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## The Strategy of Complex Quality Management in the Conditions of the Competitive Market

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Elżbieta SKRZYPEK

**The Strategy of Complex Quality Management in the Conditions  
of the Competitive Market**

Strategia kompleksowego zarządzania jakością w warunkach konkurencyjnego rynku

STRATEGIES OF QUALITY MANAGEMENT

The literature concerning management divides problems into strategic, tactical and operational ones, while in practice, one usually distinguishes tactical-operational actions, which are connected with the functioning of the system, and strategic ones connected with the system development. A strategy constitutes a definite concepts of activity in a longer period of time, considering the anticipated changes in the environment. The institutional environment of a firm is composed of the following: governmental and non-governmental organizations, capital institutions, deliverers, economic courts, local self-government, customers and competitors. The strategy includes the choice of goals, methods and means aiming at their realization, it strives at the most complete utilization of the company's chances with neutralized threats; it has a creative and dynamic character.

M. I. Ansoff states that more and more often the enterprises will have to face the fast rate of newly appearing phenomena, which he described as a strategic surprise connected with the phenomenon of turbulence (changeability, rotation) of the company's environment, which does not make it easier to run the activity.<sup>1</sup>

In the conditions of the formation of market economy the strategy of the enterprise can have a partial or global character, it can be offensive or defensive.

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<sup>1</sup> H. I. Ansoff: *Zarządzanie strategiczne*, PWE, Warsaw 1985, p. 236.

The strategy of quality is an element of a product-market strategy, the products on the attractiveness of which quality has a significant influence are, according to P. F. Drucker, "feeders of the enterprise".<sup>2</sup>

The experiences of many companies show that the greatest effects are achieved by those firms which direct their activity to quality and full satisfaction of the anticipated needs of the customer. The strategy of quality should comprise the whole life cycle of products, i.e. pre-production, production and post-production spheres. In this respect, one can find useful the papers by H. R. Hausen<sup>3</sup> and W. Schuler<sup>4</sup>. They indicate the significance, role and importance of Quality Function Deployment (QFD), which presents a sort of a concept map marking the manners of a multi-function process of planning and communicating in the whole life cycle of a product. The application of Quality Function, which contains a definite number of diagrams, includes:

- transformation of the customers demands into technical properties,
- transformation of technical properties into components,
- planning of the features of the process and procedure of control,
- determination of production parameters jointly with the planning of assembly and control.

This method provides an opportunity of combining the cooperation of all the departments responsible for the course of developmental work and realization activity. It is regarded to be an important tool of managing through quality, that is a complex treatment of quality. It is orientated on a direct user and group work resulting from practice.

An important role in determining and explaining the customers' demands is also played by a method called "Quality Architecture".<sup>5</sup> It describes the tools which make it possible to plan and carry out the projects in a controlled manner, eg. FMEA. This method comprises specification and definition of the customers' requirements and the activities connected with solving this problem.

The company's strategy in the sphere of quality is determined by inside and outside conditions whose influence can be uni- or many-directional. The following conditions should be distinguished in the strategy of the enterprise in the sphere of quality:

- progress in technique and technology,
- differentiation of the customers' needs,

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<sup>2</sup> P. F. Drucker: *Skuteczne zarządzanie*, PWE, Warsaw 1977, p. 93.

<sup>3</sup> H. R. Hausen: *The House of Quality Unconditional*, A Harvard Business Review Paperback 1991, pp. 65—72.

<sup>4</sup> W. Schuler: *Das grosse Was-Wie-Spiel*, "Qualität und Zuverlässigkeit" 1992, no. 12, 1993, no. 12, 1993, no. 1.

<sup>5</sup> H. Scholen: *Quality Function Deployment*, VDI, H. 11, 1990, pp. 49—51.

- situation on inside and outside market, including internationalization of quality requirements,
- growing competition,
- requirements of environmental protection,
- legislation.

The changes taking place on the European market, which is getting more and more integrated, requires from its participants a fast adjustment to the new conditions. The revolution of quality which has become a fact in the contemporary world forces a definite behaviour on the part of the economic subjects which should help in remaining on the more and more demanding market. This situation requires a definite involvement into planning and introducing of the system of quality assurance.

