TAMPEREEN TEKNILLINEN YLIOPISTO

JUHO HAIKOLA

UTILIZING MARKET RESEARCH TO GAIN CUSTOMER INSIGHT AND BUILD UP A PRODUCT LINE

Master's Thesis

Prof. Mika Hannula and Jussi Myllärniemi has been appointed as the examiners at the Council Meeting of the Faculty of Business and Built Environment 3.6.2015.

TIIVISTELMÄ

TAMPEREEN TEKNILLINEN YLIOPISTO
Tietojohtamisen koulutusohjelma

HAIKOLA, JUHO: Markkinatutkimuksen hyödyntäminen asiakasymmärryksen luomisessa ja tuotelinjan määrittämisessä
Diplomityö, 97 sivua, 3 liitettä (3 sivua)
Marraskuu 2015
Pääaine: Tiedonhallinta
Tarkastaja: professori Mika Hannula
Ohjaaja: Jussi Myllärniemi
Avainsanat: Markkinatutkimus, asiakasymmärryksen luominen, informaatiolähde, tuotelinja, kevytnostimet, manuaalituote, käsiketjutalja, viputalja

Työn päätavoitteena oli rakentaa tarjooma manuaalituotteille (ketjutaljat, viputaljat) Suomen markkinoille. Kyseisiä tuotteita käytetään pääsääntöisesti ahtaissa ympäristöissä, paikoissa joissa ei ole sähköä saatavilla, erilaisissa asennuksissa tai huoltotoiminnoissa. Kohdeyrityksenä ja toimeksiantajana toimi nostureita ja nostolaitteita valmistava Konecranes.

Työ on jaettu kahteen osioon; teoreettiseen ja empiiriseen osuuteen. Teoreettisessa osiossa tarkasteltiin ensin tuotteisiin ja tuotteen hallintaan liittyvää teoriaa, asiakasymmärrystä ja asiakastarvetta, sekä asiakastarvetiedon lähteitä. Näiden jälkeen siirryttiin tarkastelemaan itse markkinatutkimusta ja markkinatutkimuskeinoja, joilla asiakasymmärrys ja asiakastarpeen määrittäminen kyetään saavuttamaan. Tutkimuksen päätavoite jaettiin alatavoitteiksi; luoda ymmärrys tuotelinjan ja tuotehallinnan käsitteisiin osana asiakastarvetta, jotka saavutettaisiin markkinatutkimuskeinoin.

Teoreettisen osuuden jälkeen tutkimuksessa siirryttiin empiiriseen osuuteen. Tutkimuksessa päämetodeina hyödynnettiin työpöytä tutkimusta (desk research), kvantitatiivista havainnointia (quantitative observation) ja syvähaastattelua (depth interview). Kvantitatiivisen havainnoinnin tuloksena kerätyn 846 (11 yritystä) tuotteen tietojen perusteella Konecranesia suositellaan rakentamaan tuotelinja joka koostuu viputaljoista; 250kg, 500kg, 750kg, 1500kg ja 300kg (kaikissa 3m ketju), ja ketjutaljoista; 500kg, 1000kg, 2000kg ja 2000kg (kaikissa 3m ketju). Syvä haastattelujen perusteella kerätyn tiedon perusteella sen sijaan saatiin selville, että ostaessaan kyseisiä tuotteita, asiakkaat eivät juurikaan etsi tietoa ja ostopäätökseen vaikuttaa eniten oston helppous, brändi ja tuotteen laatu. Toimenpidesuosituksena Konecranesia kehotetaan suuntaamaan myyntinsä ja markkinointinsa asentajien kautta suoraan asiakkaalle, jotta tuotteen ostaminen kyettäisiin tekemään heille mahdollisimman helpoksi.

ABSTRACT

TAMPERE UNIVERSITY OF TECHNOLOGY
Master’s Degree Program in Knowledge Management
HAIKOLA, JUHO: Utilizing market research to gain customer insight, and build up a product line
Master of Science Thesis, 97 pages, 3 appendices (3 pages)
November 2015
Major: Information and knowledge management
Examiners: Professor Mika Hannula, Lecturer Jussi Myllärniemi
Keywords: Market research, gaining customer insight, product line, business intelligence, customer intelligence, information source, hand chain block, lever puller, light lifting

The ultimate objective for the study was to build up a product line of manual products (hand chain blocks, lever pullers) for Finnish markets. These products are being used in narrow places, in places where there is no electricity available, and in applications such as installations, or maintenance. Commissioner of this study was an organization called Konecranes that manufactures and sells lifting equipment.

This study is divided into two parts: theoretical and empirical part. First, the theoretical part discusses the product and product line management in general, customer insight, and customer need information sources. After these, market research and various market research techniques are introduced to enable gaining customer insight as well as defining precise customer need. The ultimate objective of this study was divided into sub objectives; to understand principles of product line and product line management, customer need information, and various market research techniques.

The second part of this study is the empirical part. As research methods, desk research, quantitative observation, and depth interview are used. As a result of quantitative observation – information collected about 846 products (from 11 organizations) – the recommendation of this study is to build up a product line that consists of lever pullers; 250kg, 500kg, 750kg, 1500kg and 3,000kg (with 3m chain each), ja hand chain blocks; 500kg, 1,000kg, 2,000kg and 2,000kg (with 3m chain each). Based on the information collected by depth interviews on the other hand it was identified that when purchasing these products, organizations are mainly not acquiring any information, and the most affecting issue on the buying decision is the easiness of buying, brand, and the quality of the product. As an action recommendation, Konecranes is suggested to direct its marketing and selling straight to customers with the help of service technicians, so that purchasing the product would be as easy as possible.

FOREWORD

Writing this thesis has been very instructive for me in many ways. Mapping out the subject started at early spring but the final subject was decided in the early summer. When I started to write this thesis in the beginning of summer 2014, the subject was wide and it lacked limitations. Anyhow, the subject narrowed while writing, and both the focus and limitations become more and more alike those at this moment. The beginning of the writing process was surprisingly easy for me, but difficulties occurred when trying to find target organizations to perform interviews. Therefore I would like to thank the personnel of Konecranes for helping me to find my interviewees and target organizations.

I am very grateful for Konecranes for both giving me this opportunity to write my Master's Thesis for them as well as for their flexibility in the writing process and letting me modify the subject to my liking. This thesis was guided by Mika Hannula and Jussi Myllärniemi from Tampere University of Technology and Harri Pimiä from Konecranes. I am very grateful for all of them for their help and advice during the writing process.

This thesis is the resolution of my studies at Tampere University of Technology. The research process has taught me a lot both about myself as a researcher as well as about writing academic thesis. The knowledge gained while writing this study has taught me a lot and it will be very helpful for me in the future by giving me an ability to operate with even more challenging tasks and assignments.

Tampere, 19.11.2015

Juho Haikola

TABLE OF CONTENTS

TERMS AND DEFINITIONS

B2B	Business-to-Business; describes transactions between businesses
B2C	Business-to-Customer; describes transactions between organizations and individual customers
BI	Business Intelligence; a systematic process by which organizations acquire, analyze, and disseminate business information from both internal and external sources
Customer interface information source	Includes sources: sales force, customer service and service personnel, field service technicians, marketing personnel, product development, research & development, customer itself and its representatives
Customer Insight	Understanding customer (its behavior, needs, desires, and experiences) completely with the help of market and customer intelligence as well as customer relationship management.
Customer Intelligence	Exploiting raw customer data into strategic insight for serving customers in a best way and understanding buying behavior of customers.
Customer interface	Touch point where organization's internal personnel and customer or customer personnel are in communication or contact.
Customer demand	Need turns into demand when the customer wants a specific product and is able to pay that.
Customer need	Occurs when customer want a certain product.
Customer need assessment	Need assessment is a systematic process to define customer's needs.
Data	A set of values and variables that have yet no meaning. When data is processed and, thus, been given a meaning, it turns into information.

Data source	Source from where data or information is being acquired.
Depth interview	A qualitative interviewing method that is loosely structured. It gives freedom to interviewee to express himself or herself more freely.
Desk research	Research where data is being collected without fieldwork. Utilizes secondary data sources.
Hand chain block	Portable, hand operated manual chain hoist that lifts or lowers the load (by load chain) by pulling the hand chain,
Information	Data turns into information when it is processed, structured, organized, or presented in a given context.
Industrial customer	User of industrial products that buys goods or raw material for manufacturing.
Information source	Person, document, organizations, or anything that provides information for someone.
Knowledge	Knowledge is a higher state of information. It is a combination of information, experience, and insight of individual or organization. Information turns into knowledge when it is processed in light of prior knowledge.
Knowledge transfer	Sharing of knowledge between two or more people and utilizing that knowledge as a part of decision making process.
Lever puller	Portable, hand operated manual hoist that lifts or lowers the load (by load chain) by pulling the lever.
Manual product	Lifting products that need no electricity for lifting operation.
Market research	Set of techniques and principles for systematically collecting, recording, analyzing, and interpreting data to aid marketing decision makers.
Market research technique	Method by which information is being collected. Different techniques, such as interviews, focus groups, observation, questionnaire, and survey.
Offering	A total set of goods and services offered to a customer by a single company.

Quantitative observation	Technique to collect quantitative, measurable data. Can be either structured or unstructured.
Primary research	Research that exploits data from a primary source. Collected with the help of fieldwork.
Product	Anything that can be offered to satisfy a want or need, including physical goods, services, experiences, properties, information and ideas.
Product line	Set of single products and product variants that are produced by a single company and that are closely related to each other, either by being physically similar or by fulfilling same kinds of needs of customers.
Product Line management	Process of defining and maintaining product line. Ongoing process that includes activities, such as defining product offering, targeting product offerings, and developing the products.
Secondary research	Research that exploits information that is being collected from a secondary source.
Segmentation	A marketing strategy that divides a broad target market into subsets of customers, businesses, and geographical locations that have common needs.

1. Introduction

21-century organizations are competing in more and more complex business environments than before. Markets have become global and companies can sell their products almost anywhere in the world via the Internet. As almost anyone can enter a certain market, competition becomes harder. The ease of online buying is beneficial for the customer, as it is already present. For the organizations this brings new opportunities but, at the same time, it results in new kinds of problems, like how to compete in global markets where anyone can be a rival.

Which markets to choose and where to compete in a best way? Which products would sell best in particular markets? It is always essential to understand the markets and the customers (Hague et al. 2013; Koester 2010, p. 271; Mooi & Sarstedt 2011, p. 11; Malhotra & Birks 2003, p. 4). The customer plays, or at least should play, the key role when running a business. Hague (2006, p. 5) states that without knowing and understanding the customer organization will, in the long run, have no business at all. Therefore the importance of the customer cannot be overrated.

But how to understand the customer and its behavior? How to recognize which and what kind of customers are there in certain markets? All businesses need information to make better decisions (Hague 2006, p. 7). There is lots of information everywhere and the amount of information is increasing rapidly (Grönroos 2006, p. 122). Using that information successfully becomes increasingly important when competing in more and more competitive business environment. The effective usage of information will give an organization an advantage to be better than others. Organizations need knowledge about their products, customers, and markets. They should manage their product mixes and build up suitable product lines for specific market segments.

There are vast numbers of various sources of information. Information needs should be identified and acquiring of information should be planned and executed properly and systematically. Gathered information should then be turned into new knowledge for the help of making better decisions. When thinking of markets and customers, market research plays an essential role when trying to take advantage over competitors.

Hague (2006, p. 6) states that market research is “a systematic and objective collection and interpretation of data to help reduce risk in marketing decisions”. It is structured and purposeful (Hague 2006, p. 6) and it is essential at developing marketing strategies and evaluating the effectiveness of marketing plans (Parasuraman et al. 2004, p. 19). Therefore its role in decision making, business planning, and developing strategy is essential.

Knowing how customers are making their buying decisions and to which facts those decisions are based on will help the organization to compete more effectively in the markets. It is always essential to recognize the need of customers and make a plan about how to meet that need. Which products or services would fulfill the need and which features are bringing the added value to the customer? And most importantly, which way could the knowledge about fulfilling the customer's unmet needs be delivered to them?

Product management is essential when trying to meet customers continuously changing needs and it cannot be separated from market selection (Hutt & Speh 2007, p. 217). But by which products and features are the customer needs going to be fulfilled and to which way are those needs going to develop? Organizations need up-to-date information to keep up with those trends and product development should lead the way. Building up a comprehensive product line that takes customer needs into account is a means to answer to demand. It should be planned carefully and according to presumable demand. That demand is not always clear; therefore, a systematic market research will help an organization to make better decisions for the future and market strategy.

Different sources of information should be identified because it is vital to understand which sources are suitable for specific business needs. Information sources can be divided into internal and external. When thinking of customer related information, both internal and external sources should be exploited (Jussila et al. 2012, p. 6). Sales force, people working in customer interface, and the customer itself have valuable information about customers and markets.

1.1. Konecranes

Konecranes is a leader in global overhead crane industry with the largest service network and a complete range of lifting equipment (Konecranes 01.01.2015). Konecranes serves various industries from automotive and manufacturing to nuclear, shipyards and mining. Konecranes's equipment consists of overhead cranes, hoists, port cranes, shipyard cranes, workstation lifting products, et cetera. In lifting equipment for industrial purpose, Konecranes is the world's largest supplier.

Konecranes has an extensive and diverse global customer base in lifting businesses by having general manufacturing as their largest customer segment (Konecranes 02.01.2015). Konecranes can provide standard or tailored material handling solutions for various application fields and their global service network offers specialized maintenance and modernization for all types of industrial cranes and machine tool equipment.

One of the Konecranes' strategic priorities is commitment to excellent, proactive, and real-time service. Konecranes has over 600 service locations in 50 countries and it provides high-quality service 24/7 having the largest service network in the industry (Konecranes 15.01.2015). Konecranes service's objective is to improve safety and productivity of its customers around the globe by offering specialized maintenance services from single piece of equipment to entire maintenance operations. With the help of Konecranes' maintenance service, customers can maximize the productivity of uptime with the machine and, at the same time, minimize the cost of downtime. One of the Konecranes' newest innovation is TRUCONNECT that enables monitoring machines in real- time as well as optimizing maintenance activities.

DC (distribution center) Nordic is an important part of Konecranes' service operation and it provides spare parts for lifting equipment and machine tools for all brands. Customer service representatives serve their customers 24/7 and most parts inquiries are being responded within 24 hours. Spare parts are being delivered directly from the warehouse if available or sourcing experts purchase items from the supplier and send them forward to the customer. DC Nordic has a warehouse located in Finland and it serves customers all over the world.

One of Konecranes product mix's product lines are hoists. Hoists are industrial lifting devices that use either wire rope, chain, or belt to lift and move a load. They are attached to cranes or other lifting equipment and they are supplied globally. Konecranes has a large range of hoists, including electric hoists and manual hoists, and hoists for hazardous environment.

The lifting capacities of Konecranes' hoists vary from 60 kg to 80 tons (Konecranes 20.1.2015). One of the Konecranes' light lifting's product groups are manual products. Manual products are economical solution with wide load ranges and various features to enhance working ergonomics (Konecranes 16.1.2015). Manual products are designed mainly for use in places where there is no electricity available or its use is impractical. They offer cost-effective solution for casual use, for example for maintenance- or service use.

Manual products include products such as manual chain hoists, manual trolleys and manual lever pullers. They are designed to lift load with a range from 250kg to 20 tons so they are covering diverse lifting needs. The design is compact and, thus, weight reduced, which makes them easy and safe to handle. Steel chains are galvanized for corrosion resistance and brake is enclosed to protect against dirt. Inspection and cleaning is simple because of open chain path.

1.2. Case Konecranes – Manual products

Konecranes and DC serve both Konecranes and numerous other companies in need for spare parts. The case behind the study is DC Nordic's will to strengthen its Spare part service in Finland by taking manual products (Picture 1.1) into offering. Konecranes has been stronger in manual products in certain markets, such as Germany and France, but in Finland these products have not been sold much thus far. This is because customers and salesmen in Finland do not know that Konecranes is offering manual products and the product line has not been managed and marketed properly.

Picture 1.1. Hand Chain Block (KM2), Hand Lever Puller (KL), and Manual Trolley (KPT)

The idea is to use DC's network not only for spare parts, but for different kinds of logistical distribution needs as well. DC Nordic has a warehouse in Finland and that will be exploited in distribution of manual products for the Finnish market. The aim is to build up a suitable product line of manual products that will fulfill the needs of customers. To reach these objectives, it must be examined what kinds of products are used in factories and, furthermore, what kinds of products there would be demand for.

Konecranes has a full line of manual products that consist of three kinds of products:

- Hand chain block
- Lever puller
- Manual trolley – push or chain

Typically manual products are used in places where there is no electricity available, need for lifting occurs infrequently, and narrow places where electrical chain hoist is not practical. Typical applications where manual products are used on the other hand are; maintenance, repair, or service.

Manual products are also very cost effective solutions. 1000kg hand chain block for example costs around 150 euros, where as the price for normal chain hoist with the same lifting capacity costs approximately 10 times more. Therefore, when using a hoist occasionally, manual products are an excellent choice for fulfilling lifting needs.

Konecranes offers manual products for various lifting needs. They offer manual products with lifting capacity from 250kg to 20,000kg and height from 1m normally to 6m, but even higher if necessary. Both the hand chain block and the lever puller have different variations for different kinds of lifting needs and environments. Konecranes also has a so-called premium product line that derived from the co-operation with Kito. This Kito line includes both hand chain blocks and lever pullers but no trolleys. The table below presents the variations of manual products that Konecranes offers.

Table 1.1. Konecranes' total manual product line.

Product	Brand	Specification	Min kg	Max kg
Hand chain block	Konecranes	KM2	250	5000
Hand chain block	Konecranes	KM2i	250	6000
Hand chain block	Konecranes	KMP	500	20000
Hand chain block	Kito	xKM2s	250	
Hand chain block	Kito	xKM2	500	5000
Lever Puller	Konecranes	KL	250	3000
Lever Puller	Konecranes	KLP	750	6000
Lever Puller	Kito	xKL	800	3200
Push Trolley+hand chain block	Konecranes	KM2-LH	500	5000
Push Trolley+hand chain block	Konecranes	KMP-LH	500	5000
Travel trolley+hand chain block	Konecranes	KM2-LH	500	20000
Travel trolley+hand chain block	Konecranes	KMP-LH	500	20000
Push trolley	Konecranes	KPT	250	10000
Travel trolley	Konecranes	KPTC	250	20000

KM2 and KL are the normal versions of manual products and they can be bought with lifting capacity from 250kg to 5,000kg and from 250kg to 3,000kg. xKM2 on the other hand is a hand chain block of Kito's premium line.

1.3. Research problem

Konecranes has already both a ready product line of manual products and an existing customer base in Finnish markets. That means that they are bringing old product to old markets. On the other hand, from the product perspective, the matter is bringing old products to new markets the customers of which they already know. Otherwise, when taking a market perspective, there is an old market but a new product. As a result, there will be a situation where both the product and markets are familiar, and, thus, the need for these specific products in these specific markets has to be explored.

The research problem is to gain customer insight and insight into the customer's needs for manual products. The main research question is:

- How to utilize market research to gain customer insight and build up a product line of manual products?

There is lot of customer and market related information all around. The problem is to identify information needs that would help both to build up a suitable product line for these specific markets and gain customer insight. Right information sources should be identified and acquiring of relevant information from these sources should be executed properly. Also, the right methods and techniques have to be chosen for collecting that information effectively and efficiently.

In order to answer to the main problem, it must be divided into smaller parts by putting up a set of sub problems as follows:

- What is a product line and what information will be needed to build that up?
- What is customer insight and how to gain it?
- How to utilize market research to gain customer insight?

The first two of these sub problems will be answered in the theoretical part of this study. The latest one, on the other hand, will be answered in the empirical part of this study.

1.4. Objectives of the case and limitations

The ultimate objective of the research is to build up a product line of manual products and understand the buying process of customer. For meeting that objective, customer insight must be gained, as well as understanding customer's needs and buying behavior. To be able to do that, the most important information sources must be recognized. Therefore, the right methods and techniques for collecting and analyzing the information must be determined. Concrete objectives of the study are:

- Building up a suitable product line of manual products for Finnish markets
  - Clarifying product line, product planning and product line management
  - Clarifying customer need information and exploiting possibilities of that in defining the product line
  - Clarifying the key issues that have an effect on the needs of customers for manual products
- Gaining customer insight, understanding customer needs and buying processes
  - Clarifying the information that will be needed to gain customer insight

  - Clarifying the most important sources of customer related information
- Choosing the right market research techniques to collect information

To achieve these goals, the intention of this study is to carry out a market research that exploits both the knowledge of Konecranes' own personnel, especially field service technicians' and product experts, as well as the knowledge held by customers. The intention is also to take a stance on the issues that have an effect on customer needs and their decisions to perform a purchase. The most important result of the study will be a product line that consists of the most demanded products in this particular market as well as defining the buying process of customer with these products.

Even though product features are an important part when exploring the demand, technical product details are excluded of this study. This is because more detailed technical view into products is not especially relevant when trying to determine customer demand with these products.

The order information and logistic processes in the warehouse, sales and purchasing are related to the objectives, but are also excluded of this study. Only the necessary main issues of those subjects are introduced so that the reader is able to understand the analysis and results of the study.

1.5. Research methods and strategy

According to McGivern (2013, p. 81), Malhotra & Birks (2003, p. 62) and Parasuraman (2004, p. 44), research methods can be divided into exploratory, descriptive and explanatory (or causal). Exploratory research helps the researcher to become familiar with a topic or the issue around the problem (Parasuraman et al. 2004, p. 44) and it helps to formulate the problem more exactly (Mooi & Sarstedt 2011, p. 13). It is used when trying to unpack issues, looking for insight into unfamiliar topic, clarifying the problem, or developing propositions and hypotheses for further research.

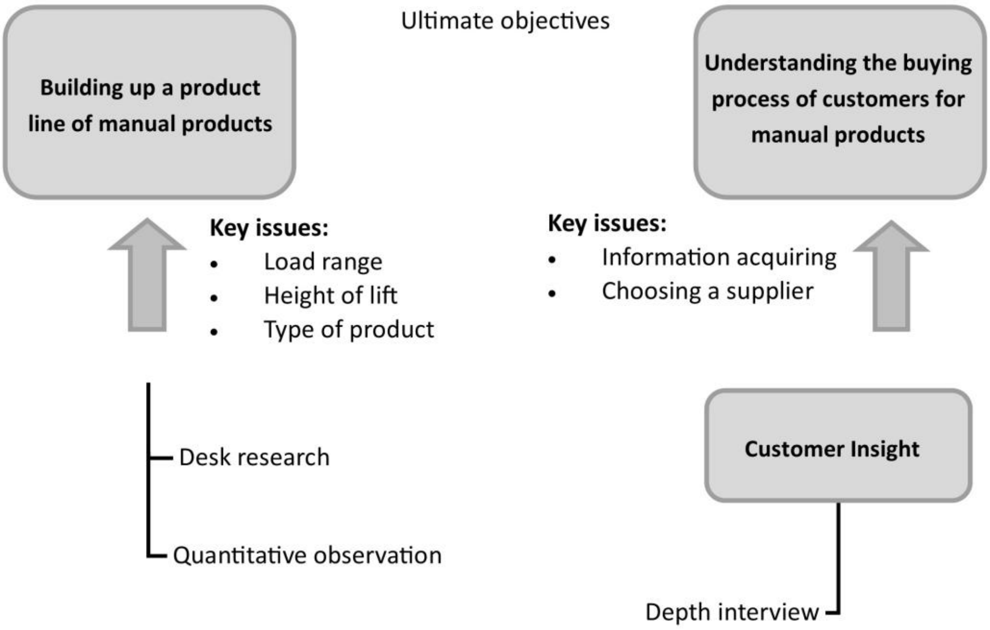
Descriptive research is used when trying to answer to the following questions: Who? What? Where? When? How? How many? It is used when collecting data to describe people, things, places, events, experiences, and situations or for measuring performance (Mooi & Sarstedt 2011, p. 16). The difference between exploratory and descriptive research is that when using descriptive techniques, the researcher must have more clearly defined research questions and objectives than when using exploratory techniques (McGivern 2013, p. 83).

Explanatory research, on the other hand, goes deeper into the topic. It can reveal issues and patterns behind the data. It is meant to explain things and develop causal explanations (McGivern 2013, p. 83). Therefore, it is very useful when trying to find initial reason or issue that drives people to behave like they do. Explanatory research can reveal issues for example why customers prefer a certain product to others. When using the explanatory research method, research must be designed and structured in a way that it determines what kind of relationships there are between variables. It also reveals how one variable affects another variable (Mooi & Sarstedt 2011, p. 16). Researcher must be aware of variables that are involved in the study and he or she must have an idea of what kind of correlation there is between variables so that it is possible to collect data about meaningful issues that are relevant to the study (McGivern 2013, p. 83).

Research projects usually do not fall into just one of these categories (Malhotra & Birks 2003, p. 70). According to McGivern (2013, p. 84), research projects are usually two- or three-fold; to explore and describe; explore, describe and explain, or describe and explain. This research about customer buying behavior is also two-fold: explore and describe. This study aims to gain insight into customer's buying processes according to these products, and further to describe the issues behind the buying decision that have an effect on choosing the product.

Research methods can also be divided into quantitative and qualitative methods (Parasuraman et al. 2004, p. 195; Hague et al. 2013). Qualitative research is usually less structured than quantitative method and its aim is to gain insight and understanding. Parasuraman et al. (2004, p. 195) state that any research using non-structured questioning or observation techniques can be labeled as qualitative research. Exploratory, descriptive, and explanatory methods are therefore qualitative in their nature. Quantitative research on the other hand is meant to measure and quantify issues. Quantitative data is usually being collected by surveys and questionnaires while qualitative data is being collected by depth interviews and focus groups. According to Malhotra & Birks (2003, p. 244), observation can be labeled also as quantitative method (quantitative observation), it is used in descriptive research, and it can be either structured or unstructured.

In this study, desk research, depth interviews, and quantitative observation will be exploited for collecting data. Quantitative observation will be conducted as an audit method, where physical records of the products that are being used in factories will be measured. This includes the load range of product, lifting height and type of product. Depth interview will be used as a qualitative method. Depth interviews will be conducted by interviewing individuals in target organizations for clarifying their buying process according to manual products. Desk research on the other hand will be exploited in the beginning of the study - for becoming more familiar with the topic - as well as in the end when confirming the results of quantitative observation.

