

Saimaa University of Applied Sciences
Faculty of Business Administration, Lappeenranta
Degree Programme in International Business

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Quality Management in Purchasing

Thesis 2014

Abstract

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Quality Management in Purchasing, 52 pages, 1 appendix

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The implementation of quality management by the companies is one of the last tendencies towards to ameliorating the whole performance of the company. The purpose of this study is to substantiate the need and significance of an application of quality management systems in a purchasing department. The data collected within the study might be a valuable reference for the organizations that are planning to implement quality management.

The whole thesis was written by using qualitative methods. The information was assembled basically from literature and Internet sources to obtain necessary knowledge concerning the topic. Additionally, the empirical part of the thesis was based on interviews in four Finnish companies.

The study provides a sufficient theoretical base of quality management in purchasing that is strengthened by four examples in companies. Further study is required to determine the reasons of the implementation of quality management systems in other departments of the companies.

Keywords: quality management, quality management systems, purchasing department.

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1. Introduction

1.1. Background

Quality is one of the key requirements of today's life. The main issue of quality might be outlined by customers' satisfaction. A customer requires and expects a product or service according to their own understanding of it and, as a result, this product or service can be either found by its perception or not. Thus, quality should be managed and controlled through all processes within an organization. To establish and maintain quality, companies and organizations are adopting quality management into their strategies.

Quality management is defined in ISO 9000 as coordinated activities to guide and control an organization about quality (Finnish Standards Association SFS 2012). Therefore, to achieve this management of quality, companies have to establish quality management systems that supplement quality management.

The area of applying quality management systems is quite wide that can vary through all processes of purchasing, manufacturing and delivering of a product or service. All stages are equally significant in the scope of quality management. However, this study is focused on the purchasing department of a company. Thus, quality management and its application will be examined in the thesis only within the functions of the purchasing part of an organization.

The purchasing department was chosen because of the wide scope of functions and its operation both in internal and external environments of a company. The purchasing department is responsible for sufficient processes within an organization e.g. procuring materials, supplier selection, etc. Thus, to ensure all these processes and maximize efficiency, a company has to implement a well organized quality management system.

1.2. Aim of the thesis

This thesis aims to define the role and importance of quality management, particularly in purchasing. Whereas, the second part of the theory is dedicated to identifying the key features of ISO 9001 and EFQM Excellence Model and their meaning in the purchasing processes.

The objective of the empirical part is to define the influence of quality management systems on the purchasing department through the interviewed four companies. Moreover, the importance of quality management implementation and the motives of the companies to apply it will be reviewed in the empirical part.

1.3. Research questions

The following questions are defined as the research questions for the study and the results of the thesis are performed as an answer to it.

- *What is the role of quality management in purchasing?*

An understanding of the concept of quality management is the base of the study. The answer to this question is included in the whole thesis. Furthermore, it includes additional questions as sub-questions to achieve the main answer of what quality management is, particularly in the purchasing department.

- *What are quality management and a quality management system?*

The implementation of quality management is mainly performed as an application of quality management systems. These systems are examined in the further second, third and fourth chapters of the thesis, where two of the most widely used systems are chosen for the next detailed investigation.

- *What are ISO 9001:2008 and EFQM Excellence Model and their role in purchasing?*

The question will cover the description of chosen systems – ISO 9001:2008 and EFQM Excellence Model for further analysis of four real examples of companies in the empirical part.

- *What are the main reasons of applying ISO standards and EFQM Excellence Model?*

The answer is concluded in the final part of the thesis. However, the empirical part mostly focuses on summarizing the importance of the implementation of all quality management systems in general. Nevertheless, the importance of the application of these particular chosen systems will be examined in the last chapters of the theoretical part.

1.4. Limitations

The main purpose of the study is to identify the significance of the use of quality management systems in the purchasing departments. There are great varieties of techniques that can be performed in quality management. However, the most known and widely applied systems are covered in this thesis - ISO 9001:2008 and EFQM Excellence Model. The topic aims to present only the purchasing department and specify particularly the purchasing processes within a company, rather than reviewing a business in general. Two chosen systems are selected mainly to their quite common implementation in companies.

The outcome of the thesis is obtained as the analysis of four examples of real companies. All companies were chosen without specification on particular industries. Besides, the key selection criterion of interviewed companies is the presence of the purchasing functions.

2. Research method

2.1. Theoretical approach

The theoretical part is based on the concepts and views of well-known authors. Moreover, the main source of analyzing the ISO9001:2008 and EFQM Excellence Model is the original published versions of these standards and models.

Therefore, the literature used in the thesis provides reliable foundation on the below listed main ideas of the study:

- Quality management
- Quality management systems
- Purchasing department of a company

2.2. Thesis procedure

To conclude an overview of the whole thesis writing process, the figure 1 presents briefly the thesis procedure. More detailed explanations of the following figure have been mentioned above in the sub-chapters 1.1 – 1.4.

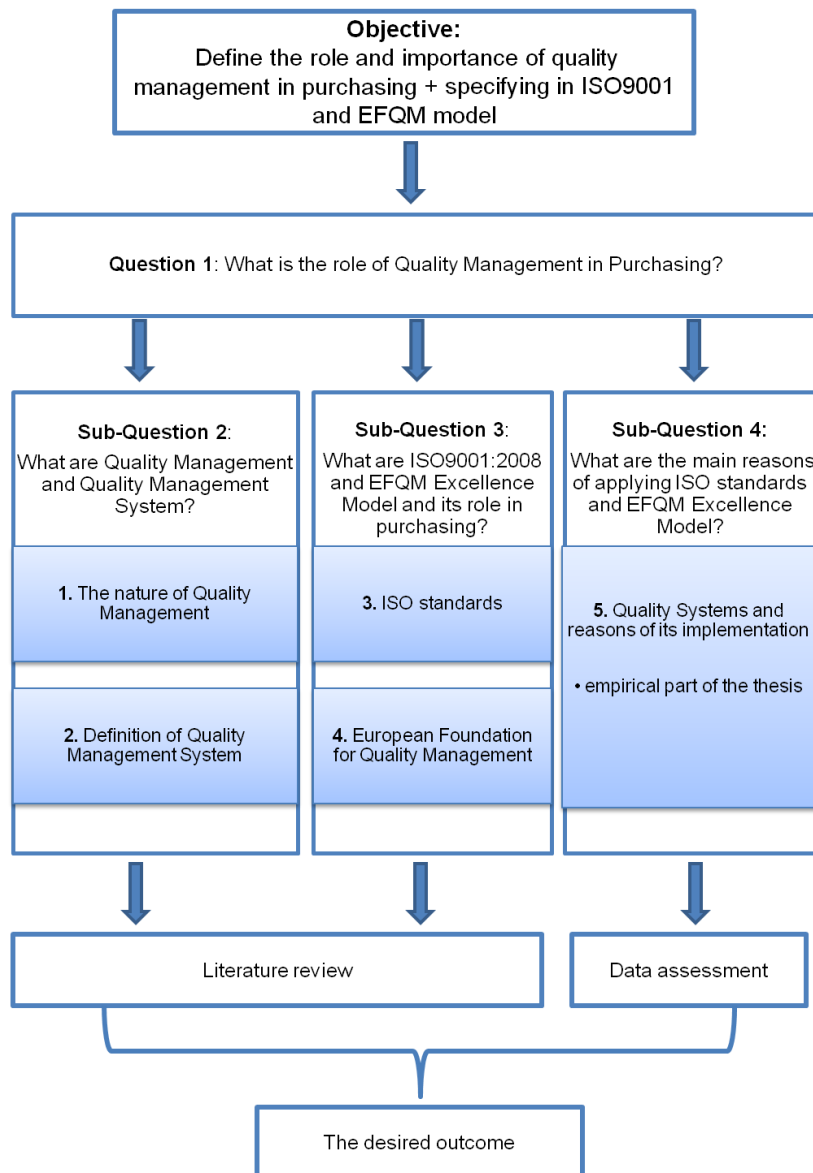


Figure 1. The thesis procedure

3. The nature of quality management

Today quality is much more important than before. Quality of products and services has to be accepted by customers; thus, quality can be called as one of the main demanding parts in the whole bargaining process. Undoubtedly, globalization influences the development of quality meaning. Therefore, nowadays quality management includes four main activities of the managing of quality, which can be identified as follows: quality planning, quality control, quality improvement and quality assurance. All these four activities are essential

pillars of quality management that are related to each other and could not function separately. (Hoyle 2007.)

Firstly, four activities of quality management will be analyzed. It provides an understanding how quality management is functioning inside and having tremendous influence on the company's performance. Moreover, the nature of quality management in this chapter will be described through eight quality management principles that could be called as the main basis of quality management systems, particularly of ISO standards.

3.1. Quality planning

This part of quality management is based on the defining quality objectives and all components to achieve those objectives (Bergman & Klefsjö 2010). Quality planning has to be followed by further activities as quality control, etc. Thus, the implementation of quality management consists of all four activities – quality planning, quality control, quality improvement and quality assurance – along all processes in an organization.

Quality planning could be divided in two ways – strategic and operational. Strategic is considered as the setting process of long-term goals that explains vision, mission and values of the business. This way of quality planning is more theoretical and leads to analyzing all external and internal sides of the business. However, the operational way of quality planning is considered as more realistic and, primarily a more systemic way. It mainly consists of creating product goals that contains, e.g. estimated demand, figures of productivity, etc. Both ways could not be separated due to the mutual supplement structure. (Hoyle 2007.)

