

Quality of Products: Problems and Solutions

Lyudmila M. Kupriyanova

Received: 14 December 2018 Accepted: 2 January 2019 Published: 15 January 2019

Abstract

The article is devoted to the problems of products quality improvement. It is focused on the integrated management of product quality and production efficiency. Foreign experience in standardization (England, Germany, the United States, France, Japan), quality requirements and issues of national significance related to energy-saving, environmental protection, ensuring safety of life, the safety of conditions in the workplace were studied. The characteristics of public and private functions in the system of quality management and recommendations for evaluation of the quality were given. The basic principle of achieving dynamic stability of business was highlighted, oriented on active response and measurement of internal and external risk factors. The conclusion is made that there is a need to identify and use reserves to ensure the competitiveness of manufactured products, the opportunity to improve the quality using breakthrough innovations, and intellectualization that provides the creation of new products that affect the survival of producers and business development.

Index terms— quality, competitiveness, quality management, business processes, quality requirements

1 Introduction

Modern companies use their resources to continuously improve the quality and modernize technology. It is important for them to keep their products at a high level of quality. Quality assurance requires combining the creative potential and practical experience of specialists. Organizations have to provide accessibility and after-sales service to keep their customers. Modern consumer is becoming more discriminating in the choice of goods. Quality, as a combination of properties and characteristics of goods, determines its suitability for use and purpose, these properties are formed when creating goods depending on the requirements of customers, and are provided with the understanding of the formation of the necessary properties of products, and the result of the quality provided, corresponding to quality standards.

The quality requirement is established by normative and normative-technical characteristics fixed in documents of state and industry standards, technical specifications and technical assignments for the design or modernization of products, drafts and process charts, technological regulations and control cards, and other documents, including company standards. Foreign standardization organizations are characterized by the creation of committees, institutes and standardization associations. For example, Japan's National Standards Organization is represented by the Japan Industrial Standards Committee (JISC [1,6,7]).

2 2

In the United States, the National Institute of Standards and Technology (NIST) is the national standardization body. This non-governmental non-profit organization coordinates the work on voluntary standardization, directs the activities of organizations that develop standards, makes decisions on the recognition of status of a national standard, or an intersectoral standard, if firms with different sectoral interests are interested in this. NIST is the only U.S. authority to adopt (approve) national standards. Its main task is to contribute to the solution of problems of national importance, in particular related to energy, founded in 1949, as an advisory body to the Ministry of Internal Trade and Industry. The committee is subordinate to the Office of Science and Technology, which approves all JISC work plans. The Committee includes: a standardization council (holds conferences of the Committee, plans work and monitors the implementation of the plan), councils of branch departments and

technical committees (develop standards for the main industries and construction). All members of councils and technical committees, as a rule, are composed of representatives of scientific and business circles, practitioners, government employees, specialists of organizations producing products and consumers of products. Japan has national industry standards, industry standards for industry associations, and company standards under Japan's Standardization Law. 1 Corporate standards are developed on the basis of national and industry standards, but, as a rule, the requirements of corporate standards differ from national ones due to the production capabilities of the company, its desire to satisfy the needs of certain consumer groups (for example, the target segment), focus on competitors, and others. Standardization departments lead standardization work in companies. The draft standard is necessarily sent to the company's departments for feedback and comments, after which the final draft of the corporate standard is drawn up, which is approved by the management of the company. 2 JISC is funded by the government. According to the Law on Standardization, Japan has national industry standards, industry standards for industry associations, and company standards.

saving, environmental protection, ensuring the safety of life and the safety of working conditions.

In Germany operates The German Institute of Standards (DIN) , established in 1975. This was preceded by a committee of normals for general engineering, created in 1917. The German Institute of Standards has created committees, as working bodies, to develop national standards. DIN provides the work of committees at the international and European levels, based on national standardization in the sectors: construction, electronics, chemical production, precision mechanics, optics, photography and cinematography, healthcare, nuclear technology, agriculture, mechanical engineering and shipbuilding, aviation, sports, leisure jewelry manufacturing and some others. It is important to highlight the role of standardization in the field of ensuring the safety of goods and services, environmental protection, and the creation of fundamental standards. The German Institute of Standards, in the framework of an agreement with the German Government, acts in the interests of German society, contributes to the removal of technical barriers in trade, protection of consumer and environment. German standards -"generally recognized rules of technology" -a measure of impeccable technical behavior, are recognized as the national standard when extending them to areas where federal legislative norms are applied. DIN represents national interests in Europe and around the world.

