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EXCHANGING EXPERIENCES IN THE FIELDS OF CORROSION, MATERIALS AND  
ENVIRONMENTAL PROTECTION

*Razmena iskustava u oblastima korozije, zaštite materijala i životne sredine*

# PROCEEDINGS

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# THE NEED OF MACEDONIAN COMPANIES FOR THE MANAGEMENT OF SUPPLIERS

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## **Abstract**

This paper is an analysis of the situation in Macedonia's 151 companies in terms of the way the company managed effectively and efficiently the suppliers and raw materials and the way it had built business relationships.

Analyzing the results of the survey we come to the conclusion of the need of Macedonian companies for the management of suppliers due to market pressure on the as the main driving force, which will lead to: increasing the ability to work and compete on the market, the need for expansion and maintenance of existing markets, increasing the satisfaction of customers / users, suppliers and improving marketing activities.

Macedonian managers that are struggling with the survival of their business have difficulty to understand trends in management development with suppliers based on the strategy of TQM. The application of this strategy means that the company needs to manage suppliers together to identify problems, optimize inventory, and to reduce recycle waste, to conserve global non-renewable sources.

To achieve sustainable development, Macedonian companies should be exempt from building criteria for selection of suppliers and proactively focus on developing long-term relationships with clients, providing technical support for training to improve processes, product quality and productivity of providers.

**Keywords:** management with suppliers, TQM system, ISO standards, partner relations.

## **Introduction**

Global competitiveness in the world imposes a strong race in the economic progress and new values of civilization between the Far East led by China, on the other side is America and Europe - which lost its leadership. Political turmoil in Europe is not ordinary caprices, but more often a consequence of frequently asked question:

- Where is the European business going?
- What are the potential winners in the global competitiveness race?
- What are the answers to the challenges of Brazil, Russia, India and China (BRIC) in the new era of nanotechnology?
- Globalization is a race in which the new technologies.

The answer is changes in technology and production, in total quality management in acquiring knowledge and skills for knowledge based development.

Introducing a total quality management system should help companies overcome their problems, because according to the requirements of ISO 9001: 2008, not only have to work in a different way but to think in a different way too. It means, reengineering in the companies, a radically new way of thinking and working to improve management of resources, suppliers, equipment.

For many companies the management of suppliers is the first step towards TQM (Total Quality Management), because it will allow the upgrade to ISO 9001:2008 standard with the TQM strategy by improving the quality of organizational processes in terms of: not only the defining, improvement and designing of the process, but also improving productivity and optimizing costs through using quality input materials and building partnerships with suppliers.

In order for the quality system is effective and efficient the suppliers are important as a key link in the design and implementation of TQM system. The procurement of input materials is one of the most important activities for ensuring quality, because the cost of input materials constitutes 50-70% of product cost and quality of incoming materials in large part determines the quality of the finished product. Daily practice of suppliers should not only be the offer a quality product that meets the needs of the client, but they must be more involved in the process of product design and the production process of the client. They need to act preemptively, to be responsible, to correct their mistakes and to amount to any problem relating to the quality that they discover.

### **Management of suppliers**

According Besterfield [1], 40 percent of average production costs refer to costs of raw materials, hence the conclusion follows that the management of suppliers is very important. The quality of the products will depend largely on the quality of materials offered by the supplier, and build partnership with them is necessary. The supplier should be treated as a continuation of the manufacturing process.

The Phillips Company (Filip's Group) was created as long partnership with their suppliers. They created the expression "Comakership" as an expression or a means for their work together toward achieving common goals. "Comakership" is based on the principle that both parties can get more through cooperation rather than separately to realize their interests. The new policy of building partnership relations with suppliers are creating significant changes in behavior, development of plans and procedures for working together with the suppliers, and the suppliers must take full responsibility for their products and not depend on the inspection of their contractor, according to Flood [2].

Many authors [3] share the common opinion of the necessity of building partnerships with suppliers and motivating them for the necessity of fulfilling the expectations of customers, because that relationship will lead to quality results in the production cycle.