In the aspect of any company, quality planning could be seen as e.g. creating of a quality system team that is responsible for coordinating the quality planning within all departments. These professionals are representing such functions like planning and establishing quality management policies gradually to all parts of the business. Quality system team is also continually working with other three parts of quality management. However, the main function is firstly to involve all

the departments to the quality management policy of the organization. (Harrington & Mathers 1997.)

Consequently, quality planning is focused on the most essential beginning of quality management processes – setting the objectives. After quality planning, another activity of quality management starts that are called quality control. However, there is not a strict following order between activities due to the correlativeness between them.

3.2. Quality control

This part covers mostly fulfilling requirements and regulating future performance of a product or service. Quality control might be applied to different parts of the operational processes. It is used in the beginning steps of manufacturing, the intermediate stage of the developing of a product or even the final measuring of the performance of a produced product. Wherever the quality control is applied the main issue is to prevent changes and to increase the level of predictability. As known, operations under control and a high level of predictability are the key of success of any business. (Hoyle 2007.)

With quality control an organization can avoid chances, define possible failure and predict changes. Thus, for the implementation of quality control into real cases, it is valuable to apply it within the main plan–do–check–act/adjust method (PDCA). This four step interactive model is used by businesses to control and maintain continuous improvement in the companies. The figure 2 below demonstrates how these four steps are contributing continuous improvement through a company that helps to maintain and control the quality.

The Deming Cycle

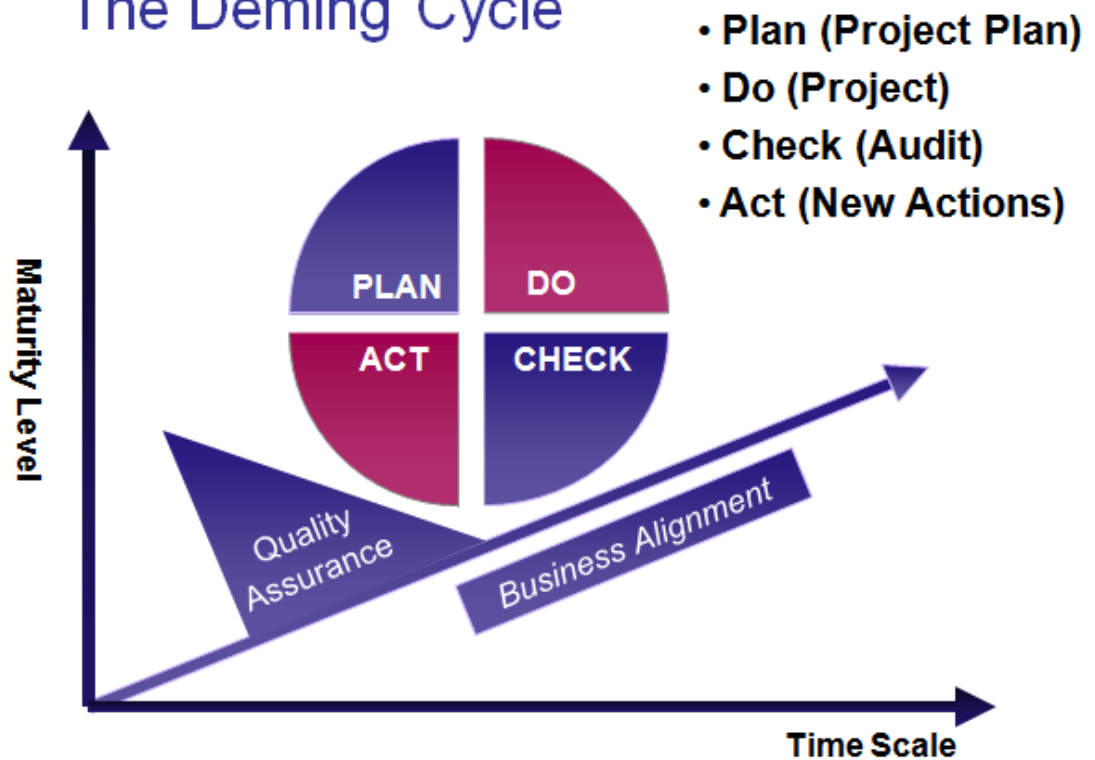


Figure 2. The PDCA method (Lean Sigma Glossary 2014)

As seen in the figure 2 above, the PDCA cycle might be applied in order to control the standards within an organization that is presented in the figure as quality assurance buffer. Thus, business alignment might show quality improvement within the time.

However, the PDCA method can be expanded to the DMAIC Problem Solving Technique or either to the DMADV project. DMAIC – define, measure, analyze, improve and control and DMADV – define, measure, analyze, design and verify - wider versions of the PDCA method that are based on Six Sigma tool. The aim of these projects is controlling and improving the processes. The only difference between them is that DMAIC is focused on existing products; however DMADV is created for launching new products. (Beckford 2010.)

In order to comprehend the picture of using the PDCA and other methods the meaning of Six Sigma should first be described. Six Sigma is the essential tool for improvement processes that was developed in 1986 by Motorola, Inc. It is widely used in quality management with the purpose of measuring errors in the

processes and minimizing the variability of the possible “defects” in the future. The term Six Sigma has statistical concept that is based on the standard deviation. Moreover, Six Sigma has the strategic idea that includes two main above discussed methodologies - DMAIC and DMADV. (Sollish & Semanik 2012.)

Therefore, all methodologies and the whole concept of Six Sigma can be used within standards and excellence models. It is exactly estimating the continuous improvement of the processes. Whereas, the standards are created as equitable bases that include compulsory requirements for companies. If any product is certified or made within the particular standard, customer’s confidence towards to this product is notably rising up. It defines the importance of standards for all organizations. (Imai 1997.)

To sum up the quality control description, it is wise to mention that the quality improvement stage begins from this term. Thus, the quality control stage is the preparation stage for further developments. Finally, quality control is defined by designing the processes concerning to the customer satisfaction (Beckford 2010).

3.3. Quality improvement

One of the last steps of quality management is quality improvement. As the applied control to any process of an organization keeps stable for a time it requires the maintenance and continuous development to stay effective all the time. For maintaining and increasing the efficiency, the quality improvement phase could be implemented in any process of the organization. Quality improvement is described as a stage of quality management based on developing new targets and raising the standards by maintaining stable efficiency and fulfilling all quality requirements (Hoyle 2007).

Undoubtedly, quality improvement is related to the standards and performance measurement tools. Quality improvement can be presented as qualitative or as quantitative methods to set continuous improvement of any stage of the

company. Basically, all these methods have a main issue of defining the objectives of improving and setting necessary targets and plans for it.

Consequently, without quality improvement a company would not be able to expand its capability. All standards and quality control tools might be implemented to an organization, but none of them will work efficiently without quality improvement. Thus, in the purchasing department of any organization quality improvement plays an important role. Within the quality improvement policies, an organization is able to monitor its further developments and challenges of the quality in separate processes and stages. Thus, according to Harrington & Mathers (1997) a quality system team that is responsible for the implementation of quality management, e.g. in the purchasing department, should estimate the following questions:

- Is it functioning right? (the exact stage where the improvement has been implemented)
- Is it possible to keep working steady in the right way?
- Are we are using the most efficient “the best” way?

All questions can be applied, e.g. to measure efficiency of procuring materials. Therefore, an organization is able to estimate more effective ways to implement standards.

3.4. Quality assurance

Quality assurance is focused on providing the confidence of the future fulfillment of all requirements. There are always some restrictions and requirements to maintain quality and these have to be completed in order to gain the result. A customer or a manager are not able to handle or observe all actions by themselves, thus they have to trust to a company that the requirements are met.

Eventually, the creating of quality assurance is understood as recording, organizing reviews and documenting the processes and results. However, these activities can be mentioned also as quality control tools as well as quality assurance parts. Nevertheless, from the customer’s points of view the

standards mainly show an assurance and provide confidence about the quality. Thus, those standards that are used to assure a customer in quality are mostly described as the main example of quality assurance. Therefore, quality assurance is the key feature of the standards and the most visible part by customers. (Juran & Gryna 1993.)

To sum up, quality assurance is the final stage of quality management that provides confidence to customers that assures that all requirements have been fulfilled. In the purchasing department quality assurance mainly can be defined as the verification of results that are gained by standards.

Consequently, all four activities of quality management – quality planning, quality control, quality improvement and quality assurance – are equally essential in the process of an implementation of quality management into an organization. After describing the four main stages of quality management, the next step is to define eight main principles that are a base of any quality management system.

3.5. Quality management principles

All four activities of quality management might be implemented in the real strategies of any company with quality management systems that will be described in the next chapter. However, the foundation of any quality management system is based on eight main quality management principles. These principles explain the main sense of quality management and cover the meaning of requirements of most of the standards and quality management systems (International Organization of Standardization 2014). Within the principles an organization could find the most significant reasons of achieving the highest quality. All these principles are described below according to Hoyle (2007).

- Principle 1 – Customer focus

The first principle concludes the focus of an organization on customer needs. All processes that are organized within a company should be applied to satisfy the

customer's wants and expectations. This principle could be defined as a base of the whole meaning of quality management; due to that every company needs to improve their quality performance to increase the efficiency of the processes that lead to raising the whole business.

The purchasing department of an organization which is implementing the customer focus principle should understand customer needs and maintain working relationship within, e.g. vendors and other departments.

- Principle 2 – Leadership

To unite people to achieve common goals and follow mission and vision of a company, every group and department need a leader on top. The leadership principle embraces particularly internal environment of a company, due to the focusing on the people employed within an organization. Therefore, this internal principle cannot be applied separately and should be supported by other principles.