In England operates the British Standards Institute (BSI), established in 1901. Today, BSI is coordinating standards development through stakeholder agreements. The automated system "Standardline" in the structure of the central reference service with the participation of BSI is engaged in information support for standardization and dissemination of information about standards. The PERINORM service databank in cooperation with Germany and France provides information on the standards of three countries: international standards ISO and IEC, and regional standards CEN and CENELEC.

In France, the national standardization organization is the French Association for Standardization (AFNOR), whose activities include standardization, metrology, management and quality control. AFNOR has created the Espace Information and Exhibition Center for consulting and informing on all standardization issues. AFNOR Association provides methodological assistance to firms and enterprises manufacturing products, holds seminars and internships on problems of standardization and quality, provides technical documentation on the production system, product quality management, efficiency of commercial activities, etc.

In Russia, the national standardization organization is the Committee of the Russian Federation for Standardization, Metrology and Certification. The committee is engaged in standardization -it establishes norms, rules and characteristics. The State Standardization System of the Russian Federation (GSS RF) includes a set of fundamental standards that regulate standardization work across the country, at all levels of production and management based on a set of state standards. The Committee or the Gosstroy of the Russian Federation adopts the State Standard of the Russian Federation (GOST R). Standards establish the forms and methods of interaction between enterprises, entrepreneurs and government bodies 4 The development concept of the national standardization system of the Russian Federation for the period until 2020 . 5 defines strategic goals and objectives, development principles and priority areas, in particular: "aviation and shipbuilding industry; space technology; telecommunication and information technology; technologies based on the use of the GLONASS satellite navigation system; medical devices; medical technology and pharmaceuticals; biotechnology; nanotechnology; energy efficiency; development of engineering and technology in the oil and gas and mining industries; construction; the creation of "smart" networks and digital substations in the electric power industry, including those aimed at ensuring reliable and uninterrupted power supply, reducing costs, increasing productivity and energy efficiency of the country's electric grid complex; ensuring labor safety and maintaining health ", ... and others, as well as:" ... enterprise management, conformity assessment, consumer protection; environmental protection, including environmental regulation, determination of levels of harmful effects on the environment and humans, environmental assessment and environmental management of business entities, a methodology for assessing health and environmental risks, and the disposal of products and industrial waste." 6 To ensure a high level of national standardization, successfully represent Russia in organizations at the international and regional level, as

The concept of developing a national standardization system in the Russian Federation provides for the need to implement measures to improve the system of training specialists and experts in the field of standardization. well as to increase the efficiency of using standardization documents in economic sectors, it is necessary to train highly qualified engineers and economists who have knowledge of standardization issues. It is important to update

or introduce into the educational institutions of higher and secondary professional engineering and economic education standardization disciplines in the relevant areas; to organize additional education programs in the field of standardization in parallel with the development of the main educational program, and involve practitioners in the field of standardization in the formation of professional competencies of bachelors and masters, to ensure the extension of the practice (internships) of professional development of staff working in standardization areas in the economy with the participation of business communities.

For Russia, the quality problem is especially important. In many areas, entrepreneurs seek to meet international standards. The solution of the problem is possible through the efforts of the state, scientists, designers, enterprise managers, as well as consumers. The state is capable and should maintain at the optimum level the efficient work of domestic producers, and for this, to establish requirements for product safety, monitor the conformity of its declared and real quality, and determine standardization and certification procedures.

