

UNIVERSITY OF TWENTE.

MASTER THESIS
BUSINESS ADMINISTRATION

*To what extent is there a market for car sharing
in the region of Twente?*

Author:

Gerwin Pannekoek
g.pannekoek@student.utwente.nl
s2033208

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Company: Munsterhuis

Address: Goudstraat 37, 7554 NG Hengelo

Website: <https://www.munsterhuis.nl/>

Supervisor: Bart Eshuis

E-mail address: b.eshuis@munsterhuis.nl

UNIVERSITY OF TWENTE.

Institution: University of Twente

Address: Drienerlolaan 5, 7522 NB Enschede

Website: <https://www.utwente.nl/en/>

First supervisor: Ir. Jeroen Sempel

E-mail address: e.j.sempel@utwente.nl

Second supervisor: Raymond Loohuis

E-mail address: r.p.a.loohuis@utwente.nl

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MANAGEMENT SUMMARY

The future of the automotive industry is unclear. To become a driver of change, dealerships have to go along with the changes and face challenges to stay ahead of competitors. One way to address these problems is business carsharing. Business carsharing is defined as; Cars that are shared among companies, employees or a particular department to reduce private vehicle fleets for business purposes (Shaheen & Stocker, 2015). Munsterhuis wanted to investigate the market for business car sharing in the region of Twente. Therefore the research question is stated as: *'To what extent is there a market for car sharing in the region of Twente'*. In addressing this research, both qualitative and quantitative research methods have been used. Data was collected from both business car sharing providers as well as potential business car sharing users (companies).

The first data collection method was through structured interviews. In total 18 business car sharing providers were eligible for this study, of which in total 5 companies participated in this research (N=5). Thematic content analysis (TCA) was used in order to analyze the data and draw conclusions. Regarding the developments, we can state that business car sharing in the Netherlands is still in development and unknown for a lot of people. There is a noticeable and visible growth, but not yet as large as was expected. Overall in urban areas business car sharing is more popular compared to rural areas. However, demand is also rising in rural areas. Until now, it appears that it is only used by governments, bigger (multinational) companies and multiple start-ups that share cars.

The second data collection method was through an online survey. In total 41 companies (N=41) filled in the survey that consisted of 22 questions in total. The goal was to detect needs and preferences of companies regarding business car sharing. Results were analyzed afterwards using SPSS. The need for business car sharing in the Twente region is very moderate and weak. Only 15,61% of the companies indicated that they saw potential in business car sharing within their fleet management. Also, more than 30% of the companies did not know about the existence of business car sharing before this research. Next to that, a couple of hypothesis were stated. Only one hypothesis was supported by our data, namely: The number of employees of companies (size of the company in terms of employees) in Twente has a positive impact on their interest in business car sharing. The advice for Munsterhuis is to once again make considerations and decisions for their future in offering business car sharing, adjust their services accordingly to better respond and fit into the current needs and preferences of the business car sharing market.

LIST OF ABBREVIATIONS

B2B	Business to business
B2C	Business to consumer
B2P	Business to peer
B2E	Business to employee
P2B	Peer to business
P2P	Peer to peer
CO2	Carbon dioxide
FCS	Fetch Car Sharing
ELC	European Lease Company
GPS	Global positioning system
OV	Openbaar Vervoer (public transport)
CROW	Centrum voor Regelgeving en Onderzoek in de Grond-, Water- en Wegenbouw en de Verkeerstechniek.
PHEV	Plug in hybrid electric vehicle
FEV	Full electric vehicle
E2E	Employee to employee
OCDM	Ondernemers collectief duurzame mobiliteit (entrepreneurs collectively sustainable mobility)
VNA	Vereniging Nederlandse autoleasemaatschappijen (association of Dutch car leasing companies)

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1. INTRODUCTION

Cars are one of the most used type of mobility in today's world. During the last years the automotive industry is radically changing. The industry is described as "undergoing the most significant change since Henry Ford industrialised automotive manufacturing in 1908" (Holweg, 2008). CO² emissions became more and more important, cities and highways are becoming overcrowded and parking issues are also becoming a major problem. The future of the automotive industry is unclear and this offers many challenges for both manufactures and dealerships but also offers new opportunities. To become a driver of change, dealerships have to go along with the changes and face challenges to stay ahead of competitors.

One way to address these problems is car-sharing. In which people can rent cars for a short period of time and pay per kilometre or in units of time. The benefits of sharing a car is that the user only pay when they use a car instead of paying monthly fixed costs to own a car, also maintenance costs disappear. Another benefit is that more people make use of the same car which will reduce the amount of cars needed to fulfil everyone's travel needs. Additionally, most car sharing organisations use more environmental friendly cars which will reduce CO² emissions when more people start adopting car sharing. Disadvantages of car sharing are that people prefer to own a car for themselves, especially people that often use a car. Therefore car sharing is more focused on people that make small trips and don't need a car for everyday usage. Other disadvantages are that insurance sometimes needs to be supplemented, membership is often required at car sharing organisations and it may appear that there are no cars available at the moment you want to use a car.

During the past years, the grow in new car sales stagnated since 2016 (Statista, 2019), and the European carsharing market is expected to witness a high growth rate in the coming years due to a large number of service providers and increased government support to increase the adoption of sharing cars. The EU council has also introduced several tax benefits and incentives to promote the adoption of electric or zero-emission cars. The European car sharing market was estimated at \$570 million in 2017 and is expected to reach \$4 billion growing at a compound annual growth rate of 33,7% from 2018 to 2024 (Global Market Insights Inc, 2018). Results from 2018 show us an increase of 25% in the Netherlands growing to a total of 41.000 shared cars with a total of 400.000 users (Autovisie, 2019).

Therefore it becomes interesting for car dealerships to look into opportunities for offering car sharing services. This is also the case for Munsterhuis. Munsterhuis is since 1962 a high quality and trusted car dealership located in Twente. Munsterhuis is an official dealer of the following car brands: Renault, Dacia, Alpine, Ferrari, Jaguar and Land Rover. Next to new car sales, Munsterhuis is also offering after sales services, car rentals, (short-)lease, insurances and car damage repair.

Recently, Munsterhuis was approached by Fetch Car Sharing (FCS) with a proposal to introduce car sharing in Twente. FCS is part of the European Lease Company (ELC) and started since 2019 with 200 free float electric cars in Amsterdam. Cars can easily be reserved, opened and started with the app from FCS. After returning the car, the money will automatically debited from your bank account.

Munsterhuis is considering the collaboration with FCS but, first wants to investigate this new emerging market before entering. Therefore, this thesis is about the feasibility of introducing car sharing for Munsterhuis in the region of Twente.

1.1 Relevance Munsterhuis perspective

The underlying reasons for Munsterhuis to consider the introduction of car sharing is due to several reasons. First off, the sales of new cars shrunk in the last years which is the core business of Munsterhuis. Another reason, are the changes in developments and trends in the mobility sector. What we see is that more and more people are concerned with the CO² emissions and the upcoming sharing economy. This effects initiatives such as private lease, carpooling, car sharing and alternative transport options. Therefore, Munsterhuis wants to investigate the readiness of businesses in Twente regarding business car sharing in order to find out if it is attractive for Munsterhuis to start operating in business car sharing. Also, there were ideas about becoming provider of free float car sharing. But since free float car sharing is involved with a large investment, the decision was made to focus on business car sharing only.

1.2 Research approach

This study will focus on business car sharing and will investigate whether companies know what car sharing entails and whether there is a need for it. The region of investigation is Twente, based in the Netherlands. All companies that are located in this area are the target

group for this research. Both qualitative and quantitative research methods will be used in order to answer the research question.

1.3 Research question

Based on the case from Munsterhuis, the following research question is formulated:

'To what extent is there a market for car sharing in the region of Twente?'

The 'readiness' reflects on the extent to which companies are open to adopt car sharing.

In order to answer this research question several sub questions are set up, answering all these sub questions will in the end give possibility to answer the research question. Sub questions are presented below:

- *What developments are taking place in the field of car sharing in the Netherlands?*
- *What is business car sharing?*
- *What is fleet management?*
- *What are trends and developments in fleet management in the Netherlands?*
- *What are the needs and preferences regarding fleet management for companies in Twente?*
- *What potential role can car sharing have within the Twente fleet management of companies?*

First off, a literature review will be done in order to define the main variables in this research. The two main variables are 'Car sharing' and 'Fleet management'. A critical look will be taken into the developments in the field of car sharing in the Netherlands, as well as particularly in Twente. In the Netherlands it will be investigated which are the current providers of car sharing services. In the end a theoretical reflection is written on doing market research. This theoretical reflection was written after the research was conducted.

1.4 Goal of the research

In this explorative research, both qualitative and quantitative research methods will be used for data collection. The main goal for collecting the data is to discover the needs and preferences regarding fleet management for companies in Twente. Also as, defining the potential role for car sharing in fleet management for companies in Twente. In the end all collected information will be brought together in order to draw conclusions and answer the research question. Based on the information, an advice will be given to Munsterhuis on how they should continue to develop Car sharing in Twente.

2. LITERATURE REVIEW

First of all car sharing in general will be defined and the different forms of car sharing mentioned in literature will be investigated. After that, research is done about the advantages and disadvantages of business car sharing in particular. Fleet management will be defined also and the types of fleet management will be reviewed, environmental impact will be investigated and in the end different environments in which business carsharing can operate are distinguished.

2.1 Car sharing in general

In the last years, car sharing is becoming increasingly popular. Car sharing basically is a service where a car, or fleet of cars is shared by a group of people paying only for the actual use of the vehicle without the costs and responsibilities of ownership (Bignami et al., 2017; Costain et al, 2012, Shaheen et al., 2009). The price of the service is based on a per-use basis, most of the times it depends on how long the car is used or the distance travelled. Wherein, prices of gasoline, insurance, parking and maintenance are included. The growth of car sharing is substantially affected by the arrival of more intelligent systems in cars, such as self-driving systems, internet- and smartphone based reservations and GPS systems which improve user-friendliness. (Barth et al, 2004; Mukai and Watanabe 2005). Another reason for carsharing receiving more attention in the past years is due to the relevance of environmental sustainability (Khanna and Venters, 2013).

Currently, three different types of car sharing systems are described which are divided into; Business-to-consumer (B2C), Peer-to-peer (P2P) and Business-to-Business (B2B). An overview is given of three categories with the corresponding car sharing systems:

1. Business-to-consumer (B2C)
 - a) Round trip car sharing; Cars are station-based and have to be picked up and returned at the same location.
 - b) Free float car sharing; Cars are free floating in a restricted area in which the cars can be picked up and returned.
2. Peer-to-peer (P2P)
 - a) Platforming; Online platforms where private car owners can offer their car in the region and rent it out for a short-period of time, f.e. Snappcar, Turo and Getaround.
 - b) Shared ownership; When a group of people buy a car together and everyone can use it whenever they want.

3. Business-to-Business (B2B)

- a) Corporate carsharing/business car sharing; Cars that are shared among companies, employees or a particular department to reduce private vehicle fleets for business purposes (Shaheen & Stocker, 2015).

2.1.1 Advantages and disadvantages of business car sharing

A lot of research has been done in the past years to find out the advantages and disadvantages of business carsharing. Business car sharing, or corporate carsharing, is defined as ‘a form of carsharing that enables commercial businesses to reduce or eliminate private vehicle fleets typically maintained for business purposes’ (Shaheen & Stocker, 2015). Since the decision is made to focus on business car sharing for Munsterhuis. The advantages and disadvantages of business car sharing are defined (Shaheen & Stocker, 2015; Clark et al., 2015; Le vine et al., 2014):

1. Advantages

- a) Operational advantage for the company over previous fleet-based models.
- b) Higher fleet utilisation.
- c) Additional flexibility through increased travelling options.
- d) Eliminates high overhead/maintenance and petrol costs of the companies car fleet(in case of electric vehicles).
- e) Ensures that staff not necessarily have to come to work by car.
- f) Travelling for work with a personal owned car will be eliminated, no need for reimbursement and insurance arrangements. Therefore, it eliminates staff that wishes to drive their own car for work-related travel, which is most of the times compensated based on the distance travelled which can eliminate the perverse incentive of private car ownership because it becomes unnecessary.

2. Disadvantages

- a) Limited availability can occur.
- b) In case of traffic jam, the reservation time for the next person can be interrupted.
- c) There can be less responsibility for the car. Because it is not owned by one person.

2.2 What is fleet management?

Fleet management will be defined and how traditional fleet management is used in companies. Different alternatives for typical fleet management are described and their relationships and impact on business car sharing are mentioned.

2.2.1 Fleet management defined

Any company that owns or leases vehicles is involved in some type of fleet management. Fleet management is about constantly providing insights and optimizing the costs of the company's fleet. With the constant pressure of reducing total cost of ownership, fleet managers have to keep the operations run efficiently to remain competitive in the market. Typical fleet managers responsibilities are vehicle leasing and financing, vehicle maintenance, licensing, accident management, speed and fuel management and drivers management. Fleet management allows companies to rely more on transportation in business with minimizing the associated risks. Companies can either choose to appoint a fleet manager themselves or make the decision to outsource. Next to that, there are some alternatives that can reduce the responsibilities of companies fleet management, which will now be described.

2.2.2 Private car ownership

Ownership expresses the special relationship between a person and an object, in this case a car, called "owning", and the object is called "personal property" or a "possession" (Snare, 1972). In ownership, the owner has full property rights over the car and is therefore allowed to use, sell, retain profits yielded from the cars use and is allowed to transform its structure if desired (Snare, 1972). People that own a car are the biggest competitors for car sharing initiatives, simply because these people probably will not make use of car sharing. It provides the owner flexibility, because the car can be used whenever they want to, without having to check for availability (in the case of carsharing). A disadvantage of private car ownership is the high amount of costs that are involved f.e.: Insurance, taxes, fuel, maintenance, parking and depreciation. These costs involved with private car ownership are directly experienced as a disadvantage (Gardner & Abraham, 2007). When companies allow employees to use their private car for work-related transport, companies often pay a fixed amount per kilometre to the employee. This ensures that the company itself does not have to take into account certain aspects of fleet management. However, paying a fixed amount per kilometre is relatively expensive for companies. Therefore, this is not very attractive for companies.

2.2.2 Private car lease

In Private car lease an individual is provided with a car by a lease company in return for a fixed amount of price per month. The lease company remains owner of the car and is therefore responsible for maintenance. Advantages are that no capital investment is required and costs are the same every month. Disadvantages can be that the individual is tied to a fixed number of kilometres per year and the contract is often signed for several years. Despite these facts, private lease is increasingly popular in the Netherlands. Looking at the numbers, in 2013 a total of 8.500 cars were private lease. With a huge increase in the past years, a total of 150.000 cars were private lease in 2018. Much competition is going on in the private lease sector regarding the lowest prices. Most of the private lease contracts range between a price of €200 to €300 per month. Wherein, most of the private leasers are 46 to 55 years old. In 2017, 98,1% of all the private lease cars were powered by petrol engines (VNA, 2019). Also, private leased cars are often used for work-related travels. Which has the same consequences for the company as private car ownership.

2.2.3 Car rental

Another alternative for car sharing is renting a car. Car rental companies are companies that rents out cars for short periods of time in return for a fee. Often car rental companies are located near airports or crowded places and serve people that are temporarily in need of a car. Car rental companies typically purchase or lease a fleet of different types of cars and charge the customer based on time used or kilometres travelled. In most cases, a separate insurance must be taken to insure the car. Also, a deposit must often be paid. Normally, the cars have to be picked up at location A, and also brought back to location A. If you want to deviate from this, extra costs are most of the times charged. Whether it is financially attractive and cheaper to rent a car compared to private lease depends on the frequency of use. This form as an alternative of fleet management is often used by start-up companies that do not own a car for transportation.

2.2.4 (On-demand) Ride-sharing and carpooling

Ride-sharing has increased popularity recent years, ride-sharing platforms and services are bringing together travellers with similar itineraries and time schedules (Saranow, 2006). Platforms consist of online dashboards in which customers can offer their trip for carpooling. Therefore, it is able to share car related expenses for ride-sharing users, making it both

profitable for themselves as for the environment. On-demand ride-sharing is currently in development and not (yet) working efficiently. The idea of on-demand ride-sharing is a system where an automated process is provided by a ride sharing organization which matches up drivers and riders on very short notice or even on-route. One condition for both (on-demand) ride-sharing and carpooling is that the driver is in the possession of a private- or lease car.

2.2.5 Other alternatives (out of scope of this research)

Other alternatives, non-car related are; public transport, (electric) bicycles, motorbikes, scooters and Uber (taxi services). These alternative options for transport have not been included in this study. This study focuses solely on options in which the traditional car is involved. Uber is of course an alternative, but is currently not yet available in our region of investigation. However, CROW gave insights in carsharing, private car ownership and (private) lease cars in comparison to the mentioned alternatives that are out of scope. We can see a total amount of 1 million lease cars in the Netherlands, of which 150.000 are private lease. So for companies leasing cars is until now the most popular form in fleet management. Shared cars have a total amount of 51.149 in 2019, but has grown strongly in the recent years. This form therefore offers many opportunities and possibilities for companies. Shared cars can also be used in a combination with lease cars, making it extra attractive for companies to implement. See table 1 for all alternatives with corresponding amounts.

