Quality management as a function of operational management of organizations to gain competitive advantage

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Abstract

When it comes to the quality of the products, then it is the result of the increasing and increasingly diverse needs of the buyers. But when it is connected with the strong strengthening of competition, with the globalization of the world market, then it is the result of the development of technology. The answer of every organization to the challenges of the environment is the improvement of the quality by accepting the modern philosophies and the new approach to the quality. This, of course, also includes the developed and implemented quality management systems. It is assumed that quality includes the whole society and management and all business systems. The most important goal of quality is customer satisfaction, and the prerequisite for achieving quality is the continuous improvement of products and services.

Today, quality is becoming an integral work strategy of organizations. The production of quality products is a goal that requires the total dedication of the entire business system.

Keywords: quality, organizations, operational management, competitive advantage

What is quality?

The quality of products and services in companies is becoming more and more a decisive factor that sets each organization apart from the rest. In this sense, managers often have to answer the following questions:[1]

- Why is a certain buyer willing to pay more for certain products and services than for some others?
- What is it for which the buyer pays?
- What are the value components of a certain product or service?
- What is most important for the buyer when buying the product or service?

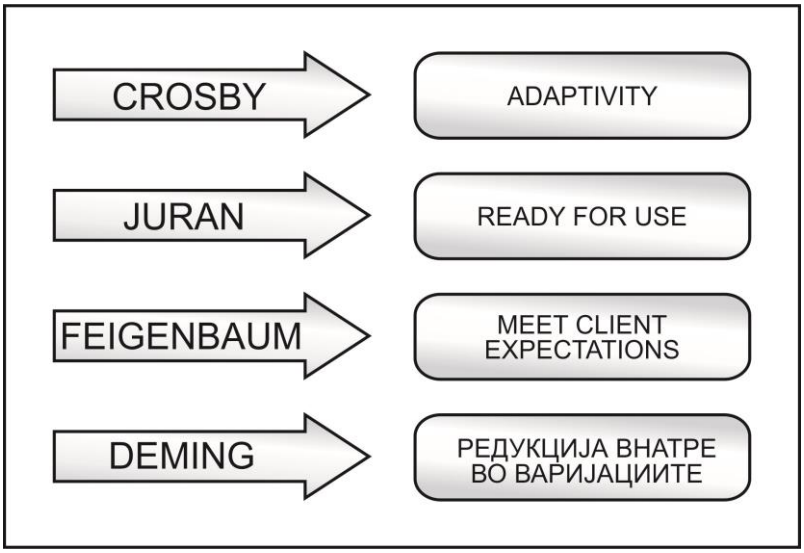
[1] Srdoc, A., Sluga, A., Bratko, I.: A quality management model based on the "deep quality concept", International Journal of Quality & Reliability Management,2005., str. 278-

The term "quality" is not easy or simple to define. In order to understand the quality, some commonly used definitions are listed, namely:[2]

- quality is the quantity and form of the used value of a product or service. Hence, it is also a measure that shows to what level a certain product or service satisfies the user's need;
- quality is a set of properties of the product, processes or services that refer to the possibility of satisfying established or indirectly expressed needs;
- quality is the integration of work and responsibility;
- quality makes customers happy;[3]
- quality is a set of all features of the product or service that relate to the ability to satisfy established or directly expressed needs with ease of use.[4]

So, it is evident that "quality" is a word with many different meanings, so it is the simplest to define it as the ability to satisfy the needs and expectations of buyers.

Figure 1: Definitions of quality by the pioneers of the quality system



Source: Avelini - Holjevac, I., Upravljanje kvalitetom u turizmu i hotelskoj industriji, Opatija, 2002., str. 8.

