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“LUCIAN BLAGA” UNIVERSITY of SIBIU

Doctoral thesis summary

**Contributions regarding increasing the quality of
motor vehicles' post sale services**

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“Any business should be looked at in terms of final outcome, more specifically from the CUSTOMER`s point of view ... A business` success is not determined by the company, but by the CUSTOMER.”

Peter Drucker

“Treat your every customer as if you were about to lose him!”

Nido R.Qubein

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1. INTRODUCTION

Given the fact that nowadays there is, more than ever, the need to know in detail and to enhance the means to manage both professional and interpersonal relationships, we chose to develop a topicality issue, an issue that generates ongoing challenges, namely the issue of customers relations management by way of ensuring the quality of service offered by the service organization to its customers.

The provision of maintenance services for vehicles is subject to the analyzed area. Such area is of high level of complexity, especially considering how each input measure can directly or indirectly influence customers' satisfaction in different ways.

The strategic goal of the thesis was thus established, namely that of contributing to improving the quality of post-sale services of vehicles, finally selecting the title of the thesis as “Contribution to improving the quality of post-sale services for vehicles”.

The first part of the scientific research focused on studying the vehicle and in what way its features have an impact on the consumer, the ultimate customer. Subsequently, the research was extended to customers, to products and services consumers, by way of analyzing the methods and techniques for assessing customers' satisfaction.

The next stage of the research program was studying the systems for organizing the post-sale services to vehicles. Thus, we identified the development opportunities particular to organizations' activity by improving inter and intra departmental communication and least but not last by creating and implementing the organizational culture necessary for increasing the performance level of knowledge-based organizations.

The ultimate subject of the research was to develop a standard for assessing the quality level of post-sale services of the organization providing repairing services for vehicles, a standard which aims to meet the requirements of automotive manufacturers and the requirements of partner organizations providing repairing services for vehicles.

The outcome of scientific research program provides solutions to organizations interested in improving the knowledge of the current technical-economic environment, in efficient and rational management of human and material resources particular to the automotive industry, in order to increase, in particular, the economic efficiency.

The study involved conducting an interdisciplinary research, the research team envisaging aspects particular to our country, our culture, which were studied from technical-economic perspective in direct correlation with the current European environment.

From an operational perspective, in view of achieving the objectives, the doctoral thesis was divided into four distinct sections nonetheless closely interdependent, approaching in order all four topics of particular importance, namely: quality features particular to vehicles topic, assessing customers' satisfaction topic, internal management of the organization providing services to ensure quality of the services provided to customers topic and assessing the level of quality of post-sale services for vehicles topic.

The four sections mentioned above are defined as follows:

1. Systems and methods for analyzing the quality features of vehicles;
2. Methods and techniques for assessing customers' satisfaction;
3. Organizational systems of post-sale services for vehicles;
4. Generating the assessment standard of the quality level of post-sale services for vehicles.

The topic selected for the herein thesis addresses within the first section the following aspects of general fundamental concepts concerning the quality assurance and management in modern organizations:

- definitions of quality and associated concepts;

- quality features, relations between quality concepts, statistical techniques and methods of control of directly and indirectly measurable features, statistical techniques and methods of control of attributive features (control sheet (p) control sheet (np));
- segmentation of quality features particular to vehicles and their interdependence;
- using statistical control in conjunction with quality features.

The following aspects, related to concepts particular to reliability and maintainability within road automotive industry, were submitted for analysis and development:

- defining reliability indicators in automotive manufacturing industry;
- defining maintainability indicators in automotive manufacturing industry;
- presenting and analyzing practical applications particular to reliability.

In terms of vehicle, during the scientific research program the following aspects related to foreseeable quality features of vehicle systems and subsystems in accordance with tracking procedures of such features were submitted for analysis:

- vehicle structure and technical features of exploiting thereof;
- theoretical basis of vehicles failure;
- global indicators of vehicles quality;
- statistical control of quality and reliability in product reception.

In the second section, which addresses the assessment of customers` satisfaction, the following issues related to methods and techniques for assessing customers` satisfaction were submitted for analysis:

- identifying customers` perceptions on the activity of the organization providing vehicle services. Highlighting the current status of organization`s image on automotive market;
- identifying customers` expectations. Establishing the essential elements for customers` expectations development. Segmentation criteria of automotive market;
- determining the extent to which basic customer requirements are met;
- identify the factors that adversely affect the development of customer-organization relationship and necessary measures to eliminate these factors.

The following issues related to concepts particular to evaluation methods and techniques of customer satisfaction were also submitted for discussion:

- analyzing the contribution to quality improvement through a rigorous reflection of customers` feedback;
- analyzing the temperaments of organization`s staff;
- analyzing the overall satisfaction level for organization`s customer.

The scientific research carried further by analyzing in detail the following issues related to concepts particular to ensuring customers` satisfaction:

- the scientific analysis to ensure overall satisfaction by managing customer relations in automotive industry;
- professional management of customer relations within a knowledge-based organization;
- conclusions on the analysis methods and techniques for assessing customer satisfaction;
- statistical control of product quality and reliability in product reception.

In the third section, which addresses post-sale services organization, the following issues related to organizing systems particular to post-sale services for vehicles were submitted for analysis:

- defining general concepts for quality of services in automotive industry;
- defining and analyzing monitoring indicators particular to the activity of Post-Sale Services department;
- analyzing organizational structure of Post-Sale Services department.

The concepts particular to the activity of Post-Sale Services department for vehicles were researched and analyzed in detail by studying the procedures which are carried through:

- analyzing the service procedures within Post-Sale Services department;
- analyzing the activity of scheduling the vehicles for service in terms of ensuring the procedure quality;
- analyzing the activity of receiving the vehicles in terms of ensuring the procedure quality;
- the role of procedures guidelines and training in ensuring staff training during the service organization;
- analyzing the vehicle repair activity in terms of compliance with the technical provisions of vehicles repairing;
- analyzing the technical verification process and certifying the repairing's quality

The fourth section of the thesis addresses issues related to means of performing the quality assessment of post-sale services which are provided by the organization to its customers, having the scope of identifying an assessment standard of the quality level of post-sale services for vehicle.

The following issues related to assessing the quality of post-sale services were submitted for analysis:

- Concepts particular to the activity of post-sale services department within the organization providing repairing services for vehicles;
- Ensuring the quality of higher education through partnership with employers. The purpose of consolidating the career students and that of employees of the organization providing repairing services for vehicles;
- The importance of direct customer relations within the services organization;
- Standards of assessing the quality of service procedures within the post-sale services department;
- Managing the activity carried out by the Post-Sale Services department within the knowledge-based organization. Analyzing the technical verification process and certifying the repairing's quality;
- Market segmentation during the current economic environment based on quality of the services provided to customers;
- The importance of permanent follow-up of performance indicators.

One of the most important topics in managing the performance level within the organization providing repairing services for vehicles is the cost management.

Therefore, the following issues regarding the concepts particular to cost management were submitted for analysis:

- Identifying the requirements particular to production of items (spare parts) necessary for the manufacture, repair and maintenance of vehicles;
- Particular methods of reducing costs in automotive industry;
- Methods and techniques of cost management within the organization providing repairing services for vehicles.

The intended scope of the research conducted in cost management was to identify methods of disposing NON QUALITY costs.

In view of developing the standard for assessing the quality of the following researches were conducted:

- Management of post-sale services quality for vehicles;
- The influence of QUALITY NON costs on customer satisfaction;
- Scientific analysis of the competitive advantages offered by Japanese management systems;
- Analysis of Toyota - TPS production systems;
- Scientific analysis of the competitive advantages offered by Toyota production system;
- Analysis of the standard for assessing the level of quality for post-sale services provided to customers.

Given the scope established as early as electing the research topic, the doctoral thesis

summarizes the means that the services organization can manage its activity, mainly the activity of the organization providing maintenance and repairing service for vehicles, thus contributing to the increase of the post-sale services quality for vehicle and to improve the management of customer relations of the service organizations.

The final conclusion obtained following the scientific research is that ensuring customer satisfaction together with customer service quality by service organizations are the two key elements that underpin progress organizations.

The first Section is mainly aimed at *analyzing the systems and methods for studying the quality features of vehicles*. The motto selected for this section was enunciated by Vernon Sanders Law: “*Experience is a hard teacher because she gives the test first, the lesson afterwards*”

Permanent knowledge of the requirements and expectations of internal and external customers of the service organization, anticipating their evolution in time, together with analyzing, establishing and continuous adjustment of the strategy necessary to satisfy these expectations, by ensuring the estimated profit, guarantees the achievement, maintenance and improvement of the performance level of knowledge-based organization, from both qualitative and quantitative point of view.

The service industry whose business scope is vehicle repairing, the changes` dynamic is extremely high. Thus, without a well-defined assurance activity to support the introduction of new products on market, the sale itself and especially the image of products on market, can in fact be endangered.¹

The issue related to the establishment and development of analytical systems and methods of vehicles quality features was submitted to research and for detailed analysis. Vehicle manufacturers must redefine the criteria particular to measuring vehicles quality in direct connection with the concepts of the modern era. Today, more than ever, the automotive industry makes the difference between products and services in terms of quality thereof and last but not least in terms of informing the customer with respect to such.

As pointed out in the scholarly literature, “the customers` expectations regarding those who provide services are clear. Customers want services to look good, be responsible, inspire safety, be empathetic and more than anything - to be trustworthy”. The consumers want companies to do what they say they will do.²

According to Kaizen`s principles, organizations` members must not take over, render or give away a failing product or service. Should an error occur, one must prevent it and stop it immediately.

Upon analyzing the current economic environment, one may see certain particular characteristics of markets and customers in the automotive industry products and services, as highlighted in Figure 1.1:

- the products and services have already become comparable;
- the product`s life cycle is increasingly smaller;
- the services intervals are increasingly higher.

The differences are mainly given by the integrated solution provided by each manufacturer with its representatives on field. Thus, it is clear that we must turn our attention towards post-sale services area in order to exploit all available resources. Considering the particularities of vehicle repairing business, customer care should be a top priority of companies` policies.

Failure to meet such goal triggers the failure to develop long-term relationships with customers.

¹ Oprean, C., Titu, M., Grecu, D., *Study regarding the importance of the activity of training in quality management within the department of post-sale services in the knowledge-based organization*, 5th Balkan Region Conference on Engineering Education & 2nd International Conference on Engineering and Business Education ©2009 LBUS, Sibiu, Romania, 15 - 17 October, 2009, ISI.

² Sevel , C., Brown, P., *Customers for life*, Editura Publica, Bucharest, Romania, (2009)

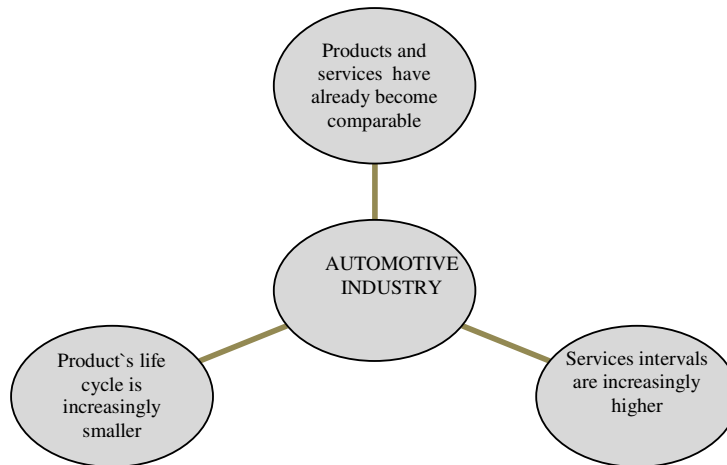


Figure 1.1 The characteristics of automotive industry

The quality management system was introduced to ensure all conditions necessary for solving in the shortest time possible, with maximum efficiency all customer requests and complaints.

“Empathy” is the keyword, which must be present in the way of thinking of all company’s employees, whether working in management, at the reception desk, in the workshop or in the spare parts supply department. All customers` complaints/claims should be treated with the utmost care, representing genuine sources of performance improvement.³

The second section is mainly aimed at *identifying and detailed analysis of methods and techniques for assessing customers` satisfaction*. For this section I chose the motto enunciated by Nido R. Qubein: “*Treat every customer as if you were about to lose him!*”

The knowledge-based organization must adopt a policy on quality which answers the following questions:

- why is customer satisfaction important to the organization?
- what is the level of involvement of the organization's management to ensure customer satisfaction?
- is the management liable for customer satisfaction?
- what is the concept of quality customer relationship for the organization?
- Which are the basic principles of the organization's customer satisfaction?

Both investors and employees of the organization want to achieve success, regardless if it is personal, financial or professional. The ultimate scope of a business is to gain profit by ensuring the satisfaction of organization`s customer. There are many people who make the mistake of believing that the only scope of a business is to earn more money. The members of the organization must act so that customers pay for the services or products provided by the organization with pleasure, having been convinced that they obtained what they wanted, or even more than they had expected, for a more than honorable price. Any successful business must primarily aim to customer satisfaction, the profit motive will come as a reward for the successful achievement of such aim. In business one knows the concept according to which the customer is always right and that business success depends on customer`s satisfaction.

³ Țițu, M., Oprean, C., Grecu, D., Tănăsescu Cristina, *Studies and Research on Customer Complaint Management in the Activities of Post Sale Services within the Knowledge - Based Organization*, In: Proceedings of the 5th Balkan Region Conference on Engineering Education & 2nd International Conference on Engineering and Business Education, 15 - 17 October, 2009, pages 459 - 464, ISBN 978-973-739-848-2, ISSN 1843-6730, LBUS, Sibiu, Romania, 2009, ISI.

The conclusion is that in order to know what customers really want one must receive the opinion of each customer, on periodical basis, on how the organization succeeds or fails to meet their expectations. Thus, one can permanently improve the quality of the product and the customer services so that they can be satisfied.

In selling products or services there are two key dimensions: macro size which refers to the big picture and micro size which covers all current details about each situation. This can easily translate to effective management of customer satisfaction level on services provided by the organization or the sold products.⁴ Most organizations consider customer satisfaction managed by a separate department, such as a customer complaints center management similar to the one pictured in Figure 1.2. It is quite hard to believe that such department or team, as separate entity, can ensure customer satisfaction without the support of other departments within the service organization.



Figure 1.2. Customers call center

However, managing a situation which led to customer dissatisfaction can take hours or even days, especially when the work is done by phone call, meetings or by transfer of documents according to which an answer is requested and expected from other departments (service, sales, purchasing). In all cases communication is insufficient.

The key to successful customer relations management is to identify solutions that ensure rapid exchange of information within the organization so that customers immediately receive not only a favorable response but also the expected solution to the request brought to the organization's attention. The organization must constantly redefine criteria particular to measuring customer's satisfaction in direct connection to the concepts of the modern era.

Permanent and continuous identification of the requirements and expectations of internal and external customers of the organization, forecasting their evolution in time, along with the integration of this information in the strategy aimed for meeting these expectations, will ensure the long-term partnership based on trust and mutual respect between the organization and its customers, building, at the same time, their loyalty.

In the current economic environment, the business of vehicle repair service providers is strongly influenced by the level of customers' satisfaction that the organization succeeds in building it and forwarding it to the customer. Without happy customers the organization cannot build and sustain a long-term partnership with the customer which is why an *integrated* quality management system must be implemented within the organization.

This management system helps to ensure all the conditions necessary to solve in the shortest time possible and with maximum efficiency all requests and failures raised by customers.

⁴ Nido R. Qubein, *How to Be a Great Sales Professional*, Curtea Veche Publisher, Bucharest, 2010

The challenge which forms the basis for building the partnership between the organization and its customers is that of always having empathy towards the customer, assuming that all customers` complaints should be treated with the utmost care, such representing the actual sources of improvement in service organization⁵.

The third section 3 is mainly aimed at *identifying and analyzing in detail the organization systems of post-sale services for vehicles*. The motto selected for this section was enunciated by the Chinese philosopher Confucius: “*If what is said is not what is meant, then what must be done remains undone*”. In general, due to its complexity, the business is unpredictable. Thus, the organizations` management is increasingly often put in the position to rapidly decide, under risky circumstances, in order to cope with the dynamic of these unpredictable changes.

The most important purpose of any service organization is that of meeting their customers` needs, while gaining the estimated profit. It is of great importance, particularly in the automotive industry, namely both the vehicles manufacturing industry and automotive repair service industry, the management of ensuring the customers` satisfaction. Information is the key to success in any business and organizing a company without having actual market information may generate confusion with serious consequences for the organization. In order to always be aware of what our customers really want we must follow each customer's perception of how the organization meets their requirements.



Fig. 1.3 Organization`s success keys

Source: <http://www.project-management-software.biz>, 10.09.2012

Customers feed-back on the services they received within the organization should be considered very carefully as they are the real sources of information for improving the business of service organization. Organization must be very dynamic as this continuous competition will generate important changes on the market. In this context, only the best of the best will be able to survive and the good news is that this process will lead to the quality improvement of the services and products provided to customers. Given the current competitive environment, proper management of the customer communication process is important in order to ensure long-term partnership with customers. Customer satisfaction is difficult to obtain without ensuring the quality of all procedures taking place within the service organization and ensuring the quality of these procedures is not possible without an adequate management. Should we apply in the area of

⁵ Țițu, M., Oprean, C., Grecu, D., Tănăsescu Cristina, *Studies and Research on Customer Complaint Management in the Activities of Post Sale Services within the Knowledge - Based Organization*, In: Proceedings of the 5th Balkan Region Conference on Engineering Education & 2nd International Conference on Engineering and Business Education, 15 - 17 October, 2009, pages 459 - 464, ISBN 978-973-739-848-2, ISSN 1843-6730, LBUS, Sibiu, Romania, 2009, ISI.

providing maintenance and repairing services, the concept according to which “*one cannot drive into the future with autopilot option on*”, we cannot move forward without knowing the actual needs of our customers and their opinion about the services provided by the organization. The winners will be the organizations which both in exponential times of economic expansion and in times of economic crisis were and remain focused on customer relations, on the partnership with customers in direct connection with identifying new business opportunities.

Scientific research aims to bring to the fore, together with the company's strategic planning based on sustainable principles, several communication methods and techniques to help the organizations which have implemented a quality management system to obtain competitive advantage for their products and services. External communication with the customer, along with internal communication between organization's departments must be conducted in impeccable conditions. Successful management of customer complaints ensures optimal performance of the partnership with the customer but customer satisfaction is hard to achieve without permanent quality assurance of services.

Modern organizations based on the principles of sustainable development must provide employee training in the specific field of activity, in performance management field, in communication skills, both inside and outside the organization.

The scientific research defines some of the situations that can be applied to the results of researches made as of present date with respect to the rules that govern the thinking and action ways of members of the service organization. In conclusion, *the employees of the organization must step out from behind the computers and actually meet the customers*, both internal customers and external customer, in order to establish and develop close cooperation relations.

The forth section has as main subject matter *the development of a standard for assessing the level of quality of post-sale services for vehicles*. For this section I chose Peter Drucker's motto: “*Any business should be looked at in terms of final outcome, more specifically from the CUSTOMER's point of view ... A business' success is not determined by the company, but by the CUSTOMER.*” Given the particular activity in the automotive industry, the concept, according to which products and services are differentiated by mainly referring to *their quality*,⁶ emerges more obviously.

Thus, in the repairing service industry for vehicle, the organizations performance monitoring, the identification and management of performance indicators are important. The new strategies and action plans must be carefully balanced to ensure partnership with customers (Figure 1.4) and must also provide the ability for organizations to rapidly respond to the changes which occur on the overall – competitive market.



Fig. 1.4 Customer orientation

Source: <http://touchbaseblog.com/wp-content>, 07.02.2013

⁶ Țițu, M., Oprean, C., Grecu, D., *Managing the Activity of the After Sales Departments in an Organization Which Has Implemented a System of Quality Management*, In: Proceedings of The 7th International Conference of the Management of Technological Changes, code 571, 4 pages, 2011, Alexandroupolis, Greece, ISI.

In the current economic environment, especially in automotive service industry, there were significant cutbacks in the amount of activity and therefore significant decreases of revenue from the sale of vehicles, the sale of spare parts and services. This situation requires immediate action in order to drastically reduce costs⁷.



Fig. 1.5 Partnership between employers and higher education institutions

Source: <http://www.crucial.ro>, 17.01.2013

The scientific research has identified, analyzed and concluded upon new ways to reduce costs which can be successfully applied in the automotive service industry. Along with the measures to be implemented in order to increase the turnover, ensuring the customer relationship stability is extremely important especially in cases where the organization failed to meet customer's expectations.

The management of higher education institutions must focus their attention primarily on analyzing the employers' perception of the applied practical preparation level of high education graduates.

Successful management of the partnership between higher education institutions and employers (Figure 1.5) ensures the adaptation and at the same time the improvement of the curriculum necessary to the development of scientific research towards the applied research, in direct connection with the needs of employing organizations. The enrollment of organizations' employees in post-graduate studies programs organized within higher education institutions can also be ensured. Depending on their skills, the students must be guided as early as their first years of higher education studies so that they manage to select the right specialization and at the same time the work place that they really want to obtain subsequent to graduation.

The evolution of graduates within the employing companies demonstrate the capability of higher education institutions to provide comprehensive and competitive training programs in strict accordance with the requirements of the labor market⁸.

The situations in which the resources of higher education institutions as well as students' resources are wasted are not rare, due to the fact that they do not have a vision of what they want to do post-graduation, the students select fields of activity which, several years later, fail to meet their expectations or for which they do not have the skills and thus waive the school years already covered in order to reorient towards other specializations.

⁷ Oprean, C., Țițu, M., Grecu, D., *Studies and Research on the Possibility of Cost Reduction within the Knowledge-based Organizations in the European Car Industry*, In: Proceedings of the International MultiConference of Engineers and Computer Scientists 2011, IAENG International Conference on Industrial Engineering (ICINDE'11), Hong Kong.

⁸ Țițu, M., Oprean, C., Grecu, D., Tănăsescu Cristina, *Life after Graduation: The Role of Hiring Graduates and Follow up Systems for the Continuous Development of Education Plans and for Improving Quality in the Higher Education*, In: Proceedings of the International MultiConference of Engineers and Computer Scientists 2011, IAENG International Conference on Industrial Engineering (ICINDE'11), Hong Kong, registration number IMECS2011_1291293477, ICINDE_100, 5 pages, ISBN 978-988-18210-3-4, 2011, ISI.

In order to ensure the ongoing quality of learning process and adaptability to current curriculum, the higher education institutions must continuously monitor the impact of evolutionary trends related to the labor market and government programs for graduates.

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2. ESSENTIAL CONCEPTS WITH RESPECT TO ENSURING AND MANAGING THE QUALITY IN MODERN ORGANIZATIONS

The main subject matter of the second chapter of this thesis is to create an ensemble image of quality management in service organizations in the current environment. Therefore, the chapter includes quality definitions and concepts related to quality products and service, the existing connections between concepts of quality being observed and analyzed. The next subject matter was to present an overview of quality features particular to modern era vehicles. In order to accomplish

such concepts of reliability and maintainability of vehicles have been considered, these concepts being subsequently correlated with the requirements particular to automotive industry.

The research presented concepts particular to vehicles structure and their technical qualities of exploitation along with the methods for testing the vehicles qualities features. The end of the chapter presents conclusions on the vehicles qualities features.

The result of the scientific research program provides solutions to organizations interested in improving the knowledge of the current technical-economic context, efficient and rational management of material resources and human resources particular to automotive industry, in order to enhance economic efficiency.

The study included conducting an interdisciplinary research, the research team considering aspects particular to our country, our culture, studied in terms of technical – economic perspective in direct correlation with the current European context.

3. SYSTEMS, METHODS AND TECHNIQUES IN QUALITY MANAGEMENT WITHIN THE KNOWLEDGE BASED ORGANIZATION AND MANAGEMENT

The subject matter of the third chapter is to identify, analyze and present specific concepts to ensure the satisfaction of the knowledge-based organization`s customers.