One of the phenomena of our times is a noticeable increase of the importance of the quality function. Quality is considered an effective weapon against the threat of man and environment. It is generally believed that this is a way of economic and social recovery. Quality is an interdisciplinary notion created on many levels of human activity and including the quality of a product, work and life. Quality is also a state of consciousness of all the participants in the process of formation and maintenance of the proper standard of the features quaranteeing full satisfaction of the customer.

In accordance with the definition of the European Quality Organization, quality is a complex of features and characteristics of a product which determine the ability to satisfy the declared and anticipated needs. The concept of understanding quality as the degree of satisfying the customer's expectations opened the way to success for a lot of firms.

Quality should be total, which means that it should comprise all the functions of the enterprise and the relations between this enterprise and its customers.

Quality in economy must be a strategic goal. Pro-qualitative strategy requires providing it with the properties of absolute necessity in realization of economic goals.

Undertaking quality management is a chance for achieving high efficiency of managing. Quality management together with the system of steering quality integrates all the system of organization in the enterprise focusing it on achieving an optimum level of quality. Steering quality constitutes a system of guiding and coordinating the activities on particular stages of the creation of a product with the aim of improving or maintaining quality on an economically justified level. It should view quality in strategic, tactical and operational aspects. Steering quality should consider the fact that quality is a system process which concerns the whole activity and that it is the basic foundation of economic efficiency.

Quality should be enforced in the whole sphere of the activity of the enterprise and it should take into consideration the needs of the customer and the producer. It has to be realized that quality improvement can be achieved only when the need for quality management is generally felt.

In the countries with a high level of development, quality is the major parameter of competition, besides the price and the promptness it has become the basic factor decisive about the degree of the customers' satisfaction and consequently, about the market success of the producer.

#### THE REQUIREMENT OF QUALITY MANAGEMENT IN THE CONDITIONS OF COMPETITION

In the conditions of market economy, quality management becomes a necessity, which follows from the fact that about 80% of the problems associated with steering quality result from improper management. This is a meaningful exemplification of the superiority of organizational activities over technical-technological equipment.<sup>6</sup> Quality should be a process directed at fulfilling the needs of the customers, its assurance requires systematic, hard and tedious work, and success can only be shared by those who are able to focus on constant cooperation in the trend towards a systematic and uninterrupted improvement. Quality improvement through preventing defectiveness means that the company's participation on the market gets greater and the production costs get lower.<sup>7</sup> The enterprise should have at its disposal such a system of quality which would convince the customer that his requirements will be satisfied. Therefore, satisfaction of the customer's expectations is an important measurement of quality.

Quality management is more and more often perceived of as a sub-system of global management, in this context quality means not only satisfaction of the customer's requirements and expectations but also those of the whole society, deliverers, partners and workers of the enterprise. E. Deming stated that "only those firms will survive till the end of the century which aim at quality, productivity and efficient service of the customer". In the conditions of growing competition the winner will be the one who will find the customer for the products, services or information.

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<sup>6</sup> J. M. Juran, F. M. Gryna: *Jakość, projektowanie, analiza*, WNT, Warsaw 1974.

<sup>7</sup> E. Skrzypek: *Systemy zapewnienia jakości*, PTE Lublin, 1992, parts I, II, 1993, part III.

The need for realization of quality management in enterprises follows from the following conditions:

- the difficulty of entering and surviving on the competitive market,
- greater requirements set for the product,
- more and more common practice of demanding the quality systems supplied with documentary evidence which would guarantee that the products fulfill the customers' expectations.

Competitiveness of products is closely related to the growing demands set for the products and these demands result from the customers' expectations and also from more and more severe legal expectations connected with the security of using the products, health and life protection of the people and the protection of natural environment.

