable production, a serious approach is needed to justify the products produced in terms of the costs of their manufacture.

Consumer demand acts as the main factor influencing the formation of the assortment, which, in turn, is aimed at maximizing and meeting the demand of the population.

Consumer demand combines a whole group of indicators that will form their niche, namely:

footwear, taking into account age characteristics and work activity:

children's;
footwear for the elderly;
leisure footwear;
footwear for special purposes;
office footwear.

footwear for a socially disadvantaged group of people:

footwear for the unemployed receiving social benefits;

footwear for retirees;
footwear for people with chronic diseases.

footwear that takes into account the characteristics of the regions:

national footwear;
exclusive shoes;
elite footwear.

Thus, the implementation of the requirements of the main parameters that form consumer demand allows the formation of distinctive features that a new range of footwear must satisfy.

The parameters that determine demand include:

-comparative competitive advantages; the product must have pronounced features or pronounced advantages in comparison with analogues existing on the market, products or services of competitors;

-social orientation; it is necessary that the product fits into the existing social conditions, so that the proposed product corresponds to the prevailing lifestyle and system of values of the consumer;

-the ability to satisfy the consumer; the product must fulfill all the functions to meet the key needs and requests of the buyer.

Quality is the most ancient value of humanity. And it is precisely in the quality of Russian goods and services, in the quality of management that we are losing in global competition.

Long hoped for a worldwide ISO system. Alas, in Russian conditions it slipped into a crisis.

- One entrepreneur once said: “We have been certified in ISO ". And then he added: "Do not think, we were certified by such and such a Norwegian company." Can you guess what this is about? Yes, selling certificates. Not everyone sells, of course, but reputation is never accidental.

So now, you will say, and not to deal with quality? Let's agree on terms. What is quality? Compliance with standards, most will answer. Of course, where standards are possible, they are. Although the standards have tolerances. And the difference between the upper and lower divisions in these tolerances can be significant. And there are also limits to standardization. Let's say customer contact. Everyone knows that the quality of such contact is critically important for the success of a business, when prices, assortment, terms are aligned under the pressure of competition. A certain set of friendly words, dress code, etc. can be considered a standard. Although we know well what they cover

The current enthusiasm for describing business processes is also gradually approaching absurdity. And somewhere it has already reached it: at different companies we already meet a rigid description of the interview, not only when applying for a job, but even the standard for meeting and negotiating.

Now a different approach appears: quality is compliance with the needs of the client, the user. Whoever buys is the one who evaluates. It is only necessary to understand more precisely what exactly he values. If you hit it - here it is, the required quality, that is, the degree of customer satisfaction with the properties of the product.

But this approach is also limited and stretches from the last century. Then the formula was considered indisputable: the buyer is always right. In our time, another imperative is much more true: the buyer does not know our capabilities.

Where are we heading? The understanding of quality as conformity (to a standard, a need) is outdated. Today, understanding it as a comparison - with another product or with the same, but the same, is becoming much more capacious. Comparison gives the superiority of product over product, service over service, specialist over specialist, organization over organization. Comparison with a standard or need does not imply superiority. Only equality is possible there. The standard and the need indicate the minimum. And for whom is the minimum enough? Few. But superiority is interesting to everyone, because the law of increasing needs is inexorable. In practice, this means switching the quality assessment system to levels, for example:

A. Sufficient qualitybelow which there is a defect, that is, the minimum permissible, the use of which does not cause damage.

B. Reference quality- according to the principle of conformity to the standard, that is, the best available. The standard can appear from the standard, but any sample can serve as it: from what we have live in our company, from competitors, or at least somewhere in the form we know.

B. Avant-garde quality - something that is achieved for the first time, surpasses the standards, but can count on effective demand and an exit to profitability immediately or in the future.

This is the vertical of quality. She may admit more degrees. And one more thing: it's time to give up the idea that any quality can be measured. You can evaluate everything, but little that is important to us lends itself to measurement.

Figure 1 shows a model of an integrated quality management process for products and services produced in the region.

The model is a closed control (regulation) system that implements the principle of “deviation” regulation. The quality of products in the consumer market can be characterized by a multidimensional quality indicator Q. In the process of conformity confirmation, testing and certification of products, a documented indicator of product quality Q d is formed. The required high quality indicator Q 0 is set in technical documentation for the best world samples, in technical regulations, national GOST and international ISO standards In the process of comparing these two values, carried out by the competition committee, the deviation of the actual quality indicator from the specified $\Delta Q = Q_0 - Q_d$. This deviation ΔQ (mismatch in control systems) in

our case should always be positive ($\Delta Q \geq 0$), since the correctly selected preset high level Q 0 is always higher than or equal to the actual Q d, which is practically extremely rare. In this case, we have a system with a non-zero static error, which is most typical for static systems with their inherent stability and speed, the accuracy of which is mainly determined by the gain and power of the "proportional" controller. In our case, the function of the regulator is performed by the link “Measures to ensure a given level of quality of products and services”, which simulates the quality management system of the enterprise, the quality service in production, the actions of which take into account the assessment of the quality of products and the recommendations of the competition committee.

As can be seen from Figure 2, the quality Q of the products produced and supplied to the market is formed in the process of its production as a result of measures to improve production, improve the quality of products and services carried out by the quality service and quality management units, purposeful actions, which, in turn, are determined by the results of the assessment products in the process of its implementation.

Today, the problem of high-quality special-purpose shoes exists apart, where, in fact, both assessment and measurement go side by side, hand in hand. The potential demand of the domestic market for such footwear is growing from year to year, and an increase in capacities for its production would be justified. Today its production in Russia is within the limits of 14 million pairs per year with a total demand of 50-60 million. steam.

The technical level of domestic footwear for special purposes basically corresponds to similar foreign products. In terms of price parameters, our shoes are close to foreign ones, with the exception of special shoes from China, which have a lower price level. The analysis shows that in a number of cases, both domestic and foreign special footwear does not meet the requirements for operation, for example, in terms of the strength of the fastening of the bottom of the footwear, the used component materials, and the necessary protective properties.

Acting normatively - technical documentation for special footwear has 50 GOSTs, OSTs and a huge number of technical specifications. Most of the regulatory and technical documentation requires revision due to the expiration of the validity period, the emergence of new materials and modern methods of fastening, which should be included in the technical documentation.

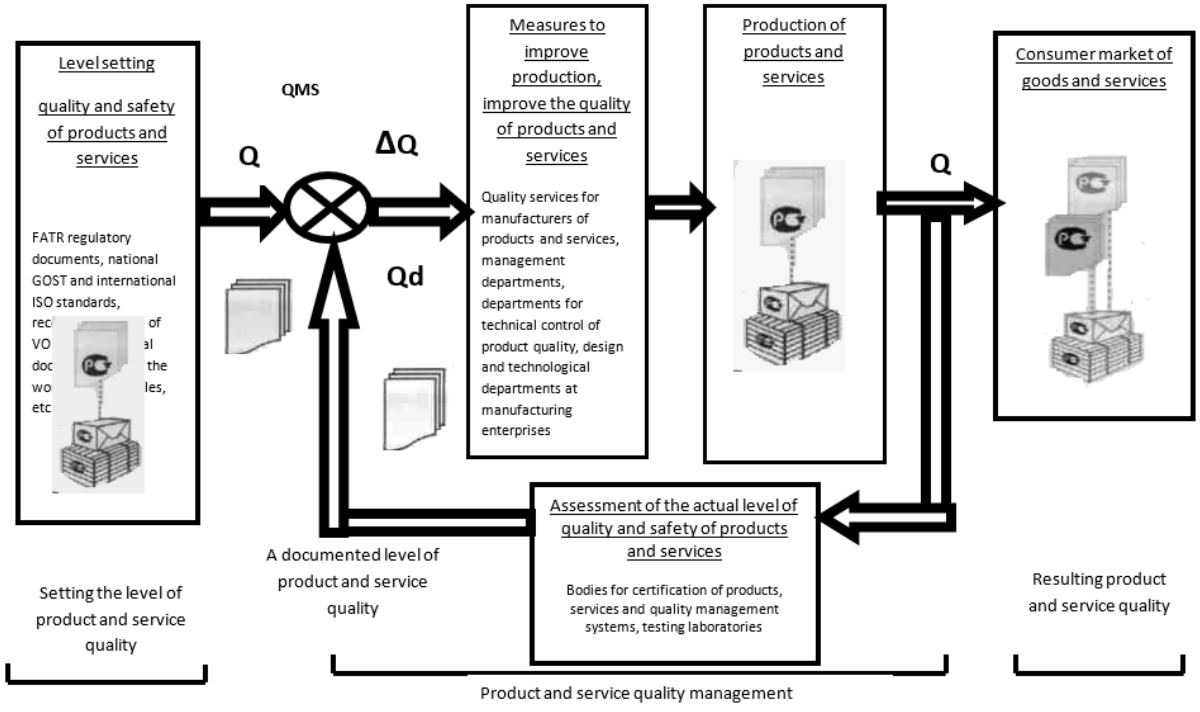


Figure 1. Model of an integrated process for managing the quality of products and services in the region

To increase the specific advantages of domestic products in the Russian Federation, scientific developments should be carried out to create new and improve existing types of footwear for special purposes on the basis of modernchangeable materials, structures, technologies: for example, such as anti-static footwear: vibration-proof; for protection against aggressive media and exposure to low temperatures in extreme conditions, etc.

In this regard, it would be advisable to include in

the developed program for the strategic development of light industry until 2025:

- development of the Technical Regulations "On the safety of footwear for special purposes";

- development, revision, amendments and additions to the normative documentation for special footwear with their simultaneous harmonization with international standards;

- development of changes and additions to the normative documentation for test methods, measurements and assessment of the domestic assortment of footwear for special purposes;

- development of national standards for the entire range of footwear for special purposes;

- adjusting the legal framework in the field of standardization and certification of special footwear in order to bring it in line with the Federal Law "On Technical Regulation" and the adopted amendments to it, as well as international norms and rules;

–Creation of an internationally accredited national center for certification and testing of special-purpose footwear;

- Carrying out R&D on the creation of new and improvement of existing technologies for the production of footwear for special purposes in order to ensure their competitiveness, both in the domestic and foreign sales markets;

- to develop a control system for the compliance of imported special-purpose footwear to the domestic market with domestic regulatory documents, declared in them indicators of properties and quality.

The need to develop technical regulations for special-purpose footwear is due to the fact that in the domestic market of funds personal protection, in particular special footwear, Russia is one of the largest consumers of products. The climatic and operating conditions of footwear in Russia differ significantly from the corresponding conditions in most foreign countries: low temperatures, a high level of potential injury hazard in a number of industries with insufficient funding for labor protection and safety measures.

The analysis of the operational and protective properties, as well as the results of laboratory tests, including certification tests, show that there is practically no state control over the fulfillment of technical requirements, the materials used, and the technologies for making special footwear. In addition, the analysis of the "Norms of Free Issuance of Personal Protective Equipment" of a number of the largest enterprises showed that there are no well-formulated requirements for the protective properties of special footwear, which leads to the operation of this type of footwear, which is not appropriate for its intended purpose and does not provide the required level of protection. The same can be said about the comfort of special shoes.

Simultaneously with the creation of technical regulations, the development of national standards for all types of footwear for special purposes should be carried out.

An integral part of the implementation of the technical regulation system is the conduct of certification tests of both domestic and imported special-purpose footwear, which will eliminate the supply of low-quality products to consumers, and improve the overall technical level of products. To this end, it is advisable to create a national "Center for Certification of Special Purpose Footwear" accredited in accordance with Russian and international requirements, equipped with modern devices and equipment. The implementation of the proposed activities will create:

- a new regulatory framework for special footwear;

- to increase the competitiveness of products;

- will increase the volume of production of footwear for special purposes in the Russian Federation;

- provide workers with footwear with high protective properties;

- to improve the health and working conditions of workers of various professions and industries;

- to clarify the norms for the free issue of special footwear by adjusting

requirements for it in accordance with modern conditions.

In the new economic conditions, only such production is progressive as it actively and dynamically responds to emerging tasks. The principle “to produce only what is needed, when needed, and as much as needed” requires shoe enterprises to adapt to the conditions of production in small batches with frequent changes in the assortment of shoes, ie. to the conditions of many assortment small-scale production. The efficiency of the footwear enterprise, and in many respects the ability to survive in the competition, depends on the ability in a short time and with minimal costs to readjust to the production of footwear in accordance with fluctuations in demand. The development and implementation of flexible production systems opens up great opportunities for this.

The technological and organizational flexibility of production systems determines the variable potential of enterprises, their ability to quickly and adequately respond to changes in market conditions and acts as a mechanism for optimizing the structure of the technological system in order to reduce the cost of footwear. Thus, the development of flexible technological processes for the production of leather goods will provide high efficiency with a large assortment of footwear and will provoke a sharp increase in demand for the products of shoe enterprises in the Southern Federal District and the North Caucasus Federal District. It is necessary to begin the study in a classical way with the formulation and general description of the problem. Surprisingly, nevertheless, the fact is that, despite the numerous

literature on the proposed topic, and no less clear applications for its comprehensive analysis,

The reason is simple, except for the work of B.S. Aleshina with coauthors, the promise of a comprehensive study of the problem remains a wish. The content of research usually does not go beyond one or two aspects of considering quality and the possibility of quality management. The rest of the angles are either declared or applied in such a sequestered state that their presence is perceived as a kind of burden for the pleasure of joining the author's reasoning on a topic that is undoubtedly relevant at all times and for any activity. The noted drawback is inherent in our works devoted to the problem of quality. Our only excuse is that so far we have avoided making a claim for a comprehensive study of quality in a management context. A tough reaction from our critics is quite possible and even predictable. They apparently overturn our conclusions on us, finding a weak link in our opus. And they will do the right thing. Others - and we with them, taking into account the criticism, will step further, forward, collectively solving what is beyond the power of individual researchers, even in the case when they combine their various cognitive resources and when, for example, in our case, sectoral specialist, systems economist and philosopher.

The theory of quality management is based on the philosophical development of this concept. "Quality" is a philosophical category and the solution of the put forward problem depends on how the philosophical component is presented in the theory of quality management. In philosophy, however, there has never been a single interpretation of quality, there is no mutual understanding in our time. An important conclusion follows from this: it is necessary, before building a quality management strategy, to decide on which philosophical "shore" you are going to land.

Quality is a general and fairly stable definiteness of the subject set. Only the forms of being and its substance are more stable than qualities - the only thing that is invariable by definition. Quality, however, also flows along the river of time and changes. The quality within itself changes, changing its states, and radically, losing its certainty, turning into another quality. Differences in the philosophical understanding of quality are due to the complexity of quality as a subject of research, but to an even greater extent they are a consequence of the philosophical understanding of the world and the methodology on which it is formed.

"Materialism", "idealism", "metaphysics", "dialectics" are philosophical concepts that are pretty shabby by class ideology. Philosophers - conservatives in Soviet times settled well, erecting barricades, because of which they shot arrows of anger at their enemies, absolutizing the political background of philosophical trends. The critics triumphant in the arms of liberal democracy do not look in the best light, cracking down on the restless legacy. Inspired by "noble anger," they essentially turned into the past and not so much "trample" on this hated past, but rather treading water, slowing down the movement of the cognitive process. “Materialism”, “idealism”, “metaphysics”, “dialectics” must not be abandoned, but they must be cleansed of pseudo ideological “husks”, thereby revealing the inherent rational meaning in these phenomena.

The boundaries in cognition are intended not to limit, to isolate one from the other. Their rationality lies in the fact that they regulate the cognitive process. K. Marx, who wrote that Hegel's idealism is "materialism put on its head," is not responsible for his followers who simplified Marxism and, in particular, the philosophy of Marxism - dialectical materialism. The idealist G. Hegel is equally not to blame for the fact that E. Mach brought the idealistic idea to solipsism, and with his philosophical exercises damaged the rationality inherent in the highest achievements of idealist philosophy. The history of philosophy warns anyone who has embarked on the path of knowledge: above all, be afraid of one-sidedness. It inevitably leads to absolutization, a state of knowledge in which the natural connection in it between the ideal and the material is broken, the movement towards truth is closed. Quality management begins with a philosophical, that is, ideological and methodological orientation of the theory. There are no alternative options. It makes no sense to deviate from philosophical foundations in the development of control theory. It is necessary to actively seek cooperation with a philosophy that is rationally interpreted.

The question: where is this rational philosophy - has long been rhetorical, since the time of the first philosophers. It was not ready-made, no, and will not be like a "magic wand", "self-assembled tablecloth", "philosopher's stone". Rationally interpreted philosophy is an exclusive product of the interaction of professional thinking with the philosophical heritage. Objections like “not everyone can do this” is quite appropriate for the situation. True, this is given to everyone, but not everyone takes on the responsibility of building a quality management system. Most are awaiting instructions and normative materials in a complete set. In the current fashion: a briefcase with documents.

Our Russian market not only tore apart the national economy in an ugly manner, giving some fat pieces, to others, left the illusory hope that someday their lean life would change and a holiday would come to their streets. The Russian market has deprived us of national unity, devaluing what is widely known as the “mysterious Russian soul,” or, simply put, our inherent craving for thinking “for life in general,” including personal and national problems. A German is distinguished by law-abiding, an American from the USA - adventurism, an Italian - spontaneity. Our

ancestors were distinguished by a responsibility that was fading away before our eyes.

The philosophy of quality is a collective concept, synthetically built. The understanding of quality in various philosophical theories differs significantly, for it is "adjusted" to the system and the method used in its development. In such an ambiguous situation, one must start with the conclusion: everyone is right and no one is wrong. What kind of gibberish, - a person accustomed to thinking according to the formula "either - or" will say, "We do not need riddles, we want everything to be according to the principle:" To each his own. " The task is precisely to sort everything out "on the shelves." It's easier, clearer, you can't go wrong. The formal logic of thinking develops spontaneously, reflects the world of things in the first approximation, roughly. F. Engels rightly compared it with elementary mathematics, which is not capable of describing the process, therefore, it is limited to actions with finite quantities.

Prohibitions on thinking are also introduced by political ideology, dividing thoughts into their own and hostile, right and wrong, forcing the public consciousness to work according to the simplified rules of the formal logic of individual thinking. Logical blinders are justified, pseudo ideological justifications have no, as well as the actions of those who stun views different from their ideology, unwilling or unable to critically comprehend them.

The Marxist and Hegelian concepts of quality have more in common than differences. The main thing is that the most essential thing in understanding quality is the same. K. Marx and F. Engels, distancing themselves from Hegel's idealism, in every possible way protected his dialectical understanding of thinking, developed the propositions put forward by him, and defended them from criticism. They understood better than anyone the reserve inherent in the Hegelian dialectic of knowledge. The quality for both Hegel and for the foundations of the supporters of dialectical materialism, who worked after Hegel, was:

- firstly, by a set of in a certain way related essential properties of phenomena;

- secondly, they understood quality as an objective state, even in the case when it is created by human consciousness, since consciousness creates quality in accordance with the objective order of the world. Quality is invariant and objective;

- thirdly, in their understanding, quality changes in accordance with the dialectics of the development of the world. It has a concrete historical way of expression.

All three of the above quality characteristics form a methodological framework: quality theory and quality management strategies.

The famous predecessor of G. Hegel, the English philosopher J. Locke, also contributed to the philosophy of quality. J. Locke divided the quality into two groups: the objective qualities of things inherent in them significantly, and the qualities that arise in the process of cognition. The latter are absent in things, but are formed by the interaction of things and human feelings. Things arouse certain feelings and they react with the formation of qualities corresponding to the received signal - sensations. Locke's theory of duality of quality was not criticized only by the laziest. He got it from the materialists for concessions to idealism: the idealists did not spare him for a group of objective qualities. Does such an active criticism of the beliefs of the English thinker mean that he was wrong in everything, getting lost in the jungle of the philosophy of quality? Not at all. Ideas of a smart person cannot be stupid if they are not a joke, and Locke was not joking. The philosopher tried to find a solution to the contradictions in the development of the doctrine of quality. He was not satisfied with the view of the quality of either simplified materialism or subjective idealists, whose judgments led to a dead end.

Locke was far from combining the ideas of opponents, and with such a primitive method to overcome the existing conflict. He wanted to emphasize the role of consciousness in the history of the formation of quality, the activity of the subject, but he could not consistently implement his plan. The essence of his initiative deserves special attention - the desire to include the activity of the subject in the theory of quality. As time passed, the idea matured under the influence of practical factors. Philosophers returned, not to Locke's philosophy, to his idea of the activity of the subject and the role of his activity in the formation of the quality of things. Not to mention that the problem of the originality of the quality of the activity itself, which creates the quality of things, has also become relevant. Suffice it to recall the modern, international quality control system ISO-9001. It is precisely the idea of the quality of activity that is basic in it. It would be a mistake to identify quality and a thing. As a special combination of properties, quality is, by definition, not the same as a thing. G. Hegel defined the quality of the phenomenon simply and, within the limits of a philosophical understanding, which in the conditions of market relations fits in with the consumer assessment, the concept: “quality is that, depriving of which, the object ceases to be itself”. “It ceases to be itself,” but it does not cease to exist at all.

Not meeting the quality requirements, the phenomenon turns from one state to another, or into another phenomenon. The expert examination gave a conclusion about the discrepancy between the goods and the technical (and consumer) parameters. The product was transferred to the category of non-standard, defective product, but the thing remained and with it some kind of prospect of its disposal was preserved: elimination of non-compliance with the standard, processing. You cannot wear shoes, you can try to scoop up water from a leaking boat with it, ram

the tow, work, but you never know what a failed boot can do in a large household - you can even put on a samovar.

It is a mistake to separate the quality from the subject not only from a philosophical position, but also from the point of view of non-philosophical comprehension, otherwise the quality will turn into something independent, like “The Nose” from the novel by N.V. Gogol, and quality management will lose its objective definition. F. Engels emphasized: "There are not qualities, but only things that have quality, and, moreover, infinitely many qualities." Specialists distinguish a shift in market needs towards high-quality products. The market is maturing. This is confirmed by the monitoring of demand. In this long-awaited situation, it is important not to lose philosophical ground when developing a business plan in accordance with new circumstances. Quality is the highest and permanent goal at the same time, so you need to have one for the future, and give the other today's image.

The manufacturer and seller must be up-to-date. Their modernity is due to the ability to find the optimal product range and match a specific product with the expected level of quality in order to get into the optimal price range dictated by the consumer's effective demand for the product, which expresses his need for the product.

Quality for the consumer is not an abstraction created by the professional mindset of the manufacturer. The consumer looks at quality through the sight of the wallet. As long as the market exists, the price remains its hallmark. If the buyer first asks to show the product and only then asks how much it costs, then the result does not change from the rearrangement of the behavioral elements. The client will ask his sacramental question, the answer to which will depend on how the act of purchase and sale is resolved.

Quality is not adapted to independent existence. A thing is presented in quality when it appears on the market - a commodity. And this is where the main thing in the theory of quality begins, so let's stop and analyze the problem in more detail.

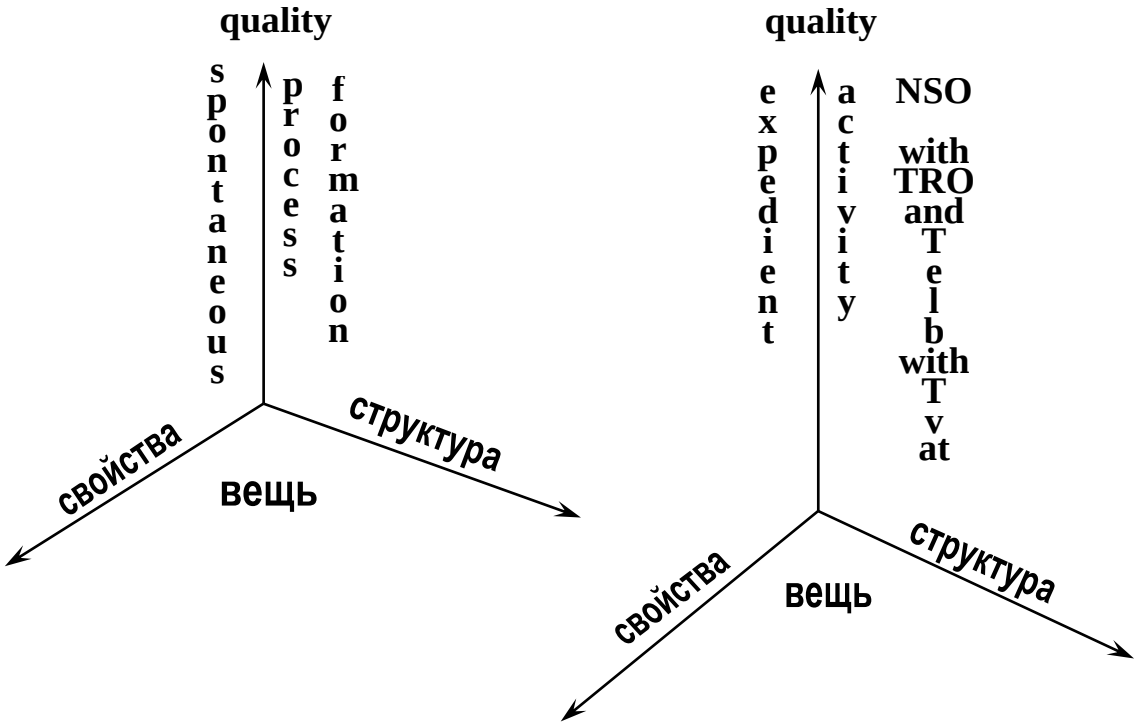
The quality of things that form nature arose naturally, spontaneously, according to a complex combination of natural laws. It follows that the quality of such naturally created phenomena is unambiguously objective in all respects.

As things produced by the practical activity of a person, as this activity itself, the objective properties of things and the subjective forms of human existence are intertwined, fused. The quality of things made by a person is objective, but their objectivity expresses the rationality (or unreasonableness) of a person. And this is where the knot of contradictions between the producer and the consumer lies. It can only be unleashed by reconciling the views on the consumer properties of the manufacturer's product with a real assessment of consumer needs and opportunities. The quality of goods should be developed solely taking into account careful marketing monitoring, accordingly tightening production reserves. We continue to observe a divided market mechanism. Hence the problems with the sale of domestic products.

Professional activity, like a sculptor, sculpts the quality of a thing, relying on the natural properties of the material, raising them through talent and labor to a state that awakens the specific interest of consciousness. Things of natural origin also attract human interest by their ability to evoke aesthetic feelings, provide a healing effect, be a material or a condition for the production of everyday life, which is understandable - a person "left" nature, remaining its special part. However, at the same time, their quality retains its "natural purity". Professional activity is a systemic factor in ensuring the quality of goods with added value. It, according to the position, should also be the initial link in the development of the ideology of quality management.

Only high-quality professional activity can produce a quality thing - this is the first and basic law of production quality. Natural disasters can do a lot. People use them by purchasing precious stones, metols, building materials. Diamond is the brainchild of natural elements. The mineral has an original unique natural quality, however, diamond products build on the natural quality so many new qualities in which a person is interested, that the natural quality remains essentially important only for the processors of natural stone.

The history of the quality of the phenomena created by human activity turns out to be different. In social practice, the spiritual component of a person is realized. A person builds a house, sews shoes, clothes, coordinating his actions with the mechanical, physical, chemical, biological properties of natural things, but we do not make the final product for nature - we will omit special cases. In the created thing, in its properties, in its quality, we realize our goals, needs, interests: we either materialize or objectify. The differences in the objectivity of the quality of a natural phenomenon and a created person are shown in (Figure 2).



Formation of quality things in nature
Quality built aimlessly and unconsciously
Objectivity of quality develops exclusively according to natural laws

Formation of the quality of things in public practice
Quality is deliberately built to "humanize" a thing, to give it the necessary meaning
The objectivity of quality is formed on the basis of natural laws, but has an introduced configuration in the interests of a person

Figure 2 - Differences in the objectivity of the quality of a natural phenomenon and a created person

The final diamond product, be it a piece of jewelry or a technical element, is the result of professional activity. On the gemstone market, there is a difference in interest in the source material - from what deposits it is, but the main thing is different: who will turn diamonds into polished diamonds. The quality of a diamond is due to the combination of raw materials and craftsmanship in the product. And since the master chooses the raw materials, the contribution of his professionalism to the quality of the product is of decisive importance. Hence the second law of production quality: to ensure the quality of a product, high-quality training of specialists is necessary, capable of maintaining and increasing professional skills. The third law of production quality requires the focus of professional activity on improving the technological process through integration with science and technical progress.

The concept of "quality", reflecting the objective diversity of the world, is thereby obliged to reproduce in itself an objective difference. This is feasible through the structuring of quality. The structured quality of quality is a particularly significant factor in the theory of quality management. It is advisable to divide the quality into the following seven structural levels according to the level of significance from the contribution of the "human factor":

- the quality of natural objects;
- quality of natural material;
- the quality of the recycled natural material;
- quality of technical equipment;
- the quality of the software product;
- quality of production activities;
- quality of organization and production management.

Organizational and managerial activities aimed at the production of a quality marketed product itself requires quality control. An audit of the organization's quality and production quality management involves the structuring of the relevant activities. Our research experience of the problem suggests that the process of organization and management should be decomposed into four components (Fig. 3).

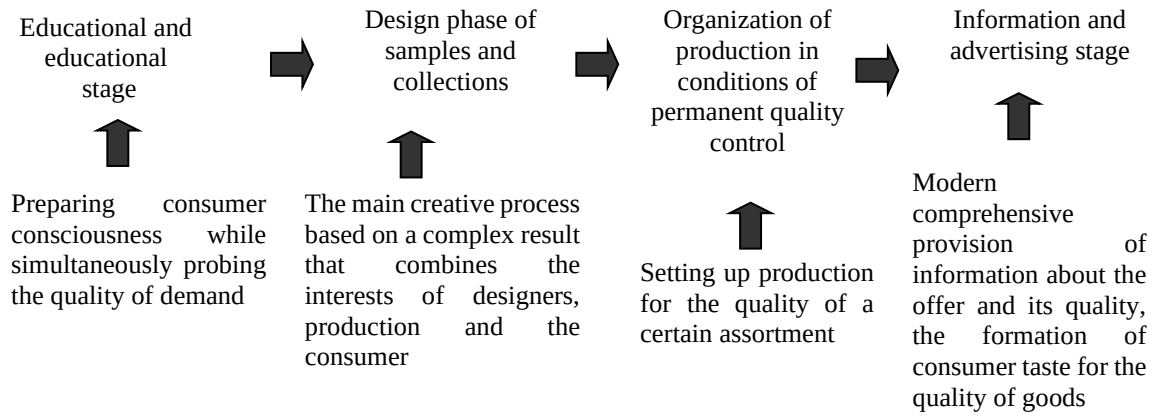


Figure 3. Stages of the inclusion of creative professional activity in the process of forming the quality of the product - the constituent organization and management of production quality

The logic of creating the quality of things created by man pushes the quality of activity into the foreground, close-up, focuses research attention on the signs of quality activity, the need to build their systemic relationships. Philosophical literature on the selected problems is more "silent". Philosophers are still at war. Supporters of the objectivity of quality prove the inconsistency of the views of their opponents, instead of looking at quality not only in the context of the objective reality of the world, but also human, professional activity transforming the material world. In the spirit of pre-Marxist materialism, it is impossible to develop a scientific and philosophical doctrine of quality, for the old materialism was, in essence, a philosophy of contemplation, and not the transformation of the world. It was not in vain that K. Marx taught: it is necessary not only to reflect the world, but also to change it. Dialectics - the materialistic worldview is based on the practical interaction of man and nature. Activity, primarily creative, is the credo of dialectical philosophy and science. The universal model of relations between the systemic properties of professional activity is explained by the scheme already cited and proposed by us. The features of professional activity included in the scheme are well known. Professionalism is usually associated with them both in scientific and practical consciousness. The novelty lies not in the features themselves, but in their representation by systemic education, which gives them a new level of meaning. When presenting a system, researchers usually refer to the effect of the systemic connection of properties discovered by Bertollanffy: the discrepancy between the sum of the features of the system and the sum of the features of the elements that form the system. The effect described by Bertollanffy is

Quality management, building on its philosophical interpretation, makes the next step along the path of the systemic organization of the activity program, dealing with the arrangement of systemic signs of activity so that the built system would be vitally stable, relevant and moderately safe. A systematic approach at this time is the highest quality way of knowing and organizing the management of any complex activity. Those who doubt the most effective systemic approach probably no longer exist. There are those who inadequately perceive and evaluate the indisputable advantages of the systems approach, absolutizing its value to the detriment of other methods, in particular, an integrated approach. An integrated approach in theory and in practice has not squandered its value in competition with the systemic one. They are not very badly combined, complementing each other, and increasing the efficiency of both organizational and managerial and cognitive activities. It is more convenient to analyze the quality of activity from the standpoint of a systematic approach. The theory of quality management, it seems to us, is more reasonable to build on the foundation of a comprehensive examination.

The situation that has formed in special - not philosophical - cognition (in practice, too) forces us to return to the difference that exists between complex and systemic methods, because substitutions of these methods have become too frequent. The systematic approach is fundamentally distinguished by the way of building knowledge, in which the relationships that form the elements, signs, are built depending on the basic relationship, called the system-forming factor. The system is formed similarly to the crystallization process by sequential increment of the components. It is systematically expedient to build, for example, products from leather, fur, textiles, when a certain agreed state of the quality of the material is taken as a system-forming factor and the whole range proposed for production is "tied" to it.

Figure 4. Universal model of systemic relations of qualitative properties of professional activity

An integrated approach is based on a certain qualitative basis and requires a comprehensive analysis of the quality of the phenomenon, and the aspects of research can be both equivalent and appear in a certain rating dependence. A good example of an integrated approach is the construction of quality management. Schematically, it looks approximately as shown in Figure 5.

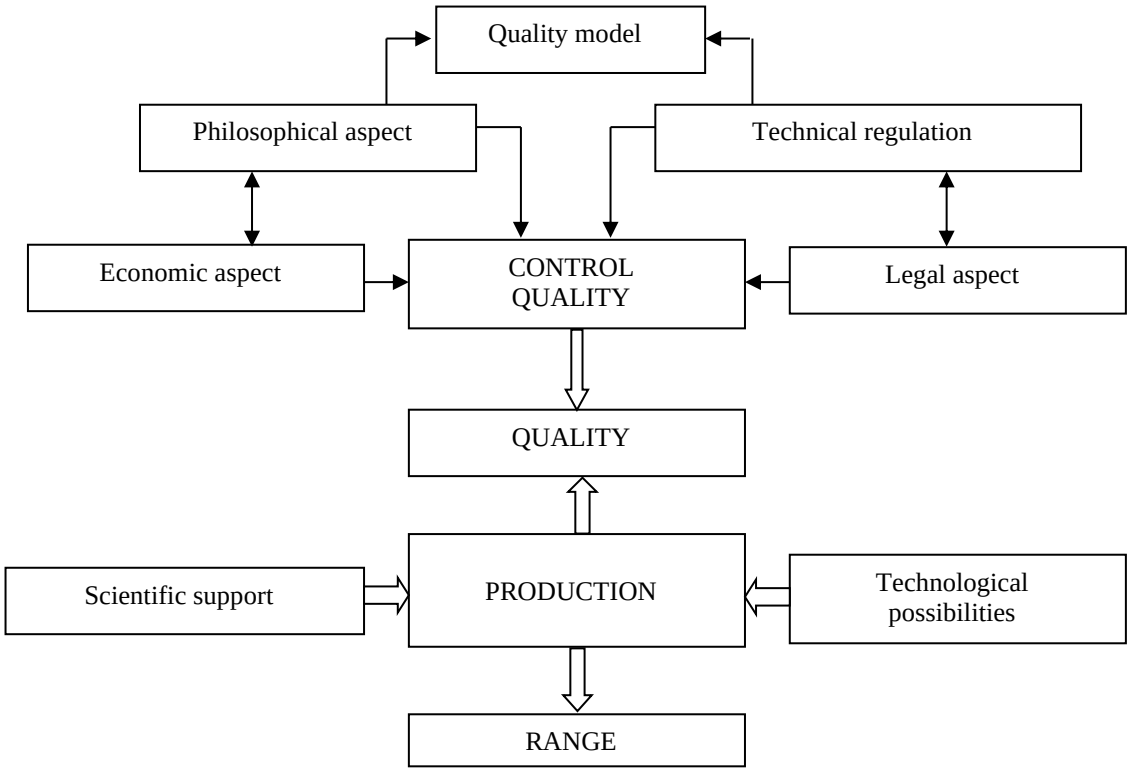


Figure 5 - Schematic diagram of integrated production quality management

The above diagram demonstrates the relationship and role responsibility of the main elements of the preparation and implementation of the production quality management process. The nodal relations are

quite clearly visible on it: the connection of the philosophical aspect with technical regulation, which makes it possible to concretize methodological and theoretical studies to the level of normative and technical tasks; technical regulation with a legal aspect, including in the latter the use of patent and licensed elements: philosophical and economic analysis, which gives the former a specific subject orientation in market conditions, and the latter a methodological perspective, the dependence of production quality on the technological state of production and scientific equipment

To complete the philosophical analysis of quality at the level necessary for the use of this knowledge in the practice of economic management of production quality will be helped by a schematic diagram of the relationship of philosophical concepts describing the quality, docked with economic categories. It was developed by us several years ago. Our return to her is forced. The reason is that we didn't have a choice. Philosophers continue to analyze quality abstracted from specific forms of economic practice in the light of their professional interests. Economists represent quality narrowly empirically within the framework of mercantile interest.