Table 1. *Alternative transport options (out of scope) with their available amounts.*

Systems	Amount	Year	Source
Shared cars	51.149	2019	CROW-KpVV
OV-fietsen	20.500	2019	NS
Taxi's	35.000	2019	BVS
Rental cars	86.600	2018	BOVAG
Lease cars	1.000.000	2018	VNA
Of which Private Lease	150.000	2018	VNA
Cars on gas	6.713	2018	RDW
Fully electric cars	62.124	2019	RVO
Fully electric cars incl. hybrids and range extenders	96.657	2019	RVO
Number of passenger cars	7.535.863	2019	CBS
Electric bicycles	1.809.400	2019	BOVAG-RAI
Total number of bicycles	23.600.000	2019	BOVAG-RAI

2.3 Environmental impact

Car sharing is associated with a couple of social and environmental benefits (Shaheen et al., 2006; Shaheen & Cohen, 2007). It is proven by several researches that car sharing results in less vehicle travels and often use of more environmental friendly cars (Shaheen et al., 2004; Cervero & Tsai, 2004). For example, in the Netherlands, 6.4% of the shared cars are electric vehicles, compared to the 1.3% of all Dutch cars.¹ As a result, individuals are avoiding the purchase of new vehicles or sell current vehicles to make more use of car sharing. This helps to reduce new vehicle sales which consumes CO² emissions and involves waste products (Millard Ball et al., 2005; Cervero et al., 2007). In the Netherlands, Meijkamp (2000) investigated the behaviour of car sharing members of four car sharing services in the Netherlands. Meijkamp found that car sharing members average yearly kilometres driven by car decreased with 33% after becoming a member at a car sharing organization. The frequency of trips did not decrease but members more often use the train, bus or bike. Another researcher found that Dutch car sharing member travelled an average of 1600 km less per year by car than before. Which is an estimated of 8-13% less CO² emissions (Nijland et al., 2015). Therefore, car sharing is associated as having a positive impact on the environment.

2.4 Different environments

At this moment, research in car sharing mainly focusses on urban areas. Rural areas are not intensively reviewed, which potentially offers solutions for inadequate public transportation (Wappelhorst et al. 2014). Wappelhorst et al. (2014) also found that for rural areas acceptance of electric car sharing might raise when more charging stations are available or when the range of the electric cars increases. Although, in the Netherlands more urban areas are represented with most of the shared cars for now regarding the collected data from Crow. Which made a collection of all available shared business cars divided into the categories: 1) very strong urban; 2) strong urban; 3) moderately urban; 4) little urban and 5) not urban. In table 2 the results are presented of all available shared business cars, also as the total representative population of each category.

¹ <https://www.crow.nl/kennis/bibliotheek-verkeer-en-vervoer/kennisdocumenten/dashboard-autodelen>

Table 2. Amount of shared business cars per degree of urbanity in the Netherlands (CROW, 2019).

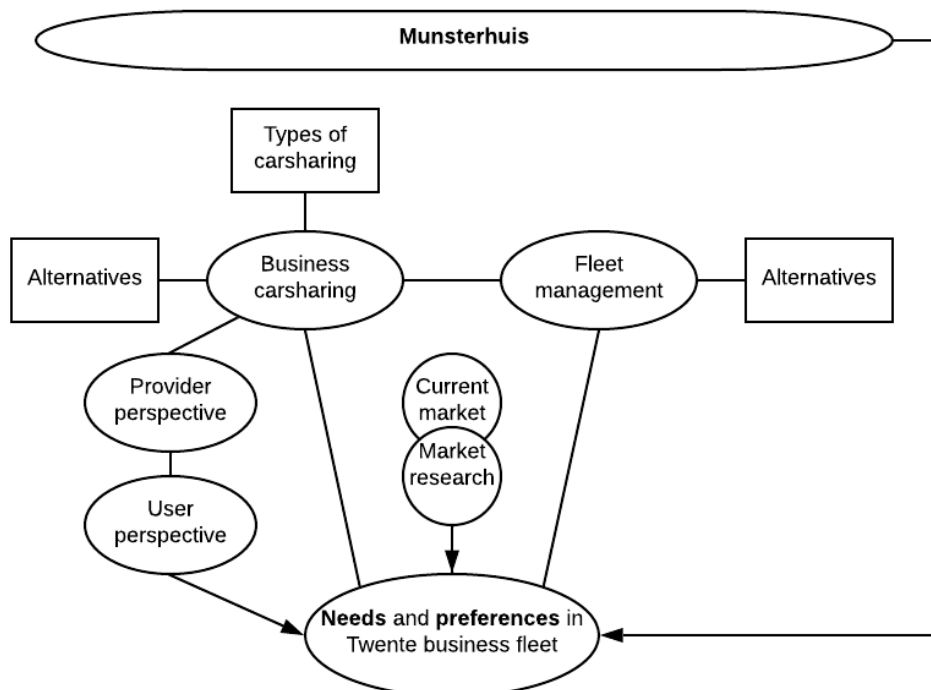
Urbanity type	Degree of urbanity	Population	Business car sharing	Amount of people per shared car
Very strong urban	1	4.195.485	659	6.367
Strong urban	2	5.271.991	489	10.782
Moderately urban	3	2.746.738	136	20.197
Little urban	4	3.780.980	78	48.475
Not urban	5	1.287.559	20	64.378

Crow labelled Enschede and Hengelo, parts of our region of investigation, both as ‘strong urban’. In the last column the amount of people per shared business car is given. We can see that ‘strong urban’ cities have the biggest population in total. In 2019, 10.782 people were present per shared business vehicle.

2.5 Conceptual model

Based on the literature review, a conceptual model is created in order to visualize the key concepts in this research. On top we can see the Munsterhuis as a main stakeholder. First off different types of car sharing were defined. Next, the focus is established on business car sharing in particular, that is on the same level as fleet management. These 2 are directly connected to the ‘needs’ and ‘preferences’ in the Twente business fleet, which is ultimately the result of this research. The results will be fed back to Munsterhuis. See Figure 1.

Figure 1. Conceptual model



3. METHODOLOGY

In this part a description is given about how the research will be structured and how in the end valuable conclusions can be drawn. This exploratory research consists of both qualitative and quantitative research methods. Exploratory research is used when the specific problem is not studied before and when the goal is to establish priorities for decision-making (Shields, 2013). Often exploratory research goes with both qualitative and quantitative research methods. The quantitative research method is used for a large amount of data collection about the companies in Twente, this can successfully be combined with additions from a qualitative research method for more in-depth information to gain knowledge about underlying motives (Patton, 1990; Reichardt & Cook, 1979). In this case, the data collection will be done in the form of interviews and surveys. One important disadvantage of exploratory research is that the collected data is subject to bias, but in this case with 41 respondents (companies) that is negligible.

3.1 Data collection

Different types of data collection will be used in this research. As mentioned before, both qualitative and quantitative research methods will be used. Therefore, primary and secondary data will be collected in order to establish a greater level of reliability (Stake, 1995).

Secondary data refers to data that is collected by someone else other than the researcher. Sources that are used in this research is information that is collected by government departments, organizational records and other data that originally was collected for other research purposes. This secondary data will be used in order to answer the following sub questions:

- *What developments are taking place in the field of car sharing in the Netherlands?*
- *What is business car sharing?*
- *What is fleet management?*

The secondary data will first be properly scanned and investigated to guarantee the reliability and usability of the information. This is one of the important conditions when using secondary data (Horn, 2018). This will be done by finding out whether the researchers have conducted reliable research and whether the information is representative for this research. The technique that will be used to collect the secondary data will be mainly desk research. Desk research is useful and extensively used in research to investigate markets.

This research is carried out in a specific area and target group. Therefore, qualitative methods will be used in order to collect primary data. Two different types of primary data will be collected namely: 1) Structured interviews with current business car sharing providers in the Netherlands. 2) Structured survey with 50 companies in Twente. The primary data will be used in order to detect needs and preferences of the fleet management of companies in Twente.

Business car sharing provider perspective

- 1) Structured interviews will be used to interview current business car sharing providers in the Netherlands, which is the sample group of this data collection method. The goal is to discover experiences of the providers. The questions are designed to get the respondent (provider) talk about their business car sharing services. It could happen that providers do not want to cooperate in the research because Munsterhuis can potentially become a competitor for them in the future. Still, every provider will be asked to participate in the interview. The questions are based on the literature review and can be found in Appendix 1. In the end this will lead to an answer for the following sub question:

- *What are trends and developments in fleet management in the Netherlands?*

3.2 Thematic content analysis

After the interviews are done, data will be analyzed based on the thematic content analysis. Thematic content analysis is widely adopted as a qualitative research method for examining themes or patterns within data (Daly et al., 1997). The goal is to identify the most important themes, and use these themes to address the research (Reader, 2017). In the same way as coding, themes are just simple conceptualizations from the data. Every theme consists of multiple insights around a central concept. Braun & Clarke (2006) distinguished between a top-down approach, that is driven by specific research questions and a bottom-up approach that is more driven by the data itself. In this research the top-down approach is used instead of the bottom-up. This six phase process gives the researcher clear guidelines in doing the TCA. All of the six phases will be briefly explained:

Phase 1 – Become familiar with the data

Familiarization with the data is the first step in the process, it is vital to be fully familiar with all the collected data. Therefore, it is necessary to read the transcripts in an active way in

order to search for meanings and patterns. During the reading the researcher will make notes and mark ideas for coding.

Phase 2 – Generate initial codes

After the researcher is familiar with the data, it is time to generate initial codes. Codes refer to “the most basic segment, or element, of the raw data or information that can be assessed in a meaningful way regarding a phenomenon” (Boyatzis, 1998, p63.). In other words, the data will be organized in to meaningful groups. Coding in this research will be done manually, this means the researcher will highlight important parts during the reading of the transcripts.

Phase 3 – Search for themes

After all the data is initially coded, there’s a long list of different codes generated from the dataset. In this phase, considerations of combining different codes into one theme will be made. A mind map will be used to create an overview of all the codes and themes. Whenever there are codes that doesn’t fit (yet) to a theme can be placed in a ‘theme’ called miscellaneous.

Phase 4 – Reviewing themes

Themes are being reviewed, and regarding Braun & Clarke (2013) there exist two levels of refining and reviewing themes. The first level is about coherent patterns within a theme. Whenever a pattern appears, a sub theme will be considered, in order to go more into detail. Level two is a similar process, but now we focus on the entire dataset instead of only a theme. All the themes together will be in terms of validity in relation to the entire dataset.

Phase 5 – Defining and naming themes

This phase starts after the themes map is created. At this point each theme will be reviewed in terms of the name. We really have to understand the essence of each theme, and what it tells us for the analysis. It is important to consider how each individual theme supports the main theme, and how this themes and main theme relate to the research question that we are trying to answer. By the end of this phase each theme will be clearly defined.

Phase 6 – Producing the report

The goal of the last phase is to ensure that the complicated data is translate into a way convinces the reader. It is important that the story has data extracts in the story to strengthen

the claims that are made in the conclusion. Braun & Clarke (2013) advice to take small extracts of the data that capture the essence of the story you want to tell. In the end an argument will be made related to the research question.

Needs and preferences in Twente

- 2) The second method of data collection is the structured survey, that will be used to approach companies to discover needs and preferences in Twente regarding fleet management. The survey will be formatted in Qualtrics, and companies will be approached by e-mail or telephone with a short introduction about the research. Afterwards, the data will be analyzed in SPSS in order to conduct descriptive statistics and to test hypothesis. The hypothesis are stated in chapter 6.4. This method will give possibility to answer the following sub questions of the research:
 - *What are the needs and preferences regarding fleet management for companies in Twente?*
 - *What potential role can car sharing have within the Twente fleet management of companies?*

3.3 Hypothesis testing theory

In total four hypothesis have been stated in this research of which the truth is unknown. Every hypothesis consists of a null-hypothesis and an alternative hypothesis. The alternative hypothesis suggests a statistical relationship between the two proposed variables. Wherein the null hypothesis suggests a relationship between the variables. Based on the chosen significance level. The significance level is often denoted as alpha or α . For the hypothesis testing in this research alpha is set on 5% ($\alpha = 0.05$). This 5% indicates the risk of concluding that differences exist when in reality there are no actual differences (Lehmann, 1986).

For testing these hypothesis, the Pearson Correlation Coefficient (PCC) will be used. PCC is a measure and statistical test for indicating a linear relationship between two variables X and Y. The correlation coefficient (P-value) ranges from -1 to +1. Wherein +1 defines a perfect positive linear relationship. Obviously, -1 defines a perfect negative linear relationship and 0 defines no relationship at all. When the P-value is less than or equal to the significance level, we reject the null hypothesis.

Standard deviation is also an important measure of dispersion, not only in the hypothesis testing but also in presenting descriptive statistics. Overall an low standard deviation indicates that the values tend to be close to the mean of the sample. A high standard

deviation indicates that the values are spread out over a wider range. Some general rules about the standard deviation are:

- 68% of the values are within 1 standard deviation from the mean
- 95% of the values are within 2 standard deviations from the mean
- 99,7% of the values are within 3 standard deviations from the mean

3.4 Correlation and causation

In doing the hypothesis testing, we have to deal with correlation and causation. Correlation simply implies that two variables move together in the same direction. A positive relationship means that when variable X increases, variable Y also increases. This is the opposite for a negative relationship. No correlation indicates no link between variable X and Y. Talking about causation. Whenever a certain relationship is found among variables the question arises which variable is the cause and which one is the effect. It may be a third variable affecting both the variables X and Y which means there is no real relationship between X and Y. Only when a researcher can prove that one event is the result of the occurrence of the other event means we can talk about a causal relationship.

3.5 Scope

The purpose of this study is to investigate the potential of the business car sharing market in Twente. Twente has a mix of 'strong urban', 'moderately urban' and 'little urban' places. So, both urban and rural areas are investigated in this study. The focus will only be on business car sharing. Therefore, the sample of this study are all businesses that are located within Twente, no further requirements are imposed on the type or characteristics of the businesses.

3.6 Limitations

The sample of this research will not be representative for statements about the whole population of Twente due to a limited sample size. But, can give a good indication for Munsterhuis for making decisions in the future. Also, sampling bias has to be taken into account. Limited information about all businesses in the region of Twente is available. Therefore, the sample will not be fully random.

4. DEVELOPMENTS IN THE NETHERLANDS

In this subchapter, a specific look is taken at the car sharing market in the Netherlands. First a look will be taken at car sharing in general. After that, a more focussed look will be taken into the market specifically for business car sharing and electric vehicles.

4.1 What developments are taking place in the field of car sharing in the Netherlands?

In 2018, a total of 41.000 shared cars were present in the Netherlands. Which were used by a total population of 400.000 individuals. In comparison to previous years, in 2017 there were 30.697 shared cars, and in 2016 an amount of 25.000 shared cars were present respectively. in 2019 already 51.149 shared cars were counted until now (CROW-KpVV, 2019). The main growth is explained by places where already the most shared cars were available. It seems that more urbanized cities (F.e. Amsterdam and Utrecht) are faster in adopting shared cars then more rural areas as mentioned before. Below in Table 3 the total amount of shared cars per system is shown. The fastest growth over the years was explained by carsharing platforms. However the growth in local communities raised with 72% last year. Business carsharing increased respectively with 23% to 3465 shared cars for business purposes.

Table 3. *Amount of shared cars per system (CROW, 2019)*

Type of system	2015	2016	2017	2018	2019	Growth last year
Roundtrip carsharing	2.103	2.278	2.385	2.499	2.512	34%
Carsharing Platforms	11.100	18.922	24.779	33.461	41.984	25%
Oneway carsharing	415	414	441	521	571	11%
Local communities	734	1.082	1.354	1.638	2.617	72%
Business carsharing	1.865	2.266	1.738	3.072	3.465	23%

When a more accurate look is taken at the types of cars that are used in these different systems, we can see on the next page in table 4 the amount of PHEV and FEV cars per system. Oneway carsharing accounts for the largest number of PHEV and FEV with a total amount of 87,6%, followed by business carsharing with a total of 31,8%. See table 4.

Table 4. Amount of PHEV and FEV per system (CROW, 2019)

system	2018	2019	Share of PHEV+FEV per system
Roundtrip carsharing	46	85	3,4%
Carsharing platforms	1.230	1.667	4,0%
Oneway carsharing	466	500	87,6%
Local communities	65	128	4,9%
Business carsharing	841	1.103	31,8%
Total	2.648	3.483	6,8%

Regarding the TNS-NIPO (2014), a Dutch opinion research agency, 71% of all Dutch residents are familiar with car sharing and 20% is open for use in the future. 6% of all Dutch residents knows someone who does car sharing. Given the rapidly growing market, these statistics are already quite outdated. However, more recent statistics are not available.