The concentration of the enterprise on fulfilling the changing expectations of the customers means directing the activities on quality. It is necessary to realize that quality cannot be controlled. It is wrong to expect that satisfying the customers' requirements is possible through traditional techniques of steering quality. That is the reason why there is a necessity of having a complex, total look at quality. The enterprise should work out its own model of quality management providing quality with a definite dimension. In this respect, one can find useful the indications contained in the papers by J. S. Oakland<sup>8</sup> and F. Jensen<sup>9</sup>. From the point of view of qualitative success of a firm, the answers to the following questions are crucial:

- who is or is to be our customer,
- what are the customer's demands,
- what is the object of turnover,
- who is our competitor,
- how are we going to cope with the demands.

The Polish enterprises function in a definite environment which is not always friendly so they must work out their own style of quality management related to the environment. One cannot uncritically follow the American, Japanese or European styles possessing their own specific features which cannot be always adapted to the completely different Polish conditions.<sup>10</sup>

The American model is characterized by the fact that the firm acts on the principle "employ and dismiss", which is connected with the

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<sup>8</sup> I. Jensen: *Materiały szkoleniowe*; Danish Technological Institute, Copenhagen 1992.

<sup>9</sup> J. S. Oakland: *Total Quality Management*, Butterworth-Heinemann Ltd., Oxford 1992.

<sup>10</sup> L. Wawilewski: *Modele strategii jakości firm przemysłowych*, IOiZ "ORGMAZ", Warsaw 1994, pp. 37—51.

mobility of the labour market, the dominating position of the owner, developed bureaucracy with its own hierarchy and links. The state of balance is established in the firm with a high level of tensions; new changes are relatively easy, staff fluctuation is considered to be a dynamic factor. J. Juran as a classical representative of the American approach to quality claimed already in the 1960's that 20% of the causes of defects can be ascribed to the workers and 80% to the managing apparatus. E. Deming in his work "Quality, Effectiveness, Competitive Position" of 1982 stated that an American manager has no chance for constructing a system of quality assurance in his firm.

The European model has a traditional and a little bureaucratic character, it is characterized by a strong position of the staff in regulations concerning the rights of trade unions, the state's intervention into the processes of labour market regulations, the staff participates in managing the firm, the employer has a strong position. The balance is fairly stable. The entrepreneur in this model enjoys the position which is appreciated by the owner and the management apparatus. The owner has a less active role as compared with the American model, the staff fluctuation is not treated as a factor dynamic for the firm. The European approach is focused on securing technological discipline in the production process; it often happens that bad quality is attributed to the direct producers.

The Japanese model is characterized by life time employment. The owner gives up the principal attributes of his power such as sovereign decisions referring to the division of profits and exchange of the workers. The principle of stimulus and punishment towards the workers was given up and replaced with a motivational system based on the criterion of the length of employment which determines the salaries. The Japanese firm is balanced and flexible. Its philosophy is that of inner harmony and trust between the partners; changes in organization are constantly introduced, the firm invests into skills and knowledge of the workers considering it an important factor of progress and development. The Japanese strategy consists in the accumulation of a new form of wealth which is knowledge, and in introducing it in the products. Knowledge is regarded as an organized quality of thinking, which is utilized in the process of designing the product and its production and which provides the user with a new value increasing the functionality and utility of the product. In this model, the staff fluctuation is treated as a destructive agent.

Differences in viewing quality in the discussed models of management are grounded in different conditions (infrastructure, organization) of introducing the methods. The model of economic organization can be presented in the form of a quadrangle of its major components, i.e. part-

ners, entrepreneurs, employers and employees), while the differences existing in the relations between them and the activities conducted or given up by the firm makes it possible to understand different approaches to quality in those three basic schools, i.e. American, Japanese and European ones. In the whole world, orientations get changed, new opportunities appear of obtaining new markets and new possibilities of profits.

The Polish model of management must consider the environment in which the enterprises function. This environment is composed of the real subjects, i.e. customers, capital suppliers, competitors, deliverers of goods and services, government and court administration, economic unions and associations and finally local self-government. The enterprise keeps definite relations with these subjects. The problem of quality management paradigm is an extremely important matter. In Poland this problem is still often viewed in the categories of technical control, while in the whole world it means control over the scale of randomness of events in the processes, which is closely correlated with the managing abilities of the bosses and the management systems in firms.