Philosophy warns that the objectification of quality has real meaning exclusively in the epistemological aspect of its consideration: when deciding the question of the nature of quality. Indeed, in the perspective of the relationship "object - subject", quality is primary - it is objective in nature. Even while constructing quality, we are deprived of absolute freedom in our creativity. Professional creativity is limited by the objective roots of the quality created by creativity. The quality of both things and theories is objective with the only difference that the quality of a thing is objective in material expression, while the quality of a scientific theory is objectified by the adequacy of the reflection in it of the objective quality of a thing, the relations of which are reproduced in scientific theory. The quality control system is shown in Figure 6.

In the theory of quality management, it is important to correctly understand dialectics as a production organization; as an activity organized by production, finally, as an objective and subjective commodity produced. Prominent Russian scientist, public figure L.P. Karsavin, in order to emphasize the active nature of quality associated with the subjective creativity of a professional, coined the term "quality".

The subjective side of the quality of a product is revealed on the market through a complex relationship between creators, intermediaries and consumers. They intersect with the originality of the national mentality - in the United States and Western European countries, a pragmatic, utilitarian approach dominates the interpretation of quality on the market, in Russia the traditional side of the attitude to the quality of goods was contemplation, quality goods, and nowadays for most Russians there is more than something intended exclusively for use.

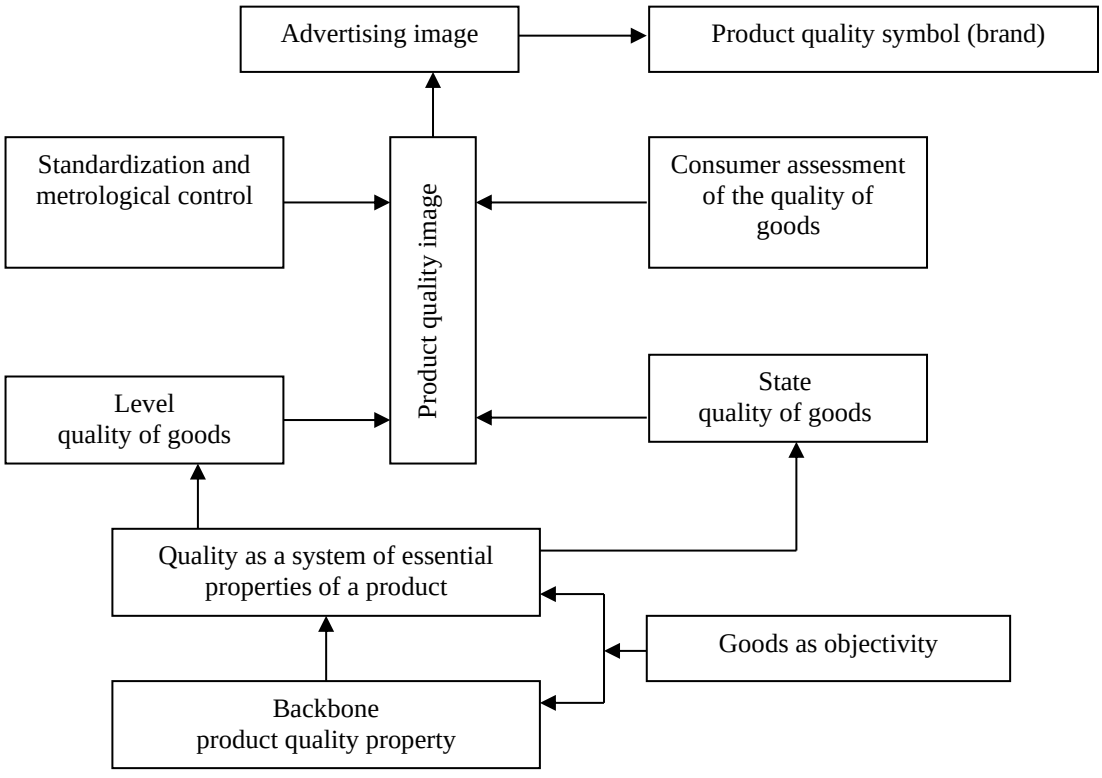


Figure 6 - Quality control system

Creators and manufacturers of quality goods need to educate potential consumers of their products, based on the fact that in market conditions, product quality is a collective image. The image of the quality of a product, of branded production, of course, can be promoted with the help of advertising, but such one-sidedness is relaxed and dangerous. The sustainability of the reputation of a quality product is ensured by the entire mechanism of the market, including its extensive infrastructure. The enlightened consumer is actively involved in the process of "struggle" for quality. The market needs it like a pike in a pond to keep the crucian carp awake. The unwillingness to spend decent funds for educating the consumer, the desire to "shoe" him with false, superficial advertising will inevitably turn into a boomerang. Unfortunately, many Russian manufacturers are not afraid of the boomerang. They know, that they will not stay in this sector of production for a long time. Until the market puts everything in its place, reacts appropriately to pseudo quality, they will be different and this "crap" for them will lose relevance.

Although experts believe that the Russian market has swung towards product quality, objectively, the market situation has not changed significantly. The small percentages on which encouraging conclusions are based are far from being qualitative characteristics.

The effective demand of the overwhelming majority of Russian citizens does not allow them to focus on the quality of goods. The shift towards interest in the quality of the goods must go through the obligatory stage of expanding the range of available goods for the mass buyer, and this stage has not been passed by the Russians, which, in other words, does not mean deactualization of the quality of the goods.

Integrating what has been said, we present formula (1), which allows us to reveal the terms of the quality of a product, that is, a product produced by a person to meet certain needs. It can also include natural phenomena included in market relations: clean air, mineral springs, therapeutic mud, clays, warm sea, etc., as well as those whose production is not designed for implementation, considering these cases as simplified option

The graphical equivalent of formula (1) is shown in Figure 7.

This formula also describes the quality of an intellectual product. Why is it necessary to expand the interpretation of the concept of "natural properties" by including in its content the intellectual and psychophysiological prerequisites for creative activity. An economic understanding of quality, on the basis of which all known concepts of production quality management were directly developed. It evolved according to dialectical laws, while economists themselves were far from always aware of the dialectic of the process.

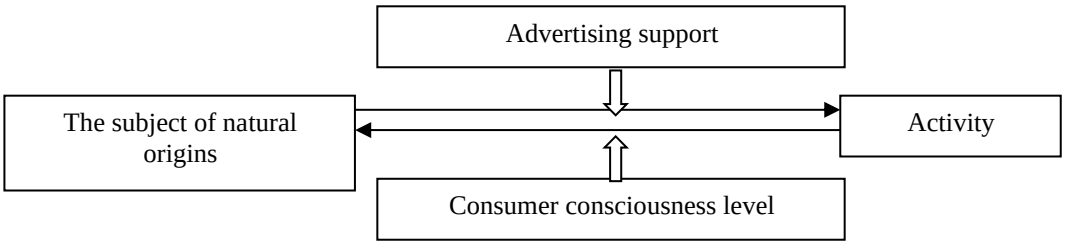


Figure 7 - Graphical equivalent of the above formula.

The development of economic awareness of quality was carried out “under the influence of contradictions between the internal and external goals of the manufacturer - ensuring the quality of products and, accordingly, strengthening the position of the manufacturer in the market (external goal), as well as increasing production efficiency, that is, increasing the profit of companies (internal goal). At each stage of production, market and society, this contradiction had its own specifics and was resolved in different ways. " B.S. Aleshin et al. Distinguishes four phases in the formation of a modern philosophical and economic interpretation of quality: the “rejection phase”, “quality management phase”, “continuous quality improvement phase” and “quality management program”.

The history of economic quality management dates back to the era of workshop production. In medieval cities, guild organizations were necessarily created, one of the most important functions of which was the certification of craftsmen. To become a recognized master, it was required to pass a serious quality check of their products. All products of the workshop craftsmen had the author's "stamp" and were unique in their own way. Quality management was simplified by production itself, by its manufacturing nature, which did not allow production to expand on a scale. Of course, no agreed quality standards existed at that time due to the difficulty of comparing strictly individual products of masters, and even more so trying to develop a certain model to follow. The uniqueness of the master's work excluded the imitation of anything in principle.

Only a long time later, standardization of the quality of products appeared at S. Colt's arms factories. Such an unusual decision was prompted by

the fact that in conditions of mass production, the final product began to be assembled not from specially made and fitted parts, but from randomly selected parts from the corresponding batch. For the first time, the production was equipped with special gauges, and trained inspectors checked the parts on them before assembly. The heyday of the idea of standardization fell on the era of the development of automobile production in the United States. G. Leland, the creator of the Cadillac company, came up with a pair: "through" and "non-through" caliber. G. Ford, having built an assembly line, went further. He replaced the input control of components with output control, thanks to which calibrated, high-quality parts were delivered to the main production - assembly, which significantly increased labor productivity and significantly improved the quality of the final product. For the first time, a technical control service was created at Ford factories, independent of production.

Like-minded G. Ford F. Taylor, who worked in conjunction with his patron, did a serious job of scientific understanding of innovations in production. As a result, he managed to formulate the principles of scientific management focused on the quality of production: a systematic approach; personnel management; mandatory division of responsibility between performers and organizers in achieving high-quality and effective work; the need for scientifically grounded labor rationing. F.W. Taylor, undisputed founder of scientific management. It was he who first discovered the "depletion" of the effectiveness of the main position in management practice: "initiative - reward" for the quality of work. “In contrast to this, Taylor argued, the development of the scientific organization of labor suggests the development of numerous rules, laws, formulas, which will replace the personal judgment of the individual worker and which can be usefully applied only after systematic accounting, measurements, etc. have been made. their actions. "

One cannot but agree with the resume of D.M. Gvishani:… what Taylorism has in the strict sense of this term boils down to the following: the creation of a scientific foundation that replaces the old, traditional, practically established methods of work, scientific research of each of its individual elements. Selection of workers based on scientific criteria, their training and education. Cooperation between management and workers in the practical implementation of a scientifically developed work organization system. Equal distribution of labor and responsibility between management and workers.

Taylor himself presented guarantees of the quality of production and its efficiency: “Science instead of traditional skills; harmony instead of contradictions; collaboration instead of individual work; maximum performance instead of limiting performance; development of each individual worker to the maximum productivity available to him and maximum well-being. " Try, argued with F. Taylor. Not surprisingly, his view of the organization and management of machine production hypnotized his contemporaries. There is an opinion according to which the concept of F. Taylor, G. Ford, A. Foyle and M. Weber “In its main features has existed until now and has become a model for organizing production of most modern enterprises. It was only in the 70s that another concept began to come to replace it - the Toyota production system ”.

The ideology of the “rejection phase” was simple and clear: at the output of production there should be only high-quality products, the meeting of the consumer and defective products should not be allowed. The main efforts of managers should be focused on quality control of components and assembly of finished products. The relative simplicity of the “rejection phase” concept was its reliability and the relativity of its reliability, led to the need for innovations in the future. The reliance in the ideology of production quality on the “rejection phase” has a practical effect. It would be surprising if the result were not positive. Increased attention to quality control is logically presupposed as a condition for the functioning of production. This requirement at the market level of comprehension accompanied the development of production activities throughout its existence.

The stability of the scientific solution to the problem of managing the quality of production of the economic (and, to a certain extent, social) effect, achieved by the pioneers, is surprising. And yet the latent side of the “rejection phase” had to appear. The displacement of management to the phase of high-quality preparation of production - in essence, towards the special status of control functions - signaled an increase in the corresponding costs of providing quality products. The quality of production and the quality of manufactured products are one and the same, but not the same. The development of production is undoubtedly due to the quality of manufactured goods. E. Deming rightly at the head of the list of the "seven deadly diseases" of modern production put "production planning, not focused on such goods and services,

During the transition from industrial to post-industrial society of the mass consumer, production is increasingly becoming a function of the market “The buyer is always right” - no matter how the well-known judgment is contrary to the seller, who is forced to adapt to the buyer's demand, he has no choice. There is also no choice for the manufacturer, for whom the “seller” is the “buyer”. Product quality is a special "song" of production. Only a "concert" cannot be made up of one song. The quality of production is also characterized by its economic efficiency. The pursuit of product quality cannot be the end in itself of production, otherwise a good deed will turn into a fatal disease. The quality of the product is not able to

compensate for the inefficiency of production as a whole. Improving the quality of the final product always requires the cost of providing it, which becomes a problem for developers of an efficient production strategy. The goals of increasing production efficiency and improving the quality of manufactured products were not combined in the concept of the “rejection phase”, so it was replaced in the 1920s by the “quality management phase”. Its developers have attempted to overcome the critical value of product quality costs evident in the “rejection phase”. They were unable to resolve the contradiction that had arisen. We managed to soften it. Among the innovators of the "rejection phase" reconstruction was V. Shewhart, an employee of the technical control department of the American company "Western Electric", who proposed a method for constructing diagrams, better known as "W. Shewhart's map control". The goals of increasing production efficiency and improving the quality of manufactured products were not combined in the concept of the “rejection phase”, so it was replaced in the 1920s by the “quality management phase”. Its developers have attempted to overcome the critical cost of product quality evident in the “rejection phase”. They were unable to resolve the contradiction that had arisen. We managed to soften it. Among the innovators of the "rejection phase" reconstruction was V. Shewhart, an employee of the technical control department of the American company "Western Electric", who proposed a method for constructing diagrams, better known as "W. Shewhart's map control". The goals of increasing production efficiency and improving the quality of manufactured products were not combined in the concept of the “rejection phase”, so it was replaced in the 1920s by the “quality management phase”. Its developers have attempted to overcome the critical value of product quality costs evident in the “rejection phase”. They were unable to resolve the contradiction that had arisen. We managed to soften it. Among the innovators of the "rejection phase" reconstruction was V. Shewhart, an employee of the technical control department of the American company "Western Electric", who proposed a method for constructing diagrams, better known as "control of W. Shewhart's map." Its developers have attempted to overcome the critical value of product quality costs evident in the “rejection phase”. They were unable to resolve the contradiction that had arisen. We managed to soften it. Among the innovators of the "rejection phase" reconstruction was V. Shewhart, an employee of the technical control department of the American company "Western Electric", who proposed a method for constructing diagrams, better known as "W. Shewhart's map control". Its developers have attempted to overcome the critical value of product quality costs evident in the “rejection phase”. They were unable to resolve the contradiction that had arisen. We managed to soften it. Among the innovators of the "rejection phase" reconstruction was V. Shewhart, an employee of the technical control department of the American company "Western Electric", who proposed a method for constructing diagrams, better known as "W. Shewhart's map control".

As a first approximation, the American specialist's initiative looks quite radical. V. Schuhart refuses the key scheme of quality control of F. Taylor, G. Ford. In the center of quality management, instead of the stage of preparation for production, at which it is necessary to reject low-quality products, the production process itself turns out to be.

The system of V. Shukhart's methods was aimed at improving the technological process, which was intended to help increase the output of finished high-quality products. In the concept of W. Shukhart, one senses from the outset a dialectical approach to the matter. His predecessors tried to "sort out production on the shelves" and load the "shelves" so as to get the desired result. As a result, they overloaded one of the flank "shelves" and the whole structure was skewed. The stage of preparation - control became the most costly, while the main stage - the technological one became dependent on it and was pushed to the periphery of the management process, undeservedly suffered. V. Shukhart called "things" by their proper names and arranged the stages according to the rank, highlighting the technological one. He risked, simplifying the stage of preparation for production, reducing the quality of components.

By investing as a priority means in improving technology, the manufacturer strengthens the production process, makes it, in principle, more efficient due to the organization and technical equipment. As for marriage, it is more expedient to track it precisely when organizing relations in production itself, relying on scientific developments and the timely introduction of new products in the technical process, complete with measures for preparing the quality of the readiness of performers. The main object of quality management of V. Shukhart's concept is the production process. The exit from it represents the flow of measurements of the quality parameters of individual products. V. Schuhart retires Ford's previous goal of “getting into admission”. G. Ford's idea worked out, awakened new thinking. She is replaced by V. Schuhart forms a tandem of goals: ensuring process stability and reducing variations in stability. V. Schuhart considered the presence of variations a natural formation. He even deduced a criterion for the quality of the process - the stability of the process should be considered in a statistical sense. Variations in the parameters of products are nothing more than the implementation of a stable random process, the distribution function of which remains constant for a certain time. V. Schuhart believed that variations in the parameters of products are the result of two groups

of reasons: special and general. The special ones are rooted in the disruption of the production process. They are identified using a control chart and eliminated based on the readings of such a chart. He even deduced a criterion for the quality of the process - the stability of the process should be considered in a statistical sense. Variations in the parameters of products are nothing more than the implementation of a stable random process, the distribution function of which remains constant for a certain time. V. Schuhart believed that variations in product parameters are the result of two groups of reasons: special and general. The special ones are rooted in the disruption of the production process. They are identified using a control chart and eliminated based on the readings of such a chart. He even deduced a criterion for the quality of the process - the stability of the process should be considered in a statistical sense. Variations in the parameters of products are nothing more than the implementation of a stable random process, the distribution function of which remains constant for a certain time. V. Schuhart believed that variations in product parameters are the result of two groups of reasons: special and general. The special ones are rooted in the disruption of the production process. They are identified using a control chart and eliminated based on the readings of such a chart. that variations in the parameters of products are the result of the action of two groups of reasons: special and general. The special ones are rooted in the disruption of the production process. They are identified using a control chart and eliminated based on the readings of such a chart. that variations in the parameters of products are the result of the action of two groups of reasons: special and general. The special ones are rooted in the disruption of the production process. They are identified using a control chart and eliminated based on the readings of such a chart.

Common causes are inherent in the process itself. There are many of them, but individually they are not essential. The danger lies in the sum of these causes. Common causes of variation in product parameters are of concern to managers, often of high level and skill. By their investigations and actions, they are able to limit the actions of common causes. At the same time, V. Schuhart made two very valuable conclusions, which should be guided by the production manager.

First, the search for the guilty is necessary, however, having found the guilty, we are rarely able to influence the situation. It is necessary to look for the reasons for the discrepancy and eliminate them, involving all its participants in this process.

Second, process variations become the source of defects and inconsistencies. Reducing variations in V. Shuhart's quality management system is a complex goal. Associating the number of variations with the organization of the production process, W. Schuhart was clearly aware that in order to reduce variations, a new configuration of relations between people employed in production was needed. The essence of such a new configuration should be comradely cooperation. People by the very feature of production are rallying into teams.

W. Shewhart's system is a serious step forward in comparison with F. Taylor's system. F. Taylor focused on the mechanism of action, and W. Schuhart - on the mechanism of interaction between people in the entire spectrum of their relations: technical, economic, psychological. B.S. is absolutely right. Alyoshin et al. Arguing: “Such a concept as“ tolerances ”(one of the most important inventions of F. Taylor) undoubtedly remains in practice. "Tolerances" are the form, language of quality requirements, the result of quality planning. Another thing is changing: the opposition of tasks of planning, execution, control and corrective actions. Such tasks are performed by teams ... "

Comparison of the two above-mentioned systems of economic quality management can be presented as follows (Figure 8).

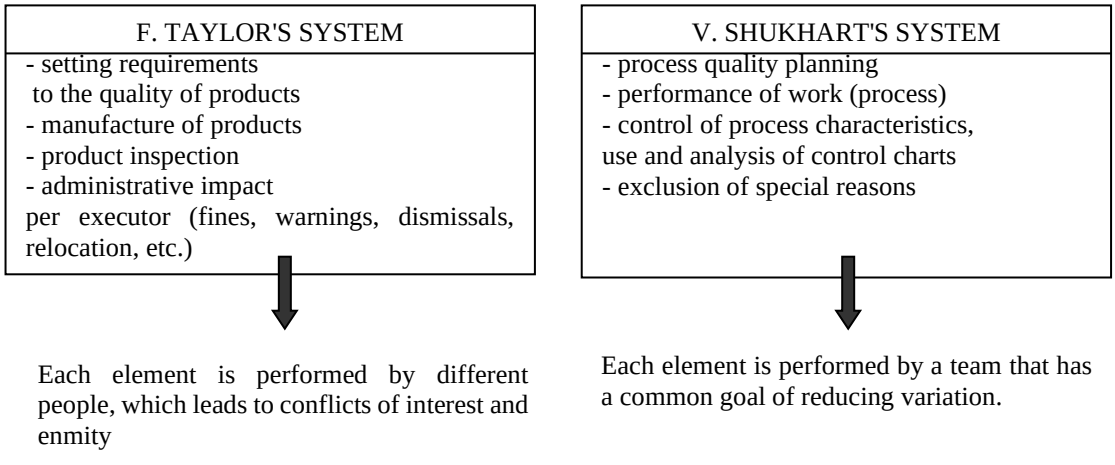


Figure 8. Comparison of Taylor and Shewhart systems

At the same time, we note that the ideas and methods of W. Shukhart continue F. Taylor's aspiration to put quality management on a scientific basis, to use scientific methods in the organization of production. But even here W. Schuhart is "ahead" of F. Taylor. For F. Taylor, G. Ford, science (and scientific methods) boiled down to those concepts that allow one to quantitatively measure the mechanical actions of an individual performer, find the optimal route of movements and take it under effective control, having previously loaded it with tasks in full. The "classical" (Taylor's) theory of quality management was based on centrifugal forces and movements and production: division of labor, specialization of actions, individuality of the performer. This one-sidedness was understood by critics. V. Shewhart considered the mechanistic view of the development of production in general and quality management in particular as an obvious simplification. The production process not only results in the interaction of centrifugal and centripetal forces - individual and collective actions: it does not allow the reduction of what is happening in it to relations of a mechanical type.

A person participates in production as a subject of actions and relationships. Moreover, a person as a subject of labor is a decisive factor in production. The development of production should be based on the development of the subject and the relations of the subject and the relations of the subjects. Subjective potential in the form of individual knowledge, skills and aspirations is the main reserve of production efficiency, which science helps to activate and organize properly. In this understanding, science includes social and humanitarian components.

An organic defect of the "classical" theory of production quality management is the simplification of the presentation and the nature of human behavior in the organization. V. Shukhart understood this, explained it as best he could, and hoped to be understandable and in demand by practical management.

V. Shukhart's new ideas did not go unnoticed by the business, but, apparently, the inertial forces of business movement are so great that the ideas begin to act on it only over time and totally. The shortcut to profit out of habit was thought to be the simplest. Any complication comes with additional costs. Will they be justified? In addition, measuring the mechanics of an action is much easier than measuring the motivation for action. It is not surprising that, almost half a century later, J. March and G. Simon noted: in the United States, two views on the position of people in an organization are widely spread: something given, and not as a variable in the system. " Another authoritative scientist M. Hare agrees with them: “There are implied assumptions about a person, on which, in my opinion, the classical theory of organization and management is based: he is lazy, short-sighted, selfish, prone to mistakes, does not know how to judge sensibly and may even be a little dishonest. " M. Hare's text explains that the classical interpretation of the organization of management is still very popular in practical management.

Three main provisions of the "classical" theory of quality management have not been eliminated until now. They continue to impress, warming the souls of patrons, caressing their self-awareness, reinforcing self-confidence in their chosenness. Everything is so well laid out in its place: the worker is a performer, in fact a "rational animal" with a clearly expressed dominant to maximize economic conclusions; "Each individual responds to economic incentives as an isolated individual"; "People can be treated like machines in a standardized way." W. Schuhart had many supporters who left their own noticeable and appreciated mark: M. Follett, E. Mayo, C. Barnard, F. Rotlisberger, G. Simon. The thirties of the last century were marked by the "humanistic challenge" of the "preaching of administrative responsibility." In theory, events unfolded according to a logical scenario. Practice, on the other hand, was not so susceptible to changes in attitudes, so the effectiveness of the new approach to economic quality management left room for reflection on the complexity of the relationship between theory and practice.

The construction of the economy itself hindered the totality of the introduction of progressive ideas. In order for a person to develop as a subject of production - to mobilize his abilities of knowledge, it is imperative that the economy turns “face” to a person, acquires a “human face”. In another way, it is impossible to inscribe the talents of the individual into the interior of the production, to make them interested colleagues. Dialectics warns: truth is concrete. The theory is effective in a concrete historical framework. Her life may be long or short, but it is always finite. The elements of the theory and the experience of its exploitation, expressed in historical lessons, continue to work, being embodied in other, relevant theories and practical actions.

Today's economic component of quality cannot fail to take into account the acquisitions of V. Shukhart, M. Follett, G. Simon and all those who argued the need to engage in the struggle for the quality of the subject's ability to think and get involved in business. In particular, in our opinion, the strength of V. Shukhart's "control charts" remains. They are simple and make it possible to monitor the quality of the process and the activities of the performers. And for the performers they are more understandable than the not always understandable displeasure of the manager, so we give a sample of them (Figure 10).

Having developed a model of a sustainable process, V. Schuhart significantly expanded the possibilities of scientific analysis of production

quality, thanks to which those aspects and stages of production that remained in the shadows in the "classical" concept were revealed. He introduced the concept of "adjusting the process according to the data of its measurements" into the characteristic of the quality of production, which is quite fashionable to consider as a concretization of the concept of "feedback" in relation to quality management. In the theory of random processes, a quantitative measure of the dependence of a sequence of random variables is the autocorrelation coefficient, which takes values from 0 to 1. When its values are close to 0 for neighboring observations (in practice, <0.2-0.3), the process is considered "white noise" ... If the values of the autocorrelation coefficient are close to 1, different closed-loop control systems should be used for this process. It is not difficult to see in Shewhart's concept a desire to theoretically comprehend the specific state of mass production of its time. He tried to look at the conveyor belt through the eyes of science. And he managed to do a lot. At least, V. Shukhart's ideas today, although they have aged, are still viable. With a creative approach, they give good results.

A remarkable contribution to the practice of quality management was the creation of a quality audit service, the function of which was significantly different from the tasks faced by F. Taylor's technical control departments. She was not engaged in sorting, but checking the performance of the quality assurance system by monitoring small workings from batches of products. Thus, W. Schuhart found a way to reduce the cost of quality, which increased disproportionately when organizing production according to the recommendations of F. Taylor. However, V. Shukhart's original thinking and his organizational talent did not resolve the old contradiction between the need to ensure production efficiency and the market demand for a quality product, and the production itself for quality raw materials and components. Each production process has a limit on the yield of quality products. This limit is not laid down in the process. It is an attribute of the system practiced at the enterprise, the product of all aggregate activities, the characteristics of labor organization and production management, including the quality of production. Approaching the limit leads to an increase in the main contradiction.

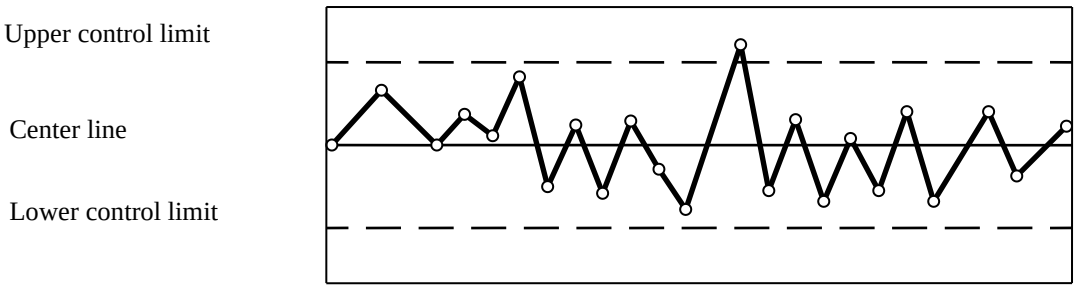
Quality assurance requires more and more resources, which leads to a decrease in production efficiency. In the fifties, a new concept of quality management was formed. Her inspiration was E. Deming. The name of the next stage in the development of the philosophical and economic understanding of production quality management emphasizes its essence "the phase of continuous improvement of quality." The version of production quality assurance proposed by E. Deming turned out to be a long-liver, having existed "in authority" for almost half a century, until the mid-nineties. Such duration of the practical relevance of E. Deming's concept is explained, as it seems to us, by the fact that it was skillfully "planted" on the basis prepared by W. Schuhart, and being in its form already a software product.

E. Deming's management program is built on three axioms focused on industrial practice:

– the first practical axiom asserts that any activity must be defined as a technological process, from which the conclusion follows about the possibility of its improvement;

– the second practical axiom was formed by E. Deming as follows: production has two forms of state - is in a stable or unstable state. In both cases, it is not enough to solve particular problems, fundamental changes are needed;

– E. Deming's third practical axiom is as follows: the top echelon of enterprise management in all cases is obliged to take responsibility for the result.



DATA COLLECTION: Collect data and map it

CONTROL: Calculate trial control limits from the process data. Identify and act on specific causes of variation

ANALYSIS AND IMPROVEMENT: Assess variations for specific reasons and take action to reduce them

Repeat these three phases to continuously improve the process.

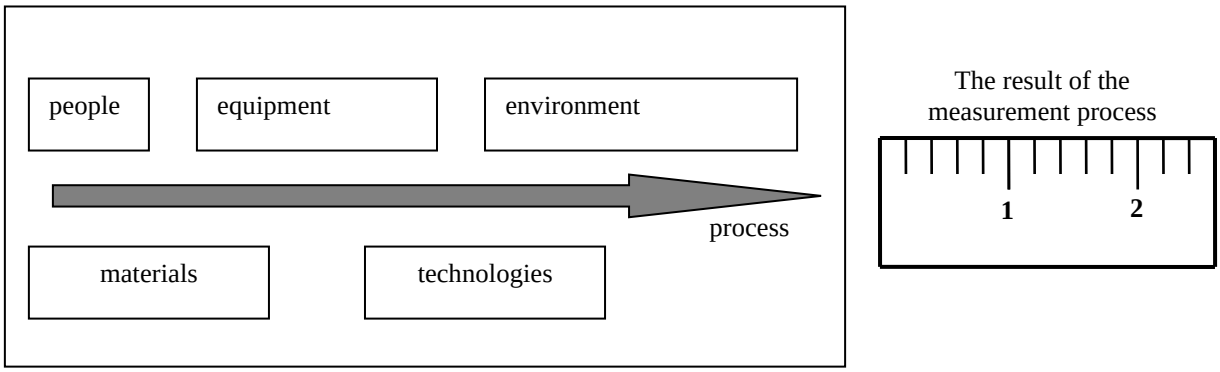


Figure 9 - V. Shewhart's control card

Deming's axioms achieve practical concreteness within the framework of a special management program that summarizes the theoretical and real experience of organizing production quality management. The program is represented by several levels of comprehension and practical implementation of ideas: "Fourteen points", "Seven fatal diseases", "Difficulties and false starts", "Chain reaction according to Deming", "Principle of continuous improvement (Deming cycle)". Of particular interest for the practice of improving quality management at enterprises are the penultimate and last sections of the program. "Deming's cycle" is essentially a scheme proposed by W. Schuhart, which was also recognized by Deming. "Chain Reaction" is a product of E. Deming's own creativity. In the Deming-Shewhart cycle, four stages are looped: observation, development of measures to improve the situation, implementation and analysis. The task of the quality manager at the first stage is to collect information and identify weak links in production that require restructuring. At the second stage, the manager develops organizational measures aimed at changing the situation. Among them is the connection of all performers through motivation. The next stage is implementation and monitoring of the modernization process. The cycle ends with the stage of analyzing the results obtained from the implementation, building up experience to repeat the cycle.

Probably, graphically, the Deming-Shewhart cycle best demonstrates the spiral of development, each turn of the spiral is a relatively closed cycle of actions. The next round "relies" on it, continuing the general process. If it were not for the tradition to call

such discoveries by the names of the authors, then the Deming-Shewhart cycle would be called the “spiral cycle” of quality management. The Deming-Shurkhat cycle is indisputably relevant even now for improving the organization of production, since it reflects the universal law of building management.

We cannot but pay tribute to E. Deming and for his development of a "chain reaction" in quality management, shown in Figure 10.

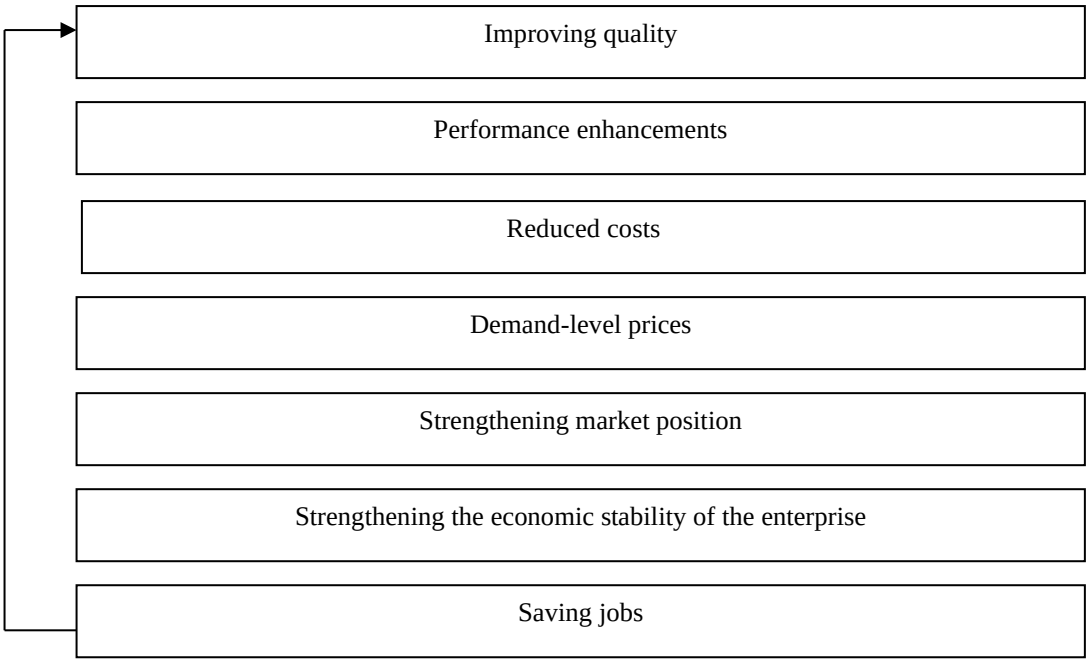


Figure 10 - "Chain Reaction" by E. Deming

In it, he linked economic and social actions, emphasizing the character of historical time. The flourishing of E. Deming's creativity is associated with the revival of the Japanese economy. The government and industrialists of the country believed Deming's argumentation and he deservedly shared with them the glory of the "Japanese miracle". His contribution is obvious in the achievement of Japanese specialists in the field of improving the quality of production, which are clearly highlighted in the study by B.S. Aleshina et al:

1. Long-term, consistent and purposeful solution of quality problems on the basis of everything advanced that accumulates theory and creates practice in this area.

2. Consistent and persistent establishment of a system for studying consumer demands - (prevention of the main "fatal disease of the economy" according to E. Deming's classification - ed.), The formation of a respectful attitude towards the consumer and his requirements up to the cult of the consumer - (the consumer is always right - ed.) the consumer (in this case) is understood in a broad sense, as the next link in the technological chain.

3. Striving for universal participation in achieving quality, from senior managers to executors of specific work.

4. Understanding that even a well-oiled work organization system loses efficiency without constant checks and improvement.

5. Organization of work on quality assurance directly by foremen and foremen. Training, including special programs on national television, national conferences for foremen and foremen.