This chapter presents the concept of continuous improvement in direct correlation with the quality cost management of the organization providing maintenance services for vehicles. The main presented concepts are: Kaizen, Quality Circles, Deming's Cycle, Suggestions System, Just - in - time concept, “Quality Function Deployment” method, Analysis of Effects and Criticalities Failure Means (AECFM).

Starting with identifying the level of customer satisfaction of organization on post-sale services, the ways in which members of the service organizations can efficiently ensure customer relations management have been submitted to identification and analysis.

Due to *cognitive dissonance*, the way we, as individuals, relate to new situations that constantly occur can sometimes be completely different and what is extremely important, how we behave can sometimes be wrongly perceived by the customer even if the intentions are focused on meeting the customer needs.

In order to ensure the operational objective of this chapter, monitoring the level of customer satisfaction in post-Sale Service department was conducted by *direct observation* and by analyzing the database obtained by contacting customer on phone subsequent to purchasing the products or services based on standard questionnaires.

In addition, the team also used other techniques among which Brainstorming and the 5 technical question of “Why?”. Besides the techniques mentioned in the study other two tools particular to strategic management were used, i.e. STEP and SWOT analysis.

Figure 3.1 is the graphic representation of customers` perception of the overall level of satisfaction on the services provided by the organization (based on questionnaire analysis).

The scientific research provides the organization`s management with the opportunity to be informed in detail about the work done in the post-sale service department and to generate information needed to analyze and establish measures to be implemented in order to increase customer satisfaction.

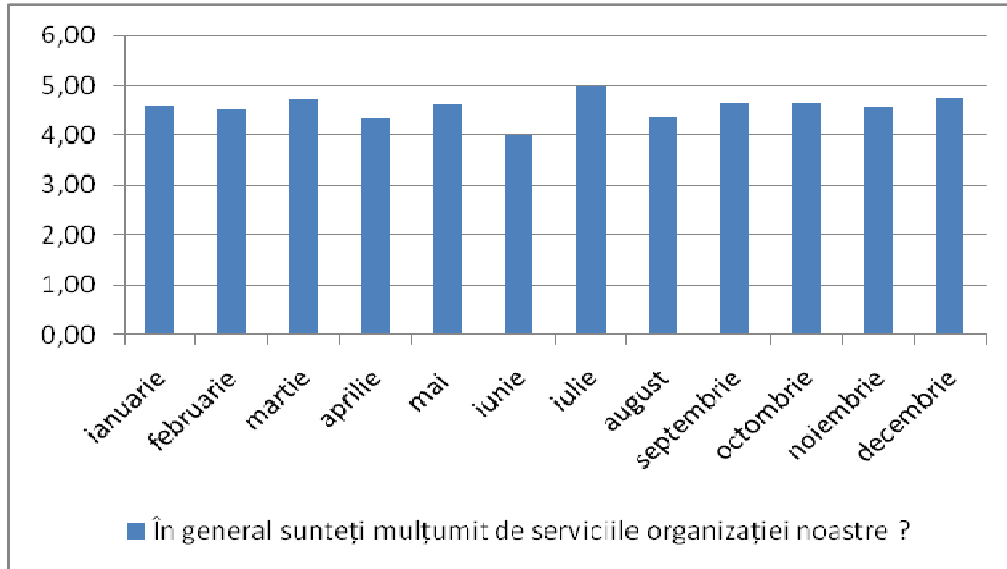


Fig. 3.1 Overall analysis of the customer satisfaction level

Figure 3.2 is the graphical representation of the analysis` result of the customer satisfaction level obtained by telephone survey.

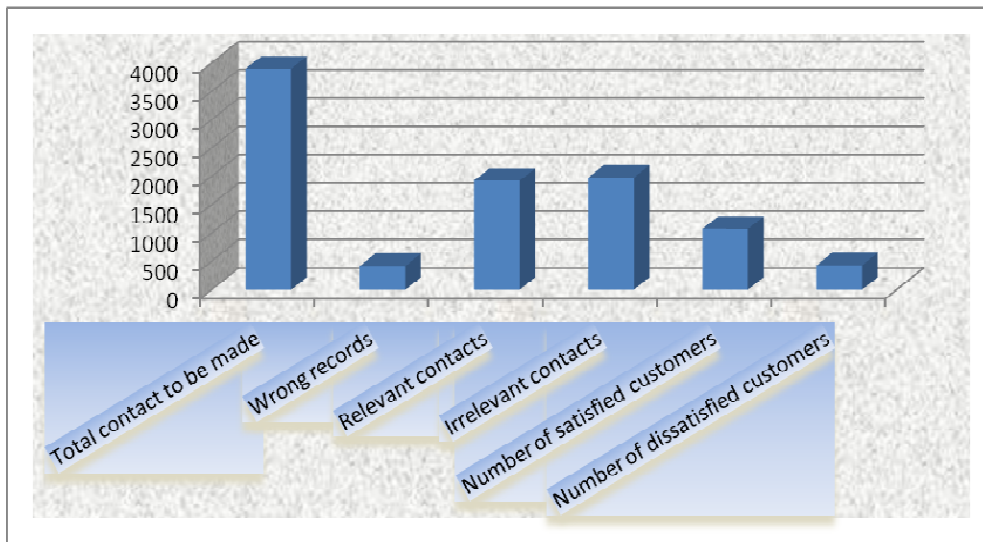


Fig. 3.2 Analysis of feedback on customer contacts

Source: Oprean, C., Țițu, M., Grecu, D., *Identifying the requirements of customers in knowledge-based organization*, Cluj-Napoca, Romania, 17-19 March, 2011

Each employee and also the entire team is responsible for providing quality customer service. The responsibility does not fall on only those who come into direct contact with the customer. In order to ensure that the situations generated by the customer complaints are rigorously managed and lead to excellent results, the employees who discuss with customers must possess strong knowledge of communication techniques. In order to identify a tool which supports the organization to reach the objective of obtaining and ensuring customer satisfaction an applied study on temperaments identification is presented.

The temperament, means the dynamic-energetic side of personality based on the emergence and development of individual behavior. There are four types of temperaments (Fig. 3.3):

- sanguine temperament
- choleric temperament
- phlegmatic temperament
- melancholic temperament

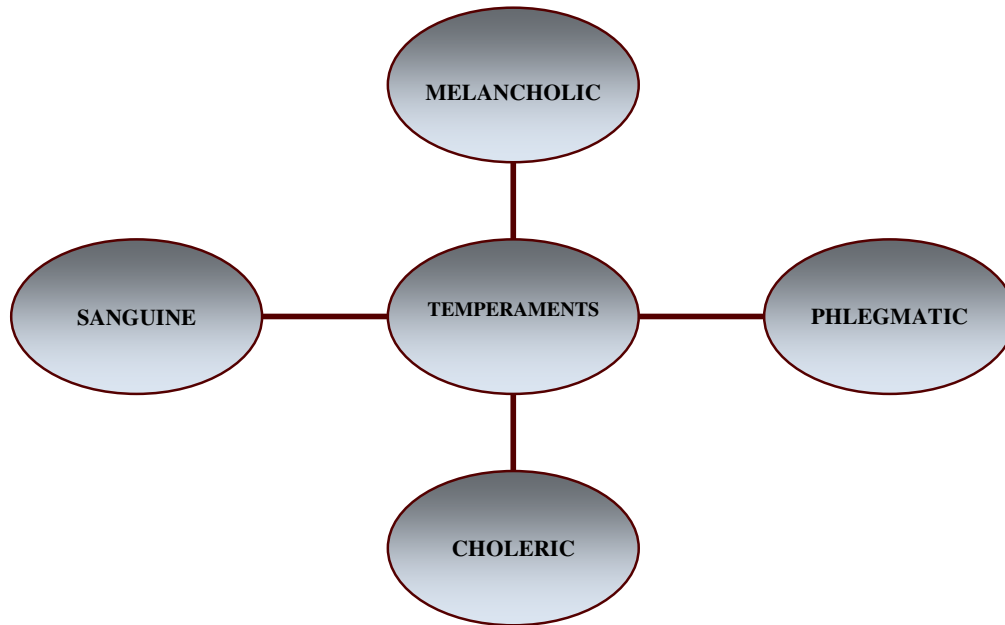


Fig. 3.3 TYPES OF TEMPERAMENTS

Source: Oprean, C., Țițu, M., Grecu, D., *The influence of the temperaments on the performance level in the knowledge-based organizations which implemented a quality management system*, In: Proceedings of the 6th International Seminar Quality Management in Higher Education – QMHE 2010, code 476, 4 pages, Book II, pag. 199-202, ISBN 978-973-662-566-4, Tulcea, 2010, ISI

The tool can be used by members of the organization for both internal and external customers. The organization's strategy must ensure customer's satisfaction and should not focus only on product or service. Local and national understanding of cultural differences is important to succeed in any market as a wrong approach can lead to the appearance of a negative impact on the image of the organization because only the satisfied customers can ensure the organization's market leading quality in the future.

Knowledge Organization

The organization is a group of people working together in their own organizational structure to achieve common goals in order to obtain a product or service intended for a customer.⁹ Innovative organization focuses its entire activity towards the customer and role of knowledge-based organization is to protect and ensure the integration of specialized knowledge. The main procedures particular to knowledge management are:

- assessing the knowledge;
- forecasting the needs and the sources of knowledge;
- obtaining the knowledge necessary for the development of the organization;

⁹ Oprean, C., Țițu, M. *Quality management in knowledge-based organisation and economy*, AGIR Publisher, ISBN 978-973-720-167-6, Bucharest, 2008

- managing, using and developing the knowledge;
- capitalizing the knowledge.

The knowledge organization is an organization that effectively uses both human knowledge as well as developing technology based knowledge. The strategy of the knowledge-based organization aims primarily at innovation. Knowledge is the organization's most important strategic resource while learning is organization's most important capacity¹⁰.

Overall customer satisfaction

The concept of “customer care” is directly correlated with customer satisfaction, based on the objective of continuously making the customer first, anticipating his needs and desires, resulting in shaping services and products to meet their needs. Such shaping includes all internal and external procedures such as: vehicle service procedure, spare parts delivery procedure, external communication/networking (employee - customer) procedure as well as internal communication/networking (employee - team - senior management) procedure.

Customer satisfaction is a performance indicator that differentiates and positions knowledge based organization in relation to other competing organizations being influenced by the needs, desires, goals and culture of each individual. Overall customer satisfaction is an indicator that measures the extent to which an organization's products and services meet or exceed customer expectations. Mathematically, the overall customer satisfaction can be defined as follows:

$$Ocs = Efl / El, \quad (3.1)$$

where: *Ocs* means overall customer satisfaction;

Efl - customer expectations fulfillment level;

El - customer expectations level.

In order to ensure the accomplishment of the organization's objectives, this indicator should not be less than an unit. Customer satisfaction can be defined as an indicator that measures the feeling of satisfaction that customers get from an interaction with internal and external factors of the service organization, based on comparing the customer expectations with the evaluated service or product. Overall customer satisfaction is in fact a psychological state of the customer, which is automatically generated by the emotion associated to the confirmation or information of customers' expectations. Thus, the overall customer satisfaction can also be expressed depending on the customer expectations fulfillment level related to customer expectations level that they perceive:

$$Ocs = f(Cpl - El) \quad (3.2)$$

where: *Ocs* means overall customer satisfaction;

Cpl - customer perceived level on customer expectations performance;

El - customer expectations level.

In turn, the customer perceived level on customer expectations performance can be expressed depending on several factors which are dependent on procedures shaping within the service organization:

$$Cpl = f(Sql, Cql, Ecl, Tl) \quad (3.3)$$

where: *Cpl* means the customer perceived level on customer expectations performance;

Sql – quality level particular to service procedures management;

Cql - quality level particular to communication of organization's members with the customer;

Ecl - empathy, care level delivered to the customer;

Tl - time spent by members of the organization to complete service interventions;

The quality level particular to service procedures management comprises the quality level

¹⁰ Oprean, C., Țițu, M. *Managementul calității în economia și organizația bazate pe cunoștințe*, Editura AGIR, ISBN 978-973-720-167-6, București, 2008

for each process, starting with the moment of scheduling services works and ending with contacting the customer to identify the perceived level of satisfaction about the services they received in the service organization. Given the above definitions we can say that overall customer satisfaction is:

- an emotional response associated with certain services or products purchased by customers;
- an emotional response caused by a cognitive evaluative process in which customer perceptions or beliefs about services or products, certain actions taken by members of the organization or certain situations are compared with customer`s personal values expectations, needs and desires;
- an affective and cognitive response that is based on service or product evaluation, assessing consumer experience and attributes which are related to procurement processes;

Overall customer satisfaction is manifested:

- prior to receiving the service or purchased product;
- after the customer purchases the desired product or service;
- during the course of the purchase procedure of the desired product or service;
- whenever the customer is requested feedback on the acquisition of the desired product or service.

Overall satisfaction has a direct influence upon the customers` return intentions in order to purchase further products and services. In the activity of managing customers` relations, the customers who became loyal to the organization have a significant part, those who have chosen to stand by the organization each year using its products and services. Effective management of loyal customers` relations, those who are true partners of the organization, generates a substantial profit compared with customers who are not related to the organization. Organization partners should feel comfortable whenever they interact with the organization.

4. ORGANIZING SYSTEMS OF POST-SALE SERVICE FOR VEHICLES

The main subject matter of the forth chapter is to identify, analyze and present organizational systems for the post-sale services for vehicles in the organization providing maintenance services for vehicles.

The first part of this chapter comprises general concepts on organization quality of post-sale service department and concepts related quality organization, with strategic organizational role after sales service department. As main activity, ensuring the quality of service procedures within post-sale service department is based on analysis of the current status related to the implementation of “service” procedures in the knowledge-based organization. Ensuring the quality of decision making process is also an important activity for ensuring continuous quality and improvement of service procedures. In an organization providing repairing service for vehicles, it is of high importance the building of a long-term strategy based on developing and strengthening partnership with customers.

In the current economic environment it is obvious that almost every organization faces difficulty choosing the most effective ways to improve their operations and their representatives should be extremely cautious as short term cost reduction can lead to a “long” suffering.¹¹ In the process of strategic planning, the management process, which is based on management functions, has an important part to ensure achieving, maintaining and improving planning performance.

¹¹ *** Revista CAPITAL, *Decisions that make your customers go away*, pag. 65-66, Ringier Romania, Bucharest, Romania (2009)

The management comprises all the steps that must be taken by a manager to achieve the assumed objective¹². In current circumstances we must give up the reactive management and proactively act on permanent basis in order to exploit our managerial function of forecast.

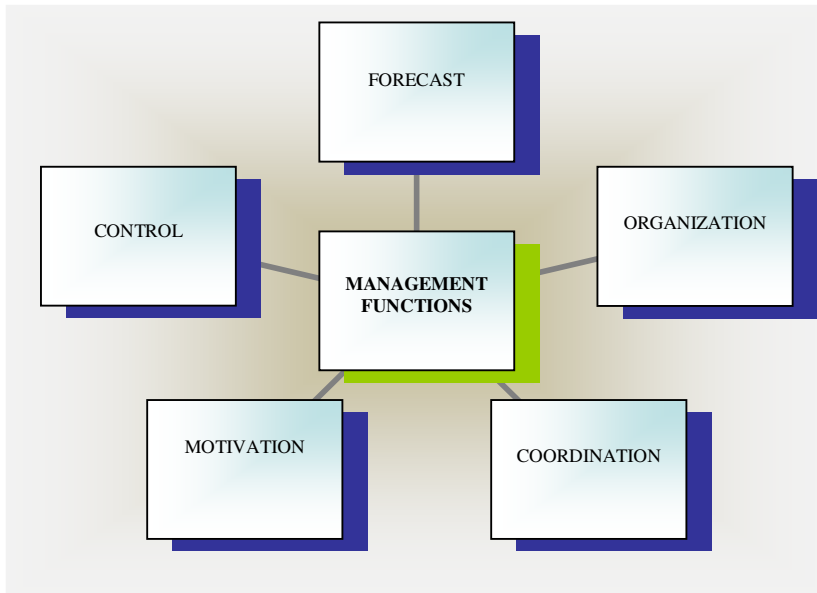


Fig. 4.1 Management functions

Within an organization providing repairing services for vehicles which has implemented a quality management system, the work is carried out based on its own internal legislative system. The analysis identified a structural standard of the legislative system for the service organization¹³, as pictured by figure 4.2.



Fig. 4.2 Organization`s legislative system

¹² Nicolescu, O., *Management systems, methods and techniques for organization*, Editura Economică, Bucharest, 2000.
¹³ Țițu, M., Oprean, C., Grecu, D., *Managing the Activity of the After Sales Departments in an Organization Which Has Implemented a System of Quality Management*, In: Proceedings of The 7th International Conference of the Management of Technological Changes, code 571, 4 pages, 2011, Alexandroupolis, Greece, ISI.

The working procedures refer to the controlled documents that describe the processes. They define a set of actions, tasks and responsibilities in chronological order, which take place within the organization in order to achieve the objectives set forth by the organization's management.

The work instructions refer to the controlled documents of the Quality Management System that ensures the planned development of the activities which affect the quality of rendered services. *Communications* mean internal informative documents which transmit information to employees or temporary tasks and effective immediately.

The internal notes refer to the documents which regulate or generate changes in work procedures, in work instructions. *The internal rules* of the organization refer to a set of internal laws which ensures its proper operation and also provides the exercise of organizational, monitoring and control management functions.

The organization's policies refer to statements of organization's management under which the decisions, based on which the organization is run, are made. The analysis indicated that the organization's policies are structured in several directions of strategic action as shown in Figure 4.3.

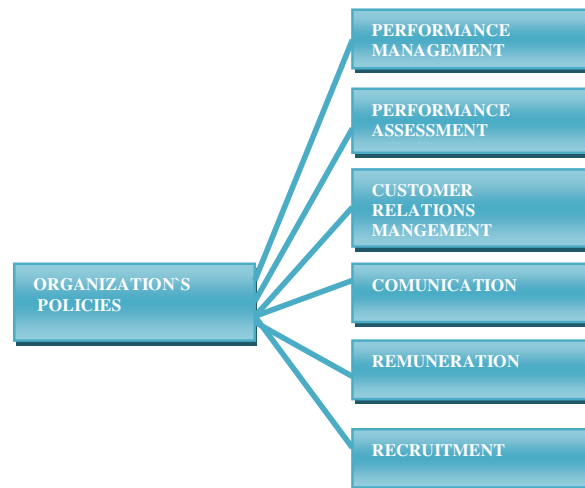


Fig. 4.3 Organization's policies

An organization, should it fails to implement a well-defined legal legislative system, it cannot have ongoing performance, the organization thus becoming vulnerable to pressure from both the external environment and the internal environment. Should a legislative system is implemented, the management ensures that all decisions and measures established are efficiently implemented in order to accomplish the objectives set forth by the organization's shareholders.

The research analyzed the service procedures which take place within an organization providing repairing services for vehicles¹⁴. In order to maintain control of all procedures particular to vehicle repair services, the main stages of the structure of these processes must be identified, then each procedure must be broken down into specific activities. The members of the organization must ensure the quality of all procedures and actions (Fig. 4.4) which take place within the organization, without which it is not possible to ensure neither the progress of the organization nor the differentiation from the competition. One of the main objectives that the organization must achieve as a result of implementing the concepts of defining, improving, remodeling the service procedures is the provision of quality customer service by the organization and increasing their efficiency in order to maximize profit.

¹⁴ Oprean, C., Țițu, M., Grecu, D., Tănăsescu Cristina, Oprean Camelia, Țițu Mariana, *A study on mapping processes in organizations based on acquaintances. A case study*, Osaka Japan, 17-20 June 2010

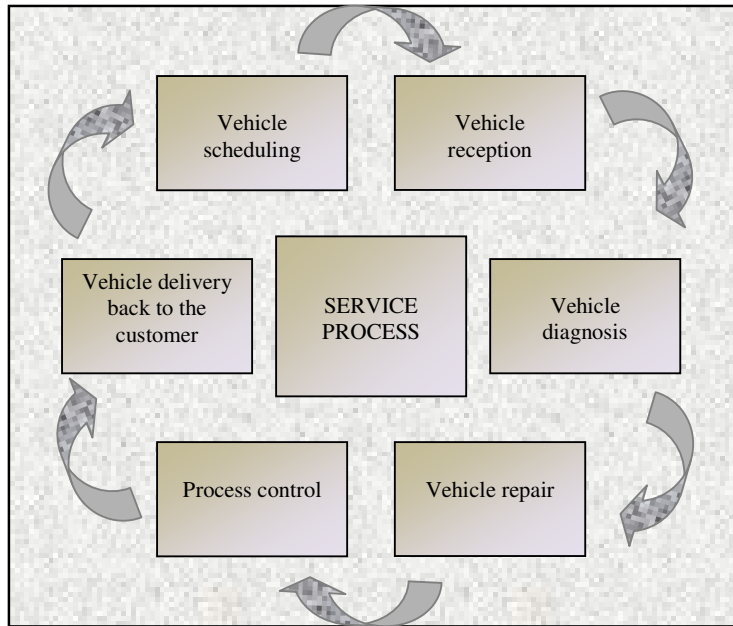


Fig. 4.4 The service process stages

Source: Oprean, C., Țițu, M., Grecu, D., Tănăsescu Cristina, Oprean Camelia, Țițu Mariana, *A study on mapping processes in organizations based on acquaintances. A case study*, Osaka Japan, 17-20 June 2010

The scientific research demonstrated that within the post-sale services department, the manager's reaction speed and the employees` ability to accurately transmit information in real-time necessary for decision making are essential in order to achieve customer satisfaction.



Fig. 4.5 Ensuring the quality of the procedures

Source: Țițu, M., Oprean, C., Grecu, D. *The identification of the customers' requirements in the knowledge-based organization*, In: Proceedings of the 1st International Conference on Quality and Innovation in Engineering and Management, ISBN, 5 pages, pag. 215-220, 17 – 19 March, 2011, Cluj-Napoca, Romania, 2011.

The ultimate goal of defining, improving, remodeling the service procedures is the provision of quality customer service by the company and increasing their efficiency in order to maximize profit.

5. COMMUNICATION METHODS AND TECHNIQUES IN ASSESSING POST-SALE SERVICE QUALITY

The affirmation of French philosopher Claude Adrien Helvetius saying that “*Nobody gives pains to convince when it is easier to command.*” serves as motto for this chapter.

Organizational communication is defined as a flow of information that ensures the functionality of the organization. Such is strongly influenced by the organizational culture existing within the company. According to the hierarchy of the organization, information flow is performed up-down, down-up or horizontal, as shown in Figure 5.1.

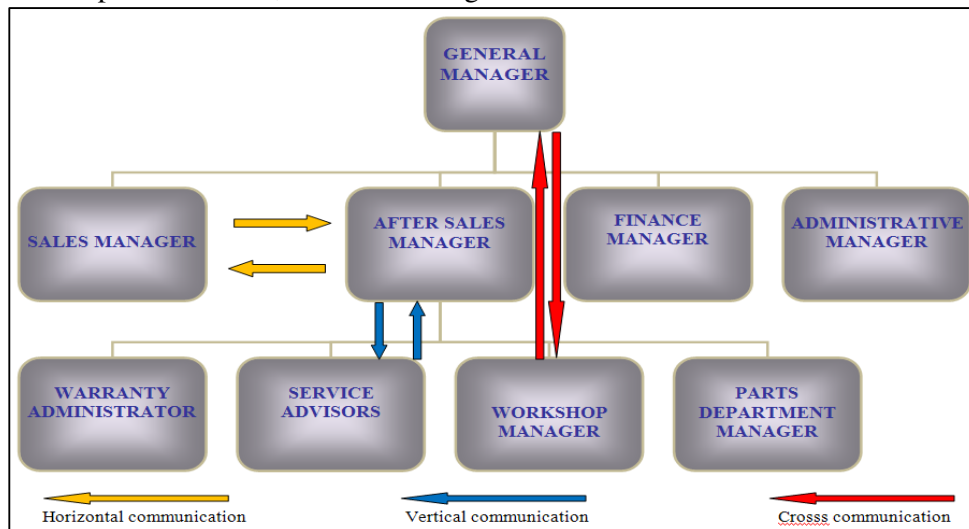


Fig. 5.1 Information flow

Source: Țîțu, M., Oprean, C., Grecu, D., *Communication techniques meant to ensure customers' satisfaction in the knowledge-based organizations which have implemented a quality management system*, 7th Research/Expert Conference with International Participations “Quality” 2011, Neum, B&H, June 01 - 04 2011, ISSN 1512926, 4 pages, 2011.