The policy run by the enterprises in the domain of quality is related to the whole of outside factors and the company's inner possibilities. This policy determines the choice of an optimum strategy which can take the following forms <sup>11</sup>:

- supremacy, which means enforcing one's own quality patterns and rejecting the strange ones,
- maintaining equality, which means the formation of one's own competitive quality patterns,
- a chase, that is concentration on the achievement of quality patterns corresponding to the leading foreign ones,
- convergence, which means undertaking the production of goods of considerable convergence with one's own program of production and one's own structure,
- searching for so-called weak and strong points and confronting them with one's own strong potential,
- a critical factor, which means considering what determines success of a product on the market.

The choice of quality policy is closely related to the position of goods of a given firm on the market. The elements of the policy of quality management include the following: market, legislative system, material and technical base, cultural patterns, technical and worker's staff, structures, procedures and techniques of management.

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<sup>11</sup> E. Kindlarski: *Jakość wyrobów*, PWN, Warsaw 1988, p. 108.



The system of quality creation in an enterprise constitutes a set of activities in the sphere of programming and coordinating all the technical, economic, organizational and legislative factors determining the quality of a product and aiming at the quality level of goods which would satisfy the customers' demands in the best possible way. The firm's success is also determined by its position on the market, competition, the situation of production and costs, which are jointly referred to as the critical factors of the firm's success.

A. V. Feigenbaum, who created the concept of complex control over quality indicates that modern quality management enables to achieve effects in five principal spheres of activity which refer to the following:

- the decision of making quality the basic strategic goal,
- transforming the firm's quality strategy onto the customer's demands,
- introducing the necessary activities in the sphere of quality in the whole enterprise,
- management activities in the field of organizational and technical matters,
- motivation in the whole firm, its introduction and measurement.

Quality management is a dynamic and innovative process including the following:

- the culture of universal quality (involvement of the highest administration, the customer's satisfaction, constant improvement, searching for new ways of lowering the costs),
- humanization of the production process,
- promotion of quality consciousness,
- motivation,
- programs of quality improvement,
- general participation of the employed.

#### THE SYSTEM OF QUALITY ASSURANCE AS THE TOOL OF THE STRATEGIC PLAN IN THE ENTERPRISE

In the activity of each firm, human, technical and organizational factors have a cardinal role to play. The system of quality assurance constitutes a specific means of supervision over these factors and this supervision must be supplied with documentary evidence if it is to prevent defectiveness. This is a set of activities directed at the satisfaction of the customers' requirements and formulated in the form of documentary procedures, instructions, quality books which in a compact form

integrate all these activities. The system of quality assurance is characterized by the following:

- it constitutes a tool of dividing and ordering the workers' duties and rights,
- it provides the rules of work and the demands set before the processes,
- it serves the improvement of the inner atmosphere of work,
- it protects the workers against stress,
- it makes it possible to reach the assumed level of quality,
- it guarantees stability of the features,
- it protects against defectiveness and its results.

The system of quality assurance constitutes the foundation of the firm's strategic plan. The most significant element of this system is going away from the way of viewing quality so far as it often meant that the section of quality control was responsible for quality and that quality could be controlled, while the point is that it cannot if it is not produced. Quality should be taken care of in the whole life cycle of products, in all the phases of their creation, i.e. in pre-productive, productive and post-productive spheres. At each stage, quality should be checked and the results provided in a documentary form. This is an important problem because the studies conducted on the behaviour of enterprises prove that the firm's strategic situation is to a big extent related to the life cycle of products which presents the phenomenon of how the product gradually acquires and loses the ability to satisfy the customers' needs. This cycle consists of:

- the phase of product formation: ideas, variants, research, preparation for production,
- the phase of offering the product on the market, the so-called market phase of the product: introduction on the market, growth, satisfaction, growing older.

The growing globalization of products and market causes that this phenomenon should not be viewed only on the native scale but also on the international scale.

