# Customer service reporting system for quality management.

## Case: Pohjola Vakuutus Ltd

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# ABSTRACT

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The goal of this project was to find ways to enhance efficiency in existing data collection processes following customer behavior within Pohjola Vakuutus Ltd. The company wanted to find a new way to monitor customer behavior and reasons behind customer contacts. The purpose was to create a tool that would follow customer behavior in a more constant and systematic way than the previous models used by the company.

The project began by following the existing processes related to data collection. The positive features and possible concerns were analyzed. The main approach used was observation. Concepts of quality and knowledge were incorporated to this project on a theoretical level in order to ensure their presence on the end result. For the execution a more constructivist approach was taken to allow formation of a tool that meets customer expectations and enables natural development.

As a result a tool was created that allows real-time monitoring and provides data of the reasons behind customer contacts. The tool also enables a possibility for an in depth product level viewing. Elements allowing inner process follow-up are also incorporated to the model. Efficiency and speed requirements were the reasons leading in choosing utilization of internet based questionnaire form.

The end product of this work is a finalized plan of the new data collection model together with an implementation plan. To guarantee natural development and to enhance open and free flow of information utilization of the principles of quality and knowledge management is encouraged.

Due to confidential material used within this project some parts are removed from the public version of this report.

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TIIVISTELMÄ

Tampereen ammattikorkeakoulu
Kansainvälisen kaupan koulutusohjelma

PENTTINEN, LAURA: Asiakaspalvelun raportointijärjestelmä laatujohtamiseen.
Case: Pohjola Vakuutus Oy

Opinnäytetyö 70 s., liitteet 12 s.
Lokakuu 2011

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Tutkimuksen päämääränä oli löytää keinoja tehostaa asiakasyrityksen tiedonkeruuprosesseja liittyen asiakaskäyttäytymiseen. Asiakasyritys Pohjola Vakuutus Oy on toteuttanut erilaisia asiakaskäyttäytymiseen ja sen seurantaan liittyviä tutkimuksia aiemmin. Tämän työn tavoitteena oli löytää ratkaisu joka tehostaa asiakaskäyttäytymisen seurantaa systemaattisella ja pitkäkestoisella tavalla. Tarkoituksena oli tuottaa yritykselle ratkaisu, joka seuraa asiakaskontaktien syitä reaaliajassa. Vaatimuksena oli että työkalun luonti ja ylläpito tulee voida toteuttaa mahdollisimman kustannustehokkaalla tavalla.

Työ aloitettiin seuraamalla nykykäytäntöjä ja analysoimalla olemassa olevien tiedonkeruumenetelmien hyviä ja huonoja puolia. Samalla kartoitettiin tarpeet ja pohdittiin mahdollisuuksia, joita työkalun avulla voitaisiin saavuttaa. Pääsääntöisenä tutkimusmenetelmänä käytettiin seurantaa. Käsitteiden osalta laatu ja tieto haluttiin sisällyttää työhön teoriatasolla, jotta voitaisiin varmistua näiden konseptien sisältyminen ja ennen kaikkea läsnäolo lopputuloksessa. Itse toteutuksen osalta lähdettiin konstruktivistisesta ajattelusta ja pyrittiin luomaan kokonaisuus, joka vastaa asiakkaan tarpeita ja loisi mahdollisuuksia kehittää toimintoja eteenpäin.

Projektin lopputuotteena syntyi työkalu, jonka avulla voidaan reaaliajassa seurata asiakaskontakteihin johtaneita syitä. Työkalu seuraa kontaktien syitä ja mahdollistaa hyvinkin yksityiskohtaisen seurannan tuotetasolla. Tuottavuuden näkökulmasta lomakkeeseen on myös otettu elementtejä mittaamaan yrityksen sisäisten resurssien käyttöä. Tehokkuuden ja nopeuden takaamiseksi päädyttiin Internet-pohjaiseen kyselylomakemuotoiseen ratkaisuun, joka mahdollistaa käyttöönoton sijainnista riippumatta.

Lopputuloksena on tuotettu valmis suunnitelma uudesta seurantamenetelmästä ja sen käyttöönotosta. Luonnollisen kehityksen takaamiseksi sekä edesauttaakseen avointa ja vapaata tiedonkulkua, käyttöönottosuunnitelmassa kannustetaan yritystä hyödyntämään laatu- ja tietojohtamisen periaatteita.

Työssä käytetyn yrityssalaisuuden alaisen materiaalin vuoksi, raportin julkisesta versiosta on sensuroitu osioita.

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Asiasanat: asiakaspalvelu, tiedonkeruu, tietojohtaminen, laatujohtaminen

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1. INTRODUCTION

1.1. Background of the study

Pohjola Vakuutus Ltd is part of the OP-Pohjola-group, which is the leading finance group in Finland. OP-Pohjola-group is formed from independent co-operative banks and groups central community OP-Keskus with its affiliated communities. The group as a whole provides a vast selection of banking, investment and insurance services and currently has over four million customers. ([www.pohjola.fi](www.pohjola.fi).)

In the field of property and casualty insurance Pohjola is the leading provider in Finland when measured in income. Company´s goal is to strengthen the market position especially among private customers. In the insurance sector, which this thesis is concentrated in the products are divided into vast selection of life and non-life insurances. Non-life insurances covering movables, valuables, motor liability insurances et cetera whereas life insurances concentrate more among others in life, casualty and health insurances. (www.pohjola.fi.)