6. Particular attention is paid to the mobilization of the physical and intellectual potential of workers. Quality circles - a group analysis of the state of affairs in a specific area and the development of proposals for improving quality and increasing the efficiency of processes, production.

7. Extensive development of a permanent system of promoting the value of high quality products to ensure high rates of economic growth.

8. Government influence on a radical improvement in quality, primarily of export products, including mandatory state certification. An attempt to export uncertified products is considered contraband. State support for exports, assistance in promoting goods to the markets of other countries. "

We deliberately did not shorten the fragment describing the Japanese practice of creating a quality management system, because in it, like a mirror, one can see Russian miscalculations, namely Russian ones, since, having declared the Russian Federation the successor of the USSR, Russian politicians and economists close to them in 90 -ies systematically

destroyed the socialist experience of building the quality of production instead of rationalizing it. In the 90s, quality was not needed by anyone who was supposed to be responsible for it. The economy was reoriented to raw materials, the quality of which is either determined by natural origin, or "compensated" by the realized quality. Comparison of the economic policy of Japan in the 50s and subsequent years with the economic policy of the Russian Federation in the 90s, announced by the revival of Russia, leads to a sad conclusion: loud statements rarely match deeds. The interests of the Fatherland during the period of Yeltsin's democratic reforms worried politicians least of all, and did not care about quality at all, squandering previous national acquisitions. However, a political assessment of this stage of our history was given long ago, and we are interested in that part of the theory that directly works for the country's economy. In this context, it is appropriate to “walk” through a number of Japanese achievements, bearing in mind the opportunity to draw practical political and economic lessons from them. The total conclusion is beyond doubt: the efficiency of the economy is determined not by the quality of the goods produced, but by their assortment and quality. The transition from quantity to quality could only be expected by those who simplified dialectics to stupidity. It is not quantity that turns into a new quality - quality and only that. The interests of the Fatherland during the period of Yeltsin's democratic reforms worried politicians least of all, and did not care about quality at all, squandering previous national acquisitions. However, a political assessment of this stage of our history was given long ago, and we are interested in that part of the theory that directly works for the country's economy. In this context, it is appropriate to “walk” through a number of Japanese achievements, bearing in mind the opportunity to draw practical political and economic lessons from them. The total conclusion is beyond doubt: the efficiency of the economy is determined not by the quality of the goods produced, but by its assortment and quality. The transition from quantity to quality could only be expected by those who simplified dialectics to stupidity. It is not quantity that turns into a new quality - quality and only that. The interests of the Fatherland during the period of Yeltsin's democratic reforms worried politicians least of all, and did not care about quality at all, squandering previous national acquisitions. However, a political assessment of this stage of our history was given long ago, and we are interested in that part of the theory that directly works for the country's economy. In this context, it is appropriate to “walk” through a number of Japanese achievements, bearing in mind the opportunity to draw practical political and economic lessons from them. The total conclusion is beyond doubt: the efficiency of the economy is determined not by the quality of the goods produced, but by its assortment and quality. The transition from quantity to quality could only be expected only by those who simplified dialectics to stupidity. It is not quantity that turns into a new quality - quality and only that.

The teachers of the Japanese were Americans, but the Japanese studied very seriously on the experience - both positive and negative - of the Soviet Union. We haven’t made up our minds yet. The whole world is skeptical about our current declarations and certifications. Those who do not know how to appreciate and use their own achievements are not able to adequately master others.

In Japan, the attitude towards quality became a national idea, and was embodied in the form of "struggle", in which everyone from the watchman to the general director was prestigious to participate. A system of mutual interests has developed, we are supported by finances, organizationally (building a career) and spiritually. We are continuing a protracted search for an idea that would unite the nation. The quality is not visible even next to what is offered. It does not appear in the candidates for the Nazi idea. Only enthusiasts are seriously engaged in quality, making their way through the "bushes" of democracy, apathy, etc. Our "helmsmen" are not up to quality. Captains are still paving the way to the West and investing in other economies. Paradox: investments of foreigners in the Russian economy in the near future will exceed the contribution of compatriots. Having lost the prospect of becoming an oligarch and feeling pressure from the fiscal services, oligarch candidates are looking for happiness in distant countries. The Japanese concentrated their capital in their home country. Patriotism meant more to them than personal gain. This is the reason (not the only one) of the "Japanese miracle".

The Allies in 1945 destroyed everything that was on the Japanese islands, except for national self-esteem. And it became a launching pad for the revival of the country. We emphasize that the Japanese were actively looking for specific mechanisms for transforming quality into the total interest of the nation in the practice of organizing quality service in the USSR: "cards decide everything!", "Quality is the main focus!" Are slogans from Soviet history. And behind them was tough party and state control. The Japanese submitted to the struggle for quality all national and state (municipal) reserves, forcing even television to work for quality. Essentially - the media weren't limited to quality advertising. They organized schools, courses, universities for quality training of key players: foremen and foremen. National finances were used to educate and train quality work and its organization. What do we have? Quality is at the mercy of everyone who makes a profit on training and education. What they did was cram the problem into the ad product.

We do not have a national quality assurance program. We also do not have a state priority project (along with well-known national projects). One gets

the impression that, having officially announced the support of international quality systems, the top political management of the Russian Federation considered their mission fulfilled, deciding that the rest would be regulated by the market.

E. Deming's ideas were continued in the concept of another American who worked for the "Japanese miracle", J. Juran. J. Dzhuran shifted the emphasis in the development of the quality management system from statistical methods to the direction of absolute value of the customer, dividing the emerging problems that are not random and chronic. Accidentally (suddenly) emerging quality problems of one-time (single) origin. They are not inherent in production. Random problems should be dealt with routinely as part of ongoing management. To this end, it is necessary to fairly clearly distribute the responsibility of managers for taking control measures and the timely introduction of corrective measures.

The problem of a chronic nature is another matter. They are present in the process and are, as it were, “planned” from the very beginning. J. Juran understood chronic problems as a result of assumptions made in the previous phase of the process. Until a certain point, such tolerances do not significantly affect the quality, then, under the influence of the conditions of sale and their own movement, they acquire a significant meaning and become unacceptable. It was the chronic problems that J. Dzhuran "blamed" for the station or the loss of quality indicators. The management of the company should not be complacent about the good performance compared to the past. It is necessary to look not backward, but forward, otherwise it is easy to get into a crisis situation. Calm management is a “deadly disease” for production.

It is pointless to try to solve chronic problems with orders. We need to start by identifying their main causes and sources. Knowledge of the reasons, J.Juran, is usually found behind the capabilities of line managers. This requires a collegial form of analysis of what happened - “brainstorming”. The second half of the twentieth century was marked by an intensive invasion of quality management by mathematical methods of process research. A new scientific discipline arose - the theory of management decisions, which was the development of operations research. In decision theory, the focus was on decision making. It was interpreted by a process available for quantitative measurement. The work was carried out in two directions. The supporters of the first of them tried to find mathematical models suitable for use in real production situations (Fogal, Luce).

The one-sidedness of both approaches gave rise to the third school, its founders wanted to "tie" mathematical research to the tasks of quantifying economic phenomena as much as possible. As a result, the so-called "econometric" approach to the analysis and management of economic processes, primarily the efficiency and quality of production, appeared. According to the above concept, the economic and mathematical model should have four components:

1. It should include economic phenomena of qualitative content, expressed in certain units of measurement. Such quantities are parameters of the model;

2. It should include certain quantitative relationships and dependencies between parameters. These can be balance ratios or more complex dependencies linking the results of processes with their causes;

3. The model should determine the area of permissible changes in the parameters of the model in time, space and volume - "restrictions imposed on quantitative dependencies";

4. It should be a system of interrelated parameters, dependencies and constraints with certain inputs and outputs.

The control of such a system, that is, obtaining certain results at the output, should be carried out by influencing only the input. Without interfering with its internal structure. The most famous economic models belong to L. Klein and A. Goldberg. V. Leontiev, who received the Nobel Prize for his work, also contributed to the mathematical modeling of economic activity. The effectiveness of economic and mathematical modeling of relatively large-scale economic phenomena is not high. Without denying the importance of such modeling, the prominent economist T. Havello wrote: “It is quite possible that as more and more sophisticated methods develop, we will come closer and closer to realizing one unpleasant fact: economic“ laws ”are difficult to accurately measure, and therefore we live in fact in the world of large, but largely superficial or spurious correlations. You can, of course, refer, as always, to bad statistics. However, I think we can find an explanation in another, namely, in the imperfection of economic theories. "

Quality management is somewhat of an exception. In contrast to the low efficiency of using the mathematical apparatus in the study of the economy as a whole or individual industries, the application of mathematics to quality management turned out to be quite an acceptable action. Deming and Juran actively used its opportunities. Analysis of the economic strategy in the field of quality management shows that the effectiveness of quality management depends on the agreed macro and microeconomic views. Real Japanese experience teaches this as well. The solution of the quality problem itself is assumed to be a step-by-step process from identifying problems, through diagnosing their condition and searching for solutions to implementing the decisions made, maintaining and developing the results achieved.

At the first stage, J. Juran called “a problem in which a solution is programmed”, problems are

singled out, priorities are identified, a rating order is established; the executors and their powers are determined. At the diagnostic stage, the optimal symptoms of the condition are determined; hypotheses are built, tested; the search for reasons is in progress. The stage of finding solutions involves finding optimal solutions; development of the necessary measures; implementation of the adopted decisions. The final stage consists of checking the effectiveness of the implementation results, comparing the dynamics of the achieved results with the planned ones.

The high efficiency of the concepts of Deming and J. Juran provoked F. Crosby to combine their systems with the experience of quality management accumulated in the USA. F. Crosby's Zero Defects program did not become something fundamentally new in the theory of quality management, but it contained interesting ideas. For example, a statement about the prevention of defects; the need to develop a "quality policy", the requirement to connect to the quality of the activities of non-production units. F. Crosby believed that at each technological site there should be an engineer responsible for quality. His professional duties include providing a daily list of problems causing significant and frequent defects; systematizing them according to the degree of importance for quality; determination of corrective actions; attraction of personnel employed at the site.

The “Continuous Quality Improvement Phase” helped to overcome the tension between quality costs and production efficiency. The consumer began to receive high-quality goods at an affordable price, the implementation of the idea of "consumer society" came closer. From the manufacturer's point of view, this is an ideal situation. But the assessment of the situation was one-sided, only from the point of view of the consumer; the quality parameters were not set by the one who consumes the product, for whom the product is made. Quality was standardized in the manufacturer's norms and, naturally, reflected primarily his own interests. The consumer was left with a choice: to purchase a product of a certain quality or refuse. This again led to the "overheating" of production, to an increase in its cost, since there were frequent miscalculations in determining the needs of consumers.

The new form of contradictions had to be eliminated taking into account the interests of the consumer. The "Continuous Quality Improvement Phase" has given way to the "Quality Planning Phase". The work of G. Taguchi is considered the beginning of the next phase. It was he who introduced the concept of "loss function" into the theory of quality management and developed a modern methodology for planning industrial experiments. The aim of G. Taguchi's research was to overcome the contradiction between quality assurance and production efficiency in its existing forms.

Four new ideas form the foundation of the quality planning concept:

1. Conclusion that product defects are mainly explained by poor-quality actions at the design stage;

2. Conclusion on the need to focus the main products not on full-scale testing of models of goods, but on mathematical modeling of both goods and the process of their production. Due to this, they hoped to find and eliminate the reasons for the increase in marriage in a timely manner. It was proposed to take the design and technological processes under control until the stage of real production;

3. The idea that the concept of "zero defects" should be replaced with the idea of "satisfied customer";

4. High quality of goods to emphasize reasonable prices and constant price reductions, thereby ensuring a stable, market demand for quality goods.

A new round in the development of quality management, overcame the marked form of the fundamental contradiction between quality and production efficiency, but not the contradiction itself. At present, its next "ecological" form is taking shape. The inclusion of ecological cleanliness in the quality characteristic of a product requires significant costs.

The peculiarity of the modern stage of quality management lies in the fact that all known formulas (phases) are practiced at enterprises. BSAleshin with co-authors, reflecting this unusual way of existence of history and modernity, built the "Tower of Quality". It is of not only theoretical but also practical interest (Figure 11).

In the seventies, A. Feigenbaum summarized the accumulated intellectual and practical experience in the development of the problem of economic quality management and laid the foundation for what is known today as TQC-Total Quality Centrol (total quality management).

Essentially, TQC is not a quality management system, but a system of sufficient conditions for a quality process. Development logically went to the development of TQC. All previous steps on the way to quality management of quality, despite the progress of the movement, were of the same type. They "tied" the solution of the problem of economic quality management to some fragment (fragments) of the process. Thus, the improvement of quality management "bypassed" the essence of the production process - its unity and the systemic nature of its unity as connections and dependencies built in a certain way.

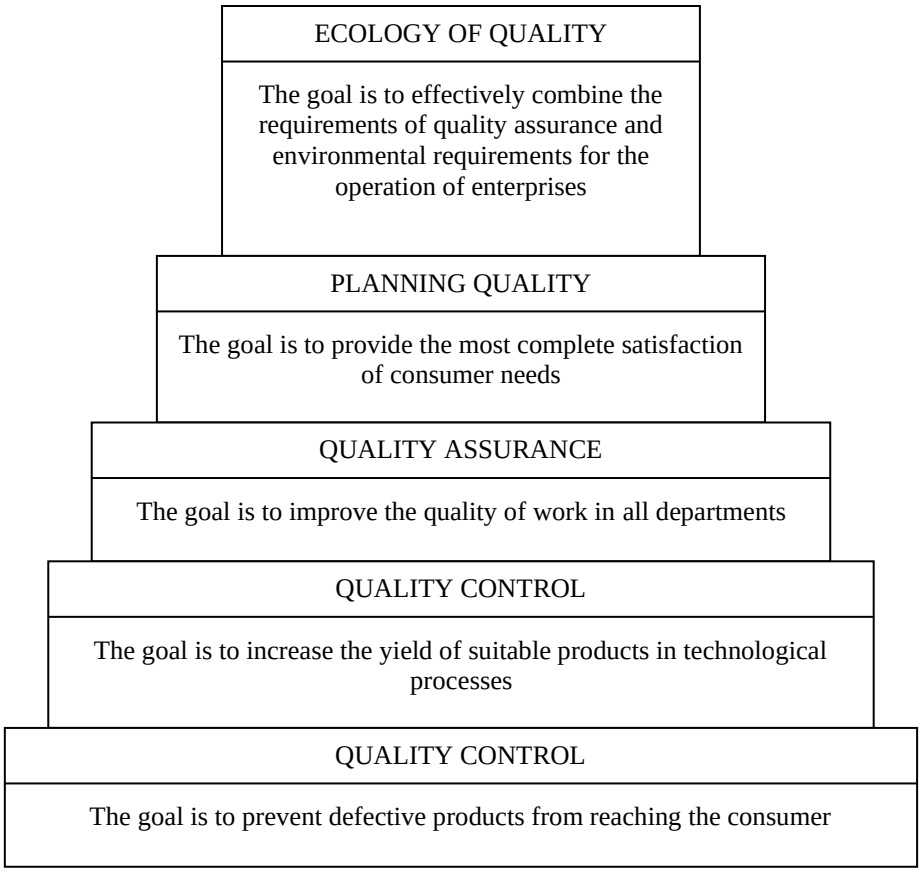


Figure 11- "Tower of quality" by B.S. Alyoshin

E. Deming, K. Isikawa, F. Crosby and A. Feygenbaum came closest to understanding the quality system as a reflection of the production system. The main conditions of TQC are the following:

1. ensuring the totality of participation in solving the quality problem of all employees;
2. awareness of total responsibility for the quality of all participants in the process, understanding that not a single specialized department (quality control department, OUK, etc.) is able to cope with the task;
3. compliance of the quality of activity with all stages of the "life cycle" of the product: from the development of the product concept and marketing research to the method of disposal of the product and its packaging. In the context of increasing environmental requirements in a number of countries, for example, Japan, product certification implies the mandatory development of a method for recycling even packaging;
4. the totality of improving the knowledge and skills of performers and managers; regularity of specially organized forms of professional development; planning related costs;
5. achieving a total understanding that the quality of work is achieved not so much by technology and technology as by focusing on the quality of employee motivation, and motivation should not be one-sided, closed only on financial returns. Then it will be stable;
6. the totality of the structuring of activity, its differentiation into operations, interrelated technological processes, transitions, and each link in the process must be understandable for its intended purpose to all performers. Studies of eliminating the causes of defects have shown that up to 90% of the problems submitted for consideration are resolved, while 75% of them are capable of solving by the controllers themselves (direct executors and organizers);
7. totality as understood by the consumer; the consumer is not someone who is outside the brackets of the production process, the consumer is every next link of the production itself - "internal consumer", therefore, an awareness of responsibility to the consumer is required throughout the production cycle;
8. total cultivation of the special status of the consumer and his interest in the quality of the product;
9. continuous quality engineering;
10. understanding the importance of defect prevention, its economic advantages over the elimination of defects;
11. team spirit of all participants in the process; corporate culture;
12. leading position in activities that ensure

quality, top management, understanding quality as the goal of entrepreneurship.

Quality management in the XXI century is based on the reciprocity of total quality management (TQM) and quality system standards (ISO 8402; ISO 9000; ISO 9001). The main difference between the quality system standards is that in many countries - including Russia - they have acquired state registration and are administratively fixed. Therefore, clarity in the definition and content of the concept of "standard" is important. In the USSR and the Russian Federation, it is customary to assign a "quality mark", officially certifying that the product meets certain agreed parameters. "Standard" in Russia and most other countries is a set of rigidly fixed, often administratively, characteristics of products, services, and activities. Analogs of our "quality marks" are found in European countries, in particular in Sweden (TCO 92; TCO 95; MPR on monitors).

From the perspective of consumer interests, the "standardized" concept of "standard" is not as relevant as for the manufacturer. The latter, taking advantage of the starting advantage, taking into account, first of all, his own interests. Hence the conventionality, the relativity of any standard and "standard sign" until the standard balances the mutual interests of both parties: the manufacturer of the product and its consumer. The most common quality system standard ISO 9000 is built on the Dei special system of organization. The basis of this idea is the thesis about the documentation of all processes related to production: purchase of raw materials, components; preparation of production by its organization; delivery of products to the consumer; providing warranty support; scientific and technical equipment of production; personnel management. As a result, the concept of "quality" acquires new facets, expands; the traditional understanding of quality is being modified. The content of the concept of "quality" is loaded with knowledge corresponding to the changed situation. A classic example of the dialectic of the development of a concept.

The most obvious illustration of what has been said is the rather frequent reports that reputable firms such as Ford, Toyota and others are recalling their products due to the discovery of a technical inconsistency in just one node. It would seem that it was easier and cheaper to instruct service centers to replace low-quality components. In fact, firms are doing the right thing in terms of market competition and their brand position.

In a complex system, a structural and technological defect of one unit inevitably affects the entire system, so it is not easy to replace a unit or block. It is necessary to comprehensively test the product as a whole so that the manufacturer's warranties work according to the declared standard. ISO 9000 and its modifications ISO 9000-2000 do not guarantee product quality. They are "determined" to provide such production conditions that make it possible to count on the "most probable" quality reserve of productive activity.

Another "weakness" of these systems is that they explain "what to do", but they practically do not explain "how to do it". ISO 9000 ideologues argue: "What should be done?" - the question is "standard" and is subject to standardization. The question is: "How should I do it?" - due to the specific conditions of production in each individual case. Therefore, "how to do it" must be decided by manufacturers on the spot. With the introduction of ISO 9000-2000, the concept of "QS" (quality system) has become obsolete, giving way to QMS defined by the International Organization for Standardization:

1. constant monitoring of consumer interests;
2. systemic leadership of the head, which ensures the unity of the goals and directions of the firm's activities, as well as a stable internal environment based on cooperation and all-round motivation;
3. maximum involvement of the abilities, knowledge and skills of employees in the production process;
4. using a process approach in managing activities and resources;
5. the need for a systematic approach to management;
6. striving for continuous improvement of the firm's activities;
7. making decisions only taking into account a comprehensive analysis of the entire possible volume of "information for thought";
8. development of mutually beneficial relationships with suppliers.

From now on, international quality standards require not goods to be submitted to the "quality mark", but the method of their production. "Quality" is the compliance of the organization and management of the enterprise's activities with the quality management system (QMS). The modern history of the economic aspect of quality management reveals a very instructive relationship between specific scientific, special and philosophical approaches to solving socially urgent problems of production activity. Philosophical teachings about quality, undoubtedly have always had an effect on economic knowledge. K. Marx began with G. Gogol, went through the "course" of economic analysis and founded the historical-materialist view of social development. Then he returned to the analysis of economics and left an impressive mark on social philosophy and economic theory. Something similar can be said about the creative ways of O. Proudhon,

History repeats itself on a new round. Thinking economists go from practice to philosophy in order to use philosophical knowledge and method to develop a deeper understanding of the subject of their own research. All modern concepts of quality management owe no less to philosophy than to economic theory.

The philosophical analysis of the social process led to the conclusion about the growing role of the "subjective factor" in it. The "human factor" in philosophical humanism has always been presented as the decisive condition of history. This was the opinion of the leading thinkers of Antiquity, the Renaissance, the Enlightenment. But the “human factor” and the “subjective factor”, contrary to the widespread practice of bringing them closer to the point of identification, are far from the same thing.

“Human factor” is a concept that characterizes the entire complex of human capabilities. The concept of "human factor" expresses the dualism of our nature - the combination of biological and social in it; organization and personality; physics, physiology, psychology, intelligence, behavior and activity. How advertising likes to present: "all in one" or "in a package". The “human factor” is, in fact, the person himself in the context of his opportunities for realizing his own potential. The clever, educated Oblomov lying on the couch, as well as the active Stolz, are examples of contrasts along with the title “Human Factor”. In the concept of "human factor" is not an expression of preference, either biological or social. I think that's right. To define "a person in action" - it does not matter in which one: turning over with a newspaper in his hands Oblomov,

It was proposed to call an abstract person in a state of abstract activity a "human factor", thus including an abstract person in an abstract historical process. In theory, the main thing is to find a conceptual equivalent to describe the object of research. The object of research in our case is social progress. The task is to understand the factors that set history in motion and give the movement of history progressiveness.

The logic of reasoning is not complicated. The history of mankind is either objectification outside of human substance (objective idea, World reason, World Will, God, etc.), or the product of the activities of people themselves: their reason, feelings, will and practical activity. The problem can be simplified, because in both versions, human activity is envisaged, with the only difference that in the first case, history is made by him according to a program developed outside of human life, and in the second, a person paves the way for history, guided by his own ideas and motives. In history, whatever one may say, one cannot deviate from human participation. History is "tied" to a person just as he is "tied" to history.

It is then that it becomes relevant to “disassemble” the “human factor” into its components, its quality, to divide what exists in a person himself exclusively in unity. Divide conventionally, depending on the contribution to historical progress of two "halves" of a person: biological and social. The concept of "subjective factor" appears. And its components are the "individual" form of the subjective factor, and the "collective form of the subjective factor." Politics emphasizing the historical nature of human activity, the collective essence of this activity. With regard to production and production quality, the “subjective factor” is concretized to the level of “performer”, “manager” and “team”.

For those who object to us, calculating that we have narrowed the understanding of a person in the structure of the economic form of his activity to the size of a "subjective factor", ignoring his biological status, also presented in production and affecting its quality, we will answer: no, modern production, that is science-intensive, high-tech production, based on the power of knowledge, not muscles; on responsibility and organization, depends precisely on the "subjective factor" of a person. The logic of the development of the process of economic quality management convincingly testifies that total quality management, to which, in general, everything was going, is possible with the total mobilization of human subjective forces: knowledge, beliefs, desires, will of interests, upbringing, education, concentrated in the professional form of culture ...

The classics of quality management economics, from Taylor to Crosby to Freygenbaum, were deeply concerned with mobilizing the motivation of production participants, rightly believing that it is the lifeblood of quality work. But they were realists and realistic experience told them: do not absolutize the moral factor, no matter how significant it is. Quality is created by free will, but it is controlled administratively and legislatively. The legal aspect of achieving TQC objectives is very significant and requires constant attention. Is it possible to imagine a situation where quality will be achieved only due to the self-organization of the manufacturer, thanks to the team spirit, social dedication of each and every one individually, and a high level of professional qualifications? The answer is at the discretion of the reader, but a hint suggests itself: it is possible.

So what happens? Is legal regulation an unnecessary or unnecessary matter? No. Trial fantasy does not take into account the purpose of production, which, by the way, is very well spelled out in TQC. The goal of production is not the quality of the product (this is a crafty goal, self-deception). The purpose of production is not the quality of production (this is the same craftiness). The purpose of production is customer satisfaction with the quality! Even production in a subsistence economy, in which the producer and the consumer are one and the same person, does not exist on its own and for itself. As for the commodity form of production, the consumer is the main figure in it. Therefore, the understanding of quality is not in the competence of the manufacturer alone. It is formed in the mutual interest of the manufacturer and the consumer in the properties of the product (and its price), intended for sale.

The manufacturer has one small advantage in

dealing with the consumer. It is not easy to use it, but the chance is quite real. A manufacturer of technically complex products that require knowledge and skills in operation may try to form a consumer's taste for it through educational and advertising activities. The mechanism, of course, is costly, but it is unlikely to win the fierce competition in the market in any other way. The interests of the producer and the consumer do not always coincide, not immediately and not for a long time, because these are the interests of the subjects of production, separated by the barricade of the market. The market is the ring for them. The manufacturer is interested in profit. The consumer is in the preservation of finances. One strives to fill the cash register, the other does not empty the wallet. In doing so, both look at quality as a reward for winning a battle. Legal regulation helps to give the fight a civilized character. Prevent deception.

The state cannot be aloof from the events taking place in the market, for the economy gives rise to politics; the movement of the market determines the movement of large social groups. And if today the class struggle has lost its relevance, then tomorrow the place of the proletariat and peasants will be taken by dissatisfied consumers - some with quality, some with a price - consumers, whose number will be no less, and the desire to win will be even steeper. The state cannot deal with the fate of each citizen individually, and it is hardly advisable, but the fate of social groups should be in the zone of special attention of any state and always, if, of course, the state itself does not want to be in the zone of special attention of that main part of society, which in quiet times is called the electorate, and in turbulent times - the people. Quality is politics, first and foremost, secondly, it is a product of the intricacies of relationships in the market. Supporters of absolute market liberalization are “scientists” provocateurs of tension in public relations and “disrupters” of national security.

All modern social experience confirms that participation in quality management is a function of the state and even interstate cooperation. An example is the Bologna Agreement. It was prepared by the social movement, but to give it a real force as a controller of the quality of education, legitimized by the collective political will.

“The attention of the state should be focused on:

intensification of the import substitution process by improving the quality of domestic products;

building up the production potential of enterprises, creating advanced technologies and new types of high-quality products, so that, as the domestic market develops and integrates into the world economy, expand the share of Russian products in the domestic and foreign markets. "

The actualization of the legal resources of the state along the entire vertical of political power in the field of quality management will undoubtedly contribute to the achievement of the following most important results:

ensuring a high-quality standard of living of the population, without which it is definitely impossible to get out of the demographic collage. In order to be among the leaders in a non-absolute indication - a reserve fund, a loan paid ahead of time, a loan, writing off a part even to those who are not able to pay it in the foreseeable future - it is necessary to improve the quality of products and services in the social sphere;

strengthening security, territorial integrity, preventing military aggression;

strengthening of the position in Russia in international relations, greater pliability in economic partnership;

creating an image of Russia as a really great, and not just a huge country;

developing environmentally sound policies and economic practices.

Integrating the analysis of real to the consequences of the intensification of state behavior in the quality market, we note the most important thing. This is the only effective way to ensure national security, that is, what is in the ranking of the state's tasks above everything else, since the achievement of everything else is possible only under conditions of national sovereignty. A systematic approach to solving the quality problem in the USSR began to take shape in the 50s. The Saratov system of defect-free manufacturing of products, the NORM, KANARSPI, KS UKP systems were quite a successful experience of the socialist embodiment of the need to manage the quality of production. In the mid-60s, the Lvov initiative was widely adopted in the domestic industry, which was recognized as a "system of defect-free labor" - STB.

The highest achievement of the "struggle for quality", apparently, was the creation, based on a combination of a serious experiment (VNIIS) and a comprehensive generalization of practical work to improve the quality of work at the leading Lviv enterprises, of the Integrated Product Quality Management System (KS UPK).

This system turned out to be the first, where the organizational and technical basis of product quality management was the enterprise standards. Unfortunately, the effectiveness of the application of best practices was low. By the beginning of the 90s, only 10% of technical products for civilian purposes corresponded to the best foreign counterparts. The state possesses large and multilevel possibilities of influencing the quality of production and the quality of products. The legal mechanism in the hands of the state is capable of influencing both directly and indirectly improving the quality of the production process. With the help of tax policy, you can stimulate high-quality production and block low-quality ones. Protecting the consumer from a low-quality product, the state actively prevents unscrupulous manufacturers from entering the market.

The basis of the legal support for the quality of production in our state is the Constitution of the Russian Federation. The 1993 Constitution was developed in the midst of the redistribution of property and therefore its creators did everything to make the provision (articles) of the Supreme Law extremely abstract, declarative. But in its abstract format, the Constitution of the Russian Federation did not ignore the right of Russian citizens to quality goods. Relevant articles have been formulated to match the time of its birth; nevertheless, in this form, some certainty is present. Article 41 of the Constitution of the Russian Federation says: "Everyone has the right to health protection." Of course, it would be better to add - "and a healthy lifestyle." And even better: "the right to health protection and a healthy lifestyle of Russian citizens is guaranteed by the state." However, in this case, the "legitimate" interests of the future oligarchs would suffer,

This article does not seem to have a direct relationship to legal quality management. There is an indirect one, mediated by the protection of the country's population's right to health. Goods for immediate and long-term consumption must be of the required quality level so as not to harm health. Otherwise, there are serious legal and financial penalties for the manufacturer and the seller. In order to ensure the protection of the right to health protection, all possible tolerances (MPCs), sanitary and hygienic requirements, state standards for products, services, industry standards were developed in the company with which their own "standards" of enterprises (TU) turned out to be. Management structures were created or modernized ones inherited from the socialist time. On the basis of the citizens' rights to quality goods proclaimed by the Constitution,

The state does not interfere with the technology of production quality management. Its activities are aimed at controlling the method of production to exclude the possibility of harm to the health of citizens (and non-citizens) and harm to the natural environment of human life, as well as to prevent the appearance of dangerous low-quality goods on the market, deception of consumers and legal regulation of relations between the seller (manufacturer) and the buyer in situations that require such a measure.

The market is dedicated to environmental activities in a normalized relationship. Prices, priorities, demand, supply, advertising - all these are the mechanisms of the market as long as they remain within the economic relations that are moral for the same markets.

The scheme of legal quality management assurance is shown in Figure 12.

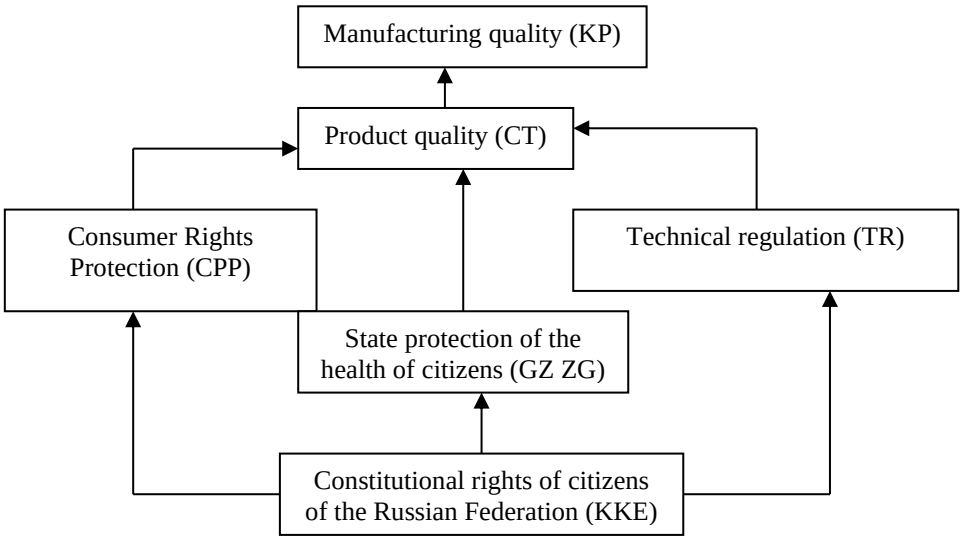


Figure 12 - Scheme of legal assurance of quality management

Many violations of economic relations inevitably lead to the intervention of law enforcement agencies designed to protect the affected entity within the framework of the current legislation. Any act of "sale and purchase" is a subordinate act and the legislator or the executor must be included in the process. Otherwise, the rights of the owner will suffer and the violator of market relations under the jurisdiction will not receive punishment. The situation with the legal support of quality management is complex. The market has divided the producer and the consumer, squeezing an intermediary (and more than one) between them. In this connection, it is necessary to differentiate the concepts: "production quality"; "The quality of the goods produced"; and "the quality of the goods purchased" by the consumer.

An intermediary - a "speculator" - is quite capable of violating technical conditions when delivering goods to the place of sale, in storing goods, preparing them for sale. As a result, the quality parameters of the product will change. The legal protection of the consumer spelled out all possible situations and measures of responsibility of the seller. Consumer legislation has been around for a long time in European countries and North America and has been refined over the centuries. In its current state, it is quite effective, which forces violators to reckon with it in order to avoid serious financial sanctions and deadly anti-advertising. Russian experience in the legal regulation of relations in this area is much poorer; moreover, it took shape in the specific conditions of the socialist market.

The subject, whose interests are protected by this law, is a consumer who has purchased a product, more precisely, a product that does not meet the entire set of consumer and technical characteristics. And the object of legal relations is the quality of the goods.

Thus, the Law has a double effect: it protects the buyer from low-quality products and protects the market from low-quality goods. The manufacturer (and the intermediary) received a legal signal about the need to present quality products to the market.

In the peripheral area of interest of the legislators was the intensification of the activities of a number of federal bodies: for standardization, metrology and certification, sanitary and epidemiological supervision, environmental protection and natural resources. The categorical apparatus of the Law on the Protection of Consumer Rights was made up of the concepts: "consumer", "manufacturer", "seller", "standard", "lack of goods", "significant shortage of goods", "safety of goods". As we see in the categorical apparatus of the law, there is no mention of "quality", despite the fact that it protects the consumer from low-quality goods, and doublet tries to protect the market from marriage and counterfeit products. The developers of the ideology of the Law acted logically. They divided the content of the concept of "quality of goods" into components: "manufacturer of goods", "performer", "seller", "standard", "consumer",

The relationship between the consumer and the producer is regulated in the Law with the help of the concept of "standard", which is subject to change in a certain system of units. "Standards" are meant to exist at two levels: universal, controlled by the state, and sectoral, private, set by the manufacturers themselves, and have passed the necessary certification procedures. According to the logic of building subordinate relations, the requirements of a higher level of organization are the benchmarks for the rest of the “pyramid”. In the event of a contradiction, the advantage belongs to the one who (or what) is higher, i.e. more important. It was superfluous to introduce into the conceptual apparatus of the Law the concept of “quality (goods)”. It has been successfully replaced by the more verifiable concept of "standard". At the same time, it reminds all market participants, from the manufacturer and the contractor to the consumer, who is the boss in the house.

From a philosophical and economic point of view, the main flaw of the law is the locality of purpose. The state is still hypnotized by the effectiveness of the economic liberalism of the American model, overly delicate in expressing its economic interests, forgetting that these are not the interests of state administration, but of the people of Russia. The state, especially the executive branch as a top manager, must fulfill the interests of the people, instead of fearing to be misunderstood by foreign partners. Foreign partners, when necessary, tighten the nuts tightly.

The state should introduce an economic policy in relation to quality on a larger scale, then its effect will be more significant and the private court practice that has considered private claims to the seller about poor-quality goods will be sharply reduced. A private lawsuit for a manufacturer of low-quality products and a wholesaler of his fueling in the market is all too early that a mosquito squeak. It is necessary to protect the market from low-quality goods, as G. Ford, senior, did in his time, when he entrusted the “phase from rejection” to special production, taking quality control out of the brackets of the main production process. As a result, substandard components were no longer supplied to the assembly line.