The term quality assurance appeared in USA in the middle of the 20th c. It was connected with the introduction of large industrial programs in military, cosmic, air and nuclear sectors. At that time, the aim was set to organize systematic and based on definite methods ways of preventing the causes of defects. The aim was plausible on condition of applying extremely rigorous and strict procedures. Introduction of the systems of quality assurance is necessary in the contemporary world, besides, a number of conditions show that this process will undergo

systematic acceleration. This is proved by six principles worked out by H. Seriey <sup>12</sup>:

- world scale of events,
- reversed relation between supply and demand,
- acceleration of technological events,
- informative revolution,
- changing living conditions,
- complexity,
- necessity of searching for the security of people and goods by means of environmental protection.

The quality system which is well planned, elaborate, supplied with documentary evidence and introduced serves greater credibility of the firm and it should result in lowered costs which are an important problem facing a lot of firms. This system guarantees the proper performance of each operation for the first time, on time and properly each time.<sup>13</sup> Such a system gives certainty of obtaining a product coming up to expectations. Besides, it creates a certain character and a distinct style of management.<sup>14</sup>

According to the definition of a norm ISO 8402 Dictionary of Quality, the quality system is a structure of organization, distribution of responsibility, procedures, processes and resources which enable quality management. Therefore, one can say that it is a specific, ordered set of rules, principles and procedures, regulations and instructions of organizational, administrative, technical and personal character which guarantees efficient activity.

The system of quality assurance is based on a constant choice of factors which determine the quality level of products. Its aim is to secure such conditions which would satisfy the customer's needs in the best possible way. It comprises a broad complex of activities which are realized by the services of marketing, research and development, distribution, post-purchase and guarantee services.

The systems of quality assurance are realized in all the countries with market economy, but the problems of quality steering are not always separated. For example in USA such notions as steering quality, technical control and quality assurance are identified. In Japan on the other hand, these problems are treated as separate ones and steering is treated as control in the process of the creation of a product, quality assurance is regarded as permanent estimation of steering efficiency,

<sup>12</sup> *Jakość paszportem eksportu*, CBJW, AFNOR, Warsaw 1993, p. 4.

<sup>13</sup> E. Skrzypek: *Systemy zapewnienia jakości — doświadczenia przedsiębiorstw*, UMCS, Lublin 1993.

<sup>14</sup> E. Skrzypek: *Zarządzanie przez jakość*, PTE, Lublin 1993.

while technical control is considered to be the selection of good and bad products.

The quality system should be meant to keep the customers and to find the new ones, to improve the discipline of production by way of the right steering of the processes and to improve organization and management, to reduce the costs connected with a lack of quality and also to improve systematically the culture of quality in the enterprise.

The quality system is aimed at determining the organizational conditions of the firm, responsibility, staff qualifications in each sphere of the firm's activity.

The system of quality assurance is based on a constant choice of factors which are decisive about the quality level of the product (articles, services, information). Its aim is to create such conditions which make it possible to satisfy the needs in the best possible way. This is an extremely important problem. P. Drucker, a classic on management sciences, claims that the mission and "to be or not to be" of an enterprise in market economy is orientation on the customer. One of the ways to reach the customer is guaranteeing of the quality which is understood as satisfaction of the declared and anticipated needs of the customer. An authentic care about the customer is an important indicator of efficient functioning of the enterprise.

The mode of the working of the quality system which constitutes a constant choice of qualitative factors is determined by an ordered cluster of goals including the following:

- scientific and technical goals,
- production goals,
- economic goals,
- social goals.

The quality system of an enterprise is related to the goals which are going to be realized, the kind of the produced goods or the services which are rendered as well as to the experience possessed by the enterprise in the sphere of quality. Each enterprise has a certain freedom in the creation of its own, distinct system of quality. It follows from the specific character of each enterprise which is determined by outside and inside conditions, and especially by the financial condition, the technical condition, the state of technology, organization, consciousness of the staff and the administration as well as the atmosphere for quality.

The quality system provides the rules concerning the creation of quality in the enterprise and it is a specific means of overcoming chaos characteristic of complex structures in enterprises through ordering their activity and eliminating their non-ordered organization.