4.2 What is business car sharing?

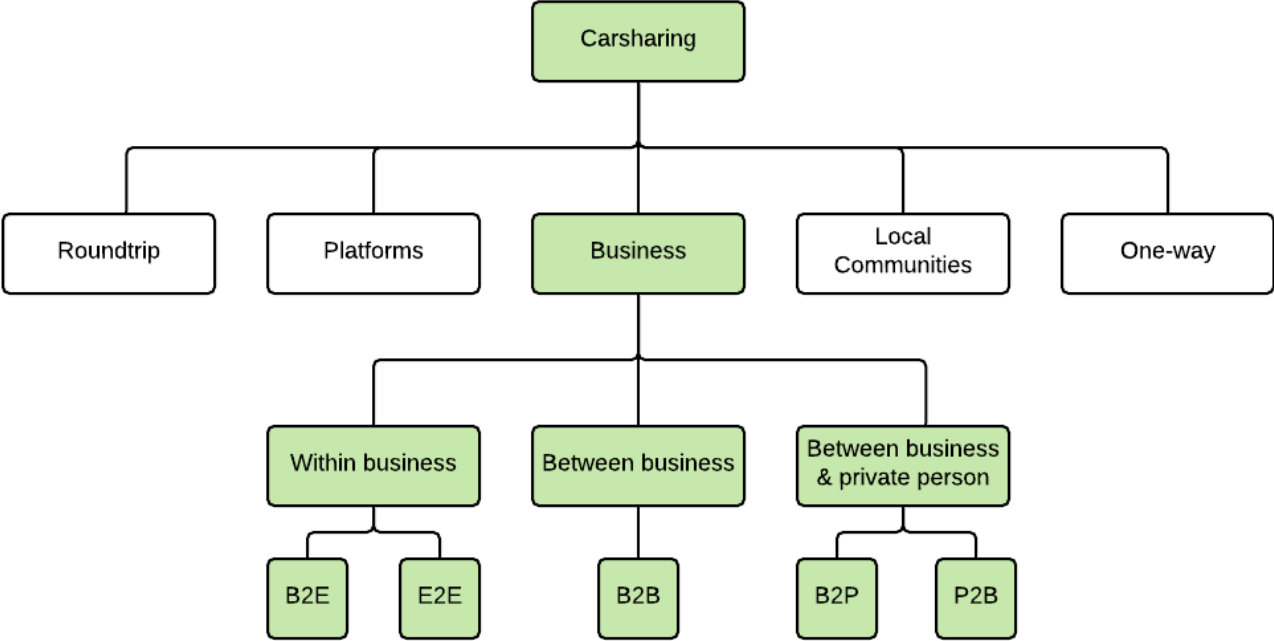
Business car sharing is defined as cars that are being shared by multiple users, where an employer is involved as a provider of the car. The employer in this stands for the complete organization and the users are defined as employees in that particular organization. Regarding the OCDM (2019), business cars are only 2 hours per day in use, so 22 hours a day the average business car stands still. Therefore, it can be interesting for business to use their company cars more efficiently, in order to save costs. A distinction was made for different types of business car sharing (CROW, 2019; Jorritsma et al., 2015):

1. Shared cars within an organisation → Business to employee (B2E) or/and Employee to employee (E2E).
2. Shared cars between multiple organisations → Business to business (B2B).
3. Shared cars between a(n) organisation(s) and private person(s). → Business to peer (B2P) or/and Peer to business (P2B).

Taking the advantages and disadvantages into account, the decision is made for Munsterhuis to focus only on business carsharing in this research. A free float car sharing system is involved with a big investment and it seems after investigating the literature about urban and rural areas that it is hard to make it profitable in Twente. Also, in very strong urban places, where private car ownership is hard also because the lack of parking areas, it is hard for this

organisations to survive. Therefore, we can see the focus of this research displayed in figure 2.

Figure 2. Focus of the research



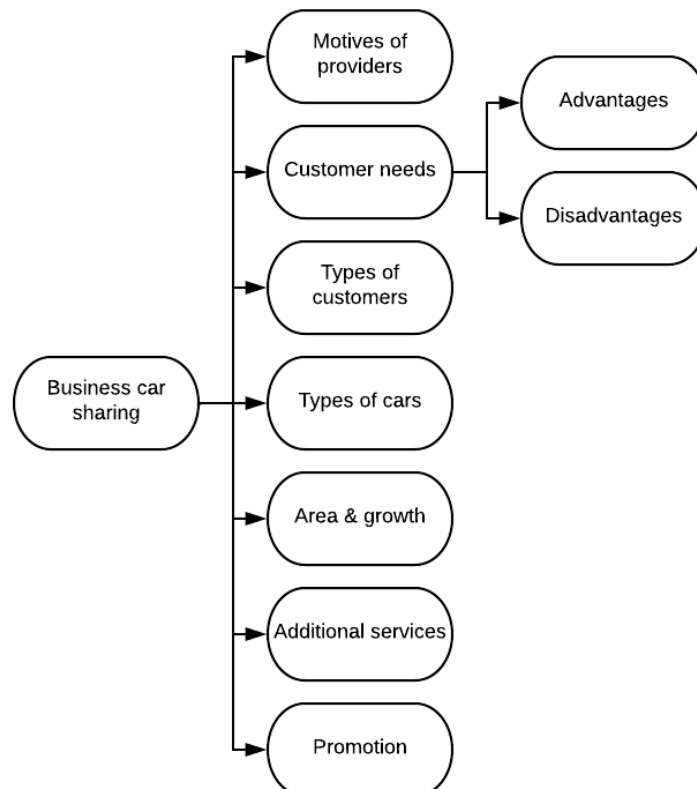
5. BUSINESS CAR SHARING PROVIDERS PERSPECTIVE

The first data that was collected in this research was through structured interviews. Various business car sharing providers throughout the Netherlands were questioned. In total 18 companies in the Netherlands were eligible for the study, of which in total 5 companies participated in this research (N=5). The transcripts of the structured interviews can be found in Appendix 1. Thematic content analysis (TCA) was used for analyzing the data.

5.1 Thematic content analysis themes map

The main theme in this research obviously is business car sharing. After carefully reading the transcript of the interview multiple times, 7 sub themes were created. These sub themes are based on the questions that were asked in the interview. The questions arose from the literature review about business car sharing. The 7 sub themes are: Motives of providers, Customer needs, Types of customers, Types of cars, Area & growth, Additional services and Promotion. Wherein the sub theme, customer needs, is further split into advantages and disadvantages. In figure 3 a schematic representation of the (sub)themes can be found.

Figure 3. Schematic representation of the themes



After the thematic content analysis map was created. The researcher set up a table for every theme in order to collect all interesting sayings from the transcripts about the specific themes from the themes map. In total 5 companies participated, which are referred to as: Company A till Company D. The advice of Braun & Clarke (2013), to take small extracts of the data that capture only the essence of the story is followed up. In table 4 every theme can be found with the related remarks, followed up by a summary of the results. Based on this, the sub question will be answered in the end.

Table 4. *Themes with related quotations*

Theme: Motives of providers

Company A: *“The reason we started with car sharing is for a sustainable future, controlling costs for the customer and administrative relief.”*

Company B: *“We already were producing all the fleet management systems that were needed for car sharing. “*

Company C: *“We want to contribute to the shift from ownership to use, our goal is to increase the use in car sharing. Save public spaces and costs for our customers by letting them share cars easily. “*

Company D: *“We believe that the current use of cars is a finite model. “*

Company E: *“By coincidence from a customer request for which we had to organize a car sharing fleet. We liked this idea so much that we continued doing this. “*

Theme: Customer needs

Advantages:

Company A: *“An advantage for our customers is the flexibility of the contract which can be ended every month. We also offer additional cars for 1 day or week, whenever our customer needs one. “*

Company B: *“Reducing fleet size is an advantage. For example we recently reduced a fleet of 30 cars to 23 cars with car sharing as a solution. “*

Company C: *“Appropriate car for every appointment (one time you can pick a van, and the other the an electric car). Less cars, so more parking space for the company. Lower operational costs for the fleet. Build in trip registrations for the customer.”*

Company D: *“It is easy in-use. It is placing a reservation and you can unlock the car easily. Also, for a nice price.”*

Company E: *“The biggest advantage is cost reduction and user friendliness.”*

Disadvantages:

Company A: *'A disadvantage is that car sharing is in practice is still relatively expensive, it sounds cheap but it is not cheap.'*

Company B: Not mentioned.

Company C: *'Dependent on other drivers in terms of reserved time, an appointment can take longer time so that the car is not on time for the next reservation. Also driving behavior is different for every single person.'*

Company D: Not mentioned.

Company E: *'The biggest disadvantage is that it is new, and that car sharing works with an app.'*

Theme: Types of customers

Company A: *'In general you can say that the main customers are governments and multinationals. Companies with different locations and with a strong desire for sustainability.'*

Company B: *'Governments and larger companies. Smaller companies are not really interested in car sharing. Also you can see that in the western part of the Netherlands car sharing is developed more than in the eastern part.'*

Company C: *'Governments, multinationals, health institutions but also start-ups that combine the use of one car.'*

Company D: *'Organizations with the PPP-mindset (people, planet and profit) and organizations that lack parking space, especially larger organizations.'*

Company E: *'Closed communities, a group of people that want to share a car(s) together, governments, flex offices and start-ups that share cars together.'*

Theme: Types of cars

Company A: *'Passenger cars only. Vans most of the times all have their own inventory and used on a daily basis by the same person. Almost all of the new cars that are being shared are electric cars, but it appears that with the current electric cars it is still complicated due to the limited range these cars offer. If we apply car sharing to existing fleets, the cars are most of the times powered by petrol engines.'*

Company B: *'Due to one big client we do mostly vans. PHEV is less attractive for companies, we mainly see FEV, petrol- and diesel engines.'*

Company C: *‘‘We implement our software and hardware from a garbage truck to tesla’s, so we can basically make every ride a shared ride. Most of the cars are petrol powered and the rest is electric or PHEV approximately equally distributed.’’*

Company D: *‘‘Only passenger cars of which 90% is PHEV and 10% are FEV’s.’’*

Company E: *‘‘Only passenger cars of which 75% is petrol- and diesel powered and the rest are FEV’s counting for 25%.’’*

Theme: Area & growth

Company A: *‘‘It is not only interesting in urban areas. What we see is that there is a more collective approach in the less urban areas. The reality of car sharing is much worse than is written in the literature, organizations don’t embrace it yet. Cars must be cheaper or organizations must be much more willing to cooperate. We are experiencing growth, but not as much as we were expecting.’’*

Company B: *‘‘We see a slow growth in less urban areas, but mostly for fuel powered cars. Therefore, the government is not investing in charging stations for electric cars. The current electric cars have a range that is not (yet) sufficient for this area. We definitely experience a growth in car sharing overall.’’*

Company C: *‘‘Car Sharing is also emerging in less urban areas, we are currently experiencing growth. Demands for business car sharing is increasing. Dealerships are also noticing that there is a growing demand and try to anticipate on this. However, it is a slow growth market.’’*

Company D: *‘‘We believe more in the less urban areas for the future. As a company, we are experiencing growth but not as much as we expected.’’*

Company E: *‘‘We do expect a growth in less urban areas, this only needs to be stimulated by the government. We do experience a small growth, and we also see that more organizations are considering car sharing.’’*

Theme: Additional services

Company A: *‘‘We offer full operational lease, maintenance, cleaning the car, fuel card, summer and winter tires, app as an online sharing platform and we offer occasionally a larger car when needed.’’*

Company B: *‘‘Our fleet management system can require the user to first inspect the car before taking off. When the car is damaged at that moment, it can be directly mentioned via the system. Also driving behavior, fuel consumption and CO2 emissions can be monitored and reported.’’*

Company C: ‘ ‘Cleaning service, fleet management, billing service and most importantly is 24/7 support for the users. When using a shared car, many more questions will arrive than using your own.’ ’

Company D: ‘ ‘Ride registrations and cleaning services.’ ’

Company E: ‘ ‘Fuel cards, unlimited mileage and we clean the in- and outside of the car every month.’ ’

Theme: Promotion

Company A: ‘ ‘We do not use social media for the promotion of car sharing. We think that this is not the way to attract new customers in this type of business.’ ’

Company B: ‘ ‘We do promote car sharing intensively on social media, mainly LinkedIn, but also Twitter, YouTube, Instagram and Facebook. This does attract new customers for us. We also attend to a lot of fairs.’ ’

Company C: ‘ ‘We attend to fairs and promote car sharing on LinkedIn. Both of these promotional methods lead to new customers for us.’ ’

Company D: ‘ ‘We are not promoting car sharing.’ ’

Company E: ‘ ‘We do a lot of pitches at events, we go to fairs to promote car sharing. We do not use social media at this moment, but for the coming year we are planning to use Instagram and LinkedIn.’ ’

5.2 Results

To summarize, the main motives of the providers for offering their car sharing services are environmental reasons. Providers believe that the current use of cars is not sustainable for the future. Also the lack of parking spaces for cars and controlling/cutting costs for the customers are main reasons for providers in offering car sharing services. This is supported by company A: ‘ ‘The reason we started with car sharing is for a sustainable future, controlling costs for the customer...’ ’

On the one side, the most important advantage for customers mentioned by the providers, seems to be: cost reduction, since it is mentioned by 3 different companies (Company B,D and E). Next to that, reducing fleet size and the user-friendliness of the integrated app are also advantages for customers.

On the other side, the disadvantages that customers experience is that it appears to be still expensive in practice. Also, business car sharing creates a dependency on the drivers of the cars. Lastly, business car sharing is a new concept which takes time for new people to adopt.

Regarding the customers of business car sharing, we see that the main customers are mainly big (international) companies, governments or multiple start-ups that share a car together. *‘In general you can say that the main customers are governments and multinationals.’* As mentioned by Company A this is also confirmed by company B that stated: *‘Governments and larger companies...’*

These customers are mostly interested in passenger cars. Due to the reason that vans have their own inventory and are most of the times used by one person, so there is no need or reason for sharing a van. Nowadays, most of the customers are interested in FEV, if their range acceptable for the companies. Since FEV’s still not have a comparable range as the traditional cars with petrol engines. Therefore customers mostly choose petrol engines as an alternative for FEV. PHEV’s are less attractive and not often used in business car sharing systems today. Only company B mentions the following: *‘Due to one big client we do mostly vans.’* But in this particular case only hardware was installed for location tracking and keyless entry with smartphones. The vans were not shared among employees.

Some business car sharing providers are experiencing growth in less urbanized areas, yet some of them already mention to experience this growth. But for now business car sharing is most popular in urban areas. Company A stated: *‘We are experiencing growth, but not as much as we were expecting.’* Which was also mentioned by other providers. Literature seems more optimistic about business car sharing compared to the reality in the Netherlands. Another remarkable statement from Company B was: *‘The government is not investing in charging stations for electric cars.’* This statement has to do with the growth in less urban areas which is caused by the government that doesn’t provide enough charging stations in less urbanized areas.

Regarding the additional services, company C mentions: *‘...most importantly is 24/7 support for the users. When using a shared car, many more questions will arrive than using your own.’* Which is quite interesting, since it is not offered by other providers yet, and this might offer a solution for the aforementioned barrier that companies do not start with business car sharing just because it is new. In addition to this striking additional service we see some others recurring, namely:

- Full operational lease
- Maintenance contract
- Fuel card
- Platform with an app for reservations and keyless entry
- Periodic cleaning service

- Registration of driving behavior, CO2 emissions, location tracker and fuel consumption registration (sometimes integrated in the app)

The last topic is about promotional activities for providers in attracting new customers.

Company B mentioned ‘‘*We do promote car sharing intensively on social media, mainly LinkedIn, but also Twitter, YouTube, Instagram and Facebook. This does attract new customers for us.*

This was also confirmed by Company C. Other companies do not use social media for attracting new customers. Also attending to fairs seems to be a good promotional activity for acquiring new customers.

5.3 Conclusion

The conclusion, and also the answer on the sub question ‘‘*What are trends and developments in fleet management in the Netherlands?*’’. Regarding the developments, we can state that business car sharing in the Netherlands is still in development and unknown for a lot of people. There is a noticeable and visible growth, but not yet as large as was expected. Overall in urban areas business car sharing is more popular compared to rural areas. However, most providers mention that also in less urban areas the demand is rising last years. Until now, it appears that is it only used by governments, bigger (multinational) companies and multiple start-ups that share cars. This can be a consequence of the fact that in practice business car sharing is experienced still expensive, while saving costs is often mentioned as a benefit.

Talking about the trends in the Netherlands, passenger cars are mostly used and preferred by companies. Nowadays companies preference an electric power source if the range is accessible for the planned distances. However, in less urban areas this is experienced less attractive because there are not enough charging stations (yet). Many companies are still unfamiliar with business car sharing and therefore need clear explanations about the advantages and disadvantages. Also, when companies are starting to use business car sharing, clear guidance is needed. This 24/7 service is also offered already by some providers, and seems to work pretty good. In addition to that, business car sharing providers invest a lot of time in creating awareness by companies which seems to support growth in business car sharing. To conclude, business car sharing is becoming more popular in the Netherlands, but it is not growing as fast as the providers had expected.