Figure 1 shows what the quality definitions of the four pioneers of the quality system are aimed at. According to Crosby, quality means adapting the organization to the needs and demands of customers. For Juran, quality is convenience of use, and for Feigenbaum, quality means meeting the expectations of buyers through the use value and selling price of the product. Deming

[2] http://kvaliteta.inet.hr/.
[3] Crosby, B. P., Kvaliteta je besplatna, Zagreb, 1996., str. 7
[4] Herrmann, A., Huber, F., Algesheime, R., Tomczak, T.: An empirical study of quality function deployment on company performance, International Journal of Quality & Reliability Management, 2006., str.347.

believes that quality is achieved through the realization and repetition of the P-D-C-A cycle with the reduction of internal variations, including all employees for continuous improvement.
Quality is economically expressed through profit, which is the highest goal of any organization. So both the existence and non-existence of quality directly affect profit.

Quality as a factor for gaining a competitive advantage

Today, the notion of quality is widely accepted. In addition to the functional and technical properties of the products, the external orientation, that is, the perception of the buyers about the quality, is of increasing importance. Quality is defined as the basis of competitive advantage on the part of the market, that is, as compliance with the requirements of buyers in terms of functions, prices, delivery time, reliability, environmental protection, guarantees, costs, advice, etc.
Starting from the customer-oriented definition of quality, quality management means the management of all stages of planning, production and use of products in the most important goal, which is the fulfillment of customer requirements. Modern quality management is not understood as controlling operations to detect errors, but avoiding errors and optimizing teamwork at all stages. At the same time, quality is not seen as a cost factor, but can contribute to profiting of organizations against the competition and thereby establish and strengthen the competitive advantage. High quality contributes to achieving a competitive advantage for organizations, be it through differentiation and creating loyal customers and unique market positions, or through cost control and the contribution of high quality and zero-defect rules that reduce total operating costs.
In order to achieve and maintain a long-term competitive advantage, organizations strive to make their products different from competitors' products. The long-term sustainability of a competitive advantage is based on protection against imitation on the basis of differentiation (quality, innovation and responsiveness to the wishes and demands of customers). Quality as a source of differentiation does not arise only from the final product, but can be the result of all activities in the organization. In order to achieve a competitive advantage in quality, coordination and cooperation of own activities in the value chain, as well as connection with the value chains of suppliers and buyers, is necessary. So, everyone is responsible for quality.
The high quality of the product increases its value in the eyes of buyers. The value for the buyer is seen in the reduction of costs or in the increase of its performance. Better coordination of activities shortens the delivery time and thus has a positive effect on the perception of quality among buyers. Synchronized delivery can reduce costs both within the organization itself and

among buyers. To increase the results of cooperation with buyers, it is necessary to identify their needs and determine the purchase criteria. Criteria for making purchase decisions are specific, not basic, product features. The analysis of the specific characteristics of the product and the factors that affect the quality and differentiation in the individual activities, allows, on the one hand, to determine which sources of differentiation can be based on the long-term competitive advantage; on the other hand, new, potential sources of differentiation can be recognized.

Quality as a factor for competitive advantage in differentiation allows the organization to achieve higher prices than the competition, to ensure greater loyalty from buyers or to protect itself from seasonal and conjunctural uncertainties.

Buyers in the market are ready to pay a higher price for the uniqueness and specificity of a certain product according to which it differs from the products of the competition. Customer loyalty is in direct correlation with the level of product quality.

Quality management

Quality management as an activity represents the realization of several strategic work engagements and tasks, the most significant of which are the determination and definition of the goals and tasks in the operation (production, economic organization), as well as the determination of the choice of the structure, organization and technology of operation. More significant immediate elements of management represent the works and tasks that need to be defined and realized in the function of quality assurance. They are numerous and differ depending on the type and size of production, the programs of operation and development, the level of quality management, etc.