The quality system serves the betterment of the inner culture of the enterprise and the construction of the "culture of changes" which should support the process of restructuring. Its aim is also to achieve the world standards of quality.

#### ISO NORMS AS THE BASIS FOR THE QUALITY SYSTEM

The norms of ISO 9000 contain general conditions and directions for the construction of quality systems. They are of generative character and they can be adapted to the needs of the enterprise. They find ever greater application in the agreements between the enterprises and they are the guarantee for the customers that the deliverers are able to keep the agreements in the field of stable, high quality of products. These norms were accepted by 70 countries and provided an important basis for the creation of quality systems. They were also introduced in Poland in 1993.

These norms were worked out in 1987 by ISO (International Organization for Standardization). The principles and the need for having a global look at the production process in the context of proper quality of the product were presented by Feigenbaum. This concept was developed by M. Juran and E. M. Gryn. It is believed that those works provided an important basis for ISO norms, series 9000. Quality management which has its origin in the American military industry is a well-defined way of management. At the end of the 1980's as the result of the experiences with the norm MIL-Q and the British and Canadian norms, ISO worked out a series of international norms ISO 9000.

It should be emphasized that the norms ISO 9000 are not the only tools of quality assurance. An important role in this respect is also played by the guides ISO/IEC, norms EN, norms ETS, norms ENV, norms HD and others. Besides, on the basis of widely held discussion, for example in "Quality", it can be stated that in quality assurance a big role is also played by quality books, the customers' acknowledgement, the firms' declarations, GMP (Good Manufacturing Practice), ECCC (Electronic Component Certification Community), Malcolm Baldrige Award, Edwards Deming Award and others.

According to the directions of the Council, the norm was defined as a technical specification acknowledged by a recognized organ of normalization for repeated or permanent use whose fulfilment is not obligatory.

It was stated in the introduction to the norm ISO 9000 that the main aim of the activity of an enterprise is the quality of its products and

services. Besides, it was indicated that the basic aims of the enterprise include the following:

- achievement and maintenance of the quality of the manufactured goods or the services so that they should satisfy the customer's needs,
- assurance of trust to the manager about the achievement and maintenance of the quality level,
- assurance of trust to the customer about the achievement of the intended quality in a product or a service.

The ISO norm constitute a reliable basis of quality. They possess the following characteristics:

- the methods recommended by ISO norms and especially their philosophy, are the essence of many years of experience of the best Western firms, they are considered to be a very difficult but safe way of overcoming the economic crisis,
- they have a significant role in creating the technical barriers in trade and export,
- these norms constitute a real factor of promoting the technical progress and the quality of goods, they perform the function of a non-tariff barrier of trade which must be seriously considered,
- they reflect the formation of new, quite different stereotypes and relations between the partners,
- introduction of these norms is a basic condition of realizing the agreements of Poland with EEC, besides, their introduction stimulates the market pressure which is an obvious fact in market economy and which is a certain kind of an alarm system,
- their construction allows all the enterprises to use them independently of the size of the firms and their resources,
- these norms show the aim for the activity of the enterprise, but they do not show how to achieve it. It means that while introducing indications of the norms into practice, they must always be adjusted to the specific character of the enterprise,
- they contain some information but they do not point at the way of solving a problem, they are not a prescription, they are characterized by openness and generality,
- they are a solid basis of quality, they give a guarantee for entering and surviving on the market,
- they sanction the new philosophy of quality,
- they indicate the way in which the producer can design, realize and present a system of quality assurance,
- their aim is to explain the differences and interrelations between the main concepts of quality and to provide some indications about how

to choose and use the further norms in this respect which can be used for the inside quality management or the outside quality assurance,

- these norms can be found useful in contract and non-contract situations and the deliverer always tries to introduce and maintain the quality system which would lead to greater competition on the market and which would make it possible to achieve the required quality with efficient costs,

- they are to determine the basis for a distinct and repeatable system of quality assurance whose realization should be aimed at maximum economic efficiency and satisfaction of the customers' expectations, which is the condition of the latter's trust,