According to Kanji and other [4], the building of a partnership between the contractor, and supplier is one of the main qualities of the practice, and the pioneers of quality (Deming, Ishikava, Crosby) believe that the supplier should be an integral part of the organization [5-7].

Juran in his paper at the third International Symposium on Quality in Shanghai, said that there is a universal set of activities that are essential for the quality management, among which is the relationship with suppliers.

At the same congress, Feignebaum [8] proposed ten principles for quality management, and one of them is: "Top quality is achieved by connecting the buyer with the supplier." Quality management depends on: the responsibility of employees, suppliers and customers.

Genna [9] suggests that steps such as: timely delivery and raw materials without defects can greatly improve the quality of the product as "first pad" quality.

Companies (Rank Xerox, TI Rayleigh, Locas, etc.) adopted the "comarkership" approach to partnership relations with suppliers and improve the quality of their products [2].

Toyota and Nissan (Toyota and Nissan) hired specialized consulting groups that should help providers to improve their performance and achieve total quality of its products and services. This assistance was free to them [10].

Easton in their research [11] stated that many applicants for the Baldrige reward started a quality program with their suppliers, gradually spreading the quality movement throughout the delivery chain.

All these scientific findings have pushed an analysis of the situation in Macedonian companies in terms of management with suppliers and business climate and building partnerships with them.

### **Materials and methods**

The analysis in this paper is a segment of the general survey of the current situation in Macedonian companies in the field of design and implementation of quality system, analyzed through the four pillars of the house of quality at which tip is the top management, and at its basics are measurement, evaluation, analysis and comparison of quality /low quality [12]. The house of quality holds four subsystems: internal standards, methods and techniques non-defect work, education and motivation and cost analysis of quality.

The current situation is analyzed through the criteria for getting the European Quality Award: leadership, policy and strategy, management staff, resources, processes, buyer satisfaction /customer, employee satisfaction, impact on society, business results. Macedonian companies were evaluated through these criteria as they competed for the European Quality Award.

Particular attention is paid to the collection of input data in the survey. Studies are done with a questionnaire sheet and custom views of the real situation in Macedonian companies. Analysis of the findings made by the algorithm for evaluating and determining the "age", i.e. the development of Macedonian companies at the pillars of the house of quality (from young and underdeveloped systems to mature and developed system, and in reverse order) and the perception of deviations subsystems of the TQM system, through the symptoms of "health" of the quality system. Pareto analysis is used for frequency analysis and participation of individual responses.

In the research participated 151 Macedonian companies from different economic sectors, and to be more representative the survey accounted for the size of company, headquarters (city) and economic activity to which they belong?

### **Results and discussion**

One of the criteria for receiving the EQA (European Quality Award) is the way the company managed effectively and efficiently with suppliers and raw materials and builds business relationships [12].

Our research pointed to poor cooperation with suppliers, lack of nurturing business relationships, lack of mutual trust and respect and so on.

Asked whether their company requires specification of the quality of incoming materials, only 31% of the surveyed companies are always looking for specifications on the quality of incoming materials, and not only when doubting the quality.

The business partnership between companies and suppliers requires confidence and adequate integration in terms of generating improvements and development of new values.

Asked of the way the supplier of input materials in their company is selected, the data show that the respondents:

- 92% of them, the choice of supplier is made on the basis of quality, delivery date, price and reliability of the material supplied, contradicting the previous answers, where only 31% of them said they always require the specification of material they buy. If the quality of incoming materials is not defined, it cannot be said that good business relations with suppliers exist;
- 8% of respondents said the choice is made on the one that will offer only quality products.

In terms of building cooperation with suppliers, the data suggests:

- 79 respondents, or 52.3%, have reported to have long-term cooperation with suppliers and nurture partnerships with them;
- 34 of them, or 22.5% that providers treat them as a reserve option, building uncertainty and discontinuity in the quality of the business cooperation;
- 27 of them, or 17.9% are in constant search for new suppliers, not taking into account the building good relationships with existing ones, to foster cooperation and to engage in all activities towards the improvement of the business results of the company;
- 11 of them, or 7.3%, they show distrust towards relationships.