The state does not need to strive to be a subject of the market, it needs to be above the market, stimulating producers of quality goods, and preventing low-quality goods from entering the market. In the first case, economic incentives are required, in the second, administrative and criminal sanctions. Now the state is approaching the problems of quality management, as if half a turn, modestly distancing itself. It is necessary to turn to face him and tackle quality, "rolling up your sleeves." Only then will the time come when the ministers will not be able to postpone the execution of the President's instructions for years.

The modern economy is more and more often called “smart”, “prudent”, innovative. This is a clearer definition in comparison with the “postindustrial” one, but how adequately it characterizes its state is not an idle question. The character manifests itself in development, determines the planning of economic policy. The latest crisis unambiguously testifies, firstly, that planning is not only compatible with the market mode of management, it is necessary to prevent and mitigate negative phenomena generated by undivided economic freedom bordering on arbitrariness. Secondly, the ongoing crisis has revealed the limitations of the desire to present the built economy as “smart”. There should be a smart economy, it is impossible to build it with just one mind. The central figure of commodity production is

not finance, as many politicians believe, including domestic ones. The money is just for the entire equivalent of the goods and will remain with them forever. The commodity creates labor, which, in turn, is also a commodity. Consequently, the movement of production is rooted in the aggregate expression of human activity, first of all, the work of consciousness, its potential.

Mind is not equivalent to consciousness. The mind is a tool for building consciousness. “Smart consciousness - knowing, cunning, mobile - but no more. The mind needs, like any force, a vector that directs the application of the mind, the construction of consciousness. The role of the vector is played by values: professional, national, universal. Consciousness fuses them in a unique personal expression. A “smart” economy is nothing if you do not put it on a value foundation. The main thing in the personality - the decisive factor of social reproduction - is her morality. Not everyone is allowed to be top managers, general designers, VIPs in politics. Someone has to work with their brains, someone with their hands. The trouble comes when the "brains" and "hands" become sticky and something that is not supposed to stick to them. Immorality undermines the foundations of professional culture and professional activity is transformed from a creative force into its opposite - it destroys what has been created. The smart economy can turn out to be a terrible reality if it continues to be immoral. We are not utopians or idealists; we understand well concretely the historical position of morality. Now we are not talking about equality and brotherhood - only about conscience and responsibility. The economy can and should be, first of all, responsible and "conscientious", then "smart". Now we are not talking about equality and brotherhood - only about conscience and responsibility. The economy can and should be, first of all, responsible and "conscientious", then "smart". Now we are not talking about equality and brotherhood - only about conscience and responsibility. The economy can and should be, first of all, responsible and "conscientious", then "smart".

As long as free competition is subordinated to calculations of how it is more effective to deceive a partner, consumer, competitors and the state; is based on corruption and lobbying, manipulation of the work of mass media sources, which are natural for the development of the market. Cyclical, economic crises will grow unnatural - systemic. The system-forming factor of the latter is the dishonesty and irresponsibility of the largest manufacturers. The classics of the genre: "greed ruined the frayer" - looks like a childish prank against the background of what American and multinational companies have created.

And what should have been done by the state, called upon to be a social guarantor in a democratic society and a defender of the rights of citizens. It was forced to "add fuel to the fire" - to subsidize a business that went bankrupt on scams in order to avoid economic and social collapse. True, European leaders at the same time sent “firefighters” to the “sources of fire” - made the further work of the fined firms dependent on moral principles - introduced moral and financial regulations designed to sober up businessmen who had lost every measure. It is symptomatic: it was France and Germany - the initiators of strict moral and financial monitoring - that were the first to feel the signs of economic recovery. England and the United States, more affected by corruption and less prone to moral dictatorship,

Russia, as one would expect, missed a real opportunity to use the crisis to revitalize the national industry. First, they poured finance into the banks, then very vague actions were taken in order to awaken the conscience and responsibility of the bankers. As if forgetting that a banker with no liquidity and with liquidity - "two big differences." There was a chance, at the expense of national funds, to force banks to be a financial lever for raising industrial production, science, and technical creativity in the country. It was necessary not to pray for the banks - to educate the banks with the ruble (currency). He naively hopes that having fed up, the "wolves" instead of continuing to rob, will serve their savior. As a result, the currency earned on the world market leaked back and everything must be “started from the beginning”.

How many more opportunities do we have to step on the same rake standing in the same corner? There is, of course, a margin of safety. It is possible to change the situation by uniting the mind - we have nothing to do with it, and conscience - the deficit of which has grown surprisingly quickly over the years of democratic reforms. The reason for this alignment should be sought in the economic chaos and the disproportionate growth of the administrative apparatus. It turns out strange: the more officials, the less effective the management - the dynamics are obvious, but the course is the same. Our lag behind someone is a natural thing. In the historical "peleton" subjects have their place, change places - this is how it should be. It is a tragedy for national development to lag behind the times, to lose a place in the "peleton". In the G8 we were eighth, but in the G8.

Time will tell what we will be like in the G20 in 5-10 years. Economically, we are no longer eighth there, while maintaining a place in the top ten. But the time is still in the memory of most Russians, when the USSR was the second line of the world economic rating. History does not return, but this is not a reason to forget history. Whatever the continuation of history is, it is its continuation. Rejecting national traditions, you can find yourself in a "broken trough". It is not only the Second World War that is falsified; the country's scientific, technical and industrial achievements are distorted and hushed up. Faith in national forces, the people's ability to regain lost positions is undermined. The current situation is

extremely difficult, nevertheless, it is not more critical than those turning points in Russian history that seemed without the original: the devastation after the civil war,

Then there was no finance available as start-up capital today. Therefore, the solution to the problem of creating a modern economy rests technically on the need to develop an effective system of management and control over the implementation of the adopted programs.

The program replaced the plan. And what has replaced the responsibility for the failure of the plan? The lack of an effective control system is the most serious flaw in current economic policies, which allow laymen to lead with a sense of being in action. The revival of the economy in the existing conditions of professional irresponsibility is impossible. Only professionalism and the associated responsibility for the cause you serve are capable of making the necessary transition to a new economic quality, building an economical and mobile economy based on the all-round development of science, stimulating technical progress and improving professional training.

The economy of the XXI century can be called in different ways. The essence of the definition is not in the name - in the content of the concept. The diversification of names shows the versatility of the modern economy. It is methodologically significant to single out the leading link or links in this set. Undoubtedly, the quality of the economy is among the clear contenders.

The presence of quality in the characteristics of any phenomenon is invariant, since quality combines its most essential features. At the same time, it should be clearly understood that the quality itself changes - it is historically specific. Correspondingly, the idea of quality changes - should change - too. From the first attempts of A. Fayol, G. Ford and F. Taylor to put the quality of goods under control, which were crowned with serious success, it became theoretically clear: the future of the quality of the economy belongs to activity. The determining factor for the economy will be not so much the quality of the goods accepted for production, as the quality of the organization and management of its high-quality production. For handicrafts and small-scale production, the quality of the sample and the marketable product is combined with the technology, as a rule, unchanged. Here, the quality depends entirely on the skill of the technique and compliance with the declared technology in a limited-scale production. Often the foreman, technologist, manager and marketer are the same person.

G. Ford for the first time put the production of a complex product on stream, dividing operations and responsibility, and, thereby, determined the turn in the fate of quality. Henceforth, the fate of quality was determined by "introduced" factors - the organization of production, management and control. It was not the skill of the direct manufacturer that came to the fore, but the ability to masterfully organize production, including its expanded reproduction, that is, supply, marketing, personnel management. The diversification of activities revealed its special position in achieving a high-quality result. The Second World War has confirmed: personnel and management are everything! Since the 1950s, the search for quality management programs through the quality of activities has been sharply intensified. If at the beginning of the twentieth century the technical regulation of the product and its components became relevant, then half a century later there was a qualitative clarification of the meaning of technical regulation. At the epicenter of interests was the technical regulation of the organization and management of production, which is confirmed by the modern international system of quality regulation.

The shift in the center of gravity in the understanding of economic policy aimed at ensuring high-quality stability of production towards technical regulation of activities did not pass without costs and dead-end routes, which, in principle, was expected. The activity, united by production, is not homogeneous and not autonomous, therefore the solution of problems "buried" in the methodological and theoretical "imperfections" of professional thinking. The concept of “key activities” was first substantiated by A. Feigenbaum. In 1951 his book "Total Quality Control" was published. ISO 9000 and ISO 14000 were developed already on the basis of A. Feigenbaum's proposals. Both sets of International Standards were intended to help move from “enterprise-conglomerates” to “enterprise-systems”.

In the process of development of industrial production under the influence of scientific and technological progress, a contradiction in the rate of change in the material side and the evolution of managerial thought concerning the organization and harmonization of the production process was rapidly formed and aggravated. The latter clearly did not keep up with the former, slowing down progress, increasing risks and costs. The rigidity of central planning only worsened the situation, which explains the stagnation of the 1970s and the recession in the 1980s. The organizational structure of the "enterprise - conglomerate" did not fit well into the transition to a systematic organization of the enterprise's work, primarily because it did not activate initiative and creativity. It is no coincidence that the "shock workers", "innovators", "rationalizers" in the USSR were mainly engaged in the party, Komsomol, trade union organizations, which in fact stood outside the framework of direct production and formed a superstructure over it. In a simplified way, the organizational chart of such an enterprise is as follows (Figure 13).

The scheme of building management, in which

the main production links are functionally autonomous and connected indirectly through a common manager, is anti-system. When someone designs something, others have to produce it, still others have to control the quality, and still others have to sell products on the market, separates the participants in production, and block the creative alliance. All are nominal accomplices in the process and have little idea of who is doing what and why. There is no team spirit, everyone acts on their own, at their own peril and risk, often at the expense of colleagues, substituting the latter.

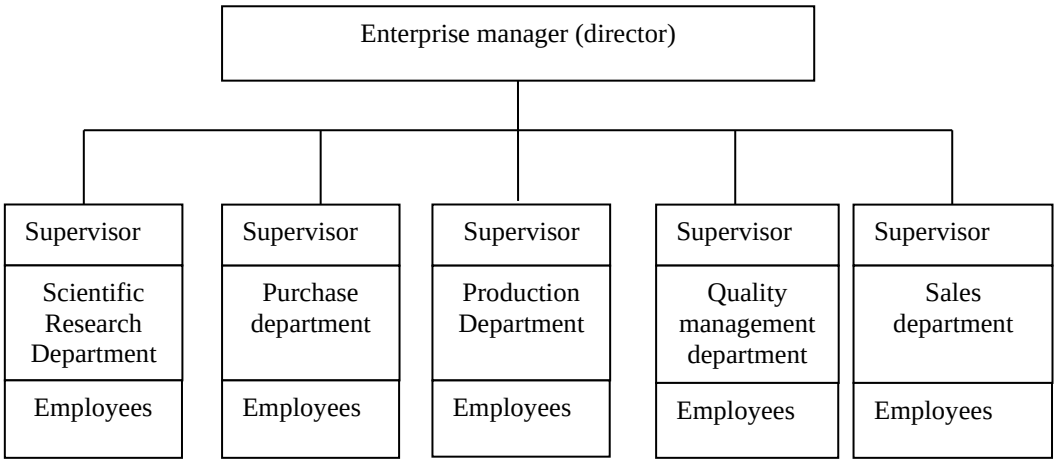


Figure 13 - Organizational chart of the enterprise

The fundamental misconception of managers of "enterprises - conglomerates" is the belief that their "brains" should be enough for the timely recognition and correction of force majeure in the production process. The management scheme "enterprise - conglomerate" essentially coincides, despite the presence of a specialized department with a quality management scheme, because the functions of the quality management department are reduced mainly to control activities. In 1924, W. Schuhart proposed to optimize this control method using the principles of the theory of statistical variation, providing managers with a statistical control chart. Improvement in work was not slow to affect the results, but the matter was limited to partial changes for the better. Instead of using it as a basis for management, the "philosophy of variation theory" was relegated to the level of statistical tools used by technicians with limited and very specialized areas of responsibility ... Ignorance of the theory of industrial process behavior made management unable to correctly recognize situations that required or did not require action. For this reason, management became extremely vulnerable to three types of costly management mistakes:

the attitude to all variations of the output parameters of the process as a surprise in behavior and the suppression of, in fact, their imaginary causes, which leads to the destabilization of the process;

treating all variations in the output parameters of the process as natural manifestations and inaction regarding the detection and suppression of the causes that cause them, which leads to unstable behavior;

the assumption that process optimization and stabilization are technical solutions for which a specific department is fully responsible, and not a solution to an organizational problem that requires the full support of management and the efforts of several departments. "

Restructuring enterprise management on the principles of systemic organization provides:

1. interconnection of key activities so that various departments of the enterprises are coordinatedly involved in coordinating actions, for example, to revise the quality of products taking into account specific customer comments, improve staff training, promotions, etc.;
2. embedding other processes in key activities;
3. integration of new key activities into existing ones.

A dangerous delusion in the construction of "enterprise-system" management is the interpretation of optimality as the sum of optimal restructuring of individual divisions. In this case, the enterprise is still viewed as a conglomerate, the sum of departments playing their own special role. There is no view of activity as an integration of all its constituents. In European literature, the new term "quality revolution" is increasingly encountered. We will not argue how adequately it captures the dynamics of a policy aimed at improving the quality of production, we will only note that the involvement in the study of the concept of "revolution" looks quite natural. Comparison of the

modern practice of quality management with the not so distant past unambiguously testifies to a radical restructuring of the understanding of quality technology.

1960s - the stage of self-determination of the quality of goods as the main factor of market competition;

1970s - a shift from the dominant quality of goods to the quality of technology and production;

1980s - the transition from the quality of technology and production to the quality of the "quality system" or "quality management system";

1990s - the ascent to the quality of education, the quality of intellectual resources.

The path of the Europeans to the Bologna Accords was long and difficult. He exposed many shortcomings and contradictions. In particular:

- the obvious gap between the requirements of the society of industrialized states to the education system and its capabilities;
- the discrepancy between the fact that the most significant discoveries and inventions are made mainly at the intersection of sciences; and education is built on the separation of subjects;
- insufficient mobility of the organization of retraining of specialists, its growing lag behind the acceleration of changes in technology, technology, science;
- inertia in the development of new educational paradigms, programs, methods, lag in the development of new educational literature.

Nevertheless, there is also serious progress - three levels of education quality assurance have been identified and balanced: university, national and European.

The intellectualization of the economy, intensified by the transformation of science into a direct force of production, which experts of the 21st century are so fond of talking about, have exposed the fundamental contradiction of human consciousness between intelligence and decency. Philosophers sought its solution in the rationality of homo sapiens, emphasizing the basic function of morality. Hypertrophying the activity of consciousness due to the actualization of intellectual abilities, focusing attention on the creative powers of the mind, reducing consciousness to thinking, supporters of the "smart" economy do not see or do not want to see the dependence of the mind on morality, oppose the role of the mind to the value of moral values. We have already noted that the power of knowledge only on a private scale can have its own vector. In systemic terms, the power of knowledge is directed by the indigenous, and not the private and corporate interests of the manufacturer. Morality was formed as the first derivative of labor as a way of first survival, then development of mankind. The main criterion of social progress cannot be production efficiency - this is a purely economic parameter, Man is a social being and the degree of his achievements is determined by how much the movement strengthens human relations - first of all, moral ones.

Economic activity should be wise when the mind is not locked on itself, but on aggregate, personal, national and universal interests. It's time to understand that it is dangerous to hold humanity for the masses of idiots, to build corporate happiness with someone else's "hands". There is no historical perspective without a rigid moral regulation that subordinates all other aspects of human life to itself. The mind is valid only as an operator clearing the path to the economy of the future. If someone likes to call the economy of the future smart, intelligent, then it is imperative to clarify that smart is a smart economy that is not built on cunning and private benefits. The current crisis has shown the vulnerability of democratic relations. The freedom of action that led to the crisis was opened by the amorphousness of democratic postulates, not clever worship of the regulating abilities of the market, not adequate perception of the actions of the "powerful". Innovation in economic construction expresses the new thinking of humanity, fusing intelligence and morality.

The Chinese and Hindus will be the first to build an innovative economy, that is, those peoples who have retained the authority of moral values in their consciousness, subordinating scientific and technological achievements to national interests. It is they who will "shod" both Europeans and Americans in the near future, and, apparently, we are the same!

One hundred and fifty years ago Karl Marx wrote “In our time, everything is, as it were, fraught with its opposite ... Even the pure light of science, apparently, cannot shine otherwise than against the gloomy background of ignorance. All our discoveries and all our progress, as it were, lead to the fact that material forces are endowed with intellectual life, and human life, devoid of its intellectual side, is reduced to the level of simple material strength. This antagonism between modern industry and science, on the one hand, modern poverty and decline - on the other, this antagonism between the productive forces and social relations of our era is a tangible, inevitable and indisputable fact. "

It is possible not to share the communist conclusion of Karl Marx, but one thing is indisputable - he is absolutely right in assessing the socio - economic situation in the middle of the 19th century. A restructuring in the public consciousness was and remains. Money should not rise above morality, otherwise the main citadel - homo sapiens - his wisdom will collapse. The competence of K. Marx's conclusions is confirmed by the socio - economic situation that has developed today in the footwear industry in Russia. The liberalization of foreign economic relations played with it a fatal role in the catastrophe that happened. On the one hand, a stream of better quality imported footwear poured in, as a

result of which Russian footwear was no longer in demand. On the other hand, using the right to set any prices, our manufacturers raised them to the level of prices for imported shoes, and the quality level remained the same. And for this reason, they also stopped buying it.

The government would have intervened and protected its producers (with cheap loans and customs barriers), but this was not done. The government did not help due to the prevailing erroneous beliefs: our light industry is uncompetitive, there is nothing to invest in it, it will be cheaper if you start it from abroad. In general, the government considered the light industry, like agriculture, a "black hole" unworthy of investment. And we both there and here received what we have today. When we hear about the protection of Russian manufacturers of whatever: machine tools and cars, clothing and footwear, food and furniture, etc., we always think about the shadow side of the coin from such innovations: about the quality of goods. Shoe companies are losing the incentive to improve and update the range of footwear, because in the absence of imports, people will take whatever they want.

The demand of the Russian light industry market with a total volume of 1250 billion rubles is formed from the following sources: 230 billion rubles (18.4%) - Russian legal manufacturers; 240 billion rubles (19.2%) - legal imports; 780 billion rubles (62.4%) - illegally imported and manufactured counterfeit goods, the same picture is characteristic of the shoe market. Today the population of Russia purchases about 600 million pairs of shoes, the domestic industry has produced only 52 million pairs (in 2007 - 46 million pairs), 100 million pairs come from official imports. Where does the other four hundred-odd million come from? They are imported in all kinds of illegal ways, i.e. there remains a huge volume of footwear that would be in demand if financial support and legal protection were provided to domestic footwear enterprises. Why is there no end to those wishing to invest in the oil and gas industry? Why do car companies go to Russia? Why are there even those willing to invest in agriculture? And why, against the background of all these “why2, do not investors go to the light industry?

The general answer is that there is no favorable environment for investors. Therefore, everything is fine with the creation of joint ventures in the oil and gas and automotive industries, where ministers and governors are watching over every enterprise. And here officials will be afraid to take bribes and will not drive investors through the bureaucratic circle. And the opening of light industry enterprises, due to their small volumes, is entirely in the hands of officials. In addition, foreignFirms argue: why create enterprises in Russia, take risks when our goods are bought there so well?

And Russian and Western firms go to China, where the ideal conditions for investment; where is a cheap, disciplined labor force; where a stable favorable tax system ...

Today the equipment at the light industry enterprises is extremely worn out. The renewal rate in recent years is 0.4 - 0.6% per year. While at foreign enterprises, technological equipment is replaced every 5–7 years, that is, 15–20% annually. How to compete here?

Funds are needed for the technical re-equipment of the industry. They can either be earned by the enterprises themselves, or provided in the form of loans, or come from foreign investors. The capabilities of the enterprises themselves are very limited. Loans from commercial banks are expensive, the government does not encourage concessional lending, and foreign investors, as already mentioned, do not enter the industry.

Hence the answer to the question, what to do? Firstly, to provide loans to enterprises at minimal interest, or even better - without them (as farms producing food, according to the national project "Development of the agro-industrial complex"). Secondly, to create such conditions for foreign companies to enter light industry, bringing in addition to capital their design, production culture, management, etc.

It should be noted that the last twenty years have shown that light industry enterprises are very responsive to the slightest attention to them from the authorities, to changes in the situation. Take, for example, 1991, the famous default. Import rose in price, and light industry immediately revived. There has been growth for three years. Another example. The exceptionally low export duties on raw hides have led to their massive export abroad. Leather and shoe factories were left without raw materials. In 2000, a protective duty was introduced on the export of leather up to 500 euros per tonne (instead of 100 euros). As a result, the production of finished leather in Russia increased from 1.1 to 2.2 billion square meters. decimeters. Instead of importing leather goods, their export began.

In favor of the fact that the resuscitation of light industry is not only It is necessary, but also possible, say today examples of the successful work of individual enterprises of the industry in the Southern Federal District, both old and newly created. Let's name at least a few. Novorossiysk shoe factory "Breeze - Bosphorus" (General Director - IK Zykov), the enterprise was created in a "bare place", gives 16 million pairs of shoes a year and all shoes are in demand.

Rostov enterprise "Gloria Jeans" (General Director - V.V. Melnikov). It is also new, starting with a cooperative. Provides products worth 7 billion rubles (up to 10% of all Russian sewing goods and up to 30% - for children). His products are sold abroad, including the United States.

So it is worthwhile for Rodina to lend a shoulder and its light industry, which has found itself in such a difficult situation, will start working, especially in the Southern Federal District.

We are not even talking about the fact that the revival of the light industry would help to solve the social problems of small towns in the Southern Federal District, in which today more than 16 million people live. Here, with the beginning of the reform, small factories (branches of associations) were the first to perish. But they appear to be small on the scale of the country or industry. While for a regional center of 10-20 thousand population, some shoe factory for 300 workers is a large, city-forming enterprise that not only gave money to the budget and produced goods necessary for the population, but also provided a decent life for many residents of a small town or the regional center, and now the factories are gone ... It is unlikely that auto plants or branches of defense factories will ever be built in these cities, but light industry ones - please. But so far, as far as we know, the problem in such a formulation is not even discussed by the government.

One cannot hear concern about another problem, even the threat that has arisen in connection with the collapse of the light industry. Previously, every enterprise in light industry, like any other, had mobilization reserves (equipment, tools, materials, etc.), which made it possible, within 24 hours, in the event of the outbreak of war, to switch to the production of the necessary army products. Instead of model shoes, to sew tarpaulin boots, instead of suits and coats - gymnasts and overcoats, instead of "fashionable sheepskin coats" - soldier's short fur coats, etc. God forbid this will happen - we will have nothing to dress and shoe our army, especially since the Southern Federal District border district with a difficult situation.

This is another reason why it is necessary to take up light industry in the most serious way. A very acute situation has developed with the provision of children's shoes. The majority of Russian shoe factories continue to reduce the output of children's shoes due to the high price increase due to the abolition of subsidies from the federal budget, and some shoe factories, including those in the Southern Federal District, have completely stopped production. In 2020, compared to 2019, the production of children's shoes decreased by 21%.

On the consumer markets of the Southern Federal District and the North Caucasian Federal District, domestic manufacturers of goods for children were actively ousted by foreign suppliers, who can afford to transfer shoes for sale on the condition of payment after their actual sale. However, the stream of beautiful and fashionable children's shoes that have poured into our markets from abroad, for the most part, do not have certificates of conformity, not to mention hygiene certificates, which is a crime against children.

Consumer demand acts as the main factor influencing the formation of the assortment, which, in turn, is aimed at maximizing and meeting the demand of the population. Consumer demand combines a whole group of indicators that will form their niche for domestic footwear, namely:

taking into account age characteristics and work activity:

children's footwear;

footwear for the elderly;

leisure footwear;

footwear for special purposes;

office footwear.

for a socially unprotected group of people:

footwear for the unemployed receiving social benefits;

footwear for retirees;

footwear for people with chronic diseases.

taking into account the peculiarities of the regions:

national footwear;

exclusive shoes;

elite footwear.

Thus, the implementation of the requirements of the main parameters that form consumer demand will allow the formation of distinctive features that the new range of footwear will have to satisfy.

The parameters that determine demand include:

comparative competitive advantages; the product must have pronounced features, or pronounced advantages in comparison with analogues existing on the market, products, or services of competitors;

social orientation; it is necessary that the product fits into the existing social conditions, so that the proposed product corresponds to the prevailing lifestyle and system of values of the consumer;

the ability to satisfy the consumer; the product must fulfill all the functions to meet the key needs and requests of the buyer.

The following set of measures is proposed:

creation a regional program for the development and maintenance of domestic shoe production in the district;

Adoption measures to reduce the import of imported footwear into the region. These measures should provide, first of all, the suppression of the trade in footwear, which is smuggled in and without permission to sell it on local markets;

help in the employment of young specialists, graduates of universities in existing and newly created shoe enterprises;

help enterprises in the process of promoting domestic shoe brands in local markets. First of all, it is necessary to develop a competent marketing strategy for regional shoe enterprises;

creation a special lending program for light industry enterprises in the region, taking into account

the specifics of production: the seasonal nature of the products sold and the peculiarity of the turnover of the working capital of enterprises in the industry.

In our opinion, for the successful implementation of all these measures, the interest of both federal and regional branches of government in the organization and development of the shoe cluster is necessary, which will provoke a decrease in prices for component materials, energy costs and transport, ensuring that the manufacturer can offer the domestic consumer at the expense of the price niche. demanded and competitive footwear. All this together will provide such a formation with a long life and stable positions not only in domestic, but, which is especially important, in foreign markets. All that is needed is the goodwill and interest of all participants in the implementation of the proposed activities. Such progress has been made; now the firm will and desire of the interested parties is required. The assortment for the formation of a consumer niche is shown in Figure 15

And again, the state of quality of domestic goods is the main base, the basis for the success of modern domestic enterprises. Such a conclusion has the right to life, because quality is the most ancient value of mankind. And it is precisely in the quality of Russian goods and services, in the quality of management that we are losing in global competition. Have you seen sophisticated products with the inscription made in Russia anywhere in the world? We didn't see either ...

Long hoped for a worldwide ISO system. Alas, in Russian conditions it slipped into a crisis. Sorry, dear colleagues from the world of quality certification, but it's time to publicly list what it has become and what almost everyone recognizes among themselves:

- an immense number of documents, in which there is no strength to navigate;
- meaninglessness of many of them (for example, according to the conditions ISO requires job descriptions, and everyone rushes to sketch something on the go, and then they forget them without a trace);
- one entrepreneur once said: “We have been certified for ISO ". And then he added: "Do not think, we were certified by such and such a Norwegian company." Can you guess what this is about? Yes, selling certificates. Not everyone sells, of course, but reputation is never accidental.

So now, you will say, and not to deal with quality? No, you just need to understand that the light has not converged like a wedge at ISO.

Let's agree on terms. What is quality? Compliance with standards, most will answer. Of course, where standards are possible, they are. Although the standards have tolerances. And the difference between the upper and lower divisions in these tolerances can be significant. And there are also limits to standardization. Let's say customer contact. Everyone knows that the quality of such contact is critically important for the success of a business, when prices, assortment, terms are aligned under the pressure of competition. A certain set of friendly words, dress code, etc. can be considered a standard. Although we know very well what is covered by them.

The current enthusiasm for describing business processes is also gradually approaching absurdity. And somewhere it has already reached it: at different companies we already meet a rigid description of the interview, not only when applying for a job, but even the standard for meeting and negotiating.

Now a different approach appears: quality is compliance with the needs of the client, the user. Whoever buys is the one who evaluates. It is only necessary to understand more precisely what exactly he values. If you hit it - here it is, the required quality, that is, the degree of customer satisfaction with the properties of the product.

But this approach is also limited and stretches from the last century. Then the formula was considered indisputable: the buyer is always right. In our time, another imperative is much more true: the buyer does not know our capabilities.

Where are we heading? The understanding of quality as conformity (to a standard, a need) is outdated. Today, understanding it as a comparison with another product or with the same, but the same, is becoming much more capacious. Comparison gives the superiority of product over product, service over service, specialist over specialist, organization over, organization. Comparison with a standard or need does not imply superiority. Only equality is possible there. The standard and the need indicate the minimum. And for whom is the minimum enough? Few. But superiority is interesting to everyone, because the law of increasing needs is inexorable.

In practice, this means switching the quality assessment system to levels. For example:

A. Sufficient quality, below which the defect goes, that is, the minimum acceptable, the use of which will not cause damage.

B. Reference quality - according to the principle of conformity to the standard, that is, the best available. The standard can appear from the standard, but any sample can serve as it: from what we have live in our company, from competitors, or at least somewhere in the form we know.

B. Avant-garde quality - something that is achieved for the first time, surpasses the standards, but can count on effective demand and an exit to profitability immediately or in the future.

This is the vertical of quality. She may admit more degrees. And one more thing: it's time to give up the idea that any quality can be measured. You can evaluate everything, but little that is important to us lends itself to measurement.

Figure 14 shows a model of an integrated quality management process for products and services produced both in individual regions and in the footwear industry as a whole.

The model is a closed control (regulation) system that implements the principle of "deviation" regulation. The quality of products in the consumer market can be characterized by a multidimensional quality indicator Q. In the process of conformity confirmation, testing and certification of products, a documented indicator of product quality Qd is formed. The required high quality indicator Q0 is set in the technical documentation for the best world samples, in technical regulations, national GOST and international ISO standards.

Figure 14 - Assortment for the formation of a consumer niche, taking into account the characteristics of the regions

In the process of comparing these two values, carried out by the competition commission, the deviation of the actual quality indicator from the given one is determined:

$$\Delta Q = Q\,0 - Q\,d \quad (2)$$

This deviation ΔQ (mismatch in control systems) in our case is always non-negative ($\Delta Q \geq 0$), since a correctly selected preset high level Q0 is always higher than or equal to the actual Qd, which is practically extremely rare. In this case, we have a system with a non-zero static error, which is most typical for static systems with their inherent stability and speed, the accuracy of which is mainly determined by the gain and power of the "proportional" controller. In our case, the function of the regulator is performed by the link “Measures to ensure a given level of quality of products and services”, which simulates the quality management system of the enterprise, the quality service in production, the actions of which take into account the assessment of the quality of products and the recommendations of the competition committee.

As can be seen from Figure 15, the quality Q of the products produced and supplied to the market is formed in the process of its production as a result of measures to improve production, improve the quality of products and services carried out by the quality service and quality management units, purposeful actions, which, in turn, are determined by the results of the assessment products in the process of its implementation.

In the new economic conditions, only such production is progressive that actively and dynamically responds to emerging problems. The principle “to produce only what is needed, when needed, and as much as needed” requires shoe enterprises to adapt to the conditions of production in small batches with frequent changes in the assortment of shoes, ie. to the conditions of many assortment small-scale production. The efficiency of the footwear enterprise, and in many respects the ability to survive in the competition, depends on the ability in a short time and with minimal costs to readjust to the production of footwear in accordance with fluctuations in demand. The development and implementation of flexible production systems opens up great opportunities for this.

The technological and organizational flexibility of production systems determines the variable potential of enterprises, their ability to quickly and adequately respond to changes in market conditions and acts as a mechanism for optimizing the structure of the technological system in order to reduce the cost of footwear. Thus, the development of flexible technological processes for the production of leather goods ensures high efficiency with a large assortment of footwear and will provoke a sharp increase in demand for the products of footwear enterprises in the Southern Federal District. The same problems are typical for other branches of the light industry. Sores are common, and their treatment may have some slight differences, but consciousness and desire to get them out of this swamp is possible only if Rodina lends its shoulder and the light industry starts working successfully again.

professional;
national;
universal.

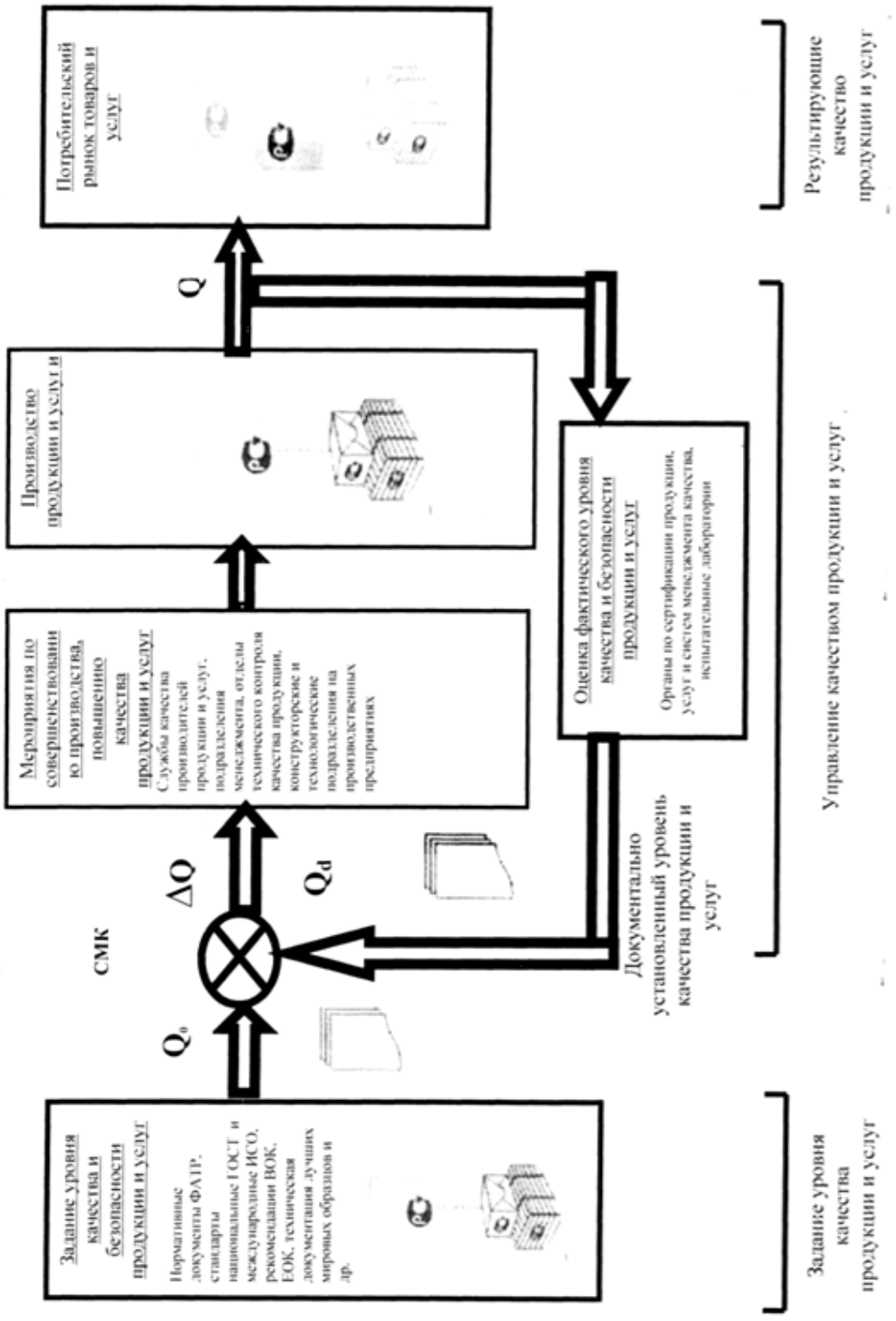


Figure 15- Model of an integrated process of quality management of products and services in the region

The characteristic features of the modern world economy are unstable production and unstable demand. Traditionally, it is believed that the first is determined by the second. This formed the "cornerstone" in the foundation of economic theory, which replaced classical political economy. According to the dominant economic concepts of the 20th century, the locomotive of development is the demand for goods, i.e. not production, but the market drives the economy. The famous formula of Karl Marx - one of the pillars of classical political economy - T – D – T today is perceived locally, as it looks in final terms: the sale of goods depends on the amount of money circulating in the market, in other words, the

real purchasing power of consumers. From the proceeds received by the seller, in turn, the quantity and quality of the new batch of goods - the prospect of production - depends.

The market should strive to be self-sufficient. It requires maximum freedom to function properly. The idea of the founder of classical political economy, A. Smith, about the need for freedom of activity of the producer of goods in the newest - non-classical economic theory was transformed into a provision on freedom of the market in accordance with the shift of ideological priorities from production to distribution.