Customer contact center of Pohjola Vakuutus Ltd receives several customer contacts per day. The center is one of the customer service channels among Pohjola offices and web-based services where customer can find information and personal assistance. Company is satisfied with the current quality of the customer service center but despite of it the company still feels that with existing resources improvements can be made to processes.

In order to create efficiency and improve current processes the company wants to create a system to monitor customer behavior and an ability to gain access to reliable data of the current situation. Therefore the purpose of this work is to find and plan an efficient and versatile way to collect information about the reasons why customers are contacting the company.

## 1.2. Purpose of the research

The intangible nature of service allows every contact with a customer become unique. Evaluation of the contents and the end results of contacts are therefore usually based on subjective experiences. When talking about development and decision making it is important that decisions are made based on facts and not based solely on feedback or current beliefs. More perspective is needed to support the decision making. The company wants to gather objective information and take a closer look on the reasons behind the contacts as in finding the reason why did the customer contact the company. What was the original reason for the contact? This information will help decision making and allow the company to monitor and make justified alternations to its functions.

Due to confidentiality this part of the thesis is removed from the public version.

## 1.3. Research strategy



**Task**
- Determining the research problem
- What is the wanted outcome

**Analysis**
- Determining the current state of the target
- Analysis of the qualities of the target

**Opportunities**
- Determining and analysing the opportunities
- Weighing the concerns and possible threats regarding the possibilities of the project

**Solution**
- Creation of the actual plan
- Execcution of the finalized plan

Background theory is utilized throughout the different steps of this project.

Figure 1.3 1

After being given the topic and rather free hands to pursue with the task, my goal was to start thinking about the actual execution of the project. A couple of meetings were held with the R&D representative of the company to clear out the goals and outcomes wanted to achieve with this project. It was wanted to make sure that the direction was right

before continuing further. Figure 1.3 1 is there to visualize and clarify the different steps within the research strategy.

Before starting to make plans for the new model the old material and the previous ways of conducting this research were looked at more closely and the issues concerning the previous model were analyzed. I wanted to see what was possibly wrong and what the critical things to improve were. I also wanted to make sure all good aspects of the previous models were kept and included into the new model. With this agenda in mind drafts from the model were done and alternatives for the execution were thought through. Based on this one of the main goals was to design a model that would lighten up the processes concerning data collection.

At this stage the concepts of quality and knowledge were introduced to the project. The idea behind these concepts was wanted to explore more in depth not only to achieve good quality results but in order to include the theories behind these concepts to this project. With this I wanted to reach a better understanding of what is needed and required in order to create system that will enable the creation of quality. Understanding the concept of quality allows the individual to gain better understanding about the small things included in projects, which despite of their size can contribute to the creation of quality.

As stated by Dunne, Pryor and Yates observation provides to a researcher an opportunity to study the phenomenon and its functions in its natural environment. By observation a researcher can gain access to information that would not necessarily be found in other research methods such as interviews or questionnaires that can lack the 'being there' factor emphasized by Dunne et al. (2005, 55) Even though the goal is to create a tool providing quantitative data the methods creating the actual tool are qualitative in search of understanding the needs and the possibilities of the new solution.

Together with interviews with the R&D representative, observation and participation are the most important research methods and sources of information used in this project. Having worked within the company for a longer period of time I had the opportunity to access information from a longer period of time and thereby understand the problems

and opportunities of the model better by long term participation and observation. Due to resource issues no employees were interviewed during the process.

After deciding on the big picture and the direction to which this project was going it was be time to continue with the actual tool and details concerning it. I wanted to find a way to collect data in a most efficient way that would not acquire a lot of resources. Due to its accessibility and low cost features an electronic way of collecting data was chosen. The type of the questions and issues wanted to investigate are most conveniently gathered with a questionnaire. Therefore options of different types of surveys and software for this purpose were looked at. Finally was time for the creation of the actual questionnaire form and making plans for the execution.

1.4. Key concepts of the study

The guiding concept of this project was the idea of quality and creation of it within actual operations of a company. I was interested in finding out and looking more closely on ways to improve quality also within the small processes that are not necessarily key factors from the operational point of view but most certainly are necessary and beneficial regarding the big picture. Like this project. My task was to design a tool that would report the reasons behind customer contacts, a small amount of information to be gained straight away but the amount of possibilities in where that information could be utilized had a great possibility to affect the quality of the processes within the customer service of the company.

During the study it quickly became evident that when talking about quality a concept of knowledge could not be excluded and therefore became an important part of this work. For that reason the theory part for this thesis concentrates in quality, knowledge and management of them. The concepts quality and knowledge might seem rather large when talking about designing a tool for data collection. What was wanted to achieve with this was to clarify the concepts and importance of them despite the size of the project by finding simple ways to incorporate them into daily operations.
Before continuing further a few important concepts are presented.

## Quality

According to Sid Kemp quality in its broadest sense is everything that will add value to anything which improves human lives and experiences. (Kemp 2005, 29)

## Quality Management (QM)

In its essence Quality management is a method trying to manage and simultaneously create quality. It strives towards continual improvement utilizing standardization and scientific methods in controlling the variables affecting to quality. Standardization and scientific methods are said to be the most essential ideas at the core of Quality Management. (Kemp 2005, 48)

## Knowledge

"*Knowledge is state of mind, an object to be stored, a process of applying expertise, a condition of access to information and is the potential to influence action.*" (Agrawal 2009)

The terms Data, Information and Knowledge are all linked to each other but in order to clarify the terminology the definitions of all are provided and also illustrated in the figure 1.4 1.