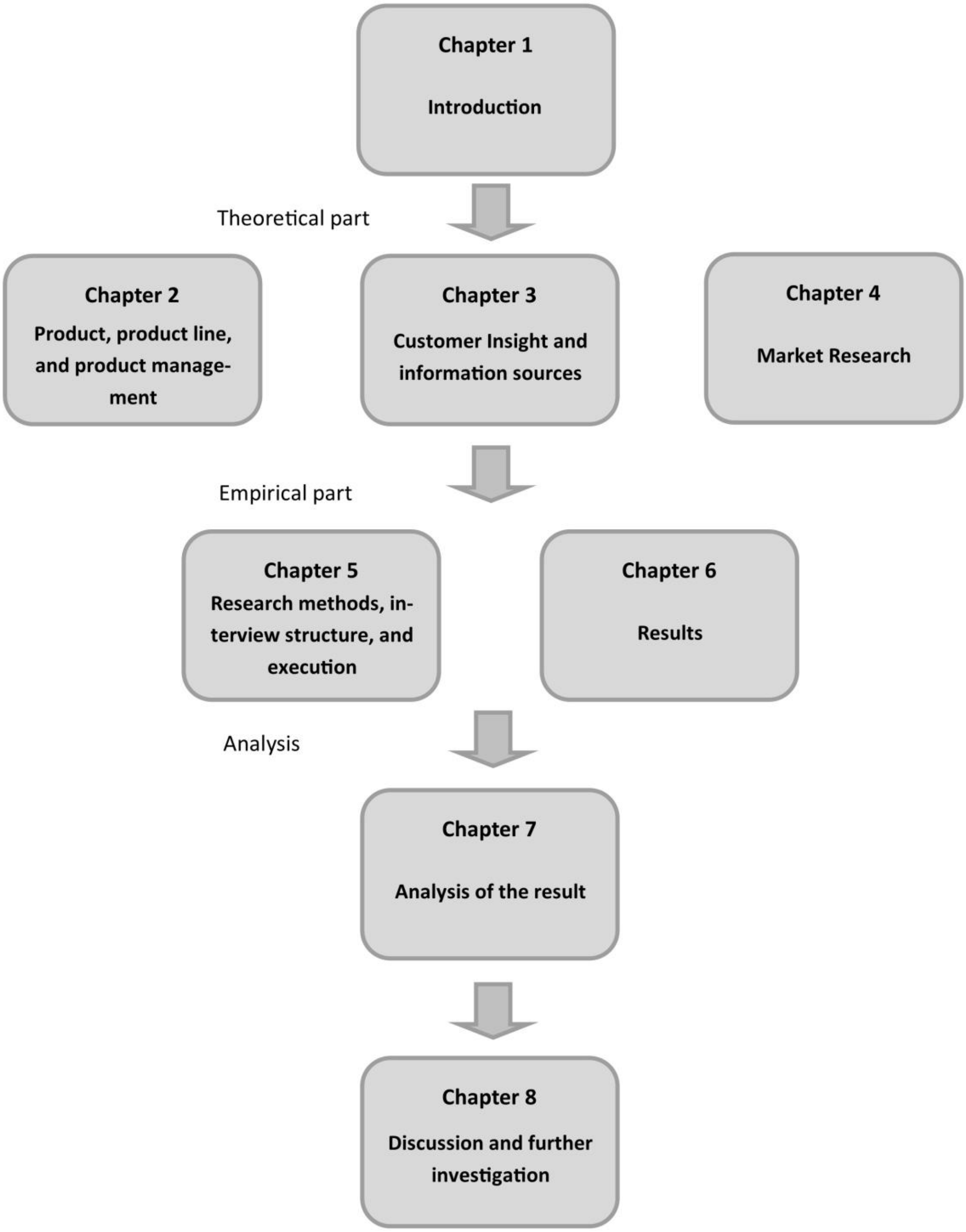


Picture 1.2. Strategy for reaching objectives

Picture 1.2 shows that the objectives of the study are also two-fold. The main research method for gaining customer insight and to understand the buying process of customer for manual products will be depth interview. The key issues when considering the buying process are: where and how customers are acquiring information about the purchased manual products and how they choose the supplier for purchased product. Main research methods for being able to build up a product line are quantitative observation and desk research. Key issues when examining products are; load range of product, height of lift, and type of product.

1.6. Structure of the study

This study will be divided into two parts: theoretical and empirical. At first, theoretical views to topics will be introduced, including product and product line management, customer insight, and customer need information sources, as well as market research. Secondly, conducting of the study and used research methods will be presented. Later part includes also presenting findings and analysis of the results. Next picture (Picture 1.3) shows the structure of the study.



Picture 1.3. Structure of the study

Chapter 1: In this chapter, the reader is introduced to the topic and Konecranes' case of manual products that is behind the study. After that problems and objectives of the study are defined.

Chapter 2: In this chapter the concept of product and product line is introduced. Product planning, product mix, and product line management as well as the relationship between those and customer need are discussed.

Chapter 3: In this chapter customer insight and its building blocks are presented. Market intelligence, customer intelligence and customer relationship management are clarified as part of gaining customer insight. After that, the most important sources of customer need information are introduced.

Chapter 4: In this chapter a better view for market research in general, the process of market research, and different market research techniques are given. The focus will be kept in those specific methods and techniques that would be helpful with the purpose of this specific research.

Chapter 5: In this chapter empirical part of the study, such as conducting research, used methods, and execution of the research, is described. The structure of the interview, as well as target organizations and interviewees are presented.

Chapter 6: In this chapter the most important findings of the study - both quantitative observation and depth interview - are presented.

Chapter 7: In this chapter analyzing and evaluating the results are performed. Suggestions to the target organizations according to results are presented, and buying processes of customers explained.

Chapter 8: In this chapter used methods are evaluated, and final recommendations to the target organization given. Successfulness of the study is evaluated, and further investigations discussed.

2. Product, demand and Product portfolio

In this chapter terms product and product line are defined. Need and demand, as well as customer's buying behavior are discussed. Particular interest is kept in buying behavior of industrial customer. This chapter also includes explanation about why product planning and product line management are important elements in shaping offerings for certain market segments.

2.1. Product

"Product is anything that can be offered to a market to satisfy a want or need, including physical goods, services, experiences, events, persons, places, properties, organizations, information, and ideas" (Kotler & Keller 2012, p. 247). It is something that individuals or organizations are willing to exchange money in order to acquire it (Brassington & Pettitt 2007, p. 179) and it also plays an important role in company strategy (Malaval et al. 2014, p. 171). Therefore, a product can be almost anything that is sold to a customer and its role in profiting revenues for the company is essential. For meeting its business objectives, product definition should be done with consideration of all the stakeholders relevant to the product (Hofer et al. 2007, p. 98); however, the customer should always be at the core when defining the product (Hague et al. 2013).

When defining product and offering, the marketer needs to understand five product levels. Each level adds more to customer value. These five levels of customer-value hierarchy are (Kotler & Keller 2012, p. 248):

- Core benefit: the benefit that the customer is really buying. The purchaser of a crane is buying an ability to move a load and the purchaser of drill is buying holes.
- Basic product: at this level the benefit has to be turned into a basic product like an actual crane, hoist, or drill.
- Expected product: a set of attributes and conditions that buyers normally expect when they purchase the product. Buyer of a hoist will expect at least a certain lifting height and lifting load capability, as well as the pendant, chain and hoist itself.
- Augmented product: at this level, the marketer prepares an augmented product that exceeds customer expectations. This can mean superior quality or some other added attributes that customers do not necessarily expect.
- Potential product: this phase includes all the possible augmentations and transformations that product or offering might undergo in the future. Organization tries to

find new ways to satisfy customer needs and differentiate their product from that of the competitor's.

It is essential that an organization is able to distinguish their offering so that they can differentiate themselves from the competitors and their products. Differentiation is possible by features, form, customization, durability, reliability, style, and performance quality (Kotler & Keller 2012, p. 350).

Product is a varied thing and it can be broken down into bundles of benefits that mean different things to different buyers (Brassington & Pettitt 2007, p. 179). Therefore, it is vital to recognize and understand those features that bring added value to the customer. Products can be classified into three groups (Brassington & Pettitt 2007, p. 181; Kotler & Keller 2012, p. 349):

- Durable products: long lasting products that are relatively expensive and purchased infrequently
- Non-durable products: can be used just once or few times, relatively low priced and frequently purchased
- Service products: intangible, non-physical products that comprise activities, benefits or satisfaction to the customer

When selling to business organizations, classification of goods and services is a little bit different. Organizations buy raw materials, manufactured components, plant and equipment, business services, and supplies (Kotler & Keller 2012 p. 205). Industrial products are usually more complex and development time takes much longer than with consumer products (Griffin 1997). According to Hutt & Speh (2007, p. 21), goods and services in B2B markets can be classified to:

- Entering goods: raw materials (iron ore, wheat), manufactured materials & parts (components like steel, microchips, et cetera)
- Foundation goods: installations (buildings, computers, elevators), accessory equipment (lift trucks, desks, et cetera)
- Facilitating goods: supplies (lubricants, paint, screws, et cetera), business services (maintenance & repair, business advisory services)

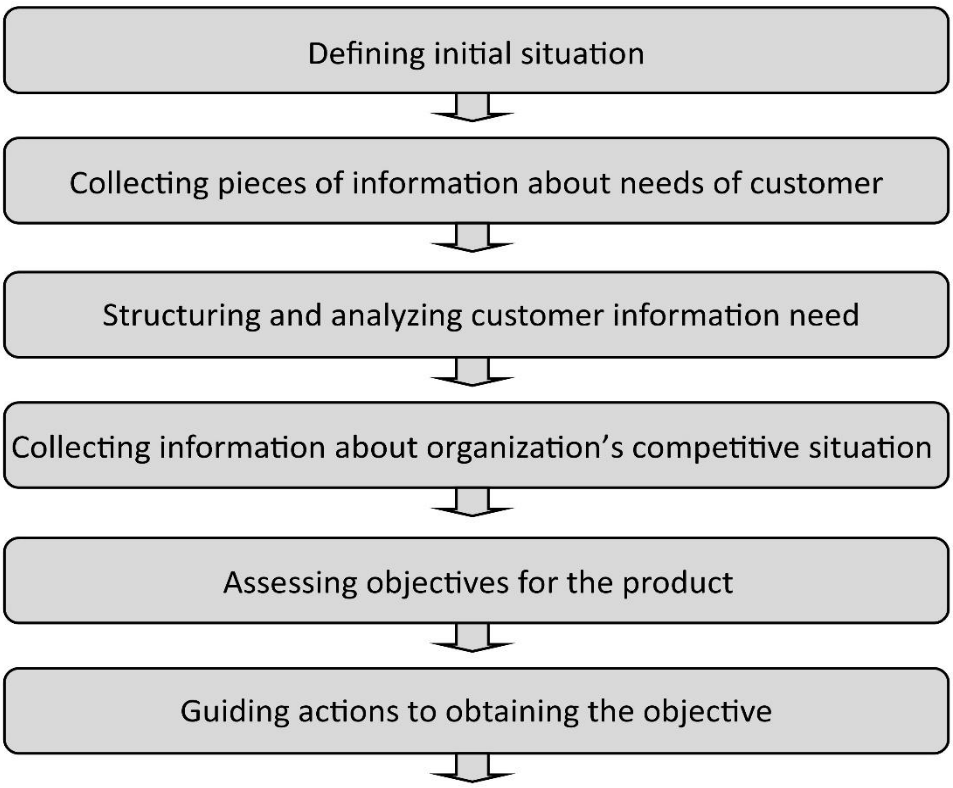
The main difference between classification of products in B2B and B2C is that, in B2C, customers are individuals that buy products usually for their own use. Otherwise when thinking B2B, organizations as buyers acquire goods and services for producing other products or services that are sold or supplied to others (Kotler & Keller 2012, p. 205).

2.2. Need & demand

Customers buy products to satisfy their physical and social needs. The purpose of a product is to bring added value to the customer and to satisfy either one or both of these needs. Kotler & Keller (2012, p. 32) specify that needs turns into demands when an individual wants a specific product and is able to pay it. For selling products, the objective is to get people to want a certain product they can also afford.

When mapping out the need of an industrial customer, one must understand the differences between industrial and consumer customers. Need assessment with industrial customers differs from the need assessment of consumer (Kärkkäinen et al. 2001, p. 166). Suitable methods for collecting information about the need of customer should therefore be different as well. Tools that promote co-operation between company and customer should be used, and customer's experts should be involved in the process of defining customer needs. Clarifying future needs should also be considered when assessing needs of the customer.

Kärkkäinen et al. (2000, p. 16) state that for clarifying the customer need assessment as an entity, it is best represented as a process:



Picture 2.1. Customer need assessment process (According to Kärkkäinen et al. 2000, p. 17)

Even though the process has been developed mainly for the use of product development, it can be used also in cases when product offerings have to be shaped for certain target markets according to customer needs. Kärkkäinen et al. (2000, p. 16) state that all the steps do not necessarily have to be executed every time and, in the case of choosing right products into a certain product line, the focus will be a bit different than in product development. The main idea of the process model is to guide information collecting about customer needs as a systematic and planned activity (Kärkkäinen et al. 2000, p. 18).

The first step in the process is defining the initial situation. When defining the initial situation, the following issues have to be defined: “Who are the customers?”, “Who are the competitors?”, “What are our competitive leverages?”, “What do we already know about customer needs and competitors, and, moreover, what should we know more?”, “What tools and methods are to be used to collect information needed?”. At first, it is important to acquire information within the organization because there is probably great amount of existing information inside the organization. (Kärkkäinen et al. 2000, pp. 17-18.)

When information has been acquired, it has to be structured and analyzed. The main idea is to recognize the most valuable and meaningful information from the mass of information (Kärkkäinen et al. 2000, p. 19). In the case of choosing right products from the product mix into a certain product line, the analysis of information is less complex because more specific and detailed questions can be asked in comparison to objectives of product development.

Next step in the process is to acquire information about the competitive environment and customers. When developing an offer, it is important to become familiar with the competitor’s offerings and understand both the differences and similarities between the offerings of competitors and target organizations. It is good to acquire information about the competitive environment at the same time with customer need assessment, because according to Kärkkäinen et al. (2000, p. 19) the customer is the best expert when making sense about the competitive environment. The main idea in this step is to identify the issues that bring an ability to overcome competitors by gaining competitive advantage, and which customer can be served in a way that their loyalty will be obtained.

The next step after understanding the competitive environment is assessing objectives for the product. In this step, the customer need has to be explored properly so that product features will support the need of the customer and competitive environment has to be considered (Kärkkäinen et al. 2000, p. 20). The last step in the process is guiding actions to obtain objectives. This step involves motivating the employees, prerequisite for operation, exploiting results in marketing, and reporting of the results.

2.3. Buying behavior

For understanding buying behavior it is essential to be able to identify profitable market segments and locate buying influences within these segments, and reach buyers efficiently and effectively with an offering that meet their needs (Hutt & Speh 2007, p. 62). The buying process is a complex issue, especially in B2B markets (Kärkkäinen et al. 2011, p. 3), and one must understand all the influencing issues connected to buying behavior. The buying decision is being made on the basis of the opinions of purchasers, users, managers and sourcing et cetera. There can also be rules and recommendations to buy from trusted and favoured suppliers (Brassington & Pettitt 2007, p. 98). In B2B markets there are also fewer customers and the people making the purchases are professional buyers. They are making the buying decisions based on physical performance and personal selling rather than just on psychological attributes and advertising (Kärkkäinen et al. 2011, p. 3). Therefore, the actual design and quality of the product, as well as relationship between sales person and customer are playing a much more important role in B2B than in B2C selling.

Organizational buying is not an isolated act or event, it is a process that consist of different stages (Hutt & Speh 2007, p. 63). It includes problem recognition and description of need, supplier search, analysis and selection, and performance preview (Hutt & Speh 2007, p. 63). The total buying experience of the customer is essential for organizations that sell products to customers so that customers can be served in best way (Best 2012, p. 140).

Industrial customers have many characteristics that differ a lot from consumer (Kärkkäinen et al. 2001, p. 165). Industrial customers acquire goods and services for production of other products or services that are being sold, rented or supplied further to other customers (Kotler 1991.). In industrial markets, there are usually fewer customer and larger buyers than in consumer markets, more complex buying decision, professional buyers, and closer supplier-customer relationship (Kotler & Keller 2012, pp. 206-207). Therefore it is important to understand differences between consumer and industrial customers when selling products.

Kotler & Keller (2012, pp. 207-208) divide buying situations in industrial markets to three categories:

- Straight rebuy: Customer reorders products on routine basis from suppliers on an approved list.
- Modified rebuy: Buyer wants to change product specifications, prices, delivery requirements, or other terms. This requires more participation from both sides.
- New task: Customer buys a product or service for the first time. Requires more participation from both sides and greater gathering of their information.

Kotler & Keller (2012, p. 210) divide the participants in the buying process as follows:

1. Initiators: Users or some others that recognized something to be purchased
2. Users: Those who will use the product or service.
3. Influencers: Technical or some other personnel who help to determine the specifications and features of purchased product.
4. Deciders: People who decide product requirements or suppliers.
5. Approvers: People who authorize the buying.
6. Buyers: Persons who have authority to make a purchase. Major role in selecting vendors and negotiating.
7. Gatekeepers: Personnel who have the power to prevent the purchase. People for example purchasing agents, receptionist or telephone operator.

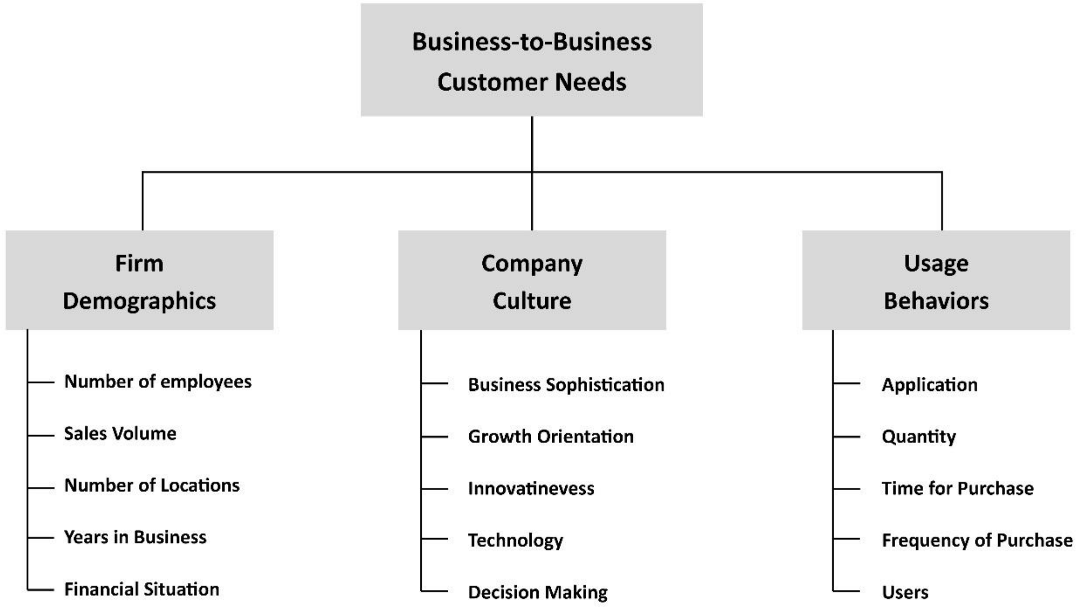
How many participants are included in the situation depends on the purchased product and buying situation. If it is a case of a rebuy, there might be just a user and a buyer included but if it is the case of a big investment, there might be all the various participants included. One person can also have multiple roles in the buying process. The same person can be for example initiator, user, decider and buyer.

2.4. Segmentation

“A market segment consists of a group of customers who share similar needs and wants” (Kotler & Keller 2012, p. 236). The first step in successful market segmentation is understanding customer need. Understanding that different customers have different needs helps an organization to divide a market into needs-based market segments (Best 2012, p. 183). When different market segments have been defined, organization must choose its target markets and build up a suitable offering for each market segment (Kotler & Keller 2012, p. 32).

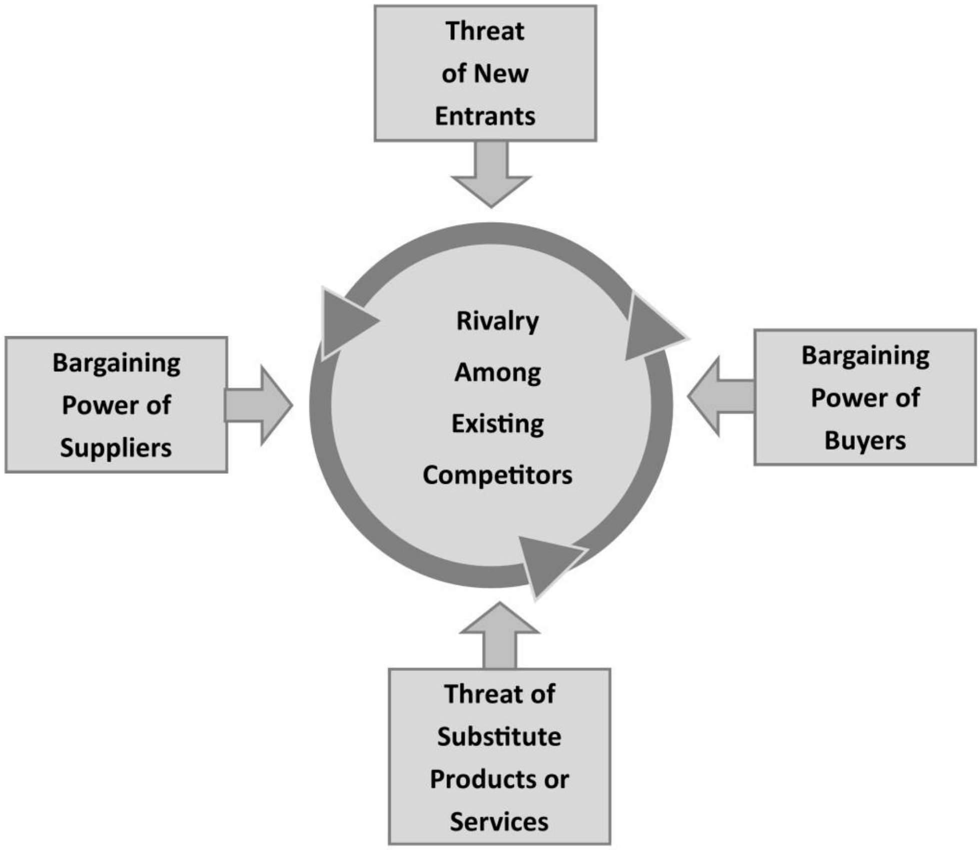
Customers are looking for solutions for their problems so the idea is to identify and understand those needs that drive product or service decisions. While customers are looking for solutions for their problems, they are comparing product performance and price they have to pay for the product (Best 2012, p. 182). Some customers might want the cheapest possible product with the lowest performance where as some customers might be willing to pay anything to get the best product with the best performance. Therefore, it is important to understand the characteristics of a specific market segment and its customer so that the organization is able to build up the most effective and profitable offering for that specific market segment. Kotler & Keller (2012, p. 253) state (according to Anderson & Narus 2006) that organizations should build up flexible market offerings to all members of a segment. This consists of the core product or service that all the members in the segment value as well as discretionary options that only some members in the segment value.

Markets can be divided into consumer and industrial markets. They both have influencing factors that have an effect on their needs but the influencing factors differ from each other in these different markets. Best (2012, p. 185) presents the influencing factors on customer needs in business-to-business markets as follows:



Picture 2.2. Influencing factors on customer needs in business-to-business markets (According to Best 2012, p. 185)

The main divisions of these affecting issues are: firm demographics, company culture, and usage behavior. These categories are again divided into sub factors. When targeting Business-to-Business markets, an organization should know which types of companies to focus on with their offering and who to contact in the buying organization (Kotler & Keller 2012, p. 212). It is important to deliver the information about the product; how it is better and different from other competing products. Porter (2008, p. 27) presents five forces that determine if the specific market is attractive in the long run:



Picture 2.3. The Five Forces That Shape Industry Competition (According to Porter 2008, p. 27)

These forces should be considered when launching new products for new markets. Porter states that a new market is unattractive if there already exist lot of competitive companies. Attractiveness of the market declines also if there is a threat for new companies to enter into that same market or if there is substitute products or services in the market already. Bargaining power of buyers and suppliers also affect downwards on the attractiveness of the market. When evaluating the attractiveness it is still always the matter of two different factors; overall attractiveness of the market and objectives and resources of the company (Kotler & Keller 2012, p. 254).

2.5. Product planning

Whether the customer is an individual or an organization, product planning and control should be done carefully. Otherwise there will be products that are inconsistent with market needs and products that add little to existing product lines (Hutt & Speh 2007, p. 217). Organizations need to maintain competitive advantage through innovation and serving customers' changing needs and wants better (Brassington & Pettitt 2007, p. 191). For meeting those changing needs the organizations must vary and develop their products.

Different customers have different kind of needs so organizations must build up a plan of which needs to meet by which products.

Differentiation of products is a part of the design process with products and services. Design used to be thought just as a shape and color of product but nowadays it is recognized as whole process of producing products to meet customer needs (Brassington & Pettitt 2007, p. 192). Design is the totality of different features that has an effect on how a product looks, feels, and functions to the customer (Kotler & Keller 2012, p. 354). Therefore designing of the product must take into consideration all the issues related to the product, including managing comprehensively the totality of products: product mix, product lines, and product portfolios.

2.5.1. Product mix

A product mix is a set of all products that a certain organization is selling (Brassington & Pettitt 2007, p. 358). Product mix consist of organization's different product lines that each consist of products that are closely related to each other. Product mix has four characteristics:

- The width: the number of different product lines
- The length: the total number of different products
- The depth: the number of variants in different product lines
- The consistency: describes how closely related different product lines are to each other

A product line brings opportunities to an organization (Best 2012, p. 279) and product line strategy defines specific products (McGrath 2001, p. 91). If a product line is broad it creates more selling opportunities for selling force (Best 2012, p. 279). Otherwise, a narrow product line requires more focusing in cost effectiveness and marketing.

2.5.2. Product Line Management

The process of defining and maintaining product line is called product line management (McGrath 2001, p. 104). It is on-going process and it includes the following activities (McGrath 2001, pp. 104-108):

- Defining product offerings from the product mix
- Targeting specific product offerings to specific market segments
- Phasing the sequence of development

An organization must possess knowledge and know-how of technology and its core competence for producing new and innovative products. New product development plays an essential role in creating and maintaining competitive advantage through innovation and better serving customer’s changing needs and wants (Brassington & Pettitt 2007, p. 191). “Product management is directly linked to market analysis and market selection” (Hutt & Speh 2007, p. 217). Product management is therefore essential for meeting specific needs in a chosen market segment.