A. Smith was undoubtedly right in the struggle for the freedom of the commodity producer, while the freedom of the market is far from identical with the freedom of the one who creates the real wealth of mankind. In conditions of complete freedom, the self-movement of the market, starting from the scale of the region, is doomed to instability. Unlike manufacturers who have the ability to enter into real cooperative relations and regulate the production of goods by assortment, quantity, price range and other parameters, sellers, most of whom are resellers, intermediaries, speculators, are not heavily burdened with production interests. They have long become professional sellers, resellers. They don't care what to sell, the main thing is to get good and quick money. They absolutely do not care about the future of a particular production.

The viciousness of the market we are dealing with in Russia is as follows: instead of providing normal opportunities for interaction between the buyer and the manufacturer (through the product and demonstration of the culture of its production), our market “divorces” the main market actors, making the figure of an intermediary absolute, usually uninterested in the fate of the manufacturer. One gets the impression that the market exists so that the buyer is not “stewed” by the interests and real culture of a particular manufacturer, the existence of a businessman is quite enough, by the way, in essence, he has little responsibility for anything.

“Freedom of the producer” and “freedom of organizing commercial activities” (formal legal, financial and narrowly organizational control instruments of the latter have nothing to do with our problem, they do not significantly affect the achievement of production stability, stabilization of financial flows, mutual satisfaction of the producer and consumer) - freedom of a fundamentally different order. The state should not consider the market only as a source of tax revenues, a condition for a healthy lifestyle and safety of consumption. The market is a link in the normal development of regional and national production. It is this function of the market that should be recorded as the first line in all documents of state economic policy. The very same economic activity must be built in the form of politics, aimed at consistently protecting the interests of manufacturers, and not so much from foreign competitors, but from fellow countrymen-officials and all kinds of officials who have adapted to the practice, legalized with the help of officials, criminal organizations who have replaced crimson jackets and gold chains for couturier suits and pectoral crosses, not hiding on "raspberries", since no one is going to look for them - they are well known, occupy their "legitimate" niche in the structure of administrative and financial mechanisms. Our laws allow them to legally earn more than on the "hop-stop". And the fantasy of the restless comrade Bender was limited to four hundred ways to get around the articles of the criminal code. How many such methods are now, hardly anyone will undertake to count. The saddest thing is that today Ostap Ibragimovich's extraordinary creative abilities are not needed, and therefore there are much more fraudsters than manufacturers of goods. The anti-hero Ilf and Petrov understood the futility of being a millionaire in his country, fled to Romania and lost a million at the border. For today's millionaires, the episode with the crossing of the border and the robbery of the enterprising "son" of Lieutenant Schmidt is the funniest passage in the novel.

Historical parallels are arbitrary, but instructive. It is senseless to repeat history, it is reasonable to draw lessons from history, to learn from historical experience, mainly national, without disdaining the past practice of other peoples. As never before, the experience of Peter I is relevant in the 21st century. Peter received the addition “Great”, resolving the no less difficult situation that had developed in the country by the end of the 17th century.

The western borders of Russia, for the Europeans of that era, were the borderline where civilization ended and barbarism began. Something like this, two thousand years earlier, the Greeks and Romans considered their borders in the north, west and east. Almost everything was in decline: education, education, science, industry, agriculture, construction. The arguments of the church leaders, who suggested that the fate of Russia to be the "third Rome", spoke to few people about something. And to be the "third Rome", having inherited the faded greatness of Byzantium, did not seem to be a very tempting prospect. Byzantium became an ordinary stronghold of Orthodoxy and, under the influence of the Church, was selective about the scientific and philosophical acquisitions of Antiquity. In the culture of Byzantium, the ideas of Aristotle, medieval patristism and scholasticism were mixed. Understanding science,

Orientation towards Byzantium was reasonable in the VIII-X centuries. The adoption of Christianity and the alliance with a powerful patron contributed to the integration of the Slavs, the formation of Russia as a single state. At that time, such an alliance was progressive in all aspects of cultural development. Peter accepted Russia in a state of extreme

backwardness, Europe was accelerating forward, leaving Russia with an Asian fate. The greatness of Peter, in contrast to contemporary politicians and spiritual leaders, manifested itself not in greater suffering and prayers, but in the ability to understand the intricacies of real life, to identify and take under personal control the nodal links of the socio-economic chain of events - past and present. He correctly assessed the situation, focusing his efforts on the economic revival of the country, and in essence began to build a new economy. Economic construction showed him a lack of education and education, a general cultural component. Peter launched a cultural "revolution".

The church did not like radical cultural innovations. Peter showed character here too. He did not try to persuade anyone and no one to adapt to. The tsar entrusted himself with the rank of patriarch. Politics cannot be effective if it only adapts to the specifics of the economy and culture. Politics in everything should be a locomotive, act ahead, guide. It is deadly for politics to accompany a socio-economic movement.

Western ideologists are cunning, portraying the state as an intermediary between production and consumption. They argue that the task of politics is to ensure social justice in the distribution of national wealth, the state should not interfere in the economic movement - it is self-sufficient. The lies of such lobbying concepts become apparent in times of crisis. As soon as a recession begins, a decline in production, debts grow, a shortage of liquidity is formed, producers, especially financial intermediaries, go directly to the state for help and are the first to receive it. Peter ruled the country with the help of decrees. As a rule, he composed the text of the decrees himself, be sure to explain exactly what purpose this decree has, how it should be executed and what awaits those who do not. A.S. Pushkin, who studied the archive of Peter I, noted, that the decrees were often not fully thought out, the fruit of an impromptu. The great poet and thinker is right in his own way, with the proviso that Pushkin was not a great sovereign. Peter was forced to be operatively cruel. He was responsible for the fate of the Fatherland. Anyone who has taken upon himself such a fate should not constantly look back at the laws in force and be afraid not to fit into their letter.

The historical routes are not laid by God, they are not developed a priori, they have to be laid, mastering a new historical space. The professional traveler does not hide behind the laws of nature, exploring the unknown. And politics should be innovative, improve the legal order of things. Laws are not absolute, they reflect reality generalized in legal terms. Politics is the art of managing a historically concrete reality that changes over time. Situational, problem thinking is important here. Realizing that it was impossible to build a new industry, to activate agricultural production without free access to sea transportation, the first Russian emperor resorted to extreme measures. In our time, there is no such need - thanks to Peter I - that makes it easier for politicians,

The easiest way to write off the crisis of traditional Russian industries on instability and economic transition. The transitional period, which has clearly been prolonged due to vague politics, will come to an end sometime. As far as instability is concerned, politicians will be disappointed. In all likelihood, the cyclical nature of crises discovered and explained by K. Marx has been left behind by capitalism. Modern crises testify not so much to the peculiarities of the dynamics of industrialized countries as to the crisis of the system of the bourgeois mode of production itself and the weakness of the social superstructure to take control of the growing negative trends. The separation of finance from real production, the absolutization of the freedom of financial capital, the concentration of financial flows lead development to a dead end, cause anarchy provoked by stock market speculations.

A significant part of traditional Russian crafts has developed in the Non-Black Earth Region, primarily around Moscow. The geography of the history of light industry is understandable. There was a stable sales market and there was no shortage of workers, and the Lord did not deprive the Russians of talent. For twenty years of returning to capitalism for centuries, the perfected production is either already lost, or survives, having lost hope.

None of the politicians “ring the bells” that it is not factories, workshops, workshops that are dying, but that a layer of national labor culture is crumbling. Kuznetsky porcelain, Ivanovsky textiles, Kostroma lace, Palekh, Mstera, Kholui, Fedoskino, Zhostkovo, Gus-Khrustalny, Dymkovo, Khokhloma - all this made us Russians. What is being done by politicians to save and stabilize the economic situation? Former assistant Yu.M. Luzhkova, Resin, who replaced an official's chair for a place in the State Duma of the Russian Federation, reports to the whole country: a plan has been approved for the construction of 200 (!) Churches in the capital, so that the temple is within walking distance for Muscovites. The explanation that the project will not require budgetary money is a lie. They may not take money from the Moscow budget, but the Russians will still have to pay. Why not invest in the salvation of the Russian national industry (there was such a concept as "local industry"), villages, old towns - a stronghold, among other things, of Orthodox culture. Tourists will not go to typical temple buildings, but the lack of world-famous products of local industry will cause them deep disappointment. Shoes can be sewn anywhere, for example, in China, clothes - in Kyrgyzstan and in the same China. But there are many household products that have grown into the culture of the people who invented them. Their originality is unique. clothes - in Kyrgyzstan and

in the same China. But there are many household products that have grown into the culture of the people who invented them. Their originality is unique. clothes - in Kyrgyzstan and in the same China. But there are many household products that have grown into the culture of the people who invented them. Their originality is unique.

Talk about cheap labor in China is yet another myth. In non-capital Russia, they earn no more than ordinary citizens in China. The essence is in the organization of production, in economic policy. In the People's Republic of China, the interests of the people and the country really come first. Economic activity in China has a clear and political landmark. In the Russian Federation, economic benefit is elevated to an absolute criterion, which is absurd, because the economy is not the goal of social development, it is just a means of this development. In China, the manufacturer is maximally protected from "assaults", the law serves as a "roof" for him; the procedure for communicating with the buyer (customer) is extremely simplified, which significantly reduces the time of the transaction and the execution of the order, minimizes non-production costs;

Russian laws regulate the market space. The market space is a legally formalized reality, conditionally built according to the formula “it should be so”, and this does not mean at all that it is and will be so.

The actual market reality is built as an environment for the interdependent coexistence of the producer, the seller (if the producer himself does not act as such) and the buyer - consumer (the inclusion of a reseller is highly undesirable). The liberals-market people, led by E. Gaidar, created an imaginary market, an ideal object outside the historical context, therefore they did not reform, but ruined the country's economy. Yeltsin and his company legalized looting. The economy that did not fall victim to the shock was thrown like a bone from the master's table to ordinary bandits, thieves and swindlers. Only those who reckoned with the law and conscience least of all came out of the economic hell of the 1990s. That is why the economic collapse was followed by a spiritual crisis that continues to this day.

Russia has always been strong in the spirit of its provinces. The capitals accumulate the spiritual forces of the outskirts. It is these forces, like springs and small rivers, that give birth to large ones. The current flourishing of Moscow and St. Petersburg should not be misleading. Real life continues in the vastness of the country. 130 million Russians still live and work where our real power of the people is concentrated. What is encouraging? Strength of character of people. J.I. Alferov's foreign colleagues-scientists asked: "Are you an optimist?" He replied: "Yes, and my optimism is invincible." "Why?" Was the next question. “Because, the famous physicist explained, there are more and more optimists around me. Pessimists have moved to your countries. With which I congratulate you. "

The authorities do not want to see the specifics of the Russian model of unstable demand for consumer goods: footwear, clothing, food, furniture, and household items. In Europe, the USA, Canada, during the crisis, the purchasing power of the bulk of the population decreases and, accordingly, the prices of goods go down, compensating, at least in part, for the satisfaction of essential living needs. The dynamics of prices for consumer goods in our country is always directed in one direction - increasing. Oscillations, of course, are observed, they are only noticeable in the official statistics. A normal market cannot change regardless of the state of production and consumption.

The Russian market reacts to changes in the exchange rate, but again only in terms of price increases. The impression is that the market is run by "puppeteers". The version is not indisputable, nevertheless, it is logically quite admissible. The authorities do not show activity, explaining that the desire to use regulatory mechanisms will inevitably lead to the impoverishment of the market and a shortage of goods. The natural question is: where will they go? No answer. Indeed, try to explain where the Chinese, Turkish, Latin American goods, products of Poland, Hungary, Ukraine, Moldova, Azerbaijan, Uzbekistan, the Baltic states will go from the Russian market? Who else needs them?

We need the protection of our own producers, who feed us, put on shoes, and dress us. Russians in the last decade of the last century understood the advantages of domestic food products. The next step is the quality of light industry goods. And the state can promote their sustainable appearance on store shelves. What needs to be done for this? Develop a specific program and strictly monitor its implementation by officials.

The program for the return of Russian manufacturers to the market should provide for reciprocal steps by the state and enterprises. Going back to what and how they sewed before is pointless. An internal restructuring of production is required, and the market begins to feel it. Shoe and garment enterprises have appeared in Russia, supplying products that are quite competitive. Customer,however, while more surprised to find such goods. Nevertheless, the process has begun and it needs to be promoted.

Of course, we are not talking about additional funding for the industry. "Industry" is a collective concept that does not summarize achievements in assortment, design art, quality, color. All manufacturers of certain products fall under the general concept. Both those who seek to modernize production and those who do not rely on their own strength are accustomed to asking for help from the state. Only innovators deserve additional financial

assistance; it is effective in targeted implementation. We must help preserve traditional folk crafts. They are technically and technologically conservative, with limited innovation.

The government responded to the appeal for help from VAZ, St. Petersburg, Ural, Far Eastern enterprises, referring to their city-forming and national importance. Everything is correct, except for one thing - what kind of patriotism, what national pride can we talk about if a Russian is dressed and shod with foreign manufacturers, and foreigners will also feed and water him. A great power starts small - with the realization that we can do everyday things ourselves, no worse than anyone else. We are surrounded by little things, they are in everything, and their meaning is not always fully visible, but it is they that create our mood.

Outdated VAZ products were exchanged for new cars, the state subsidized the exchange. An old suit cannot be handed over in exchange for a new one, and shoes that fail to meet the requirements cannot be taken back to the factory. There is another option - the state is able to compensate the buyer of domestic clothing and footwear products, say, 15-20 percent of the price. This particular form of protectionism will turn the buyer towards domestic goods and help speed up the sale of products.

It is no secret that the Russian consumer of footwear, unlike the manufacturer, expects to carry the purchased goods for more than one or two seasons. Products will need updating, repair. Why, following the example of brandedService station, do not organize a corporate network to support the operation of shoes and clothes. The repair would be cheaper and better. Equally important, such service would enhance the manufacturer's reputation. The average buyer, purchasing domestic shoes for 1500-2000 rubles, naturally thinks that he will wear them for a long time. His choice of repair addresses is small: to do it yourself, to go to a shoemaker-handicraftsman or to a company workshop. It is advisable to make workshops consolidated, so it will be less expensive.

The state should take upon itself the lion's share of the costs of organizing the economic and industrial educational program. Branded foreign shoes are not worth the declared price, so sellers easily carry out various promotions and markdowns. The buyer, who is not privy to the intricacies of the market, naively believes that the difference in price is proportional to the difference in the quality of the goods and saves money, takes out a loan so as not to make a mistake with the choice, advertising constantly reminds him - "the miser pays twice!" Next to branded shoes there are fashionable, made of genuine leather, tastefully finished Russian products, the price of which is one and a half to two times lower, but who would explain that they are of the same quality. On the contrary, advertising policies paid for by branded companies

The program "Habitat" was launched on television, debunking myths about the usefulness of foreign products. We need a similar program dedicated to the quality of light industry products. Rospotrebnadzor regularly restricts the import of food products into the country due to exceeding the maximum permissible levels of ingredients that are harmful or hazardous to health. The dangers of shoes and clothing made in China are reported in Turkey sporadically in connection with any high-profile incidents. A suspicion about the strangeness of such a policy involuntarily arises. Someone benefits from shielding the main competitors of domestic manufacturers.And, after all, you will not find fault. Lobbying in Russia is legalized and has become a good business for officials hiding behind world practice.

Scattered and still weak enterprises find it difficult to resist a large-scale, well-developed policy that facilitates the occupation of the Russian market by foreign producers. This is also facilitated by the abolition of the mandatory certification of goods. The measure is probably suitable for Western Europe with its consumer culture, but not for Russia, which is littered with counterfeit products of the most problematic manufacturers. There is no need to wait for a decline in market tension in order to win a place in the market, to gain stability, you need to act assertively and comprehensively, to revive the former Soviet experience of organizing work with a potential consumer. Fortunately, the development of the economy opens up prospects for this kind of activity.

Practice is effective when theory sanctifies its path. At first glance, turning to theory in the conditions of anarchy in the market is not quite timely. On a fire, you need to extinguish, not reason. It depends on what the fire is. Sometimes it is important to think about how to act, develop a plan, and identify possible plots for the development of the process. As for the conquest of the market, there is no way to act without a systematic understanding of the situation. It will turn out to be too primitive and ineffective.

Economy XX century was formed as an economy of mass production. The organization of mass production was an outstanding achievement that provided access to material goods for a significant part of humanity - there were a lot of goods, they became cheap. But mass production made the problem of the quality of the manufactured goods actual.

The growth of prosperity, the development of education, cultural progress, the increasing technical range of products naturally shifted the interest of consumers in the direction of the quality of products offered on the market. The problem of quality has been transformed from a purely production problem into a socio-economic and political one. "WITHThe large-scale crises in Japan and Germany in the late 1940s were overcome by government policies focused on improving quality. The crisis situations in the US and European markets that arose in the late 80s - early

90s forced not only individual corporations, but also entire countries - Sweden, Great Britain, the United States - to pay attention to quality improvement as the only means of helping national economy to resist the onslaught of competitors ".

Quality is a systemic characteristic of a product, in which the product appears in its holistic expression. In its most general form, "quality" is "what Hegel wrote, losing that, the phenomenon ceases to be itself." It is reasonable to assume that the understanding of quality is due to the nature of the phenomenon. Phenomena of natural origin, that is, arising without human participation, are entirely objective and the quality of such phenomena is an exceptional result of their self-movement.

The phenomena associated with the origin of human activity are also objectively qualitative, but the objectivity of the quality of these phenomena is dualistic. An objectified part is added to the natural basis of a commodity produced by a person, as a rule, a reified expression of the creative component of labor - knowledge, considerations, feelings, skills, in a word, what in the aggregate appears in the concept of the qualifying contribution of the subject of labor to the process of creating a commodity from an object.

The quality of an object turned into a commodity is formed by the interaction of the natural, humanitarian and social. As a result, a person has a natural right to see the quality of a product in the system of his, human, values. From here we get the opportunity to draw a very important conclusion: the quality of natural phenomena is given, the quality of created goods (products) is built simultaneously with the formation of the ability to feel quality. The upbringing of high-quality ideas can be spontaneous, incidental, or directed, modulated. Once the famous French artist E. Delacroix was asked if he could paint a portrait of Madonna with mud? Yes, he replied, only I need an appropriate background. Consumer education is not only a matter of the consumer himself. It is also an opportunity for a manufacturer to have a regular customer.

Investigating the problem of the characteristics of the quality of goods, we did not find works devoted to the system analysis of quality - considering it in a system that links production, market and consumption, namely, it contains the opportunity to find an answer to the fundamental question: how to achieve a stable position in an unstable environment of existence.

The literature mainly deals with the quality of production of goods. And in this direction, the theory has reached the state of development that is required for practical progress in quality management. But this is clearly not enough to manage the activities of enterprises, taking into account the volatility of market dynamics.

The solution to the problem of the quality of goods - really key in the modern economy, must be approached: innovatively, combining the sequence of analysis with its comprehensiveness, as shown in Figure 16

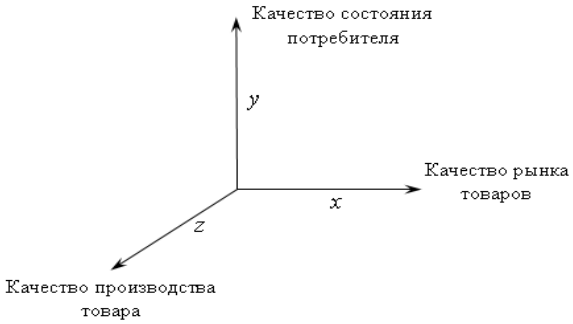


Figure 16 - Quality scheme

The demand for goods manufactured at enterprises of the light and food industries (and not only!) Is due not only to an expert assessment of the quality made by the production or at its request. The fate of a product is decided at the crossroads of interests and financial capabilities of three subjects: the producer, the consumer and the market that connects the first two. In concrete terms, it looks like this: everyone solves his own problem, but should not absolutize his status, remembering his systemic position, which obliges him to act with an eye to the potential of "partners" - whether they are ready for the proposed solution to the problem. That is why it is so important today to stay ahead of practical steps with balanced assessments of the current situation. The manufacturer is traditionally preoccupied with thinking about how to ensure the maximum possible conformity of commercial products to model samples. In the conditions of mass production, such a problem is quite costly, since it requires the organization of a special deployed service, and most importantly, where to find a significant number of qualified workers. The Japanese, faced with the problem of providing production with qualified performers, were forced to

solve it in a very peculiar way - the most advanced equipment was supplied to their enterprises located in neighboring states: Malaysia, Thailand, Singapore, Indonesia in order to minimize manual labor. Not everyone is ready to follow Japan's example. They were forced to solve it in a very peculiar way - the most advanced equipment was supplied to their enterprises located in neighboring states: Malaysia, Thailand, Singapore, Indonesia in order to minimize manual labor. Not everyone is ready to follow Japan's example. They were forced to solve it in a very peculiar way - the most advanced equipment was supplied to their enterprises located in neighboring states: Malaysia, Thailand, Singapore, Indonesia in order to minimize manual labor. Not everyone is ready to follow Japan's example.

The linear development of the economy would surely lead to a dead end - mass production would become extremely costly over time. No comprehensive mechanization and automation helped. Firstly, the reduction in personnel would cause an increase in unemployment with all the ensuing social negatives, and secondly, qualified workers would still be needed in large numbers. Salvation came from the nonlinearity inherent in the dialectic of progress. The economy of mass production has exhausted its resource and, like the next stage of a rocket, has lost the need for existence. The economic paradigm has changed. Irrational in various aspects - environmental, humanitarian, economic, mass production gave way to "lean economy" (lean production). Manufacturing fundamentally changes its purpose.

The "lean" (sparing) economy focuses the attention of the producer on the state of consumer sentiment. A manufacturer needs to study demand, look for a niche in consumer demand, "educate" through advertising, educational work, and the organization of customer service. The new economic philosophy brings the producer and the consumer closer together, emphasizes the dialectic nature of their relationship - they are opposites, but such that exist only in unity. Initially, the manufacturer and the consumer were generally in one person. The division of labor and the increase in its productivity have physically separated one from the other, but the essence of the relationship has not changed. They are naturally attached to each other, should be mutually close. The market has opposed them, strives to further distance them, complicating the system of spatial relations with intermediary, transport and other tools. The task uniting the producer and the consumer is not to lose sight of each other, to clear the market superstructures, to make ourselves direct financial partners, reducing the financial burden on production.

At the same time, the manufacturer and the consumer in the system of market relations generated by the commodity economy, are opposed to each other, therefore their understanding of the quality of production, goods partially coincide, which is also important to consider when setting up a presence on the market, hoping to gain a foothold there for the rest of their lives.

Common signs of the quality of a product for a manufacturer and a consumer will be its usefulness, convenience, hygiene, ergonomics, resistance to deformation, ease of use, compliance with fashion. The consumer, in contrast to the manufacturer, is of little interest in the quality of the production of the goods, although the "promoted", that is, the enlightened consumer should not, according to the logic of changing things, completely ignore the technology, the organization of production. The connection between the quality of the product and the quality of production is of a causal nature, and this is quite accessible to the amateurish understanding.

For its part, the manufacturer runs the risk of being out of work if he underestimates the specifics of consumers' ideas about the quality of goods. E. Deming - the author of the classification of "fatal diseases" for the manufacturer - among the seven deaths named under No. 1 "orientation of production to such goods that are not in demand in the market", that is, are not in demand by the consumer; # 2 - "focus on short-term profits and short-term benefits." In both cases, the producer makes the same methodological error - he removes his activity from the system of relationships, makes his “site” universal, for which he pays in full measure.

The consumer's idea of the quality of the consumer product is less objective, in comparison with the producer's understanding. A conscientious manufacturer, assuming professional obligations, attracts scientific knowledge, independent expertise, etc. The consumer, in contrast to the professional producer, is, in the general mass, an “amateur”. His views on the quality of goods, to put it simply, philistine, are based not on scientific knowledge, but on common sense. They are dominated by a pragmatic approach, a subjective assessment. In theory, the manufacturer should always be right; practically - then there would be no normal market, so everyone knows the opposite statement: the buyer is always right.

The dominance of a pragmatic approach to the quality of a product from a consumer is a kind of cost in relations between the main market actors. We have to put up with this, otherwise, apparently, it is impossible to build a system-forming link in market practice. The consumer, as a buyer, is limited by his ability to pay. The manufacturer has certain theoretical resources, for example, to increase sales, working capital, cut costs, etc. The consumer-buyer has no real reserves - loans will only increase his expenses, and in the Russian Federation it is very significant. Based on his situation, the consumer looks at the quality of the goods through the sight of the amount of rubles set by the seller as the equivalent of quality. To the above we add the skepticism that

awakens in the mind of the buyer the annoying repetition: "the price corresponds to the quality." The price can be equivalent to the quality only in a special case. A pack of middlemen feeds on the market.

“Quality” and “price” are basic concepts for both the producer and the consumer, but they are woven into systemic considerations in different ways, depending on the opposite of the market situation. Each of the subjects measures the quality of the goods based on their own status.

The third subject of relations between the producer and the consumer, and one more "appraiser" of the quality of the goods, is the market, which is a tool for regulating the relations between the producer and the consumer. The role of the market has historically strengthened with the development of national economies and the creation of transnational companies. The market from an episodic limited in time instrument, has become a completely independent economic phenomenon. The growth of the market was accompanied by its structural evolution; it eventually built up into a complex pyramid of direct, indirect participation; retail trade completed wholesale; transactions from the present have gone into the future. A leader has emerged on the market - the financial transactions market, which should be regarded as a symptom, because the financial market, by definition, is remote from the subject and quality is presented here in a generalized, conditional way.

"Product quality", from the point of view of the market, is conventionally specific. This is a sign of the liquidity of the product. The product is not stale, therefore, the desired quality has been achieved. The market does not care if the quality of the product really satisfies the consumer. In the market, the “king” is not the buyer, but the seller, and the quality criterion is the time of sale of the goods. What will happen next? - the seller does not really care. That is why such a "deadly disease" as striving for immediate results is common. Nevertheless, the "market theory" of quality takes place and must be reckoned with when determining economic policy.

Production, consumption and the market, which turned out to be the subject of their relations, are cultural phenomena, their historical concreteness is determined by time, national and regional characteristics of development. The word combinations “culture of production” and “culture of consumption” have long and firmly entered the professional vocabulary, which cannot be said about the “culture of the market”. The difference is not difficult to explain. Production and modern consumption are based on scientific knowledge that reflects the objective order of things; it is easy to trace the influence of cultural traditions in them.

The history of the market is not so great and the attitude to the market is somewhat different in culture. The market of the 20th and the new century undoubtedly absorbed elements of culture, but it turned out to be the very activity that does not have fundamental cultural values. The motto of Russian merchants: "Our goal is profit, but honor is higher!" took root thanks to the inherent and culturally designed guile. Honest and conscientious sellers in the market have never lingered - not their place. If the art of cheating is counted among the totality of cultural phenomena, then the market is a form of reality of mass culturally shaped deception. They deceive everyone, always and in every way. And there is no less deception in the art market than in the theater, where, in its own way, they deceive too.

Subjective, with unstable, multidirectional dynamics of movement, the market is poorly predictable. The attempts that are made in predicting the behavior of the market are unproductive precisely because of the lack of objective indicators of the systemic type. So the market reserves, as an area of real quality management, are small, especially in the absence of the state's desire to actively intervene in the architectonics of market relations.

For a specific enterprise (better than an association, a group of enterprises), the prospects for promoting marketable products to the market are associated with the development of resources for understanding quality in the coordinates of production - to look for a quality compromise, and to educate its consumer.

It is easier for European and North American manufacturers to settle in the market with their products. The experience of communicating with the consumer has been accumulated over the course of two to three centuries, the consumer has dealt with the producers, found “his own” according to his interests and pocket; the market has balanced, adjusted to the requirements of the legislation; the state does not put pressure on the market, the manufacturer and the buyer, but where it is present, it does it toughly. Corruption, arrivals, monopoly claims are not over, but the struggle is real, not decorative, fake, which greatly facilitates market accessibility and unifies the conditions of competition.

Satisfaction with the quality of consumer goods is among the main problems of European theorists and practitioners. The problem, in schematic terms, is simple - it is necessary to qualitatively satisfy the end customer's need for a product. Upon closer analysis, simplicity turns out to be conditional - composite, in order to obtain the desired result, it will be necessary to build an ensemble of the value of the product (1), price (2) and the consumer's purchasing power in the market.

In this sense, the market really acquires a key value for economic development, with the clarification that it is not so much the market in general as the market status of the consumer of the goods. This emphasis of the economic policy of producers can explain the concentration of interests on

the consumer. It is not important to wait for the consumer, he must be actively sought and "converted".

In foreign analytical reviews, information has appeared that avant-garde marketers representing large companies producing mass-market goods are proposing to significantly expand the format of participation with product consumers up to discussing the recommended price for an economy-class product. The idea is quite reasonable and practically feasible at no extra cost. Buyer's conferences are not realistic here, but the detailed practice of holding promotions, advertising actions with a device for displaying goods, reporting the estimated price and asking for a consumer assessment of the plans are quite promising and can be effective. One should not underestimate the modern buyer, his financial readiness, just as one should not force him to pay for the unqualified policy of the manufacturer with overstating the price. The agreed prices are also not fatal for the enterprise. There are always unused resources: materials science, technological, organizational, activating which the manufacturer makes the process profitable. There is a price to pay for a stable market position in the face of increased competition and volatility. Perhaps it makes sense to rationally modernize what is called "bargaining" in a "market" such as a bazaar.

The quality of a product, in practical consciousness, is determined through its ability to meet the needs and expectations of a particular consumer. The quality of a product consists of many useful properties. Figure 17 highlights the main quality properties of the product.

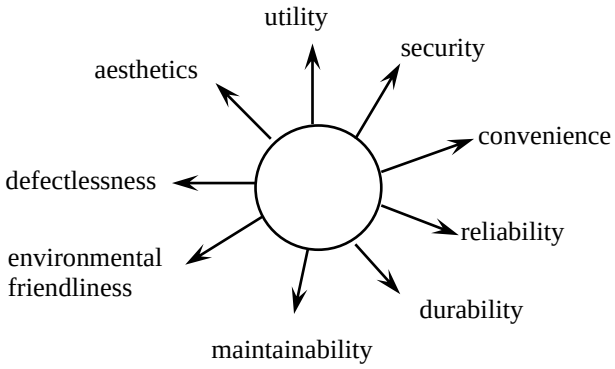


Figure 17- The main quality properties of the goods

New for economic theory, the concept of "product value" is defined as "a set of quality parameters expected by the consumer for the product he needs." The "consumer satisfaction tree" was "grown" from the concept of "product value".

The value of a product consists of the degree of necessity for its consumer and the level of quality (the presence of the required characteristics of the product). The buying decision is also influenced by:

1. confidence of the buyer in the supplier;
2. trust in the manufacturer;
3. information from other consumers;
4. accumulated experience of using a similar product.

The consumer makes a purchase decision by weighing the ratio of the proposed price of the product to the estimated cost. The higher the level of customer satisfaction, the more opportunities for business development, the more stable its market position. Quality, properties, measure, before the emergence of human interest in them, were just objective natural characteristics of things, the processes of their formation and transformation. The accumulation or reduction of the quantity led to a critical mass - the border of the "quality quantity". The measure characterizing the quantitative interval - the limits of the development of quality, warned that further change is expedient only in another qualitative expression. Of course, quantity itself is not capable of transforming into quality. The new quality arises from the quality of the old. And the way of changing the quality is different from the way of changing the quantity. Quantitative changes are continuous, qualitative, by definition, discrete.

The emergence of human activity has significantly changed the understanding of quality and the related characteristics of being. To the natural-historical processes of the development of nature, socio-historical ones were added. Man actively began to restructure the natural prerequisites of his existence, considering them as a raw material base for the struggle for his own existence. It should never be forgotten that the essence of man is practical. F. Engels was absolutely right when he argued: man, of course, is a creative being, but before creating and surprising, he must eat, drink, dress, put on shoes and have a secure roof over his creative head. He does not find what is necessary in a finished form in nature,

therefore, the foundation of human existence and his progress will always be practical activity, material production in all the diversity of its directions,

To two objective, natural dimensions of quality - natural properties and dimensionality, a third is added - quality assessment in the projection of the needs of a person's being, combining objective and subjective principles (Figure 18).

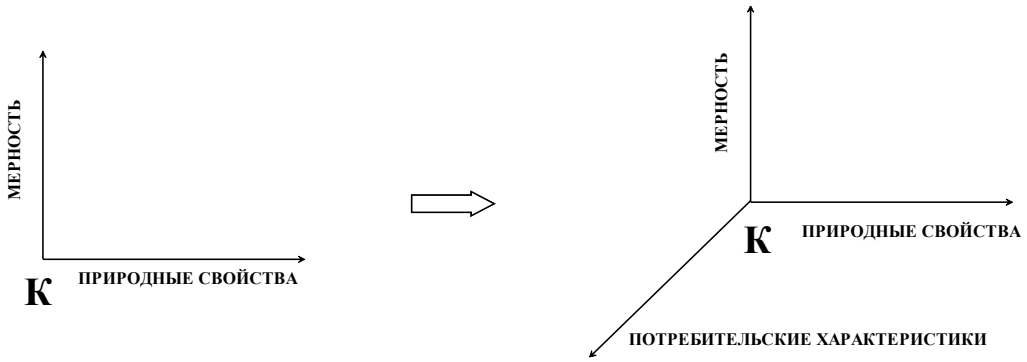


Figure 18 - Development of quality measurement concepts

The range of quality carriers has changed historically. Today, it includes, along with the quality of objects of the material world, the quality of raw materials, semi-finished products, final forms of marketable products, software products, phenomena of spiritual culture, the most creative activity of people and methods of preparation for it - the quality of professional education.

Qualitative changes in the scope of the concept of "quality" due to the inclusion of new phenomena that require qualitative characteristics, imply changes in the content of the understanding of quality. It is necessary to load it with new specifying features. Even in the first approximation, the inadequacy of extrapolations of the qualitative characteristics of natural phenomena, for example, solar radiation, on the quality of raw materials, direct consumption goods or services, is obvious. At the same time, the set of basic characteristics of quality, expressed in its definition, remains invariant. The modern understanding of quality has gone beyond the traditional understanding of "quality" developed in classical philosophy, but this should not lead to the conclusion that the philosophical definition of quality is outdated. Philosophy is a historical type of worldview, and its analysis of the fundamental characteristics of being has universal significance. The philosophical definition of quality is a message that must be adhered to in specific temporal or objective circumstances. Over time, it is not so much the philosophical understanding of quality that changes as the view of the quality of special and practical consciousness. Cognition ascends from general abstract concepts to a concrete understanding of the phenomena of the world and their properties. This movement of knowledge does not deny the original understanding. On the contrary, we are guided by it as a navigation device, making our way in the world of urgent problems. how much is a look at the quality of special and practical consciousness. Cognition ascends from general abstract concepts to a concrete understanding of the phenomena of the world and their properties. This movement of knowledge does not deny the original understanding. On the contrary, we are guided by it as a navigation device, making our way in the world of urgent problems.

In the system of philosophical categories, "quality" reflects the essential certainty of phenomena, thanks to which they appear as such and not different. The famous German philosopher G. Hegel wrote: quality is that, depriving of which, the phenomenon ceases to be itself. Defining quality as a system of essential properties of a phenomenon, philosophy identifies two aspects of determining quality, which make it possible to concretize general methodological characteristics. Quality characterizes both a set of similar phenomena and a separately taken phenomenon of a certain set. This differentiation is important in the development of quality standards and is no less significant in terms of the validity of individual consumer claims.

Another significant nuance in the definition of quality is that quality is not a collection of general properties of phenomena, but a system, therefore, the exclusion or movement of individual properties, for example, in a rating classification, is not allowed. Quality is either there or not. There cannot be less quality and more too. Quantitative variation does not apply to "quality" but to "state of quality." The concept of "state of quality" - "quality state" - is key

in the development of specific scientific, sectoral ideas about the quality of specific phenomena. Unlike the concept of "quality", which has the meaning of an ideal and serves as a reference point in the development of precise standards, the concept of "state of quality" is usually included in the development of regulations. The concept of "state of quality" is developed at the level of knowledge which allows you to actively involve specific and quantitative opportunities for determining quality. "Quality" is defined through properties. "Qualitative state" is characterized by a certain set of properties and their quantitative assessment. In essence, we mainly operate precisely with ideas about the state of quality, implying quality as such. It should not be otherwise in practical thinking, because it determines the real objective process or its results.