The main subject matter of chapter no. 5 was to identify the communication methods and techniques used to assess the quality of post-sale services. In order to achieve this objective the quality of internal communication within the organization was submitted for analysis and the used communication techniques were identified. Depending on the hierarchical level, the information flow within the company is done in three different ways, as shown in Figure 5.2, vertically (up-down, down-up), horizontally or criss-crossed.

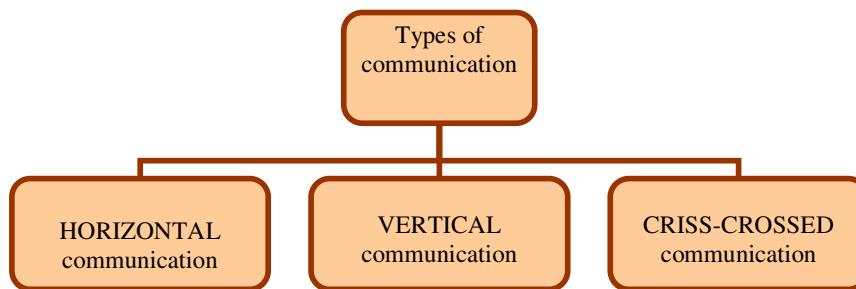


Fig. 5.2 Types of communication

Source: Oprean, C., Țîțu, M., Grecu, D., *The management of the quality of internal communication in a knowledge-based organization*, In: Proceedings of The 7th International Conference of the Management of Technological Changes, code 570, 4 pages, 2011, Alexandroupolis, Greece, ISI.

The research identified the determinants of customer satisfaction and barriers that may arise in communicating with internal and external customers (Figure 5.3).

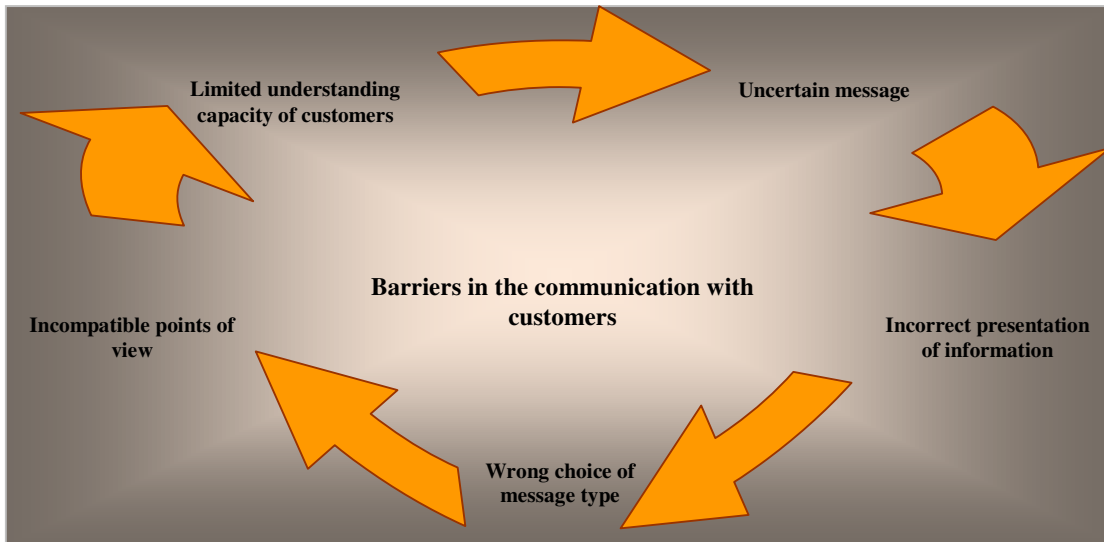


Fig. 5.3 Barriers in the communication with customers

Source: Țițu, M., Oprean, C., Grecu, D., *Communication Techniques Meant to Ensure Customers' Satisfaction in the Knowledge-based Organizations Which Have Implemented a Quality Management Systems*, Neum, B&H, 1-4 June 2011.

The documents particular to quality assurance of maintenance activity have been identified and presented from a technical standpoint. The team formation process was also analyzed, a process that strongly determines how internal communication may evolve. Working meetings and trainings are an important part of internal communication process.

One of the actions which was carried out was to present a practical application of the rules of influencing the decisions in both the external environment and the internal environment (Figure 5.4), with the help of which the customer can be influenced in making a purchasing decision or to address a complaint with regards to the services provided by the organization.

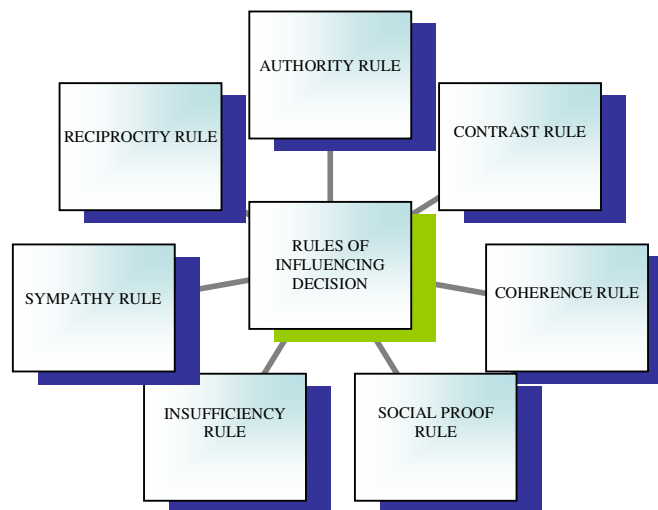


Fig. 5.4 Rules of influencing the decision

Source: Țițu, M., Oprean, C., Grecu, D., *Communication Techniques Meant to Ensure Customers' Satisfaction in the Knowledge-based Organizations Which Have Implemented a Quality Management Systems*, Neum, B&H, 1-4 June 2011.

Quality communication can be described as an effective lever for continuous improvement of the services offered by the company for continuous improvement of ongoing procedures within the company and also to identify customers` requirements. Figure 5.5 describes the main factors which determine customers` satisfaction.

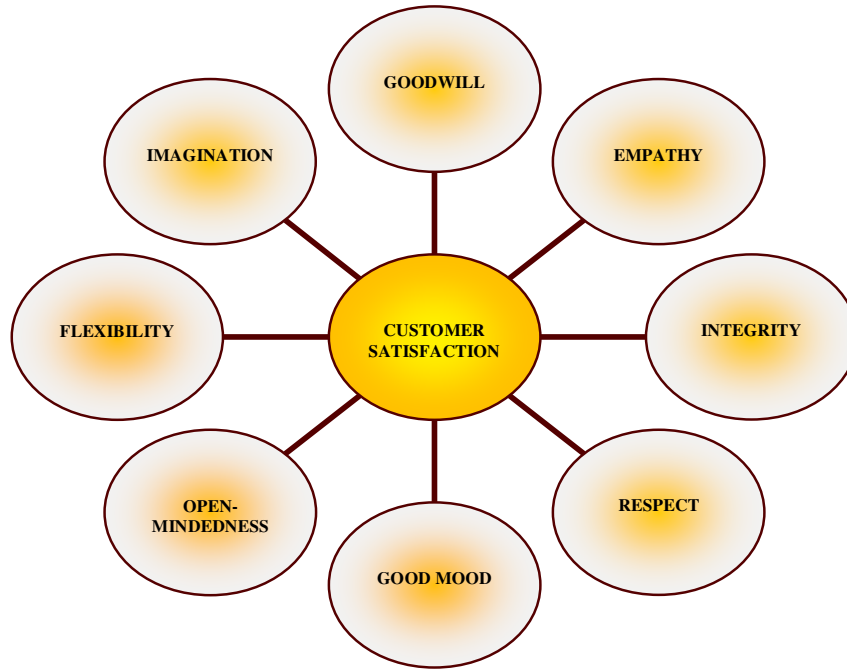


Fig. 5.5 Determinants of customers` satisfactions

Source: Țițu, M., Oprean, C., Grecu, D., *Communication techniques meant to ensure customers' satisfaction in the knowledge-based organizations which have implemented a quality management system*, 7th Research/Expert Conference with International Participations “Quality” 2011, Neum, B&H, June 01 - 04 2011, ISSN 1512926, 4 pages, 2011.

Customer satisfaction is a priority and a condition for the seller to exist, stressing the quality and provision of higher quality services. The care manifested for the customers of a company is a concept that involves the conduct of particular actions at the end of which customers are always satisfied, thus becoming loyal customers who return on regular basis with new requests.

In order to ensure customer satisfaction it is required to manage the working time based on documents particular to service procedures. As a support activity a study was conducted on the working time management particular to vehicle maintenance based on the documents particular to company`s internal procedures.

In order to highlight means of eliminating losses caused by delays occurred during the services procedures, as shown in Figures 5.6 and 5.7, a service work has been submitted for monitoring starting with the customer handing over the vehicle and ending with the customer taking over the vehicle.

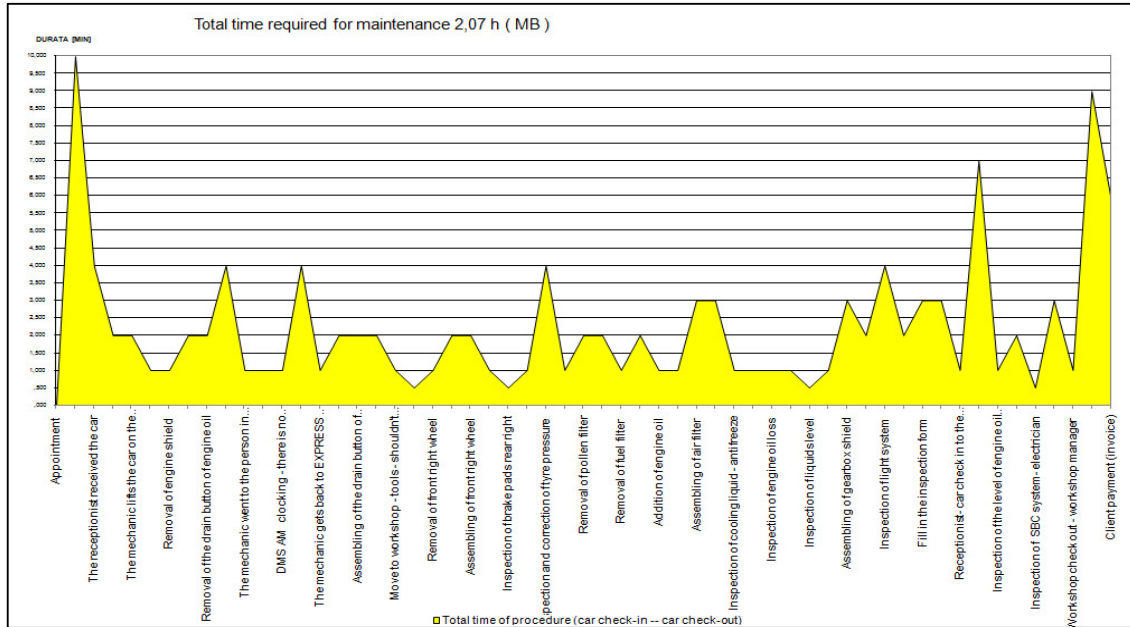


Fig. 5.6 Service intervention time frame

Source: Oprean, C., Țițu, M., Grecu, D., Oprean Camelia, *The Importance of Insuring Document Quality during the Process of Motor Vehicle Repair*, In: Proceedings of the International MultiConference of Engineers and Computer Scientists 2011, IAENG International Conference on Industrial Engineering (ICINDE'11), Hong Kong, registration number IMECS2011_1291293477, ICINDE_98, 4 pages, ISBN 978-988-18210-3-4, 2011, ISI.

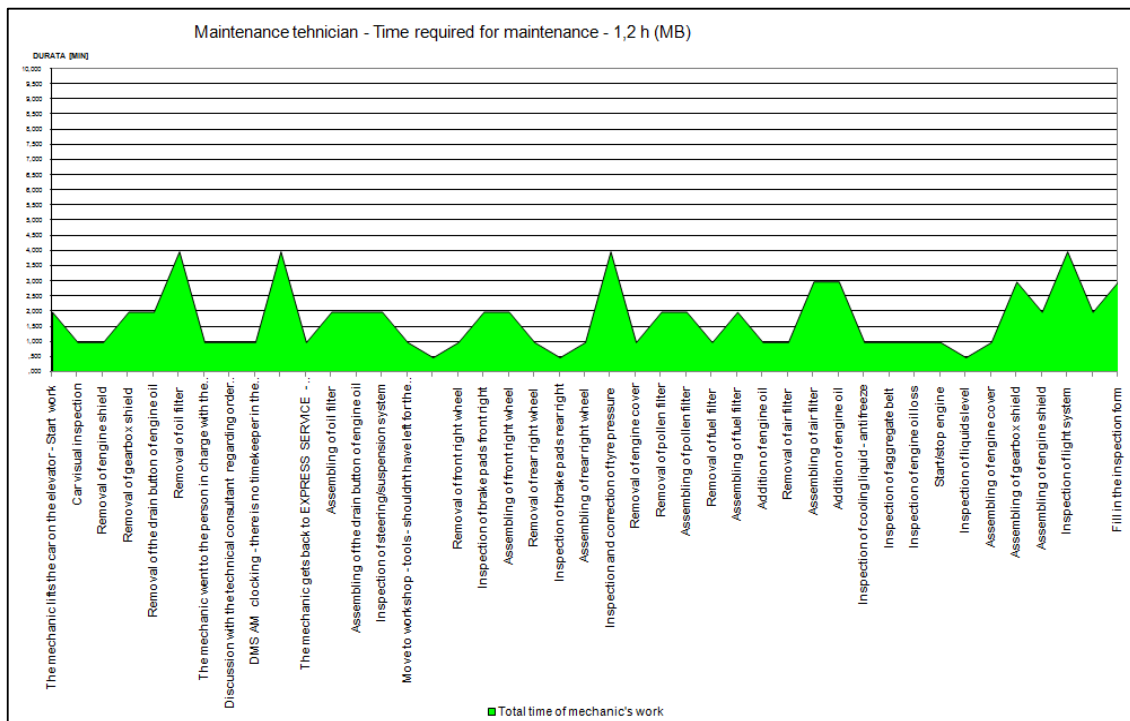


Fig. 5.7 Evolution of actual work time

Source: Oprean, C., Țițu, M., Grecu, D., Oprean Camelia, *The Importance of Insuring Document Quality during the Process of Motor Vehicle Repair*, In: Proceedings of the International MultiConference of Engineers and Computer Scientists 2011, IAENG International Conference on Industrial Engineering (ICINDE'11), Hong Kong, registration number IMECS2011_1291293477, ICINDE_98, 4 pages, ISBN 978-988-18210-3-4, 2011, ISI.

The study revealed that the time the vehicle is in service can be reduced by 49.5 minutes, which means reducing customer`s waiting time by 40% while the service technician is available to take over a new service work by 49.5 minutes earlier.

This demonstrates once again that each company must constantly keep under observation the procedures which are carried out within each department. Vehicles` repairing procedures can be managed the same way as production procedures by introducing Jidohka devices (which preventively turn off the work machine in case of anomaly occurrence), by introducing Poka Yoke devices (which prevents one from committing an error), by introducing Andon devices (distance-signaling remote audio-visual electronic system) and last but not least the “pull” type production.

6. ESTABLISHING THE ASSESSMENT QUALITY LEVEL STANDARD OF POST-SALE SERVICES FOR VEHICLES

The subject matter of sixth chapter was to develop an assessment quality level standard of post-sale services for vehicles. The following activities were carried out in this regard:

- identifying and analyzing the assessment indicators of service procedures quality;
- analyzing the management post-sales department`s activity;
- analyzing the market segmentation within the current economic environment;

The motto of this chapter is the stamen of the Ancient Greek great philosopher, Aristotle, who said that “*Everything begins and ends at organization*”. Considering the specific activity, the organizational structure of the service company must be able to ensure the resources necessary to achieve the set objectives but must also allow and ensure the availability for customer relationship management¹⁵.

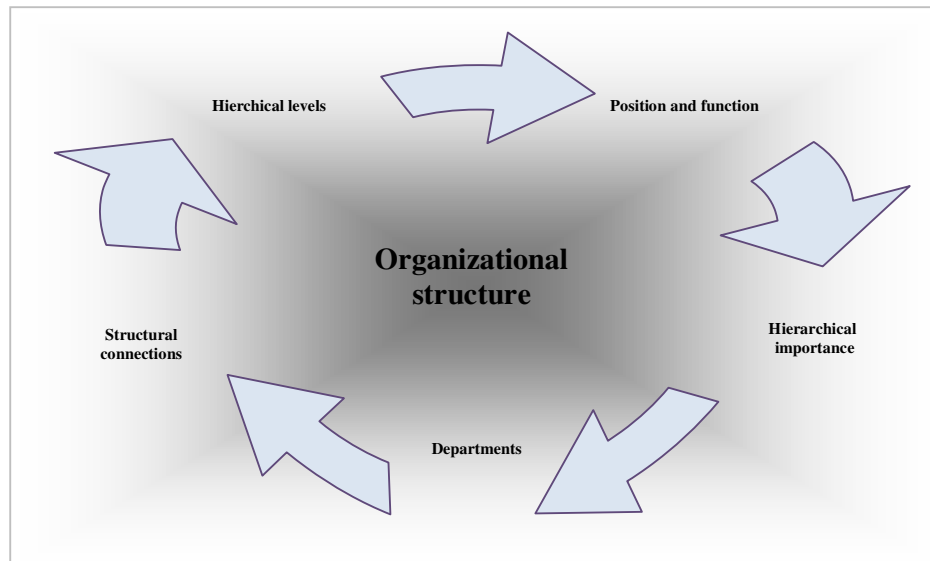


Fig.6.1 Elements of organizational structure

Source: Țițu, M., Oprean, C., Grecu, D., *Managing the Activity of the After Sales Departments in an Organization Which Has Implemented a System of Quality Management*, In: Proceedings of The 7th International Conference of the Management of Technological Changes, code 571, 4 pages, September 1-3, 2011, Alexandroupolis, Greece.

The procedures taking place in order to carry out repairing works to vehicles are graphically represented in Figure 6.2.

¹⁵ Țițu, M., Oprean, C., Grecu, D. *Managing the Activity of the After Sales Departments in an Organization Which Has Implemented a System of Quality Management*, In: Proceedings of The 7th International Conference of the Management of Technological Changes, code 571, 4 pages, 1-3 September, 2011, Alexandroupolis, Greece.

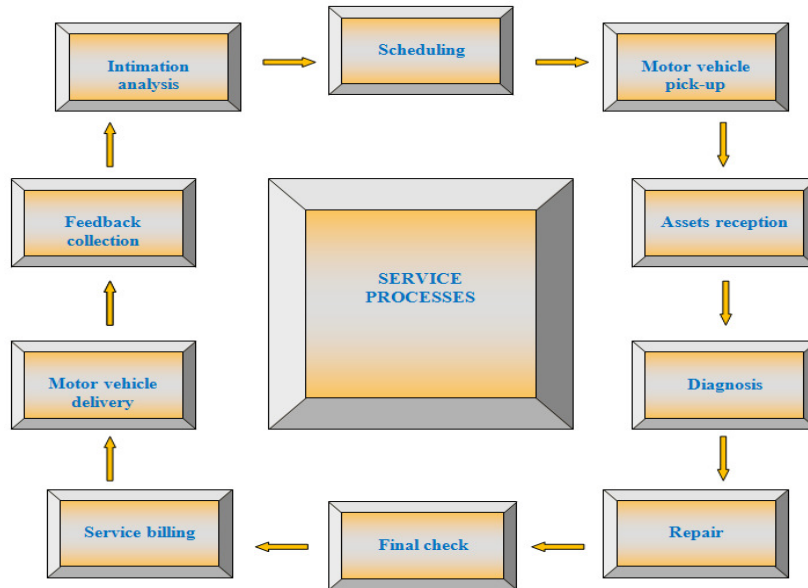


Fig. 6.2 Service procedures

Source: Țițu, M., Oprean, C., Grecu, D., *Managing the Activity of the Post-Sales Departments in an Organization Which Has Implemented a System of Quality Management*, In: Proceedings of The 7th International Conference of the Management of Technological Changes, code 571, 4 pages, September 1-3, 2011, Alexandroupolis, Greece.

The organization must appreciate any input coming from an employee.

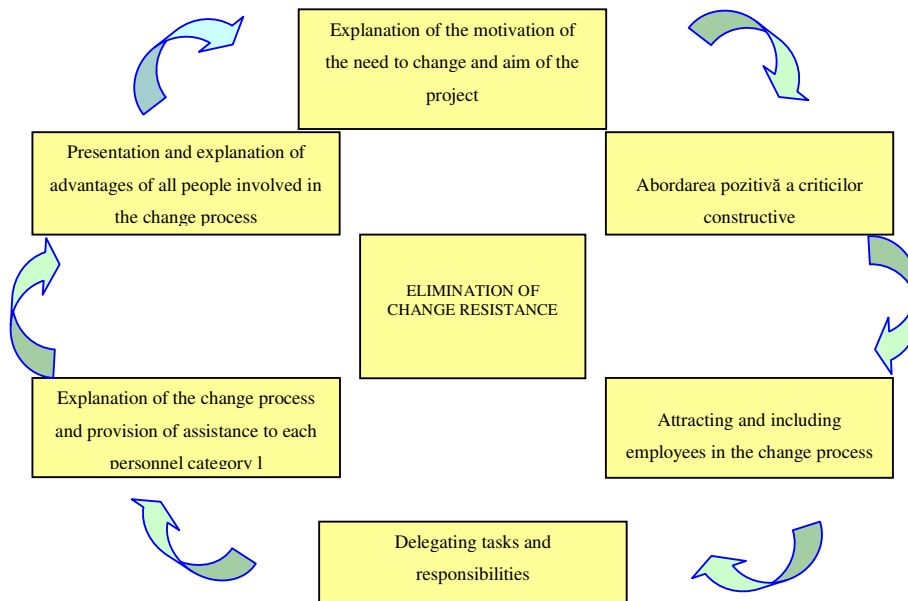


Fig. 6.3 Elimination of change resistance

Source: Țițu, M., Oprean, C., Grecu, D., *The Influence of the Management Styles on the Performance Level in the Knowledge-Based Organizations which Implemented a Quality Management System*, In: Proceedings of the 6th International Seminar Quality Management in Higher Education – QMHE 2010, code 400, 4 pages, Book II, pag. 685-688, ISBN 978-973-662-566-4 Tulcea, Romania, 2010, ISI.

In order to achieve this goal it is necessary for permanent employees of the organization to communicate with people whose cooperation is essential for achieving the organization's vision and

also work to eliminate all forms of resistance to change¹⁶. It must be clear for each member of the organization its duties and responsibilities, its place within the team, how to act and what role it has to fulfill within the organizational structure. Whenever a change must be implemented, whenever a new strategy is desired to be implemented, the implications of these actions must be measured from multiple perspectives.¹⁷

The analysis can be performed using the Balanced Scorecard tool with the help of which the effects of decisions to be implemented are analyzed from a financial perspective, from the customer's perspective, from the employees' perspective and last but not least in terms of procedures (Fig. 6.4).