*Data*: Simple presentations of parts of knowledge, such as numbers and letters. Meaning can vary according to the context.
*Information*: Physically presented symbols and combinations of them.
*Knowledge*: Information processed and interpreted by human.

(Nummenmaa 2006, 18-19)
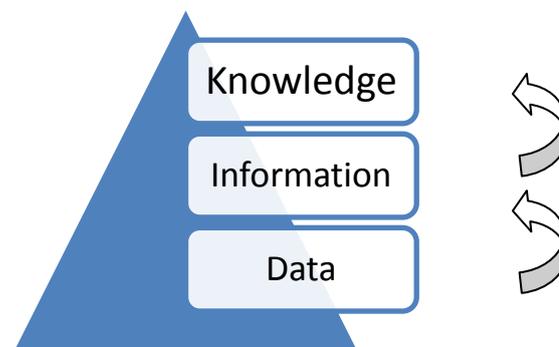


Figure 1.4 1 1

Knowledge itself can be divided into tacit and explicit knowledge where

> *Tacit knowledge* is quiet information gained by an individual, comes across in beliefs, values etc.
> *Explicit knowledge* is coded knowledge that can be transferred easily, such as information in books etc.

<div align="right">(Hannula, M 2006)</div>

### *Knowledge Management (KM)*

According to Agrawal, R.C. knowledge management is a systematic and organizationally specified process for acquiring, organizing and communicating knowledge. (Agrawal 2009)

During this study we will discuss more about these terms and try to find actual ways to incorporate them into the daily actions of the company.

## 1.5. Structure of the thesis



**Theoretical Frame**
- Quality & Quality Management (QM)
- Knowledge & Knowledge Management (KM)

**The model**
- Data collection
- Questionnaire
- Implementation plan

**Conclusion**
- Summary
- Concerns and opportunities
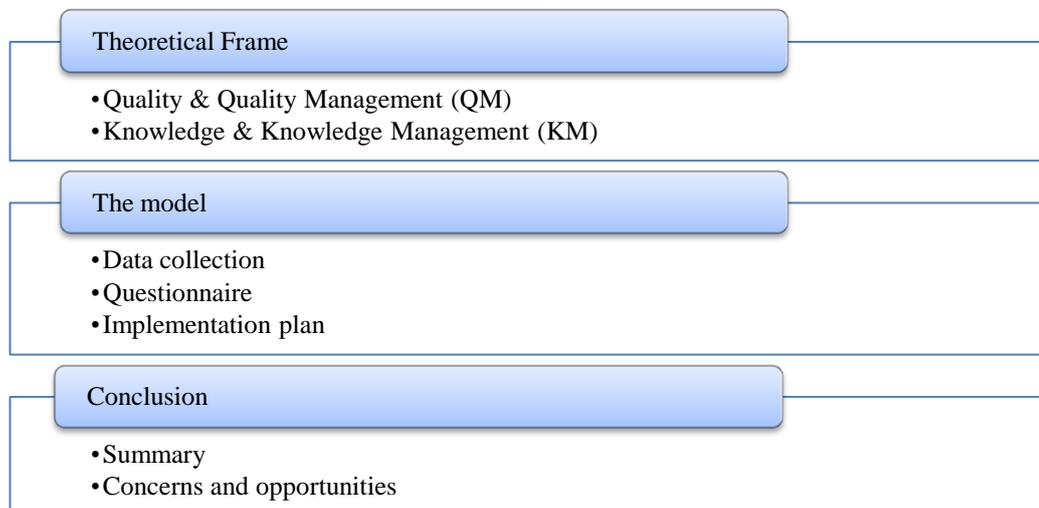
**Figure 1.5 1**

The purpose of this thesis was to find a new solution or a new way of collecting data about the reasons why customers are contacting the customer service of Pohjola Vakuutus Ltd. This report will go through the process, introduce the model and give grounds to the decisions that were made during the project. The report will introduce the

new solution and guide the reader through different issues relating to the execution of the new model.

As illustrated in the figure 1.5 1 this report will begin with presenting the background theories by going through the theoretical frame of the thesis. Terms and theory about quality, quality management and knowledge in relation to management are explained before continuing to the actual model.

The second half of the report explains the model and introduces in detail the structure and the purpose of the questionnaires and ideas behind the questions in them. Afterwards the report will go through possible concerns and opportunities relating to the project by finishing off with an implementation plan.

The report will be finished with a conclusion and thoughts about the project ending with a short summary of the relation between theory and practice.

2. THEORETICAL FRAME

2.1 Quality

Quality is all those qualities and features that a product or a service possess which are used to fulfill the expectations and demands of a client whether expressed or hidden. This is how Herkko Pesonen in his book called "Laatua!" defines quality. (Pesonen 2007, 36)

It can also be said that quality is something that adds value. What is value on the other hand varies from person to person or even by a situation to situation. According to Kemp, S. (2005) there is four facets of quality; *universal*, *cultural*, *social* and *personal*. *Universal* facet of quality is described as a night sky which is universally considered beautiful regardless by the evaluating person whereas the *cultural* facet is influenced by the common beliefs and agreements of the culture of which the individual is surrounded by. An example of *cultural* value on its behalf is the conception of beauty that varies across cultures. The third facet of what influences the experience of value according to Kemp is *social.* The social value consists of social agreements among the economic or social classes. Fashion is a good example of social value. The last fourth facet and form of value according to Kemp is *personal* views of what is valuable and what is perceived as quality according to individual's own preferences. "There is no disputing on matters of taste". (Kemp 2005, 31-32)

2.1.1 Quality Management (QM)

As companies have to survive and evolve in an increasingly global and competitive environment more emphasis is put on quality. A question of how to increase or manage quality arises.