Implementing the basic principles of standardization, the principle of balancing the interests of the parties, developers, manufacturers and consumers of products is highlighted. The developer seeks to create the most perfect product, the manufacturer takes care of the manufacturability and cost of production, and the consumer (buyer) wants to satisfy his needs by purchasing a product (service). The principle of consistency and complexity of standardization considers each object as part of a complex system. For example, a PC consists of hardware and standard programs, therefore, when developing them, it is important to pay attention to certain standard requirements in combination.

The dynamism and the accelerated development of standardization as a principle has been formed in modern fundamental laws on standardization and is focused on taking into account the possibility of appearance of new products and new technological processes. New products that do not meet current standards cannot be used effectively. In case of the possibility of appearance of new products, in the law "On Standardization" the principle of the advancing development of standardization, the ability to cover new, unknown achievements of science and technology is formed. The application of standards should provide economic (due to saved resources, increasing reliability, increasing technical and information compatibility) or social effect (ensuring the safety and health of people, the environment, etc.). The main attention should be paid to the priority of developing standards that contribute to the safety, compatibility and interchangeability of products and services, as well as the implementation of the principle of harmonization.

The principle of harmonization provides for the development of harmonization of standards -standards at all levels from international to individual company standards should be composed uniformly and without contradictions, which guarantees unhindered interaction between ministries, departments, enterprises, and partners in international trade. To make rational management decisions to improve the quality of production, it is necessary not only to know the problems and bottlenecks in production, it is necessary to apply a systematic approach to quality management, international 7 The market economy makes special demands on the quality of products, and this is justified by the need to ensure its competitiveness. In turn, competitiveness is characterized by a large number of factors, and in particular the level of prices and product quality. At the same time, product quality -operational safety, reliability, design, level of after-sales service should be put in the first place. Quality, being a synthetic indicator, reflects the combined manifestation of such factors as: the dynamics and level of development of the national economy, the ability to organize and manage the production of quality products, identify and use kaizen and kairyo reserves, which ensure the competitiveness of products and domestic standards, mastery of organizational and methodological foundations of certification and metrology, and take into account the specifics of industries.

When assessing quality, one should take into account the general trends of physical and moral aging, as well as deviations of quality from established requirements, in particular: violation of the rules and operating conditions, mistakes of developers and manufacturers, violation of production discipline, equipment defects, etc. It is also important to take into account the instability and variability of needs. Provided that the quality meets all standards and technical conditions, and the requirements of consumers change, the quality with constant parameters deteriorates. This objective reality shows that quality is an unstable object, which focuses on the study of problems, the collection of information and the development of measures to improve quality. opportunities to improve quality for account of innovations. Practice shows that in a market economy there are factors in a competitive environment that can affect the survival of producers and the results of business development.

The modern approach to business development is objectively associated with the understanding of quality as an effective means of satisfying the requirements of consumers and manufacturers interested in reduction of production costs. Therefore, characterizing quality as a set of properties of products that can satisfy the needs of customers (users), it should be understood that quality as a product of labor is a category inextricably linked to consumer value, which characterizes the ability of the acquired product to satisfy a need. Consumer value objectively forms the basis of quality, and quality characterizes the measure of consumer value, the degree of suitability and usefulness of the goods.

As a result of the evolution of the concepts of quality, social needs and production opportunities for satisfying them have increased. Aristotle (III century BC) formulated the definition of quality as the difference between objects, differentiated on the basis of "good/bad." In the XIX century AD Hegel said that "Quality is, first and foremost, a certainty identical with being, so that something ceases to be what it is when it loses its quality." According to the Chinese version -quality, which is indicated by a hieroglyph of two elements, is characterized

by the equality of "balance" and "money", as a model: $QUALITY = EQUILIBRIUM + MONEY$, therefore the quality of production of products is identical to the concept of "upscale" and "expensive".

In practice, an equal sign is often put between quality and competitiveness, and often no distinction is made between them. Moreover, the concept of competitiveness is broader than the concept of quality. Quality, which is important to understand, is not the only component of product competitiveness that predetermines its level (Fig. 1).