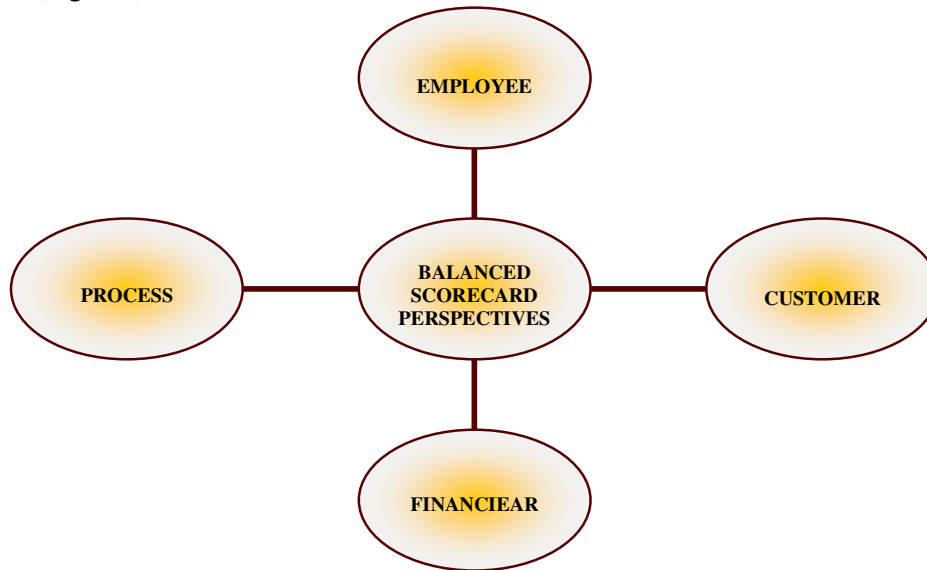


Fig. 6.4 Balanced Scorecard Analysis

Source: Țițu, M., Oprean, C., Grecu, D., *The Influence of the Management Styles on the Performance Level in the Knowledge-Based Organizations which Implemented a Quality Management System*, In: Proceedings of the 6th International Seminar Quality Management in Higher Education – QMHE 2010, code 400, 4 pages, Book II, pag. 685-688, ISBN 978-973-662-566-4 Tulcea, Romania, 2010, ISI.

This tool manages to direct the management's attention on the four perspectives mentioned above, acting as a link between the operational and strategic level. It is also an important support for decision making and an excellent filter for irrelevant information succeeding in connecting resources, processes and results. The assessment standard of post-sales services quality was defined in terms of two indicators for ensuring a long-term partnership with the customer:

- **The actual quality of the performed works/provided services.** According to this concept, from a technical standpoint, any failure or non-compliance shall be removed on spot or as soon as possible in case it was impossible to prevent the occurrence of the failure or the non-compliance.
- **The quality as perceived by the customer** with respect to the services provided by the organization. This concept underlies to all strategic procedures aimed at ensuring customer's satisfaction.

¹⁶ Țițu, M., Oprean, C., Grecu, D., *Managing the Activity of the After Sales Departments in an Organization Which Has Implemented a System of Quality Management*, In: Proceedings of The 7th International Conference of the Management of Technological Changes, code 571, 4 pages, 2011, Alexandroupolis, Greece, ISI.

¹⁷ Țițu, M., Oprean, C., Grecu, D. *The Influence of the Management Styles on the Performance Level in the Knowledge-Based Organizations which Implemented a Quality Management System*, In: Proceedings of the 6th International Seminar Quality Management in Higher Education – QMHE 2010, code 400, 4 pages, Book II, pag. 685-688, ISBN 978-973-662-566-4 Tulcea, Romania, 2010, ISI

The main 4 indicators to be monitored according to the assessment standard of post-sales services quality are as follows:

- **Productivity.** This indicator is calculated as the ratio between the number of hours worked (productive hours) and the total working hours available (attendance) during a calendar month. The recommended amount of this indicator is at least 85%.
- **Efficiency.** This indicator measures the extent to which service technicians are able to perform the repairs within the required standard time frame set by the manufacturers` norms. This indicator is calculated as the ratio between the total number of hours sold (invoiced) and the total number of hours actually worked by the direct productive personnel (productive hours). The recommended amount of this indicator is at least 100%.
- **Effectiveness.** This indicator measures the extent to which service technicians are able to maximum exploit the working time (attendance). This indicator is calculated as the ratio between the total number of hours sold (invoiced) and total working hours available (attendance) during a month. The recommended amount of this indicator is at least 85%.
- **The average number of hours invoiced** for each vehicle entered service.

In order to monitor the qualitative performance in terms of customer satisfaction the following indicators can be used:

- the result of CSI surveys conducted by manufacturers` representatives;
- the result of the service organization`s feedback;
- the result of Mystery Shoppers` visits - surveys organized by specialized companies;
- the number of returns in service;
- the number of complaints.

For example, Figure 6.5 reflects the fact that the number of returns in service does not substantially influence the level of customer satisfaction.

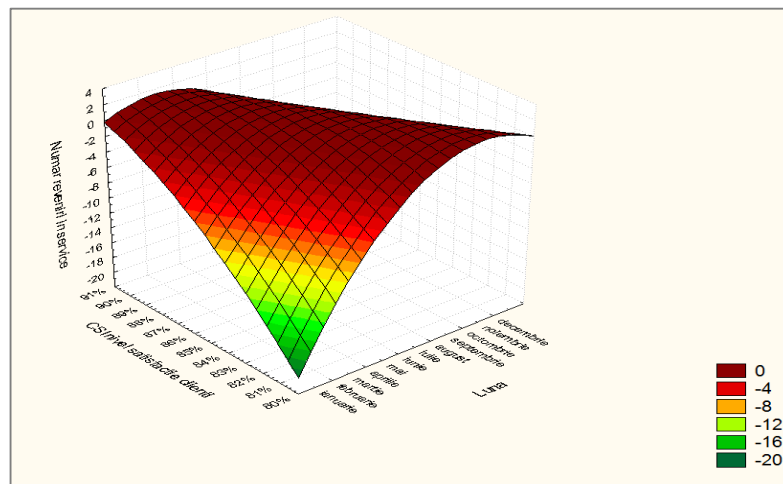


Fig. 6.5 The correlation between customers` satisfaction and the number of returns in service

The effective management by organization`s members of each case in which a vehicle is returned to service can transform a situation of customer dissatisfaction into a position that builds up a partnership with the said customer and increase customer`s confidence in the product as well as in the professionalism of the organization`s members.

7. METHODS AND TECHNIQUES OF COST MANAGEMENT WITHIN THE ORGANIZATION PROVIDING MAINTENANCE SERVICES FOR VEHICLES

The main subject matter of this chapter is to identify the main methods and techniques of cost management within the organization providing maintenance services for vehicles. The second subject matter is to scientifically analyze the competitive advantages offered by Japanese management systems.

The actions which were carried out consisted in analyzing the structure expenditures within the organization providing repairing services and identifying the cost reduction methods and techniques. It has been determined that one of the most effective methods to be used to reduce costs is to increase product and service quality the organization provides to customers. The research's conclusion was that *the main cost reduction method* which can be successfully applied in any organization is *customer loyalty*. The success of an organization is based on finding new ways to increase the revenue because reducing costs without the sustainable insurance of increasing the income does not suffice for the survival of organizations unless for a short period of time.

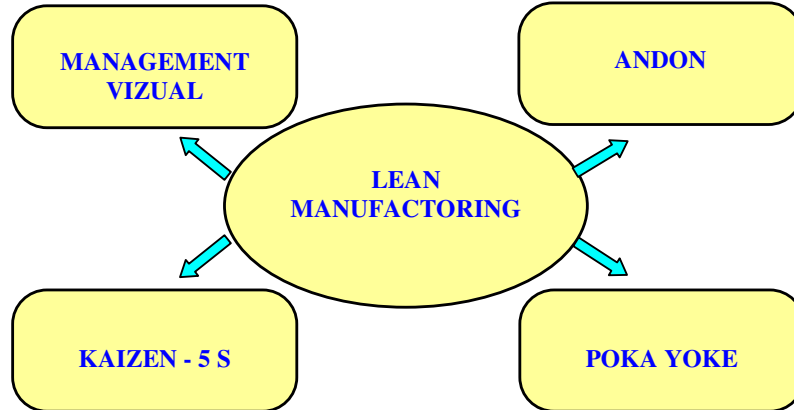


Fig. 7.1 Concepts particular to “continuous improvement”

One has noticed that good results following the implementation of concepts particular to Japanese management. LEAN MANUFACTURING is a term that includes several methods that ensure cost savings. In order to implement LEAN MANUFACTURING, we must have a stable foundation upon which concepts are integrated, as pictured in Figure 7.1.

Andon is a Japanese word that means a remote signaling system. In the current context Andon means an electronic audio-visual system which signalizes the operating mode of an equipment or operating condition of a certain process.

Poka Yoke is a Japanese concept introduced by Shigeo Shingo. The name of this concept is given by two Japanese words: Poka - unintentional error and Zokeru - to avoid. This method refers preventing accidental errors or detecting errors before prior to their occurrence.

The scientific research divides the customers intending to purchase vehicles into two distinct categories:

- customers whose comparison criterion refers to technical performance, additional options;
- customers whose comparison criterion refers to vehicle's price, warranty period and other elements important in terms of cost controlling.

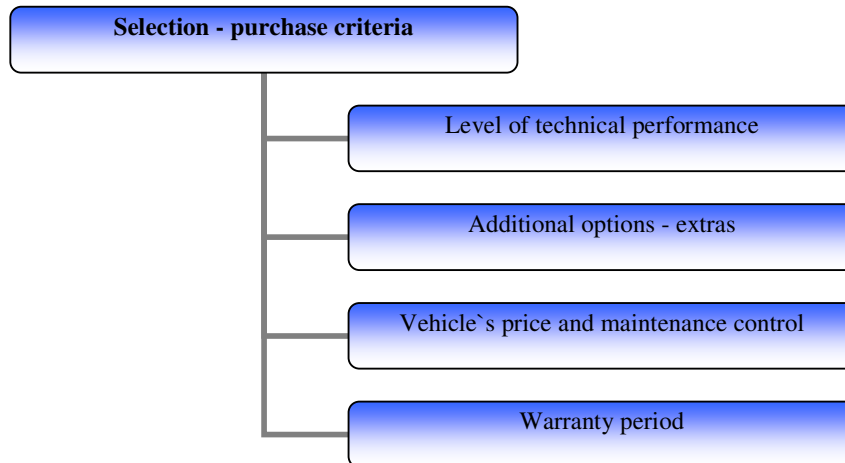


Fig. 7.2 Selection criteria in view of purchasing a vehicle

Source: Țițu, M., Oprean, C., Grecu, D., Tănăsescu Cristina, Țițu Mariana, *The scientific analysis of the competitive advantages provided by the production system Toyota – Just in Time*, Osaka Japan, 17-20 June 2010.

At the end of the chapter the competitive advantages offered by Toyota production system – TPS are submitted for analysis, a system which is based on implementing concepts particular to Japanese management.

8. MODELING THE “SERVICE” TYPE PROCEDURES

The first subject matter of this chapter is to identify the main methods and techniques for modeling service procedure for continuous improvement of vehicle maintenance activity that takes place within post-sales service department. Each sub-procedure can be modeled within the service procedure as follows:

- **Vehicles scheduling.** This means the activity which judiciously allocates the resources necessary to carry out the repairs needed for restoring the vehicle`s condition in full compliance with manufacturer`s specifications. The sub-procedure modeling can be achieved if the critical success factors listed in Figure 8.1 are effectively managed;

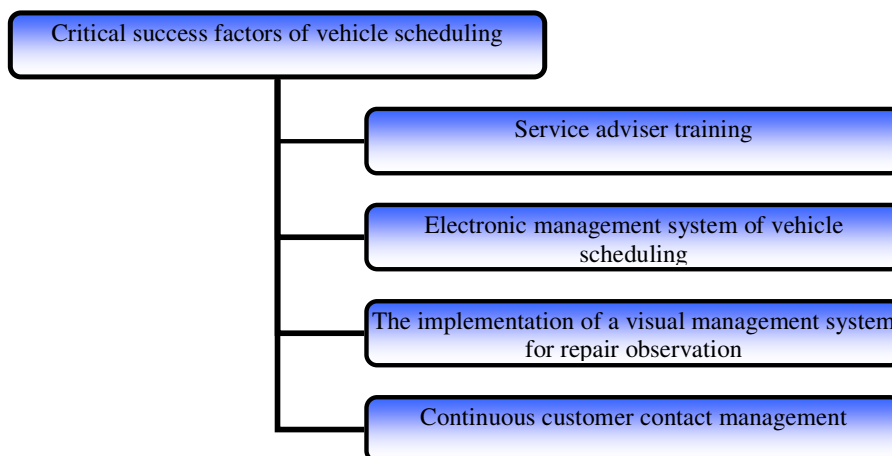


Fig. 8.1 Critical success factors for vehicle scheduling management

Source: Oprean, C., Țițu, M., Grecu, D., Tănăsescu Cristina, Oprean Camelia, Țițu Mariana, *A study on mapping processes in organizations based on acquaintances. A case study*, Osaka Japan, 17-20 June 2010.

- **Vehicles reception.** This means the activity of taking over the vehicle from the customer as per the service instructions. The moment of receiving the vehicle is when the customer is next to the vehicle together with the service advisor and pays attention to the messages communicated by the service advisor. The sub-procedure modeling can be achieved if the critical success factors listed in Figure 8.2 are effectively managed;
- **Diagnosis process.** The correct diagnosis of faults is the element based on which customer satisfaction is ensured and the organizations must invest in training activities in order to increase employees` skill levels. By increasing the level of professional competence, the faults are easily identified in a relatively short time, the long-term effect being the increase of the organization's competitiveness and customers attraction;

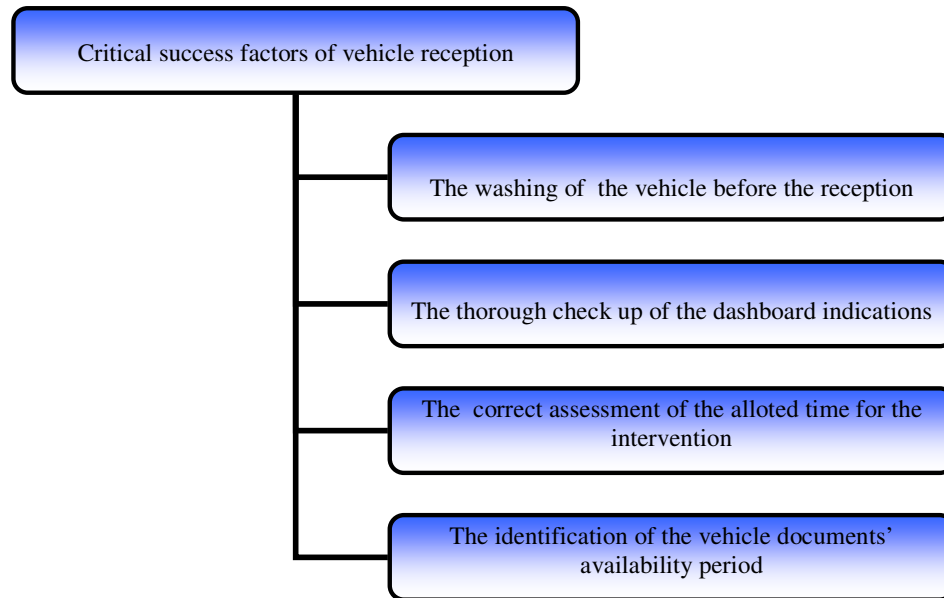


Fig. 8.2 Critical success factors for vehicle reception management

Source: Oprean, C., Țițu, M., Grecu, D., Tănăsescu Cristina, Oprean Camelia, Țițu Mariana, *A study on mapping processes in organizations based on acquaintances. A case study*, Osaka Japan, 17-20 June 2010.

- **Repairing process.** The repairs should be performed only subsequently to the consultation with the technical documentation provided by the manufacturer. The professional experience of staff working in the technical departments is extremely important but regardless of how much experience the technicians have, the repairs should be performed only subsequently to the consultation with the updated technical documentation;
- **Interoperable inspection and final inspection.** The purpose of the inspection ensures the quality level required for each performed intervention. The role of service team leaders is extremely important considering that they have to confirm the removal of all non-conformities raised by customers;
- **Delivering the vehicles to customers.** Delivering the vehicle to customer involves that the service advisor to (verbally and visually) present the repair performed, a detailed explanation of the repair estimate, followed by the payment made by the customer for the performed investigations and actual deliver of the vehicle to the customer. The sub-procedure modeling can be achieved if the critical success factors listed in Figure 8.3 are effectively managed;

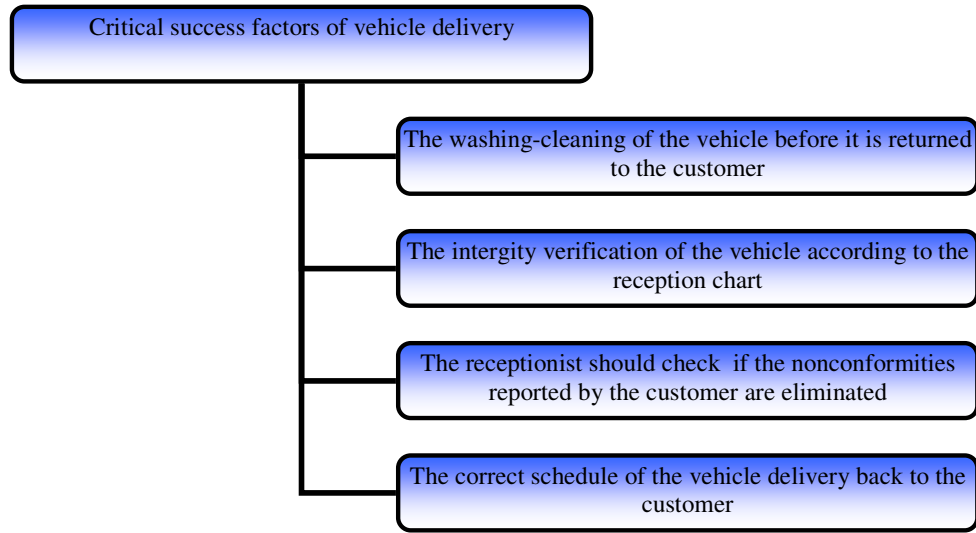


Fig. 8.3 Critical success factors for vehicle delivery management

Source: Oprean, C., Țițu, M., Grecu, D., Tănăsescu Cristina, Oprean Camelia, Țițu Mariana, *A study on mapping processes in organizations based on acquaintances. A case study*, Osaka Japan, June 17-20, 2010.

The second subject matter is to scientifically examine and identify the extent to which the management styles have an impact on the performance level of knowledge-based organizations which have implemented a quality management system.

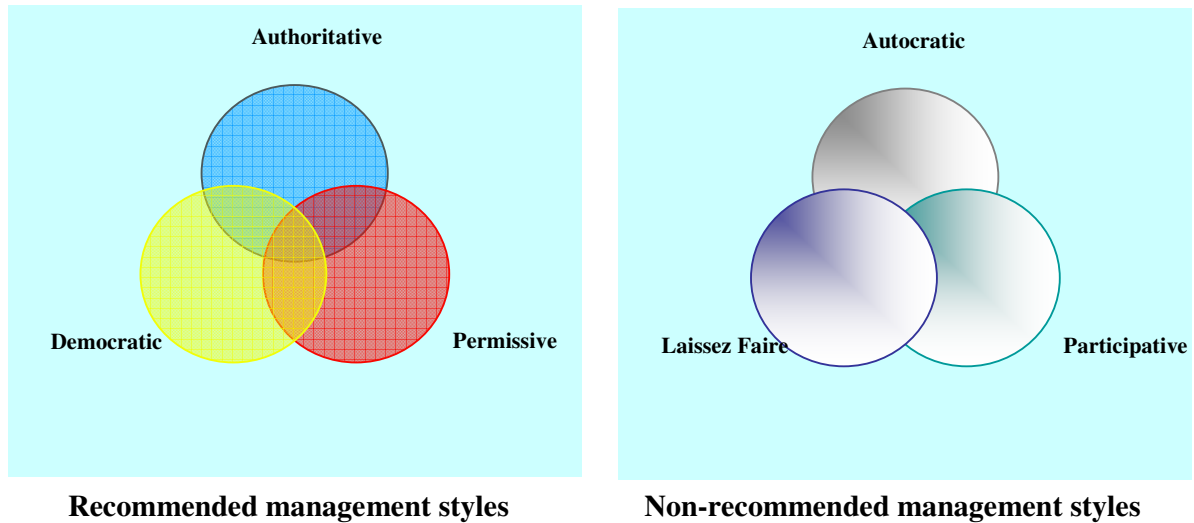


Fig. 8.4 Management styles

Source: Țițu, M., Oprean, C., Grecu, D., *The Influence of the Management Styles on the Performance Level in the Knowledge-Based Organizations which Implemented a Quality Management System*, In: Proceedings of the 6th International Seminar Quality Management in Higher Education – QMHE 2010, code 400, 4 pages, Book II, pag. 685-688, ISBN 978-973-662-566-4, Tulcea, Romania, 2010, ISI.

The studies identified two types of management styles - professional and non-professional (Figure 8.4). At the end of the chapter it is submitted for analysis an overview of the research conducted to identify the ways in which the mutual beneficial performance of the business

partnerships between the service organization and its customers can be accomplished, an element which underlies to ensuring business excellence.

During the course of daily activity deficiencies that may occur must be removed immediately, with a maximum level of involvement from both parties. Should a customer is dissatisfied, it is recommended to pursuit the steps described in Figure 8.5.

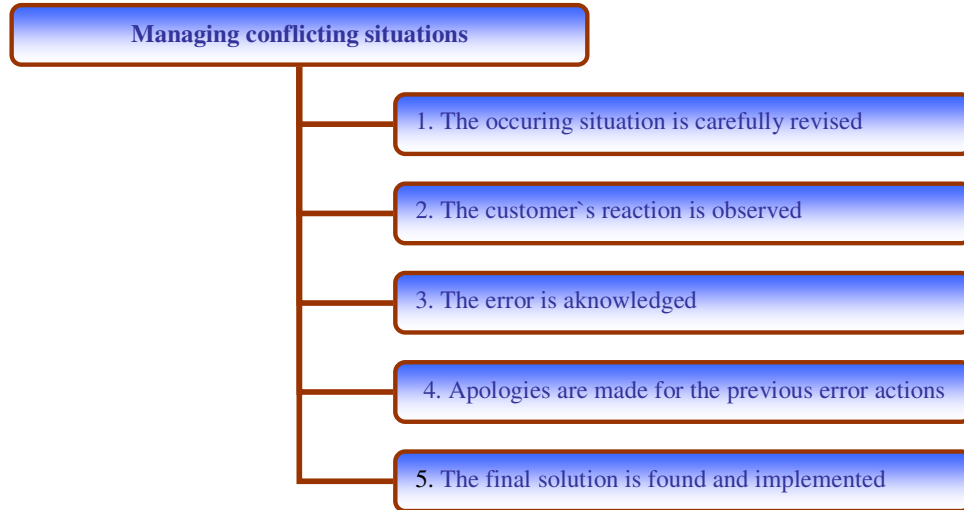


Fig. 8.5 Managing conflicting situations

Source: Țițu, M., Oprean, C., Grecu, D., *Ensuring Global Satisfaction According to the Management of the Relationship with Customers, in the Knowledge-Based Organizations which Implemented a Quality Management System*, In: Proceedings of the 6th International Seminar Quality Management in Higher Education – QMHE 2010, code 399, 4 pages, Book II, pag. 681-684, ISBN 978-973-662-566-4, Tulcea, Romania, 2010, ISI.

Table 8.1 lists several words and phrases particular to actions made throughout the process of managing the situations of dealing with customers` dissatisfaction.

Table 8.1 Words and phrases used in managing conflicting situations

Source: Țițu, M., Oprean, C., Grecu, D., *Ensuring Global Satisfaction According to the Management of the Relationship with Customers, in the Knowledge-Based Organizations which Implemented a Quality Management System*, In: Proceedings of the 6th International Seminar Quality Management in Higher Education – QMHE 2010, code 399, 4 pages, Book II, pag. 681-684, ISBN 978-973-662-566-4, Tulcea, Romania, 2010.