6. NEEDS AND PREFERENCES IN TWENTE

In this chapter the needs and preferences in Twente will be defined. First off, the sampling method and distribution of the survey will be explained. After that, descriptive and frequency tables will be presented, and some first statements are made. Thereafter, based on the researchers expectations, some hypothesis will be tested. In the end, conclusions will be drawn and the following research questions will be answered:

- *What are the needs and preferences regarding fleet management for companies in Twente?*
- *What potential role can car sharing have within the Twente fleet management of companies?*

6.1 Sampling and distribution

In total, 41 companies (N=41) that were located in the Twente region filled in the survey. The survey was created in Qualtrics, a license was available from the University of Twente. The researcher has approached 90 companies by telephone to ask if they wanted to complete the survey. Next to that, the manager from the Munsterhuis rental department also approached 35 companies by e-mail. Also, the survey was posted on LinkedIn and Facebook, but this did not lead to any new respondents. In total the data was collected from 41 companies which is used for the analysis. These companies range between 1 and 3500 employees and operate in different sectors. The data retrieved from the survey is analyzed with SPSS.

6.2 The survey

The complete survey consisted of 22 questions in total, and is split into two parts. The first part, consisting of 11 questions, are about characteristics of the companies. Whereas the second part of the survey are about the attitude of the companies towards business car sharing. In Appendix 1 an overview is given of the survey which include the questions, the type of answer options and the measurement levels of each question.

6.3 Descriptive and frequency tables

Descriptive statistics help to organize and summarize data, making it easier to interpret the data. The most used type of measures are: mean, mode and median. Standard deviations are also important in order to measure variability among the variables. Each scale measured variable has been reviewed in order to prevent drawing misleading conclusions. In doing so, all variables were checked on the distribution. For example, when an average is 5 (scale 1-10)

the number looks average, but it could be one big group that had chosen 1, and one big group that had chosen the number 10, which are two very interesting groups for further analysis. These distributions of the scale measured variables can be found in Appendix 3. The retrieved data will be organized in tables in order to make the first statements regarding the needs and preferences from companies in Twente.

6.3.1 Sectors in comparison with business car sharing interest

The survey consists of companies that operate in different sectors. In Table 5, the companies are subdivided into sectors. The most common sector is Engineering, Production and construction with 15 respondents respectively. The least represented sectors in this research are: Healthcare (N=1), Tourism, recreation and hospitality (N=1) and Transport and logistics (N=2). These sectors are not representative for drawing conclusions. In the last row of table 5, the average grade for car sharing interest is added (scale 1-7). The most interest in business car sharing comes from the sectors: Education, culture and science (6,00), followed by the trading- and service industry (3,29) and Engineering, production and construction (3,25). These three sectors also score above the average (3,02) of the complete sample (N=40).

Table 5. Sectors in comparison with car sharing interest

Sector	Frequency	Percentage	Car sharing interest
Healthcare	1	2,5 %	3,00
Trading- and service industry	9	22,5 %	3,29
Information technology	6	15 %	2,60
Education, culture and science	6	15 %	6,00
Engineering, production and construction	15	37,5 %	3,25
Tourism, recreation and hospitality	1	2,5 %	1,00
Transport and logistics	2	5 %	2,00
Total and averages	40	100 %	3,02

6.3.2 Car sharing advantages

Different car sharing advantages, mentioned in the literature, were used in the survey. Companies were asked to mention which of the advantage would be most interesting for them. This was measured on a scale of 1-5 wherein 5 indicated that the advantage of car sharing is very interesting for the company, and a 1 indicated that it is not interesting. We can

see in table 6 that increasing the sustainability imagine of the company is the most liked advantage of business car sharing (3,21), with an acceptable standard deviation of 1,45. The two lowest rated advantages are that less employees have to use their own car for business purposes (2,67) and that employees can also use the cars after working hours (2,58). Wherein the last one has a standard deviation of only 1,28. This indicated that there is a lower variability in this advantage then among other advantages.

Table 6. *Car sharing advantages*

Advantage	N	Scale	Mean	Std. Deviation
Increased occupancy rate of the fleet	33	1 - 5	3,00	1,46
Increased flexibility of the fleet	33	1 - 5	3,03	1,45
Decrease of maintenance- and fuel costs	33	1 - 5	3,06	1,39
Increasing the sustainability imagine of the company	33	1 - 5	3,21	1,45
Less employees have to use their own car for business purposes	33	1 - 5	2,67	1,53
Employees can also use the shared cars after working hours	33	1 - 5	2,58	1,28

In the interview there was also space for companies to mention new advantages from their own perspective that would make car sharing attractive for them. One new mentioned advantage is that business car sharing supports employees without an own car to use shared (electric) business cars.

6.3.3 *Car sharing disadvantages*

In the same way, disadvantages were measured in the survey. The first thing that stands out is that the overall grades for disadvantages are higher compared to the advantages. Besides that, standard deviations of all variables are much lower which indicates that the means represented better. The biggest disadvantage for companies is that it can happen that no car is available (3,91). Followed up by the chance that reservations can get compromised when drivers are delayed (3,73). The smallest drawback for companies is that drivers have less attention for the car in terms of driving behavior and cleaning the car (3,15). No groups or spread were detected when looking into the distributions of the disadvantages. See table 7 for the results.

Table 7. *Car sharing disadvantages*

Disadvantage	N	Scale	Mean	Std. Deviation
Drivers have less attention for the car (driving behavior, cleaning and so on)	33	1 - 5	3,15	1,18
It can happen that there is no car available	33	1 – 5	3,91	1,21
Whenever a driver is delayed with the shared car, the next reservation may be compromised	33	1 – 5	3,73	1,13
Failing to achieve the desired cost savings	31	1 - 5	3,52	1,12

Also one new disadvantage was mentioned by a company. It seems a disadvantage that business car sharing is dependent on the location(s) of the company or a central place where you can pick up the cars.

6.3.4 *Channels*

Thereafter, the companies have been asked how they first heard about business car sharing. The results in table 8 show us that 38,89% had their first interaction with business car sharing through news articles. Followed by, 30,56% through this research for the first time. Which indicates that nearly one out of third from the sample did not know business car sharing. It is also interesting that 8,33% are business car sharing users, which seems a lot when looking at the percentage but it only represents 3 users.

Table 8. *Channels*

Channels	Frequency	Percentage
News article	14	38,89 %
Through this research for the first time	11	30,56 %
Social media	6	16,67 %
I am a user of car sharing	3	8,33 %
Through another company that uses business car sharing	1	2,78 %
Through family	1	2,78 %

6.3.5 *Additional services*

Looking at the additional services that companies appreciate the most, periodically cleaning the cars is on top with 68,75% of the companies which would use this service. Then we see full automation of fleet management through an app on the second place with 59,38% of all companies. Charging electric cars is with 31,25% at the bottom, but this is also due to the fact

that this additional service is specifically focused on electric cars. See Table 9 for all the results.

Table 9. *Additional services*

Additional service type	Frequency	Percentage of total sample
Periodically cleaning the cars	22	68,75
The provision of charging facilities	16	50
Full automation of fleet management through an app (reservations, ride registrations and live locations)	19	59,38
Charging electric cars whenever necessary	10	31,25
Total	Sample (N= 32)	

Two new additional services were mentioned that companies would appreciate in using business car sharing. The first one is extra cars to cover peaks when more cars are needed then available. The second one is the possibility to use lease cars for business car sharing. Both of these additional services were already mentioned by car sharing providers as an option of additional services.

6.3.6 *Type of cars and Type of power source*

Furthermore, a look was taken at the preferences of companies regarding the types of cars. Which can be seen in table 10. Looking at the type of cars, we can see that passenger cars are mostly chosen, followed by a combination of passenger cars and vans. Vans are less attractive and only chosen in combination with a diesel engine.

Table 10. *Preferences for type of cars*

Type of cars	Frequency
Passenger cars	17
Combination of passenger cars and vans	11
Vans	5
Total	33

Looking at the preferences for power sources. The most attractive sources are electric, and a combination of electric and hybrid. Besides that we see the diesel engine is chosen 5 times, only in combination with vans. Generally noticeable is that not one type of power source is most attractive, but combinations are. We see that overall electric and hybrid power sources are most preferred in business car sharing. See table 11 below for the results.

Table 11. *Power source preferences*

Power source	Frequency
Electric	5
Combination of hybrid and electric	5
Diesel engine	5
Combination of electric and diesel	4
Combination of petrol and electric	3
Combination of petrol and hybrid	3
Combination of petrol, electric and hybrid	3
Hybrid	2
Petrol engine	1
Combination of petrol, electric, hybrid and diesel	1
Combination of hybrid and diesel	1
Total	33

6.3.7 *Business car sharing consideration*

All companies were asked if they ever considered implementing business car sharing in the past. Results show us that 33,33% of the companies did, take into account that 3 car sharing users are among this percentage (10,33%). On the other side we have 66,67% of the companies that never considered implementing business car sharing. See Table 12.

Table 12. *Business car sharing consideration*

Statements	Frequency	Percentage
Companies that (ever) considered implementing business car sharing	7	33,33%
Companies that never considered implementing business car sharing	24	66,67%
Total	31	100%

6.3.8 Business car sharing as a serious option

Every company was asked to what extent business car sharing is a serious option for the company. This was measured on a scale 1 (= no serious option) to 7 (= a very serious option). Only 5 out of the 32 companies answered with a 6 or higher (15,61%). The most chosen answer, the mode, is a 2 and the average grade as a serious option is 3,34. See table 13 and 14 below for the statistics and frequencies.

Table 13. Statistics business car sharing as a serious option

Sample (N=)	32
Minimum	1 (= no serious option)
Maximum	7 (= a very serious option)
Mean	3,34
Mode	2
Std. deviation	1,79

Table 14. Frequencies business car sharing as a serious option

Option	Frequency	Valid percent	Cumulative percentage
1	5	15,63	15,63
2	8	25,00	40,63
3	6	18,75	59,38
4	3	9,38	68,76
5	5	15,63	84,39
6	4	12,50	96,89
7	1	3,13	100
Total	32	100	

6.4 Hypothesis tests

Based on the expectations from the literature review and the interviews with the business car sharing providers, a set of hypothesis have been formulated. These hypotheses were created before a look was taken at the data and were based on expectations of the researcher. In doing so, the researcher prevented to make the mistake of committing the Texas sharpshooter fallacy also known as the clustering illusion. (McRaney 2012). Most of the times, this fallacy arises when the researcher gathered a large amount of data and focuses only on a small subset trying to draw conclusions and ignoring the real cause of the effects within the dataset. One way to prevent the Texas sharpshooter fallacy is when the researcher stated specific hypothesis prior to the collection of data (Thompson & William, 2009).

For testing the hypothesis, Pearson's correlation coefficient is used. Pearson's correlation coefficient is a measure for linear correlation between two variables. It has a value between +1 and -1, wherein 1 defines a perfect positive linear relationship. Obviously, -1 defines a perfect negative linear relationship and 0 defines no relationship at all. This method is used for the first three hypothesis. The 4rd hypothesis needs no correlation test, but is tested using a cross table with frequencies. All the hypothesis are stated below:

Hypothesis 1:

H0: The number of employees of companies (size of the company in terms of employees) in Twente has no impact on their interest in business car sharing.

H1: The number of employees of companies (size of the company in terms of employees) in Twente has a positive impact on their interest in business car sharing.

Hypothesis 2:

H0: The number of cars of companies (size of the company in terms of cars) in Twente has no impact on their interest in business car sharing.

H1: The number of cars of companies (size of the company in terms of cars) in Twente has a positive impact on their interest in business car sharing.

Hypothesis 3:

H0: Younger people are not more interested in business car sharing than older people.

H1: Younger people are more interested in business car sharing than older people.

Hypothesis 4:

H0: Companies that pay compensation to employees for using their own car for business purposes are on average not more interested in business car sharing than those companies that do not pay compensation.

H1: Companies that pay compensation to employees for using their own car for business purposes are on average more interested in business car sharing than those companies that do not pay compensation.

6.4.1 Results hypothesis 1

Before testing the hypothesis, the descriptive statistics of both variables were checked. These are displayed in table 15. This is done in order to understand more about the variables that are used in this test and to be able to recognize potential strange outcomes. After that, the hypothesis was tested using Pearson's correlation. Table 16 shows us that the correlation coefficient is ,572**, which indicates the strength of the linear relationship. We can directly recognize that the relationship is positive.

Looking at the P-value, we can see that our P-value is 0,001. This is smaller than our test value of 0,005, which makes the test statistically significant. This statistical significance indicates that we have enough evidence that this correlation exists in the population of our sample. Looking at the hypothesis rule: If the P-value from the test is lower than the test value, the sample contains enough evidence to reject the null hypothesis. In this case, $0,001 < 0,005$ therefore we reject the null hypothesis and the alternative hypothesis is supported. The number of employees of companies (size of the company in terms of employees) in Twente has a positive impact on their interest in business car sharing.

In appendix 4, an scatterplot can be found that shows the linear relationship between the two variables. This serves as an support and overview of the conclusion that is made.

Table 15. Descriptive statistics hypothesis 1

Variables	Mean	Std. deviation	N
Employees	756,61	1153,24	38
Business car sharing interest	3,34	1,79	32

Table 16. *Pearson's correlation hypothesis 1*

Variables		Employees	Business car sharing interest
Employees	Pearson correlation	1	,572**
	Sig. (2-tailed)		,001
	N	38	32
Business car sharing interest	Pearson correlation	,572**	1
	Sig. (2-tailed)	,001	
	N	32	32

6.4.2 Results hypothesis 2

Before starting the analysis, a new variable has been computed. Passenger cars and vans are combined into total fleet. After that, the descriptive statistics of both variables were checked. Results can be found in table 17. This is done in order to understand more about the variables that are used in this test and to be able to recognize potential strange outcomes. After that, the hypothesis was tested using Pearson's correlation. Table 18 shows us that the correlation coefficient is 0,222, which indicates the strength of the linear relationship. We can directly recognize that the relationship is positive, but very weak. Looking at the P-value, we can see that our P-value also is 0,222. This is way higher than our test value of 0,005, which indicates that this test is not statistically significant. This indicates that we do not have enough evidence that this correlation exists in the population of our sample. Looking at the hypothesis rule: If the P-value from the test is lower than the test value, the sample contains enough evidence to reject the null hypothesis. In this case, $0,222 > 0,005$ therefore we cannot reject the null hypothesis and so the null hypothesis is supported. The number of cars of companies (size of the company in terms of cars) in Twente has no impact on their interest in business car sharing. In appendix 4, an scatterplot can be found that shows the relationship between the two variables. This serves as an support and overview of the conclusion that is made.

Table 17. *Descriptive statistics hypothesis 2*

Variables	Mean	Std. deviation	N
Business car sharing interest	3,34	1,79	32
Fleet	118,38	266,72	40

Table 18. *Pearson's correlation hypothesis 2*

Variables		Business car sharing interest	Fleet
Business car sharing interest	Pearson correlation	1	,222
	Sig. (2-tailed)		,222
	N	32	32
Fleet	Pearson correlation	,222	1
	Sig. (2-tailed)	,222	
	N	32	40

6.4.3 Results hypothesis 3

Again, the descriptive statistics of both variables were checked. Results can be found in table 19. After that, the hypothesis was tested using Pearson's correlation. Table 20 shows us that the correlation coefficient is $-0,072$, we can see a negative relationship, but very weak and close to 0. Looking at the P-value, we can see that our P-value is $0,702$. This is way higher than our test value of $0,005$, which indicates that this test is not statistically significant. This tells us that we do not have enough evidence that this correlation exists in the population of our sample. Looking at the hypothesis rule: If the P-value from the test is lower than the test value, the sample contains enough evidence to reject the null hypothesis. In this case, $0,702 > 0,005$ therefore we cannot reject the null hypothesis and so the null hypothesis is supported. Younger people are not more interested in business car sharing than older people. In appendix 4, an scatterplot can be found that shows the relationship between the two variables. This serves as an support and overview of the conclusion that is made.

Table 19. *Descriptive statistics hypothesis 3*

Variables	Mean	Std. deviation	N
Business car sharing interest	3,34	1,79	32
Age	37,87	12,56	39

Table 20. *Pearson's correlation hypothesis 3*

Variables		Business car sharing interest	Fleet
Business car sharing interest	Pearson correlation	1	-,072
	Sig. (2-tailed)		,702
	N	32	31
Age	Pearson correlation	-,072	1
	Sig. (2-tailed)	,702	
	N	31	39

6.4.4 *Results hypothesis 4*

For testing the fifth hypothesis, a cross-table is created. Companies that pay compensation to employees for using their car for business purposes, is compared to their interest in business car sharing. From the total sample (N=32) that filled in this question the means of their interest in business car sharing (scale 1-7) are compared to detect potential differences. Companies that do not pay a compensation for employees using their own cars for business purposes have an average interest in business car sharing of 4,33. On the other side we have companies that do pay a compensation. On average this group showed an interest of 4,07. Lastly, we have a group of companies that have no employees that use their own car for business purposes. This group showed an interest in business car sharing of 2,47. We have to take into account that the group that do not pay a compensation is very small in this sample (N=3). The consequence is that this impacts the average grade a lot. Therefore, the outcome would be more substantiated if both samples were the same and larger. However, based on the means of this sample $4,33 > 4,07$, so the null hypothesis cannot be rejected and is therefore supported. Companies that pay compensation to employees for using their own car for business purposes are on average not more interested in business car sharing than those companies that do not pay compensation. See table 21 for the outcomes of the cross table for both variables.