The contradictions of the world have set many traps on the path of our cognition. They are designed for the weakness of our psyche and the "tendency" of the intellect. In an effort to understand quality, one-sidedness and inconsistency are especially dangerous.

The one-sidedness of knowledge is manifested in the desire to put everything in its place - "on the shelves", according to the rule - "to each his own", "God is God", "Caesar is Caesar's". Philosophers develop the doctrine of quality, the rest use the achievements of philosophy. When there is something to use, they praise, when not, they scold. The position is comfortable, it allows you to write off your own "sins" at the same time as strangers. Universal concepts of philosophy, including the category of "quality", are not the eternal ideas of Plato, access to which is open only to philosophers. Philosophical concepts reflect the level of aggregate thinking, its achievements and shortcomings. The core of philosophical knowledge forms concepts that synthesize specific cultural experience. The quality of philosophical knowledge is determined both by the quality of understanding of the philosophers themselves, and by the creativity of representatives of all areas of scientific knowledge.

Consistency and versatility in understanding quality are equally important. From the recognition of the need for a creative union of philosophy and science to the embodiment of this principle of the development of knowledge in real creativity, the road is not easy. The general is hidden in particular. It must be obtained in it, which is not easy in itself, and besides, it is not necessary everywhere. In the interaction of theory and practice, the authority of the latter prevails. Practice rushes to solve their problems. The "fruitful" side of theoretical knowledge displaces the "luminiferous" one. Science, subordinated to practice, works "off the wheels", squeezing out the possibilities of a ready-made theory. Fundamental developments are frozen, but only through them is a leap to new materials, technologies, in a word, a new qualitative state of production and goods achieved. Not only in theory, but also in practice there is a need for a synthetic concept of quality, which would combine the philosophical characteristics of quality with scientific developments and analytical experience of production. We need an ideology of quality. The ideology of quality is a scientific and philosophical theory of quality with two main objectives. First of all, it should not analytically reflect the real experience of creative human activity, systematize the understanding of quality as a product of creativity. And, of course, the ideology of quality is intended to be not only a mirror of socio-historical achievements, it should generate new ideas, guide progress, starting from production, control, regulate, anticipate the relationship between supply and demand in the market in its entire spectrum. which would combine the philosophical characteristics of quality with scientific developments and analytical experience of production. We need an ideology of quality. The ideology of quality is a scientific and philosophical theory of quality with two main objectives. First of all, it should not analytically reflect the real experience of creative human activity, systematize the understanding of quality as a product of creativity. And, of course, the ideology of quality is intended not only to be a mirror of socio-historical achievements, it should generate new ideas, guide progress, starting from production, control, regulate, anticipate the relationship between supply and demand in the market in its entire spectrum. which would combine the philosophical characteristics of quality with scientific developments and analytical experience of production. We need an ideology of quality. The ideology of quality is a scientific and philosophical theory of quality with two main objectives. First of all, it should not analytically reflect the real experience of creative human activity, systematize the understanding of quality as a product of creativity. And, of course, the ideology of quality is intended not only to be a mirror of socio-historical achievements, it should generate new ideas, guide progress, starting from production, control, regulate, anticipate the relationship between supply and demand in the market in its entire spectrum. it should not analytically reflect the real experience of creative human activity, systematize the understanding of quality as a product of creativity. And, of course, the ideology of quality is intended to be not only a mirror of socio-historical achievements, it should generate new ideas, guide progress, starting from production, control, regulate, anticipate the relationship between supply and demand in the market in its entire spectrum. it should not analytically reflect the real experience of creative human activity, systematize the understanding of quality as a product of creativity. And, of course, the ideology of quality is intended to be not only a mirror of socio-historical achievements, it should generate new ideas, guide progress, starting from production, control, regulate, anticipate the

relationship between supply and demand in the market in its entire spectrum.

Analysts point out a steady upward trend in the market for demand for quality products. There is a significant, in the sense of time concreteness, shift of consumer interest towards the quality of the product. However, it became a revelation only because there is not sufficient theoretical support for the marketing forecast. Mathematical models are "handy" tools. They are effective when sufficient experience has already been accumulated to make it possible to qualitatively measure the emerging changes in the market, that is, to follow, not outrun. A logical advance is necessary, such as in genetics, - there is a combination of chromosomes, - wait for the corresponding signs with a probability calculated according to known formulas.

The market trend towards the quality of goods was quite visible in the United States immediately after 1945. Americans at home, in Europe and Asia rushed to buy everything of more or less value. Their interest in quality was driven by purchasing power, on the one hand, and an analysis of the international situation - the political pendulum swung towards tensions between the winners, on the other.

The ideologists of quality assume an orientation towards national characteristics - national traditions, national ideas, the originality of the natural habitat and relationship with nature, the specifics of crafts and the development of production, the social architectonics of society, customs, customs. The theoretical and methodological significance of the ideology of quality is enhanced by the fact that it will help overcome the limitations of current attempts to “curb” quality. The so-called quality management systems are in fact just forms of organizing control over the quality of an activity or its result. Even the currently widely used system in the form of an international quality standard of the ISO-9000 series contains only the most general provisions for quality management. The methodological basis of the ideology of quality is dialectics in both of its epistemological meanings - as a general theory and logic of cognition. You should start from the very beginning, without succumbing to psychological discomfort. The logical beginning of the theory was and will be the search for an adequate definition of the system-forming concept. In the life of a concept, as well as of a person developing a concept, there are two periods "donatal" and "postnatal". The active life of a concept begins from the moment of its adequate definition.

Definition - the ultimate abstraction of scientific and philosophical knowledge, grasping the most essential in the content of the concept. It is very poor in content, it seems formal, "non-working" knowledge. However, it is the definition that carries a particularly significant load, systematically characterizes the concept.

The definition contains an indication of the belonging of the phenomenon reflected in the concept to the system series and at the same time fixes its distinctive features ("defining moments"). Everything that makes up its specific being belongs to the defining moments of being. If all the defining moments are collected together, then the being from the mode of possible being passes into the mode of real being. An example is the definitions of well-known geometric shapes: trapezoid, parallelogram, rhombus, rectangle, and square. All named figures have 4 corners and are formed by 4 straight lines. They are closed quadrangles, that is, they are included in the system of closed polygons in this capacity and are determined through common signs. The hierarchy of their own definitions is due to the inclusion of additional (to the necessary) features, concretizing the content of the defined concept. A square turns out to be at the top, since it is formed by the largest number of additional features. The definition of a square turns out to be the richest in content, but it is not identical with the content of the concept of "square", because it does not capture all the geometric properties of a square and its relations with other figures.

Differences in the understanding of quality begin when from the content of a concept, which is always a certain integrity, are withdrawn and inadequately interpreted individual forming signs or conditions for the existence of quality. Quality is most often identified with a property, and conditions are included in the system of quality itself. To avoid confusion, it is necessary to strictly adhere to the definition of quality as a point of reference in the system of its understanding. One-sidedness and errors in understanding the quality of a phenomenon have both objective and subjective grounds. Quality, as an objective characteristic of a phenomenon, combines several of its fundamental properties, but the quality of the phenomenon is manifested in different ways depending on the relationship with other phenomena, which allows us to speak of a multi-quality one. F. Engels wrote: “There are not qualities, but only things, possessing qualities, and, moreover, infinitely many qualities. " Different expression of quality in the process of interaction of the phenomenon can be perceived - one-sided. That is why the dialectical method of cognition requires that a phenomenon be considered in all possible diversity of its connections. Only compliance with this rule will help to minimize one-sidedness. The logic of the process of quality cognition also “disposes” to inadequate judgments. At the initial stage of cognition, the object of research appears as its separate properties. Cognition moves from individual properties, through their comparison, assessment, differentiation to the establishment of their relationships, the awareness of the unity of these relationships. And only at the stage of systematization the sought-for concept is formed. Cognition ascends from "properties" to their unity - "quality",

The concept of "quality" has actively migrated

from the system of philosophical categories to science and practical consciousness. Adaptation to new levels of thinking is presented in the Academic Dictionary of the Russian Language. Along with a philosophical definition, the authors cite three more:

"An essential feature, a property that distinguishes one object or one person from another (more often about a positive feature, property)."

"The degree of dignity, value, suitability of a thing, action, etc., compliance with what they should be."

"The difference in value between a heavy piece and an easy piece in chess."

IN AND. Dahl also preferred the broadest interpretation of quality - "a property or belonging, everything that makes up the essence of a person or thing." Thus, quality, which, according to experts, has become a system-forming factor in the modern economy, presupposes several aspects of analysis: philosophical, scientific and practical. By balancing these approaches, we can count on success in developing a quality management system. It is necessary to answer, first of all, clearly and clearly to the questions: what do we call "quality"? and what is the originality of the “quality of activity”? The latter is especially relevant, because we are faced with a specific task, to build a quality management system in relation to a specific activity - higher professional education.

Let us formulate the main provisions that clarify the previous characteristic of the concept of "quality":

firstly, quality is a system of defining properties of phenomena. Quality cannot be identified with one of them, no matter how significant it is. Quality can manifest itself through a separately taken property, but even in this case it acts as a certain unity, which cannot be neglected;

secondly, “quality” and “quantity” are dialectically opposite concepts, that is, they exclude each other, by definition, assuming interdependent existence. “Quantity” cannot go directly into “quality”; it creates a condition that ensures the transformation of one quality (or qualitative state) into another. Likewise, “quality” does not transform into “quantity”, but a new quality determines a different quantity. Hence the desire to reveal quality through quantitative analysis appears. "Reducing quality to quantity is the main trend of modern natural science." Quantitative analysis of quality is rational in terms of understanding that it does not detect a quality system. The quantitative approach to quality is limited by the function of the operator.

thirdly, the concept of "quality", reflecting the subject-diverse world, must reproduce in itself this objectively existing difference. It is therefore structured. The structuring of "quality" is especially important for the development of a quality management system. It is advisable to distinguish the following structural quality levels:

- quality of natural material;
- the quality of the recycled natural material;
- the quality of the technical product;
- the quality of the software product;
- quality of activity.

Comparing the presented levels in the structure of quality, it is not difficult to notice that their main difference is due to the presence or degree of inclusion of conscious activity. With an increase in activity participation, the quality status shifts from “materiality” (objectivity) to “ideality” (consciousness). The growing tendency of transition from naturally formed (spontaneous) properties of quality to consciously given characteristics of quality is quite obvious. This displacement reaches its highest embodiment at the level of the quality of the activity itself. At the same time, let us pay attention to the fact that quality at all levels remains an objective characteristic of a process (phenomenon), therefore, it is unproductive to set quality properties arbitrarily. It is necessary to reckon with the objective reality, of which our conscious activity is a part. The power of knowledge lies in its objectivity. Quality is ensured exclusively by those activities that are of high quality, that is, they are based on the skillful use of objective knowledge. It is customary to define such activity as "professional".

The most important scientific conclusions of the XX century about the “noosphere”, “the transformation of science and culture into the direct productive force of society” and “the increasing role of the subjective factor in the history” reflect the spectral shift in the quality structure towards the quality of activity, actualizing the complex of quality management problems. The system-forming feature of professional and educational activity is synthetically represented by the concept of "education". The concept of "professional" serves as a vector. "Education, the process and the result of assimilation of systematized knowledge, skills and abilities ... it is closely related to upbringing." Education combines training and upbringing. Education and upbringing, in principle, are related in themselves. Education gives their relationship a certain integrity and direction. It makes no sense to interpret education outside of ideology. It is not education that needs to be “cleansed” of ideology. In ideology, it is necessary to "clean up" the rubble created by apologists and critics of the bourgeois system of social relations.

The ideology of education - general and professional - is based on two most important provisions: the need for systemic training so that the power of knowledge has a positive vector, and the importance of raising the need for systemic knowledge, otherwise the active phase of attitude to knowledge will be limited by the time of training in educational structures.

It is advisable to consider the criteria for the

quality of higher professional education in theoretical and practical aspects. Ideally, both aspects should be two sides of a single action. In theoretical terms, the criteria for the quality of the university's activities look like a "docking node" of the State Standard; personal satisfaction of the graduate; the conjunctural requirements of the domestic consumer and the multilevel requirements of the international labor market. Such different approaches can be combined only in the form of a very flexible and conditionally specific model of a “specialist”.

The practical plan is clearer. We need modern effective teaching technologies, highly qualified personnel, rational management and sufficient finances. Instead of conclusions, let us summarize and define the basic concepts of the ideology of quality. The development of the ideology of quality begins with the isolation and definition of the essential properties of the set of phenomena, the quality of which we must understand and evaluate. The concept of "essential properties" reflects a group of features that characterize the structural and functional features of a given series of phenomena. Essential properties ensure the status and functioning of both individual phenomena and the multitude as a whole. The absence of at least one such property indicates the absence of a qualitative definiteness of the phenomenon.

The difficulty lies in determining the materiality of the property. Any standards designed to clarify are conditional and subjective, which makes it possible to manipulate quality as a characteristic of a phenomenon, to replace quality. With regard to the quality of the product of activity and the activity itself, such manipulation is mainly associated with the sequestration of the nomenclature of essential properties. For example, footwear should provide safety and comfort of movement. Aesthetic and hygienic composite qualities are packed in the definition of the main functions, which is quite acceptable, since the definition of a quality characteristic requires maximum brevity. The same that is synthesized included in the definition of quality, you can try to dispose of arbitrarily. It is no secret that in the production of footwear it is legal and, especially illegally, materials certified as environmentally friendly in general, but not in our particular case, are used on a large scale. It is incorrect to classify footwear into high-quality and low-quality shoes. Low-quality shoes - by definition - are not shoes, but a surrogate, a fake. What to do? It is irrational to determine the real situation on the basis of formal criteria, and even more so to reckon with the actually operating practical order.

To combine theory and practice, it is advisable to differentiate the concepts of "quality" and "state of quality" in the ideology of quality. The concept of “quality” emphasizes the systemic way of dealing with essential properties that form a certainty of a set of phenomena. Quality, as the ultimate characteristic of certainty, characterizes a given set of phenomena formally, in principle. The concept of "state of quality" reflects a specific level of expression of the quality of phenomena. In this sense, it is more meaningful and captures the real state of affairs. The quality state can be incomplete, conditionally definable. The concept of “quality levels” concretizes the understanding of quality in the aspect of the development of the world, its complication, the increasing importance of rational and practical activity. The ideology of quality is applicable precisely to certain levels of quality, and,

The historical development of the main types of footwear took place in direct connection with the natural socio-economic conditions of their era, the aesthetic and moral requirements of social life and the dominant artistic style in art. Style in art is a historically established, relatively stable commonality of the figurative system of means and methods of artistic expression, due to the unity of the ideological content. In the costume, the general style direction is expressed in the basic shapes and proportions, the way of wearing, the use of certain materials and their color combinations, the nature of the use of auxiliary materials, accessories and jewelry.

Changes in the general artistic style of the era are always associated with great ideological and social shifts. They take place over a long historical period. But in***within each style*** there is a more mobile and short-term phenomenon - a fashion that affects all areas of human activity.

The word "fashion" comes from the French mode, which in turn goes back to the Latin modus, which means measure, image, method. According to V. Dahl, fashion is a temporary changeable whim in everyday life, in society, in the cut of clothes and outfits. Another definition is often found: fashion is a short-term domination of certain forms associated with a person's constant need for variety and novelty of the surrounding activity. Fashion is especially noticeable and actively manifested in a suit, which is subject to the most frequent change of volumetric, planar and linear forms. Some experts, trendsetters, believe that the birth of fashion is difficult to associate with any particular period or event. Perhaps this is as vague as its end. But on the other hand, the most important feature of fashion is its obligatory changeability. With the advent of a new fashion, shoes, like other costume items characteristic of the previous fashion, partially or significantly lose their aesthetic value, and at the same time their monetary value. This fact is of great aesthetic and economic importance for manufacturers and buyers. Some do not want to buy, while others untimely felt a sharp drop in demand for these types of footwear, they could not offer the market new fashionable types of footwear in time in order to maintain high demand and the image of their enterprise as a trendsetter with a marketing service that monitors demand and timely

accepts effective solution. Unfortunately, manufacturers will not understand in any way that this fact - the loss of the aesthetic value of the types of shoes offered to the buyer - comes from the natural desire of people to update their wardrobe,

The work of an enterprise without taking into account the current situation on the demand market today, or better tomorrow, will surely lead to collapse, because fashion is both novelty and imitation is not always new, but necessarily unusual with the manifestation of the individuality of each consumer. One cannot but agree with the statement of the famous French fashion designer P. Cardin about fashion: “Fashion is ... renewal! The principle that nature has always followed! A tree sheds old foliage, a man sheds bored clothes and shoes. When things become familiar, people get tired of them quickly. Fashion saves you from tiresome uniformity. People want to like each other: to be beautifully dressed, to look good is a natural need. "

The modern leader needs to have that flair, the ability to foresee this emerging new thing that is already in the air, but has not yet acquired flesh. You need to learn this skill, take risks, surround yourself with talented fashion designers, trust them, implement their proposals and developments in small batches, test them on the demand market, advertise the advantages of the offered range of shoes, form good taste in the buyer and his desire to be beautifully dressed, look good ... It doesn't happen by itself. This state of mind is formed under the influence of the environment where a person communicates, lives, creates and wants to be recognizable.

The taste must be developed, but at the same time, every customer, every member of society who considers himself a cultured person, the taste must be endowed with individual qualities, only in this case the fashion will be able to fulfill its mission - to make every person an individual. This is possible if people develop the presence of different personal tastes, if a society of people is created that is capable of respecting other people's tastes, without imposing their own tastes on them, peacefully coexisting, forming a society of intellectual, cultured people. Unfortunately, the level of quality in the Russian industry and service sector still does not meet these requirements. The few examples of successful competition of Russian companies in the foreign market are in most cases achieved due to the cheapness of raw materials, materials, energy and labor. After Russia's accession to the WTO, Russian companies will not have these advantages. They will be able to compete with global manufacturers based only on the high quality of products and technological processes, on the ability to meet market requirements, on the availability of a demanded range of footwear. One of the most important steps in the implementation of these goals was the adoption on December 272002 year... Federal Law No. 184-FZ "On Technical Regulation". This law laid the foundations for a radical reform of the entire system of state regulation of quality. The Federal Law "On Technical Regulation" (hereinafter - FZ) provides for harmonization with the European practice of Russian: approach to conformity assessment, standardization system, state quality control. The reform of technical regulation being carried out in the country is aimed at ensuring the achievement of the necessary balance in the market between the interests of the consumer and the manufacturer. At the same time, on the one hand, the safety of products for a person, his property, and the environment must be ensured, and on the other hand, on the path of movement of goods to the market (assessment and confirmation of conformity, control and supervision of quality, etc.) allows prevent actions,

It is known that the leading position in the world economy is achieved only by those countries that are able to ensure the quality of products and services that create competitive advantages for their producers and comfortable living conditions for consumers. That is why in the leading countries of the world the problem of quality is at the center of the economic interests of the state and citizens. Quality systems beingmarket mechanism of quality management, which enterprises use at their own discretion, require state support.

One of the important steps of state support for quality systems was to enter 1998 year... Resolutions of the Government of the Russian Federation "On Certain Measures Aimed at Improving Systems for Ensuring the Quality of Products and Services". In particular, it says: “To consider the most important task of federal executive authorities to support business entities implementing quality systems based on GOST R ISO 9000 series in order to increase the competitiveness of products and services provided. Recommend the executive authorities of the constituent entities of the Russian Federation to provide support to the specified business entities. " As a result, by placing profitable orders, the state is interested in the industry in creating and using such effective tools for improving product quality as modern quality systems, that is, using the new version of ISO 9000: 2000.

The quality system according to the new version of the ISO 9000 series is to ensure the quality required by the consumer, but with minimal costs. This, in particular, is the philosophy of the TQM (Total Quality Management) concept and, as a consequence, the high efficiency of the quality system at the enterprise. In these conditions, the advantage will be given to the company that can offer consumers the best quality at a lower price.

The quality system must ensure both the conformity of the product to the requirements of the consumer and the guaranteed identification and elimination of deficiencies in production processes that affect the quality, i.e. ensure the greatest

likelihood of no defects. But more than a year has passed since the entry into force of the Federal Law, during this time not a single technical regulation has been adopted in the country establishing mandatory requirements for the application and execution of the objects of technical regulation.

Technical regulation - legal regulation of relations in the field of establishing, applying and fulfilling mandatory requirements for products, processes of production, operation, storage, transportation, sale and disposal, performance of work or provision of services and legal regulation of relations in the field of conformity assessment.

According to Evgeny Petrosyan, Deputy Director of the Department of Technical Regulation and Metrology of the Ministry of Industry and Energy of Russia (formerly Gosstandart), Yevgeny Petrosyan, this situation with the implementation of the Federal Law is due to the confusion in the field of standardization after the unsuccessful implementation of the administrative reform. In fact, the director of the department Marina Glazatova agrees with the fact that the unsuccessfully carried out administrative reform delayed the reform of standardization, since only a year later the Government of the Russian Federation will formulate the main tasks for them, but today it is necessary to solve three main problems, namely:

clarify provisionsconcerning the mandatory confirmation of conformity during the transition period. Here it is necessary to amend Article 46 of the Federal Law. This amendment should guarantee the obligation to carry out all forms of conformity assessment that exist today, and would establish the legitimacy of both certificates and declarations for a transitional period. As of today, there is no such document, since the laws on certification and standardization have been canceled;

clarify provisionson registration of certificates and declarations of conformity. According to the Federal Law, registration must be carried out by the federal body for technical regulation, that is, by the ministry. However, physically it will not be able to cope with such a volume of work, so this problem was solved by retaining the right to register on the spot with the centers of standardization and metrology. True, the fate of the CSMs themselves, as federal state institutions, is not yet clear;

clarify the orderdevelopment of rules and methods for testing and measurements, sampling. In accordance with the Federal Law, all methods must be approved by the government. But given the fact that there are six and a half thousand standards, this seems unrealistic. The Department proposes to transfer this work to the level of approval of national standards, that is, to the level of the Federal Agency. But the question remains open for now, because the Federal Law provides: the rules and methods that will be approved by the government will then be used for control and supervision during inspections. That is, the parties will know in advance exactly how, by what methodology, the check will be carried out. This will make the process of monitoring compliance with technical regulation requirements more transparent.

Only the meaning of these claims is rather the opposite: if "private" projects sin with incompleteness and utmost ease of requirements put forward for products, then "state" ones seek to regulate everything that is possible, and by such high standards that it is not clear who will be able to fulfill them. Although technical regulations are adopted only to ensure the protection of the life or health of citizens; property of individuals or legal entities, state or municipal property; environmental protection, prevention of actions misleading purchasers. The use of technical regulations for other purposes is not allowed.

Since, according to the Federal Law, technical regulations are divided into general and special, in this case the requirements of general technical regulations are mandatory for all types of products, production processes, operation, etc. They are adopted on the issues of safe operation and disposal of machinery and equipment, safe operation of buildings, structures, structures and adjacent territories, fire, environmental, biological, nuclear and radiation safety, electromagnetic compatibility, while special technical regulations establish requirements for certain types of products. , production processes, operation, etc.

The Federal Law provides for two types of standards to meet the requirements of technical regulations: national, which are adopted and approved by the national standardization body, and standards of enterprises (organizations). The existing industry standards will no longer exist, they must be transferred to the rank of national standards, or standards of organizations.

Therefore, a standard is a document that, for the purpose of voluntary reuse, establishes the characteristics of products, rules for implementation and characteristics of the processes of production, operation, storage, transportation, sale and disposal, performance of work or provision of services. The standard may also contain requirements for terminology, symbols, markings or labels and rules for their application.

During the reforms at enterprises after the adoption of the Federal Law, the services of standardization, metrology, quality control were sharply reduced, as unnecessary, unnecessary, and at enterprises where life was barely glimmering, in order to save the wages fund, the standardization, metrology and quality control services were generally eliminated. Strange as it may seem, the heads of some quite prosperous enterprises did not think for a long time that quality is a fundamental factor in the competitive struggle, and the named services are precisely the knights who are able to ensure this very success in the market.

Technical regulations do not establish design and

performance requirements. As a consequence of this, manufacturers will always be faced with the task in the manufacture of specific products to have such a document for the release of products, which would ensure, along with the creation of products with specified consumer properties, the fulfillment of the requirements of technical regulations. There are two ways of acting in this situation: the first is to develop such a document independently, which is far from being possible for every manufacturer, and the second is to apply a national standard. The first method is fraught with the fact that the manufacturer will have to prove that his document ensures compliance with the requirements of technical regulations. Thus, the main condition for fulfilling the requirements of technical regulations can be the implementation of the principle of "presumption of conformity" adopted in the EU.

The developers of the new version of ISO 9000 series standards made an attempt to invest in them a modern understanding of the quality system that meets the requirements of the global market, which can be characterized as follows:

– the market is oversaturated with goods of the same purpose;

– it is characterized by constant variability due to scientific and technological progress, as well as the fiercest competition that generates new proposals;

– consumers in the market know what they want and have a lot to choose from.

Another principle: a “process approach” has been adopted to build a quality system. Accordingly, it is represented by three interconnected blocks of processes instead of 20 elements provided by the previous version of the standards:–it is resource management, product lifecycle management, and change and improvement. In accordance with the ISO 9000: 2000 series, a process is an activity aimed at achieving an established goal, which is quantified - a result. Therefore, to implement the "process approach", the organizational system of enterprises must be reoriented from functional management to management of results, the totality of which must ensure an increase in the efficiency and competitiveness of the enterprise.

Consequently, from an economic point of view, the application of the concept of the "process approach" should help to increase the economic results of activities. Already today, if not yesterday, each manager needs to reconsider his attitude to what is happening at his enterprise in order to ensure the competitiveness and demand for products manufactured at his enterprise. This problem statement is especially topical for shoe enterprises, because the Russian markets have been and will be oversaturated with types of footwear for the same purpose. Therefore, you need to know exactly what will be in demand on the market and how it should be implemented so that your range of footwear is chosen by the buyer, withstanding the fiercest competition that generates new offers. For all this, it is important to build an assortment policy in such a way that the market,

In addition, both the head of the enterprise and the fashion designer must, when choosing an assortment policy, proceed from the fact that each fashion corresponds to a certain time, but a certain repetition is guessed in it with appropriate adjustments taking into account an already different, modern era.

So, for example, the same types of shoes can be:

immoral - 10 years before their time;

defiant - 3 years before their time;

brave - 1 year before their time;

beautiful - when these types of shoes are in fashion;

tasteless - a year after their time;

ugly - 10 years after their time;

funny - after 20 years;

funny - after 30 years;

peculiar - after 50 years;

pleasant - in 70 years;

romantic - 150 years after their time.

Jean Cocteau owns a catch phrase: "Take fashion seriously, because it is dying so young."

But at the same time, one has to reckon with the fact that one cannot insist on what was found, get carried away with replication even when no matter how well the model “goes” today. We will not achieve anything except the painful blockage of yesterday's fashionable shoes. And each time we will face the problem of its implementation, which is very difficult when it comes to thousands of copies. More in fashion than in any other field, one must be able to say goodbye to a find, even a successful one, for the sake of a novelty. Moreover, what is interesting: you can bring to the market in the second round, and sometimes throughout human life and in the third, great-grandmother's shoes, they "look", they are able to live, but this is impossible in relation to yesterday's fashionable and this is confirmed by the entire history of shoe production, because in the field of fashion - yesterday is the unbearable day before yesterday, the day before yesterday is possible. Here the mechanism comes into force, inherent in our cultural consciousness: memory revives the old, it becomes cute and enters modern shoes with a special note, creating a kind of support in the stream of changing impressions. This will be possible if enterprises are able to quickly change, create a new rate of turnover of finished footwear, create an extensive and highly efficient sales network with the obligatory variety of the assortment of footwear produced in “small series”. It seems clear that there can be no ready-made recipes for all occasions, but there must be constant work, a daily solution to emerging problems in the manufacture and sale of popular footwear. This will be possible if enterprises are able to quickly change, create a new rate of turnover of finished footwear,

create an extensive and highly efficient sales network with the obligatory variety of the assortment of footwear produced in “small series”. It seems clear that there can be no ready-made recipes for all occasions, but there must be constant work, a daily solution to emerging problems in the manufacture and sale of popular footwear. This will be possible if enterprises are able to quickly change, create a new rate of turnover of finished footwear, create an extensive and highly efficient sales network with the obligatory variety of the assortment of footwear produced in “small series”. It seems clear that there can be no ready-made recipes for all occasions, but there must be constant work, a daily solution to emerging problems in the manufacture and sale of popular footwear.

It's like breathing. It is impossible to take in air and freeze; even, constant, adjusted rhythm of inhalation and exhalation is Life...

Wherever the footwear produced by the enterprise is sold: in a company store, at wholesale fairs or federal exhibitions, it is always important to know the niche that is not occupied today and to fill it urgently. This is possible only if the buyer has no limited choice for making a decision to purchase it, if the interests and capabilities of all groups of consumers are taken into account. These are not nice words, but the reality of today's market. Without such marketing research, without strict consideration of demand, without analyzing the reasons for the return of shoes by customers and analyzing their claims, it is difficult to expect success, and this is simply impossible.

The more a variety of footwear is offered to the trade on the same basic basis, the more it will be sold, the easier it is for the enterprise to timely ensure the modernization of its production and timely replace the out of fashion, not in demand footwear with the one that will again be in demand. In general, you have to spin to be “afloat”.

For men's and women's shoes, the same requirements for creating conditions for their demand are characteristic, but taking into account the market where these shoes will be offered for sale, for sale. Today men's footwear is in high demand, which is due to the change in the status of the Southern Federal District (SFD) on the geopolis of the Russian Federation. The border district, internal troops, military units of the Ministry of Emergency Situations, regular military units and formations, a huge flow of refugees, a large number of higher educational institutions - all this provokes the need for a large number of consumer goods, including footwear for various purposes. In this regard, the demand for men's footwear has its own characteristics, in that the autumn-spring range of footwear is in greatest demand on the market. And the availability of technical specifications for the production of special footwear for military personnel of adhesive and molding methods expands the possibility of shoe enterprises in the development and manufacture of men's footwear, as it were, at the junction - everyday and special with the possibility of a slight change in the technology of making it for the consumer or offering it to military representatives as special footwear. Such a wide range has already provoked the opening of numerous small businesses for the production of men's shoes. I just wanted to draw the attention of heads of enterprises and fashion designers to the principles of forming an assortment of men's shoes in order to ensure stable demand and high competitiveness in the supply market.

It is important that the experimental group of the enterprise timely monitors the emergence of new materials and accessories on the supply market, ensuring for itself the right to know-how, peculiarity, uniqueness, thereby creating an image for its enterprise, respect for the "brand" of the enterprise and the trademark, so that in all cases, this prestige has always been maintained at a very high level.

So, for example, if a molded sole with a rim is used, then its fastening will always be carried out using a combined fastening method - thread and glue, since this is of high quality and ensures its durability, then the buyer will already know that the shoes of this company are distinguished from others by high quality, reliability, availability and comfort.

A special place is occupied by the production of women's footwear for the demand market of the Southern Federal District. A large volume of imported footwear and affordable prices make the production of women's footwear a less profitable business in comparison with children's and men's footwear. Once again, the fact that the importance of marketing research is increasing, the definition of its assortment, which will never be taken into account by "shuttle traders" and foreign firms, is becoming more important. Therefore, the analysis of anthropometric changes that have occurred in the feet of the female part of the population of the Southern Federal District in recent years, the presence of a large number of customers with pathological abnormalities, significant differences in full size allow manufacturers to make women's shoes on the styles of such pads that are more satisfying to customers in a comfortable and convenient shoes, and the traditional high quality and reliability against the background of a lower cost make such shoes always in demand and desired. And shoes for the elderly, socially unprotected, but having even greater pathological changes in the feet, allow manufacturers, together with designers, taking into account these features, to produce shoes that will always be in demand and sold. In addition, new solutions, unexpected proposals are needed, and then you, the manufacturers, will be successful not only in the domestic market, but also in more accessible foreign markets.

Thus, even today, despite the lack of a legal basis

for technical regulation, it is necessary for each leader to choose their own, and only their own rules of the game and behavior in the market for supplying footwear of a domestic manufacturer, not forgetting to use the opportunity to export their products to the world market, especially on the eve of the entry of the Russian Federation. in the WTO.

We sincerely wish you, our leaders, justified risk and success, both in the domestic footwear market and in foreign ones.Quality systems "ordering / 5 S" and "three" not "- the basis of stability and safety of production. The coming XXI century is destined to be a century of high quality in all its manifestations - the quality of labor, products and services, the environment, that is, to implement the modern paradigm of civilized development.

Ensuring competitiveness in the domestic and promotion of Russia in foreign markets is impossible without the production of high-quality products that meet safety requirements. Taking this into account, enterprises need to implement a quality management system (QMS), which should be systematically developed and supplemented over time. The combination of its various elements contributes to the effective management of production and the release of quality products.

One of the components of the integrated QMS is the Japanese system - "Ordering / 5S".

One of its ideologues is Kaoru Ishikawa, an internationally renowned theorist of quality management. In particular, he came up with the idea of creating famous quality circles in the early 60s of the last century.

The main task of this system is to promote maximum stability and safety of production processes, maintaining order and discipline at each workplace with the participation of all personnel of the enterprise, especially highly qualified workers.

Key concepts of the quality system "Sequencing / 5S" are shown in Table 1.

The first two elements in the 5S system (Seiri è Seiton) aim to free the workspace of unwanted or unnecessary items and to organize the remaining items. The workspace activity is directly related to these two steps in 5S (creating “workspaces where everything is in place”), but it also uses the concept of assigning space to small groups. Working to improve the working environment also fosters networking among small groups, which is a prerequisite for improving the performance of many businesses.

Table 1 - Concepts of the "Sequencing / 5S" system

Japanese term	The meaning of the term	Activity content
Seiri	Organization	Removing unnecessary
Seiton	Accuracy	Arranging the placement of items
Seiso	Cleaning	Cleaning the workplace
Seiketsu	Standardization	Standardization of rules for cleaning, ordering and cleaning
Shitsuke	Discipline	Formation of the habit of keeping clean and tidy
* Each word denotes an element of the activity to master the rules of maintaining an organized workplace.		

The third element of the 5S system - cleaning of the workspace - is necessary, because without it, cleaning of industrial premises turns into a routine waste disposal, and contamination inside machines remains sources of defects and breakdowns.

The fourth element of the 5S system - standardization - involves establishing and enforcing the best practices for shaping the work environment to ensure that the requirements of the first three elements of the 5S system are consistently met. System Mastering Step 3 (developing standards for cleaning and checking) not only establishes standardized procedures for performing steps 1 and 2, but also trains operators on how to maintain equipment while taking responsibility for lubricating equipment.

The fifth and final element, discipline, is the key to ensuring consistency in the 5S system. Steps 4 and 5 continually educate operators about the operation of the equipment, while setting standards for its maintenance. As a result, operators are motivated to keep the equipment in good condition.

To implement the above five steps, you need to go through twelve steps:

preparation for the implementation of the "Ordering" system;

removing unnecessary;

rational placement of objects;

development of rules to comply with the principles of "removing unnecessary" and "rational placement of objects";

consistent cleaning;

trouble-shooting;

development of cleaning rules;

grease;

simple check;

development of inspection and lubrication rules;

standardization of the rules developed as a result of the previous steps;

daily activities within the "Ordering" system - discipline and responsibility.

In Russian practice, there are two fundamentally different approaches to the implementation of the "5S" system: Western and Japanese.

The Western approach is focused on getting quick, mainly external results: cleanliness, order, visual control, staff compliance with strict regulations. In these cases, the 5S system is implemented by a team of managers who make all decisions, define requirements and formulate rules for maintaining order. All employees should simply follow this procedure, without adding anything to it.

The Japanese approach consists, first of all, in involving all personnel in the process, including the intelligence of each employee in the rational organization of his workspace. Of course, this method of implementation is longer, at first it requires colossal efforts to overcome the inertia and disbelief of workers. But in the end, it delivers higher and more sustainable results, making it easier and more efficient to implement full-scale lean projects.

The creation of a system for maintaining a favorable environment and safe working conditions at an enterprise can be represented by a diagram (Figure 20).

