Knowledge management supporting tricycle business strategy plan in Finland

ABSTRACT

There is currently not much knowledge about adult tricycles on the Finnish market and tricycles mostly seem to be missing from the scene. The focus of this thesis was to find out how knowledge management is supporting a tricycle business strategy plan in Finland. It was found out that businesses concerning tricycles can use knowledge management theories as part of their business strategy. Before conclusions about the use of knowledge management could be made, the Finnish lifestyle had to be studied.

The approach of the research was inductive because there were no existing theories or publications about this topic. A questionnaire and a semi-structured interview were used to collect tacit data in explicit form. The qualitative data was then analyzed and the final conclusions answered the two research questions stated. The answers to the original research questions were supporting each other. Some people in Finland have characteristics that suggest they could use a tricycle and the tricycle should be light framed, easy to park and store and it should be suitable for carrying stuff or people, since it could be used for both.

Key words: tricycle, knowledge management, Finnish lifestyle

BRÖIJER, JANNE
SUN, QI:
Tietämyksen hallinta tukemassa
kolmipyöriä myyvän tai käyttävän
yrityksen strategiasuunnitelmaa
Suomessa

Tietojenkäsittelyn ja Business Information Technologyn opinnäytetyö

84 sivua, 2 liitesivua

Syksy 2012

TIIVISTELMÄ

Tällä hetkellä Suomen markkinoilla ei ole paljon tietämystä aikuisten
kolmipyöristä ja kolmipyöräiset puuttuvat katukuvasta. Tämä opinnäytetyö
keskittyi etsimään vastausta kysymykseen, kuinka tietämyksen hallinta tukee
kolmipyöriä myyvän tai käyttävän yrityksen strategiasuunnitelmaa. Vastaukseksi
osoittautui, että kolmipyöräisiin liittyvät yritykset voivat käyttää tietämyksen
hallintateorioita osana liiketoimintastrategiaansa. Suomalaista elämäntyyliä
tutkittiin ennen kuin päätelmiä tietämyksen hallinnasta voitiin tehdä.

Tutkimuksen lähestymistapa oli induktiivinen, koska olemassa olevia teorioita tai
julkaisuja tästä aiheesta ei löytynyt. Kyselyä ja puolijäsenneltyä haastattelua
käytettiin keräämään hiljaista tietoa näkyvään muotoon tekstiksi. Seuraavaksi
laadullista tietoa analysoitiin ja lopulliset päätelmät vastasivat esiteltyihin kahteen
tutkimuskysymykseen elämäntyylistä ja kolmipyöräisten tyypistä. Vastaukset
alkuperäisiin kysymyksiin tukivat toisiaan. Joillakin ihmisillä Suomessa on
elämässään piirteitä, jotka viittaavat siihen, että he voisivat käyttää kolmipyöräistä.
Kolmipyöräisen tulisi olla kevytrakenteinen, helppo parkkeerata ja varastoida sekä
sillä tulisi pystyä kuljettamaan ihmisiä ja tavaroita, koska sitä voi käyttää
kuljettamaan molempia.

Asiasanat: kolmipyöräinen, tietämyksen hallinta, suomalainen elämäntyyli

LIST OF VOCABULARY

KM	Knowledge Management
CIO	Chief Information Officer
CKO	Chief Knowledge Officer
Best practice	Technique or methodology that through experience and research has proven to reliably lead to a desired result
Explicit Knowledge	Knowledge that has been articulated, codified, and stored in certain media
Tacit Knowledge	Knowledge that is hidden and hard to transfer, write down, and speak out
Epistemology	Study of the grounds, nature, and origins of knowledge and the limits of human understanding
Ontological	Study of the nature of being or existence, or the assumptions underlying a classification scheme, concept, system, or theory
Axiology	The study of the nature, types, and criteria of values and of value judgments especially in ethics
SWOT	A strategic planning method used to evaluate the Strengths, Weaknesses, Opportunities, and Threats involved in a project or in a business venture

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1.1   Problem Statement

The public transportation in Finland is quite expensive and in some cases inconvenient or not available all the time. For example, in the city of Lahti, the bus routes do not cover the whole city area and the buses travel infrequently. In other parts of Finland besides the capital city area, bus is the only mass transit network choice to travel around the city (Alku 2011).

Developing Finnish society gives value to green environment but the cars remain as source of pollution and noise. Of course, the comparison of benefits between private and public transport is different if the question is asked from society compared to asking from a private person. At a summer cottage or farm, there are often many things to carry like firewood or gardening equipment. People usually have something to carry with them when they travel to gym or to do sports or move their stuff not to mention when they come back from shopping or doing groceries. If the way is too long to walk and the belongings they carry are too many, heavy or large to move with bicycle or moped and they don't have a car in use, they face a problem. One solution is to rent a car or order taxi but the price levels cause stomach cramps to a person with average income. Naturally families with children want to take their children to playground but sometimes walking and pushing carriages doesn't attract. Advertising on the sidewalks is limited to boards, signs and plaques and they are not very movable. Essentially, it seems that there is some empty space in the scale of options for traveling and transport where tricycles, especially cargo tricycles, would fit in well. With cargo tricycles it's easy to carry children, equipment or other belongings. They can be transformed into advertising or selling carriages which can be driven around the city. For some reason, this multipurpose vehicle has been mainly forgotten in Finland whereas in Asian countries it's part of the daily life. The problem could be just in the thinking of people living in Finland. (STT 2012; Finnish Transport Agency 2011; Ministry of Transport and Communications 2007.)

1.2 Purpose of the Study and Research Questions

Tricycles are highly recommended in this thesis to improve the ways of Finnish transportation. Before writing this thesis there was a business idea. A rough business plan about importing tricycles from China to Finland was considered, as China has good but cheap tricycle manufactory. However, during the period of finding one typical type of tricycle which can be well suited for the Finnish market, problems kept popping up. According to the history of 1980s, there were some tricycles in the market, but why have people forgotten the usage of tricycles nowadays? There were also plenty of different types of tricycles based on the different requirements, so what kind of tricycles would benefit the market if tricycles were imported or designed?

From the perspective of Business Information Technology, lacking knowledge of tricycles would be the critical key issue for solving this problem. In this study, the research was designed to find out whether the Finnish market would need tricycles or not. Two following research questions were:

1. Do Finnish people really need tricycles?
2. What type of tricycles do Finnish people want?

The first question would be researched by open questionnaires which could answer what kind of people in Finland may need tricycles. The second question would be researched by using semi-structured interview to explore and summarize what kind of tricycles could be wanted on Finnish market. After the data collection from research, knowledge management theories would be used for forming up new theories from the study, for instance, how Finnish market could accept the knowledge about tricycles, how to turn tacit knowledge which resided in the Finnish lifestyle to explicit knowledge, etc.

1.3 Limitations

Tricycle business plan was the original reason for this thesis topic, but except the rough business idea and knowledge management as strategy, other detailed content of business was not included. While the general tricycles were talked about in this study, it mainly focuses on adult tricycles rather than kids' tricycles. The research

was done in the city of Lahti. Lahti can't represent the whole situation of Finland, however, the conclusion was somehow generalized to whole Finland, and detailed explanations of this will be shown later.

Knowledge management concerns getting information to the appropriate people, when required, helping them to share this information and experience, enabling them to use it to improve organizational performance, and putting all that in action for a specific purpose (Avison & Fitzgerald 2006). While knowledge management theories were being applied, the part concerned with inside of an organization would not be discussed, because there was no actual company and knowledge management theories in this thesis would just focus on how they serve the business strategy.

1.4   Thesis Structure

The thesis proceeds logically from the beginning to the end, giving readers an easy to follow structure which can be seen from the table of contents. In the beginning, the thesis has introductory section where the abstract, summary in Finnish, list of vocabulary, list of tables, list of figures, list of pictures and table of contents are. Then it starts the text section with introduction to the topic and process part and then closing part with conclusion and assessment. The last section of the thesis has appendices and references. Thesis structure chapter belongs to the introduction chapter of the thesis where the problem and research questions are stated. It's essential to know first what the thesis is about and what the problems and research questions are. The next main chapter explains why there is no framework for the research and the main concepts in the research. It gives readers the context for the research subject. It explains what is known about the topic before this research. Third main chapter gives readers understanding about the research methods used. Research methods include the way the research is structured, how data is collected, analyzed and interpreted. Fourth main chapter of the thesis describes the data, analyzes it and finally gets to the conclusion of the research. Fifth main chapter talks about the findings made during the research. It explains how the tacit knowledge from Finnish lifestyle changed into explicit knowledge during the research process. In sixth main chapter, knowledge management of tricycle

business strategy is discussed. In seventh chapter the thesis is summarized and the validity and reliability of the research is examined. Implications to future business plan are discussed and suggestions for further research are given. Then the thesis ends to a list of references and appendices.

Thesis design shortly

The short outline of this thesis is as follows. After introduction section the thesis gives some background information about the main concepts of the study and then moves on to a research about people's needs and wants concerning tricycles in Finland. After the findings, there is discussion about knowledge management as a tricycle business strategy and about implications to business plan. Then at the end there's summary, suggestions for further research and assessment of the study.

2 FRAMEWORK AND PREVIOUS RESEARCH

There is no previous research about how knowledge management supports a tricycle business strategy plan in Finland. It means that this research will produce new information and knowledge about that topic. Previous research about knowledge management and also research about business strategy could be found. Tricycle market in Finland however seems to have not been researched. At least, there could not be found any publicly available research on tricycle market in Finland when the search was run through Theseus, Google and Frank Multisearch at www.libraries.fi -website which supposedly covers almost all Finnish libraries. (Finnish library services 2012.)

There is no need for framework in this thesis because the idea of the research in this thesis is to form a theory or theories based on collected and analyzed data whereas having a framework suggests that there already exists a theory or many of them. Having a framework would mean that some existing theory would guide the research to some certain direction and thus the data would be collected and analyzed based on the theory. In that case the research would be deductive instead of inductive. However, this research is inductive by nature. (University of Southern California 2012; WebFinance Inc. 2012.)

This part of the thesis introduces the main concepts. The main concepts consist of sub-concept chapters covering them. The main concepts are the tricycle market, knowledge management and the business strategy plan. The Tricycle Market chapter explains what tricycles are and lights the market potential in Finland. The Knowledge Management chapter explains what the knowledge is and what knowledge management is, what kind of approaches there are to it, how to create new knowledge and how the knowledge management can serve as a business strategy. Business Plan chapter explains the concept of a business plan and what the business strategy is in order for the reader to stay on the same page about the meaning of business strategy in the thesis.

2.1 Tricycles Market

General introduction of tricycles will be discussed in this chapter. The potential Finnish market together with Finnish lifestyle will be also introduced.

2.1.1 Tricycles

Tricycles are usually abbreviated to trikes (like bicycles abbreviated to bikes), and the similar names such as work bike, freight bicycle can be also included in the concept of tricycles. Usually the image of tricycle is linked to the young kids who have no ability to balance on a bicycle.

However, the first tricycle in the world was built by a disabled German man, who tried to maintain his mobility in 1680. With the development of the tricycle, nowadays the adult tricycles are popular all over the world. There are three typical layouts which defined by the position of the wheels. Two widely spaced wheels at the back is called delta and two wheels at the front is called tadpole. The upright layout resembles a two-wheeled bicycle, the diamond frame but with either delta or tadpole. The recumbent delta layout is similar to an upright, which has two wheels at the back and one at the front, but has a recumbent layout in which the rider is seated in a chair-liked seat. The recumbent tadpole, also called reverse trike, is a recumbent design with two steered wheels at the front and one driven wheel at the back.

Picture 1 A Cargo Tricycle with Front Box

Tricycles can be also classified by foot power or hand power types. Human-powered trikes are used with pedals. Engines are added on tricycles for different usages. In recent years, tricycles have been mainly used for transporting stuff within short destinations. In picture 1 there is a typical modern cargo tricycle.

2.1.2 Finnish Market Potential

Research on Finnish market shows a lot of potential for bringing the tricycles successfully to Finland. While pondering the lifestyle of the Finnish people to see where the tricycles would fit in there can also be seen some beneficial circumstances for the import created by the social structure and developing society.

According to the Finnish Heart Association (2012), comparison of what the life has been like in Finland from the 40's to the 90's and after the recession in the beginning of 90's has shown that the living standard has become better but at the same time the passive, unhealthy lifestyle has grown more popular and the risks of this lifestyle have become more obvious. According to Official Statistics of Finland (SVT) (2011) cardiovascular diseases were the cause of death in over 40% of the cases in 2010. The recession of 90's has affected the minds of the children who were raised during that insecurity. The young people whose parents received income support have a high chance to inherit that financial poverty and many of them have mental problems. Youth researcher Minna Autio supposes that they don't build their life around work success anymore. This is the group of young adults that is supposed to take care of the older generation when the time comes. The next paragraph will explain better how this creates the basis for the need for tricycles. (A-Studio: Children of the Recession 2011.)