2.5.3. Product line

Product portfolio is often used as a synonym for product mix. It is also often used as a synonym for product line. In this study, when discussing about product portfolio, it is used as a synonym for product line. This is because of two reasons; in these specific cited references, product portfolio is being used as synonym for the term product line and the issues that come up with the product portfolio are more descriptive of a product line than a product mix.

“Product portfolios consist of a unified basic product platform and products modules, which are tailored to fit the needs of specific market segments” (Hofer et al. 2007, p. 99). Product portfolio’s objectives and requirements are defined in the product vision document and managing product portfolios is essential to meet continuously changing needs of customers. Product portfolio decisions are made based on uncertain and changing information, among dynamic opportunities, with multiple goals and strategic considerations, and considering opinions of multiple decision-makers (Cooper et al. 1999, p. 335). Product portfolios consist of single products and product variants. When choosing products into a certain portfolio customer needs should always be considered (Hofer et al. 2007, p. 99). Managing portfolio is essential at being in phase with the market (Malaval et al. 2014, p. 171).

Product lines normally have a product line manager who builds, maintains, and develops that specific product line (Malaval et al. 2014, p. 171). Product line manager must also know sales and profits provided by different products so that he or she can expand or reduce the line if necessary. It is essential that the product manager reviews the position of the line against that of the competitors so that the comparison of prices, quality, sales, and product differences is possible.

Product line length tells how many different products there is in that specific product line. Organizations that seek high market share and market growth are normally carrying longer product lines whereas organizations seeking high profitability with carefully chosen items normally have shorter product lines (Kotler & Keller 2012, p. 361). Product lines can also be stretched by taking more items into product line. It can be done to down-markets (lower and cheaper markets), up-markets (more expensive markets), two-way, or by line filling. Line filling means adding more products within the present range (Kotler & Keller 2012, p. 362). It is to be used when an organization is reaching for incremental profits by plugging the holes in line and keeping competitors out, or when trying to become the leading full-line product provider.

2.5.4. Decision making with product line

When building up a product line for specific markets, it is essential to recognize what information is needed for the build-up. Identification of customer needs is not always easy and in business-to-business markets it is not even always clear who is the buyer, or more importantly who is the person responsible of doing buying decision. Therefore for being able to build up a product line that will have demand and that will actualize in sales, must decision makers be recognized, and both customer and market related data be exploited. Kotler (2002) also points out that information wants and needs are two different things. Therefore it is essential to recognize user's real needs of information rather than want.

For understanding real needs, it is essential to gain customer insight and customer's buying behavior, as well as understand what products they are willing to buy. For gaining that insight, a manager must gather relevant information and turn that into Intelligence (Hannula & Pirttimäki 2005, p. 36). There is lot of information about markets and customers everywhere. That information comes from numerous sources internally and externally (Kärkkäinen et al. 2011, p. 3) and it should be exploited systematically as a standard procedure. Therefore, these sources of information must be recognized and defined so that gathering would be more effective and efficient. And when new knowledge has been gained for the help of decision-making that should have an effect on behavior (Choo 2005, p. 24).

2.6. Summary

In this chapter, the product itself, need and demand, as well as buying behavior were discussed. Organizations must understand how different customers are making their buying decisions and what issues have an effect on those decisions. Therefore, organizations must understand how to meet customers' continuously changing needs in a best way. That requires comprehensive understanding of the organization's product mix. Product line management should be identified as a key element in shaping the offerings to be attractive for chosen market segments and customers. Organization should also understand the difference between selling products to individual and business customers. Buying decisions made by a business customer is much more complex than the buying process of an individual customer. Therefore, close relationship between customer and selling organization should be valued. In addition, relevant information about the product itself should be delivered to customer.

For building up the most suitable offering or product line for specific market segments the organization should be aware of the customer's detailed needs. For being able to do so, the organization must recognize and require relevant information about customer needs and their buying behaviors. For understanding the real need of customer, it is important to gain customer insight. For gaining customer insight, relevant information should be recognized and gathered systematically. And when that information has been gathered, it should be used for making better decisions related to products and offerings.

3. Customer insight and information sources in customer interface

For being able to understand the buying process of customer and build up a product line that would fulfil their needs, customer insight must first be gained. Customer insight helps to understand issues that are affecting on the customer's buying decisions as well as to recognize their real needs. In this chapter the concept of customer insight and its building blocks are introduced. Market intelligence, customer intelligence, and customer relationships management as a part of customer insight are discussed. After these being presented, the most important customer need information sources are introduced.

3.1. Customer insight

Markets are changing rapidly and business environment becomes increasingly complex (Fleisher et al. 2007, p. 840). At the same time, buying behavior of consumers and industrial customers are changing (Arantola 2006, p. 15) so it is more vital than before that organizations gain deeper market and customer insight. Arantola (2006, p. 15) states that organizations are not exploiting customer intelligence effectively enough and introduces a new term, customer insight, alongside customer intelligence. She defines customer insight as follows: a procedure that gathers customer related information from all around the organization, and helps to gain deeper insight to customer needs and behavior.

Arantola (2006, p. 53) presents distinct views for customer insight as follows:

- Customer insight is deep understanding about customer needs and customer behavior, even deeper than the customer itself can describe
- Customer insight is an approach derived from the customer, approach that emphasizes the role of the customer in creating knowledge
- Customer insight is an internal function that collects customer related information within the organization into one place
- Customer insight is the ability to collect an organization's dispersed internal knowledge about an individual customer

Arantola (2006, pp. 78-79) claims that even 90 per cent of product launches fail and this is mainly because of lack in understanding the customer and its needs. She states that modern strategic thinking considers customer oriented approach, product leadership, and cost leadership. Therefore, both understanding the customer and its real needs as well as targeting right products into right market segments is at the core when developing business and strategy.

Hirschowitz (2001, p. 168) augments that no matter how effectively a company can generate customer insight, it will deliver little value without a proper process that exploits this knowledge to build stronger customer relationship. Therefore, customer insight requires a systematic process to increase customer value and generate further customer insight. This process should be implemented throughout the organization and techniques and tools to transform customer insight into increased customer lifetime value (Hirschowitz 2001, p. 169). Arantola (2006, p. 116) also emphasizes the importance of organization's ability to manage its customer insight process effectively. She states that, for performing effectively in customer insight, organizations must have three kinds of capabilities: ability to offer knowledge about customers and business environment for the user in their everyday activities; to make insight the organization's common ability, not only the individual's; and insight must be developed systematically and goal-directly.

Fleisher et al. (2007, p. 841) state that organizations should have three kinds of capabilities for gaining customer insight; Market- and Competitive Intelligence, MR (market research), and CRM (customer relationship management). They represent the capabilities which enables an organization to gain market and customer insight as follows:

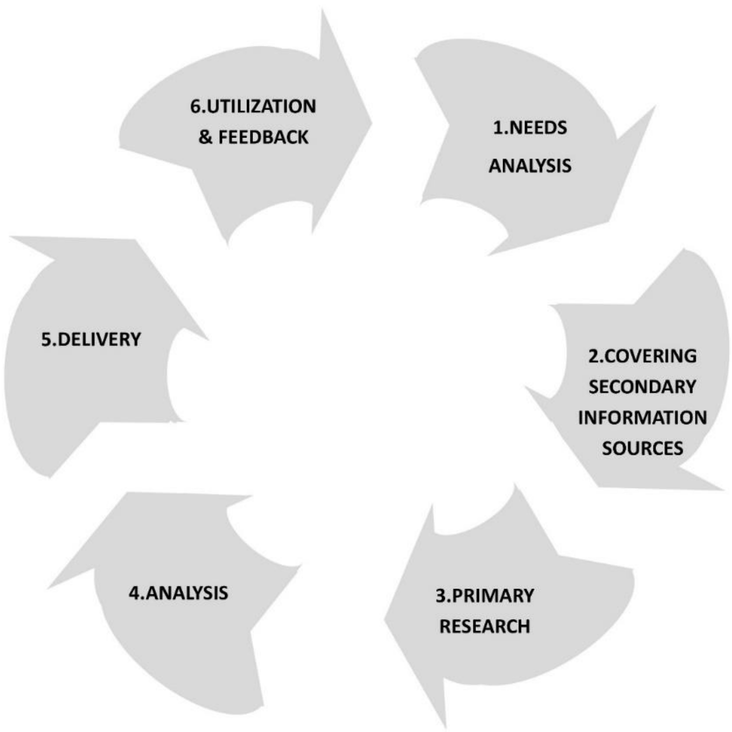
Picture 3.1. The integration of activities which forms Insight (According to Fleisher et al. 2007, p. 841)

To able to gain customer insight efficiently and effectively, organizations must therefore take into consideration all of these building blocks of customer insight. They must actively cherish their relationships with customers, exploit market and customer related data, and conduct market research if necessary.

3.1.1. Market Intelligence

Market intelligence system is a set of procedures and sources that managers use to gain information about developments in the marketing environment (Kotler & Keller 2012, p. 93). The role of market intelligence is essential in organization's strategy and success in the market place (Lackman et al. 2000, p. 6). According to Lackman et al.'s (2000, p. 7) findings, market intelligence affects heavily on planning of the following strategic issues; focusing marketing and sales initiatives, determining market potential, and forecasting product demand.

Market-orientation is important for an organization for them to answer more effectively to customer demand. Market-oriented organizations develop knowledge about their customers and their needs, and deliver them a superior customer value (O'Cass & Viet Ngo 2012, p. 127). Global Intelligence Alliance (2013) represents the cycle on market intelligence as follows:



Picture 3.2. Intelligence cycle (according to Global Intelligence Alliance 2013).

Intelligence cycle is a continuous process with two separate levels; defined processes for the market intelligence management, and clear processes for daily activities that produce market intelligence deliverables (Global Intelligence Alliance 2013). The process starts with the analysis of the needs and it is the most important step in the process. After that secondary research is carried out. Secondary research is less expensive than primary research and it gives good base for understanding the research topic before primary research is carried out (Hague et al. 2013).

Next step is in the cycle is primary research. It requires skills and it is more expensive than secondary research, but rewards are normally greater than with secondary research (Hague et al. 2013). After primary research has been carried out, results should be analyzed and reported. Analysis of the results is normally the most time consuming and complicated step in the process, and it requires more resources than previous steps in the process. Reporting of the analysis should also be considered carefully so that the most important findings can be presented to the decision makers. It is important to choose the right format (spreadsheets, newsletter, and PowerPoint presentations) and the right channel to share the deliverables (Global Intelligence Alliance 2013). Last step in the process is utilization and feedback. Utilization phase shows whether the research results in better decision making or not. Feedback on the other hand serves the continuity of the cycle to ensure that new improvements are being made in the future.

3.1.2. Customer Intelligence

Customer intelligence is the foundation for exploiting raw customer data into strategic insight for serving customers in the best way (Davies & Day 2008). It is important to understand how customers behave and interact with each other. It is vital to be able to serve customers with the offerings that meet their demand through personalized interactions and services. Muller (2006, p. 2) states that customer intelligence is both quantitative and qualitative analysis. It include both statistics and insight for customers buying behavior. Customer intelligence provides clarity of how to accurately combine products and services to satisfy customer needs in the best way (Muller 2006, p. 2). Customer intelligence is very powerful because it could yield knowledge, not just about customers, but also about competitors and competitor products (Muller 2006, p. 1; Davies & Day 2008).

The customer intelligence process consists of four main steps; planning and focus, collection of information, analysis and interpretation, and communication of the resulting intelligence (Muller 2006, p. 2). Muller (2006, pp. 2-3) presents few focus areas (according to Weiler 2001) in which customer intelligence is in good use:

- Who the customers really are: involving segmenting, understanding various segments, and delivering right products at right price through right delivery channels to each segment

- The loyalty level of customers: measuring the likeliness of them to switch to the competitor, and how sensitive they are to cost, service and quality

Muller (2006, p. 4) states that the best source of customer information is the company's own sales force and marketing team, because they are in constant contact with the customers. To gather that information effectively, sales force must know what information should be gathered and communication between sales force and customer intelligence staff should be easy.

After that information has been gathered, it must be analyzed and turned into intelligence. Muller (2006, p. 4) states that this is the most critical step in the customer intelligence process. Analyzing helps the organization to gain deeper market and customer insight. That will help an organization to better understand the customer's needs, buying procedures, processes and motives to make purchases.

The last step in this process is presenting customer intelligence. This means that both marketing representatives and front-line services personnel (in contact with the customer in daily basis) should be actively part of services sales process. By jointly gathering the knowledge they possess, organization can meet the demand of customers more effectively. Field service, repair, and technical support personnel are also in the core when acquiring information from the markets and customers. Organizations should build up processes and develop tools for gathering that information routinely on a daily basis.

3.1.3. Customer Relationship Management

"Customer Relationship Management (CRM) is a combination of people, processes and technology that seeks to understand a company's customers (Chen & Popovich 2003, p. 672). From an organization, CRM requires a company-wide, cross-functional, customer-focused re-engineering of business process. Moreover, Kotler & Keller (2012, p. 157) define CRM as a process of carefully managing detailed information about individual customers by which it can provide excellent real-time service and maximize loyalty. CRM is therefore an important part of an organization's ability to gain customer insight by acquiring and exploiting customer related data to enable better decision making and superior customer service. With the help of CRM, an organization is able to customize its market offerings and services to fit for specific customers and markets.

In Business-to-Business markets the relationship between supplier and customer is much closer than in Business-to-Consumer markets. Sales personnel have much closer contact to the buyer and in many cases they even have daily contact with the customers. Organizations are nowadays developing one-to-one marketing where they plan their marketing to fit one specific customer (Kotler & Keller 2012, p. 223). This enables the organization to gain much better customer insight of an individual customer.

3.2. Information sources in customer interface

Organizations and their members' abilities to perceive, understand and learn about their environment is called organizational intelligence (Tuomi 1999, p. 23). Therefore, organization's individuals are at the core when thinking of an organization's ability to understand its business environment. Choo (1998, p. 2) points out that knowledge creation through knowledge sharing enables organizations to develop new capabilities, design new products and services, enhance existing offerings, and improve organizational processes. When creating a suitable product line, organizational intelligence therefore plays essential role. It requires acquiring information from various sources and sharing knowledge between individuals so that the organization can select the right products to bring to selected markets.

3.2.1. The importance of employees as an information source

There is great deal of information everywhere and the amount of information is increasing rapidly (Grönroos 2006, p. 122). Hannula & Pirttimäki (2005, p. 35) state that information can be acquired from internal or external sources. Employees have valuable information about the company's own operations, competitors, customers, and external market situation (Vuori 2011, p. 46). Pirttilä (1997) states that people working especially in customer interface have a lot of valuable information about customers, competitors, and markets. That information is not always utilized properly as a part of competitive intelligence process. Therefore, there is much unexploited information in organizations that should be exploited more effectively in decision-making process. Kärkkäinen et al. (2001, p. 166) state that getting information about industrial customer needs should promote co-operation between company and customer. Therefore, personnel working in customer interface are in the core when acquiring information about customer needs.

Employees and sales force are neglected from the competitive intelligence process because organizations over-emphasize formal competitive intelligence units and analysts (Hannon 1997, p. 416). Even though information acquired by the competitive intelligence units and employees comes many times from the same sources, information possessed by the employees have usually more value. It can provide more in-depth explanations and interpretation with the help of one's prior experience and knowledge (Choo 2002, p. 234; Frishammar 2003). Marsh & Stock (2006, p. 432) also states that managers normally value more external than internal information sources. That causes missed opportunities and wasted knowledge, and it can affect negatively in an organization's ability to innovate, implement knowledge, and motivation of employees. Therefore exploiting internal sources of knowledge is essential so that all the useful knowledge will be exploited and the organization's employees will be motivated when feeling that their knowledge will result in superior outcomes.

Vuori (2011, p. 47) states that employees' competitive knowledge does not necessarily reveal any surprising issues but it deepens and refines understanding of an issue or a situation. Therefore, it is a vital source of information when trying to make more sense about a business environment or a given issue. However, when trying to discover something totally new, external sources of information are more useful.

3.2.2. Various sources of information

The existing internal knowledge about customers and markets is both in tacit and explicit form (De Luca & Atuahene-Gima 2007). An organization's individuals possess tacit knowledge whereas explicit knowledge is in systems, documents, maps, et cetera. Tacit knowledge possessed by organizational members is normally related to those products, services, processes and activities they are involved in (Hislop 2003). Nordlund (2009, p. 46) states that internal knowledge is also easier to access than external knowledge and it may also be more specified. Chesbrough (2003), on the other hand, states that information and knowledge outside the company's borders, such as knowledge of customers and users, should not be forgotten. Especially when thinking of industrial customers, users and customers are important sources of customer need information.

Combination of the most important sources of customer and market related information (according to Muller 2006, pp. 4-5; Arantola 2006, p. 56; Xu & Kaye 1995, pp. 25-26; Lackman et al. 2000, p. 8; Marsh & Stock 2006, p. 424; Hislop 2003, p. 166; Kärkkäinen et al. 2011, p. 3) can be presented as follows:

- Sales Force: tacit knowledge and gathered reports according to defined information needs
- Customer service and service personnel
- Customers themselves and their representatives
- Business Intelligence and information products: gathered reports, documents, data in the systems
- Other internal employees and organizational units: employees and units (R&D, marketing, product development) that are involved in products, services or activities
- Distribution channels, industry experts, and consultants
- Social media

When trying to make sense of surrounding market environment or customers, these sources of information should be exploited and utilized actively, systematically and effectively. This requires a standard procedure and a systematic and meaningful process so that acquiring and exploiting of customer and market related information will result in better decision making. Market research will offer that systematic process which will be discussed in more detail in chapter 4.

3.2.3. Sharing employee's knowledge

As presented above, an organization's own personnel possess valuable knowledge about customers and their needs. Still, without sharing knowledge between individuals, an organization gains no new valuable information about customers. Ives et al. (2000, p. 99) state that knowledge sharing is critical for organizations and it should be promoted in order to perform effectively in a knowledge intensive world. Arantola (2006, p. 35) states that best decisions are made when the decision is based on the organization's individuals' common knowledge. This requires active sharing and gathering of information for better decision-making.

Engaging individuals in the process of competitive intelligence is not an easy task but still worthwhile (Vuori 2011, p. 47). Actually it is said to be the hardest task in the process of competitive intelligence (Koskinen et al. 2005). Therefore, engaging individuals in the process of competitive intelligence should be planned and executed systematically and purposefully. Sharing of knowledge between individuals is important so that it can be used as a part of the decision making process. When knowledge has been shared between two or more people and it is used as a part of decision-making process, it is called knowledge transfer (Vuori 2011, p. 47). It is essential to use that shared knowledge because without doing so, an organization gains no value from knowledge sharing between individuals.

The main factors influencing knowledge sharing are motivation to share, nature of knowledge, opportunities to share, and organizational culture (Ipe 2003, pp. 343-351). Vuori (2011, p. 48) has combined the most important factors influencing competitive knowledge sharing in organizations according to Hannon (1997) and Ipe (2003, pp. 343-351):

1. Understanding the value of knowledge
2. The motivation to share the knowledge
3. The organizational culture
4. The nature of knowledge
5. The opportunities to share the knowledge

If an organization's employees do not understand the value of their knowledge it is hard to share and exploit fit or decision making processes. Individuals might also have no motivation to share their knowledge. The reason for that is that an individual feels like losing power and asset when sharing his or her knowledge to others (Vuori 2011, p. 48). Therefore, it is important that an organization allows knowledge sharing by building up a supportive organizational culture and that it has the right tools to enable individuals to share their knowledge. The nature of knowledge might also be a barrier for sharing it or one might feel that his or her knowledge is not complete or reliable and the consequences for sharing it might cause problems (Riege 2005, p. 25). Therefore, encouraging employees to share their knowledge is vital so that knowledge sharing would be as effective as possible.

3.2.4. Internal information sources

Sales force is at core in customer relationship management. They are building customer satisfaction and promoting long-term customer relationships (Rozell et al. 2004, p. 405). They are also the most important source of customer intelligence (Muller 2006, p. 4). Sales persons treasure customer relationships on a daily basis and they continuously gain information about customers and their buying habits. Sales persons are in the right place to gain customer insight and they receive valuable information about customer needs and chancing trends. They are also sensitive to customer changes and they are anxious for the organization to react to take remedial action if there is a risk that the customer would change its customership elsewhere (Muller 2006, p. 4).

Salespeople are spending significant time and resources with the customer (Rozell et al. 2004, p. 409) and they gain a lot of customer information and customer feedback that does not necessarily register in any information system (Arantola 2006, p. 67). This is the reason it is such an important source of especially tacit knowledge but also explicit knowledge. The information possessed by sales force is also easily accessible and gathered with only a little effort (Festervand et al. 1986, p. 54). For being able to collect information from sales personnel, the company must know what kind of information they should gather and what the focus areas are (Muller 2006, p. 4). The communication between sales personnel and the person responsible for customer intelligence should also be easy so that there will be no barriers for knowledge sharing.

Arantola (2006, p. 67) states that among customer service (as well as sales personnel) a lot of knowledge about the customer arises. It is normally in tacit form because it does not register in any system. Customer service personnel get lots of information about which services and products satisfy customers and which do not. They also get lot of information about the competitor’s products and services. That information is normally dispersed all around in the organization (Arantola 2006, p. 67) and therefore it might be hard to gather all that information into one place. Arantola (2006, pp. 67-68) proposes a way of gathering that information; formal inquiries, where the service personnel write down themes and issues that come up, and discuss them in weekly meetings.

According to Lackman et al.’s (2000, p. 8) findings, Research & Development should be seen as one of the most important sources of market intelligence. R&D tends to emphasize design review and quality assurance, and they give priority to solve technical problems (Kärkkäinen et al. 2001, p. 163). The marketing team (as well as the sales team) is in constant contact with customers and is one of the best sources of customer information

(Muller 2006, p. 4). Therefore, they possess both customer and market related knowledge that should be actively exploited in the decision making process.

Marketing personnel are also a vital source of customer and market related information (Lackman et al. 2000, p. 7). Marketing personnel have valuable information about both market and business environment, and customers as well as competitors. Therefore, the marketing department should not be forgotten when acquiring information about customers and market.

Kärkkäinen et al. (2001, p. 168) state that communicating customer's need information is challenging both between the company and the customer but also between different departments of a company. Therefore, it is vital that an organization enables an effective and efficient sharing of information and knowledge within the company by offering the right tools and treasuring organizational culture that support sharing of knowledge. In large organizations it is essential that the researcher knows where to find information needed, because there is a lot of information everywhere inside the company.

Jussila et al. (2012, p. 5) and Matthing (2004, p. 479) emphasizes the importance of co-operation between the company and the customer when assessing customer needs. Field sales force is a "never ending" source of vital information about the customer and the market (Falvey 1992, p. 10). According to Festervand et al. (1986, p. 54), field sales force is a great source of information acquiring when concerning competitive activities and market demand. Field sales force is even closer to the customer because they work with the customer face-to-face on a daily basis and gain trust and deeper relationship with the customers than "regular sales force". Falvey (1992, p. 1) even states that there is no point in carrying out expensive market research because all that needs to be done is just to listen what the field is telling you. Kärkkäinen (2013) also emphasizes the importance of field service personnel as one of the most important sources of customer need information because they are near to the customers and gain valuable information in face-to-face contact with the customers.

3.2.5. Information products

Xu & Kaye (1995, p. 25) state that the most of information needed by marketing managers already exists within the organization and one of the main sources is sales force reports that contain information gathered up from customers, competitors and suppliers. These reports include valuable information about the sales to the customers, claims, customer complaints, as well as competitor's products and services. Information products can also consist of different kinds of predefined documents that the sales force and service personnel have been asked to make about their customers.

Organizations have various software and systems that consist of lots of product, customer and market related information. That information should be refined to be used for decision-making. Data mining especially is a good way to exploit hidden, predictive information from large database to forecast the future, identify valuable customers and make proactive, knowledge-driven decisions (Rygielski et al. 2002, p. 483). Data mining is a sophisticated data search technique that uses statistical algorithms to discover patterns and correlations in data (Rygielski et al. 2002, p. 485). Data mining can be exploited for example for forecasting sales, performing basket analysis, predictive life-cycle management, customer segmentation, and manufacturing through customizing products (Rygielski et al. 2002, pp. 488-489).

3.2.6. External information sources

The importance of exploiting customer related information that exist inside the company borders was already discussed. There is still great amount of useful information outside the company, such as knowledge of customers and users (Kärkkäinen et al. 2011, p. 1). Kärkkäinen et al. (2001, p. 165) state that for being able to get profound knowledge of industrial customer needs, a company must be in close co-operation with their customers.

Muller (2006, p. 4) states that the customer itself and customer representatives are important sources of customer related information because they will make the choice on behalf of their suppliers. They are also the best source to gather information about spending habits, level of satisfaction, and predicting their needs. According to Nordlund (2009, p. 45), for gaining a deeper customer insight, the customer itself must be involved in the process. Especially when thinking of business-to-business markets it is important to involve customer in the process of identifying the need and want. Holt et al. (1985) state that need assessment in industrial markets is mainly done using existing relations with customers during everyday contacts and Kärkkäinen et al. (2000, p. 17) state that the customer itself is the best expert of their needs. When acquiring information from a customer organization, several people from different activities and functions should be interviewed. That is because the purchasing decision in the industrial markets is made by several functions and people from the buying organization (Kotler 1991).

Organizations as buyers are experts in understanding their own problems, development needs, and the ways the products are used (Kärkkäinen et al. 2011, p. 4). Nordlund (2009, p. 43) on the other hand states that the needs of customer are complex and not always easy to recognize and articulate. The problem may also be that customers are not able to imagine what is possible in terms of technology (Pals et al. 2008). And even if they know what they need, they might be unable to encode and transfer that information effectively (Thomke & Von Hippel 2002, p. 74). Even though there are problems in utilizing the customer as a source of information, they are an important source of information for gaining deeper customer insight.

Internet has changed lives for good. It enables people to communicate in a way they thought could not be possible and it let them contribute in conversations around the world (Leary 2008, p. 1). It let people discover an endless supply of information with just a few clicks and nowadays it is even possible to browse online wherever you want via smartphones. One can seek any information he or she wants almost anywhere, anytime. The Internet is a valuable source of information when thinking about a business environment. Kärkkäinen et al. (2011, p. 2) state that social media and other web based applications are very useful for gathering user and customer related data and information, as well as understanding the needs of users and customers. Also when trying to explore competitors, one can try to find information from their web pages. Sometimes they will not tell much, but sometimes they will provide depth and breadth information about their customers, price lists, job vacancies et cetera (Burke et al. 2008, p. 31). Therefore, the Internet and both competitor’s and customer’s web pages are useful sources of information to exploit. In setting the right prices, one can try to find prices of competitors (if they exists in web) and set their own in line with those. And if one wants know what kind of product line the competitor has, he or she can probably find that from the Internet. The Internet has therefore revolutionized the field of acquiring information, for good.