- Principle 3 – Involvement of people

An organization should apply an employee policy to enhance involvement of the personnel. Deriving satisfaction, maintaining a high level of commitment within and among departments and involvement in the processes of an organization are the main factors of this principle. The employees of all internal environments of a company need to be informed in order to actively participate and implement all skills to improve the performance of an organization.

As the principle of leadership, involvement of people includes the motivation and leading aspects of a personnel. However, it also contains the self-motivation of the employees.

- Principle 4 – Process approach

From manufacturing to sales, an organization is focusing on minimization of costs, increasing the productivity and etc. All these activities are increasing the

efficiency of the business in general. The process approach principle defines management of activities and resources together as a process.

- Principle 5 – System approach to management

After applying the process approach within an organization, there should be implemented next principle that is called system approach to management. The impact corresponds to integration of the processes to the systems to contribute a higher efficiency. All departments can be defined as the systems where people are employed only in a specific sphere with their specific skills. It leads to increasing the effectiveness of the business and efficiency at achieving organization's goals.

- Principle 6 – Continual improvement

The continual improvement principle is summarizing the principle of all above mentioned. It stands on analyzing the performance and launching the methods to improve it further, according to the already gained results. It could be described as continual questioning of the effectiveness of an organization. The approaches to improve the performance have to be applied one by one in order to gain continual correction of all sides of an organization. Moreover, within the continual improvement principle an earlier discussed plan–do–check–act/adjust method (PDCA) can be used.

- Principle 7 – Factual approach to decision making

An organization is able to use qualitative and quantitative methods to prove the continual improvement. The factual approach is defined by gathering the analysis and information about an organization in order to control and identify the effectiveness of the business. Reliable and relative data increase the validity of the approaches, thus the factual information should be used in every decision making process. However, all decisions should count also the experience and intuition as well as mainly factual analysis.

- Principle 8 – Mutually beneficial supplier relationships

The last principle is defined by the external environment of an organization. That is covered by supplier relationships. The communications and interrelations among an organization and its suppliers should be established in the way to enhance the abilities of both to create values.

However, an organization should be able not only to focus on customer satisfaction, internal efficiency, but also to maintain effective external communications. Thus, the eighth principle is created to establish supplier relationships.

To sum up, the above described principles cover both internal and external parts of any organization. All of these principles are the base of any quality management system and standard. Thus, four pillars of quality management – quality planning, quality control, quality improvement and quality assurance – and eight principles can be identified as a theoretical background of any standard or quality management model (Finnish Standards Association SFS 2012; Laatukskus Excellence Finland 2013).

4. Definition of quality management systems

As it was defined before, the quality management system is the tool within which an organization is applying quality management into the processes. However, quality management system affects exactly the following main parts of an organization.

- Organizational structure
- Processes
- Procedures
- Resources

All four parts are required for the implementation of quality management into an organization: Thus, these parts might be modified in order to achieve efficient

functioning of any quality management system. Moreover, quality management systems do not have a scope of application, thus they have an impact mostly in all areas of the organization. (Harrington & Mathers 1997.)

Accordingly, any quality management system can be identified as the establishing process of quality management policy that discovers organizational structure, all processes, procedures and resources. Moreover, the process of establishing contains coordinated activities that provide direction for an organization to grow up efficiently and effectively.

To understand the necessity of quality management systems more deeply, further main benefits of quality management systems and establishing process of a quality management system in general will be identified.

4.1. The benefits of quality management systems

With the implementation of any quality management system an organization gains an advantage within two main parts. Firstly, verified quality management system means that customers' requirements are met. Thus, it confirms that a product or service is produced according to the desires and expectations of the buyer. Secondly, an organization proves both its own internal and external requirements. Thus, an organization claims efficient usage of resources with the optimal production costs. (The UK Government Web Archive 2005).

These two requirements enable an organization to control the business effectively and improve continuously. Therefore, quality management systems can be described as the buffer and a proved support for further development of the organization's performance.

The figure 3 demonstrates that quality management system is the controller of the efficiency of the business.

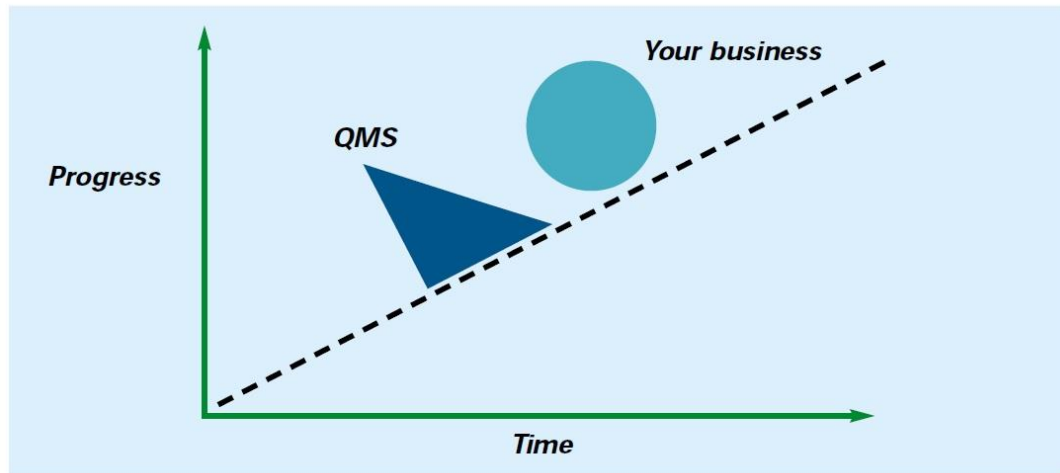


Figure 3. Model of quality management system (The UK Government Web Archive 2005)

According to Harrington & Mathers (1997) and Hoyle (2007), a successfully applied quality management system may cause, e.g. the following results:

- Improving process control
- Reducing wastage
- Decreasing costs
- Increasing market share
- Involving staff
- Setting mission and vision of a company and directions to be followed

Thus, popularity of quality management systems nowadays is increasing even more and almost all businesses are involved in the application of quality management.

4.2. Establishment of quality management systems

As soon as the quality management system is widely implemented and it has an impact on the whole organization, its integration into an organization can be illustrated by the figure 4.

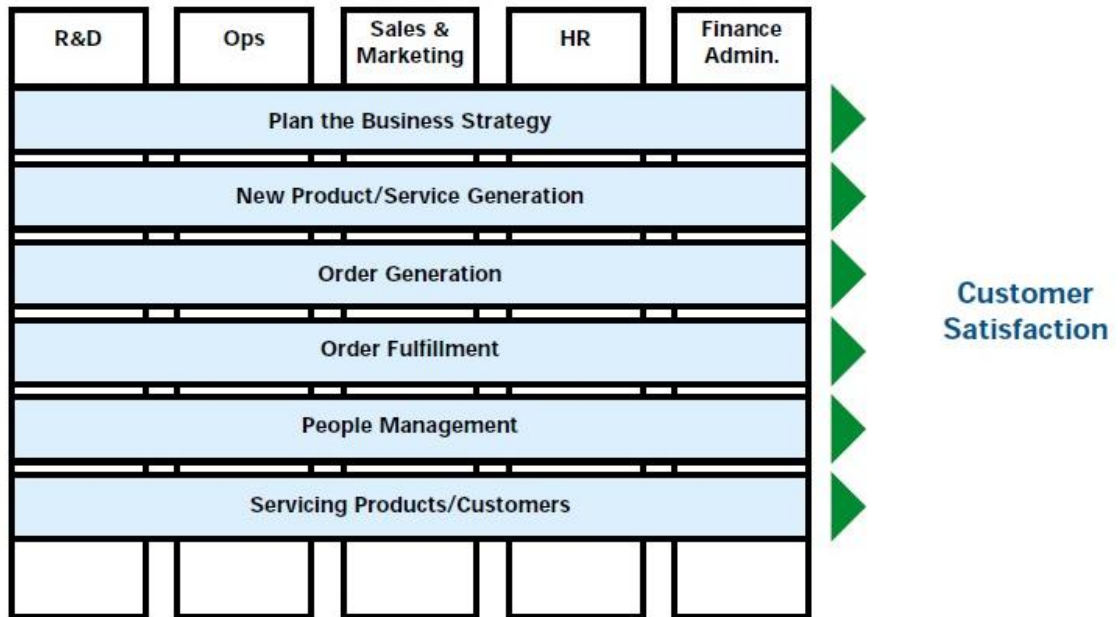
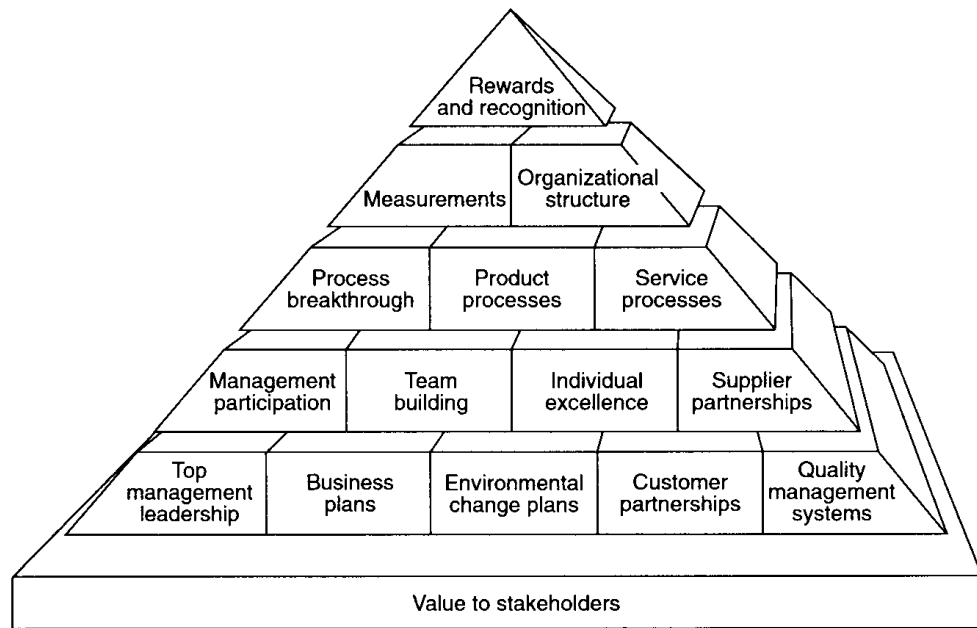