Age structure

According to the statistics of Prime Minister's Office of Finland (2011) and Official Statistics of Finland (SVT) (2011), society is about to face a challenge which arises from the age structure of the people living in Finland. The people who belong to the age groups that are now from between 43 to 66 years old already have serious trouble answering the question about who will take care of them when they grow older. The generations following them have fewer people than their own

generation. It will certainly cause them to receive less attention during their retirement, senility and infirmity days. During one of the conducted interviews that are introduced later in this thesis, one person answered that too many old people just lay home and they are not active in anything that would keep them from deteriorating both physically and mentally. While that might be just because of the prevalent mindset of passivity people have, the problem they are going to face still exists. These age groups need to start taking better care of their body and mind so that their future wouldn't lay so heavy weight on the following generations.

According to Finnish Heart Association (2012) "Good health is a result of the well-being of body and mind and meaningful relationships. Healthy food and exercise habits can add years to your life." Finland's Ministry of Social Affairs and Health (2004) wants to promote active aging where all age groups could be actively involved in society. This year Ministry of Social Affairs and Health (2012) made a national plan to participate The European Year for Active Aging and Solidarity between Generations 2012. According to Ministry of Social Affairs and Health (2008), while the age structure keeps changing, the whole Finnish society has to adapt to the needs of the more and more elderly population. Recently there were discussions about the rehabilitation of veterans and the use of the money government reserves for that (Vilmi 2012). Tricycles would offer these people a chance to become more physically active. While doing groceries, transporting bags or even kids on a tricycle they could get some of the exercise they lack.

Green environment

Environment is considered more and more these days and sustainable ways to live have become more important than ever so that people could leave after them a healthy environment and society to their offspring. The importance of environment and sustainability can be seen for example from the fact that the Finland's government has been collecting taxes at least since 1990 from the use of fossil fuels which are one source of greenhouse gasses. Talks about sustainability and green environment can be seen in press releases continuously and the Finland's government takes the environment problems very seriously. (Finland's environmental administration 2012.)

The city of Lahti has been an example in furthering the green environment research. Lahti Science and Business Park is the leading Clean Tech Center in the Nordic region. Lahti has organized a Green City program that is currently running to further the goals of their Lahti 2025 strategy, which aims to develop Lahti towards vital, attractive and environment-oriented city. Anyone can submit an initiative to the program about how to develop the city to more environment friendly place to live. The development plans of Lahti reveal a plan for traffic solutions to favor pedestrians, public transport and cyclists. Cyclists are promised smoother surfaces and new routes. Lahti's strategic objective is to favor pedestrians and cyclists in cases of traffic-related disputes. It's said that 14% of travel within the city is done by bicycles and Lahti plans to double the amount by 2017. Cyclists are also promised an active part in the design of the urban area. (Green City 2012.)

Costs of keeping a car

Keeping a car nowadays is so expensive that many people prefer switching to public transport or bicycles to save money. What make car so expensive choice for traveling besides the cost of the car itself are the taxes, insurances, compulsory routine inspections, maintenance, repairs and fuel prices. Fuel prices have gone up since 2009 and even before that the prices have increased continuously in a longer time scale (Suomen Rahatieto SRT Oy; Finnish Petroleum Federation 2011; Official Statistics of Finland according to The Finnish Information Center of Automobile Sector 2012). In Finland the government is taxing less new cars that produce less emission which helps only those who can afford to buy a new car (Perttu 2012; Finlex 2012). In Finland the traffic insurance is obligatory and the full insurance is optional but very important since the traffic insurance only covers damages for the innocent side of possible accident (Local Insurance Mutual Company 2012). In the same way that people are willing to use bicycles they could be willing to use tricycles since tricycles have qualities that bicycles don't have. (STT 2012.)

Urbanization

Urbanization has helped to create a more tricycle friendly environment and thus increased the chances of people buying a tricycle. The roads are flatter and in better

shape than in rural areas so it's easier to cycle around. The vehicles stay in better shape when the roads are cleaned regularly. The markets and other services are closer to the housings and so bicycles and tricycles can be more popular choice when one has to travel to shop and back. (Ministry of Transport and Communications 2007.)

Finnish lifestyle

When considering the Finnish market potential, one might ask if there is some kind of typical Finnish lifestyle that affects their willingness to buy a tricycle. The definition of the word "lifestyle" according to Merriam-Webster Dictionary (2012) is: "the typical way of life of an individual, group, or culture", whereas Houghton Mifflin Company (2000) according to The Free Dictionary (2012) defines the word as: "A way of life or style of living that reflects the attitudes and values of a person or group".

Rees & Westra (2004) suggest that everyone has a lifestyle, whether they are conscious of it or not and from that perspective the concept of lifestyle would also refer to the defining characteristics and qualities of some particular way of life of an individual, nation or an entire culture. Therefore, Finnish culture can be seen as lifestyle. Using a bicycle is normal in Finnish culture but using tricycle doesn't seem to be. It could be because of the lack of supply or the high prices of tricycles that make them more rare sight in Finland.

In a way of life there can be certain behavioral patterns that are repetitive and thus recognizable and they should help to explain characteristics of a person or group. Evaluating characteristics of a way of life can bring different results depending on the criteria for evaluation. Given the criteria is peoples' motivation to use tricycles, their way of life can be evaluated as suitable or not suitable for using tricycles. This is to determine whether the reasons for not using them rise from their lifestyle or some other matter.

According to O'Hiobhaird (2012) when he came to Finland in the 70's and 80's he saw tricycles being used as part of everyday life especially in Helsinki. Tricycles were solid, long or short beds and beds were in the front in all of them. The long beds were about 170-180cm long and the tricycles were heavy but in uphill the

pushing position was easy to find and the people who used them had no trouble riding them. They were also used during winter in Helsinki because there wasn't so much snow and ice that it would have caused trouble. He saw tricycles being used for transporting cargo even nowadays at the shipyards in Helsinki. Tricycles were used purely for business purpose, within the city and often to bring goods to market place in the 70's and 80's. The people who used them were workers. O'Hiobhaird says that nowadays the people who use tricycles seem to be handicapped or people with balancing problems but he, being healthy himself, would buy one if it had a cargo box.

Current Substitutes for Tricycles

Currently, there are some alternative methods being used with bicycles instead of using tricycles to do different transporting related tasks in Finland. Many of them are more dangerous or more inconvenient than tricycles for filling the same purpose. These tasks include for example transporting a child or children, carrying the groceries, mail and deliveries, purchases, sporting goods and other equipment, vendible stuff, travel bags, etc. The inconvenience starts immediately when the transportable items are too many or heavy or difficult to keep in hands or on the handlebar of a bike. Alternatives have been introduced for transporting only one child and for carrying smaller stuff like can be noticed from pictures below.

In picture number two on the next page, there's a plastic seat attached behind the driver to a bicycle and it's used to transport a child. This way of transporting a child can be dangerous. If the driver loses balance for some reason and falls, the child can get hurt badly. This problem doesn't exist when using a tricycle since it's much more stable with three wheels and a transporting box. Another thing to consider is that the driver is facing away from the child, back against child's face. It's not easy to communicate with the child during the ride because the plastic seat is in the back of the driver whereas with tricycle the transporting box with a seat can be in front of the driver and it gives the driver a possibility to talk with the child.

In picture number three on the next page, there's a bicycle with a light shopping basket in the front. It cannot withstand heavy load and the space is quite limited. It has space for only one full grocery bag.

Picture 2 A Bicycle Attached With Plastic Seat

Picture 3 A Bicycle With a Light Basket In the Front

In picture number four, there's a trailer pulled by a bicycle. It's used to transport a child or belongings. It's designed in a way that enables it to be used as carriages so that it can also be pushed where bicycles are not allowed or needed. The problems are that now the child is even more far away from the driver and they can't communicate with or see each other and the trailer is so far in the back that the combination is actually much longer than a tricycle. Sometimes it can be tricky to find a place to park this combination in the city if there's no need to detach the trailer carriages. On the back of the bicycle in the picture four, there is a basket that can withstand more weight than the front basket in the previous picture but the space for belongings is still quite limited. Cargo tricycles on the other hand serve the transporting purpose well. They can carry two children and even shopping bags in the same open box and like said before the driver and the children can have discussion and eye contact with each other if the box is in the front of a tricycle.

Picture 4 A bicycle Pulls Detachable Trailer Carriages

The picture 5, which is representing a bicycle with a one-wheeled cargo trailer, shows again that people seem to have a need for transporting stuff with bicycle. There's a metal frame in this model of a bicycle trailer and inside the frame there is some sort of a bag where to put belongings. The bag seems detachable so the trailer only has the metal frame as a solid structure. It means that this trailer can't be used to for example carry a child because it would be too dangerous without a solid seat and safety belt. Also, like can be seen from the picture, there needs to be some straps or strings to attach and keep the belongings in place. There's also no rain cover and if it rains, a mudguard would come in handy. Otherwise the belongings could be in mud all over. Tricycles at least don't throw mud over belongings and cargo tricycles can include a lid to close the cargo box and protect items from rain, snow and with a lock also from stealing and other possible problems.

Picture 5 A Bicycle With a Cargo Trailer

Bicycle and Tricycle boom

Nowadays there seems to be a high demand for bicycles and tricycles in Finland. This can be noticed from many different initiatives and campaigns that have advertisements in Facebook and throughout the Finnish websites. There are also forums where people ask questions about tricycles. According to Ministry of Transport and Communications (2011) the Finnish government has a goal of increasing the portion of walking and cycling amongst traveling options by 20 percentage by the year 2020. Education and Culture Ministry supports a registered association called Finnish Cycling Union with the promoting of cycling throughout Finland (Finnish Cycling Union 2012). The Finnish Association of People with Physical Disabilities organizes a campaign each year to educate Finnish people to drive safer and more responsibly with bicycles and motorcycles (The Finnish Association of People with Physical Disabilities 2007). Finnish government supported public radio and broadcasting company Yle (2010) published news about a company in Finland that provides workers a possibility to buy a bicycle to the company's account to encourage them to do sports more often. The reason is that workers who do sports more often stay healthier too and thus reduce the costs of the company. A big cycling culture event called Bicycle Film Festival was organized in Helsinki at summer 2012 and this event already had at least one tricycle film contributed in it (Bicycle Film Festival 2012; Relaa 2012). All these and many more initiatives and campaigns have created a good social basis for using bicycles and also tricycles in Finland. When the people know how to ride a bicycle and why it's healthy, they surely know or at least can learn how and why to ride a tricycle too.

2.2   Knowledge Management

In recent years knowledge has become a prerequisite for organizations seeking to survive in a dynamic and changing environment. Knowledge is most discussed from a functionalistic perspective, which focuses on the results what knowledge brings, and not the processes defining and creating knowledge. However, knowledge ought not to be exclusively analyzed as input to the production process, but also as the processes and players that qualify something as being knowledge.

The knowledge economy is not a system that only consists of knowledge, but it is also a system which consists of processes that create and define knowledge. (Christensen 2003.)

Thus a crucial precondition for analyzing knowledge in the organization is both an analysis of how knowledge may be organized and an analysis of which processes and players define knowledge. The organization and management of knowledge is a functionalistic perspective, whilst the analysis of processes and players is an epistemic perspective which, among other things, attempts to examine why and in what form something is defined as being knowledge.

Knowledge management, however, is useful because it places a focus on knowledge as an actual asset, rather than as something intangible. It enables the origination, protection and exploitation of knowledge as well as it helps to improve in and concentrate on knowledge development efforts. Knowledge management can be also regarded as:

- Help for learning from past mistakes and successes

- Exploiting existing knowledge assets by re-deploying them in areas where the firm stands to gain

- Promoting a long term focus on developing the right competencies and techniques

- Enhancing the ability to innovate, etc.

2.2.1   What is Knowledge?

The differences between Data, Information and Knowledge are as follows. Data represents unstructured facts about events, objects, or people. The essential difference between data and information, therefore, is that data is not interpreted, whereas information has a meaning and use to a particular recipient in a particular context and can be used for decision making. Information comes from selecting data, summarizing it, and presenting it in such a way that it is useful to the recipient.

And Knowledge contains the ability to use information effectively for particular purposes.

> *Knowledge is a fluid mix of framed experience, values, contextual information, expert insight, and grounded intuition that provides an environment and framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms. (Davenport & Prusak 1998, 12.)*

Buckingham et al. (1987) define information as "explicit knowledge". In other words, information expresses what is meant clearly, with nothing left implied. Knowledge may also be seen as accumulated information. Most importantly, people with knowledge know the meaning and implications of the information presented and how to use it effectively. So, knowledge contains the ability to use information effectively for particular purposes. (Christensen 2003.)

2.2.2 What is Knowledge Management?

Knowledge management is one of the issues that have emerged explosively in the business community over the last few years.

> *"Knowledge management is a discipline that promotes an integrated approach to identifying, capturing, evaluating, retrieving, and sharing all of an enterprise's information assets. These assets may include databases, documents, policies, procedure, and previously uncaptured expertise and experience in individual workers" (Duhon 1998, 8.)*

KM is about making the right knowledge available to the right people. It is about making sure that an organization can learn, and that it will be able to retrieve and use its knowledge assets in current applications as they are needed. In the words of Peter Drucker (1999) it is "the coordination and exploitation of organizational knowledge resources, in order to create benefit and competitive advantage".