3.3. Summary

In this chapter, customer insight in total was introduced. Customer insight was defined as follows: a procedure that gathers customer related information from all around the organization and helps to gain deeper insight to customer needs and behavior. Customer insight also requires a systematic process that is implemented throughout the organizations as well as tools to transform customer insight into increased customer lifetime value. The building blocks for gaining customer insight in organizations were defined: Market- and Customer Intelligence, Market Research, and Customer Relationship Management. These are the capabilities that enable an organization to gain customer insight.

After introducing customer insight, different sources in customer interface were discussed. Internal employees are a vital source of customer related information. They possess valuable information that needs to be gathered and exploited in customer insight process. The most important internal information sources were mentioned to be: sales force, customer service, marketing, and product development. Other, external sources of customer related information, on the other hand, were mentioned to be: the customer itself and its representatives, distribution channel, industry experts, and consultants.

However, merely recognizing these important information sources is not enough. Sharing of knowledge possessed by employees is very vital for an organization for being able to implement effective and successful customer insight process. Employees should be encouraged to actively share their information and, further, that information should be gathered and stored for further use. So the totality of customer insight includes various activities and sources of information that need to be managed comprehensively and effectively.

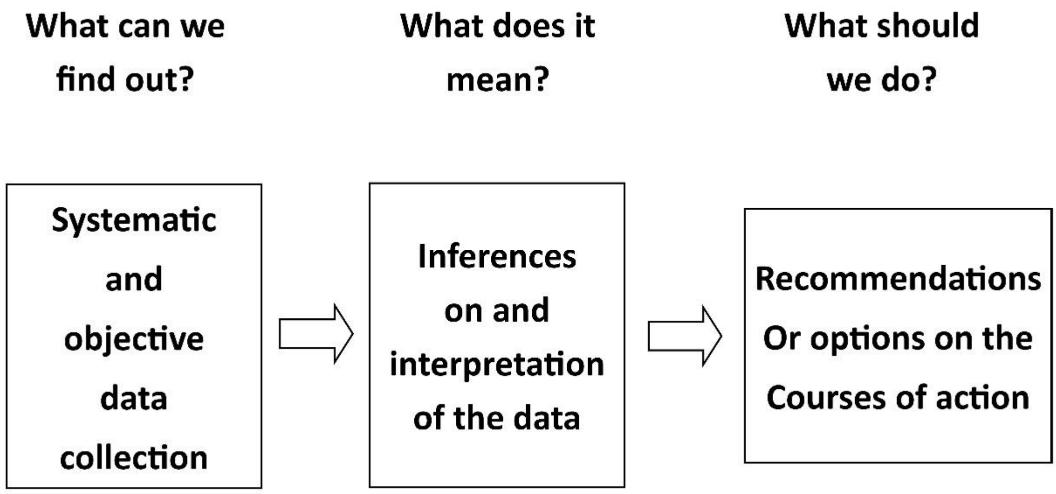
4. Market Research

“Marketing research is the set of techniques and principles for systematically collecting, recording, analyzing, and interpreting data to aid marketing decision makers” (Parasuraman et al. 2004, p. 9). With the help of market research, collecting information needed to gain customer insight and providing knowledge for the help of decision makers is possible. In this chapter, market research in general will be introduced. Also various market research techniques to collect information about customer needs and the importance of market research for this study will be introduced. At the end of the chapter, the process of market research will be explained in detail.

4.1. Market Research in general

Hague et al. (2013) state that the collection of any information for making better marketing decision can be considered as market research. Parasuraman et al. (2004, p. 8) on the other hand describe market research more detailed as follows: “Marketing research is the function which links the consumer, customer, and public to the marketer through information- information used to identify and define marketing opportunities and problems; generate, refine, and evaluate marketing actions; monitor marketing performance; and improve understanding of marketing as a process”.

Understanding the customer and customer behavior always plays a fundamental role when running a business. Therefore it is very important not just to understand both the market and the customer and their expectations for products and offerings, but also to gain in-depth insight of them. Hague (2006, p. 5) states that without knowing and understanding customers you will, in the long run, have no business at all. Crouch & Housden (2003) state that knowing and understanding the customer is even more important in business-to-business markets than in consumer markets. Hague (2006, p. 6) describes the role of Market Research as follows:



Picture 4.1. The Role of Market Research (According to Hague, 2006, p. 6)

Hague (2006, p. 6) states that good market research turns data into intelligence. The process of market research is systematic; it includes designs and plans of how the research will be carried out. The research should always have an objective and goals, and the most important issue in research process is to convert all the gathered and useful data into intelligence and knowledge.

"All businesses need information to guide decision making" (Hague 2006, p. 7). The amount of data has increased in the past decades (Grönroos 2006) and fast development of technology has increased the volume of available data for better decision-making. At the same time, markets and business environments have become more and more complex (Hague 2006, p. 7). Therefore, the availability of useful and trustworthy data plays a key role when running a business. But just the availability of that data is not enough. Managers must understand the importance of that data and turn that into knowledge and intelligence.

Hague (2006, p. 8) states that the best way to obtain a sustainable competitive advantage is to understand customers and potential customers through market research. Customers are the source of cash flow so it is fundamental that their needs are being analyzed accurately. Market research has also other benefits than just to understand the customer. It helps to find gaps in markets, develop new products and services, assess new opportunities, assess market potential and diagnose strengths and weaknesses or pros and cons (Hague 2006, p. 8).

“The demand for market research services has grown rapidly through the late years” (Hague 2006, p. 10). It shows that market research has become more and more important for organizations to be able to compete in more and more complex business environments and markets. There are different ways to conduct market research. Some (mainly bigger companies) have their own internal research departments and some (mainly smaller companies) normally use external service providers when they need information from the markets (Mooi & Sarstedt 2011, p. 5). Malhotra & Birks (2003, p. 11) divide providers of market research to internal and external. External is again divided to limited service or full service. When comparing full service providers and limited service providers, latter ones are mostly smaller companies that are specialized only in one or two different services. Full service providers on the other hand are usually bigger companies that offer syndicated data that has not been acquired only for the need of one company (Mooi & Sarstedt 2011, p. 6). That information is normally collected in many formats and the costs of that can be higher because of expectation of bigger revenues due to many clients.

4.2. Uses of Market Research

As stated earlier, all the organizations need information and intelligence to compete in the market. That information comes normally from various sources. Market research is one of the most valued sources of business information because it is systematic, organized and specific to a goal (Hague et al. 2013). A normal market research study can cost between 40,000 and 200,000 US dollars, but it will pay itself back with extra customer revenue or as avoidance of bad business decision (Hague et al. 2013).

Market research can be made for many reasons but mostly it is made to better understand markets and for enabling better decision-making about the company’s direction in the future. Organizations usually have a lot of information of their markets and customers, but a systematic analysis of independently collected data reduces the risk when confirming or challenging earlier assumptions of markets (Hague et al. 2013).

Market research can help with many business decisions, not just when thinking whether to entry into some market or not. It can help to make better decisions also about workforce, sales, pricing, budgets et cetera. Hague et al. (2013) present four different topics that market researches are mainly used for:

- Understanding markets
- Understanding customers
- Understanding and developing the offer
- Positioning the brand and communications

Market research then plays, more or less, an important role in almost every decision a manager must do concerning the business. One of the most important results for doing market research is to understand markets better (Hague et al. 2013). Understanding market environment and performing market research help an organization to identify marketing opportunities and forecast demand (Kotler & Keller 2012, p. 107). Especially when entering into new markets it is essential to understand the market and it's potential.

The importance of the customer for an organization and business has already been discussed. Customer-satisfaction is one of the most important issues when studying customers and their behavior (Hague et al. 2013). When customer-satisfaction is at a high level they will stay loyal to a company. On the other hand, when customer-satisfaction is at a low level, the customer will probably change elsewhere if a possibility for it occurs.

One of the reasons that market research is being carried out is to understand and develop the offer, but also to understand similar products that fulfill the same needs. The most important thing is to always recognize those key features which bring added value to the customer and the price that the customer is willing to pay for that added value. It is important to recognize the price points, key product benefits and workable marketing tools. It is essential to recognize the following issues when developing a new product or offering (Hague et al. 2013):

- competitor products, prices, features, distribution and market share
- possible acceptance or rejection of customers for modified products
- forecast for the need of product
- threats and barriers that could prevent the success of product
- optimum price for the products

Kotler & Keller (2012, p. 263) state that "One of the most valuable intangible assets of a firm is its brands, and it is incumbent on marketing to properly manage their value". Brand is a name, sign, term, symbol, design, or a combination of them, and it is meant to identify the goods or services of one seller or groups of sellers and differentiate them from those of competitors (Kotler & Keller 2012, p. 263 according to The American Marketing Association). Marketing and choosing the right marketing channels are important issues when driving sales or trying to increase the awareness of the brand (Hague et al. 2013). A well-known and distinguished brand gives the company an advantage when competing with other brands (Kotler & Keller 2012, p. 263). People make their buying decision due to images they have of different brands. Brand shapes customers' feeling about a certain product and its performance and quality. Therefore, building up and developing a well-known and recognized brand brings an ability to an organization to position themselves and set the prices higher.

Hague (2006, p. 19) introduces four directions for a company to expand its business. First one is to grow its market share among its existing customers with the products it already has in its portfolio. In this case customer satisfaction studies are mainly used to identify new opportunities.

	Existing markets	New markets
New products	Market research can show the likelyhood of adoption of new products	Market research can show un-met needs and provide an understanding of unfamiliar markets
Existing products	Market research can measure customer satisfaction to find out how to maintain a competitive edge	Market research can find new territories for products or services

Picture 4.2. A Strategic Framework for Market Research in Business Expansion (According to Hague, 2006, p. 20)

The next direction is to expand its traditional product range into new markets. In this case it is important to map out the size of the potential market, possible competitors, and the best way to enter new markets (Hague 2006, pp. 19-20). The third method to expand business is to persuade already existing customers to buy different or new kinds of products or services (Hague 2006, p. 20). In this case it is important to map out the needs of customers and the opportunity to meet the needs of customers with the new extended product portfolio.

The last method to expand business is to explore the possibility of selling new products to new customers. This one is the most complex and speculative of these methods (Hague 2006, p. 20). Therefore, in this case, comprehensive market research plays maybe the most vital role at growing the business adequately and appropriately.

4.3. Market research process

The market research process is "the systematic and objective identification, collection, analysis, dissemination, and use of information that is undertaken to improve decision making related to identifying and solving problems (also known as opportunities) in marketing" (Schweitzer 2014). Hague et al. (2013) on the other hand define market research as a systematic collection, analysis and interpretation of information relevant to marketing decisions. Market research is therefore a very comprehensive approach for utilizing customer and market related data for decision making. It is a complex process and it needs to be planned carefully.

Market research is a relatively old concept and within the years plenty of various definitions have been developed for market research process. In this study, the process (Appendix 1) defined by Parasuraman et al. (2004, p. 35) will be followed. They state that the steps in market research process are highly interrelated; meaning that each step may have an effect on the step(s) preceding or following it. They divide the steps in the process as follows:

1. Justify the need for marketing research
2. Define the research objective
3. Identify data needs
4. Identify data sources
5. Choose an appropriate research design and data collection method
6. Design the research instrument or form
7. Identify the sample
8. Collect data, including any relevant secondary data
9. Analyze and interpret the data
10. Present the research findings to decision makers

This process and the steps it includes will be discussed later in this chapter. Even though market research is being presented as a process, it can be done as a one-off project to meet a specific requirement (ad hoc research) or it can be a continuous research where market or product is being analyzed and monitored permanently (Hague 2006, p. 11). Whether the research is continuous or one-off type, the process follows the steps illustrated above.

Appendix 1 shows the process in total and how different steps in the process are interrelated. For example, if the need for market research is not justified it should be terminated and only if there is a real need for marketing research should it be carried out.

The available budget always plays and important role in research project. When planning the budget for the project it is always a matter of how much it is possible to spend for carrying out the project (Hague et al. 2013). It is always vital to plan how much it's worth of spending. If expected revenue is 10 million euros, it might be worth spending 50,000 euros for the research project. On the other hand, if expected revenues are 100,000 euros, 50,000-euro budget may be too much. However, costs of the research are much easier to quantify than the actual benefits. There is no one standard way, but many of them. Parasuraman et al. (2004, p. 38) propose that one way is to measure the uncertainty facing decision-makers, because the initial purpose of the research was to aid decision maker by reducing their uncertainty.

Research plan always needs a timetable. Limitations for timetable might be driven by external events and time frames like meeting a business investment or business plan (Hague et al. 2013). If the timetable is tight, the researcher will have to compromise the quality of research and research methods used (Hague 2006, p. 28). If there are only few weeks to carry out a study, it is impossible to make 100 interviews although otherwise it would be needed if there were enough time.

4.4. Defining the problem

Market research process starts always with defining the problem or realizing an opportunity (Mooi & Sarstedt 2011) and it is the most important step (Malhotra & Birks 2003, p. 31; McGivern 2013, p. 77). Hague (2006, p. 24) states that the most of failed market researches go wrong because the fundamental problem has not been fully understood or defined. Therefore, it is very important that the problem has been fully understood and defined explicitly and clearly. Like in any other project, identifying and setting up the core problem is half of the problem solved. Hague (2006, p. 24) states three question that determine whether the research should take place or not:

- What research exist already?
- What research is needed?
- Can the research readily be undertaken?

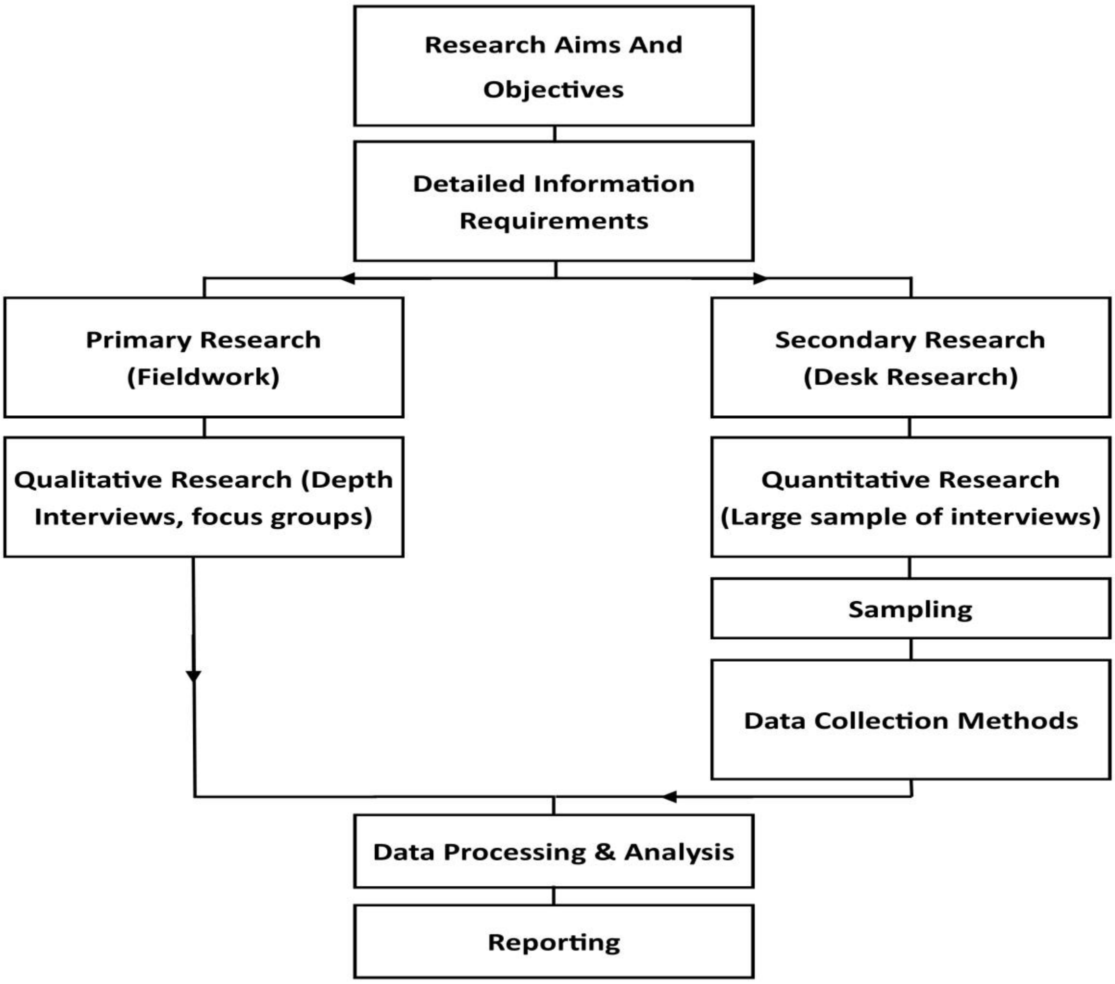
Parasuraman et al. (2004, p. 35) on the other hand present four influencing issues to consider when thinking whether or not to conduct a market research:

- The potential usefulness of the research results
- Management's attitudes toward the research
- The resources available for implementing the research results
- The cost of the research project versus the benefits

If there already exists research that fulfill information needs for decision making or if it is assumable that carrying out the research project does not result in big enough results comparing to costs of the study, it should not be undertaken.

4.5. Research design and methodology

Once the problem and objectives have been clearly defined, detailed research design should be formulated (Parasuraman et al. 2004, p. 44). Research design is a blueprint or framework for implementing the market research project and it specifies procedures of how the project will be conducted to fulfill research objectives (Malhotra & Birks 2003, p. 80). Hague et al. (2013) state that it is also essential that research methodology fits the goals and objectives of the study. If the researcher is trying to understand buying behavior of certain customers in a specific market, there is not much point in carrying out quantitative research that measures only the volumes of purchased items, but rather to use qualitative methods like open-ended question as part of semi- or non-structured interview. Otherwise if the objective is to measure sales volumes of certain products there is not so much point to gather experts together and set up a focus groups. Goal and objectives of the study are therefore key elements when choosing right research methodology.



Picture 4.3. Framework for choosing a research design (According to Hague 2006, p. 50)

Picture shows how research design methods are divided into secondary and primary research methods according to what kind of information is required. After data is being collected it will be processed and analyzed, and then reported.

Kärkkäinen et al. (2001, p. 162) criticize that many market research methods are aimed more at consumer product development and are not so suitable, as such, for assessing industrial product needs. Matthing et al. (2004, p. 479) state that especially to understanding hidden or latent needs is hard by with traditional methods. Therefore, the researcher should choose carefully methods to be used for collecting the data. The researcher has to be sure that those tools are suitable for the purpose for assessing needs of customers.

Kärkkäinen et al. (2001, p. 166) state that because of the small number of customers and complexity of industrial products, statistical methods are not so suitable for understanding needs of customers in industrial markets. They propose the researcher to use more qualitative methods, especially when it is the case to gain deeper understanding of customer’s need for products. It is very important that customer is involved in the process of need assessment (Matthing et al. 2004, p. 479). Selection of the tools or methods used should also be kept in the minimum (Kärkkäinen et al. 2001, p. 168).

4.6. Data

Data is a collection of facts that can be used for analysis and it is at the heart of any market research (Mooi & Sarstedt 2011, p. 25). Data can be divided into primary or secondary data, it can have different forms (qualitative or quantitative), and its source as well as subject can be either internal or external (Hannula & Pirttimäki 2005, p. 37). The form, source and subject should always be suitable for research goals and objectives. When considering market research, subject of the data is normally external, sources are both internal and external, and the form can be either qualitative or quantitative, depending on the objectives. Data; its form, source, and subject, that is needed for the study, depends on the objectives of the study. More clearly, once the objectives have been defined, the easier it will be to answer the question of what data should be acquired (Parasuraman et al. 2004, p. 42).

Data can be either primary or secondary data. Primary data is data that a researcher collects for specific use while secondary data is data that has been collected before by another researcher for another use (Mooi & Sarstedt 2011, p. 29). Both primary and secondary data have their advantages and disadvantages. Primary data is recent and usually more expensive while secondary data can be outdated but is normally cheaper. Drawbacks of secondary data are that it might not always be relevant to the research and objectives (Hague 2006, p. 43) and there might be errors in data because someone else controls that (Mooi & Sarstedt 2011, p. 29). Primary data, on the other hand, is suitable for research because the researcher is collecting it but it requires more time and effort to gather all the information needed (Parasuraman et al. 2004, p. 43). It is always not clear whether to use primary or secondary data. Secondary data is very helpful especially for diagnosing the research problem, developing sampling plan and research design, and interpreting primary data with more insight (Malhotra & Birks 2003, pp. 86-87).

Secondary data is normally used at the beginning of the research process and it can be collected from internal or external sources (Hague 2006, p. 41). Internally collected data is normally called "operational data" and it represents daily activities and transactions of business, like sales or purchases (Malhotra & Birks 2003, p. 109). External secondary data on the other hand is collected from published materials, online databases or syndicated services (Malhotra & Birks 2003, p. 91).

Primary data can also be collected from internal or external sources. It is normally used later in the research process (Mooi & Sarstedt 2011, p. 30). Primary data can be either qualitative or quantitative (Mooi & Sarstedt 2011, p. 52) and it is collected for specific purpose. Primary data is being collected in different ways like surveys, interviews, observation or using focus groups.

Data can also be either quantitative or qualitative. Quantitative data is expressed in values while qualitative data is expressed in other forms like words, stories, observations, pictures, or audio (Hague et al. 2013). The distinction between qualitative and quantitative data is not always clear because quantitative data is based on qualitative judgments (Mooi & Sarstedt 2011, p. 31). Qualitative data can also be turned into quantitative by giving them meaning and value.

Research can also be either qualitative or quantitative. Qualitative research is meant to obtain deeper insight to an individual's behavior, understand motivational factors and experiences (Hague 2006, p. 42). Qualitative research is explorative and it is done with unstructured techniques on small samples (Hague et al. 2013). It is done with focus groups or depth interviews and it aims to build an understanding of how and why people act like they do.

Quantitative research on the other hand is used for exploring and understanding people's needs, testing reactions to new products or services and working out the basis of a real problem (Hague 2006, p. 42). When research objectives require quantification or determining proportions, quantitative research method will be needed. Quantitative research consists of a larger amount of interviews than qualitative research and interviews are more structured.

Accuracy of data is always an important issue when acquiring the data. However, accuracy has its price and the researcher should always understand how accurate the data should be. If the accuracy of data increases too much, costs will increase disproportionately (Hague et al. 2013). Therefore accuracy should be in line with the research objectives. It is also vital that the information collected is timely and up-to-date (Parasuraman et al. 2004, p. 43). If outdated data is acquired, the results of the study might not show the current state of the issue in its real form.

4.7. Data collection

Data collection is practical but many times the difficult part of market research process (Mooi & Sarstedt 2011, p. 20). Data can be collected in different ways so it is important to plan carefully what kind of data collection method suit best for this specific purpose. The researcher must think whether it is necessary to carry out primary research or not; if there already exists surveys or studies wherefrom the researcher can gather the information needed, it might not be necessary to carry out primary research. After deciding whether to conduct primary or secondary research, the marketer must think in which way the information is going to be collected. Market research often starts with collecting information from secondary sources (Internet, existing researches, et cetera) and continues with acquiring data with primary research (interviews, focus groups, depth interview, et cetera) (Hague et al. 2013).

Data collection methods can be divided into qualitative and quantitative. The following picture presents different methods that can be used when conducting market research (Hague et al. 2013).

Table 4.1. Various market research techniques (Mooi & Sarstedt 2011; Hague et al. 2013; Parasuraman et al. 2004; Kotler & Keller 2012)

Method	Primary / secondary	Primary use	Problem	Quantitative	Qualitative	Interview Structure
Desk research	Secondary	Gather information			x	
Qualitative Observation	Primary	Analyzing responses to actions or auditing	Time consuming and no control over environment		x	Structured or unstructured
Quantitative Observation	Primary	Examining physical records or inventory analysis	Time consuming and no control over environment	x		Structured or unstructured
Face-to-face interview	Primary	Gaining deeper understanding and rapport than with phone interview	Time consuming and costly	x		Structured or semi-structured
Phone interview	Primary	Uncomplicated and structured interviews	Limited possibility to demonstrate things	x		Structured or semi-structured
Depth interview	Primary	Gaining insight and exploration	Costly and time consuming		x	Loosely structured
Ethnographic	Primary	When entering to new markets or reaching new target groups	High costs, long survey duration, long analyzing times		x	Loosely structured
Focus group	Primary	To make sense of complex processes or customer needs	Sensitivity of topic, participants lack of confidence, sharing of one's ideas		x	Loosely, semi-, or highly structured
Online surveys	Primary	Ideal for internal surveys	To find a good list of e-mail addresses	x		Structured
Self-completion questionnaire	Primary	When presence of interviewer is not necessary	Interviewer cannot clarify questions to respondent	x		Structured

The method used should be chosen according to objectives. If the objectives of the study are qualitative or quantitative, data collection methods should be chosen correspondingly.

4.7.1. Desk research

Desk research is a good and cheap way of doing market research (Crouch & Housden 2003). There is a great amount of information everywhere and desk information is a good way to take advantage of it. It is research that uses secondary data from published reports, Internet, market statistics or even just a picture. Desk research is therefore also very useful for getting familiar with the topic or issue before actually conducting a primary research. Desk research is normally used for the following tasks: market sizing, trends, company profiling, products, prices, distribution and promotions (Hague 2006, p. 60).

Desk research normally exploits data that is collected without fieldwork (Hague et al. 2004, p. 32). Earlier the most important source of desk research information was libraries. Since the Internet’s rapid growth, it has become the most important source of desk research information (Hague et al. 2004, p. 33) and it has brought possibilities that one could not imagine before (Leary 2008, p. 1). Internet is full of information and the most important thing is to know where and how information should be acquired. It might be even hard to know what key word to use for searching information even when knowing what information is being looked for. Nowadays, there are also a great number of different online databases available for searching information. Unfortunately those are mainly provided by commercial companies and users must pay a load of money to tap into that information (Hague et al. 2004, p. 37).