Figure 4. An integration of quality management system into an organization (The UK Government Web Archive 2005)

All the processes in the figure 4 are continuously going through most of the departments of an organization that generally influence the performance of an organization. The integration of any quality management system into an organization includes series of numerous processes within an organization. These processes are going through almost all parts of an organization. Thus, the participation of all departments of an organization is required to establish an effective quality management system. Moreover, the aim of organizing these numerous processes in an organization should be fixed on achieving a higher level of customer satisfaction. (The UK Government Web Archive 2005.)

To understand more exactly the common sense of a quality management system in an organization it can be identified in the total improvement management pyramid. The figure 5 demonstrates the pyramid of the total improvement management that contains blocks of the key points that an organization has to take into account to improve its performance (Harrington & Mathers 1997).

The total improvement management pyramid



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Figure 5. The total improvement management pyramid (Harrington & Mathers 1997)

The quality management systems are based on the bottom of the pyramid and this location defines the significance of the quality management systems within an organization. It can be identified as a foundation of the improving processes and as a supportive step to increase the efficiency of the business.

The total improvement management pyramid also illustrates that quality management systems might not only be implemented to increase the customers' satisfaction of the produced product, but also to bring back value to stakeholders. Thus, quality management system is a widely used feature with a great scope of the implementation and development. (Harrington & Mathers 1997.)

To sum up, it is possible to underline the most competitive advantages that an organization who implements any quality management system will be able to gain in the nearest future. The list of some advantages of an effectively implemented quality management system is described as follows:

- Predictability of the business
- International acceptance
- Foundation for further improvement of activities
- Minimization of errors, because of the control of documentation

This list demonstrates only a small part of advantages of good quality management system.

Nowadays, quality management systems are mainly represented by standards. The most known are the ISO family standards that are the most widely applicable. ISO – International Organization of Standardization certified series of standards in 80s, however earlier the most used standards was MIL-Q-9858A and NATO military standards that dates back to 1959. Plenty of standards are specified by industries and features of the product. However, the most widely known is ISO 9000 series and QS-9000 (automotive industry supplier standards). Nevertheless, quality management systems might be performed also by models or frameworks for excellence. Today, one of the most referenced models is Malcolm Baldrige National Quality Award and the EFQM Excellence Model established by EFQM (European Foundation of Quality Management). The main purpose of these frameworks is supporting organizations on their way to be more competitive in the market. (Bergman & Klefsjö 2010.)

Therefore, in the next chapter the focus will be at the ISO family standards that will give more precise explanation of the structure and general sense of any ISO standard. The EFQM Excellence Model will be considered in the fourth chapter of the thesis.

5. ISO standards for quality management

5.1. General philosophy of ISO 9000 family of standards

The implementation of a quality management system into an organization is the key factor of sustainable improvement of quality management in the whole

company. However, to compete today, any organization should function dynamically and produce right products with high quality every single day to ensure the customer's satisfaction. Thus, standards are the most common and effective methods to maintain any quality management system. The most well-known standards are from the ISO family, particularly the ISO 9000 series of International Standards.

In 1987 the ISO 9000 series were officially established and more than 100 countries have accepted it as the national standards. The first standards of the family 9000 were based on ISO 8402 that contained quality management vocabulary and fundamentals. Nowadays, ISO 8402 is released as ISO 9000 with the newest version of year 2005. (International Organization of Standardization 2014.)

Theoretically, all standards of the ISO 9000 series can be split into two groups that create a complex of mutual related standards. Thus, according to the International Organization of Standardization (2014), all standards within this series can be divided into requirements and guidelines standards.

- Requirements standards

These standards include already structured models, techniques and supporting tools for quality assurance. They are mostly combined of the requirements that an organization should meet to maintain an effective quality management system.

- Guidelines standards

These standards might be examined as addition to the above mentioned group of standards. It concludes the guidelines of the application and extra configurations that should be taken into account while implementing or using the ISO 9000 requirements standards.

The figure 6 illustrates the structure of the ISO 9000 family of standards. This scheme is simplifying the complex nature of this quite large series of standards.

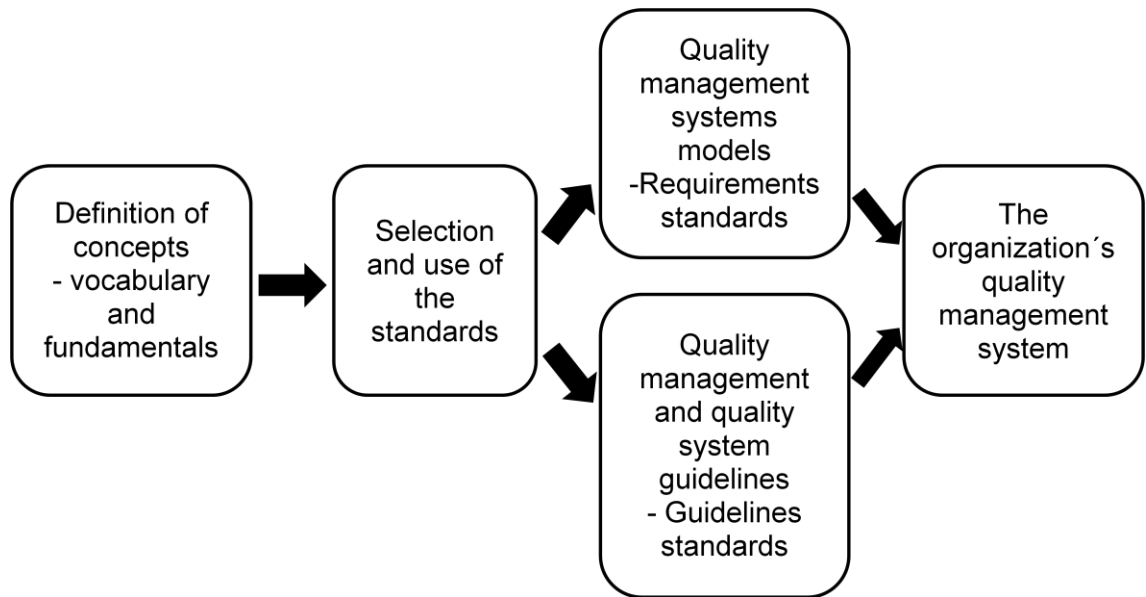


Figure 6. The structure of the ISO 9000 family

The figure 6 demonstrates the way how an organization should implement a standard from ISO 9000 series. Starting with the fundamentals an organization continues to the selection process of a standard. Then an organization continues with the implementation of requirements standard and its guidelines. At the final stage an organization might overview the whole quality management systems that are performed by implemented earlier standards.

To conclude, all steps are equally important for any organization whose purpose is to establish the right quality management system. However, the most comprehensive part might still be defined in the application of requirements standards. Therefore, only the ISO 9001 standard at the latest edition of 2008 year - ISO 9001:2008 will be described in this chapter. This standard will be explored firstly in general and later concentrating on the purchasing department. (Harrington & Mathers 1997.)

5.2. ISO 9001:2008

As it was mentioned above the ISO 9001 standard is in the group of requirements standards with two other quite similar standards - ISO 9002 and ISO 9003. When implementing these standards an organization is actually

verifying its capability to function stably by requirements. ISO 9001 can be applied for both product and service producers, who are mainly following individually every single customer' desire. ISO 9001 is defined as a model for quality assurance in design, development, production, and installation and servicing. Whereas, the difference between ISO 9001 and 9002 is concluded only that ISO 9002 does not include product design. However, ISO 9003 is applied for more simple products, where quality can be verified only by inspection or by particular test. (Harrington & Mathers 1997; International Organization of Standardization, 2014.)

International Organization of Standardization is responsible to update the standards due to the rapid economic growth that causes sizable increase of the customers' expectations and producers' requirements. Thus, the last version of ISO 9001 that will be described in this chapter is of year 2008. The next new edition is prepared for 2015. Nevertheless, all versions of standards are mostly the same in structure and sense, the only difference between them is additional explanations and notes in some parts that are not so visible in the content.

To explore precisely ISO 9001:2008, the scope of this standard should be identified. ISO 9001:2008 is applicable in an organization where the product requirements should be established or verified in order to enhance customer satisfaction (Finnish Standards Association SFS 2012). Contents of ISO 9001:2008 include all parts that have to be taken into considerations in order to implement the standard correctly. The standard states to follow specific requirements in all the parts and functions of an organization.

However, the main question of the thesis is to examine the meaning of quality management particularly in the purchasing department. Thus, in the next sub-chapter the nature of the purchasing department in general and its functions in an organization will be defined. Furthermore, ISO 9001:2008 will be described exactly within the purchasing department.