In order to create and maintain quality, it needs to be controlled or at least it has to be controllable in some way. To be able to control or utilize something it is needed to

know, what are the variables affecting to it. The variables affecting to creation and maintenance of quality are the ones which various quality management theories are trying to reach and reveal.

Sunita Giri in her book *Operations Research and Quality Management* defines Quality Management as an effective system of maintaining and improving the quality of goods and services in an organization so as to obtain the most economic operation levels with customer's full satisfaction. (Giri 2010, 52)

The following picture 2.1.1 1 is provided in order to illustrate the processes included to Quality Management more in depth according to views of Sid Kemp.

Quality Management:
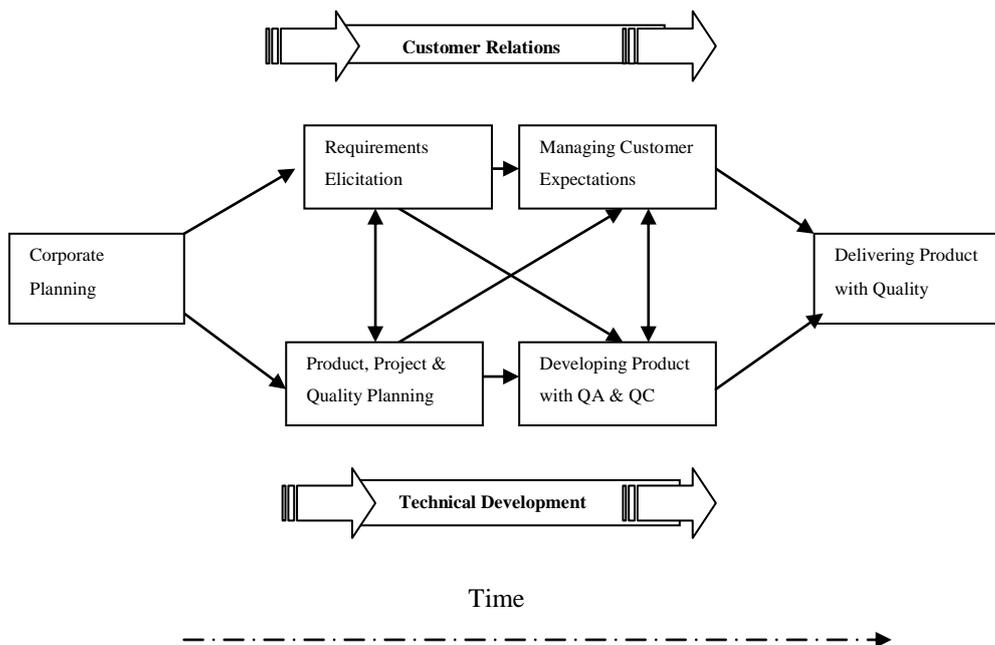


Figure 2.1.1 1

The figure is done by following the figure 3.1 from Quality Management Demystified by Sid Kemp. (Kemp 2005, 72)

The figure above presents in depths view of quality management for developing products or services. In order to open up the figure above I will start from the first bulk, *corporate planning*. This bulk is there to define the basic parameters of what the company

is doing. It contains information of the product or the service, the target audience and the goal´s of the company in question. (Kemp 2005, 71)

Bulks for *Requirements elicitation* and *Product, project and quality planning* are presented in order to specify the details of the product or service, what does the customer want, what is required from the company. It contains information about how the product or a service is made and how the quality is created and more importantly maintained. All this is done in accordance of the requirements of all parties including customers, shareholders and the company´s own requirements. (Kemp 2005, 71)

*Developing the product with QC and QA*. This part of the figure is said to ensure success. QC means Quality Control that is done according to a plans and requirements that the company has for the product or to the service. QA on its behalf means Quality Assurance, which in practice means testing all aspects of processes and making alternations based on the results attained from these tests. (Kemp 2005, 70-71)

*Managing customer expectations* and *Delivering the product with quality* are the final parts of the figure and are there to ensure that a product or a service created with care and quality is also delivered to the customer in a way that does not lessen the value of the chain prior to the delivery. These parts are there to make sure that the customer is satisfied by getting what they asked for and happy with the end result in a way that will lead to long term customer relations. (Kemp 2005, 71)

As it can be seen from figure 2.1.1 1 the idea of Quality Management works on all aspects of the company and cannot be executed only in certain areas of the company processes. Its presence is needed throughout the operations starting from planning the very basis of the company on an ideological level all the way through to the delivery of the products. This is the only way that the presence of quality can be guaranteed.

2.1.2 Quality Management & Customer satisfaction

Donna C.S Summers is summing up the most important factors of successful quality management in her book *Quality Management, Creating and Sustaining Organizational Effectiveness*. Based on several quality management theories from different Quality Management theorists such as Armand Feigenbaum, W. Edwards Deming and Joseph Juran etc, Summers has found five common factors vital for fulfilling the needs and expectations of clients. These factors are:

- Determine who the customers are
- Determine the critical key success factors for meeting customers´ needs, requirements, and expectations
- Establish effective processes that enable to provide products and services that meet customers´ needs, requirements, and expectations
- Focus on process measurement and improvement
- Provide the management involvement and commitment required for organizational success (Summers 2009, 22).