Characteristics of quality management

Today, quality is one of the main assumptions for the company's survival on the market. Quality means investing in the operation of the organization, in research and development, stabilization of work processes, etc.[5]

The main problems that arise during quality assurance are: resistance to ever-increasing needs and demands, i.e. the necessity to satisfy them, lack of quality information and education, high productivity that often reflects on quality, as well as the failure to highlight the importance of quality by management side. Quality assumes that operations will take place without downtime,

[5] Lakhal, L., Pasin, F., Limam, M.: Quality management practices and their impact on performance, International Journal of Quality & Reliability Management,2006., str. 630.

without delays or errors, without expensive and unnecessary supplies, and through communications through the information system and teamwork.[6]

Achieving quality is a very complex cycle and includes: planning, implementation, control and evaluation (measurement) of achieved quality as well as improvement of the process itself to obtain new quality. In other words: plan, do, check, improve! The cycle for achieving quality in this way repeats itself, because it is based on continuous improvement. The most sensitive phases are planning and quality improvement, because the largest number of quality errors occur due to a bad management approach. The concept of control is based on prevention and refers to the proverb that reads: "prevention is better than cure!". The evolution of the activities in the work organization is oriented towards quality, and can be followed from the changes of activities listed in table no. 1.

Table No. 1: Trend of quality-oriented activities

Earlier	**New trends**
Inspection/ Control	Planning, prevention
Products	Products and services
Conformance to specification	Adaptability to the customer
Conflict of interest with suppliers	Teamwork and cooperation with suppliers
Training of quality specialists	Training for everyone
Clients	All buyers (internal and external)
Production orientation	Orientation towards overall operation

Source: Avelin- Holjevac I., Kontroling- upravljanje poslovnim rezultatom, Opatija, 1998, str.85

For an integral approach to management, standardization and improvement of work processes, as well as for better quality management in the organization, certain guidelines must be respected, which are more or less present in all organizations that have established quality management, and they are:[7] clear and precise instructions, accurate procurement and error-free production, knowing consumer desires, developing products to meet consumer needs, offering quality and reliability in built-in elements.

Dimensions of the quality management system

[6] Ooi, K., B., Bakar, N., Arumugam, V., Vellapan, L.: Does TQM influence employees' job satisfaction?,International Journal of Quality & Reliability Management, 2007., str. 70.

[7] Hamprecht, J., Corsten, D.: Controlling the sustainability of food supply chains: Supply Chain Management, An International Journal, 2005., str. 9

The quality management system has a complex character and is manifested by a complex structure that incorporates several dimensions. All those dimensions have a cumulative effect on quality. Basic dimensions of the quality management system are:[8]

- management at the basic levels (strategic, tactical, operational and executive-routine level);
- management by activities;
- management of quality objectives and tasks;
- management by sectors and activities;
- management of development factors (accumulation, investments, human resources, science, technologies, natural resources).

In addition to these dimensions there are others such as horizontal and vertical management, management system management and others.

Tasks of the quality management system

Organizations will implement the new concept of the quality management system in their operations after fulfilling the tasks it requires. The basic tasks of the quality management system are the following:[9]

- analysis and planning of the client's needs and opportunities for realization, maintenance and development;
- defining the goals and tasks of the quality management system;
- building a model and methods of the quality management system;
- optimizing the content, process and activities of the quality management system;
- adopting and harmonizing the most appropriate solutions of the quality management system;
- determining and using the necessary management parameters and activities for efficient and rational quality management.

By fulfilling the mentioned basic tasks of the quality management system, the organization will be able to more easily master the steps that follow in the implementation of the TQM concept.

Principles of the quality management system

Several principles are integrated into the quality management system, namely:[10]

- scientificity and reality in determining quality;

[8] Чепујноска, В., Чепујноски, Ѓ., Основи на управувањето со квалитетот: филозофија, методологија, искуства, Економски факултет, Скопје, 1993, стр. 112-114
[9] Ibid, стр. 114
[10] Ibid,

- systematicity, continuity and complexity in the study of the situation, problems, needs and possibilities for quality assurance and development in all phases and sectors (design, marketing, planning, decision-making, production, exploitation-use, etc.);
- hierarchy of goals and tasks according to levels, character and content;
- adaptability and mobility of the system;
- qualitative and precise determination, standardization and measurement of quality;
- standardization of quality;
- quality management and development;
- promotion and development of the quality culture.