3 PRODUCT COMPETITIVENESS

4 PRODUCT PRICE (WORKS, SERVICES)

In 1931, Walter Schuhart, an American scientist and consultant in the theory of quality identified two aspects of quality: objective physical characteristics, and subjective (how good is the product). Scientist Ishikawa Kaoru in 1950 wrote that quality should really satisfy the needs of consumers, he was convinced that the success of Japan in conquering world markets largely depends on the belief in the effectiveness of quality control methods <http://magazine.hrm.ru/klassiki-menedzhmenta-isikava-kaoru>. Control of safety of quality and products on the Russian market is based on regulations, this is a check of compliance of the quality indicators of a particular product with the requirements, standards, technical conditions, as well as the requirements specified in the supply contract. Monitoring is carried out in order to verify a limited number of indicators and establish the variety of the product. At the same time, a broader concept than control is quality assessment.

Quality assessment as a set of operations includes the selection of the nomenclature of quality indicators of the evaluated products, the determination of the values of these indicators and their comparison with the basic ones, the determination of the quality level. Level assessment is carried out when making decisions on choosing the best product for sale, planning quality indicators of goods, etc.

To study consumers means to analyze their most important values, characteristics, behavior, specifics of making decisions about the purchase of goods. Working on targeted markets, developing a marketing strategy focused on customer satisfaction, it is important for the company to determine the goals of its activities and ways to achieve them, to minimize risks when introducing new products. The information and knowledge obtained help to predict the future needs of consumers, increase their satisfaction, receive financial benefits in the form of a higher market value [18].

It is important to understand the difference in the characteristics of the product from its value, which gives the product to the consumer, which is important for business development. It is necessary to evaluate the values of the company itself, striving for success and the values that are significant for the consumer. Each consumer has its own set of values. The study of value is carried out using various methods, for example, according to the scale of values of M. Rokich, S. Schwartz, two classes of values are evaluated: terminal (value of the goal) and instrumental (value-means). In the diagnosis of personal value orientations, as terminal values, we can distinguish: financial status, creativity, social contacts, self-development and personal prestige, preservation of individuality and others, which together can be represented in various areas of life: professional life, training and education, family and social life [2,8].

The analysis of value and ranking of indicators by importance, allows to identify indicators on which it is necessary to concentrate business efforts in the field of quality assurance. When planning quality, at a strategic level, one determines the promising areas of quality development. Current planning includes: a plan for the removal from production of obsolete and noncompetitive products, a plan for the modernization of manufactured products with high quality, a plan for the development of new types of products. Moreover, the implementation of quality improvement plans requires material and financial support, economic justification, taking into account the results of studying current and future demand and customer reviews and the results of product specifications; compliance with standards and specifications, development of R&D, patent materials, etc. It is also important to coordinate these plans with other production plans aimed at improving, including sets of measures to improve quality, and based on the principles of a systematic approach, covering all levels of management and all stages of the product life cycle.

Every year, in Russia, at the Expo Control exhibition, Russian specialists demonstrate the multifaceted nature and variety of the latest solutions and technologies for measuring, testing and quality control in industrial production and in scientific research. Among the participants of Expo Control in Moscow there are specialists from more than 80 companies from Russian regions and foreign countries -Germany, Italy, the USA, Switzerland and other countries of the world [10]. «Expo Control» exhibition website: <http://expo-control.com/uchastie/o-vystavke/>. At conferences in business circles, fundamentally new requirements for the quality of products (works, services) are discussed. This is objectively due to the fact that the survival of any company, its stable position in the market for goods is determined by the level of competitiveness.

It should be noted that competitiveness is associated with several factors, in particular, the price level and product quality, and more important factors are related to product quality and labor productivity, while saving all resources used in production is giving way to product quality.

But the quality problem has been and remains relevant. This is a strategic problem, the solution of which determines the stability of the state economy. Therefore, the most important task of product quality management

is to ensure the optimal level of quality by determining the economic effect of its increase at all stages (production and sale, consumption and operation).