Words/phrases to be used	Words/phrases to be avoided
customer`s name	no
yes	it cannot be done
you	it is not our policy to do that
thank you	sorry
I am sorry	problem
of course	we do not have the time
it is possible	I'll take care
I appreciate	lie
I assure you	you are wrong
situation	never
your wish	wait

Following the actions which were undertaken, it was found that although the organizations which have implemented a quality management system make sustainable efforts to improve the

quality of customer service, in most cases that generated customer dissatisfaction, the customer's solution to the problem was very simple, but the employees of the organization failed to correctly identify such wasting resources so without obtaining customer satisfaction. Some of the common errors that occur in customer relationship management are shown in Figure 8.6.

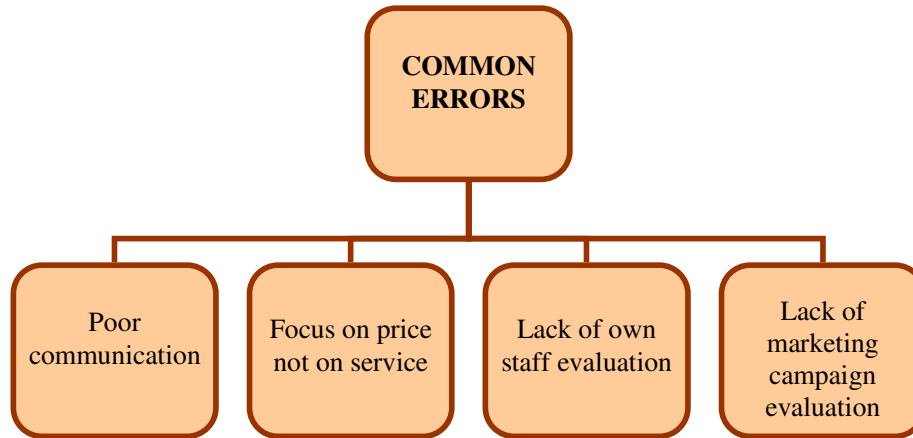


Fig. 8.6 Common errors in “customer care”

Source: Țițu, M., Oprean, C., Grecu, D., *Ensuring Global Satisfaction According to the Management of the Relationship with Customers, in the Knowledge-Based Organizations which Implemented a Quality Management System*, In: Proceedings of the 6th International Seminar Quality Management in Higher Education – QMHE 2010, code 399, 4 pages, Book II, pag. 681-684, ISBN 978-973-662-566-4, Tulcea, Romania, 2010, ISI.

Upon analyzing the feedback reports, it was found that customers are not always objective. Even if they were satisfied on the last intervention that the service had performed, some customers repeatedly refer to situations prior to survey, to the history of past interventions, which had generated discontent. These situations demonstrate once again the importance of ensuring continuous quality services to customers knowing that any customer dissatisfaction is remembered for a long time.

9. CONCEPTS PARTICULAR TO POST SALE SERVICES DEPARTMENT ACTIVITY WITHIN THE ORGANIZATION PROVIDING MAINTENANCE SERVICES FOR VEHICLES IN RELATION TO EXTERNAL PARTNERS

The subject matter of this chapter is to identify ways to improve the results of the partnership between higher education institutions and employers in the current economic environment. In order to achieve the said objective the economic and legal environment was submitted for analysis in terms of graduate – employer. The same environment was applied to practical partnerships quality in terms of partnerships with employers.

Through partnerships between universities and private organizations the students have direct contact with quality management systems. Thus, the students can notice the major differences between the organizations which have implemented a quality management system and those which have not considered appropriate to implement the system. The conducted research revealed that successful management of partnerships between higher education institutions and employers ensures the adaptation and at the same time the development of curriculum programs necessary to the expanding the scientific research towards applied research, in direct connection with the needs of employing organizations. Simultaneously, this partnership provides with the possibility of

the participation of companies` employees in post-graduation programs within higher education institutions. One of the relevant conclusions of this analysis is that without obtaining feedback on the integration and development of graduates in employing companies, the higher education quality cannot be guaranteed.

The third subject matter is to identify the Standard particular to post-Sales Service Department in relation to external partners. As of modeling the service procedures within the organization providing maintenance services for vehicle, the research conducted an analysis on the service procedures taking place within the organization providing maintenance services for vehicle. In order to maintain control of all procedures particular to vehicle repair works, the main steps of these procedures were identified, subsequently to which each individual procedure was broken down into particular activities so that we can define the post-sale services department standard in relation to external partners.

Figure 9.1. shows the standard of post-sales service department structure in relation to external partners, together with support services related to efficient management of organization`s customers relation.

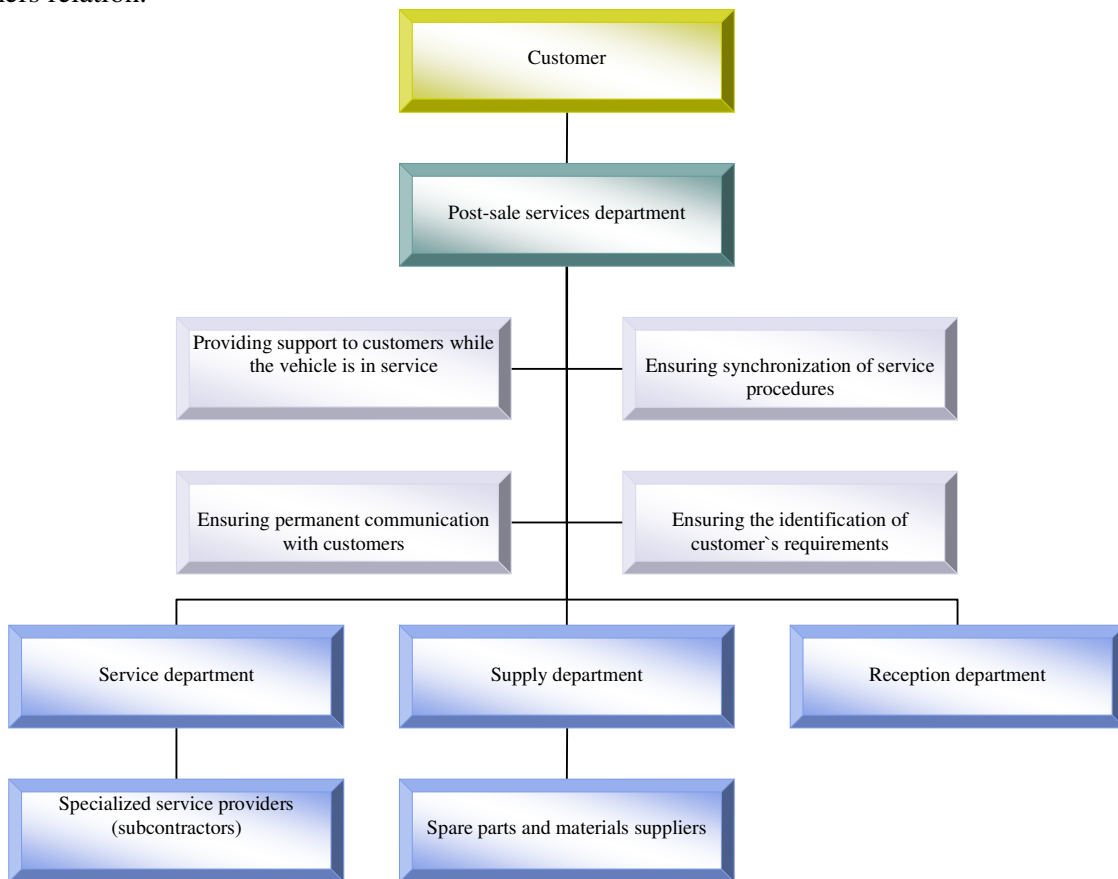


Fig. 9.1 The Standard particular to post-Sales Service Department

In terms of the methods used, the scientific research was conducted by consulting data provided by the service organization. Following the data analysis, the mathematical expression of customer satisfaction level can be defined as follows:

$$Csl = f(x1, x2, x3, x4, x5, x6, x7, x8) \tag{9.1}$$

Where: Csl is the customer satisfaction level;

x_1 - customer satisfaction level on scheduling/reception;

x_2 - customer satisfaction level on service advisor;

- x₃ - customer satisfaction level on workshop facilities;
- x₄ - customer satisfaction level on service quality;
- x₅ - customer satisfaction level on delivering the vehicle upon completion of service work;
- x₆ - customer satisfaction level on customer`s feedback upon completion repairs;
- x₇ - customer satisfaction level on customer`s intention to return to service;
- x₈ - customer satisfaction level on recommending the service to other customers.

With the help of MODDE software the data related to the assessment of workshop post-sale service for vehicles quality were processed resulting in the below graphics. Figure 9.2 shows how customer satisfaction is influenced by the quality of servicing and customer`s perception of service workshop facilities. The mathematical expression of customer satisfaction level can be defined as follows:

$$Csl = 3801.4056 - 97.656 * x_3 + 18.5709 * x_4 + 0.7508 * x_3^2 - 0.4866 * x_3 * x_4 + 0.157 * x_4^2 \quad (9.2)$$

One may note that customer satisfaction reaches its highest level when the work`s level of quality reaches its maximum level.

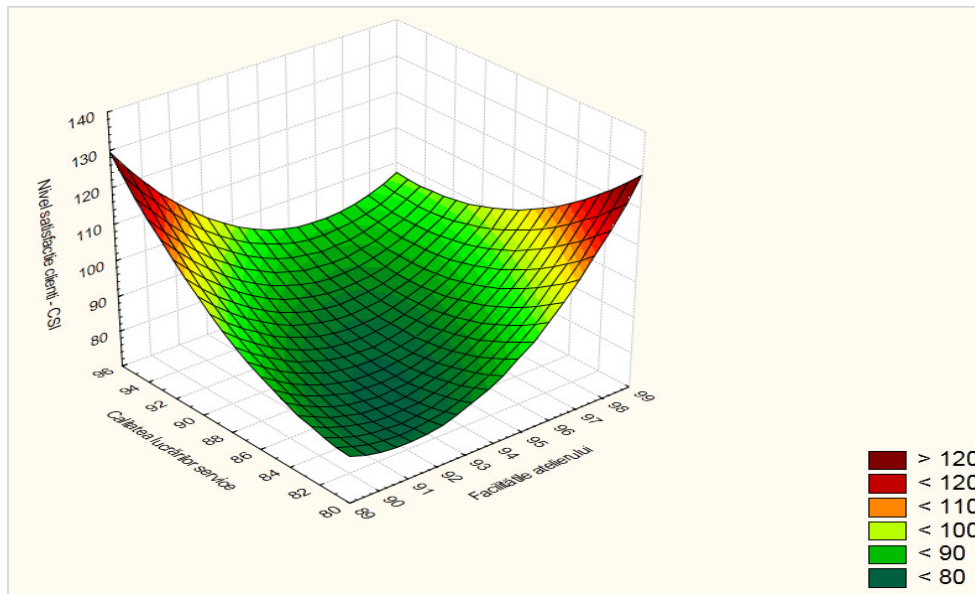


Fig. 9.2 Correlation of customer satisfaction with quality of service work and workshop facilities

Upon analyzing the above data, we believe that the standard for the assessment of post-sale services quality within the knowledge-based organization should be structured based on the indicators listed in Table 9.1.

Table 9.1 Standard for the assessment of post-sale services quality

Assessment standard for customer global satisfaction	Assessment indicators for customer`s satisfaction	Minimum Level
General level of customer satisfaction - CSI	The attitude of the service adviser	95%
	The quality of the performed service works	95%
	Contacting the customers upon repairs` completion	95%
	Customer`s intent to return to service	95%
	Recommending the service to other customers	95%
	Workshop facilities	95%

With the help of specialized optimization methods: Box-Wilson, linear programming method, Lagrange multiplier method etc., it is possible to establish certain relations expressing from a mathematical standpoint the customer satisfaction level in a knowledge based organization.

10. THE COST OF VEHICLE OWNERSHIP - CASE STUDY

The subject matter of the scientific research is to analyze and present elements particular to ownership cost in order to establish the criteria under which customers can make the purchase decision easier given the proper management of their budget resources and satisfaction with the product purchased.

The scientific research conducted an analysis of the cost of owning a vehicle taking into account the actual cost of the product, the cost of using the product, exploitation and maintenance cost of product, cost of fueling, the influence of pollution rules and last but not least the influence of registration fees. In terms of methods used, the scientific research was conducted by consulting data provided by the vehicle manufacturers' representatives, data available on the websites of these organizations and by *participatory direct observation*. Figure 10.1 shows the main elements of the cost of vehicle ownership structure.

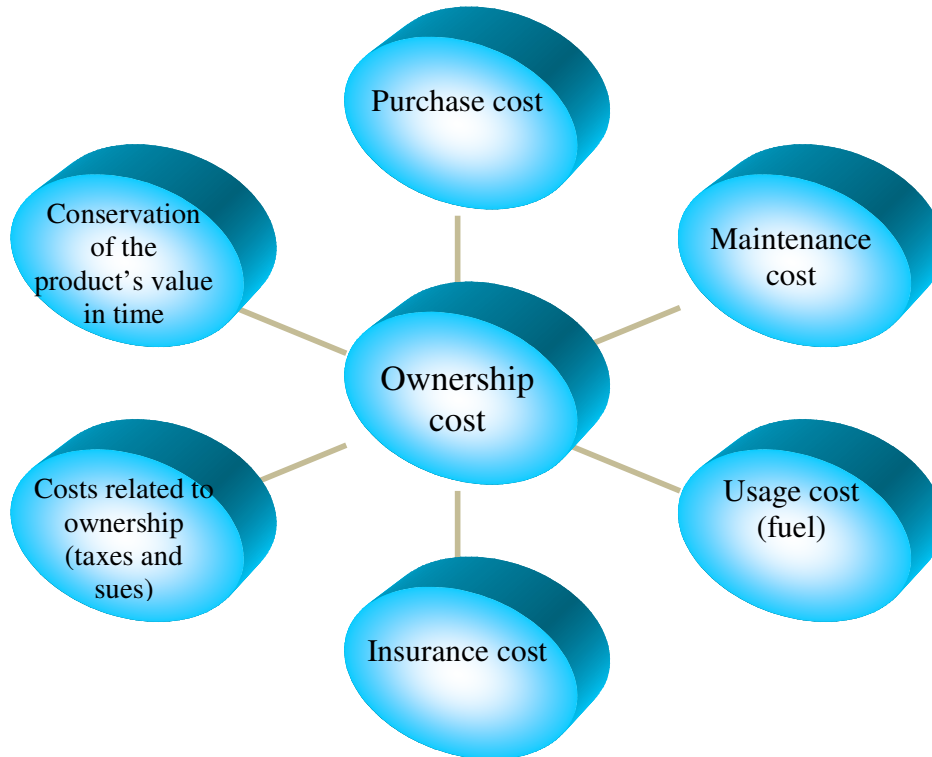


Fig. 10.1 Factors which influence the ownership cost

Source: Țițu, M., Oprean, C., Grecu, D., *Analysis of the ownership cost in the current economical context in the knowledge-based organization*, Journal of Information Technology Education: Research, ISSN: 1547 - 9714, Vol. 11 A1, pag. 19-29, 2012

Using *correlation analysis* the existing relations between the factors which influence the ownership cost and the evolution of these costs over a period of 5 years from the date of purchase of the vehicle were submitted to analysis. The research results were presented using graphical method.

The analyzed values were obtained by direct measurement, the study emphasizing on the understanding of the basic concepts related to cost structure and synthesizing the information obtained from the analysis thereof.

From a scientific point of view, the mathematical expression of ownership cost can be defined as follows:

$$OC = PC + EC + MC \quad (10.1)$$

where: PC is the purchase cost;
 EC - exploitation cost;
 MC - cost for maintaining the value required to resale.

The mathematical expression of exploitation cost (EC) can be defined as follows:

$$EC = Ic + Rc + Mc + Fc, \quad (10.2)$$

where: Ic is the insurance cost;
 Rc – registration cost;
 Mc - maintenance cost;
 Fc - fuel cost.

Below there is a presentation of the data for the possession cost structure analyzed for nine different brands of cars with a comparative analysis of these costs. The vehicles which were submitted to analysis were manufactured in 2011. The manufacturers of these vehicles are both from the European Community and Japan (Toyota, Mazda Motor Corporation, Honda, Mitsubishi Motors) and the cars have similar specifications and engines.

In order to calculate the cost of fuel, the diesel fuel price was estimated to the value of 5.5 RON/liter. Also, specific fuel consumption was calculated taking into account the maximum power given by the manufacturer for urban traffic system.

Given the traffic conditions and fuel quality, although the manufacturer does not provide for replacement of all filters at every service inspection, in this study the cost of maintenance includes replacement of air, fuel and pollen filters at every service inspection with the exception of the first one.

Also, in order to have a maximum estimation of maintenance costs we deemed that the brake pads for front and rear axles are replaced at 60,000 km and up to a distance of 100,000 kilometers the brake discs are replaced at least once for the front – rear axles and tires.

The estimated cost structure of the purchase and ownership for a period of 5 years with an overall of 100,000 traveled km of the aforementioned vehicles is shown in Table 10.1. One may notice that after a period of 5 years or 100,000 km the ownership related cost of the car almost hits the purchase price.

Table 10.1 Vehicle ownership cost structure

Source: Țițu, M., Oprean, C., Grecu, D., *Analysis of the ownership cost in the current economical context in the knowledge-based organization*, Journal of Information Technology Education: Research, ISSN: 1547 - 9714, Vol. 11 A1, pag. 19-29, 2012

The cost structure for purchasing and owning a car	Vehicle ownership cost for a period of 5 years or 100.000 km (EURO, TVA included)								
Vehicle brand	Mercedes-Benz C Klasse	Audi A4	BMW 318 D Sedan	Volkswagen Passat	Ford Mondeo	Toyota Avensis	Mazda 6	Honda Accord	Mitsubishi Lancer
Vehicle's technical details	Mercedes-Benz C Class, diesel engine 200 CDI, Euro 5, 2143 cmc, 100 KW (136 CP)	Audi A4, diesel engine 2.0 TDI, 1.968 cmc, 100 KW (136 CP)	BMW 318D, diesel engine 2.0 TDI, 1.995 cmc, 105KW (143CP)	Volkswagen Passat, diesel engine 2.0 TDI, 1.968 cmc, 103KW (140CP)	Ford Mondeo, diesel engine 2.0 TDCi, 2000 cmc, 103KW (140CP)	Toyota Avensis, diesel engine 2.0 L D-4D DPF, 1998 cmc, 93 KW(126 CP)	Mazda 6, engine 2.0 D,CDI29C E, 2184cc, 95KW (129CP)	Honda Accord, Diesel 21 MT, 2199cc, 110KW (150CP)	Mitsubishi Lancer, Diesel 21 MT, DID MIVEC, 1798cc, 110KW (150CP)
1. Purchase cost	30,988 €	32,970 €	32,984 €	27,994 €	26,400 €	22,869 €	22,890 €	27,268 €	21,493 €
1.1. Actual purchase cost (vehicle's price)	30,988 €	32,970 €	32,984 €	27,994 €	26,400 €	22,869 €	22,890 €	27,268 €	21,493 €
1.2. Additional purchase cost of the vehicle	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €

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 “Contributions regarding increasing the quality of motor vehicles' post sale services”

2. Exploitation cost of the vehicle	21,965 €	18,646 €	20,971 €	19,112 €	20,494 €	18,806 €	19,038 €	21,522 €	18,762 €
2.1. Insurance cost	8,466 €	8,177 €	8,177 €	8,643 €	8,643 €	5,938 €	5,938 €	8,549 €	6,529 €
2.1.1. RCA Insurance cost	729 €	729 €	729 €	729 €	729 €	729 €	729 €	729 €	729 €
2.1.2. CASCO Insurance cost	7,737 €	7,448 €	7,448 €	7,914 €	7,914 €	5,209 €	5,209 €	7,820 €	5,800 €
2.2. Registration cost	1,555 €	727 €	731 €	727 €	1,460 €	731 €	1,562 €	1,565 €	703 €
2.2.1. Registration cost (pollution fee, registration fee)	405 €	306 €	310 €	306 €	310 €	310 €	412 €	415 €	282 €
2.2.2. Annual tax cost	943 €	214 €	214 €	214 €	943 €	214 €	943 €	943 €	214 €
2.2.3. Road tax cost (in Romanian “rovigneta”)	143 €	143 €	143 €	143 €	143 €	143 €	143 €	143 €	143 €
2.2.4. Periodical Technical Inspection (PTI) Cost (every 2 years) – 3 PTIs cost	64 €	64 €	64 €	64 €	64 €	64 €	64 €	64 €	64 €
2.3. Maintenance cost (replacing brake pads, brake discs, tires included)	3,563 €	2,802 €	3,158 €	2,802 €	2,010 €	3,363 €	2,895 €	2,503 €	2,363 €
2.4. Fuel cost	8,381 €	6,940 €	8,905 €	6,940 €	8,381 €	8,774 €	8,643 €	8,905 €	9,167 €
3. Cost for maintaining the value required to resale (100 € quarterly)	2,000 €	2,000 €	2,000 €	2,000 €	2,000 €	2,000 €	2,000 €	2,000 €	2,000 €
Overall cost for owning a car for a period of 5 years	54,953 €	53,616 €	55,955 €	49,106 €	48,894 €	43,675 €	43,928 €	50,790 €	42,255 €

According to Table 10.2, one may notice that the weights of different categories of costs are relatively similar when compared to the overall cost of vehicles ownership for a period of 5 years or 100,000 km.

Table 10.2 Structure weight for vehicle ownership cost

Source: Țițu, M., Oprean, C., Grecu, D., *Analysis of the ownership cost in the current economical context in the knowledge-based organization*, Journal of Information Technology Education: Research, ISSN: 1547 - 9714, Vol. 11 A1, pag. 19-29, 2012

The cost structure for purchasing and owning a car	Overall weight of Vehicle ownership cost for a period of 5 years or 100.000 km (EURO, TVA included)								
	Mercedes-Benz C Klasse	Audi A4	BMW 318 D Sedan	Volkswagen Passat	Ford Mondeo	Toyota Avensis	Mazda 6	Honda Accord	Mitsubishi Lancer
Vehicle's technical details	Mercedes-Benz Clasa C, diesel engine 200 CDI, Euro 5, 2143 cmc, 100 KW (136 CP)	Audi A4, diesel engine 2.0 TDI, 1.968 cmc, 100 KW (136 CP)	BMW 318D, diesel engine 2.0 TDI, 1.995 cmc, 105KW (143CP)	Volkswagen Passat, diesel engine 2.0 TDI, 1.968 cmc, 103KW (140CP)	Ford Mondeo, diesel engine 2.0 TDCi, 2000 cmc, 103KW (140CP)	Toyota Avensis, diesel engine 2.0 L D-4D DPF, 1998 cmc, 93 KW (126 CP)	Mazda 6, engine 2.0 D, CD129 CE, 2184cc, 95KW (129CP)	Honda Accord, Diesel 2l MT, 2199cc, 110KW (150CP)	Mitsubishi Lancer, Diesel 2l MT, DID MIVEC, 1798cc, 110KW (150CP)
1. Purchase cost	56%	61%	59%	57%	54%	52%	52%	54%	51%
1.1. Actual purchase cost (vehicle's price)	56%	61%	59%	57%	54%	52%	52%	54%	51%
1.2. Additional purchase cost of the vehicle	0%	0%	0%	0%	0%	0%	0%	0%	0%
2. Exploitation cost of the vehicle	40%	35%	37%	39%	42%	43%	43%	42%	44%
2.1. Insurance cost	15%	15%	15%	18%	18%	14%	14%	17%	15%

2.1.1. RCA Insurance cost	1%	1%	1%	1%	1%	2%	2%	1%	2%
2.1.2. CASCO Insurance cost	14%	14%	13%	16%	16%	12%	12%	15%	14%
2.2. Registration cost	3%	1%	1%	1%	3%	2%	4%	3%	2%
2.2.1. Registration cost (pollution fee, registration fee)	1%	1%	1%	1%	1%	1%	1%	1%	1%
2.2.2. Annual tax cost	1,7%	0,4%	0,4%	0,4%	1,9%	0,5%	2,1%	1,9%	0,5%
2.2.3. Road tax cost (in Romanian “rovignetă”)	0,3%	0,3%	0,3%	0,3%	0,3%	0,3%	0,3%	0,3%	0,3%
2.2.4. Periodical Technical Inspection (PTI) Cost (every 2 years) – 3 PTIs cost	0,1%	0,1%	0,1%	0,1%	0,1%	0,1%	0,1%	0,1%	0,2%
2.3. Maintenance cost (replacing brake pads, brake discs, tires included)	6%	5%	6%	6%	4%	8%	7%	5%	6%
2.4. Fuel cost	15%	13%	16%	14%	17%	20%	20%	18%	22%
3. Cost for maintaining the value required to resale (100 € quarterly)	4%	4%	4%	4%	4%	5%	5%	4%	5%
Overall cost for owning a car for a period of 5 years	100%	100%	100%	100%	100%	100%	100%	100%	100%

The scientific research highlights that regardless of the vehicle brand that the customer wants to purchase, the weight of aggregate costs for vehicle ownership for a period of 5 years or 100,000 km is relatively similar.