Any organization that is determined to improve its operations and gain a competitive advantage needs to respect the mentioned principles, without giving priority to some of them.

Quality management systems

For successful leadership in organizations and their operation, systematic management is necessary. Such management will result in success through the preparation and maintenance of management systems. Those systems are designed so that performance can be continuously improved, including the needs of all interested parties.

In the following, the ISO 9000, HACCP and HALAL standards are elaborated as the most applied quality management systems.

ISO 9000 standards

The work of the organizations is regulated by local, national and international laws related to the safety of products/services. Because of that, new models of management of work systems, such as ISO 9000 and some other concepts, are on the scene today. ISO 9000 in that sense is the most widespread approach in the world, very present in Macedonia as well. The ISO 9000 model is today the most widespread new way of managing work systems. Their main reason for appearing is the need for greater work effectiveness and efficiency.

ISO 9000 is an International Organization for Standardization, ISO 9000 is not an acronym, but a name derived from the Greek word "isos" which means equal. In addition, the name ISO serves to mark the organizations throughout the world, thus bypassing a multitude of acronyms, which are the result of the translation of the full name "International organization for Standardization"

in different national languages of the members. Thus, the short name of the organization is always ISO.[11]

The ISO 9000 series of standards represent an international consensus on good management practice. ISO 9000 also includes the quality assurance models ISO 9001, ISO 9002 and ISO 9003 against which the quality system can be evaluated. With the certification of the quality system by an independent, certification institution, evaluation by buyers and other customers is avoided or reduced many times. The certificate can also serve as a written recommendation for potential buyers, especially when the buyer and supplier are new and/or geographically distant.[12]

When the company has a certified management system, it means that the independent assessor has confirmed that the processes affecting the quality of the products are controlled and correctly determined.[13]

There are two basic sets of reasons why an enterprise introduces the ISO 9000 management standard.[14] These are external and internal reasons. Of course, their combination is also possible.

Resource management is ensuring general requirements such as the development of all resources that are needed for the realization of the vision and strategies of the enterprise, the management of human resources, including the development of their competence and qualification, the use of information as a "driving resource", development and maintenance without knowledge, insurance of the necessary infrastructure (work space, hardware, software, tools, equipment, services) and its maintenance.[15]

A variant of ISO 9000 : 2000 norms is process-oriented and prescribes that the company that wants to work efficiently must identify all its activities and resources that participate in them, connect them and manage them. Such an approach also facilitates the recognition of primary (production) processes from those that do not create added value (secondary), thus enabling the elimination of possible stoppages at the points of convergence of processes.[16]

The enterprise must establish, document, apply and maintain the quality control system and continuously improve its performance in accordance with the requirements of this standard.

Finally, it is necessary to mention the fact that quality standards are not always a guarantee of quality and work success of the organization.

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[11] Lin, C., Wu, C.: *Managing knowledge contributed by ISO 9001:2000***,** International Journal of Quality & Reliability Management, 2005, str. 980

[12] Terziovski, M., Power, D.: Increasing ISO 9000 certification benefits: a continuous improvement approach**,**International Journal of Quality & Reliability Management, 2007, str. 141-163.

[13] Poksinska,B.,Eklund, J., Dahlgaard, J.: ISO 9001:2000 in small organisations: Lost opportunities, benefits and influencing factors, International Journal of Quality & Reliability Management, 2006, str. 499.