2.3 Business Strategy Plan

Every business plan should have a strategy. First a business has to have a vision about its future and then there needs to be a strategy to define how that vision can be

made reality. After strategy the business plan should define the goals to achieve the strategy (Hinterhuber 1996). Strategy looks far to the future while tactics concentrate to the changes in the surroundings at a short time scale (Strategy-Train 2009; Business Link 2012). The purpose of a strategy is also well expressed in this quote from Grant (2012): "Whereas tactics are concerned with the maneuvers necessary to win battles, strategy is concerned with winning the war". (Räsänen 1997.)

2.3.1 Business Plan

What is a business plan? Many people think of a business plan that it's only for starting a new business or applying for the money to start a business but actually it's important also for running the business and keeping it in a path of growth and development. Business plan formats and outlines vary but generally they all should include at least descriptions of the company, product or service, market, forecasts, strategy and implementation, management team, and financial analysis. Usually the most important part is the cash flow analysis and the specific implementation plan. Cash flow is sometimes hard to understand but it's vital to understand to keep the company alive. In a book called How to write a great business plan, Sahlman (2008, 19-21) presents the following questions that should be addressed to understand the cash flow:

- When does the business have to buy resources, such as supplies, raw materials, and people?

- When does the business have to pay for them?

- How long does it take to acquire a customer?

- How long before the customer sends the business a check?

- How much capital equipment is required to support a dollar of sales?

Of course investors are looking for businesses which can buy low, sell high, collect early and pay late. A business plan should answer to question about how close to this ideal is the business expected to come. The business strategies and nicely formatted documents are just theory until responsibilities are assigned with dates and budgets, and the progress is tracked with the ones responsible. A business plan

is not just about what should work but also about how to get it work and how to keep it working.

A business plan in itself is not the only thing that matters but a successful business also needs a team of people who can make things happen. People who have great business ideas are many but people who have skills to execute a business plan are not behind every corner. Arthur Rock, a venture capital legend associated with the formation of such companies as Apple and Intel, states: "I invest in people, not ideas" (Sahlman 2008, 11). Rock has also said: "If you can find good people, if they're wrong about the product, they'll make a switch, so what good is it to understand the product that they're talking about in the first place?" (Sahlman 2008, 11). So, not only are the ideas important but also the people and the skills to implement the made business plans. (Berry 2012.)

2.3.2   How to Plan a Business Strategy

According to CM Consulting (2012) all the key persons in a company should be involved with making a strategy for the company so that they would be more committed to follow it. Strategy helps the company to gain success on the market of their choice. The whole process should start from defining a common vision – where do we want to be in 2015? Business idea is based on the vision. After that the company's field of business and competitors are analyzed and different kind of scenarios about future are made which are used as a base for the company's strategy choice. When assessing the business the company should make a SWOT analysis from both, their own and the competitors' actions. The strategy that is produced should answer the question about how the vision is achieved. It should define how the company is going to act now in order to be where they want to be after a certain time period.

The formulation of strategy consists of four principles. Firstly, a company should think about their current situation and define their starting point for the strategy. This is where the above mentioned SWOT-analysis can help. Secondly, the future position of the company should be determined according to the surrounding environment by its capability to:

- Create products or services which answer the demand on the market

- Offer employees safe and meaningful working places accompanied by fair compensation

- Gain all the required resources and components from suppliers while being fair to them

Thirdly, the company should focus on the main skills and the best use of resources as well as putting in chronological order the main steps which can promote a company from the initial point to the desired target position. Fourthly, the strategy should include the criteria and standards that can be used to measure the success of the formulated strategy and the success of achieving the planned objectives. (Hinterhuber 1996.)

A business can be supported by using knowledge management which was introduced as a concept in the previous chapter called Knowledge Management. A company can gain competitive advantage by building up skills or competencies so that they become so called core skills. According to Strategy-Train (2009) knowledge is a key strategic resource for any company.

3 RESEARCH METHODS

3.1 Research Design

As it is mentioned in the chapter 1.2 - Purpose of the study and research questions, the research was designed to have two methods:

1. aiming at knowing "Does Finnish people really need tricycles" by open questionnaire,
2. aiming at knowing "What type of tricycles does Finnish people want" by semi-structured interview.

This chapter will start with the following figure 1 illustrating the design's conceptual picture and processes:
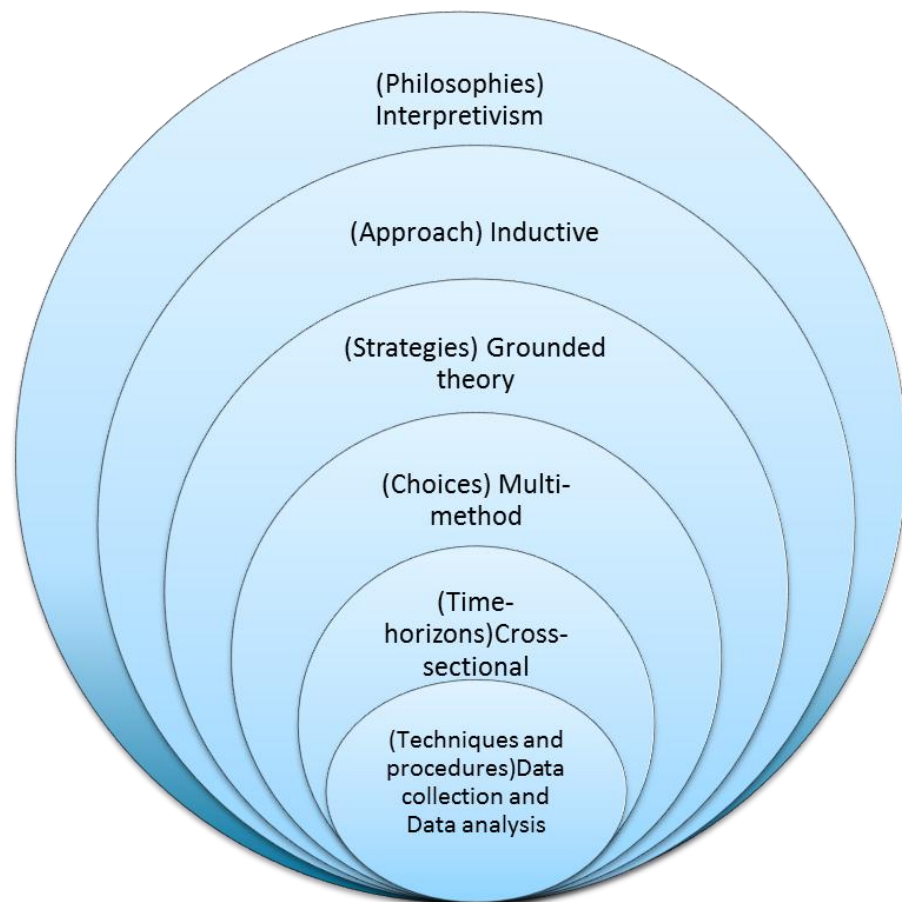
Figure 1 Designed "Research Onion"

Figure is based on the original one made by Mark Saunders, Philip Lewis and Adrian Thornhill in 2008.

3.1.1   Research Philosophy

The philosophy of interpretivism was used in the research. Interpretivism means understanding differences between humans as social actors (Saunders, Lewis, Thornhill 2007). Interpretivism emphasized on the difference between conducting research among people rather than objects. The term "social actors" was striking in the explanation. It suggested that as human we played parts of roles on the stage of human life. For instance, in a theatrical production, actors played a part which they interpreted the social roles in accordance with the meaning direct gave to these roles. In addition, the social roles were interpreted together with own series of meanings. From both researches, the data would be interpreted through analysis to give a meaning to it. The results from the research didn't directly answer to the research questions so the results needed to be interpreted. The keynote of interpretivist philosophy was that the researcher had to adopt an empathetic stance, which meant he was to enter the social world of the research subjects and understand their answers from their point of view. The table below shows the scientific characters of interpretivist philosophy:

Table 1 Interpretivism According to Saunders, Lewis & Thornhill (2007)

	Interpretivism
Ontology: the researcher's view of the nature of reality or being	Socially constructed, subjective, may change, multiple
Epistemology: the researcher's view regarding what constitutes acceptable knowledge	Subjective meanings and social phenomena. Focus upon the details of situation, a reality behind these details, subjective meanings motivating actions
Axiology: the researcher's view of the role of values in	Research is value bound, the researcher is part of what is being researched, cannot be separated and so will be subjective

research	
Data collection technique most often used	Small samples, in-depth investigations, qualitative

3.1.2   Research Approach

The induction research approaches were used in this thesis.

Induction research approach emphasized on:

- *Gaining an understanding of the meanings humans attach to events*
- *A close understanding of the research context*
- *The collection of qualitative data*
- *A more flexible structure to permit changes of research emphasis as the research progresses*
- *A realization that the researcher is part of the research process*
- *Less concern with the need to generalize.*

(Saunders, Lewis, Thornhill 2007.)

In other words, induction research approach regards as how to build a theory. The theory followed data rather than vice versa as deduction. The purpose was to get a feel of tricycles from Finnish interviewees, so as to understand better their lifestyle. The task was to make sense of the interview data collected by analyzing those data. The result was to formulate a theory or theories by our own analysis.

Research using an inductive approach is likely to be particularly concerned with the context in which such events were taking place. Therefore, the study of a small sample of subjects might be more appropriate than a large number as with the deductive approach. Researchers in this tradition are more likely to work with qualitative data and to use a variety of methods to collect these data in order to establish different views of phenomena (Easterby-Smith et al. 2008, according to Saunders, Lewis, & Thornhill 2009.)

3.1.3 Research Strategy

Exploratory study

The exploratory study was used in this research. An exploratory study was a valuable means of finding out "what is happening; to seek new insights; to ask questions and to assess phenomena in a new light" (Robson 2002, 59, according to Saunders, Lewis & Thornhill 2009). There were three principal ways of conducting exploratory research:

1. A search of the literature
2. Interviewing "experts" on the subject
3. Conducting focus group interviews

Exploratory research can be likened to the activities of the traveler or explorer (Adams & Schvaneveldt 1911, according to Saunders, Lewis & Thornhill 2009). The advantage of exploratory study is that it is flexible and adaptable to change. The focus is initially broad and becomes progressively narrower as the research going on. According to the three principal ways of conducting exploratory research, the design of exploratory research flowed as:

1. The concepts of tricycle and life style were studied before the designing of research questions.
2. One person, who knew tricycles existed in Finland, and another person who was using a tricycle are defined as "experts" for deep interviews.
3. The interviewees were picked by some groups before the interview. The groups for example, were profession, age, sex, with or without little children, etc. And the places where interviews took place were also considered. Shopping malls, bus station, parks were mainly considered, because there were chances to meet varieties of people, then the research could be more rich and convincing. The questionnaires were sent for different groups as well.

Time-horizon

Cross-sectional study was used as time-horizon in this thesis. The cross-sectional study could also be seen as a snapshot, which just studied a particular phenomenon at a particular time. Another study was called longitudinal, which could be for

example, recording a diary for a long time. The research was done as many snapshots to show the answers from Finnish people at this particular time. For example, what did they think of tricycle for the time they were interviewed, but not the answer from years before.

Choice

Choice of multi-methods was used in this thesis. The term multi-method refers to those combinations where more than one data collection technique is used with associated analysis techniques, but this is restricted within either a quantitative or qualitative world view (Tashakkori & Teddlie 2003, according to Saunders, Lewis & Thornhill 2009). There were two qualitative questions used in this study as well can be called as multi-methods choice.

Strategy

Ground theory was the research strategy used in this thesis. Classic grounded theory (Glaser & Strauss 1967, according to Saunders, Lewis & Thornhill 2009) is often thought of as the best example of the inductive approach, although this conclusion would be too simplistic. A grounded theory strategy is, according to Goulding (2002), particularly helpful for research to predict and explain behavior, the emphasis being upon developing and building theory. In grounded theory, data collection starts without the formation of an initial theoretical framework. Theory is developed from data generated by a series of observations. This data leads to the generation of predictions which are then tested in further observations that may confirm, or otherwise, the predictions. (Saunders, Lewis & Thornhill 2009.)

Qualitative Analysis

Qualitative research method was used, rather than quantitative research method, in our thesis. The table quoted below is from Miles & Huberman 1994, according to Saunders, Lewis & Thornhill 2009:

Table 2 Differences Between Qualitative Study and Quantitative Study

Qualitative	Quantitative
The aim is a complete, detailed description.	The aim is to classify features, count them, and construct statistical models in an attempt to explain what is observed.
Researcher may only know roughly in advance what he/she is looking for.	Researcher knows clearly in advance what he/she is looking for.
Recommended during earlier phases of research projects.	Recommended during latter phases of research projects.
The design emerges as the study unfolds.	All aspects of the study are carefully designed before data is collected.
Researcher is the data gathering instrument.	Researcher uses tools, such as questionnaires or equipment to collect numerical data.
Data is in the form of words, pictures or objects.	Data is in the form of numbers and statistics.
Subjective – individuals interpretation of events is important ,e.g., uses participant observation, in-depth interviews etc.	Objective seeks precise measurement & analysis of target concepts, e.g., uses surveys, questionnaires etc.
Qualitative data is more 'rich', time consuming, and less able to be generalized.	Quantitative data is more efficient, able to test hypotheses, but may miss contextual detail.
Researcher tends to become subjectively immersed in the subject matter.	Researcher tends to remain objectively separated from the subject matter.