In terms of cost of ownership, there are two categories which arise, namely vehicles whose ownership cost is over 50,000 euros (VAT included) and vehicles whose ownership cost is less than 50,000 euros (VAT included).

The first category includes in descending order in terms of overall cost of ownership the BMW, Mercedes-Benz and Audi A4. In close proximity to the first category are found Ford Mondeo (49,168 euros), followed closely by the Honda Accord (47,515 euros).

The scientific research indicates once again how important it is to fully assess the costs before deciding to make a purchase and also the importance of the role the sales advisor has when identifying customer`s requirement.

11. FINAL CONCLUSIONS, ORIGINAL CONTRIBUTIONS AND DIRECTIONS FOR FUTURE RESEARCH

As pointed out in the scholarly literature, “*the customers` expectations regarding those who provide services are clear. Customers want services to look good, be responsible, inspire safety, be empathetic and more than anything - to be trustworthy*”. The consumers want companies to do what they say they will do.¹⁸

Following research which was conducted one has noticed that in terms of the vehicle`s quality features customers buy:

- reliability;
- flexibility;
- economy;
- user friendly;
- comfort;

¹⁸ Sewel , C., Brown, P., *Customers for life*, pag. 63, Editura Publica, București, 2009.

- contribution to personal image;
- ongoing technical assistance in any area of geographical coverage;
- ensuring mobility if the customer's owned vehicle is immobilized;
- support staff availability;

Analyzing the quality characteristics of the vehicle, we can express the overall quality as perceived by the customer in a simplified form pursuant to the following indicators:

- delivery period of the new vehicle;
- immobilization period in service;
- number of returns in service;
- number of customer complaints.

During the presentation of products or services we should be able to make statements of value by which to pass on to the customer the “BENEFITS” he obtains when purchasing the product or service offered by the organization.

Customers always want to buy an integrated package of products and services that fully satisfy their requirements. However, customers wish to transfer the responsibility for managing the operation of the product or service purchased to the seller or the service provider.

The future belongs to organizations which succeed to fully meet and exceed customers' requirements, particularly those relating to the quality of post-sales services.

The first part of the scientific research focused on studying the vehicle and in what way its features have an impact on the consumer, the ultimate customer. Subsequently, the research was extended to customers, to products and services consumers, by way of analyzing the methods and techniques for assessing customers' satisfaction.

The next stage of the research program was studying the systems for organizing the post-sale services to vehicles. Thus, we identified the development opportunities particular to organizations' activity by improving inter and intra departmental communication and least but not last by creating and implementing the organizational culture necessary for increasing the performance level of knowledge-based organizations.

The ultimate subject of the research was to develop a standard for assessing the quality level of post-sale services of the organization providing repairing services for vehicles, a standard which aims to meet the requirements of automotive manufacturers and the requirements of partner organizations providing repairing services for vehicles.

The outcome of scientific research program provides solutions to organizations interested in improving the knowledge of the current technical-economic environment, in efficient and rational management of human and material resources particular to the automotive industry, in order to increase, in particular, the economic efficiency.

The study involved conducting an interdisciplinary research, the research team envisaging aspects particular to our country, our culture, which were studied from technical-economic perspective in direct correlation with the current European environment.

Original theoretical and practical contributions

The doctoral thesis comprises a detailed analysis of the organization providing maintenance service for vehicles in the current economic environment aiming to identify strategies to increase the quality of post-sales services in direct correlation with ensuring customer satisfaction.

As of the introduction *the features of the automotive market* are presented and research guidelines on *strategies to ensure customer satisfaction* are structured. The scientific researches focus on *identifying the techniques and methods to ensure customer satisfaction*, this goal is considered a critical success factor for the organization providing maintenance services for vehicles. In the first part of the thesis *the quality features particular to vehicles and the requirements particular to manufacturers* have been defined.

Chapter three comprises an *overview of the concepts for continuous improvement* with direct application in the automotive service industry. The scientific research carries further with presenting the *methods of identifying the level of customer satisfaction* for post-sales services. The applied section presents the *SWOT, STEP analysis* and the analysis of results obtained from processing questionnaires filled in by customers of the organization.

The scientific research carries further with *studying temperaments*, describing a *practical application of these principles* within the service organization.

Further on, the knowledge-based organization was defined, *the overall customer satisfaction principles* were identified, *the techniques and methods of analyzing customer complaints and returns* to service were presented. A *practical guide for words and expressions* used in managing conflicting situations was defined.

The scientific research continues by indicating the *quality management systems* related concepts of *post-sales services for vehicles* identifying *the role of strategic management* of the post-sales services department. The *managerial functions* are presented and the extent to which they affect the activity of the service organization within the framework set by *internal legislative system* of the service organization. A *practical guide to support services* which can be offered to customers was presented.

Based on the principles of good management of post-sales services department's activities the key indicators of the revenue and expenditures budget were identified and an overview was made on *the indicators particular to monitoring the activity of head of departments*. The scientific research continues with *the analysis of the service procedures quality* which carries out within post sales service department identifying in detail the critical success factors for each procedure and subprocedure. The steps to be taken to ensure efficient procedures assurance and decision-making quality assurance were presented.

The scientific research comprises *practical applications* regarding: the applicability of *internal communication principles* within the post-sales services department, *information flow, delegation procedure, team building procedure, communication techniques, rules for influencing decisions* along with *the practical way the team members must interact with customers*. The factors which influence customer satisfaction, *the barriers* that must be overcome in communicating with internal and external customers were presented, subsequently to which a *practical application concerning the management of working time* particular to maintenance services works for vehicles was presented.

Subchapter 6.1.1 presents the *organization's structure*, the organization's *legislative system*, the organization's *policies* and *organizational chart* particular to an organization providing maintenance services for vehicles. Performance indicators particular to spare parts service and trading business together with the service model for *return to service analysis* have been described. A *plan for particular actions* required to increase the number of hours billed per vehicle in service and an *overview of the methods* that can be applied to eliminate organization's members resistance to change were presented.

In view of establishing the *quality assessment standard for post-sales services*, the concept particular to actual quality of the services offered by the organization together with *the concept of quality as it is perceived by the customer* were presented. Based on these concepts in a practical application *indicators particular to quality evaluation of the service services* provided to customers have been *identified and analyzed*. Subsequent to monitoring and analyzing performance indicators particular to service workshops an *action plan* was developed to be implemented *in order to improve the quality of post-sales services*.

Given the current economic environment, the research presents a *cost analysis* particular to activities carrying out within post-sales services department. Pursuant to this analysis particular methods and techniques to reduce costs within an automotive maintenance service organization have been identified. For the same purposes the competitive advantages offered by Japanese management systems were presented.

Based on the critical success factors particular to automotive maintenance activity a *standard particular to ensuring the quality of procedures* which carry out within the post-sales service department has been identified.

The scientific research displays *the management styles and their influence* on the performance level of the activity of post-sales services department. In order to effectively manage conflict situations, the steps to be taken by organization's members so that *customer satisfaction and their loyalty to be generated* were established. Additional *expressions guide* has been prepared by which is recommended to be used to successfully manage these situations together with an overview of common mistakes that are made while managing conflict situations.

As regards the *relation between the graduate and employer modern teaching methods* in higher education are presented, in terms of managing the partnership between higher education institutions and the private sector. Starting with *modeling the service procedures the model for post-sales service department in relation with external partners* is presented.

The scientific research defines and presents a detailed analysis of the *cost of ownership* of a vehicle, followed by a comparative study of the cost of ownership for 8 different vehicle models (of the same class).

The scientific research has shown that employees who are in direct contact with customers are essential in ensuring overall customer satisfaction. The employees of the organization have an outstanding contribution in promoting the organization's image abroad, it is obvious that a special attention should be paid to ensure a high level of employee satisfaction. Good communication between internal customers generates a very pleasant atmosphere at work, which reflects positively on external customers. Thus the organization will be able to have more loyal customers¹⁹.

Below we shall present some details of the main contributions pursuant to the scientific research:

- ***Ensuring the overall satisfaction of customers***

The service organizations which do not give the due thought to customer relationship will survive for only a short period of time and only because of reduced competitiveness in certain areas. Organization's employees must be educated, motivated and well monitored so that the services offered to live up to customer expectations. Employees' behavior can be monitored through CSI (Customer Satisfaction Index) assessments or Mystery Shopping regular type assessments.

Customers find it extremely important that all service interventions to be completed in the shortest time possible and without errors or omissions from treating the indicated nonconformities. If the subject is required to complete a return/re-entry vehicle in service for the same problem, the customer will certainly be deeply unhappy, in which only ensuring an excellent level of communication can be the solution and improve customer relationships.

Improving communication with the customer must be one of the main concerns of each organization, especially if we consider that wrong choice of appropriate communication channel together with cognitive dissonance are the main factors that trigger conflict situations. The analyzes found that in many cases the customer's request was simply to communicate effectively, especially to be heard. The customer must notice employee's transparency, availability, empathy as contract partners to solve the arising problems.

Given that the website it is an effective means of communication, more and more customers use electronic communication channels. The organization must provide the necessary information to customers electronically, thereby facilitating access to general information (contact details, product specifications, pricing, special offers, comprehensive range of offered services).

¹⁹ Țițu, M., Oprean, C., Grecu, D., Țițu Mariana, *Communication in External Customer's Relations within Organisations that have implemented a Quality Management System*, In: Proceedings of the International MultiConference of Engineers and Computer Scientists 2011, IAENG International Conference on Industrial Engineering (ICINDE'11), Hong Kong, registration number IMECS2011_1291293477, ICINDE_97, 5 pages, ISBN 978-988-18210-3-4, 2011, ISI.

In the management of customer relationships, the loyal customers have an important role, those who have chosen to stand by the organization each year using products and services offered by the organization. Effective management of relationships with loyal customers, those who are true partners of the organization, generate a substantial profit compared with customers who are not related to organization²⁰.

The modern organizations, based on the principles of sustainable development, must provide increasingly higher levels of development in its business scope, in the performance growth of its employees, in increasing knowledge and communication skills both within and outside the organization.

Whatever its form, communication is an extremely complex process that must always provide the link between transmitter and receiver, the main objective being that transmitter to have its message perceived and accepted. If the organization is recognized as a leader in terms of competition in its field, the receiver of the message by “selective perception mechanism” would be easier to choose and retain the information transmitted correctly.

Quality communication can be described as an effective lever for continuous improvement of the services offered by the company for continuous improvement of ongoing procedures within the company and also to identify customers` requirements. A key role in this process goes to the visionary leader, the team which he manages in order to fulfill the objectives and how the organization`s manager shall ensure the creation of the binder called “communication” within the organization.

The organization`s managers must know the temperaments and traits of the people they work with, to be able to use them at their value and create a favorable environment for the development of communication, initiative and creativity. One of the ways in which the organization manages to generate to the customer a sense of belonging to the group, is editing and sending him a periodical publications (brochures, magazines).

When the customer presents a situation that needs the support of the organization the opportunity to retain that customer occurs. Actually, the customer wants to receive solutions instead of suggestions and support. In these cases, the employees of the organization demonstrate empathy for customers, showing that they truly care about the customers and also generate future reference because the customer was given excellent and timely help even when it was difficult. The customer will remain with the perception that he can rely on organization`s employees and shall send this message further on the market.

Only satisfied customers can ensure in future that the organization remains market leader. To achieve this strategic objective, the basic conditions are to ensure quality of products and services offered by the organization. In this regard, all departments in the organization must act as a whole.

▪ ***Systems of managing the post-sale services for vehicles***

One of the scientific research`s objectives was to demonstrate the importance of the role of proper management of the procedures taking place in the post sales services department of organizations providing repairing services for vehicles which have implemented a quality management system²¹.

²⁰ Țițu, M., Oprean, C., Grecu, D., Țițu Mariana, *Communication in External Customer's Relations within Organisations that have implemented a Quality Management System*, In: Proceedings of the International MultiConference of Engineers and Computer Scientists 2011, IAENG International Conference on Industrial Engineering (ICINDE'11), Hong Kong, registration number IMECS2011_1291293477, ICINDE_97, 5 pages, ISBN 978-988-18210-3-4, 2011, ISI.

²¹ Oprean, C., Țițu, M., Grecu, D., Oprean Camelia, *The Importance of Insuring Document Quality during the Process of Motor Vehicle Repair*, In: Proceedings of the International MultiConference of Engineers and Computer Scientists 2011, IAENG International Conference on Industrial Engineering (ICINDE'11), Hong Kong, registration number IMECS2011_1291293477, ICINDE_98, 4 pages, ISBN 978-988-18210-3-4, 2011, ISI.

The quality of the documents drafted during the repairing procedure of the vehicle is the basis of ensuring the quality of the procedures which carry out within the organizations providing repairing services for vehicles.

The researches have shown that providing the customers with quality services starts with the quality of the product which of course is provided primarily by the manufacturer. This in turn requires quality information from its representatives who ensures that the product is maintained on market. Without this feedback collected and transmitted correctly, the chances of manufacturer to ensure the presence on the market of quality products is minimized.

All this information is managed through documents that are drafted during the repairing procedures of vehicles, from the time the customer calls to services organization and ending with obtaining feedback from the customer, subsequent to billing, on the quality of services and products it has received.

At each stage of this complex process the value to the product and service must be also added. For example, in a vehicle repair workshop if the scheduling of the works is performed judiciously, the technicians will not work for a certain period of time or will be forced to work under pressure linked to failure to complete the repairs within the terms agreed with customers when they brought the vehicles to service.

The role of managers at all levels in the organizational structure must be that of focusing on the quality of the services although they are tempted to focus more on commercial and financial elements that seem to generate earnings easily visible. Quality service procedures in organizations that have implemented a quality management system are the underlying element structure necessary to ensure performance levels set by the organization.

The organization providing repair services for vehicles, the current management concept is based on three distinct elements, namely activities (as part of the process), human resources (employees who manage the procedures and comply with the actions of procedures` structure) and the knowledge which the workers possess or acquire them through continuous training.

In order to have an efficient management system it is necessary for the organization to achieve the cohesion of organizational procedures, guidance, coordination, management and, last but not least, leadership. Some organizations have waived the traditional management style in order to make a "breakthrough management". This is the common factor of the features that reflect the means of driving and assuming the management functions of the organization, for the purpose of initiating, supporting and promoting a culture of total quality.²²

▪ ***Managing the working time of the vehicle`s repairing based on the documents particular to procedures***

Pursuant to monitoring a service work, starting with handing over the vehicle at the reception by the customer and until delivering the vehicle back to the customer, the scientific research has shown the way that the losses caused by delays during the course of the service procedures can be eliminated. One noted that although the customer had to wait 124 minutes in order to retrieve the car from the service, the service technician has worked effectively only 74.5 minutes, i.e. only 60% of the time that the customer expected completion of the service intervention.

▪ ***Drafting the assessment standard of the quality level of post-sale services for vehicles***

Acquisition and successful management of service quality provided throughout the procedures which are carried out within the organization are essential to ensure long-term partnership with the customer. The organization was submitted for the analysis of the performances obtained pursuant to carrying out the services procedures, pursuant to which steps were recommended to ensure the continuous improvement of services quality. Information relating to customer perception of how the organization meets its requirements was also processed. In order to

²² Oprean, C., Kifor, C., Suci, O., *The integrated management of quality*, Editura ULBS, pag. 79, ISBN 973-739-034-2, Sibiu, 2005.

ensure continuous improvement of the quality of services provided by the organization one must constantly evaluate the results of actions taken. Thus we have the opportunity to invest in further developing and improving processes that generate competitive success for the organization, making it the current market leader.

The ultimate goal of defining and continuous improvement of service procedures is for the organization to ensure quality customer service. Sales, service and supply departments must always work together with the strategic objective of ensuring customer satisfaction who perceives the organization as a whole.

Each person in the organization is responsible for ensuring customer satisfaction. It is a very important aspect that cannot be left to a single compartment or worse, on account of one designated person.

The final goal of the organization is achieved when the customer leaves fully satisfied with the quality of the service offered by the organization, satisfied on price level, impressed by the atmosphere in which he waited for the completion of the intervention, the special treatment enjoyed by all those aspects generating a positive experience that will make the customer return with pleasure to the service.

▪ ***The influence of the management styles on the performance level on knowledge based organizations which already implemented a quality management system***

The scientific research describes the main management styles and how we can interact depending on the identified temperament in order to eliminate any barrier to communication. Managers must make sustained efforts in order for the team members to accept and treat each other as their personally like to be treated, meaning that they can improve the performance level and earn higher rewards by working together. Also, the scientific research shows how detailed knowledge of management styles manages to contribute to improving the quality of higher education.

The behavioral rules can be used to motivate people in order to promote ethics, morality and integrity, willingness to perform on both professional and personal level. As managers, in order to implement effective management systems within the organization, one must take into account the following aspects:

- the way we communicate, the we can coordinate activities, to manage the organization's resources without neglecting to obtain the feeling of acceptance from the employees. It is extremely difficult for a manager to be able to lead effectively without having a clearly defined relationship with the team he leads. One must early allocate the resources in order to know, to get feedback, to advise the team members. The manager must know what employees like, what motivates them, their leisure hobbies and last but not least what they really want;
- the way we observe the achievements of the team members, the given feedback and especially the means of giving the feedback;
- the way we transmit and communicate the assigned objectives and deadlines, their projection over time, the way we express our expectation to the team members;
- one must pursuit the extend to which the code of professional ethics is observed, in what way the team members interact both inside and outside the organization;
- in addition to (technical) professional development of the team members, the manager must also ensure the continuous development of communication skills;
- the manager must be flexible yet he must be equidistant in the relationship with team members;
- the manager must continuously develop its mentoring and coaching skills.

It is mandatory for the manager to succeed to impose its views in such way that the team members act in the indicated direction and change their actions in this regard without resentment. The management style means all the managerial actions and behaviors initiated to coordinate team

activities. The scientific research presents detailed specifications related to management styles and how to interact with members of the organization based on management style identified.

Knowledge-based organizations managers should encourage all employees, regardless of the hierarchical level, to devote themselves to the work they perform. Leadership style must be adapted more often and depending on the stage the team is formed and organization managers must have a thorough knowledge about the situational management.

- ***Ensuring the overall satisfaction according to customer relationship management in knowledge based organizations which have implemented a quality management system. Overall customer satisfaction in terms of relation between supplier and customer.***

The doctoral thesis identified and defined the relation between supplier and customer within post-sales service department. The critical success factors particular to each procedure that runs within post-sales service department were also identified. These factors directly affect the establishment, implementation, maintenance and ongoing development of long term partnerships with the customers and the suppliers of the services organizations.

In order to identify the influence factors acting on customer satisfaction the concept of *overall customer satisfaction* was defined. Customer satisfaction is a performance indicator that differentiates and positions knowledge based organization in relation to other competing organizations being influenced by the needs, desires, goals and culture of each individual. Overall customer satisfaction is an indicator that measures the extent to which an organization's products and services meet or exceed customer expectations. Mathematically, the overall customer satisfaction can be defined as follows:

$$Ocs = Efl / El, \quad (11.1)$$

where: *Ocs* means overall customer satisfaction;

Efl - customer expectations fulfillment level;

El - customer expectations level.

In order to ensure the accomplishment of the organization`s objectives, this indicator should not be less than an unit..

Conducting a mutually beneficial business partnership between service organization and its customers is what underpins the endurance of business excellence. However, during the daily activity deficiencies may occur which need to be immediately eliminated with the highest level of commitment from both sides²³. The success of every organization is conditioned by the relationship which is defined by customers, maintained and continuously improved. The relationship with the customers is the key to ensure the development of mutually beneficial business partnership.

- ***The role of analyzing the ownership cost in vehicle purchase management***

Pursuant to the scientific research the calculation method related to vehicle ownership was identified, thus being established the main lines to be analyzed when customers want to purchase a new vehicle. As mentioned in section 10.1, the mathematical expression of ownership cost can be defined as follows:

$$OC = PC + EC + MC \quad (11.2)$$

where: *PC* is the purchase cost;

EC - exploitation cost;

MC - cost for maintaining the value required to resale.

The mathematical expression of exploitation cost (*EC*) can be defined as follows:

$$EC = Ic + Rc + Mc + Fc, \quad (11.3)$$

where: *Ic* is the insurance cost;

Rc – registration cost;

²³ Țîtu, M., Oprean, C., Grecu, D., *Ensuring Global Satisfaction According to the Management of the Relationship with Customers, in the Knowledge-Based Organizations which Implemented a Quality Management System*, In: Proceedings of the 6th International Seminar Quality Management in Higher Education – QMHE 2010, code 399, 4 pages, Book II, pag. 681-684, ISBN 978-973-662-566-4, Tulcea, România, 2010, ISI.

Mc - maintenance cost;

Fc - fuel cost.

For used vehicles the cost of ownership analysis must be extended to the reports particular to the reliability of the vehicles. Customers should also consider the following additional information: the technical condition of the vehicle (vehicle verification is recommended in periodical technical inspection services), service history - including the history of service works performed as a result of road events (faults), the overall number of km made by the vehicle, the number of owners, the interior and exterior of the vehicle.

It is recommended that prior to purchasing a used vehicle to have it inspected by the brand's authorized service partner.

▪ ***Managing the organization's performance using revenues and expenditures budget***

One of the main tools used by the management of a knowledge based organization is the budget. Management by budgets is a management system which provides forecasting, monitoring and ongoing assessment activities within the organization using budgets.

The organization is managed by profit centers which are based on management centers delineation in terms of objectives, revenues, expenses. Any deviation from the budget must be carefully analyzed in order to take necessary measures to improve performance levels. The scientific research shows the advantages of using the compared budgets management system against the disadvantages that occur when the organization uses only this management system.

▪ ***Complaints` management***

Even if the customers are not satisfied for the moment following the occurrence of nonconformities in carrying out the repairing or communication procedures, they appreciate the professional behavior demonstrated by the organization's members.

Positive consequences pursuant to the occurrence of a conflict situation:

- the customer who was initially unhappy is transformed into a loyal customer;
- due to the fact that the customer's confidence grew pursuant to successful solving of the conflict situation, it will be more tolerant in the future event of non-compliance situation.

Negative consequences pursuant to the occurrence of a conflict situation:

- the customer who is not contacted according to the terms agreed with the reception officer before handing over the vehicle to service, will eventually end up discussing with the department manager or even the General Manager;
- customers usually want to receive a vehicle replacement when their vehicle is immobilized in service;
- the customer may end trusting solely the service manager repeatedly requesting him the confirmation of the necessary works;

The analyzes found that in many cases the customer's request was simply to communicate effectively, especially to be heard. The customer must notice employee's transparency, availability, empathy as contract partners to solve the arising problems.

The database for these referrals is a real gold mine for the company, providing real feedback on the perception the customer has on the services received.

Future directions of research

Organization's partners should feel comfortable whenever they interact with the organization. One of the main measures to be implemented is to provide customer loyalty programs to make them feel really special and important. Organization's employees must be educated, motivated and well monitored so that the services offered to live up to customer expectations.