Studying foreign experience, American business management experience based on individual and entrepreneurial initiative is of interest. In developing the concept of increasing competitiveness, Americans pay great attention to:

5 Global Journal of Management and Business Research

Volume XIX Issue VI Version I Year 2019 ()

6 B

The development of science, engineering and technology; the sphere of education, which has become the locomotive of the socio-economic development American society; development of quality management systems and successfully implementation of models of continuous improvement of business processes (personnel management, production management, information systems management, finance, accounting and marketing).

Much attention is also paid to the competencies of managers such as: strategic competence (global and systemic thinking, the ability to see and solve problems, security relationships); social competence (such skills as teamworking, including in international teams, the ability to motivate and convince colleagues, learning and innovate skills, personal charm, the ability to resolve conflicts); functional competence (the ability to make managerial decisions, initiative, working skills and flexibility in work, endurance in work), managerial competence (organizing skills, the ability to bear responsibility, the strength of beliefs, the authority of the leader, the behavior of the leader); professional competencies (university education, experience in linear and staff work, work experience in most functional areas and work experience abroad, knowledge of at least two foreign languages).

Today, professional managers can build their teamwork abilities in business games and consulting projects, solve cases developed on real practical situations from a business, start studying with an essay, and finish with master's theses, develop a personal strategy and achieve the goal -prestigious work. Studying the problems of quality management, entrepreneurs create a productive network of developing and implementing high quality standards, using the best modern approaches, and achieve success in business in a spiral of success: high quality, low costs, higher profits, more reinvestment; higher quality, lower costs, etc. [9,10,11].

Today, Gazprom and Rosstandart have embarked on the implementation of the best practices of standardization, metrology and ensuring the quality of products (works, services). In the coming years Gazprom plans to develop national corporate standards for the production of highly efficient technological equipment for Gazprom 11 Practice shows that in the competitive environment, product quality and associated costs become important factors in the economic situation of a (2016-2018); to take measures to synchronize the corporate regulatory framework with the latest standards in the energy sector, and by 2018 to introduce a product quality management system, increase production management efficiency, optimize costs, coordinate and implement investment projects. company, business development, and in particular such an indicator as profit. The intensive effectiveness of the quality system can be manifested in reducing the cost of production by minimizing the total costs for all cost groups. New approaches to the quality problem require manufacturers to take into account the market factor, organizational and economic measures of quality management and the transition to the more flexible standardization system. This will allow manufacturers to quickly respond to rapidly changing requirements of the internal and external market environment for the quality of goods, for the organization of work to ensure high quality products.

To assess the quality level, one can use the differential (comparison of unitary quality indicators of new products with identical basic quality indicators) and complex (comparison of actual complex indicators with basic and complex indicators) methods. Traditionally, numerical values of quality indicators are established using various methods for assessing and measuring product quality indicators: objective (measuring, registration, calculation), and subjective (organoleptic, sociological, expert) (tab. 1).

Table ??: Methods for determining the quality of products

7 Method Characteristic

Objective methods

8 Measuring method

It is based on information obtained technical measuring instruments and devices, equipment, chemicals and utensils. It requires specially equipped premises and specialists trained for analysis. For example, in the food and cosmetic industry, the mass of a product, the content of fats and carbohydrates, emulsifiers, esters, and others; in mechanical engineering engine speed, product size, vehicle speed, amperage, etc.

9 Registration method

Based on the use of information obtained by recording and counting the number of certain events, items, costs. For example, product failure during testing; the number of defective containers, defective products in a batch

during acceptance, storage, sale, reconciliation of inventory items. Used to determine indicators of unification, patent law indicators, etc.

10 Calculation method

It is based on the use of information obtained by theoretical and empirical dependencies of product quality indicators on its parameters. For example, when designing products, when objectively there is no product, and experimental research is impossible. Used to determine values: product mass, performance indicators, power, strength, etc.

11 Subjective methods

12 Organoleptic method

Based on the analysis of the perception of the senses -vision, smell, hearing, taste. The value of the indicators is determined by analyzing the sensations obtained on the basis of existing experience and is expressed in points. The accuracy and reliability of the assessment depends on the qualifications, skills and abilities of the specialist and on the conditions for the analysis. Advantage: fast, cheap, affordable. The disadvantage of this method is subjectivity (inaccuracy). Used to determine the performance of confectionery, perfumes and other products.