The provision of materials and spare parts for the companies is often the main source of problems with quality of products. The quality of the products will depend largely on the quality of materials offered by the supplier, thus building partnership with them is necessary. The supplier should be treated as an introduction to the manufacturing process and many authors all share the common opinion about the necessity of building partnership relations with suppliers as well as their motivation for the necessity of fulfilling the expectations of customers.

Steps such as timely delivery of raw materials without defects, can greatly improve the quality of products as "the first pad" to provide good quality to the end customer and forming teams to improve the quality of its products and services in which the providers of materials are also participating.

To this purpose we analyzed the suppliers of the Macedonian companies in terms of whether if they apply methods and techniques of quality in their companies and if they guarantee the quality they deliver to the customer.

The methods and techniques for providing quality are instruments for implementing activities to improve quality and are an integral part of quality management according to defined policy objectives and responsibilities of the company, and create comparative advantages in the market.

To come to the conclusion whether the suppliers of Macedonian companies have established effective control processes in achieving the defined quality at the lowest cost of operation, the question was asked: What controls the quality of products / services practice?

- 113 suppliers are reported to have quality control;
- 48 suppliers apply linear control;
- 107 of them have 100% control;
- 29 apply statistical process control;
- Providers in 137 suppliers have 5 - 15% of their daily production returned for finishing.

Macedonian companies have unenviable product quality level due to poor management of business processes, ineffective control, with a % of defects even greater than allowed. Technical and technological equipment of Macedonian companies is close to a satisfactory level and to some extent satisfies current requirements of customers /users. The problems stem mainly comes from poorly organized business processes and inability to meet required quality standards.

Here, the same technology creates lower realization business results. The reasons are not only lack in modern technology but also in weak managerial skills of managers, insufficient qualifications and fulfillment of employees, the quality of running the business processes. The linear forms of running the company (in certain stages), are mainly applied, and are known for higher costs of operation.

Due to lack of access to statistical data processing, quality assessment and transfer of information, our companies are facing a lot of problems in the performance of domestic and foreign markets.

## Conclusion

The management of suppliers is an important aspect of TQM (Total Quality Management) philosophy. Providing the materials and spare parts for the companies is often the main source of problems for the quality of products. When building partnerships between companies and suppliers for each activity, there must be criteria for both assessing good results for specific and complicated things, specific solutions, or specific requirements.

Survey do indicate that Macedonian companies depending on their needs, build a formal business relationship with suppliers, without the essential wish build those relationships, to define the obligations and responsibilities to improve quality. Creating formal relationships does not give the desired results because of the poor quality of raw materials, a good quality products are not expected, and therefore do not achieve market advantage and does not meet the requirements of ISO standards.

Analyzing the results of the survey we come to the conclusion of the need of Macedonian companies for the management of suppliers due to market pressure on the as the main driving force, which will lead to: increasing the ability to work and compete on the market, the need for expansion and maintenance of existing markets, increasing the satisfaction of customers / users, suppliers and improving marketing activities.

Lately there are more businessmen and managers of private companies who want to be able to operate with international standards and strategic connections in the West. To maintain the global market, Macedonian companies must make every effort in products / services that are competitive in the market and which most meet and exceed the needs of customers / users.

To achieve sustainable development, Macedonian companies should be exempt from building criteria for selection of suppliers and proactively focus on developing long-term relationships with clients, providing technical support for training to improve processes, product quality and productivity of providers.

The application of TQM strategy in companies in the world means to manage the company's suppliers together to identify problems, optimize inventory, to reduce and recycle waste, to conserve the global non-renewable sources versus the previous case with the design and implementation of ISO 9001 : 2008 standard, where the selection is performed and documented according to specific criteria, activities and other specified requirements arising from the ISO 9001 standard, given in the kind of question.

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