Customers find it extremely important that all service interventions to be completed in the shortest time possible and without errors or omissions from treating the indicated nonconformities. If the customer is required to complete a return/re-entry vehicle in service for the same problem, the customer will certainly be deeply unhappy, in which only ensuring an excellent level of

communication can be the solution and improve customer relationships. Customer oriented organization is able to predict their future behavior and to better meet their needs and expectations. In order to ensure a proper management and outstanding results generated by referrals of situations by customers, the employees who talk to customers must have extensive knowledge of communication techniques.

The care for customers of an organization is a concept that involves conducting particular actions which customers are always satisfied with and turn them into loyal customers who return regularly with new requests. Customer satisfaction is a priority and a condition for the existence of the seller, emphasizing on quality and higher quality service offers. Each employee as well as the whole team is responsible for providing quality customer service. The responsibility does not fall only on those who come into direct contact with the customer.

Pursuant to analyzing the outcomes of the scientific researches which represented the subject matter of the thesis, given the conclusions on the level of knowledge reached during this research, we further believe that there is the need to address the following research directions:

- scientific analysis of how to identify customer requirements, different categories of vehicles (personal use vehicles, commercial vehicles);
- scientific analysis of the cost structure of the companies producing quality vehicles;
- identifying new ways of cooperation between higher education institutions and organizations working in the private sector, to ensure the necessary environment for innovation and the knowledge development;
- reliability analysis of the vehicles in circulation in Romania based on information obtained from the analysis of periodic technical inspection reports held by the Romanian Auto Registry.

By knowing what generates value for the customer, by collecting and analyzing relevant data and information about customers, by constantly and dynamically adopting methodologies that meet customer demands, the organizations are able to develop long-term relationships with customers that can provide benefits to all stakeholders .

BIBLIOGRAFIE

- 1 Abrudan, I., *Premise și repere ale culturii manageriale românești*, Editura Dacia, Cluj-Napoca, 1999.
- 2 Abrudan, I., *La porțile Europei. O viziune asupra integrării europene a României*, în Revista de Management și Inginerie Economică, vol.5, nr.4 (20), pag.5, Cluj – Napoca, 2006.
- 3 Abrudan, I., *Managementul factorului timp*, în Revista de Management și Inginerie Economică, vol.5, nr.3, Cluj – Napoca, 2006.
- 4 Abrudan, I., *Triumful „principiului rațiunii suficiente” a lui Leibnitz sau 10 ani de la înființarea Consorțiului de Inginerie Economică din România*, în Revista de Management și Inginerie Economică, vol.5, nr.2 (18), pag. 5, Cluj – Napoca, 2006.
- 5 Adler, N.J., *International Dimensions of Organizational Behavior*, 4th edition, Thompson Learning, Cincinnati, 2002.
- 6 Alexis, J., *Metoda Taguchi în practica industrială*, Editura Tehnică, București, 1999.
- 7 Allaire, Y., Fârșirotu, M., *Management strategic – strategiile succesului în afaceri*, Editura Economică, București, 1998.
- 8 Andănuș, C.V., *Cercetări privind fidelitatea investițiilor în întreprinderile mici și mijlocii cu profil industrial*, Teză de doctorat, Universitatea Transilvania, Brașov, 2001.
- 9 Andreescu, Cr. ș.a., *Diagnosticarea automobilelor. Lucrări practice*, Editura Printech, București, 2002.
- 10 Andreescu, Cr. ș.a., *Fiabilitatea și mentenanța autovehiculelor*, Editura Printech, București, 2002.
- 11 Andronic, B.C., *Performanța firmei*, Editura Polirom, Iași, 2000.
- 12 Baicu, F., *Elemente de fiabilitate*, Editura Victor, ISBN 973-8128-609, București, 2005.
- 13 Baron, T., ș.a. *Calitate și Fiabilitate - Manual practic 1*, Editura Tehnică, București, 1998.
- 14 Baron, T., ș.a. *Calitate și Fiabilitate - Manual practic 2*, Editura Tehnică, București, 1998.
- 15 Bogdan, I., *Strategii de control*, Editura Nemira, București, 1995.
- 16 Bogdan, I., Țițu, M., *Quality – The Motor of Change – The Dominant Feature of the 21st Century*, Conferința Economică Științifică Internațională „România – Exigențe în Procesul Dezvoltării, din Perspectiva Integrării în Anul 2007”, 2004.
- 17 Bogdan, I., Țițu, M., ș.a. *Managementul afacerilor internaționale*, Editura Universității Lucian Blaga din Sibiu, Sibiu, ISBN 978-973-739-486-6, 2007.
- 18 Boroiu, A., *Fiabilitatea Autovehiculelor*, Editura Universității din Pitești, 2003.
- 19 Boroiu, A., *Fiabilitatea Autovehiculelor – Aplicații numerice*, Editura Universității din Pitești, 2007.
- 20 Boroiu, Al., Țițu, M. *Managementul fiabilității și mentenabilității sistemelor*, Editura AGIR, ISBN 978-973-720-361-8, București, 2011.
- 21 Brătianu C., Lefter, V., *Management strategic universitar*, Editura RAO, București, 2001.
- 22 Brătianu, C., *Paradigmele managementului universitar*, Editura Economică, București, 2002.
- 23 Brătianu, C., *Management strategic*, Editura CERES, București, 2000.
- 24 Bucur, V., Țițu, M., *Ingineria Sistemelor de Producție*, Partea I, Colecția Managementul și Ingineria Sistemelor de Producție, Editura Universității „Lucian Blaga” din Sibiu, ISBN 973-651-183-9, Sibiu, 2001.
- 25 Bucur, V., Țițu, M., *Ingineria Sistemelor de Producție*, Partea a II-a, Colecția Managementul și Ingineria Sistemelor de Producție, Editura Universității „Lucian Blaga” din Sibiu, ISBN 973-651-182-0, Sibiu, 2001.
- 26 Băjenescu, T., *Fiabilitatea sistemelor tehnice*, Editura Matrix Rom, ISBN 973-685-624-0, București, România, 2003.
- 27 Ceaușu, I., *Tratat de management*, Editura Asociației de Terotehnică și Terotehnologie, România.

- 28 Ciobanu, I., *Management strategic*, Editura Polirom, Iași, 1998.
- 29 Collins J., *Exceleanța în afaceri*, Editura Curtea Veche Publishing, București, 2010.
- 30 Constantinescu, A.D., Ungureanu, Ana-Maria, Costache Alina, *Management strategic*, Colecția Națională, București, 2000.
- 31 Crișan, S., *Management. Elemente fundamentale*, Editura Mira Design, Sibiu, 2001.
- 32 Crișan, S., *Strategii în aprovizionarea materială în industrie*, Editura Continent, Sibiu, 2001.
- 33 Crișan, S., *Managementul serviciilor*, Editura Universității Lucian Blaga, Sibiu, 2003.
- 34 Dalkir, Kimiz, *Knowledge Management in Theory and Practice*, Elsevier, 2005.
- 35 Daniels A. C., *Managementul performanței - Strategii de obținere a rezultatelor maxime de la angajați*, Editura POLIROM, București, 2007.
- 36 DELL'OLMO, Paolo, *Effective Resource Management in Manufacturing Systems: Optimization Algorithms for Production Planning*, London: Springer Verlag, 2006.
- 37 Drucker, P. *Management: Tasks, Responsibilities, Practices*, Harper & Row, 1974.
- 38 Drucker, P. *Management – Eficiența factorului decizional*, Editura DESTIN, Deva, 1994.
- 39 Drucker, P. *Lumea în viziunea lui Peter Drucker*, Editura Teora, București, 1998.
- 40 Drucker, P. *Realitățile lumii de mâine*, Editura Teora, București, 1999.
- 41 Drucker, P. *Societatea postcapitalistă*, Editura Image, București, 1999.
- 42 Drucker, P., *Organizația viitorului*, Editura Teora, București, 2000.
- 43 Drucker, P., *Management strategic*, Editura Teora, București, 2001.
- 44 Drucker, P., *Managementul viitorului*, Editura ASAB, București, 2004.
- 45 Drucker, P., *Despre decizie și eficacitate*, Editura Meteor Press, București, 2010.
- 46 Deac, V., Bârgu, C., *Strategia firmei*, Editura Eficient, București, 2000.
- 47 De Kluyver, Cornelis, A., *Strategic Thinking An Executive Perspective*, Prentice Hall, New Jersey, 2000.
- 48 Dess, G.G. & Lumpkin, G.T., *Strategic Management. Creating Competitive Advantages*, McGraw – Hill, New York, 2002.
- 49 Dinu, E., *Strategia firmei. Teorie și practică*, Editura Economică, București, 2000.
- 50 EIDE, Arvid R. JENISON, Roland D. NORTHUP, Larry L. MIKELSON, Steven K., *Engineering : Fundamentals & Problem Solving*, McGraw Hill Book Company, 2008.
- 51 EVANS, James R., *The Management and Control of Quality*, Thomson South Western, 2005.
- 52 Graham, W., Parker, W., *Costurile calității*, Editura Codecs, București, 1998.
- 53 Grecu Adina, *Rolul metodelor activ - participative în creșterea eficienței învățării la disciplina "Educație tehnologică"*, Editura Universității Lucian Blaga, Sibiu, România, 2009.
- 54 Hesselbein, F., Goldsmith, M., Beckhard, R. (coordonator), *Organizația viitorului*, Editura Teora, București, 2000.
- 55 Harrington, H.J., Harrington, J.S., *Management total în firma secolului 21*, Editura Teora, București, 2001.
- 56 Haberberg, A., Rieple, A., *The Strategic Management of Organisations*, Prentice Hall, London, 2001.
- 57 Henry W. s.a. *The Blackwell Handbook of Global Management: A Guide to Managing Complexity*. Blackwell Publishing, 2006.
- 58 HOLTZAPPLE, Mark T. REECE, Dan W., *Concepts in Engineering*, McGraw Hill Companies, 2008.
- 59 Imai, M., *Kaizen*, Editura Publica, Bucuresti, Romania, 2005.
- 60 Jenson R., *Piramida succesului – Organizații de succes prin oameni de succes*, Editura Codecs, București, 2010.
- 61 Joyce, P., Woods, A., *Strategic Management a fresh approach to developing skills, knowledge and creativity*, Kogan Page, London, 2001.
- 62 Juran, J.M., Grynia, F. M., *Calitatea produselor*, Editura Tehnică, București, 1973.
- 63 Kélada, J., *Qualité totale Et gestion par extraversion*, în „Gestion”, februarie 1991.
- 64 Kifor, C.V., Oprean, C., *Ingineria calității*, Editura Universității „Lucian Blaga” Sibiu, ISBN

- 973 – 651 – 4, Sibiu, 2002.
- 65 Kifor, C., Oprean, C. *Ingineria calității. Îmbunătățirea 6 Sigma*, Editura ULBS, Sibiu, 2006.
- 66 Littauer Florence, *Personalitate plus*, Editura Business Tech, București, 2004.
- 67 Mackler, R.J., *Management strategic multinațional*, Editura Economică, București, 2001.
- 68 Negruș, E., Tănase, F., Soare, I., Bejan, N., *Încercarea autovehiculelelor*, Editura Didactică și Pedagogică, București, România, 1983.
- 69 Nicolescu, A., *Dicționar de management al învățământului superior din România*, Român-Englez-Francez-German, Livpress, București, 2001.
- 70 Nicolescu, O., Verboncu, I. *Management*, Editura Economică, București, 1996.
- 71 Nicolescu, O., Bogdan, I., ș.a. *Strategii manageriale de firmă*, Editura Economică, București, 1996.
- 72 Nicolescu, O., *Management comparat*, Editura Economică, București, 1997.
- 73 Nicolescu, O. *Sistemul decizional al organizației*, Editura Economică, ISBN 973-590-049-1, București, 1998.
- 74 Nicolescu, O., Verboncu, I. *Managementul pe baza centrelor de profit*, Editura Economică, București, 1998.
- 75 Nicolescu, O., Verboncu, I. *Management*, Editura Economică, ISBN 973-590-164-1, București, 1999.
- 76 Nicolescu, O. *Sistemul informațional al organizației*, Editura Economică, București, 2000.
- 77 Nicolescu, O. *Sisteme, metode și tehnici manageriale ale organizației*, Editura Economică, București, 2000.
- 78 Nicolescu, O., Plumb, I., Vasilescu, I., Verboncu, I., (coordonatori), *Abordări moderne în managementul și economia organizației*, Editura Economică, ISBN 973-590-860-3, București, 2003:
- vol.1 *Managementul general al organizației*, ISBN 973-590-861-1.
 - vol.2 *Managementul pe domenii de activitate*, ISBN 973-590-862-X.
 - vol.3 *Economia și managementul diferitelor tipuri de organizații*, ISBN 973-590-863-8.
 - vol.4 *Eficiența economică și performanța managementului organizației*, ISBN 973-590-864-6.
- 79 Nicolescu, O., Nicolescu Luminița, *Economia firma și managementul bazate pe cunoștințe*, Editura Economică, ISBN 973-709-125-6, București, 2005.
- 80 Ohno, Taiichi, *Sistemul de producție Toyota – o alternativă la producția de serie*, Editura Finmedia, București, Romania, 2005.
- 81 Olaru Marieta, *Managementul calității*, Editura Economică, București, 1999.
- 82 Olaru Marieta (coordonator), *Tehnici și instrumente utilizate în managementul calității*. Editura ASE, București, 1999.
- 83 Olaru Marieta, *Tehnici și instrumente utilizate în managementul calității*, Editura Economică, București, 2000.
- 84 Olaru Marieta, *Etapele implementării sistemului de management de mediu și audit*, Q-media nr. 6/2000, pag. 60-63.
- 85 Oprean, C., Olaru Marieta, *Tehnici și instrumente utilizate în managementul calității*, Editura Economică, București, 2000.
- 86 Oprean, C., Țițu, M., *Managementul inovațional și al calității*, Editura Universității “Lucian Blaga” Sibiu, I.S.B.N. 973-9410-10-3, Sibiu, 2000.
- 87 Oprean, C., Țițu, M., *Sisteme de control și fiabilitate*, Editura Universității “Lucian Blaga” Sibiu, I.S.B.N. 973-9410-24-9, Sibiu, 2000.
- 88 Oprean, C., Kifor, C., *Managementul calității*, Editura ULBS, ISBN 973-651-310-6, Sibiu, 2002.
- 89 Oprean, C., Țițu, M., Oprean, Cristina, *Managementul strategic*, Editura ULBS, Sibiu, 2002.
- 90 Oprean, C., Țițu, M., Oprean Camelia, *Studii de caz în managementul strategic*, Editura ULBS, 2004.

- 91 Oprean, C., Kifor, C., Suci, O., *Managementul integrat al calității*, Editura ULBS, ISBN 973-739-034-2, Sibiu, 2005.
- 92 Oprean, C., Vanu Alina, *Dicționar de management integrat al calității*, Editura AGIR, București, 2006.
- 93 Oprean, C., s.a. *Metode și tehnici ale cunoașterii științifice*, Editura Universitatii „Lucian Blaga” din Sibiu, Sibiu, 2006.
- 94 Oprean, C., Țițu, M., *Cercetarea experimentală și prelucrarea datelor. Partea a II-a*, Editura Universității „Lucian Blaga” din Sibiu, Sibiu, 2007.
- 95 Oprean, C., Kifor C. V., *Quality Management*, Callidus Publishing House, Germany, ISBN 978 – 3 – 940677-50-1, 2008.
- 96 Oprean, C., Țițu, M. *Managementul calității*, Editura ULBS, Sibiu, 2007.
- 97 Oprean, C., Țițu, M. *Managementul calității în economia și organizația bazate pe cunoștințe*, Editura AGIR, ISBN 978-973-720-167-6, București, 2008.
- 98 Oprean, C., Țițu, M., Grecu, D., Tănăsescu Cristina, *Study Regarding the Importance of the Activity of Training in Quality Management within the Department of Post-Sale Services in the Knowledge-Based Organization*, In: Proceedings of the 5th Balkan Region Conference on Engineering Education & 2nd International Conference on Engineering and Business Education, 15 - 17 October, 2009, pages 453 - 458, ISBN 978-973-739-848-2, ISSN 1843-6730, LBUS, Sibiu, Romania, 2009, ISI.
- 99 Oprean, C., Țițu, M., Grecu, D., *The influence of the temperaments on the performance level in the knowledge-based organizations which implemented a quality management system*, In: Proceedings of the 6th International Seminar Quality Management in Higher Education – QMHE 2010, code 476, 4 pages, Book II, pag. 199-202, ISBN 978-973-662-566-4, Tulcea, 2010, ISI.
- 100 Oprean, C., Țițu, M., Grecu, D., Oprean Camelia, *Study regarding the analysis of the level of satisfaction of customers in the organizations which have implemented a quality management system*, In: Proceedings of ICIMS 2010, 5 pages, ISSN 2010-0248, February 26-28, Singapore, 2010, ISI.
- 101 Oprean, C., Țițu, M., Grecu, D., Tănăsescu Cristina, Oprean Camelia, Țițu Mariana, *A study on mapping processes in organizations based on acquaintances. A Case Study*, In: Proceedings of the Asian Conference on the Social Sciences, ACSS 2010, June 18-21 2010, Submission Reference: 100719, Osaka, Japan, 11 pages, ISSN 2218-2179, 2010, ISI.
- 102 Oprean, C., *Politici și mecanisme instituționale în domeniul calității*. Curs Universitar, UTCN, Cluj-Napoca, 2012.
- 103 Oprean, C., Țițu, M., Grecu, D., Oprean Camelia, *The Importance of Insuring Document Quality during the Process of Motor Vehicle Repair*, In: Proceedings of the International MultiConference of Engineers and Computer Scientists 2011, IAENG International Conference on Industrial Engineering (ICINDE'11), Hong Kong, registration number IMECS2011_1291293477, ICINDE_98, 4 pages, ISBN 978-988-18210-3-4, 2011, ISI.
- 104 Oprean, C., Țițu, M., Grecu, D., Țițu Mariana, *Studies and Research on the Possibility of Cost Reduction within the Knowledge-based Organizations in the European Car Industry*, In: Proceedings of the International MultiConference of Engineers and Computer Scientists 2011, IAENG International Conference on Industrial Engineering (ICINDE'11), Hong Kong, registration number IMECS2011_1291293477, ICINDE_99, 4 pages, ISBN 978-988-18210-3-4, 2011, ISI.
- 105 Oprean, C., Țițu, M., Grecu, D., *The management of the quality of internal communication in a knowledge-based organisation*, In: Proceedings of The 7th International Conference of the Management of Technological Changes, code 570, 4 pages, 2011, Alexandroupolis, Greece, ISI.
- 106 Oprean, C., Țițu, M., Bucur, V. *Managementul global al organizației bazate pe cunoștințe*, Editura AGIR, ISBN 978-973-720-363-2, București, 2011.

- 107 Oprean, C., Țițu, M., Grecu, D., *The comparative analysis of the services offered by the manufacturers dealers after the sale of motor vehicles*, Journal of Information Technology Education: Research, ISSN: 1547 - 9714, Vol. 11 A2, pag. 32-40, 2012.
- 108 Petrescu, I., *Profesiunea de manager*, Editura Lux Libris, Brașov, 1997.
- 109 Petrescu, I., *Tratat de management universitar*, Editura Continent, Brașov, 1998.
- 110 Petrescu, I., *Managementul personalului organizației*, Editura Expert, București, 2003.
- 111 Popescu, S., *Managementul Calității*, vol. I, Editura Cărții de Știință, Cluj-Napoca, 1999.
- 112 Popescu, S., Brătianu, C., autori Atanasiu. G., Rusu, C., Oprean, C., Curaj, A., Buzănescu, Șt., - *Ghidul Calității în învățământul superior – proiectul Calisro-director Pânzaru, I.*, Editura Universității din București, 2004.
- 113 Popescu, S., *Bazele managementului calitatății*, Editura Universității Tehnice Cluj Napoca, Cluj Napoca, 2005.
- 114 Porter, M., *Strategie concurențială*, Editura Teora, București, 2001.
- 115 Qubein, N.R., *Profesionist în vânzări*, Editura Curtea Veche, București, 2010.
- 116 Rusu, C. (coordonator), *Proceduri de asigurarea calității în învățământul superior din România*, vol.1, Editura Economică, București, 2000.
- 117 Rusu, C., Gafițeanu, M. (coordonatori), *Proceduri de asigurarea calității în învățământul superior din România*, vol.2, Editura Economică, București, 2000.
- 118 Rusu, E., *Decizii optime în management*, Editura Economică, București, 2001.
- 119 Rusu, C., *Managementul schimbării*, Editura Economică, București, 2003.
- 120 Sewel, C., Brown, P., *Clienți pe viață*, Editura Publica, București, România, (2009).
- 121 Slătineanu, L., Dușa, P., *Managementul inovării tehnologice*, Editura Tehnopress, Iași, 2002.
- 122 Slătineanu, L., *Managementul inovării produselor și proceselor*, Editura Politehniun a Universității Tehnice Gheorghe Asachi Iași, 2005.
- 123 Suci, O., Oprean, C. *Calitatea globală concurențială*, Editura AGIR, București, 2007.
- 124 Tracy, B., *Cum conduc cei mai buni lideri*, Curtea Veche Publishing, București, România, 2010.
- 125 Țăran, N., *Managementul inovației*, Editura Amarcord, Timișoara 1995.
- 126 Țițu, M., Oprean, C., Cicală, E., *Statistică tehnică și control statistic*, Editura Universității „Lucian Blaga” din Sibiu, Sibiu, 2001.
- 127 Țițu, M., Oprean, C., Cicală, E., *Tehnici și metode în conducerea proceselor tehnologice*, Editura Universității „Lucian Blaga” din Sibiu, ISBN 973-651-180-4, Sibiu, 2001.
- 128 Țițu, M., *Statistică tehnică și control statistic*, Editura Universității „Lucian Blaga” din Sibiu, ISBN 973-651-400-5, Sibiu, 2002.
- 129 Țițu, M., *Statistică tehnică și proiectarea experimentelor. Analiza dispersională și regresională*. Editura Universității „Lucian Blaga” din Sibiu, Sibiu, 2004.
- 130 Țițu, M., *Statistică tehnică și proiectarea experimentelor. Strategia experimentelor factoriale*, Editura Universității „Lucian Blaga” din Sibiu, Sibiu, 2004.
- 131 Țițu, M., Oprean, C., *Statistică tehnică și proiectarea experimentelor. Sisteme, metode, tehnici și instrumente*, Editura Universității „Lucian Blaga” din Sibiu, Sibiu, 2005.
- 132 Țițu, M., Oprean, C., *Cercetarea experimentală și prelucrarea datelor. Partea I*, Editura Universității „Lucian Blaga” din Sibiu, ISBN 978 – 973 – 739 – 297 – 8, Sibiu, 2006.
- 133 Țițu, M., Oprean, C., *Managementul strategic*, Editura Universității din Pitești, ISBN 978-973-690-647-3, Pitești, 2007.
- 134 Țițu, M., *Managementul calității în organizațiile industriale moderne. Teză de doctorat*, Universitatea Lucian Blaga din Sibiu, 2007.
- 135 Țițu, M., Oprean, C., *Managementul strategic*, Editura Universității din Pitești, ISBN 978-973-690-647-3, Pitești, 2007.
- 136 Țițu, M., Oprean, C., *Managementul calității*, Editura Universității din Pitești, ISBN 978-973-690-646-6, Pitești, 2007.