With these five factors a company should be able to succeed in terms of quality and customer satisfaction.

According to the international ISO 9001 quality standards another key element of creating and maintaining quality in business is to be aware of the satisfaction of customers. The idea is that a company needs to know if the customer has perceived quality in terms of getting the service or a product, which he or she wanted or expected (Pesonen 2007, 42). To underline the importance of customers it needs to be pinpointed that without customer communication any attempts to manage quality at least on ISO quality standards are said to be a waste of time or just a mere compromise. (Giri 2010, 215)

From the customer point of view according to Kemp (2005) in order to experience value and quality the whole action needs to be pleasant on all aspects. Kemp states that the sense of quality is created only when the whole experience is positive. Satisfactory will not be sufficient enough in terms of creating the sense of quality. (Kemp 2005, 32-33)

In order to know or predict if the customers are or are likely to be perceiving quality the companies need to know what kind of customers do they have or what kinds of customers they want and make alternations to practices accordingly. The target is to satisfy as many as possible. Often the information about the level of satisfaction and information of how the product or service is perceived by customers is collected with customer satisfaction surveys. These surveys are often only reporting the current state of the service or the product and necessarily do not reveal the real issues to be tackled within the processes. Even though valuable information is gathered through customer surveys they alone are not efficient enough in providing information for creating the sense of quality.

Dr. Feigenbaum, man considered to be the father of the Total Quality movement emphasized the value of continual improvement in his speech for International Conference on Quality. In the conference Dr. Feigenbaum stated that in order the company to become and be able to lead the markets it needs to continuously increase the value of services and products in order to continually excite its customers. (Summers 2009, 24-25). By laymen terms this means staying a step ahead and knowing what the customers want already before they know it themselves.

Forecasting and preparing for the needs of customers beforehand is a necessity in creating efficiency and simultaneously improving quality. To be able to meet the expectations is also emphasized by Summers on the list above. The company needs to know what customers want, what are their needs and expectations. Preparation and fast reaction times when facing problems are important especially within the service industry where the conception of quality is created within a short period of time.

2.2 Knowledge

Total Quality Management especially in relation towards learning and development has been strongly questioned. Interests towards more psychological and human aspects in organizations have been raised. (Konidari & Abernot 2006, 8-10). As value of individuals is recognized it is logical at this stage to continue to another subject, knowledge.

There are various taxonomies defining knowledge and therefore in the beginning certain emphasis needs to be put on terminology.

> The term *data* describes a set of discrete, objective facts about events (structured records of transactions).
> *Information* is a message, usually in the form of a document or communication, the importance of which is decided by the receiver (it might also be defined as data that make a difference to someone).
> *Knowledge* is a mix of framed experiences, values, contextual information, and expert insights originating in the mind of the knower
>
> Quoted from an article by Pamela Mayer referring
> to a text by Davenport & Prusak, 1998
> (Mayer 2000, 65).

## 2.2.1 Tacit & Explicit knowledge

When talking about an organizational environment knowledge can be divided into two different categories: to tacit and explicit knowledge. Tacit knowledge comprises of so called quiet information, which comes across as intuitions, beliefs, values and as know-how, whereas explicit information places itself on a more theoretical and concrete base. Explicit information is coded information, of which transferring, storing and managing can be seen rather easy whereas tacit information is more difficult to manage and to control. Despite of this it needs to be noted that the amount of tacit knowledge within organizations is substantially bigger than of explicit knowledge. (Hannula 2006)

It is stated that the biggest advantages are gained in knowledge creation where tacit and explicit knowledge are combined and utilized together. When operating in a modern, constantly changing business environment in order to gain competitive advantage companies need to utilize all the resources available and no longer rely only on stagnant information. Therefore more and more emphasis needs to be placed on knowledge. Knowledge needs to be shared and actions to be taken based on it. (Mayer 2000, 67)

2.2.2 Knowledge Management (KM)

Stephen Walczak defines Knowledge Management (KM) as any process, not taking any stands of whether KM is being formal or informal, that enables or facilitates the distribution, creation and application of knowledge for decision making. In this context Walczak defines knowledge as any data, piece of information, skill et cetera that enables high quality decision making and problem solving to occur. Thereby Walczak states that KM when implemented in an effective and successful manner enables and simultaneously ensures that everyone has access to the right kind of information at an appropriate time when decisions need to be made. (Walczak 2005, 331-333).

Modern day managers are facing new kind of challenges when trying to facilitate the access of the right kind of information or knowledge at a right time to the right people. The task seems to be easier said than done. Why bother?

It is said that successful implementation of KM is related to increased efficiency and improvement of customer satisfaction. (Wong 2005, 264) The same idea is also supported by Peter Smith who states that without knowing what they know organizations cannot cope nor can they function effectively. By sharing knowledge and information organizations can learn to function better and are able to develop processes towards more effective manner. (Smith 2005, 45)

2.2.3 Critical Success Factors (CSF) in KM

Organizational culture is formed of elements of strategy, structure, people operating within the environment and the processes within the organization that are all connected to each other. People working within these structures are supporting the processes striving to successfully achieve the business strategy of the organization. The structure of the company as well as the corporate culture are both seen necessary when implementing KM but what exactly are the critical success factors in KM? (Walczak 2005, 331-333).