Table 21. *Cross table of employees using their own car in business and business car sharing interest on scale 1 – 7*

Business car sharing interest		1	2	3	4	5	6	7	Total
Employees using their own car for business purposes	Yes, but not in return for a compensation	0	1	0	0	1	1	0	3
	Yes, in return for a compensation	0	3	4	1	2	3	1	14
	No	5	4	2	2	2	0	0	15
Total		5	8	6	3	5	4	1	32

6.5 Clustering analysis

After the analysis of the first and second hypothesis, it seemed interesting to look further into this data to see which exact group causes the correlation. The idea was to cluster the data of amount of employees and fleet size into different categories with specific ranges. However, after these clusters have been created it turns out that the sample size of these clusters were too small for a decent analysis. Therefore, the decision was made to not perform the cluster analysis because this would not give a representative outcome.

6.6 Conclusion

Both sub questions will be answered using the output of the survey. The needs and preferences regarding fleet management for companies in Twente will be mentioned. Followed by the potential role that business car sharing can have within the Twente fleet management of companies.

The need for business car sharing in the Twente region is very moderate and weak. only 15,61% of the companies indicated that they saw potential in business car sharing within their fleet management. However, when we take a closer look into different sectors we can recognize that the education, culture and science sector is by far the most interested in business car sharing. Next to that, we proved that the more employees a company has, the higher their interest is in business car sharing. Also, more than 30% of the companies did not know about the existence of business car sharing before this research. From this we can conclude that it is also unknown to many companies in this region.

The preferences for business car sharing in the Twente region is that a full automation of fleet management is integrated with an app. Next to that companies want the cars to be cleaned periodically. In case of electric cars, they want the provider to deliver charging facilities. Most of the companies prefer passenger cars with an petrol or electric power source, or a combination of these two. The greatest motive for companies to implement business car sharing is to improve the sustainability imagine of the company.

The potential role that business carsharing can have within the Twente fleet management does not look very favorable. Since disadvantages have a higher weight for the companies compared to the advantages that business car sharing has to offer. It can offer solutions for a minority of companies in Twente, but will not be adopted on a large scale in the near future. Therefore the advice for Munsterhuis is to reconsider offering business car sharing to companies and closely watch future developments

7. CONCLUSION AND DISCUSSION

In a conclusion, if we look at the available literature about business car sharing and car sharing in general. We mainly see optimistic messages. Regarding the literature, business car sharing is a solution for eliminating high overhead and maintenance costs, higher fleet utilization, and an estimated of 8-13% less CO² emissions (Nijland et al., 2015). Recent literature shows a small growth in business car sharing in the last couple of years. However, according to the predictions made in the past, business car sharing should already serve a much larger market. This is also confirmed by the providers in the Netherlands, a small growth is experienced, but not (yet) the desired growth.

This is also recognized among the companies of our sample in Twente. The average interest in business car sharing is 3,34 on a scale of 1 to 7, with a standard deviation of 1,79. We can conclude from this that an average interest is present with a high spread among the respondents. Next to that, we saw that a lot of companies are not familiar with business car sharing and are unaware of its existence before this research. Business car sharing is not yet known by a lot of companies in the Twente region. Therefore the answer on the main research question is that there is no market for business car sharing in the region of Twente at this moment. Among the companies in Twente we see basically three groups. One group that knows a lot about business car sharing, one group that has heard about it but does not know what it implies and one group that is still unknown with car sharing. This is the reason for the large spread among companies in Twente and their interest in business car sharing. What we also see in practice nowadays is business car sharing as a component in complete mobility solutions which offers more in terms of solutions and flexibility for companies. It may be that business car sharing is going to serve in complete mobility solutions as an component and that business car sharing on itself has no future perspective. Since the interest of companies very average in Twente and growth in the Netherlands is barely noticeable.

Nevertheless, other noticeable results of this study are that one industry has an higher interest in business car sharing compared to others, namely: Education culture and science. Which are mainly (high)schools, universities and government agencies mostly. This was also mentioned from the provider perspective. Next to that we found a statistically significant relationship between a higher amount of employees in companies and their interest in business car sharing. This statement was also supported on forehand by the providers, that mainly bigger (international) companies are using and interested in business car sharing. Besides that we found that the disadvantages generally outweighs the advantages of business

car sharing which indicates that companies see more of the problems than the benefits. Also, in the literature it is often mentioned that business car sharing's main advantage is cost reduction. However, the business car sharing providers state that often business car sharing still proves to be more expensive compared to the traditional fleet management systems. So to conclude again, we therefore state that the Twente fleet business is not ready for business car sharing at this moment. There is no market for business car sharing in the region of Twente at this moment.

8. RECOMMENDATIONS FOR FUTURE RESEARCH

After this research has been executed, several recommendations for future research can be formulated, namely:

- Investigating whether business car sharing is a potential component in a total mobility solution. And detect which role business car sharing can have within total mobility solutions.
- it is also proposed to execute the same research in different types of areas. For example more urban areas, such as Amsterdam, to investigate how companies think about business car sharing. Which makes it possible to compare results from different types of areas.
- One limitation of this study was the relatively small sample size. For future research bigger sample size is recommended so that cluster analysis can also be applied in which results are representative.
- Lastly, more in-depth interviews with companies are advised in order to detect underlying reasons why companies are (not) interested in business car sharing. This research was more superficial because business car sharing has never been researched this way before.

9. LIMITATIONS OF THE RESEARCH

During, and also after this research was conducted, some limitations of the research are recognized. These limitations influenced the findings of this research, in the next chapter some of the limitations of this research are turned into recommendations for future research.

The limitations of this research are:

- Too little preliminary research have been done into market research. Only afterwards a reflection has been done in order to detect whatever methods were commonly used in doing market research. Therefore, the research was limited to only research methods that the researcher was already familiar with. However, after doing a theoretical reflection, it was found out that the methods used in this research were also popular market research methods. This theoretical reflection can be found in chapter 10.1.
- Limited sample size. Although 50 companies filled in the survey, it is always better to have a larger sample size in order to do even more reliable research. Standard deviations were still pretty high which was also a result of many different opinions within the sample.
- lack of comparable previous research in this area. A lot of theoretical research has been conducted in the previous years. However, not specifically from a market research point of view in the direction of business-to-business car sharing. Therefore, there was no previous research to build on to or to learn from, also in terms of the research design.

9.1 Theoretical reflection on market research

A theoretical reflection will take place on market research. After the research was conducted, the researcher found out that little preliminary research was done on forehand about how market research is conducted in practice. Therefore, a critical look will be taken into different types of market research and important aspects to look into. In the book 'Write your business plan' by the staff of entrepreneur media (2015) attention is paid on performing market research.

Market research is about the understanding of the motives for consumers to buy your products or services. Parts of market research are for example consumer behaviors, societal and personal factors of consumers that influence the behavior of the consumer. Market research can be done using two different types of data collection, primary data collection and secondary data collection, as described previously in this research. A researcher can choose to

apply one of these methods, or both methods. To increase reliability of the market research, a combination of both methods is advised. The book described a set of basic questions that can be used to execute the market research, namely:

- *Who are your (potential) customers?*

A description of the characteristics of the (potential) customers of the specific field under investigation in terms of gender, age, occupation, income, lifestyle, educational background and so on. Based on the field of the market research a set of characteristics have to be created.

- *What do they buy now?*

Describing the current buying habits of the (potential) customers. What do they buy now? But also researching the quantities of the units they buy. The price they are willing to pay and the specifications of these products or services. In what way do these products differ from the products or services you are willing to bring to market?

- *Why do they buy?*

This is regarded as the hardest question to answer in market research. In doing the research, you have to understand (potential) customers' behavior in terms of: Why they are buying a specific product? What persuades the customer to eventually buy a product or service? Conducting interviews is one example of gathering this knowledge, it is possible to discover what potential customers value in the use of the products or services. This question is very different for each type of product or service.

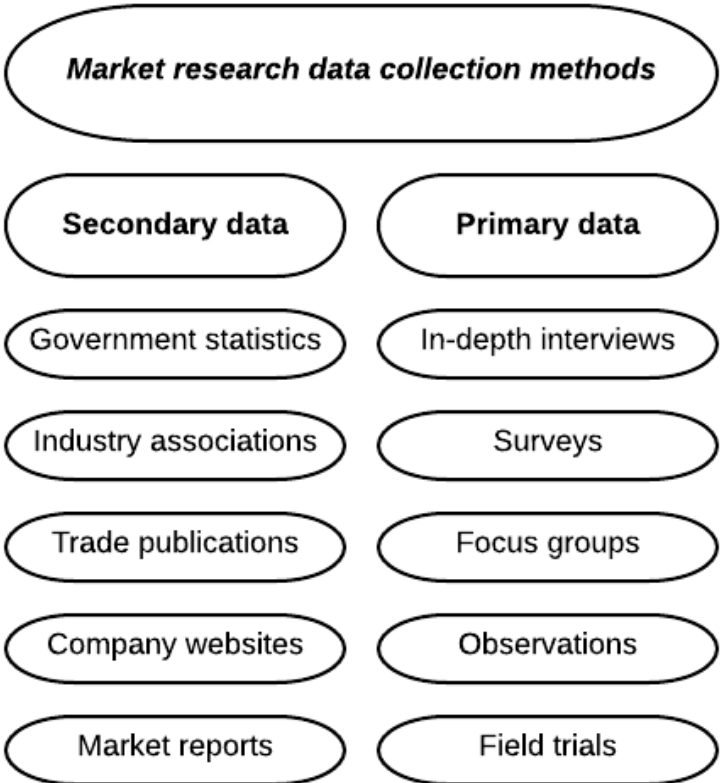
- *What will make them buy from you?*

In this phase you look at your own product or service compared to the one from competitors. You take into account the answer to the previous question, so: What do customers value? These outcomes can give you a competitive advantage when you listen to your (potential) customers in terms of needs and preferences. This can be a reason that customers ultimately choose to buy from you rather than the competitor.

This is just one way to address market research. After performing the research this particular method would have been chosen to investigate the potential role of business car sharing in a more structured way. In addressing these questions different types of data collection can be used as mentioned, primary and secondary data collection. The disadvantage of secondary data, is that it is often accessible to everyone. Therefore, also for competitors. What you want to pursue as a company is that you offer a unique product or service to your customers. So

what can happen when you only use secondary data in your market research is that your products or services can become very similar to the one from your competitors. This is a reason to also use primary data in doing market research. In the next part, the five extensively used primary data collection methods in doing market research will be explained, these methods can also be found in figure 4 below (Wolf, 2016).

Figure 4. Schematic representation of the themes



In-depth interviews

This type of data collection gives the opportunity to gain detailed and in-sight knowledge from companies of interest, for example competitors or leading companies in a comparable sector. In-depth interviews allow the researcher to drive the interview towards the research objectives. This is also done in this research with the business car sharing providers. Based on the available literature, questions were set up to gain inside knowledge about specific characteristics of their business car sharing services (Showkat & Parveen, 2017).

Surveys

Surveys are especially popular in market research because they allow you to collect a large amount of data in a relatively short time frame. Surveys are a good tool to get an indication of feelings, needs, preferences and behavior. Different types of distributing surveys are present, for example: mail surveys, online surveys, telephone surveys and collecting surveys face-to-

face at crowded places. In this research, online surveys were used to get an indication about the needs and preferences of companies in Twente. The decision to do it online was made because the data was automatically stored in an excel file which made it easy to use in doing analyses in SPSS. Based on this collected data you can predict and forecast future behavior of people of companies (Ponto, 2015).

Focus groups

A focus group is basically a group of people that fit in the target group of the research (Nyumba et al. 2018). These people are brought together to share their ideas and feelings about the topic of research. It is all about an open discussion where everyone of the focus group can say whatever they want. It is recommend to have at least three different people or people from companies involved in a focus group to express different opinions and to gather a realistic picture of the reality. This could have also been an interesting tool for doing market research in this master thesis. Afterwards we could have created a focus group of business car sharing providers in order to share opinions and feelings about the current business car sharing market. By bringing these experienced people together in a room to create a discussion perhaps more insights about the current business car sharing market could have been gained compared to the method that was used now (in-depth interviews).

Observations

By simply observing potential customers or customers using your products is another way to gain knowledge about customer behavior. Sometimes surveys are misleading and people answer surveys randomly or based on expectations. By doing observations, you create a realistic picture of consumer behavior. Disadvantages are that this method is time- and money consuming (Bryman, 1988).

Field trials

Lastly, field trials would be almost the same in this research as observations. In a field trial cars would have been offered to different companies in order to see how employees of companies in Twente would experience it to use shared business cars. This could have been a useful option in this research that could have provided many new practical insights for this research. Since this research basically only reflects on theory instead of practice (Brown, 2011).

Conclusion

To reflect on the used market research methods in this research, it would have been an option to collect a combination of theoretical and practical experiences of potential consumers of business car sharing. By using observations or field trials which would gain more knowledge about real customer experiences. For now, only theoretical data was collected and used in order to draw conclusions. However, by doing the in-depth interviews with business car sharing providers and the survey with potential customers, has still ensured that enough insights have been obtained for Munsterhuis. Munsterhuis can once again make considerations and decisions for their future in offering business car sharing and, if desired, adjust their services accordingly to better respond and fit into the current needs and preferences of the business car sharing market.

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APPENDIX 1 – INTERVIEW TRANSCRIPT

Company A

Sinds wanneer bent u aanbieder van Car Sharing?

- 2013 aanbieder van Car Sharing

Waarom heeft u als bedrijf ervoor gekozen om Car Sharing te gaan aanbieden?

- duurzaamheid
- kostenbeheersing voor de klant
- administratieve ontlasting waarbij je zorgt dat wagenparkbeheer zelf gaat
20% is klantvraag en 80% is pushen naar de markt
Hoe groter de bedrijven hoe moeilijker is het om ze over te laten gaan naar car sharing.

Wat is de verhouding tussen personenauto's en bedrijfsauto's die worden afgenomen? (Indien allebei worden aangeboden)

- alleen personenauto's
Bedrijfsauto's hebben allemaal een eigen inventaris en voeg je een extra element toe aan het delen. Bedrijfsauto's zijn vaak persoonsgebonden en worden de hele dag gebruikt.

Wat is de verhouding tussen elektrische auto's, hybride auto's en auto's met brandstofmotor die worden afgenomen voor Car Sharing doeleinden?

Eigenlijk alle nieuwe deelauto's vragen naar elektrisch, echter wat blijkt is dat dat met huidige elektrische auto's nog ingewikkeld is. Als je het doet voor overheden en gemeenten hebben genoeg geld, ze willen elektrisch, je kan 2 keer heen en weer de rest van de dag moet die opladen. Voor bedrijven met veel geld is dat niet interessant, omdat je alleen piekmomenten op wil vangen doordat de range beperkt is. Toch kom je dan vaak uit op hybride, brandstofmotoren vaak alleen door toepassing van de systemen in bestaande auto's van bedrijven.

Welke aanvullende producten en services bied u aan bij Car sharing? (denk hierbij aan opladen en schoonmaken bijvoorbeeld)

- full operational lease → APK, onderhoud, schoonmaken, tankpas, winter- zomerbanden, App als online deelplatform, vervangend vervoer bij vakantie is dat, in de zin van je mag auto's meenemen in de weekenden bijvoorbeeld, je kan incidenteel een grotere auto krijgen, bij leasemaatschappijen veel auto's staan, werkgever dekt huurprijs voor grotere auto af. Mobiliteitskaart (core business) je kan carsharing maar ook OV gebruiken, greenwheels auto's kan je hiermee ook gebruiken.

Wat voor soort organisaties zijn het die kiezen voor Car Sharing? (denk aan omvang, branche, soort wagenpark, regio van vestiging, start-up etc.)

- over het algemeen kan je zeggen dat het overheden en gemeentes zijn. Bedrijven die verschillende vestigingen hebben, en bedrijven die een sterke duurzaamheidswens hebben.

Wat zijn volgens jullie klanten de voor- en nadelen van Car sharing, en komt dit overeen met de reden waarom jullie met Car sharing begonnen zijn?

- een nadeel is dat het toch relatief duur is per ritje, het klinkt goedkoop maar het is niet goedkoop. Greenwheels kost voor een paar uur rijden gewoon echt stevig geld, om die auto terug te verdienen moet het gebruik veel hoger zijn. 11 uur afspraak voor 2 uurtjes dus auto wordt uiteindelijk maar heel even gebruikt op een dag.

Voordelen; het leaseconcept, met een opzegtermijn van 1-3 maanden kan je er vanaf. Dat je kan opschalen (mobiliteitsgarantie), neem 2 deelauto's, als je 24 uur van tevoren een extra deelauto nodig hebt dan leveren wij die (worden daar nauwelijks voor benaderd). Hoe groter de bedrijven hoe regelmatig dat voorkomt.