The explanation started to borrow one comparison between Qualitative Study and Quantitative Study from James Neill 2007 , done by Miles & Huberman (1994, 40). The two research questions were both to find the answers based on the recorded word descriptions involving analysis of data such as words, pictures, objects, e.g. but not numerical data from interviewees.

The methods using qualitative research, how the data was collected, and how the results were analyzed would be discussed in following chapter and Chapter 4.

3.2 Research Data

According to the Queensland University of Technology Management of research data policy, research data means among other things data in the form of facts, observations, images, recordings, measurements or experiences on which an argument, theory, test or hypothesis, or another research output is based. Data may be numerical, descriptive, visual or tactile. It may be raw, cleaned or processed, and may be held in any format or media. (Australian National Data Service 2012.)

Since the subject of the research were people who live in Finland - their lifestyle and thinking - it was important to find a way to harvest what they have. Data was in tacit form in the observations, information, knowledge, opinions, views, experiences, conceptions and ideas people had about tricycles. It was necessary to bring this data into explicit form in order to analyze and study it. In other words the above mentioned data needed to be collected and turned into written form. In the next chapter the methods for data collection are explained more detailed.

Data was qualitative in its nature because the important thing was to find the motives of people and understand reasons for their thinking. Data was not in numerical form and it could not be counted or measured like quantitative data. The purpose was not to make statistics or charts about the data but to explain the phenomenon that was going on in Finland. To give explanation to it, it was essential to collect data about the phenomenon through subjects who are part of it. The word phenomenon here refers to the lifestyle of people living in Finland and the actual problem statement. Two research questions were asked based on the problem statement. The research questions were: "Do Finnish people really need tricycles?" and "What type of tricycles do Finnish people want?" There seems to be no unambiguous reason why people of Finland would not start using tricycles in their everyday life but still the tricycles are mostly missing from the scene. To answer this kind of problem one has to find out the underlying reasons to it. Qualitative data needs to be gathered from individuals to understand why they think in some certain way. (Dey 1993, Healey and Rawlison 1994, according to Saunders, Lewis & Thornhill 2009, 482.)

3.3   Methods of Data Collection

Data for the research was collected by performing a semi-structured interview and a questionnaire to people who live in Finland. The questionnaire and the interview were conducted roughly at the same time scope. The structure for both was finished at about the same time and after that they were performed. Both the questionnaire and the interview were conducted on many separate days and some time passed between the days but still they were all finished within five months. Most of the interviews were recorded in June and most of the questionnaire answers were collected in October.

Questionnaire

The purpose behind the questionnaire was to find out whether the Finnish people have factors in their life that indicate a need for tricycles. The same questions were asked from all the answerers. Sample size was 12 people. The questionnaire form was one page long and had 13 main questions and 5 sub-questions, all together 18 questions. The questions were designed to be direct and so simple that the interviewee could only guess that the questionnaire was somehow related to lifestyle and ecological thinking. The questionnaire contained only open questions.

According to Fink (2003) open question means that the answers could not be chosen from a list of given answers unlike in closed question but the answerer had to write the answers by hand (Saunders, Lewis & Thornhill 2009, 374-375). According to Saunders, Lewis & Thornhill (2009) open questions are usually used if the response is unsure or when a detailed answer is required, such as in this case when there was no time to design and perform a lengthy questionnaire to many people and then analyze it.

When handing out the questionnaires some people asked what it's for and they received an answer that it's part of a thesis research and the researchers were from Lahti University of Applied Sciences. The time needed to fill the questionnaire was about five minutes on average. The questionnaires were given to seemingly different people in Lahti by hand or the answers were written to the form in their presence according to what they said or they were sent to familiar people like relatives or friends around Finland through Internet and by family members. So, the

technique of the questionnaire was both self-administered and interviewer-administered (Saunders, Lewis & Thornhill 2009, 362-363). It was not necessary to give the questionnaire to very specifically selected people from different groups because there was no knowledge about how the groups and their representatives should be defined. The age of the answerers was not an important factor considering the use of tricycles. Adults from all ages could ride tricycles designed for adults. However, age was asked in the questionnaire just to make sure that the sample would be more representative for the study population by covering people from different ages. Only two of the answerers were of the same age. The age of the answerers ranged from 24 to 63 so it should be a wide enough scale to give a broad lifestyle spectrum. Actually, the range was from 26 to 63 because the test answerer's age was the youngest – 24, and the next youngest answerer was 26 years old.

Before the actual questionnaires were conducted on people, one test questionnaire was carried out to test if the questionnaire form was functional, clear and understandable or if it should be changed somehow. It was noticed that the test questionnaire had one grammatical error and one question had to be changed into a more clear one to better understand what the question means. The structure of the questionnaire worked and it wasn't too long or boring for the participant to answer. Of course, the questions could have been better and to find out the person's lifestyle there could have been many pages of questions and clarifications instead of just one. However, time and resources for the research and the whole study were limited and thus the questionnaire had to be made short and simple. The people who answered to the questionnaire gave their answers based on the thoughts they had at that moment, whether they knew about tricycles or not. There's no way of knowing if the knowledge about tricycles would have affected their answers or not.

Semi-structured interview

Semi-structured interview means that the answers of the interviewed people were not limited to predefined choices. This type of interview prompts discussion so it made open discussions possible concerning the answers given by the interviewees. Using this way it was possible to gather more detailed data and thus deeper understanding to the whole underlying question about Finnish lifestyle and way of

thinking about tricycles. (Community Sustainability Engagement Evaluation Toolbox 2010.)

During the face to face interviews the answers were recorded to a notebook in the order of questions asked. If the interviewees started to discuss about their views or tell more than what was asked then everything related to their thinking about tricycles and their lifestyle and reasoning was recorded as well. One to one interviews were easier to organize and manage than group interviews and in group interview someone's answers could have affected other group members' answers. That's why one to one interview was chosen as the method that was used. When the interviews were conducted, the questions were asked with neutral tone to not guide interviewees' answers to certain direction and time was given for small talk and clarifying questions from the interviewees' side. Interview is quite natural way to collect raw data in form of opinions, views, knowledge, observations, experiences, etc. Interviews lasted from five minutes to one hour depending on how much the interviewee wanted to talk.

Interviews were conducted during the year 2012 in the city of Lahti, Finland but some of the interviewees had come to Lahti from other parts of Finland and some were from abroad but currently living in Finland. The sample size was 12 people and they all answered to the questions. People for the interview were selected randomly but at the same time trying to find different kind of people of different ages. The differences between interviewees could be seen by naked eye or by knowing something about the person's background. One of them was riding a tricycle on the street and seemed like an interesting candidate for the interview. It turned out that this person had plenty of interesting knowledge about tricycles. Age of the interviewees was not particularly determined since tricycles could be used by any adult unless they have a disability restricting them. However, the age of almost every interviewee was different, only two of them had the same age. Also the idea about what kind of people groups would use tricycles was unknown and so it wasn't possible to name these groups and their representatives. The research had to be exploratory to get a clue about the possible user groups for tricycles. The idea in picking different kind of random people to tell their views on tricycles was to get as broad sample of views from the population as possible within a convenient scope.

The purpose was to analyze if there was something in common with them, some common factors or characteristics.

3.4 Methods of Data Analysis and Interpretation

Analyzing means that to turn the collected data into useful information. Based on the terminology used by Trochim (2006) in his book, the research analyzing unit was an individual but the unit of observation was a group in certain geographical area – people living in Finland. By taking two samples of 12 individual people of different ages from the group that was observed, it was possible to get some valuable insights to form a theory. The first sample of 12 people was taken by using a questionnaire and the second sample was taken by using a semi-structured interview.

Methods for questionnaire

The analyzing method used for the questionnaire was first to form two groups based on the idea in the first research question: "Do Finnish people really need tricycles?" The groups were named: "people who might need" and "people who might not need tricycles". These groups were based on the questionnaire's design which was meant to separate people with the answers into the above mentioned two groups and it was expected that the answerers would be easy to divide into these two groups. The answerers were numbered from 1 to 12 to separate their answers. First the answers of person's number 1 and 2 were analyzed as an example of the analysis. The number 1's answers suggested that he could use a tricycle and number 2's answers suggested that she wouldn't use a tricycle. However, these two examples were the easiest ones to divide into the two groups mentioned before. It could be seen from the analysis of these two person's questionnaire answer sets, which were taken as an example, that there are different kinds of people in Finland. The summed characteristics of the most of the 12 answerers did not clearly fit into one of the two groups. That's why it was better to first find an answer from the data to question: "What kind of people in Finland need tricycles?"

After this conclusion the range of the answers was listed in a table called "Questionnaire answer data simplified" where the answers were simplified and the

answers that were favorable for using tricycles were typographically marked. After that, another table was formed and it was named "characteristics that suggested a need for a tricycle". Then the typographically marked answers were simplified and collected to this table. If some answerer seemed to have a need – a characteristic – which could be met by using a tricycle, that characteristic was marked on the table. After that the table called "characteristics that suggested a need for a tricycle" was explained and why certain characteristics were chosen to it. Then finally the conclusion part explained and answer to the question "What kind of people in Finland need tricycles?" and after that the research question "Do Finnish people really need tricycles?" was answered as well.

Methods for semi-structured interview

In the semi-structured interview, a few questions were asked. These were the questions:

1. What is your age and profession?
2. Have you heard about or seen tricycles before?
3. Where did you hear about or see them?
4. What did it look like and where was it used?
5. If you had a tricycle, how would you use it?
6. Would you rent or buy one?

The analyzing of the interviews started with dividing the interview questions into four named themes. The themes were: "1. Heard about tricycles", "2. Own usage", "3. Image about tricycles", "4. Willingness to buy or rent". The first theme included interviewees answers based on question 2. The second theme included answers based on questions 3 and 4. The third theme had answers from question 5 and the fourth theme included answers based on question 6.

These themes were then used in a table designed for analyzing the data. In the table, themes were listed in the left column and the 12 interviewees were numbered and the numbers put on the top row across the table from left to right. The themes included answer options based on how many different answers there were from the interviewees. All the answer options from the notes were listed under the themes on the left column. The names of the themes and the answer options under them were

separated in the same column by color. The answers of the interviewees were marked by "x" to the table under their number by choosing what they answered from the left column options. After all the answer choices were marked to the table, the "x" s were counted together and conclusions drawn from each theme. The conclusions were based on the possible patterns found from the answers of all 12 interviewees or if there was no pattern or anything noticeable, then the conclusion could not be made of that part of the data. Then finally a summary conclusion was made after the table from all the theme conclusions in the right column.

4 DATA ANALYSIS

4.1 Data Description

Table 3 Questionnaire Data Description

Questions	"Might Need" Interviewee's Answers	"Might Not Need" Interviewee's Answers
What is your age?	56	26
What is your profession?	Teacher/musician	Sales person
How many people in your family?	5	3
Do you have children?	3	1
Do you do a lot of work outdoors?	no	Yes
How far do you live from the city center?	2.5 km	8 km
Do you have a car?	no	Yes
7.1. How do you feel about parking in the city?	Great for bikes, not for cars	Now is easy, I have a monthly charged place
Do you have a space for a car in where you live?	Yes	Yes
How do you travel small distances, less than 6km?	Bike	Car

9.1. How do you transport your child/ children?	Bike	Car
9.1.1. Do you desire changes to the way(s) you are using?	Not really	No
9.2. How do you carry stuff that you want to take with you?	Good luggage racks on my bikes	Car
9.2.1. Do you desire changes to the way(s) you are using?	Larger luggage racks or theoretically a tricycle	No
Do you want to improve your fitness?	Yes	Always
Is safety more important than speed when you travel?	Yes	Yes
Would you like to reduce pollution and noise?	Absolutely	Yes
Are you willing to use an ecological vehicle? Rent or buy one?	Absolutely	Yes and I could buy more ecological car

Table 4 Interview Data Description 1

Interviewee /Theme	Age	Profession	Heard about Tricycle	Own Usage	Tricycle Image	Willingness to buy or to rent
No.1	18	Student	No	Selling ice-cream; Delivering newspaper	Not comfortable riding and weird	No for buying; someone ride for me if I rent
No.2	20	Student	Selling fruits	Carrying stuff-dogs, furniture	Back-basket	Fine for renting
No.3	25	Student	No	Shopping	Heavy to ride	Renting, if there's no cars
No.4	50	Janitor	Heard	Transferring the kids	No use	Service for renting
No.5	21	Student	Kids tool	Going to gym or shopping	Useful	150 euro for Buying
No.6	Unsure	Student	Disabled people for moving; Delivering bread;	Shopping; Carrying sports stuff	No parking space	200 euro for Buying; Renting but cheap
No.7	72	Unsure	Disabled people; Carrying stuff	Going to cabin or cottage	Useful	No for renting
No.8	57	Worker	Action centre of Lahti; Disabled people; transporting animals; Privately made like a bicycles with trailer at back;	Shopping; Returning bottles	Flower stories can be; electrical tricycle is better than taxi; good for old people; Storage and climbing hill	No for renting