5.3. Purchasing department

Almost all big organizations have a purchasing department. This department is responsible for obtaining needed resources, materials and products for an organization. This part of an organization could be defined as a backbone of the other further functions and processes within a company. Thus, it is significant to support the purchasing department by quality management policy. As mentioned earlier, standards by International Organization of Standardization is one way to build an effective quality management system. Therefore, the implementation of a standard into the purchasing department will strengthen functions of this part of an organization and maximize the efficiency of the whole department. To comprehend more precisely how ISO 9001:2008 influences the purchasing part of an organization, firstly the function of the purchasing department will be examined in the next paragraph.

5.3.1. Functions of the purchasing department

Definitely, procuring materials is not the only one function the purchasing department has. According to Cavinato & Kauffman (2000) the most relevant five functions of the purchasing department are presented and explained in the following list.

- **Procuring material**
This process starts with receiving requisition of materials from another department of an organization. Then, the assessment of the demand and selection of suppliers take place before the ordering of materials. Obtaining materials is the main and fundamental function of the purchasing department where the quality management should be applied.

- **Supplier relationships, selection and price evaluation**
Supplier selection and general evaluation of the quotations and further orders is a significant function of the purchasing department. This stage also includes further supplier relationship management. However, in this

stage an organization needs to estimate the efficiency of the relations with suppliers and sign the most optimal agreements. There are a lot of approaches of the supplier selection process that are created in order to support this function of the purchasing department. Thus, the most profitable relations for organizations are long-term contracts that provide the lowest cost and the greatest value-add. Therefore, reliance is the key starting criterion of any relation that might become a root to the competitive advantage for the company (Trent 2007).

- Documentation and accounting
Verification of invoices and payments should be handled before or right after the order. The purchasing department is responsible to check all transaction accurately on time. In some organization the accounting department of a company could take some responsibility for the verification of payments.
- Inspection of incoming ordered materials
Quality control of received materials and products is the main part of this process. The purchasing department has to verify that transport requirements are met and all the processes of receiving incoming materials are obeyed by rules.
- Policy compliance
Because of the close connection among all departments within the organization, all parts of a company have to follow the organizational policy. Thus, the purchasing department has to create goodwill while contracting with any supplier. Moreover, all policies and the company's internal and external rules should be counted all the time.

To sum up, the importance of the purchasing department can be viewed from its functions. Therefore, the implementation of the quality management particularly into the purchasing department is the effective step to improve the whole performance of an organization (Cavinato & Kauffman 2000).

Thus, the requirements of standard ISO 9001:2008 will be examined from the view of the purchasing department in order to define possible improvements within this part of an organization due to the implementation of quality management system.

5.3.2. Requirements for the purchasing department

According to the concepts of ISO 9001:2008 the requirements have a great scope of application. Therefore, the following list contains the most significant requirements that should be met by the purchasing department. This list also includes brief explanations of each to make the picture of the implementation of ISO 9001:2008 more understandable.

- **Management responsibility.**
Top management should ensure that the implementation of the quality management systems will lead to the further development and improvement of the organization's performance. Thus, defining the subcontractor quality policy, establishing internal communication within departments, and verifying responsibilities and authorities of all personnel of the purchasing department will be the first requirements of ISO 9001:2008 standard. To sum up, management responsibility requirements includes the base of policy compliance.

- **Quality policy and quality management system. Quality records. Internal quality audits.**
These requirements cover the maintaining quality policy with all functions of the purchasing department. Recording and tracking the efficiency of the implemented quality management systems is a sufficient tool to recognize the errors and possible parts for further improvement. Therefore, before the official application of ISO 9001:2008 an organization should provide a quality manual, a copy of the quality policy and all needed documents, including e.g. work instructions.

- **Subcontract Review. Subcontractor Process Control.**
Evaluation of suppliers is a particular requirement for the purchasing department. All subcontractors should be informed about the quality policies of an organization and all requirements have to be discussed in the right order. It confirms correct ordering process and establishes well-organized relations between a company and suppliers.

- **Documentation requirements. Documents control.**
All documentation should be kept in order to control the established quality policies. The invoices, account payables, quotations and etc. should be transferred to the financial department in order to provide information that is needed for reports and further requisitions and orders. The document control will simplify the recording of the results and current situations in an organization. Thus, legible performance of the documents is one of the first requirements of any standard, particularly of ISO 9001:2008.

- **Design and development. Design control.**
Functional performance of the product should be estimated. It provides clearness in the ordering process of the needed materials and supplements. However, the design of a product should be confirmed and in case of any changes it has to be discussed immediately. Incoming materials have to follow all the rules and requirements concerning the product.

- **Purchasing quality assurance.**
The supplier selection and verification of the contracts is the main step of the purchasing quality assurance. It also includes the inspection and testing of the received materials and supplements, production provision and identification and traceability of materials.
Moreover, this part contains control of monitoring and measuring equipment. It includes inspection of transportation, storages and etc. The

purchasing quality assurance is the largest part where the requirements of the ISO 9001:2008 standard should be applied.

- Control of a nonconforming product.
Elimination of the inspected unconfirmed received materials or supplements should be handled by quality requirements. The purchasing department should ensure that the delivery and transportation are organized correctly. Thus, the inspection is needed right after the delivery of the product in order to notice any probable errors in installing and transportation.

- Measuring, analysis and improvement. Corrective action.
These requirements include internal audit within the purchasing department that is monitoring the efficiency of all functions. Therefore, all evaluation should be recorded for further data analysis.

- Analysis of data. Statistical Techniques.
The documentation and all records of efficiency and productivity should be formed and analyzed by the time. It should be kept statistically in order to recognize the tendencies.

All above examined requirements are the most important for the purchasing department. It does not exclude the following all other requirements of ISO 9001:2008 in other parts of an organization. However, all of them should be defined separately and implemented correctly in each department of an organization.

To summarize, ISO 9001:2008 standard requires sufficient preparation before its actual implementation. The application process should not be seen so complicated, but deep enough due to the wide scope of the implementation. Therefore, ISO 9001:2008 maintains the functions of an organization in the most dynamic way, particularly in the purchasing department, due to the requirements. Thus, dynamic environment provides a higher level of productivity

and greater adaptation level to any challenges. To notice, the recording and analysis of the current situation and performance is one of the most efficient tools to comprehend how ISO 9001:2008 influences a company. Thus, the implementation of ISO 9001:2008 can be described as a wise step towards improvement and further development of an organization.

6. EFQM Excellence Model

As it was mentioned before, nowadays any quality management system can be performed or stimulated by excellence models or frameworks. These excellence models have been created from awards that were established to demonstrate the most successful techniques of quality improvements and self-assessment tools. Moreover, the awards can be seen as an inspiration for the companies to function efficiently and maintain the business by self-evaluating. (Bergman & Klefsjö 2010.)

The most known awards are the Japanese Deming Prize, the American Malcolm Baldrige National Quality Award and the EFQM Excellence Award. Moreover, more than 70 national awards exist that are supporting the business in various countries. All of these awards include models as the main part that can be implemented into a company to improve the quality management system. Today, the models and frameworks are widely used for companies' assessments. Therefore, in the next chapter transnational Excellence Model EFQM will be examined. Furthermore, EFQM Excellence Model will be described for the purchasing department to explicit the importance of self-assessment at this particular part of an organization.

6.1. Definition of EFQM Excellence Model and benefits of its implementation

Referring to the previous paragraph, EFQM Excellence Model is focused on improving of a company's performance by self-assessment. This framework aims to interpret internal and external "resources" of a company to valuable

results. According to European Foundation of Quality Management (2014), the model can be defined by three supportive elements:

- The fundamental concepts of excellence.
It examines both the principles of the framework and the defined eight main objectives for organizations that are planning to implement EFQM Excellence Model.

- The EFQM Excellence Model.
This scheme illustrates nine criteria of the framework. Moreover, it presents how this model is functioning and which “resources” and processes are used in a company.

- RADAR logic.
Within this part the results of the implementation of the framework can be seen. This logic is also applied for understanding the integration of the criteria of the model with fundamental concepts.

These three figures of EFQM will be defined more precisely in the following sub-chapters. However, to comprehend why this model is widely used despite of its quite complex structure, the possible benefits of EFQM are needed to be explained. The main advantages of its implementation are underlined in the following list:

- Improving financial performance
- Higher level of efficiency of operation within company
- Increasing of satisfaction of customers
- Better organization of internal environment of a company – motivation of personnel, common mission and vision of a company
- Improving management system in a company
- Etc.

There are lots more benefits that can be defined after the implementation of this framework. However, all results vary individually, because it completely

depends on the organization. Thus, it has been defined in different approaches that the EFQM Excellence Model may also cause negative results or either do not have any results.

To sum up, the implementation of the framework does not guarantee the improvement of the company's performance, but it will provide the data of what is functioning in a wrong way and what an organization could focus more on.

6.2. Fundamental Concepts of Excellence

The first stage is defining fundamental concepts of the model that an organization should take into consideration in order to implement EFQM Excellence Model in a right way.

All fundamental concepts of excellence that are used in EFQM Excellence Model are demonstrated in the figure 7 below.