[14] Krakar, Z., Put do poslovne izvrsnosti, Infotrend, 2007

[15] Ibid,

[16] Hawkins, N.:ISO 9001-2000: Implement Your Quality Management System With Minimum Headaches, 2006

HACCP (Hazard Analysis and Critical Control Point)

The HACCP system is legally mandatory in all entities that work with food, which includes the plants of large food industries and smaller facilities that trade in perishable food, such as milk and meat. Furthermore, the HACCP system is one of the conditions required for obtaining an export permit in EU member states, which should be the goal of every ambitious producer. HASSR is an abbreviation of the English words for composition: Hazard Analysis and Critical Control Point, while in translation it would read as: Analysis of danger and control of critical points. The goal is a health-safe product, but with the elimination of analysis and control of the final product, which, apart from significantly increasing costs, also affects the final product itself. As an alternative, the HACCP system is based on the analysis and control of the production processes themselves, which strive to eliminate the potential risks of biological, chemical and physical contamination of food (bacteria, contamination of raw materials, plastics, etc.).[17]

The Food Law defines the requirements for the implementation of the HACCP system, where the seven principles of the HACCP system must also be observed:

- Principle I- Hazard analysis.
- Principle II- Determination of critical control points.
- Principle III- Setting critical limits.
- Principle IV- Setting up a monitoring system for the control of KKT.
- Principle V- Setting corrective measures that are taken when the monitoring shows when a CCT is not under control.
- Principle VI- Setting procedures that the HACCP system is effective.
- Principle VII- Setting up documentation and records for all procedures that correspond to the principles and their application.

In the Republic of N. Macedonia, already in 2002 a law on food safety was adopted.[18] According to the adopted law, its amendment and addition and other by-laws, all food operators (producers and traders) are obliged to implement it from 01.01.2009.

[17] Shenawy, E., Baker, T., Lemak, D.: A meta-analysis of the effect of TQM on competitive advantage, International Journal of Quality & Reliability Management, 2007, str. 450

[18] Сл. Весик на Р. М. Бр. 54/2002), а неговата измена и дополнение е направено во 2007 година (Сл.весник на Р.М бр. 84/2007).

HALAL standard

The word "HALAL" comes from the Arabic language and means permissible, and its principles are based on Islamic teachings. The Halal standard means the production of food and beverages in accordance with Islamic regulations. In 2006, an Agency was established for the first time in the Balkans, which has the opportunity to certify Halal production. The most common application is in the production of food, beverages, in the pharmacy, in the transport sector, catering, tourism and others.

The Halal system includes the following stages:[19]

1. detailed analysis of the organization according to established processes (current state, process holders, responsibilities and powers);
2. development of an operational plan for the implementation of Halal requirements;
3. training of key persons according to processes;
4. realization of the operational plan;
5. production of system documentation;
6. preparation for internal checks;
7. implementation of internal checks;
8. management review;
9. taking corrective and preventive measures in case of revealed inconsistencies in the system;
10. preparation for certification inspection (external).

The global Halal market caters to the needs of around 2 billion people. Consumption is particularly pronounced in the United States and the countries of the Middle East. In Western Europe, the Muslim population is most interested in buying products with a Halal certificate. In Great Britain, out of 6 million consumers, only 2 million are Muslims. It is estimated that each Muslim spends 85 cents on Halal food per day.

It is predicted that in the next ten years, the turnover of Halal food in the EU will increase by 20-25%. The value of the overall market for Halal food in the European market is currently estimated at about 66 billion dollars, while the value of the world market is 634 billion dollars, including meat, fresh and packaged products.

The Halal standard in Macedonia began to be issued in 2010 through the Islamic Religious Community (ICC) and means a guarantee that there are no raw materials prohibited by Islamic principles in the products. Macedonian companies that are export-oriented show great interest in introducing Halal. Unlike HACCP, the introduction of Halal is not a legal obligation. The costs

[19] www.halal.ba

of introducing the Halal system are not high if the organization has already implemented the HACCP system. In the Republic of S.Macedonia, a large number of production organizations are already showing interest in the Halal system, and "Swislion" is among the first to implement it.

Conclusion

The modern approach to achieving quality, viewed as a concept of integral quality assurance, covers the realization of production processes and all work functions, from market research to after-sales service. Achieving quality products/services means planning, designing, producing and selling in the most economical way for long-term customer satisfaction with minimum costs. It can be concluded that the high quality, which is built through loyal customers, contributes to strengthening the market position of the organization, that is, achieving and maintaining its competitive advantage.

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