Car sharing is begonnen als een succes in stedelijke gebieden, ervaart en/of verwacht u als aanbieder dat ook de minder stedelijke gebieden hierin gaan volgen? (Cultuur, parkeergelegenheid en laadpalen)

- je ontkomt er niet aan om te zeggen die auto's moeten worden terugverdiend; dat doe je door iedereen die een auto nodig heeft, hem kan gebruiken. Dat een auto niet buiten business uren stilstaat. Koude kring: mensen van buiten het bedrijf kunnen gebruik maken van de auto, omdat afschrijving van de auto er niet toe doet voor bedrijven omdat zij een vast bedrag per maand betaald. Buiten stedelijke gebieden interessant dat mensen voor langere tijden. Mensen besluiten bijvoorbeeld om geen 2^e auto te kopen maar om gebruik te maken van deelauto's. Grote probleem bij de provincie dat het OV slecht geregeld is, voor 'the last mile' vanaf het station een deelauto pakken.

Het grote antwoord is; het is niet alleen interessant is in stedelijk gebied, maar vooral interessant als je meerdere opties kan aanbieden. Gericht op cultuur; (amersfoort) Cultuur; delen ben je gek? Iedereen wil een eigen leaseauto. Buiten de stedelijke gebieden vooral meer collectieve aanpak

Ervaart u een groei in vraag naar zakelijk Car Sharing sinds u bent begonnen met aanbieden?

Stel je kritisch op! Werkelijkheid van car sharing is stuk slechter en beroerder, dan geschreven wordt in de literatuur. Mensen omarmen het nog niet. Er zitten heel veel haken en ogen aan het hele principe. Auto's moeten goedkoper of de bedrijven moeten veel meer bereid zijn om samen te werken. Er is zeker groei, maar niet zoveel als verwacht.

Promoten jullie de dienst carsharing intensief? Indien ja, hoe? Indien niet, waarom niet?

Je hebt te maken met bedrijfscultuur, dat kan je niet in 1 keer veranderen. Bij kleinere bedrijven minder snel pusht dan bij grote bedrijven.

Welke Social Media kanalen gebruiken jullie hiervoor?

Wij niet zo heel veel, business car sharing. Voor bedrijven is social media niet interessant. Voor wat ik weet is het niet het kanaal om klanten te werven.

Levert deze promotie nieuwe afnemers op? En op welke andere manieren zou u eventueel nog promotie toe willen passen?

Nee social media levert niks op.

Toen jullie zijn begonnen met Car sharing hadden jullie een bepaalde visie en strategie, is die in de loop van de tijd aangepast?

- het leek een gat in de markt, waarmee veel geld verdiend kon worden. Blijkt niet zo te zijn. De techniek loopt voor op de mensen. De techniek is nog niet optimaal; er zijn een paar fundamentele problemen. Als je een auto publiek wil delen, heb je het sleutelprobleem. Met keyless entry is de auto gemakkelijk te openen. In een parkeergarage heb je bijvoorbeeld geen bereik en kun je de auto niet starten. Een van die oplossingen is bluetooth, apparaatje weet wanneer die geen gebruik heeft en dan om de zoveel seconden gaat hij zoeken naar bluetooth

verbinding. Bij het systeem van Wego is dat een probleem. NFC kaart voor de ruit houden is een oplossing, of de 'greenwheels' oplossing waarbij je de sleutel in het dashboard kastje legt. De ideale oplossing; is er (nog) niet (heeft de praktijk nog niet bereikt)

Minder schade gereden met deelauto's dan met gewone auto's

Hoe brengen jullie het verhaal van Car sharing naar de klant toe om ervoor te zorgen dat de klant voor Car sharing kiest?

Niet, klanten moeten zelf inzien dat ze een probleem hebben anders zullen ze ook nooit inzien dat het voor hun geld kan besparen en gemak kan bieden.

Company B

Rittenregistratie, beheer van vloten op het gebied van tankpas, rijstijlanalyses, zwaailichten en dergelijke. Postnl grote klus → plaatsbepaling (2400 auto's). Openbaar vervoer in den haag (alle voertuigen) 27 bmw I3's die ook car sharing doen.

Sinds wanneer bent u aanbieder van Car Sharing?

- in een hele basale vorm al een jaar of 15 doen.

Waarom heeft u als bedrijf ervoor gekozen om Car Sharing te gaan aanbieden?

- zijn erin gerold, als aanbieder van wagenparkbeheersystemen, alle middelen die car sharing nodig hebben waren al aanwezig.

Wat is de verhouding tussen personenauto's en bedrijfsauto's die worden afgenomen? (Indien allebei worden aangeboden)

- voornamelijk door postnl slaan zij door naar de bedrijfswagens. In de B2B is het weggelegd voor overheden en de multinationals (echt de grote bedrijven).

Wat is de verhouding tussen elektrische auto's, hybride auto's en auto's met brandstofmotor die worden afgenomen voor Car Sharing doeleinden?

- evenredig verdeeld, de app beslist welke auto de gebruiker meekrijgt. Op basis van de ingegeven route berekent de app welke auto je het beste mee kunt nemen. Hybride minder bij bedrijven, voornamelijk elektrisch en brandstof auto's.

Welke aanvullende producten en services bied u aan bij Car sharing? (denk hierbij aan opladen en schoonmaken bijvoorbeeld)

- alle vervoersmiddelen (fiets scooter, ov kaart), wagenparkbeheer verplicht de gebruiker om de auto te inspecteren voordat hij de auto start, schade kan via de app doorgezet worden. Rijgedrag wordt gemonitord, wordt gerapporteerd naar de gebruiker toe. Registreren het verbruik van het voertuig, co2 uitstoot wordt berekend.

Wat voor soort organisaties zijn het die kiezen voor Car Sharing? (denk aan omvang, branche, soort wagenpark, regio van vestiging, start-up etc.)

- overheden (geel kenteken), grotere bedrijven. Mkb is er niet heel hard mee bezig. Je ziet heel duidelijk dat in het westen dat ze er heel druk mee bezig zijn, en dat het hier in het oosten allemaal nog niet zoveel uitmaakt. Het is een mindset elektrisch rijden.

Wat zijn volgens jullie klanten de voor- en nadelen van Car sharing, en komt dit overeen met de reden waarom jullie met Car sharing begonnen zijn?

- het voordeel is het verkleinen van het wagenpark (KPI van transscope), we hebben bij klanten gezien 30 auto's, met car sharingauto's konden dat er 23 zijn, 7 auto's konden weg. Puur kostenbesparing, en het efficiënter benutten van auto's. De reden is ook vraag vanuit klanten.

Car sharing is begonnen als een succes in stedelijke gebieden, ervaart en/of verwacht u als aanbieder dat ook de minder stedelijke gebieden hierin gaan volgen? (Cultuur, parkeergelegenheid en laadpalen)

- ja ziet het heel langzaam wel gebeuren, maar dat zijn dan voornamelijk brandstofauto's die voornamelijk ingezet worden. Elektrische auto's niet, omdat de actieradius is niet toereikend, daarom wordt er ook niet geïnvesteerd in laadinfrastructuur.

Ervaart u een groei in vraag naar zakelijk Car Sharing sinds u bent begonnen met aanbieden?

Ja, heel duidelijk.

Promoten jullie de dienst carsharing intensief? Indien ja, hoe? Indien niet, waarom niet?

Ja, wij promoten vooral social media (linkedin), en dat brengt ook klanten uit. Promoten ook op beurzen.

Welke Social Media kanalen gebruiken jullie hiervoor?

Linkedin, youtube, instagram, facebook, twitter.

Levert deze promotie nieuwe afnemers op? En op welke andere manieren zou u eventueel nog promotie toe willen passen?

Jazeker, geen andere mogelijke manieren om nog promotie toe te passen.

Toen jullie zijn begonnen met Car sharing hadden jullie een bepaalde visie en strategie, is die in de loop van de tijd aangepast?

- geen strategie, werken niet met een jarenplan, kijken naar het volgende jaar. Markt veranderd heel snel, plan over 5 jaar. Meer visie dan echt toekomstplannen.

Hoe brengen jullie het verhaal van Car sharing naar de klant toe om ervoor te zorgen dat de klant voor Car sharing kiest?

Dat doen we niet, de klant moet zelf kiezen en ervan overtuigd zijn dat hij dat nodig heeft. In de salespitch noemen we de voordelen. Begint het verhaal met wat zoek je?

Company C

Sinds wanneer bent u aanbieder van Car Sharing?

WeGo is in 2011 gestart met een particulier platform in Amsterdam. Het bedrijf richtte zich op de Peer to Peer markt. In 2013 is de focus gelegd op naar de andere markt van autodelen; de zakelijke markt. Bedrijven, gemeentes en overheden hebben vaak een wagenpark waar hun werknemers gebruik van mogen maken. Het worden poolauto's gemaakt. WeGo zorgt voor het deelbaar maken van deze voertuigen.

Waarom heeft u als bedrijf ervoor gekozen om Car Sharing te gaan aanbieden?

WeGo wil bijdragen aan de transitie van bezit naar gebruik in mobiliteit. Het doel is dat auto's steeds meer worden gedeeld door verschillende gebruikers. Daardoor zijn er minder auto's nodig, worden auto's efficiënter gebruikt, komt openbare ruimte vrij omdat er minder parkeerplaatsen nodig zijn op maaiveld, en nemen de kosten voor automobilititeit af voor bedrijven en particulieren.

Wat is de verhouding tussen personenauto's en bedrijfsauto's die worden afgenomen? (Indien allebei worden aangeboden)

Zelf zijn wij geen leverancier van auto's. Wij bieden bedrijven de mogelijkheid om een wagenpark deelbaar te maken met onze techniek. Op dit moment hebben wij ruim 1500 auto's rijden met onze techniek, alle soorten voertuigen zitten hierin. Van vuilniswagens tot Tesla's.

Wat is de verhouding tussen elektrische auto's, hybride auto's en auto's met brandstofmotor die worden afgenomen voor Car Sharing doeleinden?

Grofweg 800 brandstof, 300 hybride, 400 elektrisch.

Welke aanvullende producten en services bied u aan bij Car sharing? (denk hierbij aan opladen en schoonmaken bijvoorbeeld)

Schoonmaakservice, wagenparkbeheer, facturatiservice maar het belangrijkste van allemaal 24/7 ondersteuning voor gebruikers. Bij het gebruik van een deelauto komen er veel meer vragen dan bij het gebruik van een eigen auto. Bij je eigen auto zal je een keer moeten "ontdekken" hoe het voertuig werkt, bij een deelauto kan het zo zijn dat je elke dag in een ander voertuig rijdt. Op het moment dat de bestuurder zijn of haar vragen niet kan stellen zullen zij eerder geneigd zijn geen gebruik meer te maken van een deelauto, het is daarom van belang dat bestuurder ondersteunt wordt in het gebruik.

Wat voor soort bedrijven zijn het die kiezen voor Car Sharing? (denk aan omvang, branche, soort wagenpark, regio van vestiging, start-up etc.)

Veel verschillende zoals; gemeentes, zorginstellingen, grote corporates maar ook kleine start-ups. Binnen het WeGo platform is zo groot en klein als nodig te maken.

Wat zijn volgens jullie klanten de voor- en nadelen van Car sharing, en komt dit overeen met de reden waarom jullie met Car sharing begonnen zijn?

Voordelen:

- Gepast vervoer per afspraak. (de ene keer een bus de andere keer een elektrische BMW i3).
- Minder parkeerdruk
- Lagere gebruikskosten, door het deelgebruik
- Mogelijkheden om een zakelijk auto ook fiscus-proof zakelijk te gebruiken.
- Sluitend richtregistratie

Nadelen:

- Afhankelijk van andere bestuurders (schoonmaak, rijgedrag, gebruik, enz.)

Car sharing is begonnen als een succes in stedelijke gebieden, ervaart en/of verwacht u als aanbieder dat ook de minder stedelijke gebieden hierin gaan volgen? (Cultuur, parkeergelegenheid en laadpalen)

Wij verwachten het niet, wij zien het al gebeuren. Ook in minder stedelijke gebieden komt autodelen op. Een deelauto kan namelijk in minder stedelijke gebieden de tweede auto van een gezin overbodig maken.

Ervaart u een groei in vraag naar zakelijk Car Sharing sinds u bent begonnen met aanbieden?

Ja zeker, er komt steeds meer vraag naar zakelijk autodelen. Dealerbedrijven beginnen ook te merken dat er vraag komt naar zakelijk autodelen, zij beginnen hierop te anticiperen. Echter het is een trage groeimarkt (lees dit artikel eens: <https://www.trendsinautoleasing.nl/nieuws/achtergrond-artikelen/9278012-autodelen-groeit-maar-het-is-kralen-rijgen/>)

Promoten jullie de dienst carsharing intensief? Indien ja, hoe? Indien niet, waarom niet?

Ja, wij zijn te vinden op o.a. beurzen welke betrekking hebben op facilitair en automotive.

Welke Social Media kanalen gebruiken jullie hiervoor?

LinkedIn

Levert deze promotie nieuwe afnemers op? En op welke andere manieren zou u eventueel nog promotie toe willen passen?

Ja.

Toen jullie zijn begonnen met Car sharing hadden jullie een bepaalde visie en strategie, is die in de loop van de tijd aangepast?

Ja zeker, WeGo is begonnen met delen van auto's onder buurtgenoten. Dit was het Peer2Peer tijdperk van WeGo. Dit bracht de nodige uitdagingen met zich mee. Later is WeGo zich gaan richten op zogeheten warme kringen (oftewel zakelijk autodelen). Binnen warme kringen kennen mensen elkaar, niet altijd bij naam maar ze werken dan bijvoorbeeld wel voor dezelfde organisatie.

Hoe brengen jullie het verhaal van Car sharing naar de klant toe om ervoor te zorgen dat de klant voor Car sharing kiest?

Het heeft geen zin om een klant te "overtuigen" van carsharing zolang ze zelf geen "pijn" voelen. De klant moet ergens tegen aanlopen wat opgelost kan worden met autodelen. Je kan hierbij bijvoorbeeld denken aan ritregistraties of financiële lasten. WeGo begeleidt een klant naar het autodelen toe. Het is niet alleen het inbouwen van de auto's en het installeren van een app maar het is ook een organisatorische verandering binnen een bedrijf. WeGo heeft hiervoor een compleet operationeel team dat klaar staat om de transitie van eigendom naar deelgebruik te begeleiden.

Company D

Sinds wanneer bent u aanbieder van Car Sharing?

Juni 2018

Waarom heeft u als bedrijf ervoor gekozen om Car Sharing te gaan aanbieden?

Ik geloof gewoon dat het zelf hebben van mobiliteit een eindig model is. Wat je kan doen is voor een klant een dienst bieden die mobiliteit organiseert. We hebben aan platform waar je

eigenlijk alles kan organiseren. Klanten zijn voor ons gevoel nog niet bereid voor car sharing, is moeilijk om te begrijpen en snappen.

Wat is de verhouding tussen personenauto's en bedrijfsauto's die worden afgenomen? (Indien allebei worden aangeboden)

Alleen maar personenauto's, zakelijk reserveren. S'avonds en in het weekend mogen medewerkers er ook prive mee rijden. (geen vaste prijs, prijs is afhankelijk van de afstand die wordt afgelegd.

Wat is de verhouding tussen elektrische auto's, hybride auto's en auto's met brandstofmotor die worden afgenomen voor Car Sharing doeleinden?

90% hybride en 10% elektrisch.

Welke aanvullende producten en services bied u aan bij Car sharing? (denk hierbij aan opladen en schoonmaken bijvoorbeeld)

Ritregistratie. Deling in zakelijk/woon werk en prive. Schoonmaken van de auto's wel

Wat voor soort organisaties zijn het die kiezen voor Car Sharing? (denk aan omvang, branche, soort wagenpark, regio van vestiging, start-up etc.)

Bedrijven met het PPP (people planet profit idee). Organisaties met weinig parkeergelegenheid. Vooral hele grote bedrijven. Voor MAAS werkt dat hetzelfde, loop vast omdat bedrijven teveel auto's.

Wat zijn volgens jullie klanten de voor- en nadelen van Car sharing, en komt dit overeen met de reden waarom jullie met Car sharing begonnen zijn?

Het is het gemak, het is reserveren en je krijgt een sleutel. Het staat heel dichtbij je, tegen een leuk tarief.

Car sharing is begonnen als een succes in stedelijke gebieden, ervaart en/of verwacht u als aanbieder dat ook de minder stedelijke gebieden hierin gaan volgen? (Cultuur, parkeergelegenheid en laadpalen)

Ik geloof juist meer in de minder stedelijke gebieden. De business case is, mensen willen geen auto's meer in stedelijke gebieden, dat gaat er allemaal uit. Wij willen juist veel kilometers en dat zie je juist gebeuren in de minder stedelijke gebieden.

Ervaart u een groei in vraag naar zakelijk Car Sharing sinds u bent begonnen met aanbieden?

Ja er is wel een markt voor, wordt ook groter, maar we gaan niet zo snel als we zouden willen.

Promoten jullie de dienst carsharing intensief? Indien ja, hoe? Indien niet, waarom niet?

Nee

Welke Social Media kanalen gebruiken jullie hiervoor?

Helemaal niks.

Levert deze promotie nieuwe afnemers op? En op welke andere manieren zou u eventueel nog promotie toe willen passen?

Nee

Toen jullie zijn begonnen met Car sharing hadden jullie een bepaalde visie en strategie, is die in de loop van de tijd aangepast?