Table 5 Interview Data Description 2

			not industrial		problems	
No.9	55	Metal Worker	Heard	Carrying stuff	Interesting for farm workers; Better with electricity	No for renting
No.10	57	Lab worker	No	Carrying stuff-TV in sub-urban	Heavy for distance	No buying nor renting
No.11	60	Painter & entrepreneur	Paralyzed people; Carrying stuff	Carrying post, suitcase	Light basket; available with an engine; good differential; fat and old people can use	900euro for buying
No.12	56	Teacher& Musician	Carrying stuff for selling in 70s Finland; Transporting at shipyard in Helsinki; Disabled people; with balance problem	Carrying sound equipment and instruments	Useful; better can fit in the train	1100 euro for buying

4.2   Data Analysis

4.2.1   Questionnaire analysis

In the previous part of this chapter called Data description there was a table of three columns, the first column was for the questionnaire questions and then the second and third column contained two questionnaire's answers presented as an example of the data collected with questionnaires. Second column's answers were mainly in favor of using tricycles and the third column's answers were mainly not in favor. Because, the research question behind the questionnaire was: "Do Finnish people really need tricycles", the first idea was that questionnaire answerers could simply be divided into two groups according to the answers - people who might need and people who might not need tricycles. The people in group number one might need tricycles and the people in group number two might not need tricycles. Of course, this division was drawn based on the questionnaire's design which was meant to separate people with the answers into the above mentioned two groups and it was expected that the answerers would be easy to divide into these two groups. The research questionnaire was designed in a way that the answers to the given questions gave clues and hints to the researchers about why people could or could not have a need for a tricycle.

For the sake of understanding and clear structure in this analysis, the answerers were given a number from 1 to 12, one number for each of the 12 persons to separate their answers from one another. The answers used in the example were from the persons numbered as 1 and 2.

Person number 1

The answers in the second column of the example questionnaires were in favor of tricycles. That conclusion was drawn after going through all the answers and checking if that person's lifestyle is suitable for tricycles or not. It should be suitable because the answers to the questions gave an image of the person's lifestyle and the person number 1's lifestyle suits for using tricycle.

The person number 1, later referred to as "number 1" or "he" or "him", being a male, had three children and transported them by bike if the distance was small. Small distance was defined by the researchers as less than 6 km in the question asked about traveling. Number 1 could transport children more easily by using a tricycle instead of a bike because a tricycle can carry three small kids but bike only one with a seat. Number 1 might not be able to afford an expensive lifestyle since he has three children besides two adults in his family and Finland is an expensive country to live. Number 1 lived 2.5 km away from the city center so he could use tricycle to drive to services and back because the distance is not too long for normal riding. Number 1 thought parking in the city was "great for bikes, not for cars", which means he could prefer using bike when visiting city area. Of course parking a tricycle is not much harder than parking a bike although it requires a little more space. There was a space for car in where number 1 lives but he had no car so it could mean that there's also space for tricycle. Number 1 traveled small distances by bike and carried stuff in good luggage racks on the bike so there's a chance to switch the bike for tricycle which has a box for stuff. Additionally number 1 desired changes: "larger luggage racks or theoretically a tricycle", so number 1 knew something already about the qualities of tricycles. Number 1 wanted to improve his fitness and reduce pollution and noise and he was willing to buy more ecological vehicle. Additionally he considered safety more important than speed when traveling. By using tricycle number 1 could improve his fitness more than if he was using a car or bike since riding a tricycle requires more muscle power and endurance because it's heavier than normal bike and doesn't have engine like cars. By using tricycle instead of car, it's also possible to reduce pollution and noise and buying a tricycle is more ecological than buying a car. Riding a tricycle may be slower than riding a bike or car but it's safer because it's more stable than bike and doesn't go as fast as cars.

Person number 2

The answers in the third column of the example questionnaires were not in favor of tricycles. That conclusion was drawn also after going through all the answers and checking if that person's lifestyle is suitable for tricycles or not. The person number 2, later referred to as "number 2" or "she" or "her", being a female, had one child and a car and transported children by car even if the distance was small. She might

be able to afford an expensive lifestyle because she has only one child and two adults in her family and she is a sales person by profession which can be one of the most well paid professions in Finland. Expensive lifestyle then can usually be linked to comfortability and riding a tricycle may not always be as comfortable as riding a bike or especially a car. Number 2 felt that parking in the city is now easy when she bought a monthly charged parking slot. She has a space for a car in where she lives but it's probably reserved for her car. Number 2 didn't desire changes to using a car to transport her child or stuff even on small distances not to mention long ones. Despite that number 2 wanted to improve her fitness, and safety was more important than speed when traveling, and she wanted to reduce pollution and noise, she was likely to use some other way than tricycle to keep those values. When asked about willingness to use more ecological vehicle number 2 answered: "yes, I could buy more ecological car". The answers lead to think number 2 is too far from being interested about traveling the 8 kilometers from her home to the city center by tricycle.

Rethinking the analyzing way

In similar way than in these two examples, the rest of the questionnaires' answers could point towards or against of using a tricycle. However, these two examples were the easiest ones to divide into the two groups mentioned before – people who might need and people who might not need tricycles. Just to remind the reader, the research question was: "Do Finnish People really need tricycles?". The two groups were drawn from this research question because the original idea of analysis was to categorize the answerers. However, like it could be seen from the analysis of these two questionnaire answer sets that were taken here as an example, there are different kind of people in Finland. The summed characteristics of the most of the 12 answerers did not clearly fit into one of the two groups. To others a tricycle might suit well and to some there's no need for it or willingness to use it. It was better to first find an answer from the data to question: "What kind of people in Finland need tricycles?" The people living in Finland are not all similar. They have differences in lifestyle and needs and willingness to do or use something, so it was important to find some common characteristics of people living in Finland that suggest the need for tricycles. Common characteristics could be found from the questionnaire answers based on the same inferring thinking used in these two

example analyses. The example questionnaires could actually be considered a sub-sample. This sub-sample was used to better understand the analyzing of the whole sample data. To make all the answers easier to analyze the range of answers was better to be shown question by question. The questionnaire questions were numbered so that they are easier to refer to. The questions related to the numbers in the following table 6 could be seen in the data description part.

The table 6 below has the whole answer data in simpler form to ease the analyzing and understanding of the meanings of the data. Where the answers could be presented by scale they were presented so, but when the answers were not countable or in the same unit, they were listed separately.

Table 6 Questionnaire Answer Data Simplified

Question Nr.	Answer range
1	Age ranged from 26 to 63
2	Professions included: • teacher/musician • sales person • social worker • practical nurse • post worker/shop steward • service advisor • English teacher • radiographer • secretary • public health nurse/midwife • entrepreneur • contractor/retired
3	Family size ranged from 1 to 7, some had no children at home anymore
4	Number of children ranged from 1 to 5, some had moved out from home
5	People either did ***a lot of work outdoors or did only some*** or didn't do at all
6	Distance from home to city center ranged from 1 km to 25 km, the most typical distance was 5 km with 4 answers from 12
7	>> People either had a car or not
7.1	Experiences about parking in the city included: • ***great for bikes but not for cars*** • now easy because a monthly charged slot • enough space and not hard • ***exciting*** and don't park a lot in the city • ***expensive*** and ***crowded*** • don't hold car for long in the center because it's ***expensive*** • ok because always able to find parking place • ***not comfortable*** • ***difficult*** • ***pocket parking with a big car causes trouble*** • very comfortable • ***expensive in big city*** but no problems in smaller city
8	>> People either had a space for a car or not
9	People traveled small distances: • ***by walking*** • ***by bike*** • by car

	• by public transport like bus
9.1	Children were transported: • ***by foot*** • ***by foot with carriages/stroller*** • ***by bike*** • by car • by bus • they were not at home anymore or traveled by themselves
9.1.1	Desired changes: • no changes • ***reduce usage of car*** • more walking if weather not bad
9.2	People carried stuff with them ***by hands*** or by using: • car • car's trailer • bus • ***luggage racks on bike*** • ***a bag or backpack*** • ***by walking*** • ***stroller*** • ***bike's front or rear basket***
9.2.1	Desired changes: • no changes • ***some kind of change*** • ***larger luggage racks or theoretically a tricycle***
10	***Everyone wanted to improve their fitness***
11	***Everyone kept safety more important than speed when traveling***
12	***Almost everyone wanted to reduce pollution and noise***, only one answerer said he doesn't believe individuals can affect and that government should decide for him
13	Willingness to use, buy or rent an ecological vehicle included answers: • ***yes*** • ***yes, if practical*** • ***I have no idea about price but cycle a lot*** • ***if cheaper than current vehicle, the whole costs including fuel, insurances, maintenance, taxes should be counted*** • ***if one was available here and wouldn't cost much and could be used with two children*** • ***I already have, bicycle*** • I have bicycle, not using it much

The answers that suggest the suitability for the use of tricycles could be marked typographically from the simplified data in the table 6 above to notice them better. The data had to be simplified more before more conclusions could be made so that is why the following table 7 had to be made.

Table 7 Characteristics That Suggested a Need for a Tricycle

Characteristics that suggested a need for a tricycle
Number of children was between 1-3
Children were small
Did a lot of OR some work outdoors
Living distance from the services 1-5km OR completely outside city area, like 25km from the center
Had a space for a car but didn't own a car
Parking in the city felt great for bikes but not for cars OR if there was too little space/crowded to park OR if parking was too exciting OR it was expensive OR difficult OR not comfortable
Current way of traveling small distance was by walking or by bicycle
On small distance, children were transported by foot OR with carriages/stroller OR by bike
Desired change for traveling a small distance was reducing the usage of car
Carried stuff on small distances by hand OR luggage racks on bike OR a bag or backpack OR by walking OR with stroller OR bike's front or rear basket
Desired some kind of change OR larger luggage racks OR theoretically a tricycle to carry stuff on small distances
Wanted to improve fitness
Safety was more important than speed when traveling
Wanted to reduce pollution and noise
Was willing to use, buy or rent an ecological vehicle OR had already bicycle OR considered the costs of keeping a car expensive

The inferred data in the above Table 7 had to be explained. Why were these characteristics chosen to suggest a need for a tricycle? The conclusions were based on the features of tricycles and the characteristics of people that could need a vehicle with those features. In other words, if a person seemed to have a need – a characteristic – which could be met by using a tricycle, that characteristic was marked on the table of characteristics that suggested a need for a tricycle.

Explaining the Table 7 characteristics

The characteristics had to be explained too. If the number of children in the family was 1-3 they could be transported with a tricycle. However, in the case of three children, they should be small to fit the transporting box properly. If a person did much or some work outdoors he could need a tricycle to transport tools, materials, bags of potatoes or whatever there could be outside to transport instead of carrying them by hands or using something else. If the person's living distance from the center was 1-5 km that person could ride to the services like shops, post office, library and kindergarten with a tricycle and carry children or stuff like groceries in the cargo box. On the other hand, if the person lived far enough from the city, the person could have use for the tricycle in the place he lived, like a farm, and he most likely would have more space to store it. If the person, regardless of the distance from the city center, had a space for a car in where he lived but no car, he could place a tricycle to that space. If a person felt that parking in the city was not comfortable with a car but maybe great with a bicycle, then that person might prefer using a bicycle or a tricycle instead of car when visiting the city. If the current way of traveling a small distance was by walking or by bike, and if those ways plus carriages were used to carry children on small distances, the way used could as well be a tricycle. If the person wanted to reduce the use of car on small distances, he could replace the car with a tricycle. If the person carried stuff on small distances by hand, by bike, with a stroller, in a bag or backpack, they could as well carry stuff by using a tricycle. If the person desired some kind of change to the answered ways of carrying stuff on small distances, he could start using a tricycle. If the person wanted to improve fitness or if safety was more important than speed when traveling, then he could start using a tricycle. If the person wanted to reduce pollution and noise or was willing to use, buy or rent an ecological vehicle or already had a bike or he considered the costs of keeping a car expensive, he could

start using a tricycle. The final conclusions from the questionnaire are presented in next chapter called Findings.

4.2.2   Semi-structured Interview Analysis

In the semi-structured interview, a few simple questions were asked. These were the questions:

What is your age and profession?

Have you heard about tricycles before?

Where did you hear about them?

What did it look like and where was it used?

If you had a tricycle, how would you use it?

Would you rent or buy one?