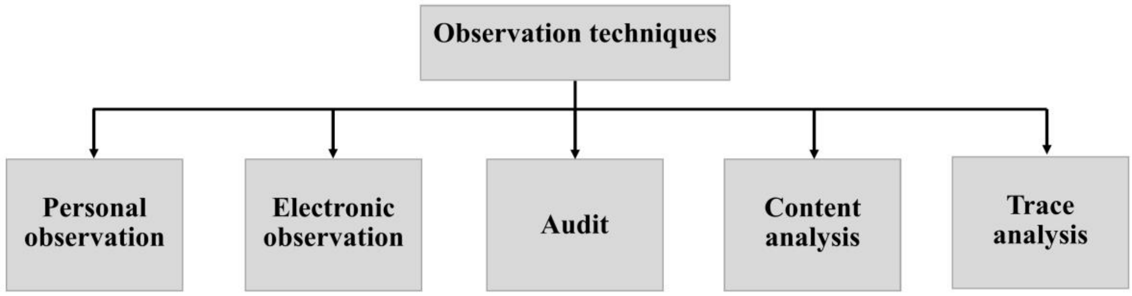
Other important sources of desk research information are experts, company data, government statistics, market research reports, the press, and directories. Experts (internal or external) possess a great deal of useful information from the markets, products, customers, et cetera. (Hague et al. 2004, pp. 34-35). For example in big organizations there might be someone who already has a great customer or market insight. That information would be very useful when carrying out a market research and therefore should be exploited actively.

4.7.2. Quantitative observation

Observation in one of the oldest ways of doing market research (Hague 2006, p. 70). Through observation, marketing specialists are analyzing people and their responses to different actions. For small companies, this method is one of the easiest ways of doing market research. Observation can be either qualitative or quantitative. The focus will now be kept just in quantitative observation because it is more suitable for the purpose of this study.

Quantitative observation is being used in descriptive research and techniques can be either structured or unstructured. When using structured techniques, the researcher specifies what is to be observed and in which ways measurements are to be recorded (Malhotra & Birks 2003, p. 242). Structured observation techniques are suitable when observed phenomena can be defined clearly and counted properly. In unstructured observation, on the other hand, the researcher monitors all the aspects that can possibly affect on the problem. Unstructured techniques are mainly used in exploratory research where the research problem has not yet been formulated precisely (Malhotra & Birks 2003, p. 242).

Malhotra & Birks (2003, p. 244) divides quantitative observation techniques as follows:



Picture 4.4. Quantitative observation techniques (According to Malhotra & Birks 2003, p. 244)

Personal and electrical observation techniques are divided into different categories based on whether the actual observation is being performed by a human or by a machine. Audit techniques are used when the researcher collects data by examining physical records or performing inventory analysis (Malhotra & Birks 2003, p. 245). Content analysis on the other hand is used when the phenomenon being observed is communication. In this case, the researcher is measuring content (words, characters, themes, or topics) of the communication. Last quantitative observation method is trace analysis; it is based on physical traces or evidence of past behavior. This technique requires innovativeness and can be inexpensive when creatively performed.

Observation techniques have both advantages and disadvantages. The greatest advantage of observation techniques is that they measure actual behavior and there is no reporting bias (Malhotra & Birks 2003, p. 248). Only potential bias is caused by the interviewer or by the process and those can be reduced or eliminated.

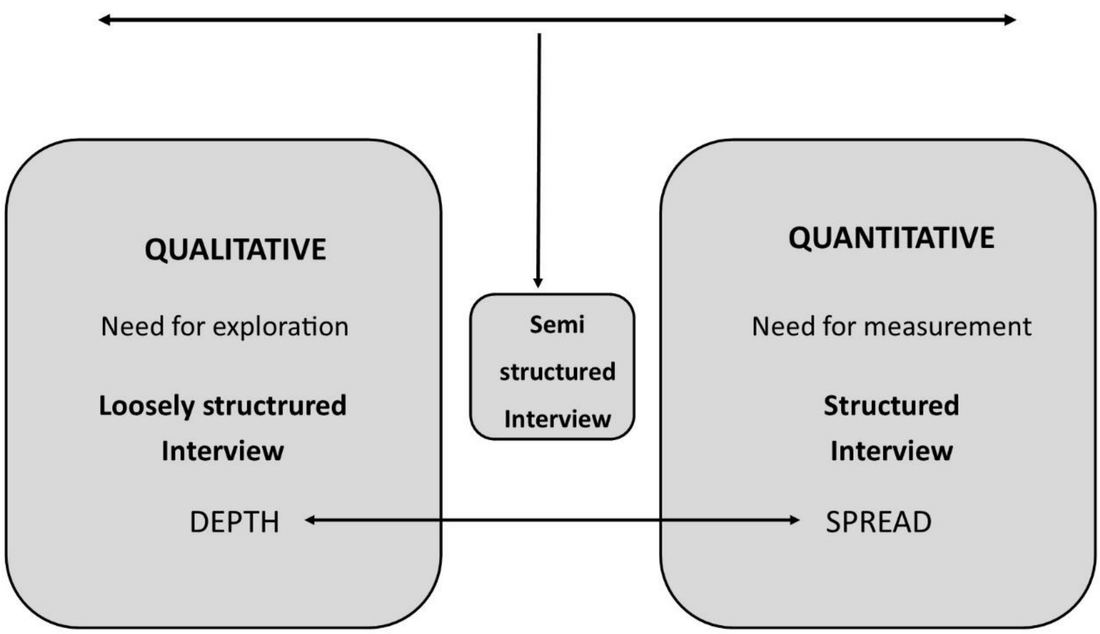
The biggest disadvantage of observation is that observed phenomenon may be difficult to determine if the researcher does not know the underlying issues (motives, beliefs, attitudes) behind the behavior (Malhotra & Birks 2003, p. 248). Another disadvantage is that observation may be time consuming and expensive to collect.

4.7.3. Interviewing

Interviewing is one of the most used methods of conducting market research (Hague et al. 2013). It is normally a dialogue between people and there is a list of questions that are being asked and answered. An interview can be either qualitative or quantitative. If the research is aiming to measure and quantify, the interview will be structured with precise questions and answers have been anticipated with pre-coded responses.

Qualitative interviews on the other hand should be in use when the goal of the study is to explore, make sense of behavior, or gain insight (Hague et al. 2013). Qualitative interviews are loosely structured and the respondent is expected to answer in his or her own words without giving them pre-coded answers to choose from (Hague et al. 2013).

Market research is normally multi-method including both qualitative and quantitative methods (Hague et al. 2013). For example a product development usually starts with exploring customers unmet needs with a qualitative method. It is usually followed by a structured interview to measure the size of the need and concluded with depth interview to test the concept.



Picture 4.5. Different types of interviews in market research. (According to Hague et al., 2013)

Phone interviews and face-to-face interviews are the most common quantitative interviewing methods while depth interview is one of the most common qualitative interviewing method.

4.7.4. Depth Interview

Depth interview is a qualitative interviewing method and it is loosely structured like other qualitative methods. It gives freedom to both interviewer and interviewee to express themselves more freely. It is built in a way that enables both interviewer and interviewee to change the course of the interview if necessary or go deeper into some topic if felt so (Hague et al. 2013). Therefore, it incorporates a great deal of respondent's perspectives into the findings. This is useful when the research issues are not known or when not so accurate assumptions have been made (Hague et al. 2013). In this case it is important that the interviewee can change the course of the interview and the researcher can get more accurate information and knowledge about the markets and customer behavior, as well as the usage of manual products.

Depth interviews are normally carried out as face-to-face conversations (but not always) (Hague et al. 2013) and the normal length of a depth interview is from 45 minutes to 2 hours (McGivern 2013, p. 162). That gives more depth to an interview because the interviewer can read the interviewee's body language and, at the same time, build a trust between them for revealing the truth more effectively. It also enables the interviewer to keep the interviewee concentrated on the topic (Hague et al. 2013). Depth interviews can be done individually or in pairs. Depth interviews compete with focus groups and are the preferable method in the next circumstances (Hague et al. 2013; McGivern 2013, p. 163): when interviewees are geographically apart, or when meaningful comments are required from every respondent.

Hague et al. (2013) state that depth interviews are useful especially in market research, when processes need to be described in detail, explanation of complex issues is required, or when the topic of the research is not known. Therefore, it is very useful when the objective is to gain greater insight into an issue.

Like focus groups, depth interviews can be done alone or as a part of a multi-dimensional market research. Hague et al. (2013) propose that depth interviews are good especially when conducting one of the following multi-dimensional market researches:

- Market structure: expert knowledge from key respondents to get a bird's-eye view from markets
- Product testing: unique cases can be monitored through new product trial
- Needs assessment: just a few depth interviews can discover unmet needs and current behaviors

The number of interviews carried out is an important thing when conducting market research and it is normally defined at the research design stage. Hague et al. (2013) suggest that 10 depth interviews is enough but 30 would point out all the important facts to the topic. Face-to-face interviews cost a lot of money (10 times more than a phone call interview). It is also a matter of spread of interviews, the ease of travelling and closeness of different interviews how much would it cost.

Depth interview also has its disadvantages. The most important thing is the cost. Depth interview initiates with the pre-call where the project is explained, some pre-questions are asked, and the actual interview is to be arranged (Hague et al. 2013). It is also possible that interviewee does not show up even though actual interview has been arranged. There might be sickness, absence or crises so that the interview has to be rescheduled. A big problem is also that depth interviews take much time. Depth interview takes much longer than just a phone call and if the interviewee has no interest on the topic area (Hague et al. 2013), he or she would not want to waste his or her time for the research.

Depth interview is normally a social event where the interviewer and the interviewee are talking together for the first time. Therefore, it is important to make the interviewee feel comfortable to speak freely and openly about the topic (Hague et al. 2013). In Finland this stands out even more comparing to some other countries because a typical Finnish is shy and introvert.

The most important thing when interviewing someone is to be enthusiastic. It is the easiest way to develop interviewee’s interest in the topic (Hague et al. 2013). When starting the interview there is usually little anxiety on the interviewee’s behalf. Therefore, it is important to create a rapport with respondent as quickly as possible. A good way of doing this is to start with some small talk and then, the first “real questions” of the interview should be easy ones.

When the respondent starts to feel comfortable with the interview, can the interviewer move to more detailed questions. There should be a guide of the topics that will be discussed. On contrary to focus groups, the guide should not be as strict. One advantage of depth interview is that both interviewer and interviewee can naturally change the course of discussion if they feel so. The interviewer’s job is then to make sure that all the needed topics are being discussed. Listening the interviewee is also one of the most important things, so that the researcher can get the most out of the interview. Hague et al. (2013) suggest that the interview should conventionally follow the next structure:

1. **Introduction**
2. **Warm up questions**
3. **Main body of the interview**
4. **Thank and close**

The main body includes sections that are related to the objectives and are broken down into specific questions. Questions should be open-ended ensuring flexibility and the possibility for the interview to go deep enough in the topic. At the same time the interviewer can evaluate the respondent's knowledge and experience. Interviewer's assumptions and expectations will also be challenged more as the interview is not structured and limited so strictly.

4.8. Data analysis

After the data has been acquired it must be analyzed to enable better decision-making. Data analysis is a process of aggregating individual responses or "raw" data (Hague 2006, p. 150) and it is normally done by computer software or a spreadsheet (Hague et al. 2013). Analysis of the data can be divided different ways, but for this purpose it is relevant to divide it according to Hague (2006, p. 150) into analysis of quantitative data and qualitative data.

When analyzing quantitative data, the researcher must decide which data is relevant to the objectives and the survey (Hague 2006, p. 153). Samples in quantitative research is much larger than in qualitative research so data analysis should be different as well. Data analysis strategy for analyzing quantitative data should be made according to earlier steps of market research process (Malhotra & Birks 2003, p. 435). When choosing data analysis strategy, gathered data and objectives of the study should be considered.

When the objective is to measure the number of certain products with certain features to occur, frequency distribution is a most convenient way to evaluate the results. A frequency table provides the basic information about the products, variations, and frequencies (Malhotra & Birks 2003, p. 449). Even though frequency analysis is defined to be one of the univariate analysis methods, Mooi & Sarstedt (2011 p. 104) state that frequency analysis can be done also for more than one variable. When the case is also not to examine the relationship between different variables, there is no need to expand frequency analysis to cross-tabulations that consider also the link between different variables (Malhotra & Birks 2003, p. 457). In frequency analysis, the results are normally presented in the form of a frequency table that includes all the variables and how often they occur (Mooi & Sarstedt 2011, p. 84).

Analyzing of qualitative data on the other hand is different from analyzing quantitative data. The sample in qualitative research is smaller, collected data is more complex, and questions are normally open-ended (Hague 2006, p. 159). Malhotra & Birks (2003 p. 207) present a four-stage process for analyzing qualitative data: data assembly, data reduction, data display, and data verification. At first, the researcher should take notes during the interview. This step guides the researcher to take short notes during the actual interview and expand those notes right after the interview. This transcribing, as well as analyzing actual data, should be done as quickly as possible after the interviews so that the interviewer still remembers all the important issues that were discussed while interviewing (Hague 2006, p. 160). Mooi & Sarstedt (2011, p. 80) emphasize that it is important to clean up the data that is being collected. This requires checking for data entry errors, interviewer frauds, and missing data.

After the first step, the researcher should organize and structure the data (Malhotra & Birks 2003, p. 208). This step means that the researcher should decide what information is relevant and what is not. He or she should break down information into smaller, discrete chunks that can be managed easier later in the process. It is also important to build up structure for files and directories so that the researcher is able to keep track and modify those later if necessary (Mooi & Sarstedt 2011, p. 78).

When this reduction has been done, the researcher should display the data. This can be done in a graphical format, with boxes that summarize the issues. Malhotra & Birks (2003, p. 212) state that one of the simplest ways of doing this is through the use of a spreadsheet. All the interviews can be transcribed into a spreadsheet so the actual analyzing of the data is easier when all the information is being categorized into suitable boxes.

The last step in the process is data verification. This step involves seeking of alternative explanations through other data sources (Malhotra & Birks 2003, p. 214). This is so that researcher can demonstrate that they have presented a valid meaning of that data they have collected.

After these steps, Hague et al. (2013) propose that the answers (for each and every question) of the respondents should be divided into categories so that the data is easier to represent for an audience. At this step, the researcher must build up categories for each question so that every answer falls into one (or more) category. The problem is that one answer can fall in two or more different categories so that total 100 per cent will be exceeded.

4.9. Reporting

Communicating and presenting results is an essential part of the market research project (Mooi & Sarstedt 2011, p. 286). That includes presenting clear answers to initial research questions and recommendation of a course of action. Malhotra & Birks (2003, p. 645) state that reporting and presenting results is important because of the following reasons: they are tangible efforts of the research project, management is making decisions according to report and presentation, many marketing decision makers are limited to the report and oral presentation, and they can be exploited in the future for the help of decision making.

Mooi & Sarstedt (2011, p. 286) state that market researchers normally provide clients a written report summarizing the key findings but Hague et al. (2013) propose that traditional 10,000- to 15,000-word reports have disappeared and have been replaced by PowerPoint presentations. Sadly those PowerPoints are still too often too hard for the reader to follow, results not relevant to objectives, or too full of pictures that give no added value.

The problem in creating a sense making and clear presentation is the great amount of data. The researcher should put a lot of time and effort in making a report that leaves a long lasting impression and that really enables better decision-making (Hague et al. 2013). Hague et al. (2013) define common rules for both written reports and presentations as follows:

- Meet the needs of the audience
- Form the structure right
- Pay attention to details with careful checking and editing
- Make it look good

Meeting the needs of audience is very important when creating a report. Reports have two different purposes; to give a clear presentation and a lasting document that can be exploited also in the future (Hague et al. 2013). The problem is to meet both of these needs with the same document. Another problem is to meet the needs of audiences who want different things from the study. Mooi & Sarstedt (2011, p. 287) divide the audience into two categories: academics and practitioners. While academics concentrate more in statistics, theory and methodological details, practitioners' concern is to solve a specific marketing problem.

The structure of the study is key to a good market research reporting (Hague et al. 2013). Structure is present all the way from the beginning till the end of the research process. It is important that structure drives the study towards the conclusion in a clear and logical way (Hague et al. 2013). Structure should consist of three parts: beginning, middle and end. The first section consist of introduction to the market and background of the study. The middle part of the study is the longest one and it contains details of the findings. This middle section consist of chapters that should be linked to each other and lead the study towards the conclusion. Mooi & Sarstedt (2011, p. 288) emphasize the importance of methodology in the middle section so that the audience can understand how and wherefrom information was acquired and in which way it was analyzed.

When writing a report it is important to express the main points quickly and clearly (Hague et al. 2013). The report should be written in a way that a busy reader gets the main points with just a glimpse. When the report has been drafted, structure, readability, and content should be checked. Hague et al. (2013) define three key requirements of a good report as follows: it has to meet the objectives, the data must be presented clearly, and it should drive towards the action. Mooi & Sarstedt (2011, p. 295) on the other hand state that there is four rules for a written report: it must be complete (including all the relevant information), accurate (well-written, grammar, and objectivity), clear (short sentences, language), and concise (action driven, understandable in results and findings). The researcher must also think in which way he or she is going to present the results. It can be done by summarizing the overall findings and dividing them into relevant subgroups (Mooi & Sarstedt 2011, p. 291). Otherwise, if several research methods have been used, results can be presented correspondingly.

Final edits, such as grammar, spelling, indexing and readability are the responsibilities of the author but it is better to have the document proofread by someone else as well (Hague et al. 2013). The author is normally too deeply involved in the study so he or she may not recognize misspelling, grammar errors et cetera. It is also important that the report looks good so that it attracts the reader to read it through. Tables and graphs should bring life to the report and make it interesting (Mooi & Sarstedt 2011, p. 291), and the report must be designed in an appropriate format that has: a title page, including a table of contents; consistent margins, fonts, heading styles et cetera; and use of page numbers (Hague et al. 2013). The slides should also be kept as simple as possible and cramming too much on a page should not be done.

When findings have been presented, most relevant points in light of the research objectives should be summarized (Mooi & Sarstedt 2011, p. 293). This part must include both the most relevant findings of the study as well as recommendations or advice on management decision.

Oral presentation is also an important part of presenting findings. This will help the management of the client organization to understand and accept the written report (Malhotra & Birks 2003, p. 655). When delivering an oral presentation, the same principles as in the written report should be kept in mind (Mooi & Sarstedt 2011, p. 296). When giving an oral presentation, it is especially important to identify and understand the audience. The presentation should be prepared thoroughly so that it leaves a long lasting impression among the audience of management. Otherwise poorly prepared presentation will lead into unpleasant situation and it leaves negative impact on the manager's overall impression of the project.

Oral presentation should also be designed to look good. It should include visual aids, such as tables, graphs, overhead transparencies, prezi shows. These do not only help emphasize important points but make the presentation more interesting and, further, facilitate the communication of difficult ideas (Mooi & Sarstedt 2011, p. 298).

After both the written and the oral presentation have been delivered, the researcher should help the client to understand and implement the findings, and take follow-up action (Malhotra & Birks 2003, p. 656). Implementing findings include answering questions that may arise from the written or oral presentation, providing assistance in selecting products, helping with marketing actions, et cetera (Mooi & Sarstedt 2011, p. 298). After this, the researcher should critically evaluate the successfulness of the project so that new insight and knowledge can be gained (Malhotra & Birks 2003, p. 656). It is important to be able to recognize issues that could have been done more effectively and efficiently. The researcher can, for example, consider following questions: How could have data collection methods been chosen differently? Was the initial problem defined correctly and properly enough? Could different approach to the problem have yielded in better results? This is done so that it is possible, in the future, to perform more effectively and efficiently with market research projects.

4.10. Summary

In this chapter Market Research in general was introduced. Different uses of market research were discussed and the process of market research was presented. Market research was stated to be the set of techniques and principles to systematically collect, record, analyze, and interpret data to aid marketing decision makers. Market research is mainly used for understand markets, understand the customer, understand and develop the offer, or position the brand and communications.

The market research process includes various steps. At first, research objective, data needs and data sources should be defined in detail. After that, the most appropriate research design and data collection method should be chosen. When that has been done, a sample should be chosen and collecting of data should be executed. The last steps in the process are analyzing the data and presenting findings to decision makers.

Various market research techniques were introduced in this chapter. There are lots of quantitative and qualitative research methods from which the researcher must chose the most appropriate ones. Quantitative observation, face-to-face interviews, phone interviews, online surveys and self-completion questionnaires were mentioned as quantitative research methods. On the other hand, desk research, qualitative observation, depth interview, ethnographic study, and focus groups were mentioned as qualitative research methods. Research methods should always be chosen accordingly to research objectives so that the results are in line with the goals of the study.

5. Research methods, execution and results

Now that the theoretical views for the topics – product line, customer insight, information sources and market research, and their relation to each other as well as background of case Konecranes – have been introduced, conducting of the empirical part of the study is possible. This empirical part involves introducing used methods for collecting information, execution of the research and presenting the results, as well as analysis of the results. In this chapter, which way and why market research is going to be carried out will be explained.

5.1. Background

The main research problem of this study, as presented in the first chapter, was:

- How to utilize market research to gain customer insight, and build up a product line of manual products?

In the beginning sub problems were presented as follows:

- What is product line and what information will be needed to build that up?
- What is customer insight and how to gain it?
- How to utilize market research for gaining customer insight?

In the first chapter, product line and product line management were discussed. After that the most important customer need information sources were presented and different market research techniques to acquire that information were discussed. These theoretical grounds give a basis for conducting the empirical part of this study.

For reaching the main objectives, an empirical part of the study that explores two issues must be conducted:

- What kind of manual products is there in use in Finnish industries and, further, what would be needed?
- Customer's buying process with manual products and issues that has an effect on choosing a purchased product and supplier.

By exploring these issues, building up a suitable product line of manual products for Finnish markets as well as gaining customer insight and customer's buying processes for manual products will be possible. These objectives will be reached by conducting market research for manual products.

5.2. Market research

Hague et al. (2013) state that the collection of any information to enable better decision making can be considered as market research. In light of Hague's statement, it is justified to say that this study can be considered as market research. Hague et al. (2013) stated that market research is mainly used for four purposes: to understand markets, to understand the customer, to understand and develop the offer, and to position the brand and communications. The main objectives of this research are to understand and develop the offer, and to understand the customer.

Appendix 1 presents the process of market research project. The need for carrying out a market research (step 1) was justified in the beginning of the study; DC Nordic's wants to strengthen its spare part service by taking manual products into its offering. Therefore market research needs to be carried out so that the suitable product line of manual products can be built and offered for Finnish markets. The purpose of the project (step 2) was also defined in the beginning; to build up a product line of manual products and understand the buying process of customers. Data needs (step 3) for reaching objectives have also been presented earlier in this study (picture 1.2) by introducing what kind of data needs to be collected.

In this chapter, steps from four to eight (identifying data sources to actual collection of data) will now be covered. Chapters 6 and 7, on the other hand, cover steps nine (analyzing and interpreting the data) and ten (present the findings to decision makers).

Hague (2006, p. 11) divided market research to be either one-off projects or continuous research. This research will be more the one-off type project even though manual product offering and markets should be analyzed and monitored by Konecranes in the future as well. Hague et al. (2013) stated that systematical analysis for independently collected data reduces risk when confirming or challenging earlier assumptions of markets. Therefore, even though Konecranes already has some assumptions about the Finnish markets for manual products, it is worth carrying out a systematic market research for manual products. That will result in a reduced risk of not taking the wrong products into offering as well as gained understanding in customers buying processes.

5.2.1. Interviewees and companies

The target organizations that were interviewed were chosen based on the knowledge of Konecranes' service technicians. At first, the technicians were interviewed and the most suitable companies for the study were chosen based on that information. The contact information of target organizations was also acquired straight from the service technicians. Respondents in organizations were mainly maintenance engineers, purchasers or blue-collar workers who use manual products. From each company selected to the study, one person was interviewed. Table 5.1 presents the information about the respondents.

Table 5.1. Information about respondents.

	Industry	Job description	Years in organization / in position	Role in buying
Organization 1	Paper	Worker / user	25y	Relay orders
Organization 2	Paper	Maintenance engineer	20y / 5y	Accept orders
Organization 3	Steel	Maintenance engineer	25y / 1,5y	Relay orders
Organization 4	Water	Maintenance engineer	1,5y	Purchasing
Organization 5	Paper	Maintenance engineer	16y / 6y	Purchasing
Organization 6	Paper	Foreman	15y	Purchasing
Organization 7	Steel	Technical manager	20y	Management
Organization 8	Paper	Technical engineer	30y	Purchasing
Organization 9	Paper	Senior mechanician	34y	Purchasing /repairing
Organization 10	Steel	Purchaser	16y	Purchasing
Organization 11	Steel	Service specialist	2y	Purchasing

Companies visited were mainly paper mills (6 pcs) because they have the greatest amount of manual products in their factories comparing to other industries. There were also four steel industry factories and one water refining plant. People who were interviewed were selected based on the objectives of the study. Because the buying processes of the companies were to be explored, people who were involved in the buying process were obvious choices as respondents. All the respondents that were interviewed are involved in the process of purchasing manual products. Even though only one user was being interviewed, it was possible to gain valuable information about the usage and using environments from all the respondents.

Even though sales force is one of the major sources of customer related information, it was noticed that Konecranes' own sales personnel do not possess the kind of information that would have helped to identify either the buying process of customer's with these specific products or the variety of the manual products that is in use in companies. Therefore, Konecranes' sales personnel was left out from the study.

Other internal personnel that were exploited as a source of information in the study were product managers and Konecranes' Service staff: branch managers, service technicians, and other product related specialists. From them it was possible to acquire valuable knowledge especially about the product itself and the companies using these products.

5.2.2. Research Methods

Research methods are divided into explorative, descriptive and explanatory (McGivern 2013, p. 81; Parasuraman et al. 2004, p. 44; Malhotra & Birks 2003, p. 62). For becoming familiar with the topic or issue around the problem, exploratory research should be conduct. Explorative techniques are being used to formulate the problem more exactly. Descriptive techniques on the other hand are used when trying to describe things, events, or situations (Mooi & Sarstedt 2011, p. 16). The difference between exploratory and descriptive research is that, when using descriptive technique, research questions and objectives should be more clearly defined than when using explorative techniques (McGivern 2013, p. 83).

Malhotra & Birks (2003, p. 70) state that research projects do not usually fall into just one of these categories (explorative, descriptive, explanatory). According to McGivern (2013, p. 84), research projects are usually two- or three-fold: to explore and describe; explore, describe and explain; or describe and explain. Hague et al. (2013) also state that market research is normally multi-dimensional, including both qualitative and quantitative methods, and exploiting both primary and secondary data. Therefore, multi-dimensionality is also used this research; both qualitative (depth interview) and quantitative (quantitative observation) data will be collected, from primary (interviews and quantitative observation) and secondary sources (desk research), using both explorative (desk research) and descriptive techniques (depth interview).