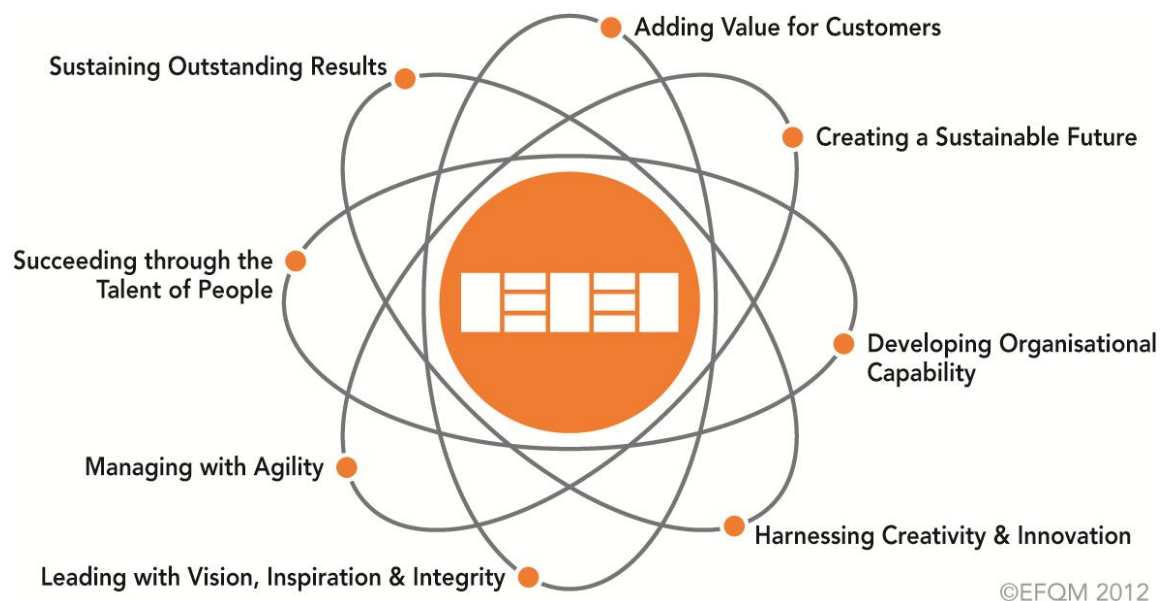


Figure 7. Fundamental Concepts of Excellence (European Foundation of Quality Management 2014)

These concepts describe objectives of an organization or primarily the issues on which an organization should concentrate to gain an excellence. The EFQM Excellence Model is operating with all of these eight principles to gain maximum

positive results (Bergman & Klefsjö 2010). Next these fundamental concepts are examined more precisely regarding to Laatukskus Excellence Finland. (2013).

- Adding value for customers.
Building strong customer relations contains an understanding of customer behavior. By creating target groups, identifying the needs and expectations of buyers, the company is able to gain a higher level of customer loyalty and fulfill needed requirements. All above discussed aspects are covered by this concept that is the prime objective for any company.
- Creating a sustainable future.
Corporate social sustainability is the base of this concept. Thus, it defines environmental, social and economic sides of a company. That means ensuring these three sides and providing dynamic performance in order to gain better overall external organization's performance.
- Developing organizational capability.
This concept defines both internal and external environment of a company and ensures the capability of an organization in general. The capability is performed by developing relations, improving the financial situation, establishing the strategic goals and controlling the efficiency of operations in a company. Thus, the business should be ensured and all goals should be settled in order to improve continuously the organizational capability.
- Harnessing creativity and innovation.
Generating the innovation approaches and transforming ideas into reality is the main issue of this concept. It also includes allocation of resources in order to improve continuously. Innovations and the development of produced products are important factors towards maintaining the customer satisfaction due to the rapid growth of today's requirements.

- Leading with vision, inspiration and integrity.
 Company's ethic and values should be recognized by all internal and external partners of an organization. It means that, e.g. personnel, should be involved to corporate culture and work concerning the mission and vision of a company. Then, policies and strategies of a company should be recognized by everyone who is involved.

- Managing with agility.
 The availability to evaluate external environment is the foundation of this concept. Threats and opportunities should be predicted and determined in order to increase the level of efficiency. Thus, tracking the current performance of a company and maintaining the dynamic environment is the key feature of the managing with agility.

- Succeeding through the talent of people.
 Motivation of personnel and ensuring the working atmosphere in a good manner that leads to a higher level of productivity. The communication within a company should be ensured and performed according to competencies and people attitudes.

- Sustaining outstanding results.
 Reviewing the results and evaluating all errors is the key feature of sustainable estimation of the company's performance. Moreover, setting the long-term goals is providing a higher level of predictability of possible errors that will help to avoid them in the future. Thus, outstanding results can be gained only by meeting all established short and long term goals within an organization.

Supporting these eight main issues can provide an organization the right way towards excellence. However, the implementation takes time and can cause some difficulties the first time. Nevertheless, with the next explained RADAR

logic a company is able to control the process of the implementation of a model, support weaknesses and escape possible errors.

After understanding the fundamental concepts of the model the main criteria of the EFQM Excellence Model has to be defined. In the further sub-chapter the diagram of the framework represents the structure of the model that consists of nine criteria.

6.3. Model structure

EFQM Excellence Model is operating both in internal and external environments of a company. Then, concerning the criteria of the model it covers the main nine aspects. As it was mentioned earlier, the aim of the framework is the interpretation of the “resources” of a company to improve company’s performance. Thus, according to Laatukskus Excellence Finland (2013) among the “resources” the following criteria can be defined:

- Leadership culture presents developing leadership in an organization as the prime tool to ensure the on-going processes of a company.
- People aspect presents the awareness of the potentiality of the personnel. It is described as rewarding and motivating of company’s workers, and getting them involved into an organization.
- Policy and strategy covers establishing a strong mission and vision within a company. Moreover, all policies and strategies that are applied in a company have the same purpose of maintaining relations with stakeholders. Thus, all the organizational systems in an organization should be measured, updated and controlled constantly.
- Partnerships and resources mean meeting environmental requirements, maintaining external relationships and efficient managing of internal sources. Thus, an excellent organization should be able to secure, e.g.

supplier relationships, and control, e.g. technology, at manufacturing stage in the highest level.

Processes can be described as the step of designing, managing and improving a product or service in order to add customer values and maintain stakeholder's relations. Therefore, all operations in a company have to be controlled and fixed in the most efficient way (European Foundation of Quality Management 2014).

According to the official manual of the EFQM Excellence Model these above listed criteria are called "enables". Thus, these criteria should be supported and improved to achieve further excellence. Nevertheless, from "enables" the organization aims to get the following results.

- People results.
Employees' perception and their motivation are covered in this part. Therefore, people results are presented by workers' motivation and satisfaction and involvement into the company's business.
- Customer results.
Customer loyalty and customer relationships are the main issues of the customer results. Thus, an organization aims to improve customer service in order to gain a reputation on the market.
- Society results.
It measures the achieved results concerning the external relationship of a company, e.g. communities' expectations, supplier relations and etc. This criterion also contains environmental impact, safety performance and other society activities.

These three results lead to the key performance results. It presents whether a company meets the stakeholder's needs or not. It may contain both financial and non-financial measurements. In general, this criterion is formed of financial outcomes, and other performance indicators concerning the financial situation in a company. (Laatukeskus Excellence Finland 2013.)

To sum up, a complete structure of above examined nine criteria is illustrated in the figure 8.

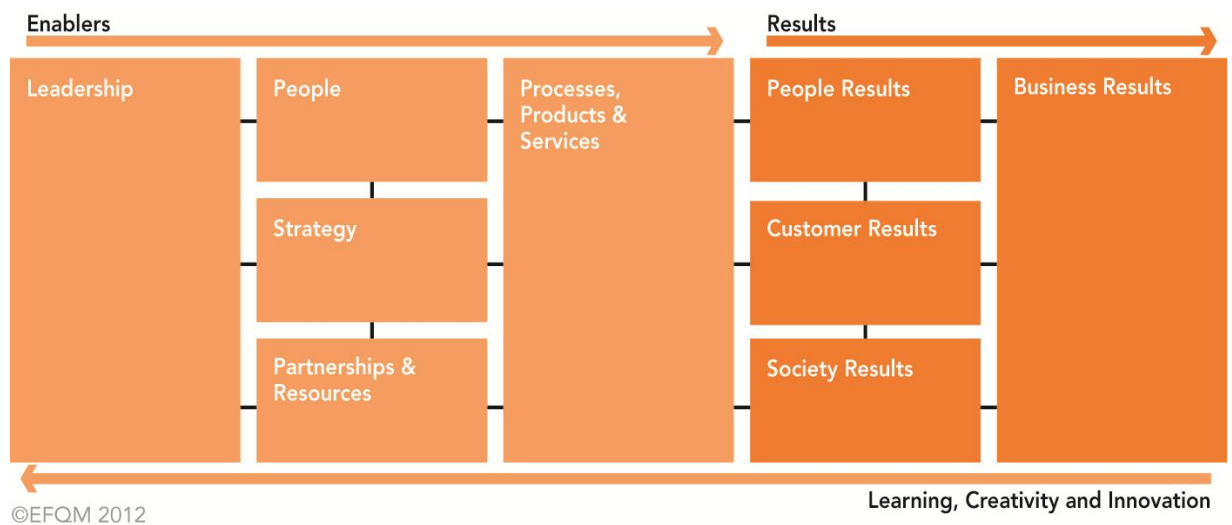


Figure 8. The criteria of EFQM Excellence Model. (European Foundation of Quality Management 2014)

By “results” a company is able to see how efficient “enables” were used and which aspects can still be improved to gain higher results. Thus, this complex of criteria is a foundation of the model that provides the main meaning of the framework. (Hoyle 2007.)