Definite list of factors affecting to the success of KM does not exist yet but it has been possible to narrow down some factors that are seen critical in the success when imple-

menting KM. These factors have been described as areas that, when managed with a satisfactory manner, will ensure successful performance of the company. Therefore they are to be seen as activities and practices that need to be addressed to ensure that the implementation of KM will succeed (Wong 2005, 262).

A listing of seven crucial success factors is made based on a study following leading companies in implementing KM by Skyrne and Amidon 1997, referred by Wong, K. Y. These factors are:

- Strong link to business imperative
- Compelling vision and architecture
- Knowledge leadership
- Knowledge creating and sharing culture
- Continuous learning
- Well-developed technological infrastructure
- Systematic organizational knowledge processes.

(Wong 2005, 262)

As it emphasizes the importance of sharing tacit knowledge in order to make higher quality decisions knowledge culture and the commitment in implementing it from the managerial side is one important factor in implementation of KM. (Walczak, S. 2005, 331-333). Even though people management and training has yet to attain the status of CSF in KM the idea of it being an important factor is widely supported. (Wong, K. Y. 2005: 266).

## 3. DATA COLLECTION, PLAN

### 3.1 Background information

Everyday observation is often subjective and the results usually vary depending on the observers and their background (Nummenmaa 2006, 19). Therefore a more scientific approach is needed to gain more reliable information in an objective form. The goal of this project is to produce objective data preferably in a numerical form in order to support decision making.

In order to gather objective data we need to produce measurable information. Measuring is important in a business environment because without numerical data organizations cannot really know how their business is actually doing. As Summers (2009) states in her book measures are indicators of performance and they enable the business to define the meaning of success numerically. Having the data and comparing it to the data from previous periods of time the company leaders are given enough information to answer the question "*How do we know how well are we doing*?" (Summers 2009, 250)

Designing the structure of the tool it needed to be decided whether the tool would be gathering information on qualitative or quantitative form. Quantitative research is often said to be striving towards common ideas and conceptions whereas qualitative research tries to find the details and reasons of the phenomenon in question (Vehkalahti 2008, 13). Based on this the decision was rather simple since the qualitative way of conducting a survey would produce subjectively gathered information, with reasonably high usage of resources and would not serve the purpose of this study. Therefore in order to collect reliable objective data about the reasons why customers are contacting the company a quantitative method was chosen. Quantitative approach enables also a vast coverage of the customer service center and allows repetition without tying a lot of resources to the process.

3.2 Quality in data collection

Quality needs to be present also at the collection process itself. To ensure quality a statistical quality control is used. Statistical quality control according to Giri (2010) is a scientific method which is used in the control of quality standards. It relies on statistical techniques in order to maintain quality within processes. (Giri 2010, 49) In the following a few tools of statistical quality control according to Sunita Giri are presented.

1. *The law of statistical regularity*. If a fairly large number of items are taken randomly from a much bigger group the items that are taken are likely on average posses the qualities of the bigger group.

2. *The law of intertia of large numbers*. This law bases itself into principle where large numbers appearing on a certain group are likely to have an equally large numbers on an opposite side as well. For this reason the total change in the results will be small.

3. *Sampling*. Census enquiry or sample enquiry? Census enquiry requires that all the units within the universe are studied. In sample enquiry requires only a selected number of units to be studied.

   a. *Random sampling*. Random selection means that the selection is done so that the inclusion of every item in the whole universe is equally probable within the sample.
   b. *Purposive sampling*. In purposive sampling the items are selected according to a certain principle. Here the likelihood of certain kinds of units is high whereas the appearance of other kinds of items is reasonably low. The criterion for selection is decided first and the items in the sample are selected accordingly.
   c. *Mixed sampling*. This form of sampling is a mixture of random and purposive sampling. All the units within the universe are first divided into groups according to the principles of purposive sampling and then items are selected to the sample according to the laws of random sampling.

(Giri 2010, 50-51)

With this study the sample will be drawn in accordance of these rules. The tool itself will be collecting data utilizing the techniques sample enquiry and mixed sampling. Data collection methods and practical issues relating to it are discussed more later on in chapter 5.

3.3 Practicality & Functionality

In order to collect data in a most efficient and resource effective way utilization of internet is currently the best option. For this reason a web-based structured questionnaire form was chosen for this project. Web-based software will not need any installations and therefore data collection is not bound by location. Data will be gathered electronically utilizing survey forms. All questions are divided and organized by categories and from categories organized again into sub-groups. All questions are conditioned. With conditioning different alternatives it is possible to gain more detailed information without making the survey too heavy and lengthy to use. In order to increase efficiency and decrease the time used in reporting all questions do not show in every reporting time.

Providing users a system that guides the answers we shorten the time used on answering by not forcing the user go through every alternative. At the same time reliability of the results is raised because the likelihood of getting vague answers that do not separate the actual reasons for the contacts is higher when the user has to spend a lot of time thinking about the correspondence between the contact and the alternative in the questionnaire. The motivation spent on answering is also likely to drop if the survey is not considered easy to use. This would affect negatively on the results and thereby lover the validity of the results gained.

Having the system on an electronic form enables fast data access. Data will automatically be in a measurable form. The possibility to make cross analysis and comparisons between different alternatives allows the company to gain data and have access to reliable information and knowledge to help decision making processes. The reporting becomes easier, faster and at the same time fewer resources are spent to the process itself. Considering the future of the system the electronic form allows relatively flexible and fast possibilities for alternations.