13 Expert method

Based on a decision made by experts (scientists, designers, technologists, product experts), etc., it allows to objectively evaluate the quality of products. It means the production of special experiments, tests in appropriate -created or selected -conditions. It is used in forensic research, investigative and judicial practice, in the production of forensic examinations.

14 Sociological method

Based on the collection and analysis of the opinions of actual and potential consumers of products. The attitude of consumers to the quality of products is revealed by taking into account the questionnaires completed by them, holding consumer conferences, sales exhibitions, tastings, and other events.

Improvement of the quality of products and services is the most important area of increasing business efficiency. In this regard, the role and importance of integrated management of product quality and production efficiency is growing. Assessing the level and quality of products is objectively the basis for taking managerial influence in the quality management system.

Quality assessment system as a set of responsibilities, procedures and resources providing a general guide to quality assessment is based on a quantitative measurement of the defining properties of product quality indicators (purpose, reliability, manufacturability, standardization and unification, ergonomics, aesthetics, transportability, environmental friendliness, safety, patent indicators). Quantitative indicators are determined by experimental, organoleptic and sociological methods. In aggregate, all indicators for various objects are regulated in the relevant regulatory legal acts and documents -laws, standards, norms, rules. Such quality assessment system is used to determine the level of quality at all stages of the innovation process, it allows making effective management decisions that are justified: objective assessment of product quality at various stages of reproduction, taking into account the relationship between quality, quantity and price; an objective reflection of the properties and indicators characterizing quality in regulatory technical documents for products; objective data on the quality, technical level and competitiveness at all stages of the product life cycle.

In the quality assessment system, the appropriate place is taken by the ISO 9000 International Standards (ISO 9001, ISO 9002 and ISO 9003), focused on a specific policy and the achievement of goals. These fundamental documents of quality management system contain a quality assurance methodology, models of functional (organizational) relationships between suppliers and consumers; Standards 9000 and 9004 define the requirements for a quality system and quality management.

Compliance with the requirements of ISO 9001:2011 will provide organizations with the opportunity to enter the market, based on the assessment of commercial activities on the principles of transparency and standardization of the rules by which production is carried out. The document confirming such is a certificate 12 The achievement of dynamic business sustainability remains the principle of an active response . The certification of the quality management system (QMS) in Russia is carried out by organizations accredited to the State Standard, that issue certificates for compliance with GOST ISO 9001-2011, which are valid in the Russian Federation. To work on the European market, certification of QMS compliance with ISO requirements from a Western certification body is required, in particular: BSI (British Standard Institute) (Great Britain), Det Norske Veritas (Norway), Societe Generale de Surveillance (Switzerland), etc.

Practice shows that the implementation of the QMS contributes to an increase in the volume of production (90%), the expansion of the customer base and the assortment range of products (85%), and the reduction in the number of complaints about product quality (60%) [3].

The certification procedure provides for a preliminary audit of the company by the certification body, a thorough check of the object for which the Certificate is issued. The presence of the Certificate is confirmed

by documentary evidence of the quality of work performed, by the presence of the effectively working quality management system at the enterprise [4,5].

The modern quality management system objectively focused on business performance, not only ensures participation in many state tenders and competitions of certified enterprises, but also opens up opportunities for entering international markets where it is impossible to state the serious intentions of the company without a Certificate.

Practice shows that obtaining a Quality Certificate not only makes it possible to attract large investments or credit resources, increase the reputation of the brand, but also is a good advertisement of products, it attracts customers (buyers, customers), and, which is most important -makes it possible to significantly increase profits. The company receives the opportunity to increase profits through the optimization of business processes, thereby increasing sales and reducing costs. For buyers, the presence of a Certificate is a guarantee of product quality. ISO certification all over the world is the evidence of effective quality management, the key to the competitiveness of the company and its products on the national and international market. 12 Standardization and certification together form a single and clear quality management system. In this aggregate, standardization is the regulating element, which regulates quality requirements, and certification is an important element in monitoring compliance with these requirements.