The answers are in the table in the earlier data description part in simple raw form. The answers or their meanings were clarified a little bit in the following table 8's left column. The table 8 was divided to four pages according to the themes because each theme required almost one page of space. This way it was more readable although it's still one table and should be thought of as a whole. The answers were analyzed in the table 8 by counting the answers to the right column and making conclusions about the patterns or repetitiveness of certain answers. After the findings about each theme, the conclusions were summarized and the original research question was answered based on the summary of the findings and conclusions. The final conclusions from the semi-structured interview analysis are in the next chapter called Findings.

Table 8 Interview Data Analysis 1

Themes go down	People go across													Totals	Conclusion for each theme
Possible answers follow each theme	1	2	3	4	5	6	7	8	9	10	11	12		Totals	
1. Heard about tricycles															Most people had heard about some kind of tricycle before. Most of the people who had heard about tricycles had heard or seen disabled or paralyzed people using them. The most popular way to use a tricycle besides just riding it that was heard or seen was carrying stuff with it. Both, industrial and privately made tricycles were seen.
Yes		x		x	x	x	x	x	x		x	x		9	
No	x		x							x				3	
Selling fruits		x												1	
Kid's tool					x									1	
Disabled / paralyzed people						x	x	x			x	x		5	
Delivering bread						x								1	
Carrying stuff						x	x	x			x	x		5	
Action center of Lahti								x						1	
Transporting animals								x						1	
Privately made, not industrial								x						1	
Carrying stuff for selling in 70s Finland												x		1	
Transporting at shipyard in Helsinki												x		1	
People with balancing problem												x		1	

Table 94 Interview Data Analysis 2

2. Own usage	1	2	3	4	5	6	7	8	9	10	11	12	Totals	
Selling ice cream	x												1	If the interviewees had their own tricycle, most of them would use it for carrying stuff but different people would carry different things and for different purpose. Among the people who said they would carry stuff the most common thing to carry were shopping bags. The second-most suggested stuff to carry was furniture or TV. By looking at the answers in general, there were quite many ways how people would use a tricycle.
Delivering newspaper	x												1	
Carrying stuff	x	x	x		x	x		x	x	x	x	x	10	
Carrying animals		x											1	
Carrying furniture / TV		x								x			2	
Carrying shopping bags			x		x	x		x					4	
Transferring the kids				x									1	
Going to gym / using tricycle to excercise					x								1	
Carrying sports stuff						x							1	
Using it at cabin or cottage							x						1	
Returning bottles								x					1	
Carrying post											x		1	
Carrying suitcase											x		1	
Carrying sound equipment and instruments												x	1	

Table 10 Interview Data Analysis 3

	1	2	3	4	5	6	7	8	9	10	11	12	Totals	
3. Image about tricycles														
Not comfortable riding and weird	x												1	Most common answer was that tricycle is useful but it didn't necessarily mean that it was useful for them but could also be useful to someone else like old people, farmers, fat people and flower stores. Old people were suggested as possible users more than other user groups. Second-most common answers were that a tricycle is either heavy to ride or there's no storage or parking place for it. Almost half of the people interviewed found a negative characteristic from using a tricycle and likely wouldn't want it because of that. Some people who thought a tricycle would be useful wanted to have it with electricity or with a light structure or wanted to find answers to some other issues concerning the use.
Only seen with rear basket		x											1	
Heavy to ride / heavy for long distance riding			x							x			2	
No use for it				x									1	
It's useful					x		x	x	x		x	x	6	
No storage/parking space for it						x		x					2	
Flower stores can use								x					1	
Electrical tricycle is better than taxi								x					1	
Good for old people								x			x		2	
Climbing hill a problem								x					1	
Interesting for farmers									x				1	
Better with electricity									x				1	
Has a light basket											x		1	
Available with an engine											x		1	
Has to have good differential											x		1	
Fat people can use											x		1	
Better if can fit the train												x	1	

Table 11 Interview Data Analysis 4

4. Willingness to buy or rent	1	2	3	4	5	6	7	8	9	10	11	12	Totals	
No for buying	x									x			2	Some interviewees would be willing to buy a tricycle but the price they were ready to pay at most ranged from 150€ to 1100€. There were more interviewees who would rent a tricycle than those who wouldn't but those who would rent had conditions that had to be filled. Some wanted to have a rider for them or if no cars were available only then the person would rent a tricycle or the renting had to be cheap. Generally the willingness to buy or rent were about equal in favor.
No for renting							x	x	x	x			4	
Someone rides for me if I rent / service where someone rides for me	x			x									2	
Fine for renting		x											1	
Renting if no cars available			x										1	
Cheap renting						x							1	
Buying 150€					x								1	
Buying 200€						x							1	
Buying 900€											x		1	
Buying 1100€												x	1	
Final conclusions														

5   FINDINGS

Questionnaire

The final conclusion was that the original research question: "Do Finnish people really need tricycles?" was not so simple that it could have been answered with a "yes" or "no" option. There were both, people who needed tricycles or were willing to use them and people who didn't need them or were not willing to use them. The people, whose lifestyle suggested a need for a tricycle, had characteristics in their life that could be served well by using a tricycle. It meant that using a tricycle could satisfy their needs or make their life more comfortable.

Those people in Finland who present the characteristics of Table 7 in their life could really use a tricycle to serve their interests, ease their life, and make their lifestyle more comfortable or to replace some more inconvenient way they are using. For example using a bicycle mixed with having to transport two little children at the same time doesn't work, whereas with tricycle it's completely possible and convenient. Wanting to reduce pollution and noise and considering a car expensive but still using a car to drive even small distances is not the best solution. Using a tricycle on small distances can save money, improve one's fitness and reduce pollution and noise at the same time. These are just examples of the variations of suggestions that can be made from the conclusion of the questionnaire analysis. So the answer to the question "What kind of people in Finland need tricycles?" is that the kind of people who have characteristics from the Table 7.

Finally, the answer to the research question number 1 "Do Finnish people really need tricycles?" was as well that those people in Finland who have characteristics from the Table 7 could need tricycles whether they realize it or not. This is also the first theory formed as a result of this research.

Semi-structured interview

Most people had heard about some kind of tricycle before so it could be said that they had some kind of image about tricycles in their mind. Most people who had seen them perceived them as something that the disabled or paralyzed people usually use. Besides riding a tricycle, the most popular way of use was thought to be

carrying stuff with it. If people had their own tricycle most of them would use it to carry different kinds of stuff too, most commonly shopping bags. The answers about how they would use a tricycle covered many other ways to use a tricycle too but only the feature of carrying was in common with the most of them. The image about tricycles was that they are useful. Generally, if people didn't find a tricycle useful to themselves, they suggested some other people groups who could have use for it. The old people were mentioned more than other groups. However, some people saw problems in using a tricycle. They said it's too heavy or hard to park or store. The negative images seemed to affect people's willingness to use it but seemed to have no correlation to the willingness to rent one, especially if they could have a driver for it. Generally, people didn't seem to have good understanding about the current prices of tricycles because the price they were willing to pay at most ranged from 150€ to 1100€ and those prices are quite small compared to the costs of buying a new tricycle in Finland. Because, the people who could buy a tricycle had unrealistic idea about the price and those who wanted to rent a tricycle were only somewhat willing to rent, it could be said that the chances of doing either one were about the same.

Based on these conclusions the answer to the original research question number 2, "What type of tricycles do Finnish people want?", is that they want light framed tricycles that are easy to park and store and they can be used for carrying different kinds of stuff.

The answers to the original research questions were supporting each other. Some people in Finland have characteristics that suggest they could use a tricycle and the tricycle should be light framed, easy to park and store and it should be suitable for carrying stuff or people, since it can be used that way too.

Views about Tricycles

The table below shows the typical views of tricycles from different area based on the pre studies.

Table 5 Views About Tricycles

Area:	Tricycles usages:
Southern China	Paper made stuff collection for recycling; Selling vegetables or fruit on the street;
Western China	Transporting wood or crops around farm
Africa	Used by handicapped people; Selling bread
Denmark	Delivering news paper
South Asia	Public rental vehicle
North America	Shopping or doing exercises for older people
Netherland	Trip vehicle

This is for comparing different views to the Table 7 – which summarized the Finnish tricycle views.

6   DISCUSSION

Too often, market forgets what they knew (tricycles), and one aspect of knowledge management is identifying its knowledge assets and then managing and making use of these assets by diffusion. Knowledge management doesn't help only when people are forgetting knowledge already learnt. It helps also with communicating quickly new knowledge just discovered in this period of rapid change. It is through the knowledge of their people that organizations have real competitive advantage, not through their technology. And knowledge management theories may become a crucial issue in companies nowadays.

6.1   Knowledge Management as Tricycle Business Strategy

The definitions of data, information and knowledge are discussed in chapter 2.2.1. Their relations can be described with the following "Infogineering Model":
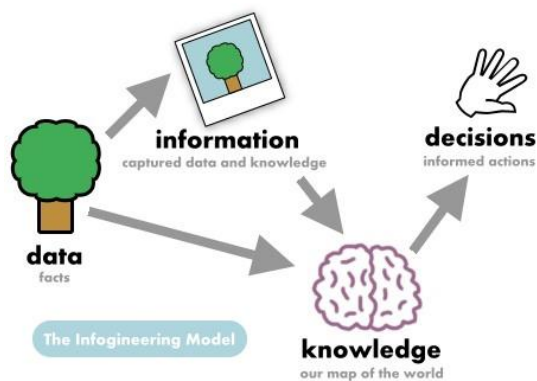

Figure 2 The Infogineering Model

When people confuse data with information, they may make some critical mistakes. Data is somehow always correct (my birthday is 7, 8, 1990) but information can be wrong (there may be two files on me, one recording I am 23 years old, and one recording I am 22 years old). Information is the record of data at one particular

point. Data may change over time. People may wrongly think that the information they are using is always an accurate reflection of the data.

The strategy here can be thought of as understanding the differences between data and information. People may have better understanding how to make better decisions based on accurate facts. For example, if there are three wheels on a tricycle – one wheel more than on a bicycle, people may wrongly think riding a tricycle will require one-third more power than riding a bicycle. Assumption leads to conclusion that tricycle is too heavy to ride. The conclusion is arbitrarily made because of the misunderstanding.

The content in this chapter will explain more, how knowledge management theory is supporting tricycle business strategy in Finland.

> *Based on a pragmatic understanding of the knowledge concept and in an attempt to adopt a thematic approach towards the processes of creating and mobilizing knowledge – knowledge maybe be said to be mobilized and created via four distinct processes: transfer or sharing of knowledge; transformation of knowledge, knowledge stemming from experienced-based learning; and knowledge through experiment.(Christensen 2003.)*

Table 6 Knowledge Creating and Mobilizing Process

Sharing of knowledge	Knowledge exists somewhere as best practice
Transformation of knowledge	Knowledge exists somewhere either as tacit or explicit knowledge
Learning Knowledge is obtained based on experience and reflection on this experience	Knowledge is obtained based on experience and reflection on this experience
Experimentation	Knowledge so far is non-existent, but arises when consistency is obtained between expected and actual results through action

Sharing knowledge and Transformation of knowledge will be highlighted rather than Learning Knowledge is obtained based on experience and reflection on this experience and Experimentation. Because the knowledge about tricycles is lacking which means the experiences about tricycles cannot be found at this moment, learning knowledge and experimentation therefore can't be discussed as mobilizing knowledge. However, the business strategy consists of three main parts: Sharing of knowledge, Capturing knowledge and Transformations of knowledge. This is the suggestion for bringing the knowledge to the Finnish market prior to making a real tricycle business plan.

6.1.1 Knowledge Sharing

Knowledge sharing deals with making knowledge that was not previously accessible in the context, accessible. Shared knowledge is both perception-based and experience-based. However, these two forms of knowledge require different compartments in order to be shared. Perception-based knowledge is often linked to the knowledge contained in databases (books, media, magazine, etc.) or in communication between people, but the factors that promote this type of knowledge sharing will be less pronounced. Experienced-based knowledge is usually designated best practice, and constitutes an internal or external practice performed better than recognized best practices. The transfer of best practice is epistemologically linked to tacit knowledge showing that it is in the individual's interaction with his or her surroundings. The literature on knowledge sharing concentrates mainly on best practices.

There are various forms of knowledge and these require different compartments for the sharing of knowledge. Other factors than the community of practice facilitate knowledge sharing – O'Dell & Grayson (1998) name four factors: technology, culture, management and measurement. Technology increases opportunities for sharing knowledge, as this process largely requires interaction between individuals. Technology may both contain knowledge and provide access to knowledge concerning who possesses which knowledge. That's why people's, (especially public figures or experts) who are interested in tricycles, spread of the knowledge about tricycles will make impressive opportunities for the business. A willingness

or reluctance to share knowledge may also be anchored inside the Finnish culture. The culture is out of control if a reluctance to share knowledge will constitute a challenge to business management to establish incentives that promote willingness to share the knowledge of using tricycles. If knowledge sharing is to be promoted, management must both provide staff with knowledge-sharing incentives and ensure that the necessary resources for the implementation of knowledge sharing are in place. Measurement of knowledge sharing renders visible and is an evaluation of knowledge sharing, and consequently an incentive to continue and promote sharing of knowledge. These are two types of measurement of efforts. One is identifying best practices and the second is measurement of the effect of the transfer of best practices.