3.4 Software

Due to confidentiality this part of the thesis is removed from the public version.

4. DESCRIPTION OF THE SYSTEM, DESIGN

During the project there were two separate questionnaire forms designed. One for the customer service center and due to the different nature of the tasks carried out within the sales services another version was designed for this department. This part will explain more in detail the structure and nature of them. The pictures and models are added to visualize the structure and help to illustrate how the questionnaire is designed to work. The report in the section 4.1 is done according to instructions for Questionnaire documentation from the University of Tampere.

4.1 Questionnaire documentation

The questionnaire is designed in cooperation with Pohjola Vakuutus Ltd by utilizing and developing the previous questionnaires used by the company and revising the future needs and possibilities of this project.

All costs related to the execution of this project are covered by the company.

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The data will be collected on several periods of time in order to prevent the results from getting distorted based on a factors affecting to the customer behavior in certain periods of time. This will also provide a vast presentation of the population. The law of intertia of large numbers guarantees that minor variations within the data will not be causing distortion on the results (see chapter 3.2). Because the sample is drawn from customers calling the customers service location of the person calling does not favor certain persons and all callers can be considered having equal chances to get selected.  A more

detailed plan for the data collection schedules will be presented in chapter 5. (Kyselyaineiston dokumentointi ja raportointi, uta.fi)

## 4.2 Structure of the questionnaire

Choice 1
• User identification

Choice 2
• Two main categories devided in more detail to specify the product

Choice 3
• Five sub categories to identify the need

Choice 4
• Sub category of choice 3 to identify the preferred outcome, action wanted

Choice 5
• Four  categories to specify the outcome and actions taken
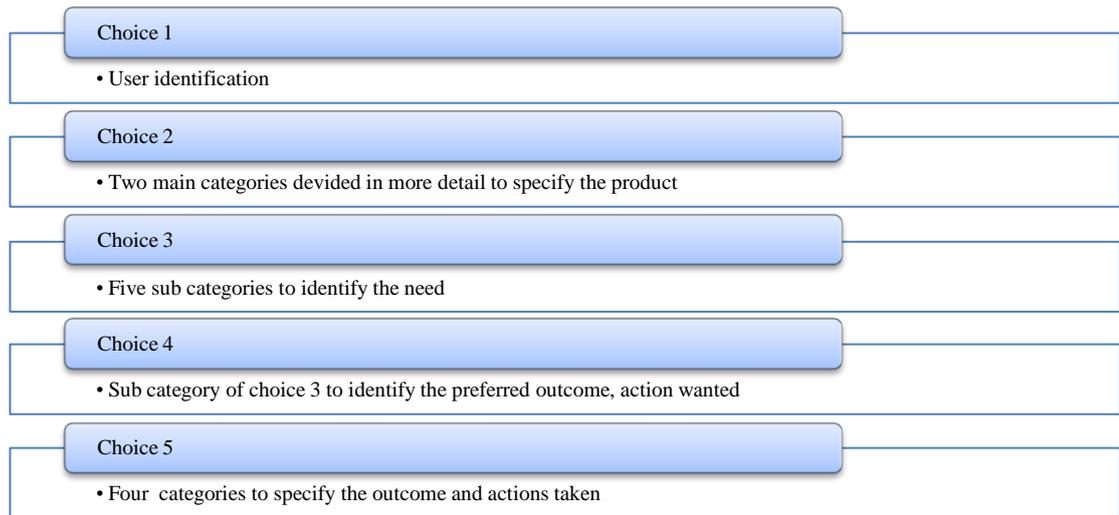
**Figure 4.2 1**

When designing the questionnaire it was important to prevent the structure from getting too heavy to use. The company wanted to achieve as detailed information as possible and my task was to try to find a balance between these two. To prevent the questionnaire of getting too heavy it is divided into five sections, each having its own concentration and function. This will shorten the time used on answering and help the responder to provide reliable data. Figure 4.2 1 illustrates the structure of the model. Following figures 4.2 2-9 throughout this chapter are there to visualize and clarify the structure of the questionnaire and its qualities more in depth.

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## 4.2.1 Choice 1, User identification

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### 4.2.2 Choice 2, Specifying the product

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### 4.2.3 Choice 3, Identifying the need

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### 4.2.4 Choice 4, Recognizing the preferred outcome and action wanted

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### 4.2.5 Choice 5, Specifying the outcome and reporting the actions taken

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### 4.3 Sales services questionnaire

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### 4.4 Considering the questionnaire

### 4.4.1 Concerns and possible threats

The main issue concerning the questionnaire is the possibility of the structure being too heavy to use by the customer service center.

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As the amount of different kinds of surveys and questionnaires has been rising the answering fatigue is likely to increase simultaneously. In this case the risk of fatigue caused by answering is important to be eliminated already in the beginning of the project. To avoid this answering should be made as easy as possible, attention to the language is important and a lot of emphasis is needed to be put on piloting the system before introducing it to the whole audience. (Vehkalahti, K. 48-49, 2008). This way the possible problems can be detected and corrected without creating any credibility issues among users.

Concerning this project in order to avoid misunderstandings the wording and the formation of the questionnaires are done following the same logic and terminology already existing in other tools within the company. It is seen that familiarity helps the responder to find and choose relevant alternatives. Another minor factor helping to decrease the answering fatigue is a personalization feature within the software used. The software enables personalization for the appearance of questionnaires that can be altered for example according to different periods of time or seasons.