- 137 Țițu, M., Oprean, C., Tomuță, I., *Cercetarea experimentală și prelucrarea datelor. Studii de caz*, Editura Universității „Lucian Blaga” din Sibiu, ISBN 978 – 973 – 739 – 299 – 2, Sibiu, 2007.
- 138 Țițu, M., *Fiabilitate și mentenanță*, Editura AGIR, ISBN 978 – 973 – 720 – 169 – 0, București, 2008.
- 139 Țițu, M., Oprean C., Grecu D., *Study regarding the evaluation of Atmosphere Quality in the Area of Sibiu, by using a method of quality management*, In: Proceedings of the 4th International Conference On Manufacturing Science And Education - MSE 2009, *Trends in Engineering and Academic Education*, Volume II, pag. 255, ISSN 1843-2522, Editura Universității Lucian Blaga, Sibiu, România, 4th-6th June 2009.
- 140 Țițu, M., Oprean, C., Grecu, D., Tănăsescu Cristina, *Studies and Research on Customer Complaint Management in the Activities of Post Sale Services within the Knowledge - Based Organization*, In: Proceedings of the 5th Balkan Region Conference on Engineering Education & 2nd International Conference on Engineering and Business Education, 15 - 17 October, 2009, pages 459 - 464, ISBN 978-973-739-848-2, ISSN 1843-6730, LBUS, Sibiu, Romania, 2009, ISI.
- 141 Țițu, M., Oprean, C., Grecu, D., Oprean Camelia, *The Analysis of Client’s Complaints and the Measures of Improving the Clients’ Satisfaction in the Organizations Which have Implemented a Quality Management System*, In: Proceedings of ICIMS 2010, ISSN 2010-0248, 5 pages, February 26-28, Singapore, 2010, ISI.
- 142 Țițu, M., Oprean, C., Grecu, D., *The Influence of the Management Styles on the Performance Level in the Knowledge-Based Organizations which Implemented a Quality Management System*, In: Proceedings of the 6th International Seminar Quality Management in Higher Education – QMHE 2010, code 400, 4 pages, Book II, pag. 685-688, ISBN 978-973-662-566-4 Tulcea, România, 2010, ISI.
- 143 Țițu, M., Oprean, C., Grecu, D., Tănăsescu Cristina, Țițu Mariana, *The scientific analysis of the competitive advantages provided by the production system Toyota - Just in time*, In: Proceedings of the Asian Conference on the Social Sciences, ACSS 2010, June 18-21 2010, Submission Reference: 100717, Osaka, Japan, 8 pages, ISSN 2218-2179, 2010, ISI.
- 144 Țițu, M., Oprean, C., Grecu, D., *Ensuring Global Satisfaction According to the Management of the Relationship with Clients, in the Knowledge-Based Organizations which Implemented a Quality Management System*, In: Proceedings of the 6th International Seminar Quality Management in Higher Education – QMHE 2010, code 399, 4 pages, Book II, pag. 681-684, ISBN 978-973-662-566-4, Tulcea, România, 2010, ISI.
- 145 Țițu, M., Oprean, C., Grecu, D., *Applying the Kaizen Method and the 5S Technique in the Activity of Post-Sale Services in the Knowledge-Based Organization*, In: Proceedings of the International MultiConference of Engineers and Computer Scientists 2010, IAENG International Conference on Industrial Engineering (ICINDE'10), Hong Kong, registration number IMECS 2010_1256061548, ICINDE_142, 5 pages, ISBN: 978-988-17012-8-2, 2010, ISI.
- 146 Țițu, M., Oprean, C., Grecu, D., Țițu Mariana, *Communication in External Customer’s Relations within Organisations that have implemented a Quality Management System*, In: Proceedings of the International MultiConference of Engineers and Computer Scientists 2011, IAENG International Conference on Industrial Engineering (ICINDE'11), Hong Kong, registration number IMECS2011_1291293477, ICINDE_97, 5 pages, ISBN 978-988-18210-3-4, 2011, ISI.
- 147 Țițu, M., Oprean, C., Grecu, D., Tănăsescu Cristina, *Life after Graduation: The Role of Hiring Graduates and Follow up Systems for the Continuous Development of Education Plans and for Improving Quality in the Higher Education*, In: Proceedings of the International MultiConference of Engineers and Computer Scientists 2011, IAENG International Conference

- on Industrial Engineering (ICINDE'11), Hong Kong, registration number IMECS2011_1291293477, ICINDE_100, 5 pages, ISBN 978-988-18210-3-4, 2011, ISI.
- 148 Țițu, M., Oprean, C., Grecu, D., *Communication techniques meant to ensure clients' satisfaction in the knowledge-based organisations which have implemented a quality management system*, 7th Research/Expert Conference with International Participations “Quality” 2011, Neum, B&H, June 01 - 04 2011, ISSN 1512926, 4 pages, 2011.
- 149 Țițu, M., Oprean, C., Grecu, D., *Managing the Activity of the After Sales Departments in an Organisation Which Has Implemented a System of Quality Management*, In: Proceedings of The 7th International Conference of the Management of Technological Changes, code 571, 4 pages, 2011, Alexandroupolis, Greece, ISI.
- 150 Țițu, M., Oprean, C., Grecu, D., *The identification of the customers' requirements in the knowledge-based organisation*, In: Proceedings of the 1st International Conference on Quality and Innovation in Engineering and Management, ISBN, 5 pages, pag. 215-220, 17 – 19 martie 2011, Cluj-Napoca, România, 2011.
- 151 Țițu, M., Oprean, C., Boroiu, Al., *Cercetarea experimentală aplicată în creșterea calității produselor și serviciilor*, Editura AGIR, ISBN 978-973-720-362-5, București, 2011.
- 152 Țițu, M., Oprean, C., Grecu, D., *Managing the influence factors of the service activity with the help of the quality management system*, Journal of Information Technology Education: Research, ISSN: 1547 - 9714, Vol. 11 A1, pag. 42-52, 2012.
- 153 Țițu, M., Oprean, C., Grecu, D., *Analysis of the ownership cost in the current economical context in the knowledge-based organization*, Journal of Information Technology Education: Research, ISSN: 1547 - 9714, Vol. 11 A1, pag. 19-29, 2012.
- 154 Țițu, M., Oprean, C., Grecu, D., *Monitoring the service processes with the help of the techniques, methods and quality tools specific to the japanese management*, Journal of Information Technology Education: Research, ISSN: 1547 - 9714, Vol. 11 A2, pag. 71-85, 2012.
- 155 Untaru, M., Cîmpian, V., Hilohi, C., Vărzescu, V., *Construcția și calculul automobilelor*, Editura Tehnică, București, 1974.
- 156 *** Revista CAPITAL, *Decizii ca sa-ți pui clienții pe fugă*, Ringier România, București, România, 2009.
- 157 *** Revista CAPITAL, *Prețul face legea în domeniul reparațiilor de autoturisme*, Ringier România, București, România, 2011.
- 158 *** *Colecția de Standarde în Domeniul Asigurării și Managementului Calității*.
- 159 "STATISTIC DATA SYSTEM" - *Sistem integrat de identificare și management al informației în asigurarea și managementul calității* - software universal pentru modelarea, optimizarea statistică experimentală și managementul proceselor, produselor și serviciilor" Universitatea din Sibiu – Universitatea Politehnica Timișoara 1997 - 2006. (Țițu Aurel Mihail, Oprean Constantin, Cicală Eugen) – protejat prin Oficiul Român de drepturi de autor ORDA 2007.
- 160 *** VDA 6.1. Managementul calității în industria automobilelor.
- 161 *** www.anusedcar.com - *TÜV Report*, 2013.
- 162 *** www.europa.eu.int, 2012.
- 163 *** www.mie.ro – Site-ul Ministerului Integrării Europene, 2012.
- 164 *** www.cnfis.ro – Site-ul Consiliului Național pentru Finanțarea Învățământului Superior, 2012.
- 165 *** www.edu.ro – Site-ul Ministerului Educației și Cercetării, 2012.

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LIST OF ABBREVIATIONS

ABC - Activity Based Cost
ABCM - Activity Based Cost Management
AQ – Assurance of Quality
CAD - Computer Aided Design
CALL CENTER – A center from where customers are contacted by phone
CCP - Critical Control Point
CLI – Civil Liability Insurance
CRM – Customer Relationship Management
CWQC - Company Wide Quality Control
EFQM - European Foundation for Quality Management
EWU – Elementary Work Units
FMEA - Failure Mode and Effect Analysis
FMECA - Failure Modes, Effects and Criticality Analysis
FTB – Functional Tender Book
FTFO - First Time, First Out
HACCP - Hazard Analysis and Critical Control Point
HCL – High Control Limit
IAE – Initial Analysis of Environment
IATF - International Automotive Task Force
IR – Internal Regulation
ISO - International Organization for Standardization
JIT - Just In Time
JUSE - Union of Japanese Scientists and Engineers
LCL – Low Control Limit
M.T.B.F - Mean time between failures
MQ - Quality Management
OCQ – Overall Competitive Quality
OOR – Organizational and Operational Regulation
OQM – Overall Quality Management
PDCA - Plan-Do-Check-Action
PDCE - Plan-Do-Check-Efficient
PERT - Program Evaluation and Review Technique
PSSM – Post Sale Services Manager
PTI – Periodical Technical Inspection
QC – Quality Control
QFD - Quality Function Deployment
RF – Rotation Factor
RPN - Risk Priority Number
S.P.C - Statistical Process Control
SDCA - Standard-Do-Check-Action
SDV – Tools, Devices and Checkers

SG – Service Degree

SM – Sale Manager

SMART – Specific, Measurable, Achievable, Relevant, Time-Bound

SMED - Single Minute Exchange of Die

STEP - Analysis tool that shows how the external environment can influence the organization's business

SWOT – Strengths, Weaknesses, Opportunities, Threats

TPM - Total Productive Maintenance

TPS - Toyota Production System

TQC – Technical Quality Control

TQC - Total Quality Control

TQM - Total Quality Management

WWWWH - Who - Why - What - Where - How

LIST OF KEY WORDS

Audit quality - means all systematic and continuous control activities by which all activities which are carried out in order to achieve quality are verified to comply with the requirements set forth in such field.

Body - the main part of the vehicle which is designed as carrier of installations and accessories fitted on the vehicle, persons or goods.

Certificate of analysis – means the document detailing certain physical, chemical, mechanical etc. features

Certificate of compliance – means the document which certifies that the product complies with the documentation of the final product.

Certificate of homologation – means an approval certifying document (an operation involving the contributions of the provider and the beneficiary in order to verify that the products comply with technical documentation).

Certificate of quality. Such certificate includes the physical, mechanical, chemical, organoleptic and trials tests to which the product has been subjected in full compliance with the standard, technical regulation, tender book or other conditions of quality as stipulated in the agreement. This document accompanies the product upon delivery.

Certificate of warranty - means the document that has dual purpose i.e. to confirm product's quality and ensure the beneficiary with regards to any defects and hidden defects during warranty period.

Communications – means internal reports which transmit information to employees or temporary tasks and are effective immediately.

Decision - means the management tool aimed at capitalizing managerial attributes.

Delegation – means a managerial deed by which the liability for carrying out a particular task is transferred to another employee.

Engine – means the source of energy required for the vehicle propulsion and at the same time for the auxiliary systems to be functioning well.

Fault (out of operation) - means the total or partial loss of working capacity of a system or component and is an event opposite in relation to good performance.

Improving quality – part of quality management focused on increasing the effectiveness, efficiency and traceability system.

Internal notes – means the documents which regulate or generate changes in working procedures, within work instructions.

Kaizen - means a philosophy of continuous improvement and targeting all employees in the organization in order for them to work a little better every day.

Maintainability - means the ability of a product to use the given conditions to be maintained or restored (reinstated), able to comply with the particular (requested) function when maintenance actions are carried out under particular conditions and in a given time, based on procedures and remedies.

Maintenance - means the set of all necessary technical and organizational actions, performed in order to maintain or restore the product to a state necessary to perform the requested function.

Procedures rules – means the documents which precisely indicate who performs the work, what type of work exactly, when and where the preset work is to be performed.

Quality - the extent to which a set of inherent characteristics fulfills (certain) requirements. (SR EN ISO 9000:2006 entitled “Quality management systems - Fundamentals and vocabulary”).

Quality assurance - part of quality management focused on providing confidence that quality requirements will be fulfilled.

Quality Control - part of quality management focused on fulfilling quality requirements.

Quality management – the coordinated set of activities performed to maintain focus and control of an organization with regard to quality.

Quality management system - management system for managing and controlling an organization in terms of quality.

Quality planning - part of quality management focused on setting quality objectives, operational processes and resources necessary to achieve quality objectives.

Reliability - means the probability that an item will continue to function at customer expectation levels, at a measurable point, under environment and task cycle conditions

State standards (STAS) - means a set of mandatory national technical rules which establish, according to the technical development level at a given moment, the technical and economic characteristics to be fulfilled by a product, work or service and the requirements for acceptance, labeling, storage, transportation, if any.

Technical rules. Such rules regulated the quality conditions which a product must comply with in order to suit its intended purpose, regulations which are valid in the company which develops such.

Tender book – means the document made by the beneficiary by way of the characteristics as well as the requirements for reception, delivery etc. are set forth and must be accepted by the beneficiary unit.

Traceability - means the ability of a product or service of being pursued in a past period (to know its history) using results / records held by pre-registration methods.

Work instructions – means the documents controlled by the Quality Management System which ensure a planned development of the activities affecting the quality of service.

ANNEX I – FOLLOW-UP FORM ON CUSTOMERS SATISFACTION ON SALES

Sales Follow-up Form

Dealer: _____				
Sales Follow-up Form				
Name / Customer Name: _____		Date of contact: _____		
Brand / Type of vehicle: _____		Date of delivery: _____		
1) What do you think overall about the vehicle you purchased?				
disappointed/1	2	3	4	5/delighted
Notes: _____				
2) How satisfied are you with the person who advised you to purchase _____ vehicle? (Professionalism, level of professional training, attitude, availability)				
disappointed/1	2	3	4	5/delighted
Notes: _____				
3) How do you asses the sale procedure? (First contact, initial presentation of the vehicle, test drive, delivery)				
disappointed/1	2	3	4	5/delighted
Notes: _____				
4) How useful was the test drive in making your decision to purchase the new vehicle? (Availability of sales staff, vehicle availability, duration, route choice)				
disappointed/1	2	3	4	5/delighted
Notes: _____				
5) Were you satisfied with the delivery procedure of the vehicle? (Date, time, location, duration, details)				
disappointed/1	2	3	4	5/delighted
Notes: _____				
6) How do you asses the conditions offered by the dealer? (Showroom, the range of vehicles on display, customer waiting area, service)				
disappointed/1	2	3	4	5/delighted
Notes: _____				
7) Can you make a recommendation on the improvement of the sale of vehicles?				
Notes: _____				
8) Would you recommend your closed persons the company and the sales advisor?				
Yes / No				
Notes: _____				

ANEXA II - FOLLOW-UP FORM ON CUSTOMERS SATISFACTION ON SERVICE

Service Follow-up Form

Dealer: _____

Service Follow-up Form

Name / Customer Name: _____ Date of contact: _____

Brand / Type of vehicle: _____ Date of invoicing the service work _____

1) What do you think overall about the scheduling service availability?
disappointed/1 2 3 4 5/delighted

Notes: _____

2) How satisfied are you with the person who advised during the course of the service work?
(professionalism, level of professional training, attitude, availability)
disappointed/1 2 3 4 5/delighted

Notes: _____

3) How would you rate the ability of service personnel to diagnose / identify fault?
disappointed/1 2 3 4 5/delighted

Notes: _____

4) How would you rate the quality of the performed service work?
disappointed/1 2 3 4 5/delighted

Notes: _____

5) Were you satisfied with the process for receiving / delivering the vehicle?
(date, time, details)
disappointed/1 2 3 4 5/delighted

Notes: _____

6) How do you asses the conditions offered by the company?
(service reception area, customer waiting area, access to services, vehicle replacement / mobile)
disappointed/1 2 3 4 5/delighted

Notes: _____

7) Can you make a recommendation on improving the service process?
Notes: _____

8) Would you recommend your closed persons the company`s post-sale services?
Yes / No
Notes: _____

ANNEX III – REQUEST/COMPLAINTS REGISTER

No.	Date of receiving the request	Customer`s identification data (name, phone number)	Description of customer`s request	Date of completing the request	Notes, details of the situation

ANNEX IV – ANALYSIS OF CUSTOMERS` REQUESTS

Analysis of customers` requests	
Request received by:	
Received requests	
In writing	
Via e-mail	
Via phone	
Personally delivered	
Type of request	
Warranty	
Employees` attitude	
Waiting time	
Price	
Repairing time	
Price calculation	
Non-complied promises	
Others	
Product quality	
Customer`s attitude	
Principled	
Frustrated	
Furious	
Customer`s suggestions for solution	
No suggestions	
Proposed suggestions	
Status	
Processed	
Not processed	
Completed	
Final level of customer`s satisfaction	
Very satisfied	
Satisfied	
Dissatisfied	
Date of proceeding with the analysis	
Date of last update	
No. of analyzed days	

ANNEX V

Table 1. Surveys for defining the strengths and weaknesses

Strengths				
1	Daring	Adaptable	Animated	Analytical
2	Perseverant	Joyful	Patient	Peaceful
3	Docile	Altruist	Sociable	Stout
4	Kind	Self-controlled	Combatant	Persuasive
5	Stimulator	Respectful	Reserved	Capable
6	Reserved	Sensible	Self-confident	Vivacious
7	Forecast	Patient	Positive	Initiative
8	Firm	Spontaneous	Organized	Shy
9	Tidy	Flexible	Sincere	Optimist
10	Friendly	Constant	Funny	Powerful
11	Temerarious	Delightful	Diplomat	Meticulous
12	Gay	Consistent	Cultivated	Confident
13	Idealist	Independent	Inoffensive	Cheerful
14	Expansive	Decisive	Spiritual	Profound
15	Peace-maker	Music lover	Active	Friendly
16	Gentlemanlike	Tenacious	Voluble	Tolerant
17	Good listener	Loyal	Ruler	Energetic
18	Pleased	Leader	Rigorous	Pleasant
19	Perfectionist	Pleasant	Productive	Popular
20	Enthusiastic	Bold	Decent	Equilibrated

Weaknesses				
21	Inexpressive	Faint-hearted	Naughty	Tiran
22	Not disciplined	Careless	Apathetic	Inflexible
23	Reticent	Rancorous	Antagonist	Tiring
24	Scabrous	Fearing	Careless	Single-minded
25	Intolerant	Fearful	Indecisive	Interruptive
26	Ritualistic	Uninvolved	Unpredictable	Insider
27	Stubborn	Imprudent	Pretentious	Hesitant
28	Dull	Pessimistic	Arrogant	Indulgent
29	Immoderate	Placid	Bickerer	Lonely
30	Naïve	Negativist	Stiffed	Nonchalant
31	Confident seeker	Frozen	Workaholic	Confident seeker
32	Gossiper	Tactless	Coward	Gossiper
33	Non-organized	Disorganized	Demanding	Depressive
34	Stubborn	Insider	Inflexible	Disinterested
35	Cluttered	Irascible	Sorehead	Manipulative
36	Arrogant	Stubborn	Arrogant	Suspicious
37	Loudly	Dominator	Lazy	Loudly
38	Lazy	Frozen	Irascible	Absent
39	Unreliable	Unreliable	Impassible	Foolish
40	Unstable	Critical	Cunning	Instable

Table 2. Calculating the personality score

Strengths				
	The popular sanguine	The powerful choleric	The perfect melancholic	The quiet phlegmatic
1	Animated	Daring	Analytical	Adaptable
2	Joyful	Pushing	Perseverant	Peaceful
3	Sociable	Stout	Altruistic	Docile
4	Persuasive	Combatant	Kind	Self-controlled
5	Stimulator	Capable	Respectful	Reserved
6	Vivacious	Confident	Sensible	Undemanding
7	Initiative	Positive	Forecasting	Patient
8	Spontaneous	Firm	Organized	Shy
9	Optimist	Sincere	Neat	Flexible
10	Funny	Powerful	Constant	Friendly
11	Charming	Temerarious	Meticulous	Diplomat
12	Gay	Secure on oneself	Cultivated	Consistent
13	Cheerful	Independent	Idealist	Harmless
14	Expansive	Decisive	Profound	Spiritual
15	Friendly	Active	Music lover	Peace-maker
16	Voluble	Tenacious	Gentlemanlike	Tolerant
17	Energetic	Leader	Loyal	Good listener
18	Pleasant	Ruler	Rigorous	Pleased
19	Popular	Productive	Perfectionist	Pleasant
20	Enthusiastic	Bold	Decent	Equilibrated
Overall - Strengths				
Weaknesses				
	The popular sanguine	The powerful choleric	The perfect melancholic	The quiet phlegmatic
21	Naughty	Tiran	Faint-hearted	Inexpressive
22	Not disciplined	Careless	Inflexible	Apathetic
23	Tiring	Rancorous	Antagonist	Reticent
24	Reckless	Single-minded	Scabrous	Fearful
25	Interruptive	Intolerant	Fearful	Indecisive
26	Unpredictable	Insider	Ritualistic	Uninvolved
27	Imprudent	Stubborn	Pretentious	Hesitant
28	Indulgent	Proud	Pessimist	Dull
29	Immoderate	Bickerer	Lonely	Unimpressed
30	Naïve	Stiffed	Negativist	Nonchalant
31	Confident seeker	Workaholic	Frozen	Restless
32	Gossiper	Tactless	Susceptible	Coward
33	Non-organized	Demanding	Depressive	Skeptic
34	Stubborn	Inflexible	Insider	Disinterested
35	Cluttered	Manipulative	Irascible	Sorehead
36	Arrogant	Obdurate	Suspicious	Slow
37	Loudly	Dominator	Solitaire	Lazy
38	Lazy	Irascible	Skeptic	Absent
39	Unreliable	Foolish	Revengeful	Impassible
40	Unstable	Cunning	Critical	Compromiser
Overall - Weaknesses				

ANNEX VI

Annex VI - Service – call center services feedback survey	Score (1 - 5)
Was the service staff helpful in relation to you?	
Are you satisfied with the quality of work performed?	
Were you promptly served according to the agreed deadlines?	
Do you deem that the final price justifies for the quality the work done?	

ANNEX VII

Annex VII - Service - reception services feedback survey	Score (1 - 5)
Was the service advisor helpful in relation to you?	
Do you deem that service technicians are well trained in terms of profession?	
Were you promptly served according to the agreed deadlines?	
Is the final price higher than the service advisor originally estimated?	
Are you generally satisfied with the services of our organization?	

ANNEX VIII

Annex VIII- hotel services feedback	Score (1 - 5)
Details on room: cleanliness, amenities, features	
Details on table service/breakfast: clean, variety, quality, friendship/courtesy	
Details on reception: friendship, enthusiasm, courtesy, availability, empathy	
Bar service: friendship, courtesy, quality of beverages, variety of beverages	
What brings you here at the hotel? Personal, business	
It is the first time you stay with us / our hotel?	
What can we improve – your suggestions?	

ANNEX IX – Happy birthday letter template for customer`s birthdays

Dear Mr. Mircea Ionescu,

We would like to express our most sincere wishes for your birthday and thank you for being our business partner!

It is a special day for you, and we want to contribute to this event by giving you a voucher as a gift which is valid until the end of this year, based on which you will receive a 50% discount on service intervention related labor of your choice

It is an honor for us to be your business partner.

We wish you a Happy Birthday, health and fulfillment alongside your loved ones!

General Manager,

ANNEX X – Thank you letter template for the partnership between the company and customers

Dear Mr. Mircea Ionescu,

We owe the partnership with our customers the development of our company, to whom we always provide with services of the highest standards of professionalism and quality.

In everything we do we are guided by a key principle “respect for our partners.”

We would like to pleaurably surprise you by offering you more gift services such as: exchange car during inspection periods, wireless internet connection for your notebook, Internet Cafe equipped with the latest generation notebooks, children playground and last but not least the possibility to drive and test the latest car models.

Should you want to wait while the service intervention necessary for your vehicle is completed, you can enjoy the facilities of specially designed waiting areas within our company.

It is an honor for us to be business partners and we want to reward your choice by giving you a voucher as a gift, which is valid until the end of this year, based on which you will receive a 25% discount on service intervention related labor of your choice.

Thank you for choosing to be our partner and we are looking forward for seeing you!

Sincerely,
General Manager,

Post-Sales Services Manager,