The sharing of knowledge is not without any problems. In a survey of more than 100 best practices transfers, Szulanski (1996) noted some of the most serious barriers to knowledge sharing. The barriers of tricycle market are that the receiver does not have sufficient background knowledge to receive the tricycle knowledge which means that in some cases knowledge is difficult to grasp. And the relations among customers do not necessarily promote knowledge sharing. Where the recipient does not have sufficient knowledge to receive knowledge, Cohen & Levinthal (2003) refer it to as a lack of absorptive capacity. (Christensen 2003.)

6.1.2   Knowledge Capturing

When the tricycle knowledge is no longer available to the whole market, but is only available to a limited number of people, some questions may rise which are important to the market's or business manager's ability to maintain its competitive edge. How can one show such private or personal tricycle knowledge to public? What advantage can this limited number of persons have over those who do not possess this private knowledge? And how can we test it that the private knowledge is correct?

In other words, how is knowledge captured correctly? The spread of knowledge undermines the strategic benefits contained in e.g. tacit knowledge. Boisot (1995, 493) has given us this excellent description:

> *Codified knowledge "explicit knowledge" is inherently more
> diffusible than uncodified knowledge 'tacit knowledge'. That is to
> say, as it gains in utility it loses in scarcity. A little over a century
> ago, Leon Walras pointed out that economic value required the
> joining of utility and scarcity, which is easy enough to achieve if
> you happen to own a purely physical asset like an oilfield, but
> apparently much harder to pull off if your value-creating assets
> are information-based. Information, especially when codified, is
> hard to domesticate; it likes to roam. (Christensen 2003.)*

Tacit knowledge can only be captured when it is found. Therefore the key to successfully leveraging tacit knowledge within an organization is to accurately find the right people to solve that particular situation. Expertise management becomes a central tenet of tacit knowledge. The knowledge mainly exists in individuals, communities, surroundings and managers. From there, the expertise is needed to be picked up for capturing the knowledge. Similarly, a deep interview was analyzed before in this study. The right-side-paralyzed man, who had used different tricycles in order to keep balance and mobility, got somewhat recovered by riding a tricycle as exercises for years.

6.1.3 Knowledge Creation

The transformation of knowledge is based on Nonaka & Takeuchi's (1995) "SECI" model. Knowledge exists in both tacit and explicit forms, and the object of the "SECI" model is to describe four types of knowledge transformation. It is emphasizing that knowledge is created through a process which either changes the form of the knowledge (which is from the epistemic level) and/or makes knowledge accessible to a wider group of individuals – the group which is opposed to the individual (which is form the ontological level).

Table 7 "SECI" Model

From tacit knowledge	Socialization	Externalization
From explicit knowledge	Internalization	Combination
	To tacit knowledge	To explicit knowledge

The Combination (from explicit knowledge to explicit knowledge) emphasizes the transfer of knowledge, and thus does not involve transformation of knowledge but rather the moving or combining of existed knowledge. Internalization (from explicit knowledge to tacit knowledge) process is largely marked by learning-by-doing (Nonaka 1994, 19, according to Christensen 2003). The socialization (from tacit knowledge to tacit knowledge) and externalization (from tacit knowledge to explicit knowledge) of tacit knowledge creates the knowledge that was formerly solely available to a single person but which now becomes available to a number of people or groups. Through shared experiences, socialization of tacit knowledge results in shared tacit knowledge existing both in a technical and cognitive dimension, and this socialization of tacit knowledge requires physical proximity. (Nonaka & Konno 1998, 43, according to Christensen 2003.)

The technical dimension of tacit knowledge deals with the transmission of technical skills characterized as being know-how, which finds its expression in the interaction between the individual and the surroundings. The cognitive dimension deals more with the process that examines how a framework is to be created around a shared method or understanding of the socialization of knowledge.

Some examples of how tacit knowledge is socialized are (von Krogh, Ichijo & Nonaka 2000, 83):

- Direct observation

- Direct observation and narration

- Imitation

- Experimentation and comparison

- Shared performance of work

Externalization of knowledge makes tacit knowledge available in an explicit form. Action is not the central element; rather it is the dialog which is a tool for the individual to make tacit knowledge available as explicit knowledge.

Table 8 Tricycle "SECI" Model

From tacit knowledge	1. Socialization(Empathizing) - Setting up seminars on tricycles, embedding the new information into lifestyle	2. Externalization(Articulating) - Setting up a tricycles exhibition, let people see real tricycles
From explicit knowledge	3. Internalization(Embodying) - Setting up events, let people try to ride tricycles	4. Combination(Connecting) - Setting up a forum to share experiences and ideas on tricycles
	To tacit knowledge	To explicit knowledge

In this table tricycles knowledge creation in Finnish market is designed with "SECI" model.

1. The SECI model claims that knowledge conversion begins with the tacit acquisition of tacit knowledge by people who do not have it from people who have it.

2. Externalization, the next step in the knowledge conversion process, involves converting tacit knowledge into explicit knowledge, and holds the key to knowledge creation as new concepts are formed in this step.

3. Thirdly in the SECI model is combination which is the process of "systematizing concepts into a knowledge system" (Nonaka & Takeuchi 1995, 67), which happens when people synthesize different sources of explicit knowledge. (Nonaka 1991b, 99.)

4. The final cell of the matrix is called internalization, which can be also described as "a process of embodying explicit knowledge into tacit knowledge". It is "closely related" to "the traditional notion of learning", and to "learning by doing". (Nonaka et al. 1994, 340-41; Nonaka 1994, 19; Nonaka & Takeuchi 1995, 69.)

6.2   Implications to Business Plan

6.2.1   The Knowledge Creating Company

Some of the differences between a traditional company and a knowledge company are showing below:

Table 16 Differences Between Traditional Companies and Knowledge Creating Companies, According to Christensen (2003)

The traditional company:	The knowledge company:
Centralized management	Self-management
External allocation of work	Allocation of own work
Procedures	Challenges
Resistance to change	Change
Supervision	Self-supervision
Hierarchy	Shared work practices
Closed to the outside world	Open to the outside world

In an economy where the only certainty is uncertainty, the one sure source of lasting competitive advantage is knowledge. When markets shift, technologies proliferate, competitors multiply, and products become obsolete almost overnight, successful companies are those that consistently create new knowledge, disseminate it widely throughout the organization, and quickly embody it in new technologies and products. These activities define the 'Knowledge-creating' company, whose sole business is continuous innovation.

And yet, despite all the talk about "brain-power" and "intellectual capital", few managers grasp the true nature of the knowledge-creating company - let alone know

how to manage it. The reason: they misunderstand what knowledge is and what companies must do to exploit it. The example is showed in Chapter 6 that the misunderstanding of knowledge (or data and information) will lead to a wrong decision.

6.2.2 Benefits for Companies

In Finland, there are some companies that certainly could use tricycles as a tool or product. In this chapter it is discussed how tricycles could benefit Finnish companies. This matter is easier to explain by giving examples and suggestions of existing companies who have considered or could consider tricycles as an option in developing their business. Not only are the companies mentioned but also the ways they are using (if already using) their tricycles.

Mail delivery

Itella Group provides services using the "Itella" brand name for companies and provides services using the "Posti" brand name for consumers. Posti is well-known for Finnish people because it delivers their mail and offers other mail related services like selling stamps, envelopes, packets, postcards, etc.

The following quotation is picked from Itella's website from under a title called Itella Mail Communications:

> *In Finland, our key mission is to offer postal services to all citizens in Finland. Itella is the only service provider for a nationwide delivery service every week day. Posti's competitive edge relies on the strong brand, a high level of professional competence, as well as premium customer service. (Itella 2011.)*

Itella is the only postal service provider for a nationwide delivery service which would make them a big customer for tricycle import businesses if they made a deal with them. Itella is currently using bicycles with saddlebags and a strange metal frame attached to the bikes to deliver mail inside city area. These bikes look like home-made brainchildren. The metal frame seems to be used to keep the bicycle in balance and still while the mail deliverer is not riding. The saddlebags would be easy to steal when the deliverer is inside the building delivering the mail. Another

downside is that the deliverer might fall with the bike when it's slippery because it might be hard to keep balance with it when there is something in the saddlebags.

With tricycle, the mail deliverer doesn't have to work on the balance like with the bike because it has three wheels. The delivery box on the tricycle could be closed with a lock to prevent stealing of the mail and also more mail can fit in the cargo box than in the bags of a bicycle. The tricycles could be painted with the colors of Posti and the sides of the delivery box can be used as an advertisement. This has been done before, Thomas Nationwide Transport (TNN), a global delivery and transporting company working in over 200 countries, among others has tricycles in their use. This is no wonder because they expanded from Australia to Holland which is a well-known country regarding the popularity of the usage of tricycles. (Thomas Nationwide Transport 2011.)

Taxi services

Tricycles are already used as taxis in Helsinki so why not bring that idea to other cities of Finland. They can be used to transport people from place to place, especially in more flat areas and locations. Many people in Finland could afford to pay a few euros to get from place to another even if it's just a small distance. For example, after a movie or dinner back to home by tricycle taxi, it's cheaper than ordering a car taxi and more ecological, not to mention more exciting and even romantic. Tricycles that have a wide seat in the back behind the driver and have a top are known as rikshaws. Rikshaws can be rented in Helsinki for amusement rides and different events like weddings and bachelor parties and they can be even bought (SLT-promotions Oy 2009). Tricycle taxi services have also been available during summers at Helsinki for some years (Åberg 2010). The tricycle taxis in Helsinki had 15-30 customers per day in 2007 and their popularity has certainly grown along with the publicity by now and that should bring more customers too. The CEO of Fillaritaxi Oy said that in the center of a city, it's not possible to get everywhere with a car but with a tricycle taxi you can go easily to any place. (Piiroinen 2007.)

Food and other vendible

Food businesses would benefit from tricycles by using them as delivery and sales units. In many countries they are used to sell ice cream. They could be used to sell soda, candies, hot dogs, popcorn, candy floss, BBQ products, paella, slush or other delicacies. The cargo box just has to have a lid and a special heater to heat the food or refrigerator it to keep the vendible cold. Nestlé - the world's leading nutrition, health and well-being company - among other companies uses tricycles to sell ice cream at least in the UK (Red Kite Prayer 2010). (The Party Hire Company 2010.)

Picture 6 A Tricycle with a Front Box Used for Holding an Ice Cream-Shaped Advertisement with Stickers for a Nearby Coffee Shop

Commercial use

Tricycles that have cargo box on them have good space to advertise on the sides and front of the box if the cargo box is in the front of the tricycle and back of the box if

it's in the back of the tricycle. This would be a good way for companies to bring them more visibility. In similar way than in the picture 6 above tricycles could be used to promote the company. They could have their company tricycles in use in the city area and when it's not in use it could be parked outside somewhere, standing there as an advertisement. It could be used to for delivering or picking up daily products from a nearby shop or to distribute products, fliers or samples of products. It would certainly be cheaper than to have a company car with advertisements if the field of work is in the center of the city. In Helsinki the tricycles used for passenger transportation have adverts on them (The Slate 2007). The picture 7 below represents a passenger tricycle used as an election advertisement stand. It also has some other advertisements in it. This advertisement stand can be driven to another part of city to get more viewers.

Picture 7 A Tricycle Used as an Election Advertisement Stand in the City of Lahti

Industrial use

With tricycle's cargo box or bed it would be easy for companies to carry boxes and materials from place to another without using fuel which is becoming expensive all the time. Some tricycles are already used in the harbor of Helsinki to transport materials (O'Hiobhaird 2012). Google used specially designed tricycles in their endeavor to map the world for their Google Maps service (Smith 2012; Dan Nosowitz 2009).

Film and video shooting

For some time already, there has been a need among film and video producers to be able to move smoothly while shooting the film or video. Tricycles offer a great chance for that. While the driver steers the tricycle, the person shooting a video can just sit in the cargo box or passenger seat and concentrate on working with the video recorder. The bigger the wheels the smoother the ride should be because then they don't jump from every little stone. With a rain cover or top the tricycle could be just the right tool for making commercial videos, short films, movies, documentaries, etc. Bicycles and film making already have a connection so why shouldn't tricycles have connection to the film industry too (Hämäläinen 2012).

6.2.3 CIO Vs CKO

A way to encourage knowledge sharing and knowledge management is to have an executive level role with the title of chief knowledge officer (CKO) in one organization. This shows top-level commitment to the importance of knowledge. So what is different between the chief knowledge offer (CKO) and the Chief information officer (CIO)? Chief information officer (CIO) is responsible for Information Technology, Information System and information strategy and aligning them to the needs of the business as a whole. Although usually a member of the IT department, it is essential that the CIO is part of the organization's top management team and understands the implications of the global and digital economy (Ross & Feeny 2000). The CKO position is related to, but broader than, the CIO position. The CKO's job is to ensure that the company profits from the effective use of knowledge resources. Investments in knowledge may include

employees, processes and intellectual property; a CKO can help an organization maximize the return on investment (ROI) on those investments.