- they treat the principles of quality assurance in a complex manner considering the whole of the functions performed by the enterprise, i.e. marketing, designing, supply, planning, development, control, research, dispatch, installation at the customer's service,

- they constitute the basis for designs and modernization of production processes, optimalization of the organizational structure, removing the factors distracting for the production process, introduction of technological and measurement equipment not only in relation to production but also to wrapping, storing, designating and the procedures concerning defective products,

- they are an efficient weapon in competitive struggle,

- although these are not *vi legis* norms but *vi contractus* ones they become regulators of international exchange of goods and services in a very short time,

- besides satisfying the customer's requirements, the package of norms ISO 9000 fulfil the requirements of cooperation, because the certificate creates a plane of understanding there is a possibility of using the same language which guarantees the conditions of compatibility,

- the norms ISO 9000 are a sort of shock in the enterprise, there is consciousness that the quality control used so far is a dead end,

- according to the decision of the Technical Committee ISO/IEC 176, these norms have the following strategic aims: general acceptance, present compatibility, compatibility in the future and flexibility in the future,

- these norms are completely different from the industrial norms used so far, that is why they are called the third generation norms because they constitute normalized methods of managerial practice.

## TOTAL QUALITY — TQM

In the conditions of a radical change in the attitude to quality and a new approach to its essence, it is necessary to consider the principles of TQM strategy (Total Quality Management) in the system of management. This strategy is defined as a way of the firm's activity enabling to create products or services of a required standard. Complex quality management is a philosophy which is introduced on a broad scale in many enterprises. The aim of global, universal, total and complex quality management is success through the satisfaction of the needs and requirements of the market. It includes the following stages:

- the strategic level comprising: settlement of goals, criteria for the achievement of success, conditions and possibilities of introducing global management,
- settlement of tactical tasks containing quality plans, quality systems, means, activity range, planning and managing of the undertakings,
- the operational level including training, promotion, motivation, estimation and management of particular section.

TQM means a definite culture of organization defined as permanent aspiration to the achievement of the customers' satisfaction through an integrated system of tools, techniques and training. The elements of TQM culture include the following:

- the use of information about quality for the purposes of constant improvement and not control,
- close correlation between authority and responsibility,
- identification and promotion of the effects achieved by the workers and attempts to appreciate each worker's efforts aiming at permanent improvement,
- far reaching feeling of security during work,
- creating the conditions for the atmosphere of honesty and reliability,
- care about just and honest salaries for the workers employed on all the levels of organization,
- creating the conditions for the workers to have their shares in the enterprise.

Complex quality management, according to many authors, is based on E. Deming's<sup>15</sup> qualitative philosophy, and his theses are considered to be the foundations of qualitative revolution.

TQM means coordinated activity, a dynamic process of perfection the aim of which is to orientate the firm to the customers' satisfaction. It

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<sup>15</sup> E. W. Deming: *Quality, Productivity and Competitive Position*, MIT Center Advanced Engineering Study, Cambridge, Massachusetts 1982.



contains a strategy intended above all to satisfy the customers. Besides, the aim of this strategy is to do away with final control and to support inspection over the course of the processes, which means that steering a process does not remove errors but seeks the ways of preventing them. In practice, it is a long-term process which requires determination, self-discipline and endurance. It is believed to be an endless process because in the face of constantly changing inside and outside conditions, improvement has no temporal or material limits. A real increase of efficiency and lowered costs should be the real effects of such conduct.

TQM is a strategy which should result in changes in the whole enterprise with the aim of achieving success which can be realised when this aim is clearly defined with the fixed strategy and defined criteria of measuring the effects. That is why it is important to:

- make an accurate diagnosis of the enterprise,
- lead to the discipline of the administration and the whole personnel,
- search for new ways of quality improvement,
- make a thorough control of the results, provide information about them and give proper motivation to the workers.

The decisions about introducing complex quality management must be made having in mind that an important role in this respect is played by the state of technique and technology, organization, marketing, knowledge of the market, introduced systems of quality assurance worked out on the basis of the norms ISO 9000, the system of communication and others.