However, the evaluation of the key performance results and the whole model can be performed by special logic. As it was mentioned before, the RADAR logic is the supportive tool of the EFQM Excellence Model that presents a structured approach of the integration of the fundamental concepts and nine criteria.

6.4. RADAR logic

RADAR logic includes five steps that are presented below according to Bergman & Klefsjö (2010).

- Defining what *results* have been gained
- Created *approach* to achieve these results

- *Deployment* of this approach
- *Assess and review* of the approach in order to implement further improvements

The whole picture of how the logic is functioning is illustrated in the figure 9.

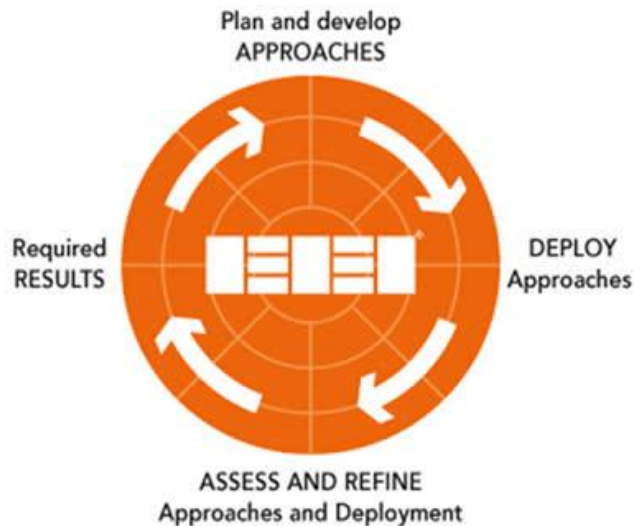


Figure 9. RADAR logic. (European Foundation of Quality Management 2014)

RADAR is one of the models to analyze the efficiency of the model. However, every criteria of the EFQM Excellence Model should be measured individually in order to estimate it more deeply.

To sum up, EFQM Excellence Model is quite a comprehensive framework that requires a lot of attention before and after the implementation. Thus, this model covers the whole organization where all criteria should be applied in every department. However, to examine it more precisely, EFQM will be described in the purchasing department.

6.5. Efficiency of EFQM in the purchasing department

The implementation of EFQM in the purchasing department can be started by identifying of the nine criteria of the framework particular in this department. All of them will be kept the same as they will be implemented in the whole

organization. Thus, leadership will be presented by the purchasing manager and people as workers of the purchasing department. Partnership and resources will include supplier relations and contracts. Policy compliance can be interpreted as policy and strategy; functions of purchasing department will be presented as processes. The results that a company will gain due to the efficient use of the “enables” might be the following:

- People results. The improving of the working atmosphere within the department, efficient grouping of people by their skills and knowledge will provide successful team with a higher level of productivity.
- Customer result. The purchasing department is not directly connected with the final customer. However, due to the company’s strategy the customer focus should be followed in all parts of the company. Thus, the purchasing department can be defined as part of a chain, which should work sufficiently to maintain the whole chain. Therefore, this part of an organization should meet all requirements, e.g. quality requirements, payment requirements and etc. Efficient functioning will provide a company ability to stably maintain customer focus.
- Society results. One of the main points of this criterion in the purchasing department could be supplier relationships. As it was mentioned in the previous chapter supplier relations is one of the most important functions of the purchasing department. Therefore, the selection of suitable suppliers and signing mutual profitable contracts is the main objective for this department within EFQM Excellence Model. However, it is claimed to follow environmental requirements and safety in the department. That is the key parts of corporate social responsibility.

To sum up, these “results” are closely related with the results of the whole organization. However, with the implementation of EFQM Excellence Model in the purchasing department the evaluation of the efficiency of the department might be simplified. The framework describes quite widely all issues of the

department, clarifying all functions and responsibilities. However, people's focus is important particularly in a department with quite spread functions, because the workers' involvement is the key feature of success for most organizations.

7. Examples of quality management systems in companies

7.1. Review of the approach

The empirical part of the thesis consists of the analysis of interviews in the companies. The companies were chosen by the presence of the purchasing functions or departments and possible applied quality management policies. However, the approach of interviewing was selected due to the variety of questions needed to be asked. Thus, interviews were conducted with the help of a questionnaire (Appendix 1: Questionnaire). The questionnaire includes nine closed format questions and one open format question left for comments and recommendations. However, all questions aim to recognize the importance and influence of the implemented quality management systems in the companies.

The interviews were done by sending questionnaires via e-mail to the purchasing department of the companies. The responses were received in the same way. Firstly, in the next sub-chapter the interviewed companies are examined briefly to comprehend the nature of the companies and their performance. Secondly, the chapter includes detailed analysis of the interviews.

To sum up, the approach can be defined as qualitative due to the absence of the statistical data and figures. This method was selected primarily because of the desired outcomes. The outcome should contain complete answers about the topic; in fact, the questionnaire consists of only open format questions. Therefore, the selected form of the empirical part is most suitable for this particular topic of the study.

7.2. Description of the companies

The interviewed companies were searched in Finland according to the two above mentioned criteria. Basically, purchasing functions is a key issue that was identified first. Persons who are responsible for the purchasing functions were found in official web pages of the companies. However, reviewing the quality management policies were the second step in order to confirm the suitability of the company. These four interviewed companies are presented briefly below; however, more detailed information can be assessed in their official web pages.

- Kemira Oyj

Kemira is a Finnish producer of expertise and chemicals for pulp & paper, oil & mining, and municipal & industrial industries. The company operates in 40 countries with more than 4500 employees. The headquarter is located in Helsinki. (Official web page of Kemira Oyj 2014.)

The supply chain management and quality management can be developed in order to enhance the efficiency of the business. Therefore, the purchasing department is large and contains representatives from all production units in all countries.

- Chemigate Oy

Chemigate is a Finnish company that is producing raw material for mostly paper production. The products include a variety of starches for further industrial application. The company has three manufacturing units in Finland – in Lapua, Mietoinen and Kaipainen. The headquarter is based in Lapua. (Official web page of Chemigate Oy 2014.)

The company is following a strong environmental policy due to the toxic elements of production. Thus, the presence of quality management policies is explained by necessity of controlling the quality within all processes in the company.

- Laitex Oy

Laitex is a Finnish supplier of mechanical equipment such as rotary valves and conveyers. The company is operating mostly with energy, mining and wood and paper industries all over Finland. The main office is located in Lappeenranta. (Official web page of Laitex Oy 2014.)

Due to the heavy industry Laitex implemented strong environmental strategies. As the supplier Laitex guarantees a high level of quality and follows strong quality management policies.

- Darekon Group Oy

Darekon Group Oy is a producer of medical and electronic equipment. The company is based in Espoo. However, Darekon has three plants in Finland and one in Poland. The company also provides testing of the equipment at the final stage of the production, further assembly and transportation to the buyer. (Official web page of Darekon Group Oy 2014.)

According to the web page of Darekon Group, the environmental and quality issues are playing a significant role in the whole organization and particularly in the production.

All four companies are operating in specific industries and produce raw materials for further manufacturing. Scopes of the companies are completely diverse. However, it provides an opportunity to examine the importance of quality management systems in companies of different sizes.

Nevertheless, all companies have implemented environmental strategies and quality management policies. The main reason of the implementation can be defined by a specific production that needs to be controlled with the specific requirements. Thus, the further sub-chapters are based on the responses from above described companies and particularly from their purchasing departments.

7.3. Analysis of the responses

All questions primarily aim to define the role and impact of the quality management systems on the purchasing departments. However, the following five sub-purposes of the analysis can be determined.

1. Defining how quality management systems are performed
2. Understanding the key motives of their implementation
3. Identifying advantages and disadvantages of their implementation
4. Determining the influence on functions of the purchasing departments
5. Examining how the documentation is performed

Thus, next sub-chapters are focusing on the above listed goals. The responses are examined individually in order to analyze them more deeply. Therefore in the final sub-chapter the results will be evaluated and summarized.

7.3.1. Performance of quality management systems

As it was noticed earlier from the description of the companies, all interviewed companies have implemented quality management policies. According to the responses, all of them are using quality management systems to supplement quality management policies. All the companies have ISO 9001 (quality management standard), and most of them use ISO 14000 (Environmental management standard). Moreover, every company have specifically implemented standards for their industries, e.g. ISO 13485 (Medical devices) and ISO 3834-2 (Welding quality assurance). Specific standards have the exact scope of the application compared to general used ISO 9001 and ISO 14000.

According to the responses, none of the companies is using excellence models. As long as three of the interviewed companies are middle sized, the implementation of the standards is enough to maintain quality management policy. Then, the size of the business is a key feature of selection of appropriate quality management system.

All the standards that are implemented by the companies are certified from three different organizations.

- LRQA (Lloyd's Register Quality Assurance) – British company that provides business assurance services with maritime, energy and other industries. (Lloyd's Register Quality Assurance 2014.)
- SFS (Finnish Standard Association) – Finnish organization that controls all standardization processes in Finland. (Finnish Standard Association 2014.)
- Inspecta – is originally a Finnish leading company of consultancy, certification and inspection. The company operates in the market of Northern Europe. (Inspecta 2014.)

The buying of the certification depends mostly on which market the company operates. Thus, if the prime market is Finland it is the most reasonable to purchase the certification from the nearest Finnish organization. Nevertheless, before the certification a company should define its own specific standards and check from which organization it is possible to certify.