Ja, car sharing is slechts een kleine schakel in de keten van Maas, en daar is car sharing een onderdeel van.

Hoe brengen jullie het verhaal van Car sharing naar de klant toe om ervoor te zorgen dat de klant voor Car sharing kiest?

In het begin echt op basis van de businesscase. Nu is het, de gehele mobiliteit, wij bieden een mobiliteitsoplossing.

Company E

Sinds wanneer bent u aanbieder van Car Sharing?

Mobeazy bestaat sinds 2015, meneer bolderman is daarmee begonnen

Waarom heeft u als bedrijf ervoor gekozen om Car Sharing te gaan aanbieden?

Heeft temaken met meneer bolderman, die is een marketeer, eigenlijk voor gebed ontwikkeling, had een aanvraag voor een bekende(vanuit de klant), om leegstaande panden aan de markt te brengen, ook mobiliteit hierbij aan te bieden. Vond het idee zo goed om er zelf met de mobiliteit door te gaan.

Wat is de verhouding tussen personenauto's en bedrijfsauto's die worden afgenomen? (Indien allebei worden aangeboden)

Personenauto's 100%

Wat is de verhouding tussen elektrische auto's, hybride auto's en auto's met brandstofmotor die worden afgenomen voor Car Sharing doeleinden?

Hybride 0, elektrisch 25%, en de rest zijn brandstofmotoren.

Welke aanvullende producten en services bied u aan bij Car sharing? (denk hierbij aan opladen en schoonmaken bijvoorbeeld)

Auto wordt aangeboden voor een laag tarief, inclusief brandstof, onbeperkt kilometers, inclusief eigen risico, inclusief brandstofpas, tanken op kosten van ons, elke maand schoongemaakt binnen en buiten kosten van ons.

Wat voor soort organisaties zijn het die kiezen voor Car Sharing? (denk aan omvang, branche, soort wagenpark, regio van vestiging, start-up etc.)

Closed communities, eigen kring van mensen die met elkaar een auto willen delen, bedrijven, met elkaar poolauto of leaseauto. Vereniging van eigenaren bij vastgoedprojecten. Buurtschappen maar ook bedrijvenkringen en flexkantoren. Start-ups maken vaak gezamenlijk gebruik van. Bedrijven met een wagenpark, kunnen we dat anders inrichten.

Wat zijn volgens jullie klanten de voor- en nadelen van Car sharing, en komt dit overeen met de reden waarom jullie met Car sharing begonnen zijn?

Grootste reden is kostenbesparing en gemak, auto's staan niet meer op de balans.

Nadeel is dat het nieuw is, dat het met een app werkt. Om de stap te maken naar het recht van een leaseauto moet in de toekomst verworven worden.

Car sharing is begonnen als een succes in stedelijke gebieden, ervaart en/of verwacht u als aanbieder dat ook de minder stedelijke gebieden hierin gaan volgen? (Cultuur, parkeergelegenheid en laadpalen)

Ja 100%, ze moeten alleen nog gestimuleerd worden door overheid, in elk gebied in nederland wordt het steeds voller, flexibele mobiliteit is daarvoor een oplossing. Dat heb je ook al hier in Apeldoorn.

Ervaart u een groei in vraag naar zakelijk Car Sharing sinds u bent begonnen met aanbieden?

Wij ervaren een kleine groei, maar zien wel dat veel bedrijven ermee bezig zijn, maar ik verwacht dat de echte groei. Wij willen bij elke auto een stukje vaste kosten eruit halen, wij willen alleen maar op een auto kunnen verdienen.

Promoten jullie de dienst carsharing intensief? Indien ja, hoe? Indien niet, waarom niet?

Heel veel persoonlijke benadering 1 op 1, sponsoring, we houden veel pitches bij bepaalde evenementen.

Welke Social Media kanalen gebruiken jullie hiervoor?

Op dit moment te weinig, als de website klaar is, gaan we de linkedin en instagram erbij pakken.

Levert deze promotie nieuwe afnemers op? En op welke andere manieren zou u eventueel nog promotie toe willen passen?

Zoals wij het afgelopen jaar gedaan, komen altijd afspraken uit van de beurs. Samenwerkingen aan te gaan met verschillende Maas aanbieders die dan onze auto;s in hun app opnemen.

Toen jullie zijn begonnen met Car sharing hadden jullie een bepaalde visie en strategie, is die in de loop van de tijd aangepast?

Ja, toen ik kwam was die heel gericht op car sharing, en op 1 type bedrijf, op flexkantoren. Wij bieden nu ook scooters en steps aan. Op elke partij heb je een ander pijnpunt en daar leer je zelf als bedrijf ook weer van.

Hoe brengen jullie het verhaal van Car sharing naar de klant toe om ervoor te zorgen dat de klant voor Car sharing kiest?

Persoonlijk contact. Goed te luisteren naar wat zijn pijnpunten zijn. En dan de propositie te bepalen hoe je daar het beste een invulling aan kan geven.

APPENDIX 2 – SURVEY OVERVIEW

Characteristics of the company				
Question number	Subject	The question	Answer options	Measurement level
Q1	Name of the company	What is the name of the company you work for?	Text entry	Nominal
Q2	Location of the company	In which place is the company located?	Text entry	Nominal
Q3	Main activities of the company	What are the main activities of the company?	Text entry	Nominal
Q4	Operating sector	In which sector is the company operating?	Multiple choice (11) + text entry	Nominal
Q5	Position	What is your position in the company?	Text entry	Nominal
Q6	Age	What is your age?	Text entry	Interval
Q7	Number of employees	How many employees does the company has?	Text entry	Interval
Q8	Company fleet	How many passenger cars and vans does the company has?	Text entry	Interval
Q9	Company fleet	Does the fleet consist of bought cars or leased cars (both options are possible)	Multiple choice (2)	Nominal
Q10	Company fleet	Do employees use their own car for business purposes?	Multiple choice (3)	Nominal
Q11	Fleet responsibility	Who is responsible for the fleet management within the company?	Multiple choice (2) + text entry	Nominal
Attitude towards business car sharing				
Q12	Awareness	Are you familiar with the concept 'Car sharing'?	Multiple choice (2)	Nominal

Q13	Awareness	In what way did you first heard about car sharing?	Multiple choice (5) + text entry	Nominal
Q14	Advantages	Which of the following advantages of business car sharing would be most attractive for your company? (1 = not attractive, 5 = very attractive)	Scale 1 – 5 + text entry	Ordinal
Q15	Disadvantages	Which of the following disadvantages of business car sharing would be most attractive for your company? (1 = not attractive, 5 = very attractive)	Scale 1 – 5 + text entry	Ordinal
Q16	Additional services	Which of the following additional services would be attractive for your company in business car sharing (more answer options possible)	Multiple choice (4) + text entry	Nominal
Q17	Consideration	Did you ever considerate implementing business car sharing in the company?	Multiple choice (2)	Nominal
Q18	Preferences	Imagine that the company would start with car sharing, what type of car would you prefer?	Multiple choice (3)	Nominal
Q19	Preferences	Imagine that the company would start with car sharing, what would the fleet look like?	Multiple choice (4)	Nominal
Q20	Applicability	To what extent do you think business car sharing is a	Scale 1 – 7	Ordinal

		serious option for your company?		
Q21	Summary of the results	Do you want a short summary of the results from this research?	Multiple choice (2)	Nominal
Q22	E-mail	What is your e-mail address?	Text entry	Nominal