to the measurement of internal and external risk factors. External destabilizing factors of stability in relation to the enterprise are determined by the stability of the economic environment, internal dynamics and trends over time of indicators characterizing the results of production, management, personnel and financial and economic activities of the organization. Internal and external risks, as vectors of development, show the achieving of goals, at the same time acting in opposite directions: the higher the stability, the lower is the risk in terms of deviation from the expected result, and vice versa. Therefore, risk assessment is objectively related to the probability of occurrence of events and the effect caused by this event, which can be negative (loss) and positive (gain) [13,14].

Accepting the concept of risk management, a model of dynamic stability is adopted -increasing organization and efficiency, with a set of goals, expressed by streamlining indicators of the economic condition of the organization [15,20]. For example, at the micro level -the level of small and medium business structures, the new quality of economic growth should be characterized by dynamic stability and efficiency, combining economic and social characteristics of business development into a single system. At the same time, the concepts of sustainable growth are generalized, reflecting not only the economic growth, but also a new quality and efficiency in unity and development [16,17].

Poor product quality can objectively be the reason for buyers' refusal to purchase goods, it can lower the financial stability of the enterprise, and lead to bankruptcy. The consistent application of quality management tactics is necessary, in practice it is called quality control. The fulfillment of all requirements of conformity to quality is ensured by product quality management, which should be implemented systematically. The product quality management system should function as an organizational structure that distributes responsibility and procedures, processes and resources necessary for quality management. The Quality Management Services operating in the structure of the company solve the main tasks, in particular: they protect the reputation of the company, protect consumers from defective products, as well as reduce unproductive work and prevent spoilage at the enterprise.

The quality policy is formulated in the form of business principles and long-term business development goals. For example, to improve the economic situation of an enterprise; to expand the market, to gain new sales markets; to achieve a high technical level of products, to increase the level of leading enterprises in the industry; to focus on customer satisfaction by industry or region; to develop products, taking into account the implementation of new principles, an increase in warranty service and the development of service.

World experience shows that it is quality that is the most factor in overcoming the economic crisis, and the determining vector is the innovative vector of development in the areas of: technological, benchmarking, intellectually creative, informational, integration reserves; kaizen reserves -the involvement of each employee in work to improve the quality of products, works and services; Kairyo reserves ensuring competitiveness - improvements that demand a radical organization, requiring more investment to improve the quality of enterprise management and the quality of products [12,19,20].

Objectively high results of the effectiveness of business development will be ensured by the intellectualization of the enterprise -orientation of the activity to the acquisition, creation, use of knowledge and competencies, with the aim of transforming them into new products, services or business models. Intellectualization requires operational and strategic decisions, the creation of competency models that focus on the ability to develop and improve the human resource, and the answer to the questions: why a business competency model is needed, and why it is a link in the personnel management system, why it is necessary to start with competencies, if the company faces with issues of increasing the efficiency of business processes. ^{1 2 3 4}

Figure 1:

¹State standardization as a form of development and standardization is carried out under the guidance of state bodies according to unified state standardization plans. National standardization is carried out on a state scale without a state form of leadership.

²7 International Standard -A standard adopted by an international standardization organization. The development of international relations leads to the need for the development and widespread use of international standards. In 1946, the International Organization for Standardization (ISO) was established, the main activity of which is the development of international standards.

³© 2019 Global Journals

⁴Official website of Gazprom: <http://www.gazprom.ru/press/news/2014/may/article191681/>