The main objective of the study is to gain customer insight and insight into their buying behavior. The aim is to be able to describe how customers are making their purchase decisions with these products as well as issues affecting their buying decisions. Therefore, this research can be considered to be descriptive exploiting qualitative data. But before being able to gain customer insight and insight into their buying behavior, explorative methods should be used to become more familiar with the products in general. For that purpose, both qualitative and quantitative data from secondary sources were collected. Therefore, this research can be considered to be multi-dimensional (qualitative and quantitative, primary and secondary data) and two-fold: to explore and describe.

Kärkkäinen et al. (2001, p. 168) said that the selection of the methods should be kept in the minimum. Therefore, the methods in this research were restricted to three; thus, desk research, observation, and depth interview were chosen. Desk research is used to explore and collect both qualitative and quantitative data. Observation and depth interviews on the other hand are in use when visiting various factories for conducting interviews and quantitative observation. The meaning of observation was to acquire both quantitative and qualitative data. Quantitative to get information about manual products that are currently in use in factories and qualitative for observing environments and applications where products are used. The meaning of depth interviews on the other hand was to collect qualitative data about buying processes of manual products of the customers. The aim was to be able to identify both issues effecting on choosing the product and supplier as well as channels wherefrom customers buy the products and acquire the information about the products and suppliers.

5.2.3. Interview structure

Depth interviews were carried out by exploiting customers as an information source. These interviews were loosely structured like depth interviews normally and the form of the data was qualitative. Hague et al. (2013) propose that, when conducting depth interview, there should be a guide of the topics that will be discussed. That guideline was followed also in this research; interviews were built up to have a guide that consisted of the most important topics that needed to be discussed. The aim was to be able to make rapport between interviewee and respondent so that respondent would have felt comfortable to express himself more freely. Respondent also had a chance to change the course of conversation if necessary.

The structure of the interview followed Hague et al. (2013) proposition:

1. **Introduction**
2. **Warm up questions**
3. **Main body of the interview**
4. **Thank and close**

All of these steps were discussed in a casual way so that rapport between interviewee and interviewer was kept, and the interviewee was able to express himself more freely. The order of the topics also differed within the interviews. Some interviews started by discussing the products that are used, some started with a discussion about the buying process, and some started by discussing the organization in general. Therefore, the structure of the interview can be considered to be very loose. The structure of the interview is attached as appendix (appendix 3).

No pre-interviews were conducted because the purpose of the interview was not to carry out a structured interview where questions are discussed one by one. The aim was to wake up a conversation and rapport between the interviewer and respondent. Hence, it was made sure that all the necessary topics will be discussed when carrying out the interviews.

5.3. Execution

Hague et al. (2013) state that market research is many times multi-dimensional using both qualitative and quantitative methods. McGivern (2013, p. 217) added that an interview can be carried out as mixed-mode, meaning that the interviewer can use different modes within one interview with the same person. Hence, also this research is multidimensional, using both qualitative and quantitative methods. For gaining customer insight and insight into their buying behavior, depth interviews were utilized. For building up a product line on the other hand, observation and desk research were exploited.

Earlier in this study it was stated (According to Hague 2006, p. 24) that three questions determine whether the research should take place or not; What research exist already? What research is needed? Can the research readily be undertaken?. When conducting desk research to become familiar with the topic, no existing research was found to the needs of this study. The objectives of the research have also been discussed earlier in this study, so justifying the need for conducting market research has been fulfilled.

After initializing the research, exploring the issue, products, and markets were reached by using desk research technique. Typical for desk research, the data that had been collected without fieldwork was utilized. Since the Internet has become the most important source of information for desk research (Hague et al. 2004, p. 33), it was the most suitable source for the purposes of this study as well. When acquiring information about competitors and their offerings as well as for getting more familiar with the manual products, information was collected mainly from the Internet. Desk research utilized secondary data and the structure of that data can be considered both quantitative (technical details and specifications) and qualitative (overall picture of manual products' markets in Finland). Offerings were explored via Google by making searches with keywords "ketjutalja" (chain block), "viputalja" (lever puller), and "käsiketjutalja" (hand chain block). This way it was possible to acquire the information about the offerings of manual products in Finnish markets.

The result of the desk research was a better understanding about the offerings of manual products in the Finnish markets, the price level of products, and the knowledge of technical details. The most important result of the desk research was therefore the overall picture of the whole markets of manual products in Finland. With the help of knowledge gained by conducting the desk research, it was possible to design research; used methods, sources of knowledge, and possible outcomes more clearly at an earlier stage.

After conducting a desk research, Konecranes' service technicians and product managers were exploited to identify the companies that use manual products. When target organizations were chosen, depth interviews and observation in factories could be started. These interviews resulted in the most important findings in the study. The aim of these interviews was to gain insight into the customer's buying process and the issues effecting on choosing the product and supplier. The most important result of the observation on the other hand was to make sense of the environment where these products are being used and, specifically, what products are used. Therefore, the results of observation were both qualitative and quantitative. Photos were also taken during the observation. This was done to be able to give a clearer picture about the environment where the products are being used and for documenting this information should it be needed in the future. The results of the depth interviews on the other hand were mainly qualitative (buying process and effecting issues) but also some quantitative facts (variations and range of products in use) resulted from these interviews.

Two people, the interviewer and the respondent, carried all of the interviews. The length of an interview varied from 45 minutes up to 2 hour. According to McGivern (2013, p. 162) that is the typical length for depth interviews. With this kind of multi-dimensional research method it is hard to define the total length of an actual interview because observation and depth interview were carried out partly at the same time.

Interviews were carried out with the help of a block and ballpoint pen. Notes were taken during the interview so that transcribing the most important issues after the interview was possible. The interviewer also had a ready Excel template that included all the important issues that needed to be filled to reach the objectives of the study. This template was done before the first interview and it was checked to include all the important issues. After transcribing the notes, the template was filled. This template is attached in appendixes (appendix 3). The template was built up in a way that it was easy to fill after the interview. It included boxes that were filled according to the notes.

5.4. Results

Hague et al. (2013) state that the structure of the study - that consist of a beginning, a middle part, and an end - is key to a good market research. In the beginning, theoretical views and background of the study were introduced. The middle part, on the other hand, consisted of used methods and detail to the findings. In the latest chapter, used methods - interview and observation - and execution of the research were discussed.

In this chapter, the results of the empirical part of the study will be presented. Results were reached with the help of depth interviews and quantitative observation. Desk research was also exploited before and after observation and interviews as Hague et al. (2013) propose. Results are based on information collected from target organizations, and confirmed with the help of information collected by desk research. This chapter is divided into two parts; building up a product line, and defining buying processes for manual products in target organizations. At first, introducing results of observation will be presented and after that results of depth interviews will be declared.

5.4.1. Results in general

Reporting and presenting results is last step in market research (Mooi & Sarstedt 2011, p. 20) and it is an important part of research because management is making business decisions according to propositions (Malhotra & Birks 2003, p. 645). The main objectives of the study are to interpret findings, to answer initial problems, and enable better decision-making. It is also vital to design in which way the results are being presented. Findings will be presented correspondingly to used methods: depth interviews and observation.

Mooi & Sarstedt (2011, p. 286) state that market researchers usually provide a written report summarizing key findings but Hague et al. (2013) add that PowerPoint presentations have replaced traditional 10,000- to 15,000-word reports. Mooi & Sarstedt (2011, p. 287) also say that the report should fulfill the need of different audiences. In this study, when presenting the results, we must consider both audiences; academics as its role of a Master's Thesis, and practitioners (Konecranes) for reaching their objectives according to market decisions. Therefore, in this case, both written report and a PowerPoint presentation will be provided. The PowerPoint presentation (Appendix 4) is meant to satisfy the needs of practitioners of Konecranes and this document on the other hand is meant to satisfy the need of academics as serving the purpose of a Master's thesis.

5.5. Product line - observation

One of the main objectives of this study was to build up a product line of manual products for Finnish markets. The aim was to define which products should Konecranes take into its offering from the total line of manual products. The best way to do that was considered to be quantitative observation.

Malhotra & Birks (2003, p. 244) divided quantitative observation methods to personal observation, electrical observation, audit, content analysis, and trace analysis. For this purpose, when examining physical records or performing inventory analysis, an audit method being carried out as a personal observation is the most useful.

With the help observation, a great amount of quantitative data about the manual products in use in factories in Finland was collected. This data was collected from 11 factories in Finland (6 paper mills, 4 steel industry factories, and 1 water refine plant). The results showed that in paper mills there are a lot more manual products in use than in other factories. This is based on the fact that, in paper mills that were visited, there were from 150 to 350 manual products in use in each factory, whereas in other factories there were just 5-20 manual products in use. Also the fact that it was possible to find just a few factories - other than paper mills that were even meaningful to visit considering this study and its objectives - shows the importance of paper mills for the study. While observing, the specifications and facts of 846 manual products were collected. Results showed that there is a lot more Lever pullers (72%) in use than hand chain blocks (28%).

When thinking about the environment and applications where manual products are being used, research showed that these products are being used mainly for maintenance, repair, and installation. Places these products are being used are either too narrow and tight for electric chain hoist, or usage of the product is so infrequent so that it is much more cost effective to choose manual product than an electric chain hoist (1,000kg hand chain block circa 150 euros vs. similar electric chain hoist circa ten times more). Also, most manual products are movable and used in different locations. Therefore, carrying a manual product from one place to another is much more convenient than carrying a heavier electrical one. Especially one of the most popular lever pullers - 250kg - is very handy and of a compact size, so it is very easy to carry it with when going to perform an installation.

The study showed that small lever pullers (250kg, 500kg, and 750kg) are used mainly for installation and bigger lever pullers and hand chain blocks mainly for maintenance. In the case of paper mills they are mainly used for changing a cylinder of a paper machine. Depending on the machine and cylinder this maintenance procedure is carried out from once in a month to once in a year.

Load ranges varied in total from 250kg to 12,000kg. Still the biggest need was for products of load ranges from 250kg to 3,000kg. There were a few manual products for heavier loads than 3,000kg but these products are both more uncommon and more rarely in use so the rebuy of those products is less frequent than the rebuy of products for smaller loads.

The objective was to measure the number of certain products with certain features to occur, so frequency distribution is a most convenient way to present and evaluate the results. Frequency table provides basic information about the products, variations, and frequencies (Malhotra & Birks 2003, p. 449).

Table 5.2. Result of observation

	Lever Puller					Hand Chain Block				
PCS	**1,5m**	**3m**	**4m**	**5m**	**Total**	**3m**	**4m**	**5m**	**6m**	**Total**
250kg	18	78	0	0	96	11	0	0	0	11
500kg	0	94	0	0	94	47	0	3	0	50
750kg	0	106	0	3	109	4	0	4	0	8
1t	0	9	0	3	12	56	2	0	0	58
1,5t	9	162	0	0	171	6	0	4	0	10
2t	0	4	0	0	4	19	1	6	0	26
3t	8	84	0	0	92	30	0	10	0	40
5t	0	6	4	0	10	13	0	1	2	16
6t	0	9	2	8	19	3	2	5	0	10
9t	0	2	0	0	2	1	0	2	0	3
12t	0	0	0	0	0	0	2	1	2	5
Total overall:	**846**	**pcs**			**609**					**237**

Table 5.3. Result of observation (in per cent)

	Lever Puller					Hand Chain Block				
PCS	1,5m	3m	4m	5m	Total	3m	4m	5m	6m	Total
250kg	2 %	9 %	0 %	0 %	11 %	1 %	0 %	0 %	0 %	1 %
500kg	0 %	11 %	0 %	0 %	11 %	6 %	0 %	0 %	0 %	6 %
750kg	0 %	13 %	0 %	0 %	13 %	0 %	0 %	0 %	0 %	1 %
1t	0 %	1 %	0 %	0 %	1 %	7 %	0 %	0 %	0 %	7 %
1,5t	1 %	19 %	0 %	0 %	20 %	1 %	0 %	0 %	0 %	1 %
2t	0 %	0 %	0 %	0 %	0 %	2 %	0 %	1 %	0 %	3 %
3t	1 %	10 %	0 %	0 %	11 %	4 %	0 %	1 %	0 %	5 %
5t	0 %	1 %	0 %	0 %	1 %	2 %	0 %	0 %	0 %	2 %
6t	0 %	1 %	0 %	1 %	2 %	0 %	0 %	1 %	0 %	1 %
9t	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %
12t	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	1 %
Total overall:	100 %				72 %					28 %

The biggest amount of lever pullers there were:

- 250kg, 1,5m and 3,5m
- 500kg, 3m
- 750kg, 1,5m and 3,5m
- 1500kg, 3m
- 3000kg, 3m

The biggest amount of hand chain blocks on the other hand there were:

- 500kg, 3m
- 1000kg, 3m
- 2000kg, 3m
- 3000kg, 3m and 5m

The need for lifting height varied from 1,5m to 8m, but the biggest need was from 1,5m to 3m, and most products had lifting capability up to 3m. The biggest need for 1,5m lift chain was for 250kg lever pullers, because those are mainly used for installation and service technicians are carrying those with them so often. Therefore, the reduce in weight of the product when changing 3m chain to 1,5m chain is a key factor for the need of 1,5m chain lever pullers. Otherwise, longer than 3m lifting chain (mostly 5m) was mainly needed for 3,000kg hand chain block.

5.6. Buying process

The other main objective of the study was to gain customer insight and insight into their buying processes for manual products. The goal was to identify how organizations are making their decisions when purchasing manual products and what issues are affecting on choosing the supplier and brand of the product.

5.6.1. Manual products in general

Manual products are used in factories mainly because of two reasons: they are a cost effective choice for electrical chain hoists and they are usually rarely in use. Because of the infrequent use and expensiveness of electrical chain hoist it is much more cost effective to choose a manual product instead of an electrical one. Therefore, it is not worth spending lot money for electrical chain hoist when the lifting need occurs maybe just once in a month or once in a year in the same place. Manual products are also being used in places where it is more convenient to install a manual product rather than electrical one and, further, a manual product is much easier to carry with.

At the moment, there are numerous different brands of manual products in factories. Even though some organizations are purchase these products through Konecranes, there were only few Konecranes branded manual products in use. The most popular brands were Kito, Vital, Yale, and CM (Columbus McKinnon). These all can be considered as premium line products. Other, so-called normal brands were; Yellow Line, Elephant, Technolift, Carl Stahl, and Buffalo.

5.6.2. Buying process itself

When performing, or even thinking, about performing a purchase, organizations usually acquire information about the product they are about to purchase. They acquire information not just about the product but also about the suppliers and different brands. The knowledge about from which sources organizations are acquiring that information is important to Konecranes for clarifying the buying process.

This study showed that the most organizations are not acquiring any information about these products before their purchase. 9 out of 11 organizations told that they mainly do not acquiring any information before the purchase. Therefore, it is important to be able to provide this information actively to them, before they are even considering of buying a product from somewhere.

Even though “not acquiring any information” was recognized to be most common answer, organizations still recognized few channels where they acquire information; the Internet and regular suppliers they already have contract with. Both of these sources were mentioned by three organizations. Therefore, cherishing good relationships, that service now have with customers, is at the core when trying to sell these products.

Table 5.4. Issues affecting on choosing the product

Decision making process	Responses	Answer rates x/11 organization
Wherefrom information is acquired?	No acquiring	9
	Regular supplier (usually maintenance provider)	3
	Internet	3
Issues affecting on choosing the supplier/brand	Easiness	6
	Price	4
	Brand	6
	Experience/quality of product	5
	Size	2
	Spare part availability	3
	Contract with certain supplier	3
Issues **NOT** affecting on choosing the supplier/brand	Price	4
	Delivery time	5
	Brand	2
Current supplier	Inspection/repairing provider	2
	Tool supplier	5
	Local tool store	4
	Contract dealers	7

The most important issues affecting on choosing the supplier or brand were recognized to be easiness of buying, brand, price, and quality. Surprising was that price and brand were also recognized as not as an affecting issue on buying a manual product.

When considering issues not affecting in choosing the product, delivery time was the most mentioned according to the interviews. That means that delivery time is not important as long as it is still reasonable; that is, the product can be delivered within a week or at least within two weeks. Therefore, Konecranes will be able to handle the deliveries with the help of their warehouse in Finland. As mentioned, price was recognized not to be an affecting issue on buying a certain product as well. Few of those who mentioned price as not an affecting issue said that price still should be reasonable but few of those did not give any importance to the price while buying these products.

5.6.3. Other results

At this point organizations are buying manual products mainly from tool suppliers or from companies they either have supplying or maintenance contracts with. None of the contract dealers came up clearly above the others but Würth, Etra, and Machine Tool were mentioned more than once.

Organizations are mainly doing purchased as a rebuy. Usually they already have manual products and they buy new ones when needed or when old one gets broken. Therefore, contract dealers are easy channels for them to perform a purchase. Out of the target organizations just three (two paper mills and one steel industry organization) said that they buy more than 20 new manual products a year. Otherwise 5 of them said that they buy less than 4 manual products a year. Therefore, Konecranes should actively recognize those organizations that buy new products more often. According to these results, paper mills have much more potential in causing profits to Konecranes with manual products than any other industry.

5.7. Summary

In this chapter the background of the study, used research methods, interviewees and interview structure were introduced. After that execution of the research and results were being presented. There were 11 different organizations where interviews and observations were carried out. Desk research, quantitative observation, and depth interview were chosen as market research methods. Desk research was used for becoming familiar with the topic. Quantitative observation and depth interview on the other hand can be considered as main research methods. Quantitative observation was used for mapping out what kind of manual products are used in factories at the moment. A lot of information was gathered and 846 different products were observed to clarify for which products there should be demand in the future. Depth interviews were on the other hand carried out for clarifying the buying process of the customer – how they are seeking information about the products and how they choose the supplier or purchased product.

The most important findings, when considering quantitative observation, were that the biggest demand is for lever pullers: 1.5t, 750kg, 250kg, 500kg, and 3t. When thinking of hand chain blocks, the biggest demand is for 1t, 500kg, 2t, and 3t products. The most important findings of depth interview on the other hand were categorized; wherefrom customer are looking for information when purchasing a product, issues affecting on choosing the product, and issues that are not affecting on choosing the purchased product. The study showed that customers are mainly not acquiring any information when choosing the product. An important result was also that the most affecting issues on choosing the supplier or product were the easiness of buying, brand, and experience/quality of product.

6. Analysis of results

The ultimate objective of this study was to build up a product line of manual products and understand the buying process of the customer. Now that detailed findings of the study have been presented, analysis of results as well as propositions for Konecranes according to these results can be discussed.

Analysis of results is an important part of the study for confirming the findings and giving suggestion for client organization if possible. When findings have been presented, the most relevant points, in light of the research objectives should be summarized (Mooi & Sarstedt 2011, p. 293). This part must include both the most relevant findings as well as recommendations for management decisions.

In this chapter, findings will be analyzed and main questions of the study answered sub-chapters. After that, results of the study will be evaluated against the theoretical views and propositions. At the end of this chapter, conclusions and suggested action plan for target organizations will be presented.

6.1. Interviewees and observation

Kärkkäinen et al. (2001, p. 166) say that need assessment with industrial customer differs from assessment of the need of the consumer. Therefore, when assessing the needs of industrial customers there should be suitable tools in use that exploit the knowledge of customer's experts. In this research, product users and purchasing personnel from customer organizations were included.

For getting information about industrial customer needs, co-operation between company and customer should be promoted (Kärkkäinen et al. 2001, p. 166). Field sales force was said to be a never ending source of vital information about customer needs (Falvey 1992, p. 10) and Muller (2006, p. 4) states that the customer itself as well as the customer representatives are important sources of customer need information because they will make the choice of suppliers. Kärkkäinen et al. (2000, p. 17) also say that the customer itself is the best expert of its needs. When conducting depth interview all the respondents were representatives of customers. Therefore, the choice in interviewees, and acquiring rightful information from the right sources for being able to clarify the buying process of customer, can be said to be successful.

Kärkkäinen et al. (2011, p. 3) state that buying decisions of industrial customers are being made due to opinions of purchasers, users, managers, and sourcing personnel et cetera. Hence, the purchasing decisions are being made by several functions and people from the buying organization. Therefore, when acquiring information from the customer organization, several people from different activities and functions should be interviewed. When conducting the research, product users, purchasers as well as sourcing personnel were interviewed. Although just one person from each target organization were interviewed, it can assumed that the right personnel were included to the study.

Kärkkäinen (2013) said that field service personnel is also an important source of customer need information because they are near to the customer and gain valuable information in face-to-face contacts with customer. Konecranes' service technicians - who are near to the customer and having face-to-face contacts with them on daily basis - were also exploited in the study. With the help of Konecranes' service technicians, valuable information about needs of customers they are working close to as well as about the purchasing channels that customers are now using was collected. Through those interviews, treasuring and deepening co-operation with Konecranes' service technicians was achieved, so that in the future when implementing sales and marketing campaigns it is easier to exploit them in marketing and selling manual products to customers.

Holt et al. (1985) say that need assessment in industrial markets is mainly done using existing relations with the customers during everyday contacts. That also supports the decision to interview the customer itself. None of the possible new customer organizations with which Konecranes does not yet have lifting equipment service contracts on the other hand were included in the study. That is because of two reasons; knowledge of which ones of them have and use manual products actively in their factories was out of reach, and getting their contact information as well as arranging meetings with them would have been too hard without having proper lifting equipment service contracts with them.

In the chapter 3 the most important information sources of customer and market related information according to (Muller 2006, pp. 4-5; Arantola 2006, p. 56; Xu & Kaye 1995, pp. 25-26; Lackman et al. 2000, p. 8; Marsh & Stock 2006, p. 424; Hislop 2003, p. 166; Kärkkäinen et al. 2011, p. 3) were combined. The following list clarifies with yellow highlight which sources were exploited in this study.

- Sales Force: tacit knowledge and gathered reports according to defined information needs
- Customer service and service personnel
- Customers themselves and their representatives
- Business Intelligence and information products: gathered reports, documents, data in the systems
- Other internal employees and organizational units: employees and units (R&D, marketing, product development) that are involved in products, services or activities

- Distribution channels, industry expert, and consultants
- Social media

Out of these only customer service and service personnel, customers themselves and their representatives, and other internal employees, such as product managers, were exploited. These were chosen because these sources would possess the most valuable information for this purpose. Konecranes' sales force for example was left out from the study because they do not possess (at least according to the knowledge available) enough knowledge about these products because they have not sold these products before.

The amount of depth interviews (11 pcs) can be assumed to be enough for being able to reach objectives that were set for the research in the beginning of the study. That is being supported by Hague et al.'s (2013) proposition that with depth-interviews, 10 interviews would be enough to carry out market research. On the other hand, more interviews with some other than paper mill (now only 5 other than paper mill) industry organizations could have been included. However, manual products are used mainly in paper mills, so closer contacts to them should benefit more in profits in the future. Therefore, that great number of paper mill industry organizations can be said to be justified.

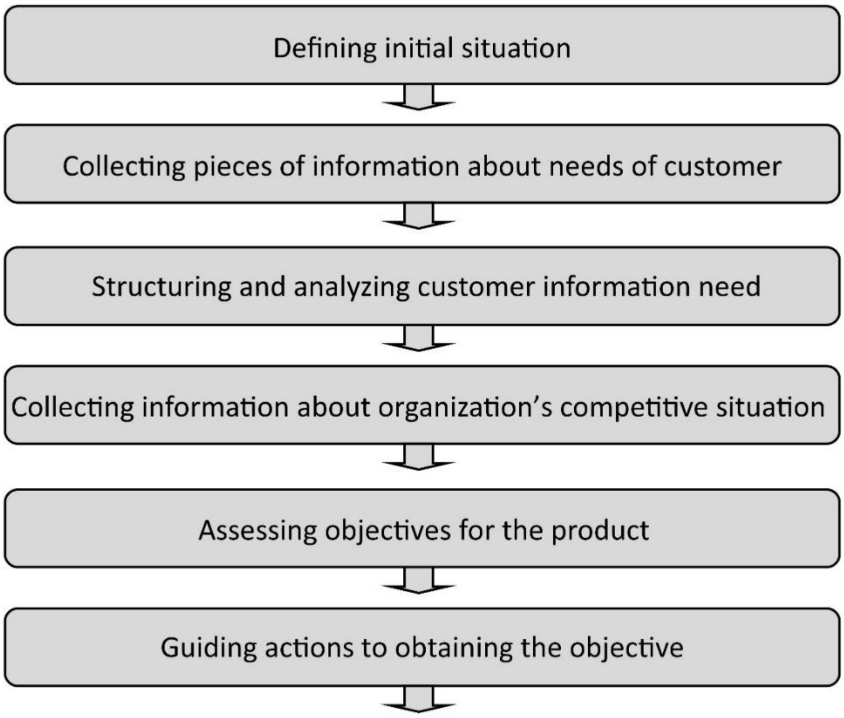
6.2. Customer insight

Customer insight was defined (according to Arantola 2006) to be a procedure that gathers customer related information from all around the organization, and helps to gain deeper insight to customer needs and behavior. She added that most product launches fail because of lack in understanding the customer and its needs. Therefore gaining customer insight is vital for being able to build up a suitable offering for target markets. Muller (2006, pp. 2-3) also emphasizes the importance of segmenting when launching the product. This involves understanding various segments and delivering right products at a right price through right delivery channels to each segment. In this case, the target segment was recognized to be big industry organizations that are already Konecranes' customers. These customers are mainly paper mills, but there is still potential for other industries as well. The most important issue is that Konecranes is able to monitor markets and recognize potential customers due to these manual products.

Fleisher et al. (2007, p. 841) propose that organization should have three kinds of capabilities for gaining customer insight; market and customer intelligence, market research, and customer relationship management. Customer relationship management is at a good level in Konecranes as it serves its customers with lifting equipment maintenance 24/7 with the help of its service technicians. Konecranes's customer service personnel are experts in lifting equipment spare parts and they always look for the solution for the customer's problems. Konecranes also collects feedback from its customers so that they can develop their customer service to be even better all the time. After this market research has been finished and recommendations for Konecranes have been proposed, it can be claimed that customer insight has been reached.