If proven too complicated to use as a whole the sections of the survey can be utilized separately to gather information and data on a category level based on the company needs at a time. If leaned towards this option it needs to be noted that the opportunities of information gained would be decreased significantly from the original version.

4.4.2 Possibilities

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4.5 Between theory and practice

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## 5. IMPLEMENTATION PLAN

Implementation of this project will be done according to the principles of quality management theorist Walter Shewhart and his Plan, Do, Check, Act theory that was later popularized by W. Edwards Deming and for that reason is more commonly known also as Deming's circle. (Peterson 2004, 36)

The theory places itself into a constantly self developing state. The first phase 'Plan' needs answers to a questions "what do you do?" and "how do you do it?" The second phase 'Do' contains the execution of the plans and the third phase 'Check' encourages the executor to evaluate the plan and success of the execution. Did everything go as planned? Final the fourth part brings the constant development aspect into the theory by encouraging the project managers to revise the processes. What was done and think about the things that could be done even better? The fourth phase can be described with a word 'Act'. (Peterson 2004, 40-41). By following these steps the model will be automatically be implementing the idea of continuous development and learning emphasized by the quality and knowledge management theorists within the chapter 2.

The idea with this chapter is to elaborate the actions to be taken during the implementation. First we will take a look at different roles and responsibilities related to the project. Afterwards we will concentrate more on execution and actions to be taken during the launch and the final part of this chapter will concentrate on issues related to communication and scheduling of the project.

### 5.1 Roles and responsibilities, Plan

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### 5.2 Actualization, Do and Check

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### 5.2.1 Piloting

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### 5.2.2 Placing

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### 5.3 Project launch, Act

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### 5.3.1 Introduction

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### 5.3.2 Launch

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### 5.4 Schedule

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## 6. CONCLUSION

### 6.1 About the system

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### 6.2 About the theory

Quality, to add value, to create something that will exceed expectations and allow the experience of quality. How? The very essence of quality management is to be aware of current state of customers. How are they experiencing the service, what are their expectations and current views on the quality of the service? Is there something that could be improved? How can we deliver quality and answer to our customers needs in a way that would give even more value?

In order to be aware and really know we need to bring the phenomenon into a measurable state. Measuring is needed in order to understand what is really happening. To ensure understanding we need to make sure that all parties understand what is being done and more importantly why. This brings us to the concept of knowledge and the importance of effective knowledge management. With this project the concept of quality is concentrated behind the ideas of the designed system whereas theories presented about knowledge lean more towards the implementation of the work.

The concepts of quality and knowledge were originally brought to this study only on an ideological basis but after a deeper view of these concepts and studying the theories behind them quality and knowledge are now a crucial part of the future of this project and definitely need to be kept in mind when continuing with the development not only of this tool but for the development of the service as a whole.

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There are no shortcuts to quality. All aspects and variables affecting to quality need to be known and every requirement of quality management is needed to be fulfilled also on levels of knowledge management in order to ensure that all necessary information is available to those parties in need. By ensuring this we enable the creation of true quality and allow natural development.

The idea of the designed tool is to find out reasons why the customers are contacting the contact center. By designing a tool which will help to develop processes into a measurable state we on this part enable the creation of quality. By having access to information of customer needs the company has numerical data of the behavior that can be introduced, explained and understood in the same way by all parties. Having data in a numerical form we create knowledge that may already have existed in a tacit form but are now transforming it to explicit form in order to allow equal sharing of knowledge and more importantly equal understanding. By doing this we are able to maintain continual development and continue the positive continuum introduced in the PDCA theory.

6.3 About the project

Looking back at the project and realizing that it is almost done. I feel relieved to say I am happy with the end result even though the project took more time than first anticipated or planned.

The project started off really fast and the design phase was completed in a surprisingly short period of time already during the early stages of the process. Only modest changes have been done to the original design afterwards so the vision on that part has been clear from the start. The reporting period on its behalf took unfortunately more time than planned. This is why the project as a whole was delayed.

From project management point of view I can say I have learned a lot about the importance of good and detailed planning. No matter how big of a cliché it is I can honestly say that well planned is almost done is true. I think the biggest concerns and issues I had with this project were due to poor planning in some parts of the project. By having such a clear idea of the actual design of the model led to a situation where not enough

time was spent on designing the whole structure of the work. I was so eager to start the project and design the actual model that not much time was used on planning the project. This led to the point where I had trouble combining the theory and practice in a way that the true connections between theory and practice would show in the end report. The ideas were there but in case I would have taken more time in planning and asking myself how a lot of time could have been saved.

One thing I would have wanted to add to this project was the execution. In order to guarantee the functionality of the model and to make sure I deliver a working design to the customer company I would have wanted to execute it or at least been able to pilot it. This way I could have made sure that the processes and the design works and no major issues are left to tackle concerning the actual model.

All in all I can say that this project as a whole has been really interesting and rewarding. I have learned a lot and I am happy to the result already at this stage despite of the fact that at this stage I do not know if the tool is actually going to work for the purpose it was designed for. I hope the ideas and theories used within this project will be developed further and introduced to other areas of the company as well.

On my part this is the end of the project even though it is only the beginning of the process it will hopefully begin. I believe in the design itself and hope it will be of good use.

*"Knowing is not enough; we must apply. Willing is not enough; we must do"*
*-Goethe*

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APPENDICES

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APPENDICES