-
- 400 [Latysheva et al. ()] , L A Latysheva , Yu M Sklyarova , I Y Sklyarov , *Economy* . 2015. p. .
- 401 [Kupriyanova. Publisher -Asian Social Science ()] , *Kupriyanova. Publisher -Asian Social Science* 1911-2017 E-
- 402 1911-2025. 2015. Canadian Center of Science and Education. 11 (7) p. .
- 403 [Balance sheet as the most important source of information for assessing business development. Kupriyanova L.M., Osipova I.V. I.]
- 404 *Balance sheet as the most important source of information for assessing business development. Kupriyanova*
- 405 *L.M., Osipova I.V. Financial analytics: problems and solutions*, 2014. p. .
- 406 [Basovsky ()] L E Basovsky . *Quality management: textbook. -M .: INFRA -M*, 2012.
- 407 [Campbell R ()] *Competitive cost based pricing systems for modern manufacturing*, Quorum Books, Campbell R
- 408 . 1992. UK.
- 409 [Denisov and Zhdanov ()] 'Economic management of enterprise and corporation'. A Y Denisov , S A Zhdanov .
- 410 *Business and service*, 2012.
- 411 [Features of the analysis of the quality of non-profit organizations functioning] *Features of the analysis of the*
- 412 *quality of non-profit organizations functioning*, Petrusevich T.V.
- 413 [Malyshev] 'Formation and development of Kairyo reserves to improve the quality of enterprise products'. D N
- 414 Malyshev . *Bulletin of the Tambov University. Ser. Humanitarian sciences* 9 (65) .
- 415 [Kupriyanova] L Kupriyanova . *The financial analysis. Textbook -M .: INFRA-M*, 2015. -158p,
- 416 [Kupriyanova ()] L Kupriyanova . *Economic analysis. Textbook -M .: INFRA -M*, 2014. p. 159.
- 417 [Management of financial risks of agricultural entrepreneurship of the Stavropol Territory] *Management of fi-*
- 418 *nancial risks of agricultural entrepreneurship of the Stavropol Territory*,
- 419 [Dimov ()] *Metrology, standardization and certification*, Y Dimov . [http://psycabi.net/testy/](http://psycabi.net/testy/322-test-tsennosti-shvartsa-tsennostnyj-oprosnik-tso-shvartsa-metodika-shvartsa)
- 420 **322-test-tsennosti-shvartsa-tsennostnyj-oprosnik-tso-shvartsa-metodika-shvartsa**
- 421 2013. Peter. (Series: Textbook for high schools. 4th edition. Date of treatment July 11, 2015] 2. Schwartz
- 422 technique)
- 423 [On the implementation of the interstate standard GOST ISO 9000: 2011 "Quality Management Systems. The main provisions and
- 424 *On the implementation of the interstate standard GOST ISO 9000: 2011 "Quality Management Systems.*
- 425 *The main provisions and the dictionary: the order of Rosstandart of Russia No*, December 22, 2011 -Moscow,
- 426 2011. 1574 p. 32.
- 427 [On the implementation of the interstate standard GOST ISO 9001: 2011 "Quality Management Systems. Requirements: order of
- 428 *On the implementation of the interstate standard GOST ISO 9001: 2011 "Quality Management Systems.*
- 429 *Requirements: order of Rosstandart of Russia No. 1575, 12/22/2011 -Moscow*, 2011. p. 34.
- 430 [Valevich et al. ()] *Quality management of goods and services: training manual*, R P Valevich , P ; /R , O B
- 431 Valevich , Minsk . 2013. Belarusian State Economic University
- 432 [Vdovin (ed.) ()] *Quality management system in orrganization*, S M Vdovin . Textbook: S.?. Vdovin, T.A.
- 433 Salimova, L.I. Biryukova. -M .: INFRA -M. (ed.) 2012. (301 p)
- 434 [Some issues of financial stability analysis as the basis for managerial decision-making ()] *Some issues of finan-*
- 435 *cial stability analysis as the basis for managerial decision-making*, 2015. p. .
- 436 [Emanuel] *The introduction of international standards of the ISO system in Russia -problems and prospects/A.V.*
- 437 *Emanuel//Quality management in healthcare and social services*, A V Emanuel . p. .
- 438 [Gludkin ()] *Universal quality management: textbook for universities*, O P Gludkin . 2011.
- 439 [Spoede et al. ()] 'Using activity analysis to locate profitability drivers: ABC can support a theory of constraints
- 440 management process'. C Spoede , Henke E , M Umble . *Management Accounting* 1994. 75 (11) .