The distinction between data, information, and knowledge is context-dependent. Here is an example where a line manager analyses the departmental figures and presents the results to the top management department. For the line manager, the results are an interpretation of events which is therefore meaningful information rather than data. But for the top department, these figures are the raw input for their own analyses, not yet interpreted, and are therefore data rather than information. Hence, information is such because it is relevant and understandable to some person or group. But the top managers need to have the knowledge to use this information effectively. This may be explicit which is communicable to others or tacit which is only implicitly understood. And the top managers here can be regarded as a CKO. The reason to compare these two concepts (CIO & CKO) is to see that "knowledge" is a tendency direction for firms to think about and take in use.

6.2.4   Chinese Suppliers

Finland is the most expensive country in the Eurozone so manufacturing tricycles here compared to China is a lot more expensive. Everything from food to materials cost more than in China. That is why the Chinese manufactories were the first choice as tricycle business suppliers. (Yle 2012.)

Taking a vital exporting spot – Shanghai – as an example, Shanghai's vibrant economy and location make it an ideal city to be used as a gateway to export industrial goods to anywhere in the World, the Port of Shanghai already works as a major transportation hub for shipping products to mainland China and abroad. The Port of Shanghai is well organized, divided into specialized sections, clearly differentiating passenger and freight terminals with large storage spaces available.

China is also known as a manufactory paradise. Varieties of products can be manufactured well, cheap and in short time. There are already some available popular websites online of exporting tricycles from China. If going further with these websites, it's not hard to find that the tricycles there can be also designed

personally or special purposes; logistics are fluently flowing; and the whole business process is mature.

7   CONCLUSION

7.1   Summary

As it was proved above, the Finnish market could benefit from tricycles. The discussion was made after noticing the issue of tricycles knowledge from designed research: people have lost the knowledge, it's hard to capture it, it resides in small groups for sharing, it was in tacit form for transferring.

However, knowledge management is still difficult to use, how can we identify and manage something that we do not know exists? In a long term, some organizations try to change the culture so that knowledge sharing is a norm. In doing that, it needs to counteract the view that knowledge is power and therefore sharing it causes a loss of personal power. Reward schemes can help to make the sharing of knowledge (and also using other people's knowledge) advantageous to the individual. The theme mainly is encouraging people to share and exploit each other's knowledge partly through the support of IT, not the use of IT to replace people. Organizations need to develop a "culture of knowledge sharing".

7.2   Suggestions for Further Research

One future research subject could be to study people's views and opinions about their lifestyle after they have received information about tricycles in forms of pictures, videos, articles, etc., and maybe before and after test driving a tricycle. In this research, it could be noticed that some people who were familiar with tricycles from before, perceived them as one option among other vehicles that they could use and they had a positive image about tricycles. In fact, it seemed that they considered a tricycle as a better option for themselves than a bicycle.

Usage of tricycles in different parts of Finland

Another suggestion for future research is the range of ways to use a tricycle in different parts of Finland. There are surely some differences in the popularity and usage of tricycles around Finland. In some parts of Finland the landscape is maybe more flat than in Lahti and thus the environment for using tricycles could be easier.

Branding of tricycles

For tricycle manufacturers and importers, branding their tricycles could be the key to success if the product itself is of good quality. The effect of branding could be seen in recent years when a company named Rovio Entertainment (2012) published a game called Angry Birds which used an already existing and actually quite old idea of a game but because of their huge success in branding, the popularity of the game spread like fire. In the same way, tricycles have been in Finland some time now and they are not very popular yet but after some branding, the views on them might change radically. It could be researched how branding a tricycle would affect the perception of people compared to non-branded basic tricycles.

Tricycle marketing in Finland

Branding is closely tied to marketing but is not totally the same thing. Making a brand is a different thing than the way of suggesting that brand to customers. No matter how good a tricycle is as a product, if the customers don't get the message about it, how could they buy or rent it? The ways of marketing tricycles in Finland could be studied, what the channels would be and how to give a positive image about tricycles to people in general. Also the focus groups of customers could be researched and how to reach those particular groups.

7.3   Assessment

Research Ethics and Confidentiality

All the research data was collected by politely asking if the person was willing to contribute his or her time. If the person was willing to contribute his or her answers to the research he or she was told what the research is about and in which school the researchers study. The research was anonymous so the identity of the questionnaire answerers and interviewees stayed hidden and the identity was not asked at all. This fact improves the confidentiality of the research.

Using of sources and source criticism

In this thesis, sources were referenced quite a lot which means that the background study was extensive and research methods used for example were not just random thinking but they were based on known practices and methods that work. Most of the references were from published books found from libraries or from the Finnish government or important and known organizations like, for example, Statistics Finland, Itella, Yle, Finnish Petroleum Federation, STT, Finnish Heart Association, plus online newspaper articles and dictionaries, etc. It's reasonable to say that there might be some questionable references besides the trusted ones but those references were surely not used without consideration and comparing to previous obtained knowledge about the subject in question. Questionable references like someone's personal website were also not used as only reference if they were used to back up something factual but more used as an example of something that happened. Using a blog called "The Slate" as reference when giving an example of someone who noticed that rickshaws arrived in Helsinki for example is not a statement of absolute truth but just an example. That reference was also used in the more free discussion part of the thesis which is for making the authors' own suggestions and thus is more of the authors' view anyway.

7.3.1 Validity of the Research

Validity of research is related to the ability to generalize the results. Validity can only be evaluated. It should be evaluated to know if the same kind of research gives the same results in some other place and some other time, conducted on different people than this time, when it's repeated.

Main threats for the research validity

According to Trochim (2006) – author of an online hypertext textbook on applied social research methods - there are at least three major threats to validity of a study because there are three ways of possibly being wrong – people, places or times. It's highly unlikely that all the people that were picked for interview were all special cases and thus could not be used to making generalization. Lahti as a place shouldn't be special among the cities of Finland when thinking about the use of tricycles or people's views about them. There are both good and bad sides in Lahti as a place why people could use tricycles or know something about them. For

instance, a good side could be that there's development towards the popularity of cycling and green environment in general. Then a bad side could be that Lahti has many hills and cycling in Lahti is not always convenient compared to some city that was built on a flatter area. The last one of the three major threats was the time of the research. Before the research there were no major changes in the news or recently published studies or strong public opinions affecting people's thinking, knowledge or views about cycling and tricycles. That's why there should have been no difference timely if the research was conducted earlier. If the same kind of research would be done much later from now, the public awareness regarding the topic could be better assuming that tricycles are becoming more popular all the time. This assumption rose from the backgrounds of the research in section two of the thesis.

The questionnaire was conducted on people of whom some were also from different parts of Finland than Lahti and the questionnaire was to find out if Finnish people really need tricycles. Therefore the questionnaire had wider accessible population and covered more of the whole population geographically than the interview.

Validity of the method

According to Trochim (2006) sampling frame means the list of accessible population from which the sample is drawn or a procedure to follow in order to get the sample. To understand the idea better, see the figure 1 below this paragraph. Sampling frame should answer the question about how the study population can be accessed to draw the sample. The sampling frame in this research was the procedure followed to get a sample of the population of Lahti. The procedure was to interview people while walking in Lahti and to do the questionnaire with people around Finland. Selecting different people in sampling improves the validity of the research because differently picked people represent the accessible population better compared to picking the first twelve. If the first 12 people had been picked for the interview, they would have all been students since we started collecting the interviews from Lahti University of Applied Sciences. Instead of doing that, 12 people were selected randomly to get more representative sample of the population of Lahti.
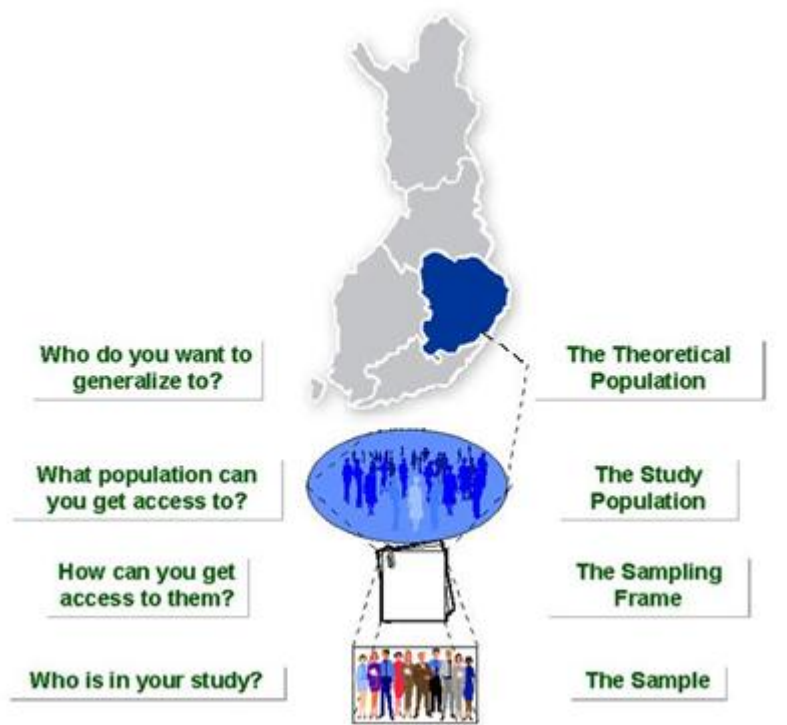
Figure 3 Sampling Terminology, Modified by Author from the Example Figure Given by Trochim (2006)

For the questionnaire, the people were chosen also from other parts of Finland than just from Lahti, so it just had wider accessible population.

7.3.2   Reliability of the Research

Reliability of the method

The method for collecting data was semi-structured interview which is quite a natural way of collecting views of the interviewees. There could be thought of no reason why people would not tell their thoughts and views in the interview. Therefore, access to the data was not difficult at all. Most of the answerers had at least either one of the researchers present when answering the questions so it was possible to tell if they were serious with their answers and if they understood the questions correctly. This improves the reliability of the research.

Generalizability of the theory

According to Trochim (2006) the theoretical population whom the sample was to be generalized to is the population of Finland. Then there's a difference between the theoretical population and the study population who could really be accessed. The sample could not be taken of the whole population of Finland. Instead it was taken of the population of the city of Lahti because the time and resources for the research were limited. This might affect the reliability of the sample by means of how it can be generalized to the whole population of Finland. However, this research was exploratory and aimed not to give a comprehensive answer but some idea of direction, a theory of what people want and need. It could be said that the research went deep enough to see under the surface but not wide enough to see what's beneath the whole surface. For the purpose of this research the sample should contribute enough as it is. To understand the idea in this paragraph better, see the figure 1 at the end of previous chapter called validity of the research.

This research gave a lot of useful knowledge for anyone who is interested in tricycles in Finland and how he or she could start a tricycle related business. The research contributed two theories that can further be tested and used as guidelines or references for further study.

Consistency and logic of the results

The results of the research are based on the conclusions from the collected data which was collected using two different methods while being careful not to bias the data. The conclusions from the data are based on patterns or behavior that suggest or point to certain direction and are thus logical. Two theories were formed during the analysis and the theories are also consistent with the data and do not contradict each other.

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APPENDICES

APPENDIX 1 Research Questionaire

Questions	
1. What is your age?	
2. What is your profession?	
3. How many people in your family?	
4. Do you have children?	
5. Do you do a lot of work outdoors?	
6. How far do you live from the city center?	
7. Do you have a car?	
7.1. How do you feel about parking in the city?	
8. Do you have a space for a car in where you live?	
9. How do you travel small distances, less than 6km?	
9.1. How do you transport your child/ children?	
9.1.1. Do you desire changes to the way(s) you are using?	
9.2. How do you carry stuff that you want to take with you?	
9.2.1. Do you desire changes to the way(s) you are using?	
10. Do you want to improve your fitness?	
11. Is safety more important than speed when you travel?	
12. Would you like to reduce pollution and noise?	
13. Are you willing to use an ecological vehicle? Rent or buy one?	

APPENDIX 2 Tutkimuskysely

Kysymykset	
1. Minkä ikäinen olet?	
2. Mikä on ammattisi?	
3. Kuinka monta ihmistä perheeseesi kuuluu?	
4. Onko sinulla lapsia?	
5. Teetkö paljon töitä ulkona?	
6. Kuinka kaukana asut kaupungin keskustasta?	
7. Onko sinulla auto?	
7.1. Miltä parkkeeraus kaupungissa tuntuu?	
8. Onko sinulla tila autolle asuinpaikassasi?	
9. Miten matkustat pieniä matkoja, alle 6km?	
9.1. Miten kuljetat lapsesi?	
9.1.1.Kaipaatko muutosta nykyiseen tapaan?	
9.2. Miten kuljetat tavarat, jotka haluat ottaa mukaan?	
9.2.1.Kaipaatko muutosta nykyiseen tapaan?	
10. Tahdotko parantaa kuntoasi?	
11. Onko turvallisuus tärkeämpää kuin nopeus kun matkustat?	
12. Tahtoisitko vähentää saastetta ja melua?	
13. Tahtoisitko käyttää ekologista kulkupeliä? Tai ostaa sellaisen?	