Figure 20 - Scheme of creating a system for maintaining a favorable environment and safe working conditions at the enterprise

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APPLICATION PECULIARITIES OF COMPOSITE MATERIALS FOR RESTORATION OF AUTOMOBILE CARDAN HINGE SPLINES

Abstract: *The spline connection is used to secure gears, toothed wheels, bushings on the shaft. It has a number of advantages over other types of connections. The component parts of this connection are easier to center. This significantly reduces mechanical deformations at the bushing boundary.*

During operation, under the influence of various loads, the spline connection loses its properties. In this case, the splines or grooves in which they are located are restored. The following article looks into the peculiarities of composite materials for the restoration of automobile hinge splines.

Key words: *restoration, spline, lubricant, viscosity, mechanical stability, distribution, compression, indentation.*
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Introduction

Factory instructions for the use of machines often give overestimated standards for the frequency of lubricant changes (up to 20 thousand km of run). But due to the heavy load, off-road driving and storage outside the garage, these figures are halved. The use of lubricants prevents the splines from wearing out and increases their service life.To lubricate the splined joint of the propeller shaft, oil-based greases are usually used - with petroleum and synthetic origin. Thickeners (10-20% of the composition) are soaps, paraffin, soot. The size of the dispersed particles of the thickener is 0.1-10 microns. Up to 5% of the composition can be occupied by additives with extreme pressure, antiwear and conservation properties.

The main performance characteristics of lubricants:

Ultimate strength is the ability to be held in friction units under inertia. Depends on temperature - decreases with increasing.

Viscosity - decreases with increasing temperature, worsens antiwear properties.

Colloidal stability

The dropping point is the temperature at which the first drop of lubricant falls. On the basis of the liquid, there are low-melting (60 degrees), medium (60-100) and refractory (over 100)

Water resistance

Mechanical stability - with a poor performance, the lubricant quickly collapses, becomes liquid and flows out.

By the type of thickener, liquids are soap (based on thickeners of organic and inorganic nature) and hydrocarbon.

The nature of the wear of the splines indicates the presence of "hot" seizure - the destruction of a thin film under load and increased temperature in the contact zone of the formation of seizure centers. Therefore, it is so important to select high-quality lubricants.

Heavy-duty guides, universal joints for propeller shafts with varying bearing speeds, pivots, splined shafts and threaded connections require a multi-purpose lubricant, as do bearings and other components subject to continuous loads. Correctly selected fluid is cold and hot water resistant and has excellent resistance to contact pressure, lateral deformation and aging. It also needs to protect against corrosion and reduce friction and wear.

To protect the components, liquids with solid additives are selected, which enhance the action of extreme pressure additives. The additives are graphite or molybdenum disulfite. The former is active at high temperatures, the latter during severe wear. With a high load of spline joints, greases with a high welding load should be selected. With a lower load, universal fluids come in handy.Lubrication of splined joints and crosspieces of the propeller shaft

The spline joint needs to be replenished regularly with grease. Otherwise, it wears out, backlash or jamming is formed. This leads to vibration in the driveline and damage to the flexible coupling.

Lubrication procedure:

Locking the front propeller shaft against rotation and swinging the elastic coupling. Make sure that there is no corner play in the connection.

Inspection of the coupling and intermediate bearing. If there is rubber detachment from metal, rupture or cracks, spare parts need to be replaced.

Cleaning the plug from dirt, unscrewing, installing a grease fitting in its place.

Lubricate with a syringe until grease comes out through the flange gland.

Unscrewing the grease nipple and replacing the plug.

However, the grease nipple does not need to be replaced with a plug - it can remain in the spline connection until the next lubrication.

Lubrication of the splined joint of the propeller shaft can lead to errors, as most modern shafts are made with a plastic coating to provide sliding with a minimum amount of lubrication. Auto specialists may overfill the connection with grease, which will be indicated not by its exit from the spline clearances, but by squeezing out the inner plug and leaving it in the shaft pipe.

This leads to strong vibrations during acceleration. If the lubricant enters the pipe and is distributed unevenly along the walls, then there will be a noticeable imbalance. If this happens, the problem can only be solved by disassembling the shaft - the tube will have to be cut on one side. It is cleaned inside, the plug is welded and the connection of the shaft and the end of the pair is restored. This requires the manufacture of an adapter sleeve, which is inserted into the tube and scalded. The elimination of the problem is completed by fine balancing, which makes the shaft as good as new.

The restoration of spline joints is carried out according to the results of the assessment of the condition of the entire joint. The procedure for carrying out repair or restoration work depends on the type of fit of the product, the degree of wear of each part. The most common ways to troubleshoot found faults include:

draft;
distribution;
compression;
indentation;
editing;
knurling.

The solution to these problems is carried out by the following methods:mechanical processing (using metalworking machines, hydraulic presses, manual processing);

welding and direction;
metallization;
galvanic method.

If minor defects of the slot appear, repairs can be carried out using the distribution method. For its implementation, a hydraulic press is used. Under pressure, the material used for the repair is forced into the bore of the bushing. Then it is re-calibrated. Similar actions can be carried out using the so-called spline broach. All excess metal is removed. Then it is milled and processed until the hole reaches the specified size.

With a high degree of wear, surfacing is carried out using an electric arc apparatus. Another option for repairs with a high degree of wear is edge welding. These methods, after appropriate processing, allow you to obtain the original size of the groove. Repair of splines is allowed when the groove is first widened and deepened. Such an operation allows you to eliminate all kinds of causes of the malfunction. Then a stepped key is made to it. This method is used in cases where other methods are not acceptable.

The distribution is done in two ways. The first involves carrying out the operation manually. The second is with the use of pressing equipment and special tools. Along the slot with a core, a longitudinal risk is applied. Next, the grooves are made with a chisel. To expand them and give the required shape, a minting is used. The final processing is carried out on a lathe or planing machine.

The resulting grooves are completely welded. The slots are processed, and to give increased strength they are subjected to heat treatment.

Repair of spline joints in which wear in thickness is observed is carried out using welding machines. To fill the grooves, the prepared rollers are applied along the slots. Further welding works are carried out.

Worn parts located in steel hubs are restored by the reduction method. They are heated. Then the prepared slot is placed in the sleeve. Using a special punch, the part is crimped. This operation is performed using a mechanical hammer.

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PESTS IN POMEGRANATE BIOCENCENOSIS AND THEIR BIOCOLOGY AND LEVELS

Abstract: *The main insect pests vary in different geographical areas. Studies have shown that the pomegranate biocenosis is dominated by pests such as Euzophera punicaella Mooze, Aphis punicae Theob, Pseudococcus komstoci Kuw, common spider (Tetranychus urticae Koch) damage was detected. Pomegranate juice gives 10-12 generations of pomegranates a year. These pests mainly damage pomegranate orchards in Tashkent region.*

Key words: *Pest, Euzophera penicaella Mooze plant lice, bark beetle, egg, pomegranate, spider.*

Language: *English*

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Introduction

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Pomegranate tree and its fruit contain various pests. The main pest insects are diverse in different geographical areas. While some pests cause major problems in one area, they are harmless or non-existent in other areas. However, some pests, insects and diseases are found in most areas where pomegranate is grown. The main pests that damage the pomegranate stem and body are Pomegranate body rodents, Serajin bark beetle, Bark silkworm, Plant lice (aphids) and others. Plant lice (aphids) are common pests that cause serious problems in pomegranate orchards. Young pomegranate leaves are very prone to aphids attack. The most important of these fruit pests are fruit rodents, pomegranate fruit, pomegranate butterfly, and leaf-eating worms. Thrips and spider mites damage both the fruit and the tree (Bondarenko N.V. 1983).

Objective: To study the biology and ecology of the main pests of pomegranate: Pomegranate sucking pest (Aphis punicae Theob), Comstock worm (Pseudococcus komstoci Kuw), Common spider (Tetranychus urticae Koch).

Plant lice (aphids). Scientific name of the pest: There are various species belonging to the family (Aphididae) - plant lice are pests that are common in pomegranate gardens and cause serious damage. It is an insect that feeds mainly on young twigs, leaves and sometimes flowers in the spring. By absorbing the sap

of the tree, it weakens the trees, damages the flowers, reduces the yield and reduces its quality. (Figure 1.2).

Figure 1. The formation of dry mold on the leaves and fruits of lice juice

Unsimon kurt (Kamstok kurti) Pseudococcus. Scientific name of the pest: (Pseudococcus comstocki Kuw). Symptoms - nymphs and adult females feed on the juice of the leaves, flowers and fruits of the pomegranate tree, causing serious damage to them. As a result, the leaves turn yellow, fall off and the fruit softens. The leaves do not wrinkle like a virus. Dry mold coating can form in the sap that separates the worms. Damage may result in shedding of fruit. The pest stains the fruit and changes the structure of the fruit peel (Fig. 3.4).

The spider. Scientific name of the pest: (Brevipalpuslewisi, Aceriagranati and Tetranychus punicae). Signs - glossy white-brown spots appear on the underside of leaves, and the increase of the pest gives a reddish tinge. The damaged leaves twist and slowly begin to shed. The damage starts from the fruit stalk and the brown change moves along the fruit peel causing it to crack.

Fig. 3. Unsim worm on the stem of the plant

Fig. 3. Unsim worm on the fruit

Research results: As a result of the study of pomegranate pests, pests such as Pomegranate fruit (Euzophera punicaella Mooze), Pomegranate juice (Aphis punicae Theob), Comstock worm (Pseudococcus komstoci Kuw), Common spider (Tetranychus urticae Koch) were studied. Pomegranate sap (Aphis unicae Theob) is one of the most common pests of pomegranate. Comstock worm (Pseudococcus komstoci Kuw) was found in moderate, simple spider (Tetranychus urticae Koch) in rare cases (Table 1).

Table 1. Arthropods that damage pomegranates.

	NAMING		Meeting rate
	In the Uzbek language	Latin	
1	Pomegranate sucking pest	*Aphis punicae* Theob.	+++
2	Pomegranate fruiter	*Euzophera punicaella Mooze*	+++
3	Comstock worm	*Pseudococcus komstoci* Kuw.	++
4	A simple spider	*Tetranychus urticae* Koch.	+
5	Chipor bronze beetle	*Oxythyrea cinctella* Schaum.	+
6	Olenka bronze beetle	*Epicometis turanica* Rtt.	+
7	Harmful head calf beetle	*Polypphlla odspersa* Mots.	+
8	March calf beetle	*Melolontha afflicta* Ball.	+
9	Comma-shaped shield	*Lepidosaphes ulmi* L.	+

Note: +++ - the most common and the damage is great
++ - occurs in 40-60% of trees
+ - rare

Conclusion. The results of the study suggest that pomegranate juice (Aphis punicae Theob), Pseudococcus komstoci Kuw, and similar pests are the most harmful pomegranate pests and pomegranate juice when studied in their biology.

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ANALYSIS OF INVESTMENT POTENTIAL IN THE DEVELOPMENT OF INDUSTRIAL ENTERPRISES

Abstract: *This article is based on the fact that the chemical industry occupies a special place in the industrial system of Uzbekistan, the economy does not use chemical products and there is no industry. The status and dynamics of investments in the development of the chemical industry in the Republic of Uzbekistan, as well as the share of investments in enterprises and its economic results are analyzed on the basis of large-scale analysis methods.*

Key words: *investment, potential, economic growth, value added, innovation, investment potential, chemical products, modernization.*

Language: *English*

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Introduction

At present, the chemical industry occupies a special place in the system of industry of Uzbekistan. There is no national economy and no industry that does not use chemical products. Uzkimyosanoat Joint Stock Company, established in 2001 on the basis of the Uzkhimprom Association of Chemical Enterprises, plays a key role in ensuring the development of the chemical industry of the Republic of Uzbekistan. It includes 43 enterprises and organizations in the chemical industry. There are 2734 chemical enterprises in Uzbekistan.

In recent years, large investment projects have been implemented in Uzbekistan, as a result of which new production facilities have been built and put into operation. Including:

- Kungrad Soda Plant UK with a production capacity of about 100,000 tons of calcined soda;

- Dehkanabad Potash Fertilizers UK with a production capacity of 200.0 t / y of potassium chloride;

- Navoiazot OJSC with a production capacity of 180.0 t / y nitrogen-phosphorus fertilizers. AM-76 ammonia units were reconstructed at Maksam-Chirchik OJSC and Ferganaazot OJSC. Urea production at Maksam-Chirchik OJSC has been technically equipped and modernized.

These producers of our country are the leading sectors of the national economy, in particular, agriculture (mineral fertilizers, plant protection chemicals, defoliants, film for cotton), gold mining industry (cyanide sodium, thiourea, polyacrylamide), light industry (acetate yarns, nitron fibers), building materials industry (soda ash).

In 2017, Uzkimyosanoat produced goods worth 2.7 trillion soums ($ 330 million). During this period, the production of mineral fertilizers amounted to 1.14 mln. t. (100% in nutrients), including: nitrogen

fertilizers - 854.81 thousand tons; phosphorus fertilizers - 119.09 thousand tons; potassium fertilizers - 168.0 thousand tons formed. Exports of products were completed by 129%. According to the localization program, in January-December 2017, 166.46 billion soums (20 million US dollars). As part of the implementation of investment projects included in the investment program, Uzkimyosanoat has allocated 311 million U.S. dollar. The amount of investment is mastered. Of the total chemical industry production, 48.2% are products produced by small businesses.

In terms of territory, the largest volume of chemical products was produced by enterprises of Tashkent (30.0% of the industry's production) and Tashkent region (22.9%), Navoi (13.8%) and Fergana region (13.75%) produced.

The application of chemical products to the country is a great economic and economic development, which includes expanding the raw material base of the national economy, increasing the volume of industrial and agricultural production, reducing production time, improving product quality, saving material, labor and financial resources. socially effective. Production of innovative chemical products is one of the key factors in the innovative development of the country's economy and chemical industry. Due to its competitiveness and high quality, the chemical product will have a sufficient specific volume of total exports. In 2018, chemical products accounted for 7.3% of the country's total exports to Uzbekistan [1].

The geography of exports of Uzkimyosanoat products includes not only the CIS and Central Asian republics, but also the United Kingdom, Belgium, Italy, Greece, Turkey, India and Pakistan.

The chemical industry, which is a major producer of ammonia, urea, ammonium nitrate, ammonium sulfate, phosphorus fertilizers, is a leader in the region in terms of types and volume of mineral nitrogen and phosphorus fertilizers produced.

The share of the state in the structure of share capital of most joint-stock companies of JSC "Uzkimyosanoat" is predominant, only foreign investors operate in JSC "Maxam-Chirchik", JSC "Ammofos-Maxam" and JV "Electrokimyozavod", other legal and physical the share of individual shareholders is not significant (Table 1).

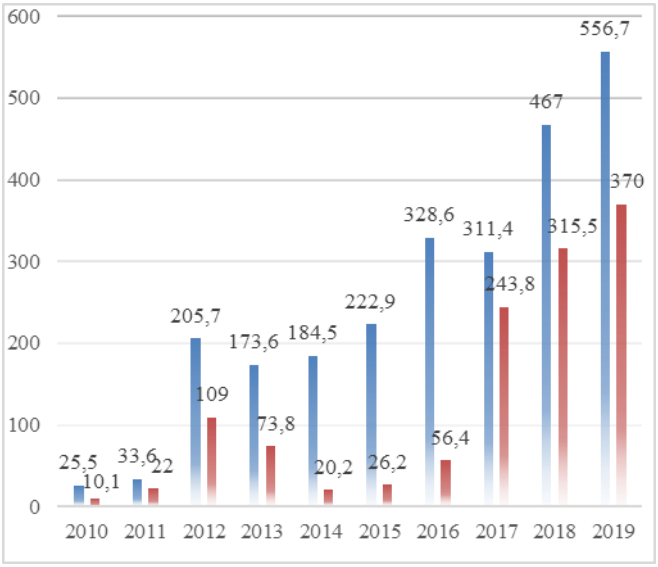
Table 1. Structure of share capital of chemical industry enterprises within "Uzkimyosanoat" JSC [2]

Business name	State share		Share of shareholders (legal entities and individuals), %	Share of foreign investors, %
	State share in the charter capital of Uzkimyosanoat JSC, %	State share provided by SUE "Center for State Assets Management", %		
JSC "Navoiyazot"	51.0	49.0	-	-
JSC "Ferganaazot"	51.0	48.05	0.95	-
JSC "Maksam-Chirchiq"	51.0	-	-	49.0
"Ammofos-Maxam" AJ	51.0	-	-	49.0
Samarkandkimyo JSC	39.65	60.35	-	-
JV "Elektrokimyo-zavod" JSC	26.0	-	19.0	55.0
Jizzax Plastics JSC	25.0	61.04	13.96	-
Kokand SFZ JSC	25.0	70.54	4.46	-

The chemical industry enterprises headed by Uzkimyosanoat JSC currently produce more than 170 types of chemical and petrochemical products (synthetic ammonia, caustic soda, diacetylcellulose, chemical fibers, polyethylene pipes and soda ash). Most of them specialize in the production of mineral fertilizers (nitrogen, phosphorus, potassium fertilizers).

According to the Resolution of the President of the Republic of Uzbekistan Sh.M.Mirziyoev dated April 3, 2019 No. PP-4265 "On measures to further reform the chemical industry and increase its investment attractiveness", the program will cost a total of $ 3.1 billion. 43 investment projects of equal value have been implemented, which will increase the volume of industrial production by 2.4 times, exports by 2.7 times, increase the share of localized industrial products to 42.5% and create 43 new types of industrial products. The goal is to create more than 3.2 thousand new jobs. At the same time, in order to regulate the export-import activities of the industry, to ensure openness and transparency in foreign trade processes, and most importantly, to constantly increase sales and expand the geography of chemical products in foreign markets, create a competitive environment, increase structural attractiveness should be increased.

An important condition for the development of the national chemical industry is, of course, the attraction of foreign investment and advanced technologies. The dynamics of investment in the chemical industry is changing. The largest investment was in 2019. In particular, as a result of the implementation of investment projects by JSC "Uzkimyosanoat" during this period, the enterprises of the sector received 370 million dollars from various sources. The United States has attracted 9.8 times more investment in the last 10 years. During this period, the share of foreign investment and loans in total disbursed investment was 52%. In 2012, the volume of investment in the industry increased sharply by 612.2% compared to 2011. Over the past 4 years (2015-2019), the accelerated implementation of investment projects has allowed to increase the volume of investment in the sector by an average of 224.0% per year.



1-picture. Dynamics of investment in the chemical industry

Despite the fact that many financial indicators of JSC "Uzkimyosanoat" have been positive over the past five years, in general, some financial indicators in the industry show a negative result. In particular, until 2015, revenues from the sale of products by chemical enterprises increased by an average of 113.1% per year. However, in 2016, revenue from sales of products in the industry decreased by 961.7 billion soums compared to 2015. The net profit indicator for the industry has been showing a negative result in recent years. This was mainly due to the net profit of chemical companies, in particular, the large losses incurred in 2015-2016 in JSC "Navoiyazot" and JSC "Maksam-Chirchik". However, the net profit of the executive branch in 2019 will reach a record high of 5.2 billion. soums, an average increase of 3.9 times compared to recent years. Also, in 2018, the cost of production of JSC "Navoiyazot" was reduced by 7.3%, JSC "Ferganaazot" by 11.1%, and JSC "Ammofos-Maxam" by 5.2% (Table 2).

Table 2. Changes in the financial performance of Uzkimyosanoat JSC [3]

№	Financial indicators	Years					Changes in 2019 compared to 2015	
		2015	2016	2017	2018	2019	(+, -)	%
The main indicators of financial results, bln. sum								
1.	Revenue from product sales - across the industry, e.g.	3559.6	2597.8	3517.4	4319.4	5580.7	2021.1	156.8
1.1	on chemical organizations	3559.6	2597.8	3517.4	4319.4	5580.7	2021.1	156.8

1.2	on the executive apparatus	-	-	-	-	-	-	-
2.	Net profit - on the total network, e.g.	-38.9	-21.3	26.5	34.1	42.9	81.8	43 times
2.1	on chemical organizations	-40.2	-25.0	18.7	29.4	38.7	78.9	39 times
2.2	on the executive apparatus	1.3	3.7	4.3	4.7	5.2	3.9	4 times
Balance sheet financial indicators, bln. sum								
3.	Long-term assets	237.3	492.7	520.3	562.4	591.1	353.8	249.1
4.	Current assets, etc.	18.4	46.2	47.5	49.7	53.1	34.7	288.6
5.	Accounts receivable	10.0	38.4	40.6	42.6	44.6	34.6	4.5 times
6.	Private capital	219.4	502.6	628.8	770.2	903.5	684.1	4.1 times
7.	Liabilities, etc.	36.3	36.3	37.5	39.1	40.7	4.4	112.1
8.	Accounts payable	1.4	1.4	1.4	1.4	1.4	0	100

The measures taken by the country's leadership envisage increasing the production of finished chemical products and making them more competitive in the world market. In addition, a "road map" has been developed to strengthen the financial stability and production cycle of enterprises of JSC "Uzkimyosanoat".

Implementation of innovations and high results depend on the development of investment potential of enterprises of the sector and sources of investment financing, investment activity, attraction of capital. The industry has a huge potential of natural resources, a strong production and technical base and skilled labor resources, has significant priorities in the production of chemical products, and includes a large potential object of direct and portfolio investment zida shows [4].

The specifics of the chemical industry and the conditions of production determine the objective problems that arise in the management of chemical enterprises, which in turn necessitates the implementation and development of mechanisms for the formation and activation of investment activities of chemical enterprises [5]. The basis of ensuring production efficiency is the investment orientation of the development strategy of chemical enterprises. The main problems and issues related to the implementation of investment activities of enterprises of the chemical industry, the formation and development of its investment potential require new approaches to the theory and practice of management decision-making. Formation and development of the investment potential of the enterprise is the main resource for increasing the competitiveness and production efficiency of the products of the chemical industry enterprise. The process of formation of investment potential and the fact that all elements of the system are organized and highly organized, as well as scientifically based and practical recommendations for assessing and managing its investment potential is one of the main conditions for the future development of chemical enterprises.

In this regard, the issues of the mechanism of formation and formation of investment potential of enterprises of the chemical industry, which require the development of new conceptual, methodological and practical approaches, are relevant.

In the context of economic restructuring, the issue of attracting investment and increasing the country's production is a key task for both the industry

and the enterprise. Today, attracting investment in the chemical industry and developing the scientific potential of the enterprise requires organized and effective investment activities [6].

The use and attraction of capital is an important element of industry policy development, as the analysis of the investment situation provides a systematic view of the factors affecting the investor, provides an in-depth assessment of the situation in the industry or individual enterprise, allows to know the motivation of the partner [7].

Resolution of the President of the Republic of Uzbekistan No. PP-4265 of April 3, 2019 "On measures to increase the investment attractiveness of the chemical industry and further reforms" and "On further development of the chemical industry of the Republic of Uzbekistan until 2025" In 2019-2030, the state will implement 31 investment projects worth $ 12.1 billion, including 1.7 billion US dollars. It plans to support the Chemical Industry Development Program through foreign direct investment and loans. It will focus on: production of phosphorus, nitrogen, potassium and other complex types of mineral fertilizers, including JSC "Navoiazot" in Navoi region, JSC "Samarkandkimyo" in Samarkand region, "Fergana region" Ferganaazot JSC, Ammofos-Maxam JSC in Tashkent region, Dehkanabad Potash Plant LLC in Kashkadarya region and launching new production facilities in other regions of the country and making maximum use of existing production facilities.

With the participation of leading foreign companies and joint ventures with Uzbekneftegaz, new productions for the production of various polymer products with the use of modern innovative developments and advanced technologies, as well as the production of new types of chemicals and tools cooperation is underway. With the existing production facilities, it is expedient to realize the possibility of effective use of their activities on the basis of building production clusters on their basis [8].

These funds will also be used to finance important projects of REDW (research and experimental design work). Today, it can be noted that the demand for chemical products by almost all consumer industries is growing [9].

In order to stimulate domestic demand for chemical products, measures are planned to develop other sectors such as the automotive, aerospace and machinery industries. In order to increase the efficiency of the chemical industry, individual enterprises and industries, it is necessary to ensure its investment.

The main directions of development of enterprises of the chemical industry are the expansion of investments in foreign current assets, namely, the acquisition of intangible assets (intellectual property, patents, licenses, know-how), financing of research and experimental design work, technical re-equipment and re-equipment, lib, resulting in a significant increase in the competitiveness of organizations' products.

Considering the current state of JSC "Uzkimyosanoat", it is possible to show the following positive aspects of its financial condition and financial results: growth of commodity output, export volume, share of foreign investment, etc. (Table 3).

Table 3. The main performance indicators of JSC "Uzkimyosanoat" for 2010-2018 [3]

Naming	Measure-ment one	2010	2012	2014	2017	2018
1. Volume of goods	billion sum	981.7	1562.1	2013.8	2743.7	4179.7
Growth rate over the previous year	%	106.7	106.1	106.8	95.2	100.0
2. Volume of product exports	mln. doll.	241.0	343.2	288.3	227.6	185.4
Execution of export forecast	%	100.6	107.0	95.0	129.3	100.2
3. Production under the Localization Program	Number of projects	34	34	14	11	28
	Billion sum	166.3	333.1	231.5	166.5	136.0

4. The specific gravity of the localized product of the total volume of goods	%	16.9	21.4	11.5	6.1	3.3
5. Creating new jobs	number of people	1939	384	594	626	1242
including home-based jobs	number of people	431	86	70	42	-
6. Purchase of products within the cooperation exchange	Billion sum	68.3	147.2	189.0	-	-
7. Capital investments	mln.doll.	25.5	205.7	184.5	311.4	467.0
including foreign investment	mln.doll.	10.1	109.0	20.2	243.8	299.3

However, the measures taken are not enough to improve the technical condition of production, increase production capacity and reduce the cost of production and increase its competitiveness in foreign markets [10]. At present, the contribution of the chemical industry to the GDP of the Republic of Uzbekistan does not exceed 1%. In the structure of industrial production, the share of the industry is less than 5%.

In 2021, Uzkimyosanoat will invest 3.6 billion soums. It is planned to implement 18 projects worth US $. In particular, Navoiazot Open Joint Stock Company, the largest industrial enterprise in the country, has invested 710 million soums in the complex reconstruction of nitric acid units and the production of polyvinyl chloride. U.S. dollar. construction of a chemical complex with a capacity of 309 mln. Modernization of OJSC "Ferganaazot" (a new unit of ammonia) in the amount of 230 million US dollars in the city of Angren (Tashkent region). It is planned to build a tire plant in the amount of US dollars, which alone will allow to produce an additional 150,000 tons of complex mineral fertilizers annually as a result of the complex reconstruction of nitric acid units by Navoiazot. Also, in the chemical industry, modernization and reconstruction of raw material production to ensure sustainable production of mineral fertilizers at Maxam-Chirchik JSC, Ammophos-Maxam JSC will produce 650,000 tons of new sulfuric acid per year. Prospective projects are being implemented, such as the construction of a new production of sulfuric acid at Navoi Mining and Metallurgical Plant with a capacity of 650,000 tons per year, the expansion of production capacity of Dehkanabad Potash Plant LLC.

The activities of the chemical industry are directly related to investments in the efficient operation, financial stability, solvency, business activity and ensuring financial results, which are:

1) sources of formation of increase of production capacity of the organization;

2) a mechanism for achieving the strategic goals of economic development;

3) mechanisms for optimizing the structure of assets;

4) the main factors in the formation of the long-term capital structure;

5) an important condition for ensuring the growth of market prices of the organization;

6) a tool for implementing innovation and investment policy;

7) mechanism for solving social problems;

One of the important forms of economic activity of enterprises of the chemical industry and the realization of its economic interests is investment activity. The investment activities of enterprises of the chemical industry have the following characteristics:

1) investment activity is the main form of ensuring the operational (current) activities of the organization;

2) forms and methods of innovative activity are less dependent on the industry characteristics of the organization than on its operational activities;

3) unequal volume of investment activity over time;

4) investment income is formed with a significant "delay" in the implementation of investment activities;

5) investment activity forms an independent form of cash flow of enterprises, the specific periods of which differ significantly in their area of activity;

6) investment activity is inherent in investment risk.

In modern conditions, there is an unstable dynamics of world oil prices, changes in world

commodity prices, periodic cycles of decline or rise in chemical industry production against the background of various crises in the global and domestic financial systems. There are major problems in the development of the chemical complex, which is the gap between the development of the country's chemical production and the development of the chemical products market. The indicated delay could escalate to a critical point as a result of the backwardness in the formation of new competitive priorities and the gradual disappearance of existing priorities. The following have a negative impact on the development of the chemical industry:

1) weak competitiveness of domestic producers in terms of positions;

2) high resource capacity of the industry: the export direction of the chemical complex, the continuation of the operation of technological schemes with high cost coefficients of raw materials and energy resources and other costs, the structure of the industry with low production, modern equipment and or indicates the need for technical armament of the industry with the introduction of technology;

3) restrictions on the supply of carbon raw materials;

4) the problem of competition in the domestic market due to the fact that the country's chemical enterprises are "stuck" at the initial stage of the technological border, selling and exporting chemical semi-finished products rather than final products, resulting in a large share of revenue.

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DEVELOPMENT OF BASIC PROFESSIONAL COMPETENCIES OF FUTURE TEACHERS IN THE PROCESS OF PROJECT ACTIVITIES

Abstract: *In recent years, competencies have come to the fore in education. We are witnessing rapid technological change, the process of globalization, the growth of diversity. Under these conditions, education undoubtedly plays a huge role in preserving social well-being and political stability, productivity and competitiveness. We are talking about competence and competencies as a new unit of measurement of education, while attention is focused on learning outcomes, which are considered not the sum of memorized knowledge, abilities, skills, but the ability to act in various problem situations. In this work, the basic professional competencies of future teachers are considered as a complex of universal and general professional knowledge, skills, practical experience that ensure the ability and readiness of a person to solve problems of professional and other types of socially and personally significant activities. Basic professional competencies are primary in relation to special competencies and serve as the basis for their formation in the educational process of a higher educational institution. The role and place of design technologies in the system of training future teachers that ensure the effective formation of basic professional competencies are shown. The necessity of using project activities in the educational system of higher education institutions in the formation of professional competence has been proved, its universality and effectiveness in combination with other teaching methods have been determined.*

Key words: *project, project method, project activity, competencies, basic professional competencies, pedagogical technologies, information projects, creative projects, research projects.*

Language: *English*

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Introduction

The ongoing changes in the system of secondary vocational education have highlighted the problem of finding ways to improve the efficiency of professional development of future specialists. The formation of basic professional competencies of students takes an important place in the process of formation of their competitive personality and is one of the main tasks facing institutions of higher professional education. This circumstance is actualized by the fact that at present the interest for society and the employer in the labor market is a specialist who has a high level of basic professional competencies, prepared to solve professional problems in various conditions, who is able to make optimal decisions and organize his own activities. It is with the formation of the competence of the future specialist that the modern quality of professional education is associated, which ensures the competitiveness of the graduate in the labor market.

The analysis of scientific literature on the problem of the formation of basic professional competencies of the future teachers made it possible to identify its specific features in the system of pedagogical education. Currently, the interest for society and the employer in the labor market is a specialist who is prepared to solve professional problems in various conditions, who knows how to

organize his own activities, make optimal decisions, i.e. possessing basic competencies at a high level [1-6].

Main part

The formation of basic professional competencies of future teachers occupies an important place in the process of becoming a competitive personality of a future specialist and is one of the main tasks facing institutions of higher pedagogical education at the present stage of its development.

The development and gradual formation of the basic professional competencies of students is carried out in the process of performing various types of educational activities: in the process of assimilating the content of lectures and seminars, completing coursework and projects, a diploma project, performing practical tasks during educational and industrial practices, as well as various types reproductive and research independent work outside the classroom.

Project activity, being an integral component of the competence-based paradigm of education, which is based on the concept of “activity”, forms a set of certain competencies in students, both general cultural and professional for a certain type of professional activity. We can talk about the competence-based approach as the leading strategy for training a new generation of specialists.

This strategy determined the importance of project activities as a means of implementing a partial search method of teaching in the process of professional competencies that they need as future specialists in their professional activities.

Project technology in the implementation of the competence-based approach is the scientific design and reproduction of the teacher's pedagogical actions aimed at the formation of the student's competencies and, as a consequence, his professional competence by the methods of project activity.

In general, the technological chain of the teacher's organization of project activities in the implementation of the competence-based approach should include certain constructive actions: defining a set of competencies assimilated by the student during the development and implementation of the course curriculum project in the discipline; the choice of a rational structure of the course project and the determination of its compositional structure; pedagogical actions of choosing the most rational types of assimilation of new material and competencies in the course of planning a student's work when performing an educational course project; identification of possible difficulties in the course of the training course project with the best ways to resolve these difficulties.

Project activity allows the student to model his educational and professional activity in a particular professional situation, thereby adapting to real professional activity. So, the pedagogical adaptation of students in such areas as educational activity, interpersonal relations and professional development, proceed successfully if the teaching staff and the entire educational system in institutions of secondary vocational education are aimed at enhancing the adaptive potential of the student's personality, the central components of which are the characteristics of self-awareness and value-motivational sphere, in particular the level of aspirations, characterizing the setting of goals and objectives, correlating real achievements and plans for the future, determining the level of complexity of solving life, educational and professional tasks.

Traditionally, there are three forms of university educational projects, which are reflected both in the state educational standard and in the standard curricula for training specialists, bachelors and masters: diploma projects, course projects and course mini-projects (course papers). These projects differ both in the didactic design goals and the timing of the time allotted for their implementation.

The course project, as a form of educational activity, got its name, because, as a rule, it is carried out within the framework of the knowledge of one academic course (one discipline, one subject) and integrates the knowledge of a holistic course.

At the same time, some academic disciplines with an increased scientific capacity are continuously taught for 2-3 semesters. One of the active forms of studying such courses by students is the implementation by them of the so-called term papers. Course work covers only some part of a holistic educational course, some conditionally local, independent educational module of this course. It seems most appropriate to call this type of project activity not a term paper, but a term mini-project.

The diploma project is carried out at the last stage of a student's education at the university - at the stage of diploma design. The diploma project is always focused on solving such a problem in the direction of training and the profile of the specialty, which requires the use of numerous and varied knowledge contained in the totality of all academic disciplines studied by the student throughout the entire period of study. Thus, a diploma project is a qualifying work with an increased level of interdisciplinary, interdisciplinary and supra-subject (interdisciplinary) integration of knowledge.

In a broad sense, pedagogical technology is a systematic method of planning, applying and evaluating the entire learning process and assimilation of knowledge by taking into account human and technical resources and the interaction between them in order to achieve its greatest efficiency [10]. The characteristic features of the pedagogical technology used in the preparation of future teachers are:

- conceptuality - the technology is developed for a specific pedagogical concept, it is based on a certain

methodological, philosophical, psychological and pedagogical position of the author;

- consistency - the technological chain of pedagogical actions, operations, communications is built strictly in accordance with the target settings, which have the form of a specific expected result; didactic goal-setting - the presence of didactic procedures containing criteria, indicators and tools for measuring the results of students' activities and ensuring the guaranteed achievement of educational goals, the effectiveness of the learning process;

- innovativeness - the technology provides for the interconnected activity of the teacher and the student on the basis of educational cooperation, dialogical communication, interactive approaches to learning;

- Optimality - the optimal implementation of human and technical capabilities, the achievement of planned results in the shortest possible time intervals;

- adaptability - the ability to implement operational feedback, focused on ensuring a well-defined goal;

- reproducibility and guarantee of results - elements of pedagogical technology should, on the one hand, be reproducible by any teacher, and on the other hand, guarantee the achievement of the planned results.

The project technology of teaching is understood as a set of methods, methods, techniques and means of organizing educational and cognitive activities of students through their implementation of educational projects [8].