6.3. Product line

When choosing products into a certain product line customer needs should always be considered (Hofer et al. 2007, p. 99) and managing product line is essential in meeting the needs of customer. It is vital that an organization serves its customers with offerings that meet their demand through personalized interactions and services. When bringing new products to markets, an organization must choose and define their target market. Product management is also directly linked to market analysis and market selection (Hutt & Speh 2007, p. 217) so choosing the right market segment for these specific products is vital. In the theoretical part of the study Hague's (2006, p. 19) four directions for companies to expand its business were presented. The third method was to expand business utilizing existing customers to buy new kinds of products. Therefore it can be claimed that the case of this study will fall into Hague's third method of expanding business.



Picture 6.1. Customer need assessment process (According to Kärkkäinen et al. 2000, p. 17)

Kärkkäinen et al. (2000, p. 17) present the process for customer need assessment (Picture 6.1). When comparing this process and the research project, all the same steps were recognized. At first the initial situation was defined: problems and objectives of the study.

After, customer need information was collected with the help of market research techniques that were structured and analyzed with suitable methods. When data was analyzed, findings were confirmed using the knowledge possessed by Konecranes' service technicians and product managers, as well as by collecting information about the competitor's offerings with the help of desk research. After analyzing the data, it was possible to assess objectives for the product; defining product features and various products that Konecranes should take into its manual product offering.

Market segment consists of a group of customers who have similar needs and wants (Kotler & Keller 2012, p. 236). When a target market has been defined, an organization must build up a suitable offering for that specific market segment (Kotler & Keller 2012, p. 32). Product planning and control should always be done carefully, otherwise there will be products that are inconsistent with market needs (Hutt & Speh 2007, p. 217). Different customers have different needs so organizations must build up a plan of how to meet those needs. For being able to do that, an organization must exploit customer and market related data. For this purpose, a study that exploited quantitative observation was conducted.

Quantitative observation can be divided into structured and unstructured technique. Observation in this research was carried out as an audit method where physical records about the products were collected. It can therefore be claimed to be s structured method, because the problem was well defined and objects that had to be observed were known.

Table 6.1. The most used products in target organizations

	Lever Puller					Hand Chain Block				
PCS	1,5m	3m	4m	5m	Total	3m	4m	5m	6m	Total
250kg	18	78	0	0	96	11	0	0	0	11
500kg	0	94	0	0	94	47	0	3	0	50
750kg	0	106	0	3	109	4	0	4	0	8
1t	0	9	0	3	12	56	2	0	0	58
1,5t	9	162	0	0	171	6	0	4	0	10
2t	0	4	0	0	4	19	1	6	0	26
3t	8	84	0	0	92	30	0	10	0	40
5t	0	6	4	0	10	13	0	1	2	16
6t	0	9	2	8	19	3	2	5	0	10
9t	0	2	0	0	2	1	0	2	0	3
12t	0	0	0	0	0	0	2	1	2	5
Total overall:	846 pcs				609					237

Konecranes has a total line of manual products and the aim was to modify that line to fit in the Finnish markets. Observation was performed for clarifying what kind of manual products are used in different factories in Finland. Observation was conducted in the same places than depth interviews. Information about 846 products used in factories (over 500 of these products were used in paper mills) was gathered. The results showed that manual products that were used had lifting height capability from 1.5 meters to 5 meters and load ranges from 250kg to 3,000kg, but still the most needed lifting height was up to 3 meter. The proposition for Konecranes is to take the following items (table 7.2) into its Finnish offering:

Table 6.2. Suggestion for the product line

Lever Puller / Hand Chain Block	Specification	Brand	Load weight	Height of lift
Lever Puller	xKL-250-1.5	Kito	250kg	1,5m
Lever Puller	KL-250-3.5	Konecranes	250kg	3,5m
Lever Puller	KL-500-3.5	Konecranes	500kg	3,5m
Lever Puller	xKL-750-3.5	Kito	750kg	3,5m
Lever Puller	KL-750-3.5	Konecranes	750kg	3,5m
Lever Puller	KL-1500-3.5	Konecranes	1500kg	3,5m
Lever Puller	KL-3000-3.5	Konecranes	3000kg	3,5m
Hand Chain Block	KM2-500-3.5	Konecranes	500kg	3m
Hand Chain Block	KM2-1000-3.5	Konecranes	1000kg	3m
Hand Chain Block	KM2-2000-3.5	Konecranes	2000kg	3m
Hand Chain Block	KM2-3000-3.5	Konecranes	3000kg	3m

Results showed that there are a lot more lever pullers (72%) in use than hand chain blocks (28%). Therefore, more lever pullers than hand chain blocks were included into the product line.

Kotler & Keller (2012, p. 253) state (according to Anderson & Narus 2006) that organizations should build up flexible market offerings to all members of a segment. Observation was performed in 11 different locations including paper mills (6 pcs), steel industry factories (4 pcs), and a water refining plant (1 pcs). Most of the products were used in paper mills so it is justified to build up a product line that suits best for the use in paper mills. However, these same products were also being used in other factories as well.

Hofer et al. (2007, p. 98) state that product definition should be done considering all the stakeholders relevant to the product but the customer should always be at the core when defining the product. This proposition of the products that Konecranes should take into its offering is being done according to actual needs of end customers but it takes into account also the opinions of Konecranes' service technicians as well as product managers related to these products.

Brand and quality were recognized to be one of the important factor in choosing the purchased product. Kito (also Vital and Yale) has a good and well recognized brand that organizations value. Konecranes has contracts with Kito and they are able to sell Kito's manual products with Konecranes branded labels on side of the products. Therefore, a recommendation was given that Konecranes take two of Kito's premium lines products as well into its offering. This proposition is supported by the findings of both depth interviews with customers as well as interviews with Konecranes' service technicians. Especially paper mills seem to value Kito brand the most. The results also showed that two customers out of ten would not even buy any other manual product than Kito branded and few others also preferred Kito products above the others. So, by having two Kito products in manual product offering will give Konecranes an advantage to enter into manual product markets in Finland.

Kito products that should be taken into manual product offering are 250kg and 750kg lever pullers. 250kg Kito lever puller is available only with 1.5m lifting chain but Konecranes' own product can be bought with various lifting chains from 1m to 5m. The recommendation will be that Konecranes should take its own 250kg lever puller with 3m lifting chain. 750kg Kito lever puller on the other hand should be taken with 3,5m lifting chain like all the other lever pullers, because that is the most popular length for lever pullers among the customers. Hand chain blocks should be taken with the 3m lifting chain. This 0,5m difference between the lengths with lever pullers and hand chain blocks is because with lever pullers standard length for the chain is always x,5m (1,5; 1,5; 3,5 et cetera) as with hand chain blocks it is always xm (1,2,3,4,5) sharp. If a customer wants longer than 3m or 3,5m chain they can buy that as an additional spare part from the warehouse where extra chain will be stocked.

Kotler & Keller (2012, p. 350) say that it is essential to distinguish offering so that offering can be differentiated from the competitors and their products. The results showed that the most important factors in choosing the purchased product are easiness of buying, brand, price, and experience/quality. With Kito's premium line it is therefore effective to differentiate the product by quality and recognizability. The so-called normal line on the other hand is also effectively being differentiated by easiness of buying and strong lifting equipment brand. According to Kotler & Keller (2012, p. 263) this gives Konecranes an advantage when competing with other brands. The price of these products on the other hand cannot be considered as differentiation factor. Even though the price is not in a higher level than that of the competitors, it is still not significantly lower. Price was also recognized to be one of the not affecting issues in choosing the purchased product. Therefore, an assumption can be made that differentiation by other facts is more effective than only competing with the price.

Cooper et al. (1999, p. 335) state that product decisions are made based on uncertain and changing information, among dynamic opportunities, considering multiple decision-makers' opinions. Product decisions are always made based on the best and the most up-to-date information that can be exploited. In this study, recommendations for Konecranes in relation to the product line are based on the most up-to-date information that was possible to collect. It is not the absolute truth, but rather the best suggestion that could be provided in a dynamic and changing market environment. Therefore, Konecranes should actively and continuously monitor how these products sell and modify manual product offering in the future if necessary. A product line manager who owns these products should do monitoring actively. In this case Konecranes has a global product manager who owns these products but they should nominate responsible product manager for Finnish markets as well. His or hers responsibilities should include actively modifying offering by monitoring sales and marketing environment as well as comparing prices, quality and product differences against the competitors.

6.4. Depth interview

Malhotra & Birks (2003, p. 207) present their four stage process for analyzing qualitative data; data assembly, data reduction, data display, and data verification. Data analysis in this research was conducted according to that. During the interview, short notes were taken which were expanded right after the interview. Transcribing those notes to a ready template was also made as soon as possible after the interview so that remembering all the relevant issues that should have been transcribed was possible.

After transcribing, organizing, and structuring the data by breaking it down into smaller, easier manageable chunks was made. For displaying the data, spreadsheet was used as suggested by Malhotra & Birks (2003, p. 212). This spreadsheet is presented in table 6.3. The results are also categorized into suitable boxes so that analyzing will be easier. Dividing answers into categories was not easy as the same answer fell in some cases into many categories. That affected the results in a way that the answer rate for a certain question exceeded the total rate (11).

Table 6.3. Analysis of results of depth interview

Decision making process	Responses	Answer rates x/11 organization
Wherefrom information is acquired?	No acquiring	82 %
	Regular supplier (usually maintenance provider)	27 %
	Internet	27 %
Issues affecting on choosing the supplier/brand	Easiness	55 %
	Price	36 %
	Brand	55 %
	Experience/quality of product	45 %
	Size	18 %
	Spare part availability	27 %
	Contract with certain supplier	27 %
Issues **NOT** affecting on choosing the supplier/brand	Price	36 %
	Delivery time	45 %
	Brand	18 %
Current supplier	Inspection/repairing provider	18 %
	Tool supplier	45 %
	Local tool store	36 %
	Contract dealers	64 %

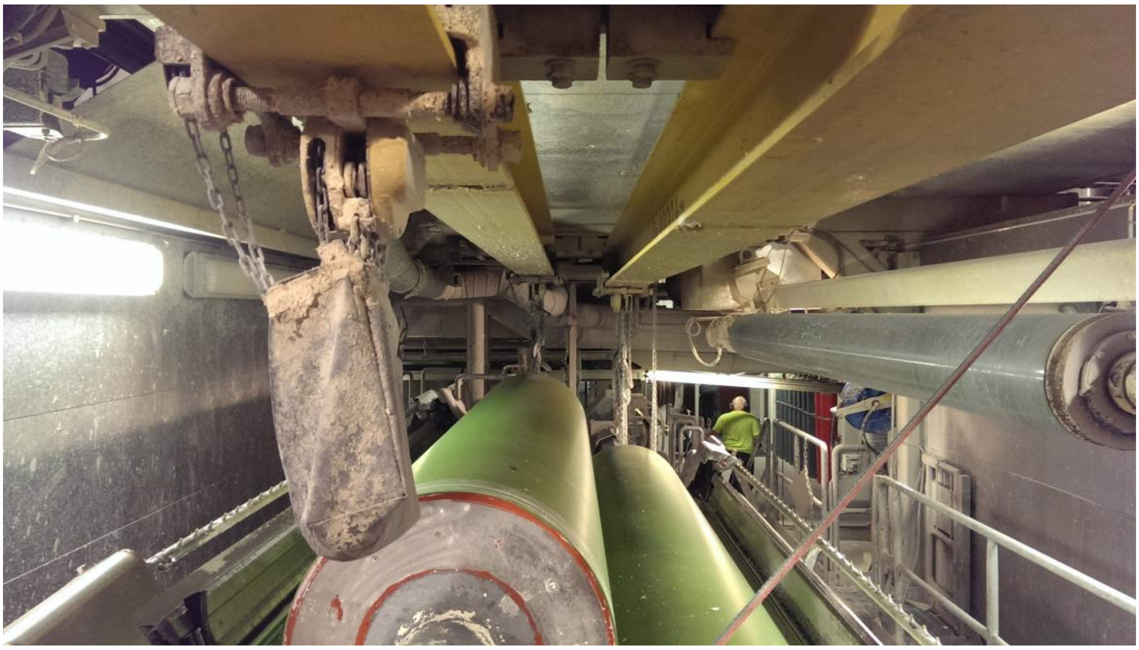
As already discussed, the most important issues affecting on choosing the supplier or brand were recognized to be easiness of buying, brand, price, and quality. When thinking about supplier and easiness in total, it is the most affecting issue on the decision of where to buy the product. This is worth considering because, in most cases when supplier was mentioned as an important factor in choosing the product, it was because of easiness to deal with supplier. Also when considering brand and quality in total, assuming that it is an even more important factor on choosing the product can be made. This is due to the fact that when mentioning brand as the most important factor, respondent related the brand straight to the quality of product. This is still not a straightforward assumption that brand and quality in total would get 11 votes, because some organizations mentioned both of these as an important factor when choosing a product to purchase.

6.5. Buying process

The buying process in industrial organizations is a complex issue (Kärkkäinen et al. 2011, p. 3) and one must understand all the influencing issues according to buying behavior.

Hutt & Speh (2007, p. 63) said that organizational buying process consist of different stages that include problem recognition and description of need, supplier search, analysis and selection, and performance preview. Interviews conducted in this study covered all of these stages. First, environments where these products are used and why exactly manual products are used in those environments were clarified. After that it was examined how customers search the suppliers and what issues affect on their choosing of the supplier or product.

Environments and applications when manual product are used in factories were divided mainly into two categories; maintenance and installation. Maintenance use in factories (especially in paper mills) usually occurs when changing a cylinder of the paper machines. When changing cylinders there were normally both hand chain blocks and lever pullers in use depending on the preference of the technician. The other one from the main using applications were installation. Installation can be almost anything that happens in factories. In this case there were mainly lever pullers in use and technicians preferred light 250kg lever pullers because they are easy to carry with. The following photos present few examples of the environments where manual products are used.

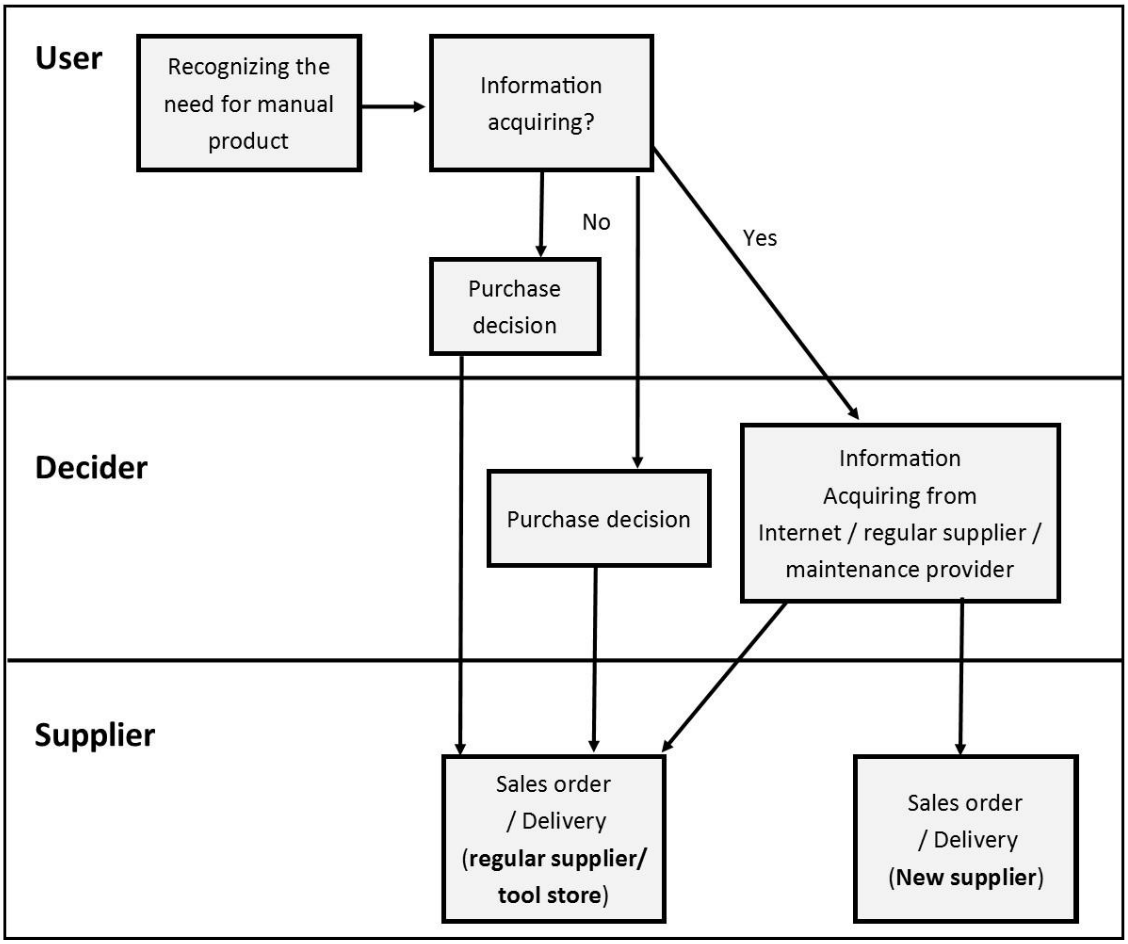


Picture 6.2. Hand chain block in narrow environment in paper mill

Picture 6.3. Hand chain block in an environment where it is used unfrequently

Picture 6.4. Lever pullers in use in a steel casting factory

The issues behind choosing manual product were recognized to be its low cost (vs. electrical chain hoist), infrequent need (maintenance), and the easiness to carry it with (both maintenance and installation). The price difference between manual chain hoist and electrical chain hoist is remarkable and infrequent need for lifting, especially in maintenance (paper machine cylinder), has led the organizations to use manual products in these applications rather than using electrical chain hoists. The easiness of carrying manual hoists to the place where the need occurs also came up as one of the most important issue. This applies also with maintenance use but especially for installation. In some factories technicians carry lever pullers all the time with them so small size and lightweight is a relevant issue for choosing a manual product as well. The following picture (Picture 6.5) shows buying process of customers:



Picture 6.5. Buying process of customers for manual products

When the need for the manual product has been discovered, customers start to search for a supplier. The study showed that most organizations do not search any information on possible suppliers. This is not a traditional procedure of the buying process of industrial customer but the reason for this is likely the low cost of the product. With this cheap product, industrial customers most likely buy it where they can get it in the easiest way.

This is what the study showed as well; the easiness of buying is one of the most important issues in choosing the supplier or product. In most cases this leads to purchasing a manual product from the same place where the company has bought them before and that is most likely the reason for an organization not to acquire any information when choosing the product.

Other important issues affecting in buying decision of industrial customer were recognized to be price, brand/experiences/quality, and size of the product. Like said, it was surprising that the price of the product was both an affecting issue and not affecting issue. That might be the result from the easiness of buying being the most affecting issue (as long as the price is reasonable) and companies' recommendations to buy from trusted and favored suppliers as Brassington & Pettitt (2007, p. 98) state.

Kärkkäinen et al. (2011, p. 3) state that industrial organizations are making their buying decisions based on physical performance and personal selling rather than only on psychological attributes and advertising. Findings in this study support that proposition by revealing that quality and brand are the most important factors affecting the choice of the product. Also the fact that companies are buying these products from their regular suppliers supports the fact that personal selling is an important thing with these products. Therefore, it cannot be overrated how important Konecranes' service technicians are in marketing and as a sales channel.

Kotler & Keller divide the buying situation in industrial markets to three categories; straight rebuy, modified rebuy, and new task. In this case, when Konecranes is having existing customers who have not bought these products from Konecranes, we can assume the case to be modified rebuy. In the case of modified rebuy it requires more participation from both buyer and seller.

Therefore, this requires a great amount of participation and large amount of information sharing both from customer to Konecranes and from Konecranes to customer. Konecranes has to make their customers aware of the new products they are selling and they must deliver the information about the core benefits of the product. According to Kotler & Keller (2012, p. 208), manufacturer's brand name recognition is important in establishing trust when customer is making a new task buying. Considering this, Konecranes has a strong brand in Finnish markets to sell lifting equipment so it should be easy to establish trust among the customers.

In Kotler & Keller's (2012, p. 210) act of dividing participants in buying process were recognized to be initiators, users, influencers, deciders, approvers, buyers, and gatekeepers. Buying process of manual products - according to the study - on the other hand includes only initiator/user and decider/buyer. That is because these products are relatively cheap so there normally is no need to request permission to purchase a product from higher than the superior of the actual user of the product. Users also usually possess the best knowledge whether or not they need a new product and what specifications they require from the product.

When comparing the findings and Best's (2012, p. 185) definition of influencing factors on customer needs in business-to-business markets, it can be recognized that these factors are mainly related to opinions of users, frequency of purchase, and applications where products are being used. The most important issues affecting on choosing the product can be seen to be related to usage behavior. Therefore, Konecranes must concentrate on affecting the user's opinions when marketing and selling these products as well as choosing the suitable products according to the applications where customers are using these products.

6.6. Summary

In this chapter results of the study were analyzed. The most important results were already presented in chapter 5 and this chapter included more detail and analyzing of the results. Based on the analysis of the results, the suggestion for Konecranes is to take two Kito lever pullers (250kg and 750kg) into its offering. Other lever pullers that Konecranes should take into its offering are: 250kg, 500kg, 750kg, 1500kg, and 3,000kg. All of these should be taken with the height of lift 3,5m except the small 250kg Kito lever puller that should have lifting capability of 1.5m. Hand chain blocks that should be taken into offering are: 500kg, 1000kg, 2,000kg, and 3,000kg. All of these should have a lifting capability to 3m.

The most important results of depth interviews were also presented already in chapter 5. Based on that information the buying process of customer could be defined. Customers are mainly not acquiring any information when purchasing manual products. And when they are choosing a product to be purchased, the most affecting issues were recognized to be easiness of buying and brand. Therefore, Konecranes should provide these products to customers in the easiest way possible. The best way to do that is to utilize Konecranes' own service personnel to market and offer these products to customers always when they are in contact with them. Buying decisions are in most cases done by users of the products and Konecranes service technicians are usually in contact with them. Therefore the role Konecranes' service technicians is at the core when selling these products.

7. Discussion and further investigation

In the beginning, the initial problem and objectives for this study were defined. The ultimate objectives were to build up a product line of manual products for Finnish markets and to gain insight into customer's buying processes. For being able to do this, sub questions and sub objectives that would help to reach ultimate objectives were stated.

After introducing problems and objectives of the study, theoretical views for product management and how to build up a product line were introduced. After that, customer need and information that should be exploited to be able to build up a suitable product line for target markets were defined. When these had been discussed, different sources of customer need information were defined so that it would be possible to define precise customer needs according to these products. Lastly, in the theoretical part of this study, market research and different techniques to acquire information from suitable sources were introduced.

When comparing the relationship between initial objectives and results of the study, it can be claimed that these objectives were successfully reached. Information needed, for being able to both to define suitable product line and offering Konecranes suggestions for suitable marketing and sales channels for these specific products, was acquired and analyzed properly. Utilizing right market research techniques and exploiting right information sources to gain customer insight was also successfully reached.

Malhotra & Birks (2003, p. 656) state that after presenting the results, the researcher should help the client to understand and implement the findings and take follow-up action. In this chapter, the summary of suggestions that have been led from the results as well as recommendations for marketing and sales channels will be provided. At the end of the chapter, the successfulness of the study and additional research will be evaluated.

7.1. Used methods and recommendations

In the theoretical part, it was argued that customer intelligence is both quantitative and qualitative analysis including both statistics and insight into customers buying behavior. Therefore conducting a research including both qualitative (depth interview) and quantitative (observation) methods was justifiable for this purpose. Depth interviews were stated to be a suitable method when interviewees are geographically apart, and processes need to be described. Therefore, depth interview can be seen as an appropriate qualitative method for the purpose of this study. As a quantitative method, quantitative observation can also be seen as a suitable method, because it was stated to be suitable when the case is to carry out inventory for physically objects. With the help of these methods, ultimate objectives were successfully reached and presenting recommendations for Konecranes were able to be presented.

According to this study, recommendation for product line of manual products for Finnish markets (as we showed in last chapter) will be as follows:

Table 7.1. Suggestion for the product line

Lever Puller / Hand Chain Block	Specification	Brand	Load weight	Height of lift
Lever Puller	xKL-250-1.5	Kito	250kg	1,5m
Lever Puller	KL-250-3.5	Konecranes	250kg	3,5m
Lever Puller	KL-500-3.5	Konecranes	500kg	3,5m
Lever Puller	xKL-750-3.5	Kito	750kg	3,5m
Lever Puller	KL-750-3.5	Konecranes	750kg	3,5m
Lever Puller	KL-1500-3.5	Konecranes	1500kg	3,5m
Lever Puller	KL-3000-3.5	Konecranes	3000kg	3,5m
Hand Chain Block	KM2-500-3.5	Konecranes	500kg	3m
Hand Chain Block	KM2-1000-3.5	Konecranes	1000kg	3m
Hand Chain Block	KM2-2000-3.5	Konecranes	2000kg	3m
Hand Chain Block	KM2-3000-3.5	Konecranes	3000kg	3m

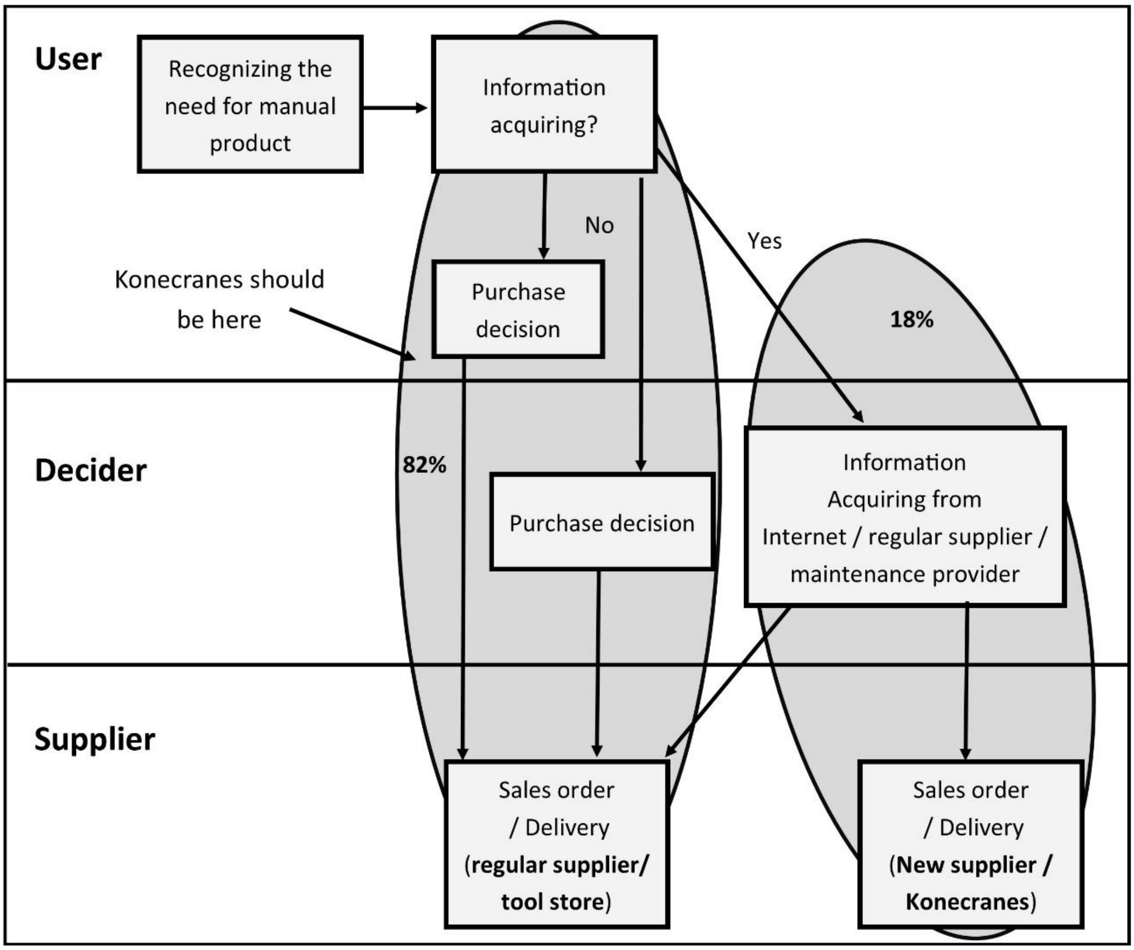
The decision making process of customers according to manual products can be summarized as follows:

Table 7.2. Decision making process with manual products.