APPENDIX 3 – DISTRIBUTIONS OF THE VARIABLES

Table 1 - Car sharing interest distribution

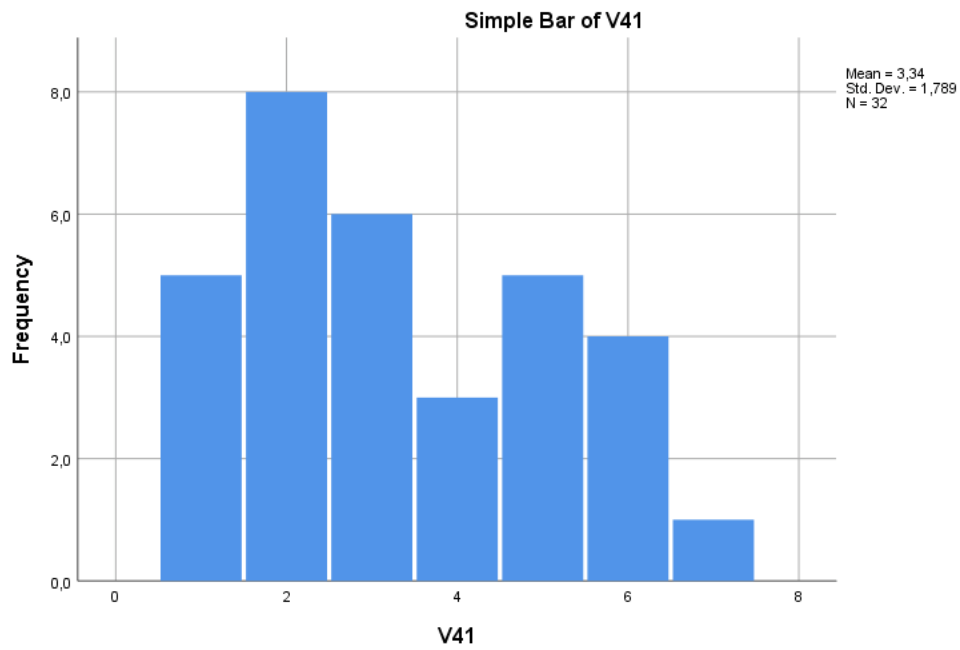


Table 2 – Increased occupancy rate of the fleet

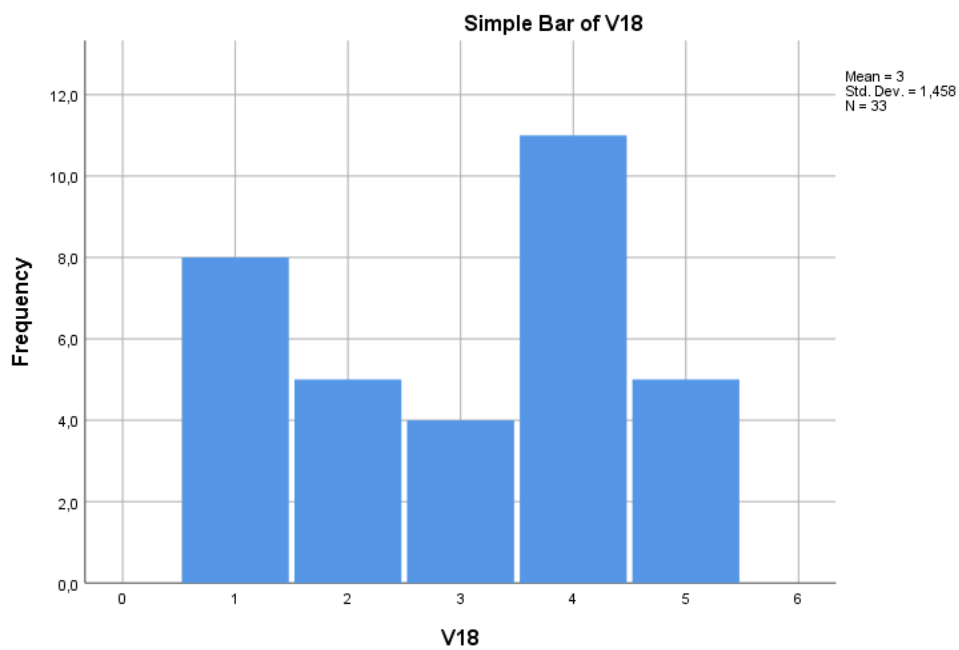


Table 3 – Increased flexibility of the fleet

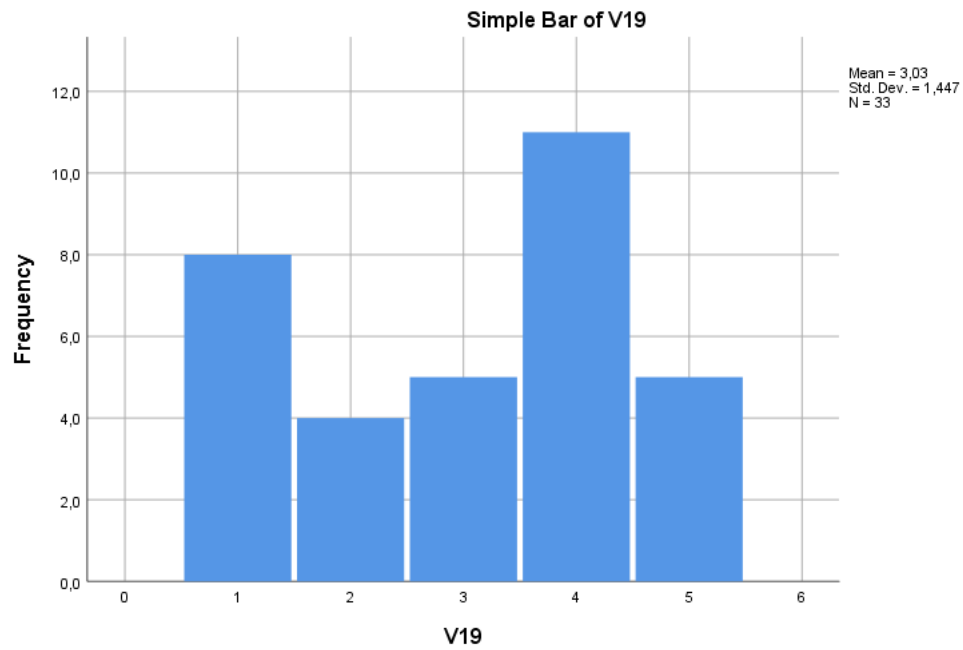


Table 4 – Decrease of maintenance- and fuel costs

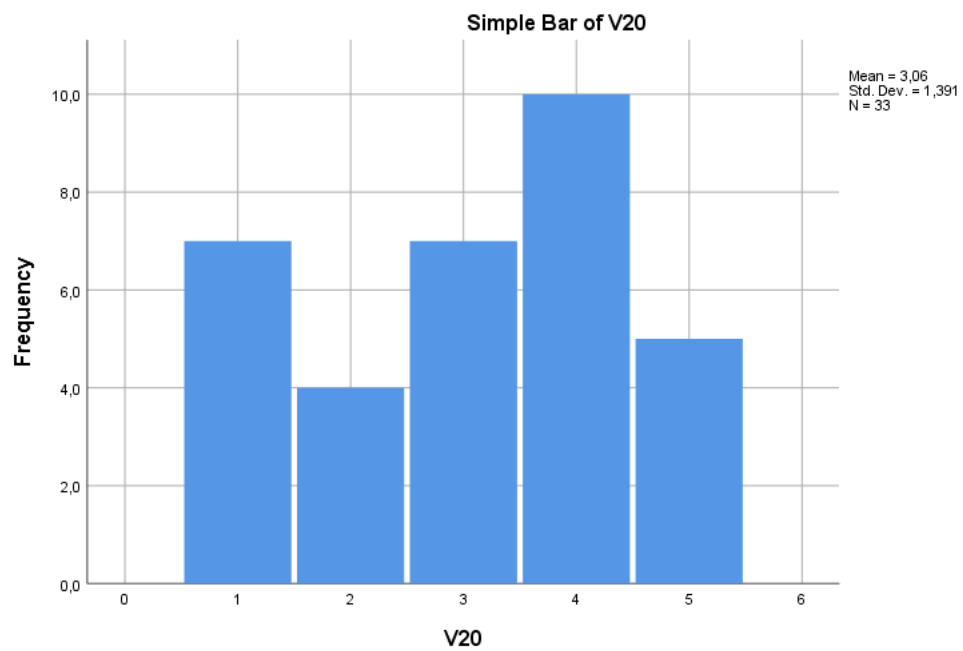


Table 5 – Increasing the sustainability imagine of the company

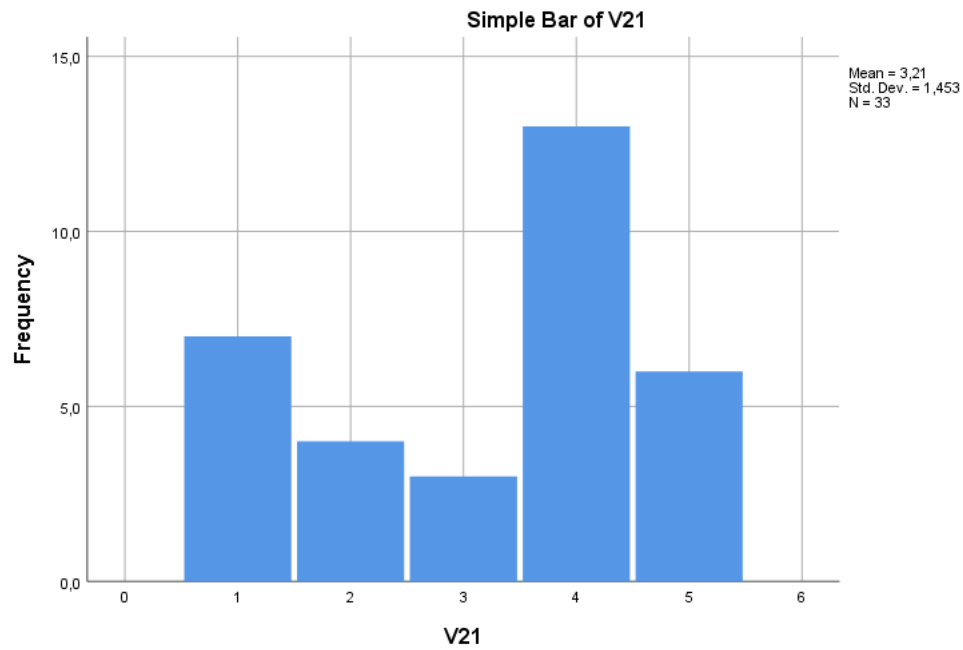


Table 6 – Less employees have to use their own car for business purposes

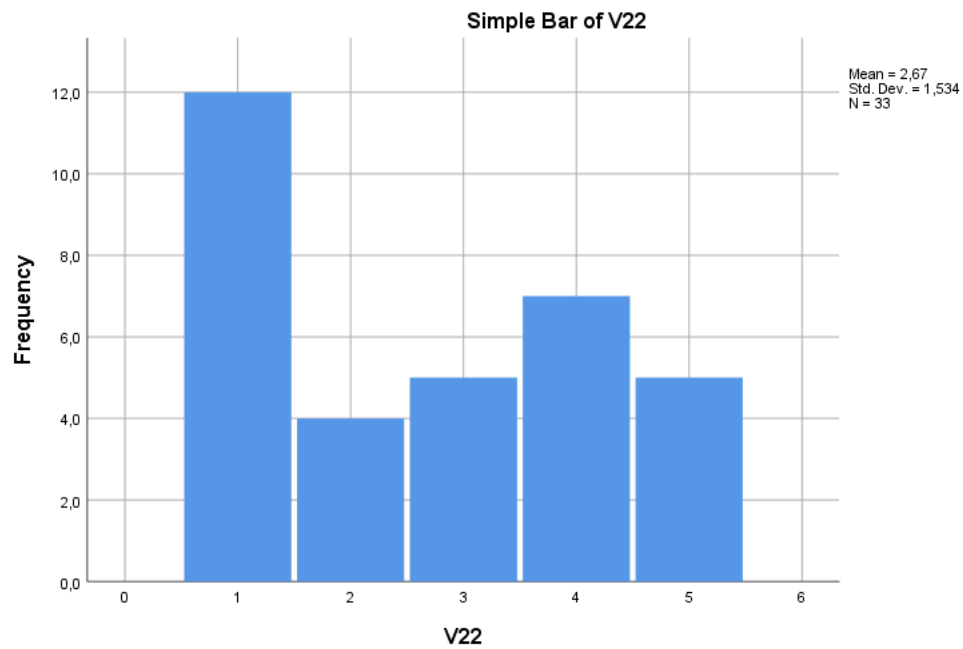


Table 7 – Employees can also use the shared cars after working hours

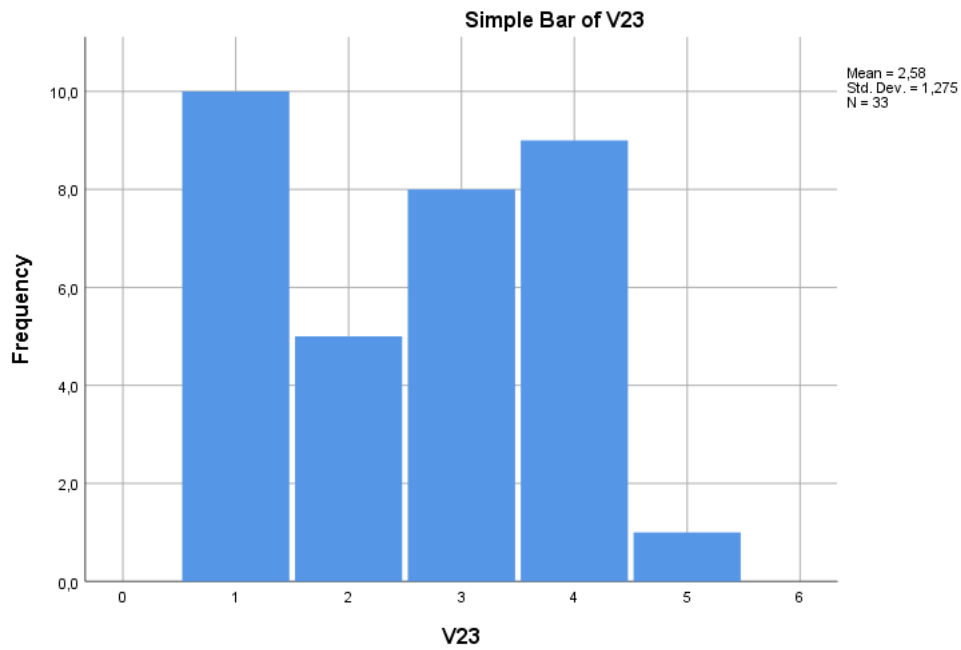


Table 8 – Drivers have less attention for the car (driving behavior, cleaning and so on)

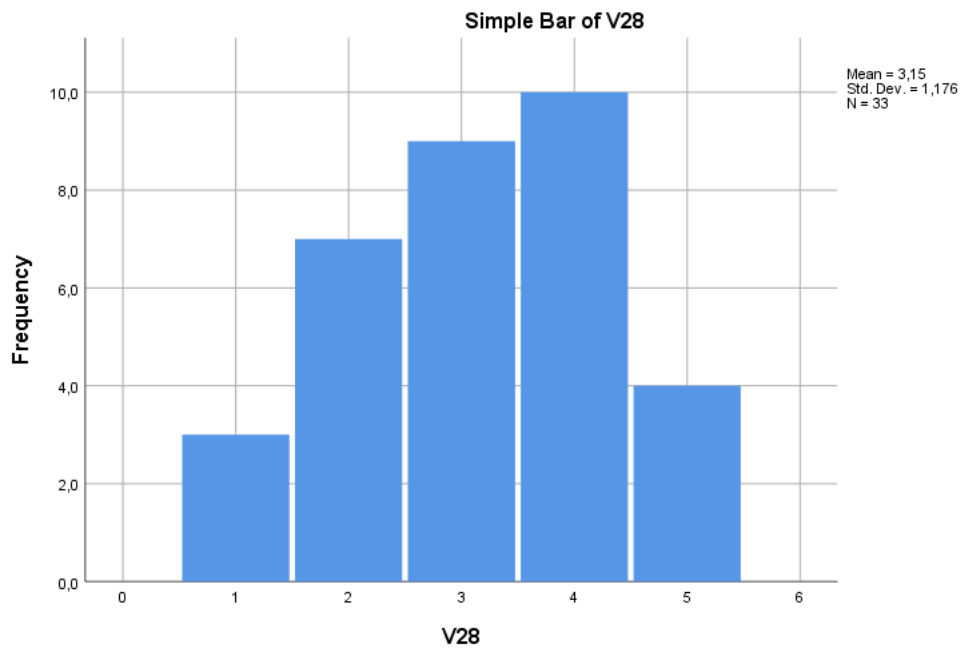


Table 9 – It can happen that there is no car available

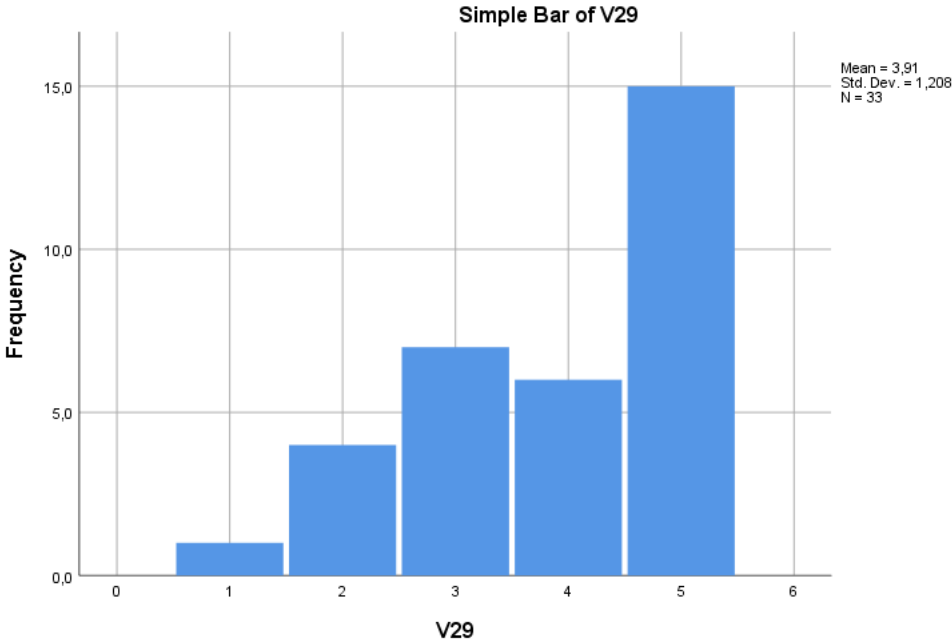


Table 10 – Whenever a driver is delayed with the shared car, the next reservation may be compromised

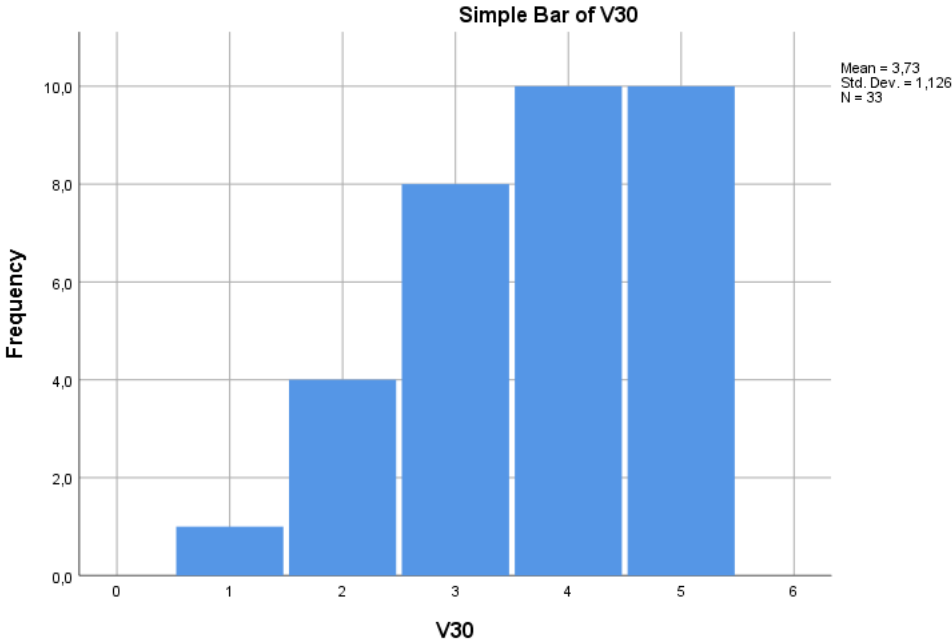
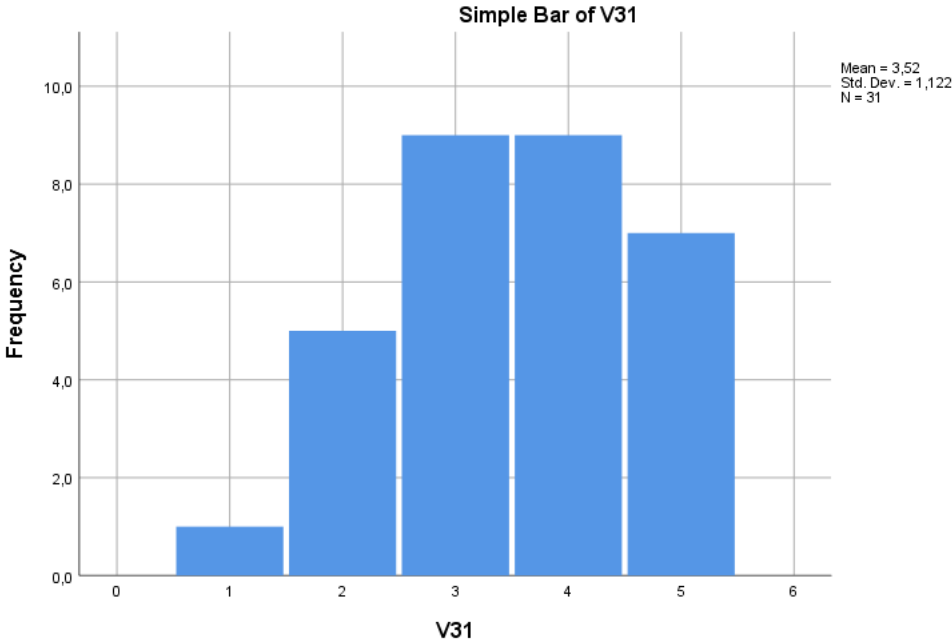


Table 11 – Failing to achieve the desired cost savings



APPENDIX 4 – SCATTERPLOTS HYPOTHESIS

Figure X – Scatterplot hypothesis 1

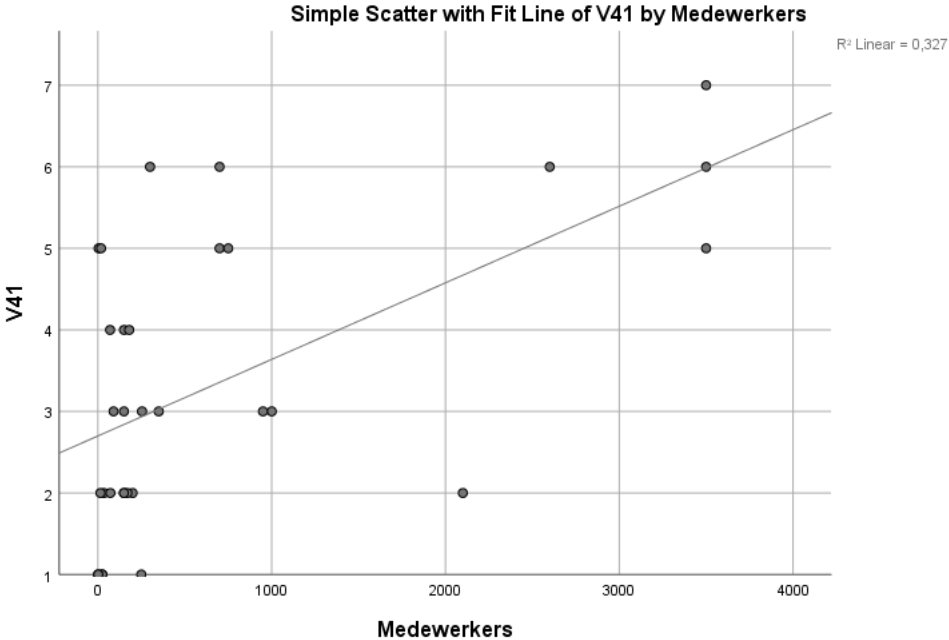


Figure x – Scatterplot hypothesis 2

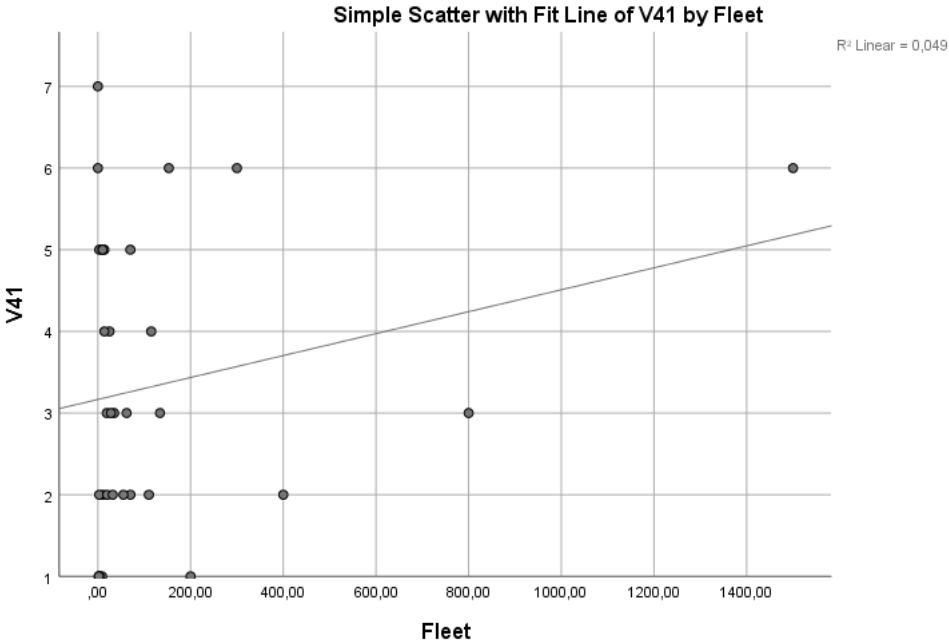


Figure x – Scatterplot hypothesis 3