To sum up, to ensure the basis of the implemented quality management policies, all the companies have quality and environmental management standards. Moreover, the certification of the standards is an official confirmation of all met requirements. The certification can be bought from different organizations that depend on the operating market of the business. Therefore, in the next sub-chapter the motives of the certification will be examined. Thus, the main goal of the implementation of quality management systems will be defined.

7.3.2. The reasons of the implementation

Regarding the responses, the motives of the implementation of the quality management systems in the companies can be defined by customer focus. All

companies stated that the standards were applied and certified because of the customers' requirements. Today quality is one of the most significant features of any a product or service. Thus, the implementation of well known standards brings reputation on the market and increases customers' trust. Surely, in every business customers' needs and perception are various. Therefore, the companies need to launch specific quality management systems that are recognizable by particular businesses.

Moreover, the reasons of the implementation might be as follows:

- Improvement of internal processes within an organization.
- Adding competitive advantages to the business.

The necessity of controlling the operations within a company and increasing of the efficiency of the whole business leads to implement of special strategies and policies. Thus, quality management systems can be helpful due to their requirement and strong impact on both internal and external sides of the organization. Nevertheless, competitive advantages can be gained by many factors. Therefore, quality management systems have a high impact on the whole organization that will be defined in the next sub-chapter. However, after the implementation of any standards, a company can get, e.g. competitive advantage in supplier relations. In this case, within the positive influence on the supplier selection by quality management system, an organization will gain more profitable long-term contracts that can be considered as a competitive advantage in the market.

In conclusion, it is wise to highlight that meeting customers' requirements is always the prime purpose of any business. Thus, all strategies or policies aim to increase customers' satisfaction. Nevertheless, quality management systems can be used as sufficient supportive tools in the internal system of an organization. The more detailed possible influences and benefits of their implementation on the purchasing department will be examined further.

7.3.3. Benefits of the implementation

According to the responses, quality management systems mostly have a positive influence on the purchasing department. Among the benefits, there are three key benefits that are presented in the figure 10.

General internal improvement of the department

- Organizational structure
- Transparency of the processes
- Systematic order of the operation - ensuring that all is done on time

Development of supplier relationships

- Suppliers' audit - Systematic vendor assessment

Increase of quality assurance of purchased products

- Transparency of operations

Figure 10. Benefits of the implementation of quality management systems on purchasing department

The first main benefit includes the general development of the department. It is followed by the simplifying of the processes, thus adding the transparency to the operations. Moreover, due to the requirements all processes are systematically organized. It gives an assurance that all operations are done on time, and no tasks are left. The organizational structure of the department is also well organized. That means that the employees are grouped by their skills and everyone understands their own responsibility. The requirements of the management responsibility include the involvement of the workers into the company's mission and vision. Thus, the organization as a whole is improving efficiently, because of the above mentioned changes within an organization.

The second benefit is the development of the supplier relationships. Quality management systems simplify vendors' assessment due to the requirements. It also creates a strong audit system that clarifies the supplier selection process. Thus, quality management systems have a positive impact on the external environment of the department.

The control of incoming products is the third main benefit of the implementation of quality management standards. The standards applied by the companies require quality assurance from the supplier. Thus, the quality can be controlled easily and kept at a high level by increasing the transparency of the processes.

To sum up, the responses of the interviewed companies proved that quality management systems have enough positive effects on the purchasing department. Both internal and external sides of the department can be improved. However, all the developments are long-term processes and the result cannot be seen right after the implementation. Therefore, the long-term focus of the development causes continuous improvement.

7.3.4. Disadvantages of the implementation

Concerning the results of the questionnaire, possible disadvantages can be presented in following two aspects:

- Organizational structure
- Documentation

None of the companies outlined these problems like critical ones. However, the negative effect on these aspects can appear after the implementation of the quality management systems.

The improvements in the organizational structure were discussed in the benefits of the impact. Nevertheless, it can be seen from the other side. A more structured organizational structure of the department becomes a more bureaucratic. It results from strict separations of the responsibilities within the employees in the department. Sometimes, this bureaucratic scheme causes

difficulties, e.g. when receiving any confirmation or other official documents. The confirmation should be approved by the general purchasing manager or even maybe by an upper manager. Thus, when departments are big the approving of some projects or documents can take a long time due to the complex organizational structure.

Another disadvantage is the comprehensive documentation system. As soon as quality management systems include the certification, various manuals, evaluation results, etc., more paperwork has to be done in order to launch quality management systems. This problem can appear mostly in small or middle size companies.

Thus, the negative aspects of the implementation of the quality management do not always appear. In most cases, it depends on the size of the organization. Therefore, potential determined disadvantages of the implementation can be defined as side effects.

7.3.5. The influence on the functions of the purchasing department

All the functions of the purchasing department are equally important. Thus, the implementation of the quality management systems refers to all of them. However, according to the responses, there are three following most affected functions.

- Documentation
- Supplier selection
- Policy compliance

The documentation has to face more changes than any other function. As it was defined earlier, these changes can even be seen as difficulties. By the requirements of, e.g. standard ISO 9001, all documentation should be kept safely and should be presented as legible and relevant. Thus, a company should understand the importance of the documentation and be ready to change the system.

The supplier selection should also meet all the requirements. The requirements of ISO 9001:2008 were precisely explained in the chapter about ISO 9008. Therefore, the company has to change its principles and habits in order to switch to a completely new system. The impact on the supplier relations can be seen in modifications of the suppliers' audit, contractual issues, etc. The company with an implemented quality management system should be aware about the suppliers and agreed on mutual conditions.

All departments should follow strategies and policies of the business. Full involvement of the employees and also external partners is required by all quality management systems. The idea of any quality management system is uniting an organization with the common aim and strategy. Policy compliance gives many opportunities to an organization to work more efficiently. However, it is a long process to establish policy compliance. Thus, the influence on it can be sufficient, particularly the first time.

In conclusion, the impact of the application is spread in the whole department. However, some functions are facing more changes and modifications. Thus, the impact depends on whether the organization is prepared to implement quality management systems or not. Moreover, the size and experience of a company can decrease or increase the influence.

7.3.6. Performance of the documentation

As it was discussed in the previous sub-chapter, the documentation is the most influential function of the purchasing department. Thus, in this sub-part the way how it is performed within the companies will be identified.

Nowadays all documents are stored on the computer. Companies are using various programmes to monitor the documentation easier. The most basic that can be used is Excel from Microsoft Office. Nevertheless, big companies have their own system to handle the documentation. For example, Kemira uses DMS systems (Document Management System). It is a widely used set of programmes for storing e-documents. Surely, DMS is more suitable for large

companies. However, small and middle sized companies can select less complicated computer systems.

Thus, monitoring of data is a compulsory process that can be easily done by computer nowadays. The programmes vary by their complexity whereas companies are able to choose the most appropriate.

7.4. Summary of the approach

There are quite big influences on the purchasing department from the implementation of the quality management systems. Almost all operations and processes need to be modified. However, all the changes have to be done to apply quality management in an efficient way. Thus, with the right application the company might achieve sufficient results both internally and externally. The side effects are also predictable and might be eliminated with a good preparation of the implementation in the beginning. Therefore, all modifications within the department are aimed to the key goal – customers' satisfaction. This main aim does not depend on the size of the company or on the operating industry. However, another aims, e.g. the internal development or competitive advantages, can vary from the nature of the business.

With these examples of the companies, the importance of quality management systems can be defined. The real cases also supported by the earlier theoretical analysis about quality management systems. Moreover, the interviews proved the role of quality management, particularly in the purchasing department. Thus, the analysis of the responses answered the main questions of the study and concluded the theoretical part of the thesis.

In addition, a debt of gratitude to:

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- Sales and Supply Manager, Chamigate Oy
- Purchasing manager, Laitex Oy
- Material Manager, Darekon Group Oy

8. Conclusion

Quality management is widely used and has been implemented in many companies. Concerning this study, the implementation of the quality management is a complex system and there are many issues that have to be taken into consideration. The thesis covered the application particularly in the purchasing department. Thus, the interviews made in the companies defined how specifically the quality management system influences the department.

To sum up, the present thesis has overviewed what is quality management, how it can be applied and what result it can bring. The literature review outlined main concepts and definitions of quality management. The empirical part showed the implementation of quality management in real examples of companies.

This study can be a reference to further potential more wide research within this topic. Four examples of the companies can be seen as a start for the next researches in order to focus more specifically on this topic. Moreover, the thesis does not cover any other department; thus, the extension of the topic might be continued in many ways.

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Appendices

Appendix 1. Questionnaire.

Questionnaire consists of 10 questions, which are formed concerning implementation of quality management systems in purchasing department in the particular company. The company is chosen by the type of the availability of quality management policies. Thank you in advance for giving the full answers!

Questions:

1. Does your company have any quality management system(s)?
2. Is it certified? If it is possible, please, mention by which organization your company has been certified and when.
3. What was the motivation of starting to use these quality management system(s) in the company?
4. In your opinion, what are the main benefits of the implementation of these quality management system(s), particularly in purchasing department?
5. Is there any negative effect on the company from these implemented quality management system(s)?
6. On which function of purchasing department quality management system(s) influence more? (e.g. policy compliance, procuring material, supplier selection, evaluating prices, documentation and accounting, inspection of incoming materials and etc.)
7. How is formed quality management documentation in your company? Is there any computer programmes for it or either paper documents?
8. In your opinion, what can be improved in usage of these quality management system(s) in purchasing department to make it more efficient?
9. Are you aware of any other quality management systems? Would you like to implement any of them?
10. Comments or additional information

Thank you very much for the given answers! If you have any comments, do not hesitate to add it in the open question 10. Please return it back via e-mail!