Decision making process	Responses	Answer
Wherefrom information is acquired?	No acquiring	82 %
Issues affecting on choosing the supplier/brand	Easiness Brand	55 % 55 %
Issues **NOT** affecting on choosing the supplier/brand	Delivery time	45 %
Current supplier	Tool supplier Contract dealers	45 % 64 %

This table shows that customers are mainly not acquiring any information about the product when performing a purchase. The most important issues when choosing the product or supplier are easiness of buying and brand. Therefore, taking Kito products into offering and making buying as easy possible for customers are vital issues when competing in the markets of manual products. In the latest chapter, easiness of buying and a certain supplier, as well as brand and quality was strongly linked together according to the respondent's opinions. Therefore, the role of both easiness of buying and brand are the most vital issues affecting on the customers opinions when choosing the supplier or brand.

Like picture 7.1 shows, customers are now purchasing products mainly from regular suppliers that they have contract with. Therefore, Konecranes should put a lot of effort in becoming a regular supplier for customers. This can be done by offering them manual products in the easiest way. The next picture describes the buying process of customers for manual products:



Picture 7.1. Buying process of customers for manual products.

This picture presents division of process whether customer organization is acquiring information or not when performing a purchase. Picture shows that 82 per cent do not acquire any information and buy products from regular suppliers or tool stores. For becoming a regular supplier, Konecranes should put lot of effort in marketing these products with the help of service technicians who have having face-to-face contact with customers on a daily basis.

7.2. Marketing and sales channels

In the theoretical part, it was stated that when selling products in business-to-business markets, sales personnel have a much closer contact to the customer than in business-to-consumer markets. It was also argued that both marketing representatives and front-line service personnel should be exploited actively in the sales process. This assumption was recognized also in the empirical apart of the study, like presented in the last subsection. Especially Konecranes service technicians should actively be exploited in the processes of marketing and selling manual products.

Best (2012, p. 279) says that product line can be thought to be either long or narrow. Proposition given to Konecranes was to take just 11 different products into its manual product line and it can be considered as a narrow product line. Therefore, it requires Konecranes to focus on cost effectiveness and marketing. Cost effectiveness can be considered as relatively low because, from Konecranes, taking these products into offering does not require any or just a little effort to stock these products and send these to customers like any other spare parts from the warehouse. There also will be no manufacturing costs because these products are being ordered as ready spare parts from France. Marketing on the other hand needs a lot of focusing and resources. As the results show, the best marketing channels are the Internet and service technicians.

Konecranes now has their own wide websites that include all the information about the organization itself, equipment, services et cetera that they provide to its customers. Manual products have their own sub websites under lifting equipment in Konecranes web pages. However, this webpage is not very attractive for customers so Konecranes should put effort to build up or modify the page so that it would be more attractive to the customers and buyers of these products. At the moment, only a phone number is provided if a customer wants to make an invitation for tenders.

The most important thing when marketing these products is to provide service technicians with information and knowledge of these products. It was recognized that the most effective way is to provide information to branch managers (superior of service technician) is via email. Also handouts and brochures should be very effective when providing information about these products to service technicians and customers. These actions will be executed later after this study, and all the information will be delivered for all service technicians, branch managers, and district managers (superior of branch manager). Actual way of making service technicians aware of offering and motivated to sell these products is that branch managers are introducing these brochures and handouts in their monthly meetings with service technicians.

7.3. Validity and reliability

Information acquired for this study was both qualitative and quantitative. Quantitative data was collected for building up a product line, whereas qualitative data was collected for being able to clarify the buying process of customers. As the data has been collected, it is important to be able to evaluate the validity and reliability of that data.

Quantitative data was collected by visiting Konecranes' customers and observing manual products they use actively. That data consisted of 846 products that are used in factories. There were mainly four kinds of information that was collected about the product: the type of product (lever puller or hand chain block), load range, lifting height, and brand. Some factories had only 10-20 products so, in those places, it was easy to collect reliable information about the features about the product. On the other hand, there were three factories that had over 200 manual products in use; hence, all the features of each and every product were impossible to collect. Therefore, the observation had to be done by estimating the amount of each product in the factory.

For example, when there were 200 manual products in a factory, estimation had to be performed by counting the approximate amount of lever pullers and hand chain blocks. After that, estimation had to be done for various products that have different features. Load range and the amount of the products that have the same load range capability were easy to evaluate. Lifting height, on the other hand, for each and every product was harder to evaluate. These estimations were performed with respondents of the target organization. This kind of estimation will of course results in errors in the gathered data. Still, those errors that these estimations could have caused should not be big enough to effect on the suggestions on which product Konecranes should take into its product line. This is due to two reasons; when preliminary results were proposed to Konecranes' product managers and service technicians, they agreed that these are the most used and asked products, and, furthermore, the offerings of the competitors do not differ a lot from the product offering recommended in this study.

The data collected can also be assumed to be valid. With the help of the data collected, providing a comprehensive suggestion for Konecranes of which products they should take into their offering is possible. The validity of the gathered qualitative data can also thought to be valid. A lot qualitative information was collected by conducting depth interviews in the target organizations. Because of the nature of these interviews – less structured interview guided by the list of main topics that should be discussed – gathered data includes, of course, not so valid information for the main objectives. Still, all the information required to reach the objectives of the study was able to be collected. And the knowledge (not straightly related to objectives) that was gained while conducting those interviews, gave a better picture of the Finnish markets of manual products for the researcher.

The reliability of the qualitative data that was collected can also be thought to be reliable. That data was acquired from the people working closely with the manual products; either by using the products, making buying decisions, or both using the products and making the purchasing decisions.

7.4. Further investigation

In this study, large organizations with which Konecranes already has maintenance contracts were chosen as a target segment. Nevertheless, there is a great potential in smaller repair shops for manual products as well. According to this study, it cannot surely be said that the need for the products and product variants will be the same in that segment as well. However, it can be assumed that satisfying the need of smaller repair shops is possible with the product line built up according to this study. But which ones of these products are the most needed in that segment cannot be said surely. Also, marketing and selling products for these customers is much harder than for larger, already existing customers. Konecranes is implementing its e-commerce somewhere in summer 2015. That should be, at least at this point, the most effective channel to sell manual products for both smaller repair shops and individual customers. With e-Commerce it is possible to reach larger audience and sell these products effectively online.

In the theoretical chapter, Porter’s five-force model that determines if the specific market is attractive in the long run was introduced. These forces are; threat of new entrants, bargaining power of buyers, threat of substitute products or services, bargaining power of suppliers, and rivalry among existing competitors. Hague et al. (2013) also stated that, when developing a product or offering, it essential to recognize competitor products and prices, threats and barriers that could prevent the success of product, optimum price of product, and features and promotions that lead to new customers. Even though desk research was exploited to compare suggestion of product line for Konecranes against the competitor’s one, more systematic comparison including price level of the products should be done as well. Also, the barriers that could prevent the successfulness of these products in these markets could be examined as well.

With the help of this study, a lot of valuable customer related knowledge and customer insight was gained. The issue of how Konecranes should exploit this information in the future should be considered as well. Also the state of Konecranes’ ability to exploit customer and market related knowledge in general should be examined so that even better products and offerings for specific markets could be developed.

References

Anderson, J.C. & Narus, J.A. 2006. Excelling in Today's Multimedia World. Landor, Economist Conferences.

Arantola, H. 2006. Customer Insight - Uusi väline liiketoiminnan kehittämiseen. Juva, WS Bookwell Oy. 158 p.

Best, R. 2012. Market-Based Management - strategies for growing customer value and profitability. 6th ed. Prentice Hall, New Jersey, Pearson Education Inc,. 576 p.

Brassington, F. & Pettitt, S. 2007. Essentials of marketing. 2nd ed. Edinburgh, Pearson Education Limited. 545 p.

Burke, G., Clarke, L., Molian, D. & Barrow, P. 2008. Your Customers and Competitors. In: Burke, G., Clarke, L., Molian, D. & Barrow, P. (ed.). Growing Your Business: A handbook for Ambitious Owner-Managers. Taylor & Francis e-Library. pp. 29-49.

Chen, I.J. & Popovich, K. 2003. Understanding customer relationship management. Business Process Management Journal 9, 5, pp. 672-688.

Chesbrough, H. 2003. Open Innovation - The new imperative for creating and profiting from technology. Boston, Harvard Business Press. 232 p.

Choo, C. 2005. The Art of Scanning the Environment. 25, 3, pp. 21-24 Saatavissa: http://onlinelibrary.wiley.com/doi/10.1002/bult.117/pdf.

Choo, C. 2002. Information Management For The Intelligent Organization - The Art of Scanning Environment. 3rd ed. Medford, Information Today, Inc. 325 p.

Choo, C. 1998. The Knowing Organization - How Organizations Use Information to Construct Meaning, Create Knowledge, and make Decisions. New York, Oxford University Press. 298 p.

Cooper, R., Edget, S. & Kleinschmidt, E. 1999. New Product Portfolio Management: Practices and Performance. 16, 4, pp. 333 [viitattu 2.7.2014]. Saatavissa: http://onlinelibrary.wiley.com/doi/10.1111/1540-5885.1640333/pdf.

Crouch, S. & Housden, M. 2003. Marketing Research for Managers, Third Edition. 3rd ed. Great Britain, Taylor & Francis. 361 p.

Davies, R. & Day, B. 2008. Customer intelligence. Digital Perspectives [verkkolehti]. pp. 8.7.2014 Saatavissa: http://connection.ebscohost.com/c/articles/34947408/customer-intelligence.

De Luca, L. & Atuahene-Gima, K. 2007. Market Knowledge Dimensions and Cross-Functional Collaboration: Examining the Different Routes to Product Innovation Performance. Journal of Marketing 71, 1, pp. 95-112.

Falvey, J. 1992. Sales force management: Field Intelligence. Sales and Marketing Management 144, 14, pp. 10-11.

Festervand, T., Grove, S. & Reidenbach, E. 1986. The sales Force as Marketing Intelligencec System. Journal of Business and INdustrial Marketing 3, 1, pp. 53-59.

Fleisher, C.S., Wright, S. & Allard, H.T. 2007. The role of insight teams in integrating diverse marketing information management techniques. European Journal of Marketing 42, 7/8, pp. 836-851.

Frishammar, J. 2003. Information use in strategic decision making. Management Decision 41, 4, pp. 318-326.

Global Intelligence Alliance. . Intelligence process - Turning Data into Insight. 2013. www.globalintelligence.com, Global Intelligence Alliance.

Griffin, A. 1997. Drivers of NPD success: The 1997 PDMA report. Product Development & Management pp. 28.

Grönroos, M. 2006. Mahdollisuuden aika – Kohti virtuaalista organisaatiota. Tampere, Tammer Paino. 272 p.

Hague, P., Hague, N. & Morgan, C. 2004. Market Research in Practice - A Guide to the Basics. 1st ed. Great Britain, Kogan Page Publishers. 272 p.

Hague, P., Hague, N. & Morgan, C. 2013. Market Research in Practice: How to Get Greater Insight from Your Market. 2nd ed. Great Britain, Kogan Page. 256 p.

Hague, P. 2006. A Practical Guide To Market Research. Guildford, Grosvenor House Publishing Ltd. 198 p.

Hannon, J. 1997. Leveraging HRM to Enrich Competitive Intelligence. Human Resource Management 36, 4, pp. 409-422.

Hannula, M. & Pirttimäki, V. 2005. A Cube of Business Information. In. Journal of Competitive Intelligence and Management. 3, 1, pp. 34.

Hirschowitz, A. 2001. Closing the CRM loop: The 21st century marketer's challenge: Transforming customer insight into customer value. Journal of targeting, Measurement and Analysis for Marketing 10, 2, pp. 168-178.

Hislop, D. 2003. Knowledge integration processes and the appropriation of innovations. European Journal of Innovation Management 6, 3, pp. 159-172.

Hofer, R., Zimmermann, D. & Jekal, M. 2007. Alignment of Product Portfolio Definition and User Centered Design Activities. 4550, pp. 98-107 [viitattu 2.7.2014]. Saatavissa: http://link.springer.com/chapter/10.1007/978-3-540-73105-4_11.

Holt, K., Geschka, H. & Peterlongo, G. 1985. Need assessment: a key to user-oriented product innovation. R&D Management 15, 3, .

Hutt, M. & Speh, T. 2007. Business Marketing Management: B2B. 9th ed. Mason Ohio, Thomson South-Western. 658 p.

Ipe, M. 2003. Knowledge sSharing in Organizations: A Conceptual Framework. Human Resource Development Preview 2, 4, pp. 337-359.

Ives, W., Torrey, B. & Gordon, C. 2000. Knowledge Sharing Is a Human Behavior. In: Morey, D., Maybury, M. & Thuraisingham, B. (ed.). Knowledge management - Classic and Temporary Works. London, The MIT Press. pp. 99-132.

Jussila, J.J., Kärkkäinen, H. & Leino, M. 2012. Learning from and with Customers with Social Media: A Model for Social Customer Learning. International Journal of Management, Knowledge and Learning 1, 1, pp. 5-25.

Koester, E. 2010. Green Entrepreneur Handbook: The Guide to Building and Growing a Green and Clean Business (What Every Engineer Should Know). London, Taylor and Francis Group, LLC. 406 p.

Konecranes . Konecranes. 02.01.2015 [viitattu 1/2015]. Saatavissa: http://www.konecranes.com/equipment.

Konecranes . 15.01.2015 [viitattu 3/2015]. Saatavissa: http://www.konecranes.com/service-old.

Konecranes . 20.1.2015 [viitattu 3/2015]. Saatavissa: http://www.konecranes.com/equipment/hoists/electric-chain-hoists.

Konecranes . 16.1.2015 [viitattu 3/2015]. Saatavissa: http://www.konecranes.com/equipment/hoists/manual-hoists.

Konecranes Konecranes - Industries. Konecranes. 01.01.2015 [viitattu 03/2015]. Saatavissa: http://www.konecranes.com/industries/port-equipment-services.

Koskinen, A., Pirttimäki, V. & Hannula, M. 2005. Liiketoimintatiedon hallinta suomalaisissa suuryrityksissä vuosina 2002-2005. 21.

Kotler, P. 2002. Marketing Management. 11th ed. Upper Saddle River, NJ, Prentice Hall. 768 p.

Kotler, P. & Keller, K. 2012. Marketing Management. 14th ed. Edinburgh, Pearson Education Limited. 679 p.

Kotler, P. 1991. Marketing Management - Analysis, Planning, IMplementation and Control. 7th ed. London, Prentice-Hall. 756 p.

Kärkkäinen, H., Piippo, P., Salli, M., Tuominen, M. & Heinonen, J. 2000. Asiakastarpeista tuotteiksi ja palveluiksi. 2nd ed. Helsinki, Metalliteollisuuden Keskusliitto, MET. 88 p.

Kärkkäinen, H., Jussila, J. & Janhonen, J. 2011. Managing Customer Information and Knowledge with Social Media in Business-to-Business Companies. i-KNOW '11 Proceedings of the 11th International Conference on Knowledge Management and Knowledge Technologie, 7.9.2011. New York, ACM.

Kärkkäinen, H. 2013. Tarvetiedon lähteitä. Tampere University of Technology, Tiedonhallinnan ja logistiikan laitos. Uuden tiedon luominen .

Kärkkäinen, H., Piippo, P. & Tuominen, M. 2001. Ten tools for customer-driven product development in industrial companies. International Journal of Production Economics 69, 2, pp. 161-176.

Lackman, C., Saban, K. & Lanasa, J. 2000. The contribution of market intelligence to tactical and strategic business decisions. Marketing Intelligence & Planning 18, 1, pp. 6-8.

Leary, B. 2008. Social CRM: Customer Relationship Management in the Age of the Socially-Empowered Customer. CRM, Essentials, LLC pp. 9.

Malaval, P., Bénaroya, C. & Aflalo, J. 2014. Innovation and Product Management. In: Malaval, P., Bénaroya, C. & Aflalo, J. (ed.). Aesrospace Marketing Management - A Handbook for the Entire Value Chain. Springer. pp. 171-232.

Malhotra, N. & Birks, D. 2003. MARKETING RESEARCH An Applied Approach. 3rd ed. Edinburgh, Pearson Education Limited. 786 p.

Marsh, S. & Stock, G.N. 2006. Creating Dynamic Capability: The Role of Intertemporal Integration, Knowledge Retention, and Interpretation. The Journal of Product Innovation Management 23, 5, pp. 422-436.

Matthing, J., Sande´n, B. & Edvardsson, B. 2004. New service development: learning from and with customers. INternational Journal of Service Industry Management 15, 5, pp. 479-498.

McGivern, Y. 2013. The Practice of Market Research - An Introduction. 4th ed. United Kingdom, Edinburgh, Pearson. 572 p.

McGrath, M. 2001. Product Strategy for High-Technology Companies. 2nd ed. New York, McGraw-Hill. 378 p.

Mooi, E. & Sarstedt, M. 2011. A concise Guide to Market Research. Berlin, Springer. 307 p.

Muller, M. 2006. Building blocks of competitive intelligence - sales and customer intelligence. South African Journal of Inofrmation Management 8, 4, .

Nordlund, H. 2009. Constructing Customer Understanding in Front End of Innovation. Doctoral. Tampere. Faculty of Ecnomics and administration, University of Tampere. Customer understanding, innovation, front end, customer knowledge, knowledge processes, space. 190 p.

O'Cass, A. & Viet Ngo, L. 2012. Creating superior ustomer value for B2B firms through supplier firm capabilities. Industrial Marketing Management 41, 1, pp. 125-135.

Pals, N., Steen, M., Langley, D. & Kort, J. 2008. Three approaches to take the user perspective into account during new product design. International Journal of Innovation Management 12, 3, pp. 275-294.

Parasuraman, A., Grewal, D. & Krishnan, R. 2004. Marketing Research. Boston, Charles Hartford. 643 p.

Pirttilä, A. 1997. Competitor Information and Competitive Knowledge Management in a large, Industrial Organization. Doctoral. Lappeenranta. Lappeenranta University of Technology. 175 p.

Porter, M. 2008. The Five Competitive Forces That Shap Strategy. Harvard Business Review pp. 23-41.

Riege, A. 2005. Three-dozen knowledge-sharing barriers managers must consider. Journal of Knowledge Management 9, 3, pp. 18-35.

Rozell, E., Pettijohn, C. & Parker, S. 2004. Customer-Oriented Selling: Exploring the Roles of Emotional Intelligence and Organizational Commitment. Psychology & Marketing 21, 6, pp. 405-424.

Rygielski, C., Wang, J. & Yen, D.C. 2002. Data mining techniques for customer relationship management. Technology in Society 24, pp. 483-502.

Schweitzer, F. 2014. Market Research in the Process of New Product Development. In: Gupta, P. & Trusko, B.E. (ed.). Global Innovation Science Handbook. 1st ed. McGraw-Hill. pp. 283-299.

Thomke, S. & Von Hippel, E. 2002. Customers as Innovators - A New Way to Create Value. Harvard Business Review pp. 74-81.

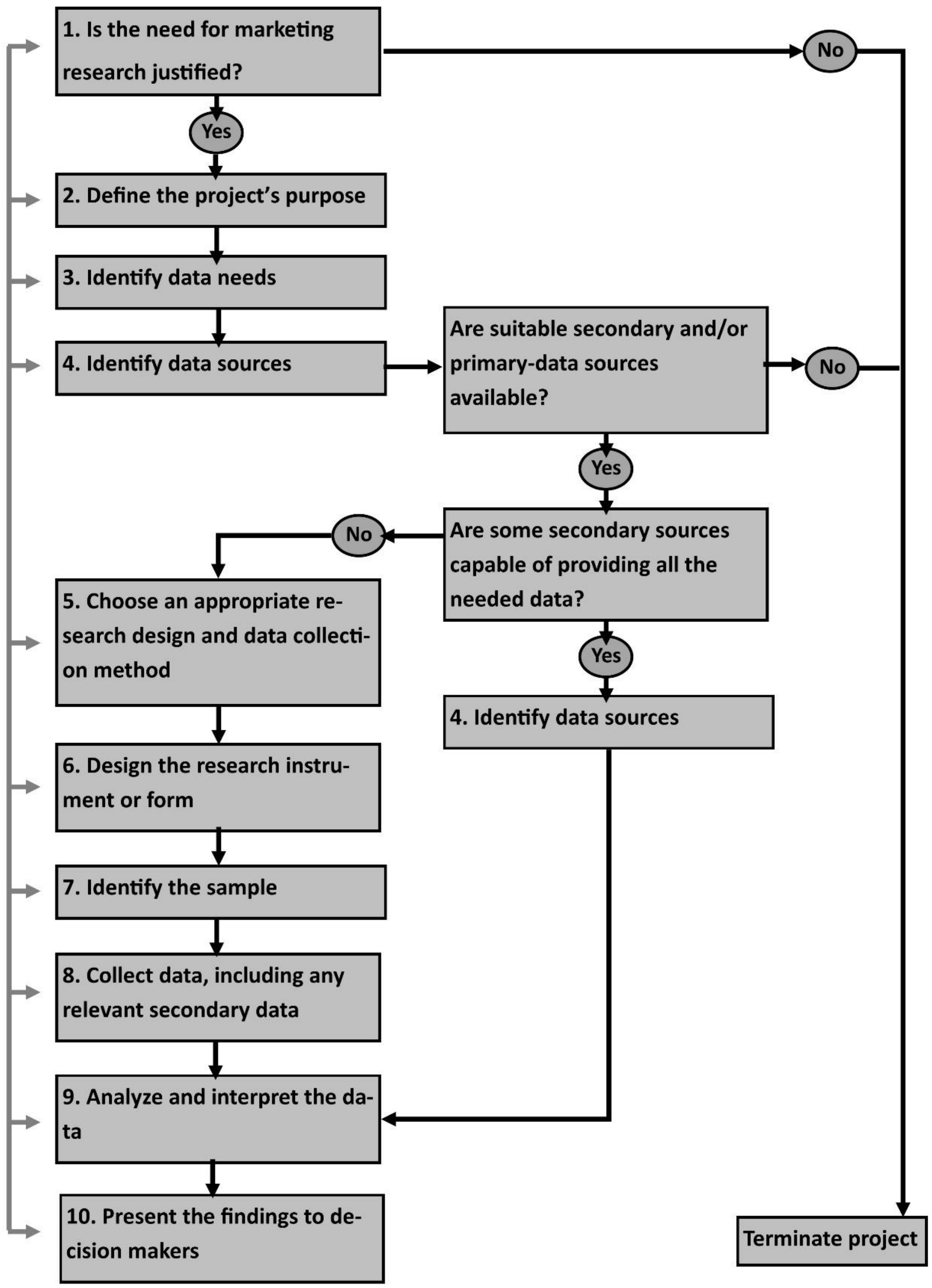
Tuomi, I. 1999. Corporate Knowledge - Theory and Practice of Intelligent Organizations. 2nd ed. Helsinki, Metaxis. 453 p.

Vuori, V. 2011. Social Media Changing the Competitive Intelligence Process: Elicitation of Employee's Competitive Knowledge. 1. Tampere. Tampere University of Technology. Competitive intelligence, Competitive knowledge, Social media, Knowledge sharing, Employees, External business environment. 201 p.

Weiler, R. The Essentials of Customer Intelligence. Information Week. 2001 [viitattu 7/8/2014]. Saatavissa: http://www.informationweek.com/the-essentials-of-customer-intelligence/d/d-id/1011545?.

Xu, X. & Kaye, G.R. 1995. Building market intelligence systems for environment scanning. Logistics Information Management 8, 2, pp. 22-29.

APPENDIX 1: The process of market research



APPENDIX 2: Customer interview

CUSTOMER interview

Introduction

- Names, introduction to research, topics, confidentiality (no names mentioned in the study results)

Warm up questions

- Small talk (introducing oneself, name, position, job description, years in organization, et cetera)

Main body (topics covered)

- Manual products in general
- Using environment
- Decision making process considering manual products
    a. What are the key influences to choose manual product → why manual product?
    b. Wherefrom and how are you acquiring information about suppliers/products?
    c. Issues affecting on choosing the supplier/brand?
        i. Price, delivery time, easiness of buying, specifications, brand, spare parts
    d. Rebuy, new buy → frequency
- The Usage
    a. How often in use?
    b. What is the typical load range you are lifting (max-min)?
    c. What is the lifting height (max-min)?
- Maintenance and repairing

Thanks and close

Thank you for your participation!

APPENDIX 3: Depth interview template

	Organization X
Interviewed Person / role	
Hand chain block and lever puller are called	
Why manual product is needed?	
Environment where products are being used	
Where information about manual product is acquired?	
Issues affecting on choosing supplier	
Issues that are not affecting on choosing product/supplier	
Repair / inspection (organization)	
Current supplier	
Load range (kg)	
Height range (m)	
When new one is bought?	
How often will be renewed?	
Is there need for installation?	
Why certain brand/product was chosen?	
Brands in use	