The interest on the part of higher pedagogical education in project-based learning technologies and the demand in the educational services market is explained by their advantage over other traditional and innovative learning technologies. In this regard, the following main characteristics and the resulting didactic values of design technologies should be highlighted [8, 9]:

- the basis of any project is a target setting for solving a specific problem, which allows each student to be involved in an active cognitive creative process ... At the same time, the orientation of the educational and cognitive process should be such that students know why they need this or that knowledge, for solving what problems they can be useful;

- project training technology is focused on integration, on combining theoretical knowledge with practical activity. In the process of project implementation, not only the formulation and solution of a certain mental task is carried out, but also its practical implementation in the form of a report, drawing, text, software product, product; implementation of project training technologies contributes to an increase in the level of functional literacy of students;

- esign technology always presupposes a solution to some problem, in this connection, some scientists and educators call it the "method of problems";

- the method of projects is focused on independent creative project activity of students, which is performed either individually or by a group of students under the guidance of a teacher for a certain period of time. As a result of this type of activity, students develop skills and consolidate the skills of organizing independent work, searching for and obtaining the necessary information from bibliographic sources, patent funds, the Internet, independent decision-making when considering multi-criteria optimization tasks, technical and graphic presentation of the results of execution work, presentation and advertising of their developments, and in some cases protection of intellectual property and a number of other professional competencies, which require the manifestation of personal initiative and enterprise;

- work on a project is an activity based on joint work and cooperation in the process of communication, communication;

- the method of projects allows students to choose activities according to their interests, according to their abilities, which creates motivation for learning and contributes to the emergence of interest in subsequent affairs, the future sphere of professional activity, encourages students to actively use existing and acquire new knowledge, develop skills and skills in solving specific problems;

- the method of projects allows students to actively develop the basic types of thinking, creativity, the desire to create themselves, to recognize themselves as a creator when working with "naughty tools" and "unyielding materials", with "smart machines" and "technological systems" ... In the design process, students develop and consolidate the skills of analyzing consumer, economic, environmental and technological situations, the ability to evaluate ideas based on real needs, material capabilities, the ability to choose the most technological, economical, meeting the previously specified requirements, the method of manufacturing the object of project activity (product of labor);

- project teaching technologies are an effective didactic toolkit for the socialization of thinking and activity. This is due to the fact that initially the educational project is focused on solving a specific problem that has a certain pragmatic value and social significance;

- the solution of the problem inherent in the educational course or diploma project, in most cases, is associated with the involvement of integrated knowledge. Even if the topic of an educational project refers to one problem within the framework of one specific academic subject, then for its optimal, best solution, one has to use not only knowledge from different sections of the given subject, but also from other studied subjects, i.e. e. use intra-subject and inter-subject integration. Moreover, in a number of

cases, when implementing projects, it is advisable to use the techniques of monodisciplinary and core integration.

The type of creative projects, and they can be analytical, experimental, analytical - experimental, search, inventive, etc., should include those, as a result of which either a new material or intellectual product is created (technical object, technology manufacture of an object, a new method of application, a computer program, etc.), or new, hitherto unknown knowledge is discovered and learned [13].

To the type of creative projects, first of all, it is necessary to include research projects, which mean the activities of students aimed at solving a specific research problem with an unknown solution in advance.

Results and discussion

According to the level of integration of knowledge used in the implementation of the educational project, the latter are subdivided into intra-subject (monodisciplinary), inter-subject (transdisciplinary), supra-subject, in which not only knowledge that is part of the disciplines of the curriculum of higher education is used, but also knowledge from other areas. science and technology.

Educational telecommunication projects occupy a special place in the group of projects. An educational telecommunication project is understood as a joint educational and cognitive activity of students - partners from different universities of the same city, from other cities and foreign countries, organized on the basis of computer telecommunications using e-mail or the Internet. Such projects, as a rule, are interdisciplinary in nature and are carried out within the framework of a common global problem, a single goal, agreed methods and methods of activity aimed at achieving a common result.

By the number of project participants, projects can be distinguished: individual; paired; group. Other classifications of projects are given in [14, 16].

Project-based teaching technologies have been widely used in higher education for about two centuries. It was not possible to find a systematized methodological and generalizing methodological literature on this type of educational activity of students on the shelves of libraries and bookstores, but there is a number of educational and methodological manuals for the implementation of course and diploma projects in specific subjects and specialties [7, 12], as well as methodological instructions on the organization of specific types of educational projects, but they reflect only some local and specific pedagogical experience and have narrow segments of their use.

Students in accordance with the curriculum carry out the following types of projects: research; informational; creative; applied and interdisciplinary.

Research projects include the following types of projects: - course projects; - final qualification works (diploma projects); - coursework by discipline; - calculating and calculating-graphic works on separate sections of the discipline; - reports on educational, training and production, industrial, pre-diploma practices.

Research projects require a well-thought-out structure, designated goals, the relevance of the research subject for all participants, social significance, appropriate methods, including experimental and experimental work, methods of processing results. These projects are completely subordinate to the logic of research and have a structure that approximates or completely coincides with genuine scientific research.

Research projects imply a strict argumentation of the relevance of the topic taken for research, formulation of the research problem, its subject and object, designation of research tasks in the sequence of the accepted logic, determination of research methods, sources of information, choice of research methodology, hypotheses for solving the indicated problems, development of ways to solve it, including experimental, experimental, discussion of the results obtained, conclusions, registration of research results, designation of new problems for the further development of the research.

In pedagogical practice, mixed types of projects are most often used, in which there are signs of research and creative, practice-oriented and research projects. Each type of project is characterized by one or another type of coordination, deadlines, stages, number of participants. Therefore, when developing a particular educational project, one must bear in mind the signs and characteristic features of each of them. At the same time, it is necessary to highlight the following conditions that can ensure the successful application of design technologies for the formation of basic professional competencies of future teachers: the involvement of each student in an active cognitive process; joint work in cooperation in solving various problems, when it is required to show appropriate communication skills; free access to the necessary information in order to form your own independent, but reasoned opinion on a particular problem, the possibility of its comprehensive study; constant tests of their intellectual, physical, moral forces to determine the emerging problems of reality and the ability to solve them, performing different social roles [15].

The formation and development of basic professional competencies of students of pedagogical universities is especially effective in the process of their graduation project implementation.

Diploma projects are always interdisciplinary (transdisciplinary). This is due to the fact that they are performed on the basis of knowledge of a large number of academic disciplines. Moreover, some diploma projects are carried out as supra-subject, in

which knowledge from such areas of science and technology is integrated that are not part of the academic disciplines of the educational program for the preparation of a specialist of this profile or specialty.

Analysis of scientific and methodological literature and pedagogical experience showed that today in pedagogy there are two approaches to the organization of educational design: the first (traditional) approach, in which each of the course mini-projects or course projects is an autonomous (local) project focused on solution of some conditionally independent problem (subproblem, task); the second (innovative) approach, in which course mini-projects in a particular discipline are linked together into an integral garland by a single problem, a single object and a single design methodology, and a garland of course projects in different disciplines is linked (integrated) with each other by a single problem, a single object and design methodology into a single integral project.

The forms of presentation of the results of students' project activities are also varied, which are carried out in the form of explanatory notes, scientific reports, working drawings, computer programs, layouts, models, experimental industrial samples.

It is obvious that the implementation of complex diploma projects is associated not only with interdisciplinary, but also supra-subject, interdisciplinary integration of knowledge, and the organization of this type of diploma design requires high professional and methodological competence from project managers.

Conclusion

Thus, project activity is the basis for the development of basic professional competencies of students, and the variety of types of project technologies allows teachers of higher educational institutions to make the learning process person-centered, individual, to increase the interest and motivation of students to study.

In modern conditions, knowledge and skills as a unit of educational result are necessary, but not sufficient in order to be successful in society. For a specialist, it is not so much encyclopedic literacy that is important as the ability to apply generalized knowledge and skills to resolve specific situations and problems that arise in real professional activity.

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REQUIREMENTS FOR ORTHO-SHOES, FORMED ACCORDING TO THE CATEGORIES OF FOOT PATHOLOGY

Abstract: *The paper presents the substantiation of the consumer properties of ortho-shoes, the konstructios requirements of which are formed on the basis of the clinical analysis of pathological feet, according to the categories of diseases that must be taken into account in the manufacture of comfortable, ergonomic ortho-shoes, in order to both prevent the disease and correct pathology and alleviate the condition of consumers.*

Key words: *Pathology of the foot, anthropometry of the foot, orthopedic shoes.*

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ТРЕБОВАНИЯ К ОРТО-ОБУВИ, СФОРМИРОВАННОЙ ПО КАТЕГОРИЯМ ПАТОЛОГИИ СТОП

Аннотация: *В работе представлены обоснование потребительских свойств орто-обуви, конструкционные требования которых сформированы на основе клинического анализа патологических стоп, по категориям заболеваний, которые необходимо учитывать при изготовлении удобной, эргономичной орто-обуви, с целью как превенции заболевания, так и коррекции патологии и облегчения состояния потребителей.*

Ключевые слова: *Патология стопы, антропометрия стопы, ортопедическая обувь.*

Введение

Сознание о комфортности обуви в населения последнее время значительно повысилось, что объясняется с возрастанием требованиям к эргономическим показателем обуви, которая способствует сохранению здоровых стоп с детства до старости. Естественно, такая обувь особенно важна для тех, кто страдает деформацией и патологией стоп.

Обеспечение научнообоснованной специальной обувью населения с различных заболеванием стоп, до сих пор нет на нужном уровне. К сожалению, большинство таких потребителей используют обычную бытовою обув, изготовленной методом массового производства. Такая обувь не приемлема для патологической стопы, даже на начальной стадии заболевания [1-5].

По клиническим проявлениям различают различные патологии стопы, распределения которых в популяции получает серьезный вид. Развитие техники и технологий способствует разнообразию используемых методов и материалов изготовления обуви. Последний, в силу своего разнообразия видов и способов изготовления, может вызывать самые разные патологии. Био-механические деформаций стоп, основном вызваны неудобством внутренней формы обуви и физико-механическими свойствами используемых материалов.

Наиболее важной из различных патологий стопы, которые могут вызвать другие сопутствующие заболевания, является ангиопатические, нейропатические и комбинированные (смешанные) формы (в том числе деформации опорно-двигательного аппарата). В числе комбинированных заболевании входит: ангиопатиа+нейропатия; ангиопатиа+остеоартропатия; ангиопатиа+гиперкератоз; ангиопатиа+ нейропатия+остеопатия; ангиопатиа+флегмона; ангиопатиа+язва (в том числе диабетическая язва); остеопатиа+гиперкератоз; неиропатиа+ангиопатия+остеопатия+язва (в том числе диабетическая язва); нейропатия+остеопатия, нейропатия+«неврома Мортона».

Распространение заболеваний стопи у мужчин и у женщин совершенно разные. Исследования показали, что существует ряд заболеваний, которые встречаются только у женщин (например, так называемая «неврома Мортона», Ангиопатиа+флегмона), или наоборот, некоторые встречаются только у мужчин (неиропатиа, остеопатиа+гиперкератоз; неиропатиа+ангиопатия+остеопатия+язва; нейропатия+ остеопатия) (табл. 1, рис. 1). Все эти виды заболеваний, несмотря на ряд общих проявлений, требуют особого, индивидуального подхода, чтобы игнорирование любого фактора не привело к осложнению заболевания и необходимости полной или частичной ампутации.

Таблица 1. Распределение отдельного вида патологии стопи в совокупности у мужчин и у женщин

№	Виды патологии стопи	Распределение в совокупности	
		мужчины	женщины
1	Ангиопатия	4,5	38,5
2	Остеоартропатия	-	4
3	Нейропатия	14,8	-
4	Гиперкератоз	6	8
5	Остеопатия	3	
6	Ангиопатиа +остеоартропатия	-	8
7	Ангиопатиа +флегмона	-	4
8	Ангиопатиа +нейропатия	41	25
9	Ангиопатиа +гиперкератоз	17,5	8
10	Ангиопатиа +ампутация	3,5	4
11	Ангиопатиа +остеопатия	8	-
12	Ангиопатиа +диабетическая язва	8	4
13	Остеопатиа +гиперкератоз	6	-
14	Нейропатия +остеопатия	3	-
15	Ангиопатиа	-	4

	+нейропатия +остеопатия		
16	Ангиопатиа +нейропатия +ампутация	4	
17	Ангиопатиа +неиропатия +частичная ампутация	4	
18	Ангиопатиа +остеопатия +частичная ампутация	4	
19	Неиропатиа +ангиопатия +остеопатия +диабетическая язва	3,5	

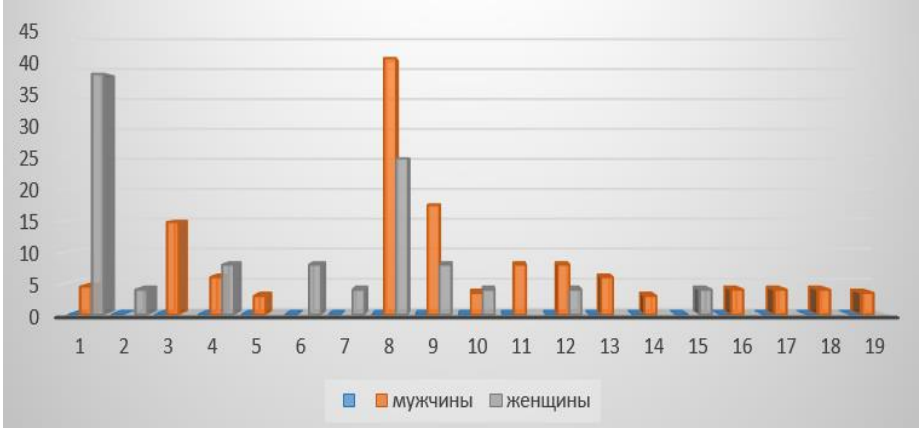

Рис. 1. Распределение отдельного вида патологии стопы в совокупности у мужчин и у женщин.

Патологии стопи, по сходству клиническими проявлениями, сгруппированы по категориям, что позволяет сформулировать требования к ортопедической обуви (табл. 2, рис. 2.).

Таблица 2. Категорий заболеваний и их распределение в совокупности, соответственно у мужчин и у женщин

Категория заболевания	Мужчины (%)	Женщины (%)
I категория	30,91	56,15
II категория	19,48	4,93
III категория	49,61	38,92

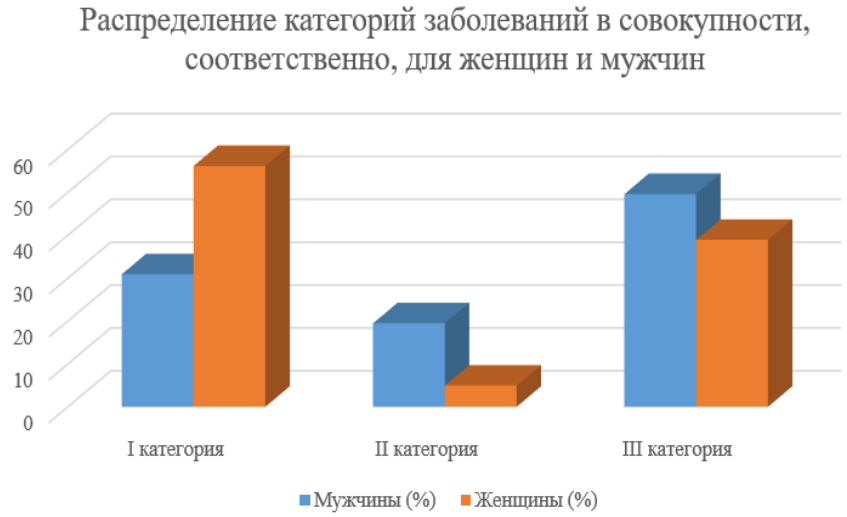

Рис. 2. Категорий заболеваний и их распределение в совокупности, соответственно у мужчин и у женщин.

Сравнение антропометрических данных, полученных при исследовании популяции с патологическими стопами, показало значительную разницу с соответствующими параметрами популяции здоровых стоп той же возрастной группы (Таблица 3), что еще больше укрепило мнение о том, что использование обуви массового производства абсолютно недопустимо для населения с патологическими стопами. Отклонение средних значений основных параметров размеров между здоровыми и патологическими стопами не подчиняется общепринятому закону нормального распределения. Поэтому, представление о том, что потребитель может использовать обувь больше, чем его стопа, для регулировки поперечных и обхватных размеров внутренней формы, не обоснованы.

Таблица 3. Основные размерные параметры здоровой и патологисеской стопы

Математические ожидания (мм)	Длина стопи	Обхват внутреннего пучка	Обхват наружного пучка	Обхват в середине стопи	Косвенный обхват	Ширина наружного пучка	Ширина внутреннего пучка	Ширина пятки
группа	Женщины							
Патологическая стопа	249,8	234,3	238,4	243,0	336,8	95,2	94,4	72,6
Здоровая стопа	241,5	229,4	236,8	245,5	319,7	93,6	90,7	68,5
Разница в размерах между патологическими и здоровыми стопами	8,3	4,9	1,6	-2,5	17,1	1,6	3,7	4,1
группа	Мужчины							
Патологическая стопа	272,7	255,1	261,6	264,3	371,8	105,8	104,6	78,1
Здоровая стопа	265,4	250,7	256,2	265,8	345,6	101,2	99,1	74,8
Разница в размерах между патологическими и здоровыми стопами	7,3	4,4	5,4	-1,5	26,2	4,6	5,5	3,3

Из таблицы 3 видно, что разница в размерах в основных сечениях стопи существенно. Например, длина стопи женщин по 8,3 мм больше, т.е. требуется размер на 1,7-раз больше (учитивая, что разница между смежними размерами обуви 5 мм). Поскольку, к ортопедической обуви предъявляются особые требования, разница, указанная в таблице, еще раз подтверждает необходимость разработки нового, оптимизированного размерно-полнотного ассортимента для колодки и обуви, а для конструкции обуви, формирования особых требований. А также формирование особых требований к применяемым материалам и пакетам используемых материалов.

В результате полученных данных, на основе проведенного нами антропометрического исследования и диагностики, пришли к выводу, что для удобства обуви и профилактики заболевания, при конструировании колодки и внутренней формы обуви, решающая роль возлагается на разумный подход к учету физиологических требований, предъявляемых к обуви, и, соответственно, в процессе проектирования колодки, в первую очередь, на предусмотренные утилитарно-эргономических свойств, изготовляемых по ней обуви. Выявилась необходимость кластеризация видов распространения патологии стоп по клиническим и физическим проявлениям (рис. 1) с точки зрения оптимизации конструкции и внутренней формы обуви, а также оптимизация пакетов материала, особенно для верха. Только после этого учитывается его внешний вид [6-8].

Исходя из характерных для патологических стоп изменений, разработанно ориентировочная внутренняя форма обуви, по клиническому явлению патологии:

- для стоп с ангиопатической заболевании, которая требует увеличенных размеров ширины и обхвата обуви в плюснефаланговом сочленении (чтобы она дополнительно не вызывала нарушений кровообращения в кровеносных сосудах);

- для стоп с нейропатической заболевании, оптимальное соответствие размеров и формы дополнительно требует рациональной опоры, которое максимально соответствует рельефной поверхности плантарной части стопы;

- для стоп, имеющих комбинированной деформации (два или более), все связанные с обувью нюансы должны быть учтены в совокупности.

Общие требования:

1. При конструирования колодки:

- колодка в передней части фаланг пальцев стопы должна быть более свободной и широкой по сравнению с соответствующей стандартной колодкой;

- в нижней опорной пяточной части она должна быть закругленной соответственно средней типичной части пятка стопы;

- носочная часть должна быть высокой и широкой для свободного расположения пальцев;

- во внешней части свода как сбоку, так и снизу прогиб не делается.

2. При конструирования подошвы:

- приставленный каблук подошвы с задней стороны по сравнению опоры должна быть округлена;

- основа передней части стопы должна быть обеспечена достаточной твердостью;

- подошва должна быть твердой и легкой;

- подошва переднего плюснефалангового сочленения должна иметь способность переката.

Также следует отметить, что при использовании обуви, изготовленной массовом производстве, на стандартной колодке, для патологических стоп, несоответствие в основном проявляется в следующем: объемные размеры в передней части должны быть гораздо больше, должна быть больше и опорная площадь поверхности (особенно в носочной части), по предварительным данным, полнотный интервал мал, вместо 8 мм (стандарт 3928-88) для 3-х полнот должно быть взято 6 мм. Исходя из этого, обувь должна быть изготовлена 5-и полноты, то есть общий размах вместо 24 мм будет составлять 30 мм. Опора вкладной стельки должна иметь стерео-форму плантарной части стопы, в результате чему возрастает толщина стельки, что и должно быть учтено в обхватных размерах колодки обуви и т.д. Более конкретно указанные требования будут рассмотрены в процессе проектирования.

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ORGANIZATION OF THE HISTORICAL ENVIRONMENT OF COUNTRY ARCHITECTURAL ENSEMBLES FOR FORMATION AND DEVELOPMENT OF THE TOURISM SPHERE IN UZBEKISTAN

Abstract: *The article is devoted to the organization and development of the city's architectural ensembles. The architectural ensembles of Central Asia are a unique visiting card of medieval monumental architecture. Their distinctive feature is the architectural ensembles and complexes around the city.*

Key words: *ensembles, territories, complexes, kosh, maidan, compositional, urban planning, one-yard, multi-yard, residences, organizations, caravan route, peculiar.*

Language: *Russian*

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Scopus ASCC: *3300.*

ОРГАНИЗАЦИЯ ИСТОРИЧЕСКОЙ СРЕДЫ ЗАГОРОДНЫХ АРХИТЕКТУРНЫХ АНСАМБЛЕЙ ДЛЯ ФОРМИРОВАНИЯ И РАЗВИТИЯ СФЕРЫ ТУРИЗМА В УЗБЕКИСТАНЕ

Аннотация: *Статья посвящена организации и развитию архитектурных ансамблей города. Архитектурные ансамбли Средней Азии - уникальная визитная карточка средневековой монументальной архитектуры. Их отличительной чертой являются архитектурные ансамбли и комплексы вокруг города.*

Ключевые слова: *ансамбли, территории, комплексы, кош, майдан, композиционные, градостроительных, однодворовой, многодворовой, резиденций, организации, караванный путь, своеобразной.*

Введение

Архитектурные ансамбли на территории Средней Азии являются своеобразной визитной карточкой монументального зодчества Средних веков. Специфичными среди них являются загородные архитектурные ансамбли и комплексы. Они формировались разными путями - на привалах караванных путей, возле загородных резиденций, садов, в особо почитаемых местах, у могил знаменитых представителей религии, на базе загородных праздничных мечетей, возле родников и источников минеральной воды и лечебной грязи и др. Загородные архитектурные ансамбли и комплексы по своему объемно-планировочному решению отличаются от центральногородских и махаллинских архитектурных ансамблей. Характерные для городских архитектурных ансамблей приёмы «кош» и «майдан» в загородных постройках не встречаются или представлены в несколько иной форме[1]. Потому что, эти композиционные приемы были выработаны для уличной системы

характерной для городов и иных населенных мест, но не для локальных градостроительных образований. Загородные архитектурные ансамбли и комплексы закладывались на основе свободной композиции. Встречаются строения, построенные на основе однодворовой или многодворовой композиции, которые в некоторых чертах напоминают композицию махаллинских ансамблей. В организации дворовой композиции иногда применялся приём «жуфт».

В хорошем состоянии дошли до нас такие культовые, или же загородные мемориальные компексы и ансамбли как ЗангиАта (Ташкент), Ходжа Ахрор, Ходжа АбдиДарун (Самарканд), ЧорБакр, Баховуддин (Бухара), ХусанАта-ИсакАта, Ходжа Касби (Кашкадарьинская область), Султан Саадат (Термез) и др.

Достаточно многочисленными были к началу XX в. комплексы загородных резиденций. До нас дошли единицы из них – знаменитые загородные дворцы бухарских эмиров Ситораи-мохиХосса (1-рисунок) вблизи Бухары и дворец в Кагане, комплекс КиблаТоза Баг, построенный в пригороде Хивы. С сожалением можно отметить разрушение в начале 1980 ых годов таких загородных резиденций как Ширбудунв Бухары и Чармгар–Чорбог в Кермине.

Отдельным порядком следует отметить загородные архитектурные комплексы, формировавшиеся на караванных привалах (стоянках). Как известно однодневным расстоянием караванного перехода(мархала) принято считать 35-50 км пути. Обычно на таком расстоянии в оазисах располагаются малые города с торговым центром и соборной мечетью. В случаях, когда караванный путь проходил через большие пустыни, где на расстоянии однодневнего перехода отсутствовали населенные пункты, то строились загородные караван-сараи, которые назывались рабатами. Они представляли собой комплекс укрепленных построек с источником воды-сардобой. Сардобой называется крытый круглый водоем, который собирал талую воду и имел отверстие в верхней части купольного помещения, предназначенное для проникновения света и проветривания. До нас дошли руины караван-сарая Рабати Малик с сардобой, расположенные вблизи города Навои. До 1980-ых годов можно было увидеть многочисленные сырцовые постройки вокруг этого, некогда расцветавшего комплекса. Рабаты после прекращения караванных сообщений в XIX в. пришли в упадок и к исчезновению, оставив лишь названия небольших поселений, напоминающих о них, как Акрабат, Кошрабат, Кызыл рабат, Ташрабат и др.

Примером организации загородного архитектурного ансамбля является комплекс ансамблей ЧорБакр в Бухарской области (2-рисунок).

Ансамбль сложился на месте захоронения Абу БакраСаада, умершего в 360 году хиджры (970-971 г. н.э.) одного из четырех Абу Бакров, потомков пророка Мухаммеда. При могиле святого возник некрополь усыпальниц – хазиры, состоящие из обнесенных стенами двориками для захоронения. Над захоронениями устраивались могильники - «сагана».

Правитель Мавераннахра Абдуллахан считающийся великим строителем, за годы правления с1557-1558 года провел большие строительные работы в Бухаре и Бухарском ханстве. В безмерном почтении к роду Джубайрских шейхов, и своему покровителю Ходжа Исламу, а в последствии его наместнику и сыну, Ходжа КалонуСааду, он воздвиг ансамбль на территории захоронения их предков. В 996 году хиджры, он строит на принадлежащей им территорий, у могилы их предка Абу Бакра Саадахонаку, мечеть и медресе. Постройка, которая носит название медресе, имеет два этажа и соединяет грандиозную мечеть и хонако. Однако бытует мнение что изначально эти помещения носили функцию жилых помещений для паломников. Это медресе представляет собой единственное, раскрытое к площади сооружение, которое на основании это считается летним медресе. Но его худжры (кельи) имеют своего рода камины и поэтому едва - ли правомочно называть его летним. Также в ансамблевую группу входит минарет, построенный в 1890 году.

Комплекс ЧорБакр состоит из построек различного назначения: мемориального, культового и др. Это поминальные мечети, фамильные усыпальницы (хазиры 3- рисунок), хаммам (баня-тахаратхана), сардоба, зиёратхона и др.

При возведении всех частей ансамбля применялся жженный квадратный кирпич разных размеров. Кладка стен производилась на хорошо приготовленном глиняном растворе, своды и купола выкладывались на ганчхаке.

Дарвазахона, являясь входным элементом ансамбля представляет собой образец монументальных входных ворот и некогда составлял со зданием хонако особый тип ансамбля. Занимая площадь около 50 м^2, она находится на одной оси с хонако, что видно по фундаментам сооружений поставленным друг к другу. Сооружение дарвазаханы «Н» образной формы, представляет собой отдельно стоящий небольшой портал, с невысоким входным проемом в центре[2]. Оно сложено из обожженного кирпича квадратной формы, размером 27х27х6 см. На тимпане портала сохранились остатки майоликовой облицовки. Дарвазахона является символическими воротами,

через которые осуществляется вход в комплекс захоронений Чор-Бакр, город усопших святых.

Одним из трех монументальных сооружений ансамбля является хонако. Здание хонако представляет собой правильный прямоугольник в плане (20х30м) с большим центральным залом, перекрытым куполом на четырех пересекающихся арках и глубокой портальной нишей. Главным фасадом хонако ориентировано на восток. В углах расположены в два этажа худжры, связанные между собой открытыми арочными галереями северного и южного фасадов. Уникальное сооружение хонако сохранилось до наших дней во многом благодаря мощному фундаменту. Купол Ханака также отличается масштабностью, высота его в интерьере составляет 22м, а окружность 17 м. На поверхности купола выполнен орнамент в виде Калимы Тайибы. Уровнем ниже выполнен орнамент из майолики.

Грандиозный портал медресе, с худжрами по бокам, расположенными на двух уровнях. На каждом уровне сооружены худжры, каждая из которых имеет два яруса. Портал медресе был реставрирован дважды: в 1950 и 1971 гг., но в процессе реставрационных работ, проводимых в 1999 году он был разобран до фундамента, и мастера воссоздали его заново. Своды худжр выполнены по технологии Арки дузи. Для комфортного проживания учеников здесь имелись очаги, сандальные места, а также для удобства в стенах были сооружены ниши для книг. Для входа на верхние уровни здесь имеется специальная лестница, ступени которой выложены из желтоватого известняка. Лестница не потеряла прочности и по сей день и не требует реставрации.

Здание мечети имеет величественный облик. На втором этаже и портале мечети сооружены худжры. Грандиозный купол на подпружных арках, выполненных по технологии лингазарба. Высота портала мечети составляет 25 метров, а высота надземной части фундамента 12м. В цокольной части фундамента имеется толстый слой из камыша. Камыш использовался здесь для препятствия проникновения влаги на верхние конструкции здания. Также именно камыш являлся хорошим материалом, препятствующим трению от нагрузок и способствующий циркуляции воздуха в конструкциях памятника. Все вышеперечисленное позволило здание от постепенного разрушения. Интерьерная часть мечети, в месте расположения михраба украшена подвесными элементами шарафе. С трех сторон установлены двухстворчатые двери, которые выполнены из прочной древесины карагача.

Напротив трех величественных зданий ансамбля находится невысокий минарет, возведенный в 1890 Мирза Ходжой Джуйборий. Бытует предположение, что минарет построен на остатках фундамента более ранней мечети.

Анализ зданий ансамбля показал, что сначала была построена хонако, затем примыкающее к нему медресе. Мечеть была сооружена немного позже.

В комплекс сооружений входят также тахаратхана и хаммам. В плане постройка тахаратханы почти квадратная (7,9х8,8м.). Северная часть его занята большим купольным помещением, где собственно и проходил ритуал омовения. Южная часть разделена на три очень маленьких помещения, среднее из которых служило для подогрева воды. Конструкция тахаратханы: прямо от уровня пола возведены четыре арки, образующие в плане квадрат. Углы квадрата срезаны парусами, ганчевые которых опираются на первые (пазухи забуртованы строительным мусором). На систему этих арок опирается восьмигранник основания купола. Купол с невысокой стрелой подъема сложен как и весь объект из квадратного кирпича(23х23х4см), но на глиняном растворе. Вход в тахаратхану устроен в небольшой щипцовой стене через прямоугольный проход и акцентирован небольшим скромным порталом[3].

Уникален состав кирпичей, использованных для строительства сооружений комплекса. Для их приготовления использовался сложный раствор, в составе которого применялась виноградная закваска, измельченный пепел камыша, сурьма, цинк, сыворотка из скисшего молока. Для обжига использовались вместо дров стебли цветущего янтака (верблюжьей колючки). Дело в том, что только цветущий янтак имеет в составе химические соединения, которые способствуют изгнанию солей из глины в процессе обжига. Для глиняной основы использовалась специальная земля, собранная с дорог, и измельченная до пудрового состояния, дополнительно просеивалась, и отмывалась от солей поочередно в нескольких водоемах - отстойниках.

Построение ансамбля можно отнести к принципу застройки на параллельных осях. Перед ансамблем простирается площадь, обрамленная с трех сторон группами фамильных усыпальниц. В центре площади находится источник хауз, традиционный элемент для создания микроклимата, столь необходимого для жаркого региона.

Ансамбль Чор Бакр, являяс одним из функциональных загородных архитектурных ансамблей, в окрестности Бухары сложился на месте захоронения потомков пророка Мухаммеда[4].

Монументальные сооружения комплекса стали центром, вокруг которого продолжали складываться другие ансамбли. Новые дворики захоронений стали пристраиваться к старой части некрополя, образуя главную площадь перед основными сооружениями. В основе застройки

некрополя можно проследить несколько архитектурных ансамблей:

— главный ансамбль, состоящий из хонако, мечети и медресе, с большой площадью перед постройками образуют классический ансамбль майданного типа[5], сооружение дарвазаханы и здание хонако несмотря на значительное расстояние между ними составляют ансамбль на единой оси;

— портал при входе в проход МазориДароз, ведущей к самым первым и главным усыпальницам, в том числе Абу БакраСаада и Ходжа Ислама и портал хазиры напротив, являются ярким примером парного ансамбля «жуфт»;

— эти же предыдущих два сооружение в сочетании с порталом хазирыПашшоОйим, образуют ансамбль майданного типа;

— ЧилляханаМазариДароз и находящаяся напротив портал хазиры Абу БакрСаада, также являются примером ансамбля «жуфт»;

Как видно из анализа сооружений комплекса ЧорБакр, застройки здесь не возникли единовременно. Многие поколения Абу Бакров постепенно создавали хазиры, семейные усыпальницы. Но разновременность застройки территории не исключило ее плановость. При строительстве новых усыпальниц, их порталов и стен, четко прослеживается следование принципам ансамблевой застройки.

Начиная с 1999 года, по инициативе президента Республики Узбекистан здесь была проведена комплексная реконструкция всех сооружений, хазир, было восстановлено все утраченное и разрушенное временем, погодными условиями. Нужно отдать должное мастерам, которые очень грамотно подошли к вопросу реконструкции, резутьтаты их трудв радуют глаз. Теперь паломники и туристы, посещая комплекс ЧорБакр могут увидеть всю его уникальность (4-Рисунок).

Выводы: Гармоничная организация территорий, придерживание общих принципов составления ансамблей, служат лучшему восприятию всей архитектуры, показывают величие погребенных здесь людей и мастерство воплотивших замысел строителей демонстрируют весь комплекс ансамблей ЧорБакр во всем его величии.

Таким образом, ЧорБакр являясь уникальным ансамблем своего времени, остается одной из жемчужин исторического наследия Узбекистана и свидетельствует о поколении великих людей, жизнь которых оставила огромный след в истории и в бесценных шедеврах архитектуры, дошедших до нынешнего поколения. Из проведенных исследований выявлено, что большинство средневековых загородных архитектурных ансамблей сформировались на караванных путях;

Четырехступенчатое иерархическое деление пространственного уровня ансамбля состоит из группы зданий; из нескольки ансамблей; совокупности градостроительных и ландшафтных ансамблей;территориальных ансамблей на уровне районной планировки;

Ансамбли формировались на основе композиций «кош», «на параллельных осях», «майданные» открытого и закрытого типов;

Большинство загородных ансамблей были включены в ландшафтную организацию территорий типа «чарбаг»;

В центре композиции традиционного сада имелась архитектурная постройка «кёшк».

Используя традиционные приемы построения и благоустройства территории загородных ансамблей нужно сохранив структуру органично вписать их в туристические маршруты Узбекистана. Для повышения уровня сервиса данных объектов необходимо внедрить необходимые элементы (объекты транспортной и дорожной сети, общепита, сервиса, гостиниц и мотелей и др.)в целях привлечения большего потока внутренних и внешних туристов и повышения комфорта при посещении исторических ансамблей.

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http://www.citefactor.org/journal/index/11362/theoretical-applied-science

JIFACTOR
http://www.jifactor.org/journal_view.php?journal_id=2073

Eurasian Scientific Journal Index (Kazakhstan)
http://esjindex.org/search.php?id=1

SJIF Impact Factor (Morocco)
http://sjifactor.inno-space.net/passport.php?id=18062

InfoBase Index (India)
http://infobaseindex.com

Электронно-библиотечная система «Издательства «Лань» (Russia)
http://e.lanbook.com/journal/

International Institute of Organized Research (India)
http://www.i2or.com/indexed-journals.html

Journal Index
http://journalindex.net/?qi=Theoretical+%26+Applied+Science

Open Access Journals
http://www.oajournals.info/

Indian citation index (India)
http://www.indiancitationindex.com/

Index Copernicus International (Warsaw, Poland)
http://journals.indexcopernicus.com/masterlist.php?q=2308-4944

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Correspondents and Academicians

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2. List of publications
3. The list of articles published in the scientific journal ISJ Theoretical & Applied Science
   * to correspondents is not less than 7 articles
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Detailed information on the website http://www.t-science.org/Academ.html

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2. Список научных трудов
3. Список статей опубликованных в научном журнале ISJ Theoretical & Applied Science
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   * для академиков (необходима ученая степень) - не менее 20 статей.

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