The elements of total quality management include:

- agreeing the requirements with the customers,
- knowledge of the bonds between the customer and the deliverer,
- accurate execution of proper actions,
- proper execution of these actions for the first time,
- aspiration to success,
- permanent improvement of quality,
- the leading role of the managers,
- training courses for the workers,
- formation of a system of mutual communication.

Quality management is sometimes identified with long-term investment in people. The enterprise which intends to order its activity on the basis of quality treated in a total manner should be aware of the facts that:

- the process of designing, working out and introducing of the system of total quality must refer to all phases of creation and life of the product,
- the organizational system of the enterprise should function in such a way that it can be submitted to permanent improvement,
- there is a necessity of securing the means which guarantee the introduction of quality understood in a complex way.

In the conditions of increasing competition, understanding the essence of total quality management, its development and introduction is an important factor of market success.

Experiences of the firms which introduced complex quality management show that they achieved definite effects in the form of:

- favourable image of the firm,
- increased flexibility of the enterprise in satisfying the customers' declared and anticipated needs,
- increased efficiency of production and sales,
- noticeable reduction of costs,
- better communication within the enterprise,
- improved organization of work,
- greater satisfaction of the workers and the customers,
- greater culture of the firm.

#### THE NORMS ISO 9000 IN RELATION TO TQM

Designing, working out and introducing the system of quality assurance on the basis of the norms ISO 9000 becomes a necessity in the conditions of growing market competition. These norms constitute an ordered set of requirements which condition introducing the quality system in the enterprise on the basis of one of the models of quality assurance (ISO 9001, 9002, 9003). The system of these norms makes it easier to introduce TQM because they are helpful in solving many problems appearing while introducing TQM.

While the norms ISO 9000 help to work out a system of quality assurance whose existence is acknowledged by the certificate, complex quality management has a much wider range. Complex quality management is understood much more broadly than the systems of quality assurance constructed on the basis of contract norms. It is believed that the norms ISO 9000 and EN 45000 are an important tool in realization and development of TQM.

It follows from the studies carried out by the author in enterprises<sup>16</sup> that the latter feel a necessity to undertake work on the systems of quality assurance. They are also acquainted with the strategy of TQM and they realize that it requires the fulfilment of more conditions than the quality system constructed on the basis of international norms ISO 9000 (EN 29000).

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<sup>16</sup> E. Skrzypek: *Systemy zapewnienia jakości — doświadczenia przedsiębiorstw*, PTE, Lublin 1993; pp. 76—157.

## STRESZCZENIE

W artykule przedstawiono strategię zarządzania jakością, ich istotę, rolę i znaczenie. Wskazano na konieczność zarządzania jakością w warunkach konkurencyjnego rynku, uzasadniono potrzebę realizowania w przedsiębiorstwach systemów zarządzania jakością. Przedstawiono istotę amerykańskiego, europejskiego i japońskiego stylu zarządzania jakością. Wskazano, że system zapewnienia jakości powinien być wiarygodnym narzędziem planu strategicznego przedsiębiorstwa. Pokazano istotę, cechy i znaczenie systemu jakości budowanego na bazie norm ISO 9000. Przedstawiono rolę, znaczenie i przydatność tych norm w praktycznych przedsięwzięciach służących zaprojektowaniu, opracowaniu i wdrożeniu systemów zapewnienia jakości w przedsiębiorstwach. Podkreślono ważną rolę innych, oprócz norm ISO 9000, narzędzi zapewnienia jakości. Przedstawiono ponadto istotę i znaczenie strategii zarządzania przez jakość, określanej jako Total Quality Management (TQM). Wskazano na etapy, elementy (części składowe) oraz znaczenie TQM. Przedstawiono konkretne korzyści, jakie przedsiębiorstwa uzyskiwały wskutek wprowadzenia kompleksowego zarządzania jakością. Wskazano także powiązania występujące między systemami jakości budowanymi na podstawie norm ISO 9000 oraz TQM podkreślając, że systemy jakości stanowią ważne narzędzie realizowania strategii TQM.