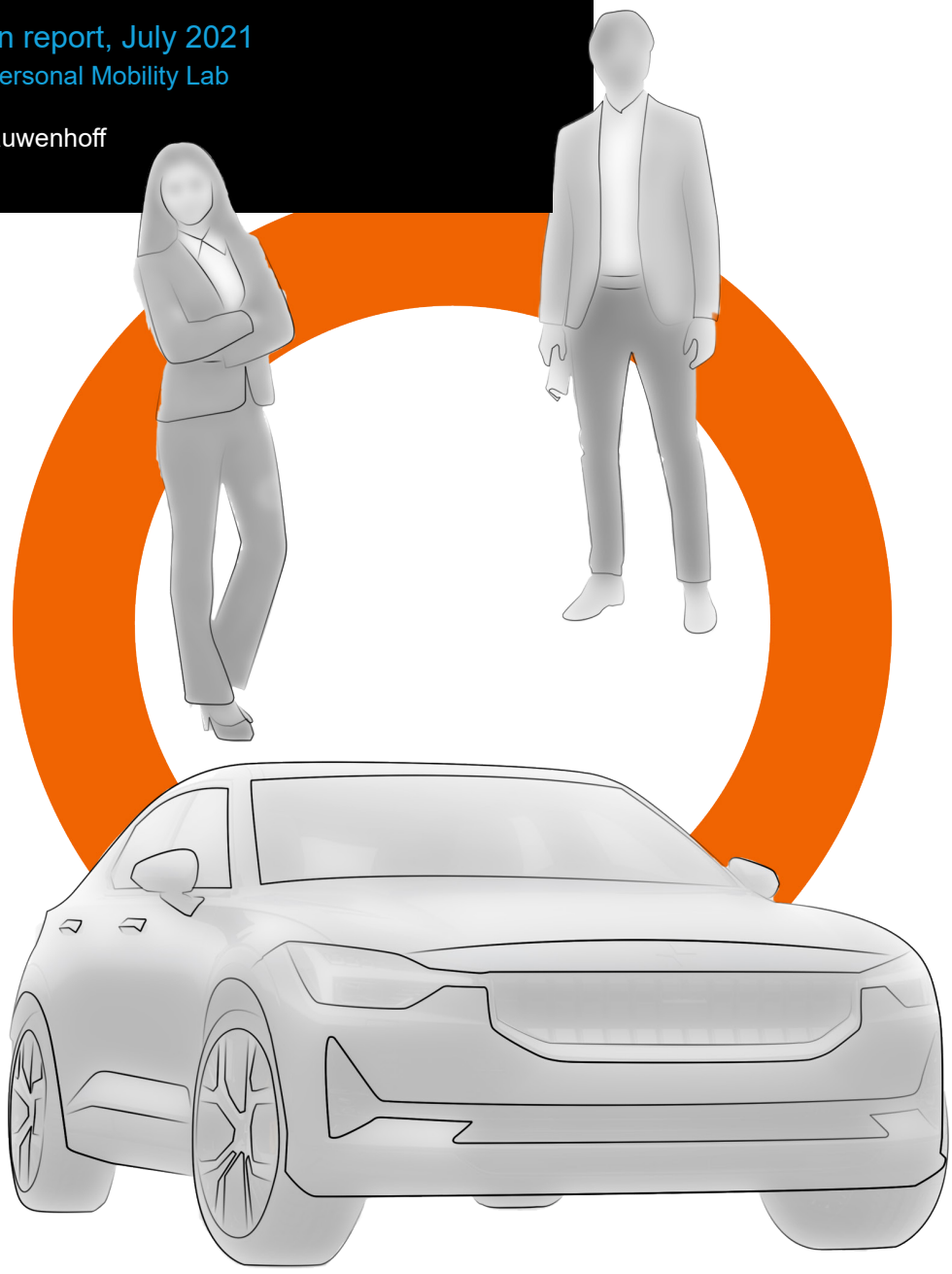
Designing an ecosystem to transform the lease car to a shared modality

Graduation report, July 2021

Seamless Personal Mobility Lab

Lodewijk Rauwenhoff

Faculty of
Industrial Design Engineering



TU Delft

LeasePlan

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Delft University of Technology
This report is part of the Seamless Personal Mobility Lab

July 2021

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Preface

People that know me also know my fascination with everything regarding automotive and mobility. This ranges from my inherited love of Saabs to making clay models for electric long-range travel. Keeping up with the latest developments in these industries is a hobby that I have established a long time ago. When I had the opportunity to shape my graduation project at LeasePlan around the future of corporate mobility, I was pleased to combine my personal interest with my final project of my studies at the TU Delft.

For the past 5 months I have worked towards the result that is exhibited in the report in front of you. The start of the graduation project was shaped by the work from home restrictions around the COVID-19 (C-19) pandemic. During the project, the regulation become less strict and luckily, I was able to work at our faculty. Due to the work at home restrictions, I have not visited the LeasePlan offices in the first five months. However, in the last week I finally saw the LeasePlan office in Almere and worked there with my colleagues of the business development team.

I would like to thank Suzanne, for all the inspiration in the form of interesting literature, new mobility concepts and seminars. Your considerable knowledge in the field of mobility helped a lot in the decision making throughout the project.

Sylvia, thanks for being always available for a talk, during the coaching sessions there was a personal note next to all the academic matter. Without your knowledge on strategic design, it would be a lot harder to connect and use the stakeholders in this project to their full potential.

I want to thank Viola for kick starting the project and giving me the opportunity to graduate within LeasePlan. Bruce thanks for sharing all the knowledge that was needed to make this project a success, the quick weekly sessions and all the concrete feedback on my ideas.

Big shoutout to the rest of the business development team, the daily stand ups made me feel part of the team. As we met only twice, the stand ups were our main means of communication. The afternoon on the cannels of Amsterdam really helped to understand the spirit and dynamics of the team that I had worked with the past few months.

In this last part I want to thank everyone that contributed and helped me to go through the process of graduating: internally at LeasePlan for all the shared knowledge, externally to all the companies that shared their experiences in the field of corporate knowledge and to the people that participated in the creative sessions and surveys.

Finally, I want to thank my parents for carefully reading through the entire report and all their support during my studies. Of course, I cannot forget my housemates who endured me during my best and worst times while graduating.

All the best,

Lodewijk

Executive Summary

With a fleet of 1,9 million vehicles, LeasePlan is the largest player on the lease and fleet management market in the Netherlands as well as worldwide (LeasePlan, 2021). They believe in their Car-as-a-Service strategy that unburdens users with the hassle that comes with the ownership of a car.

The fleet of cars and light commercial vehicles is allocated for 73% at corporate client (companies with a fleet >25 vehicles). There is continuous movement in this market segment due to developments such as mobility budgets and total mobility solutions. During the last years, there was much talk around these subjects. However, it was mostly talking without concrete action leading to change. The impact of the COVID-19 pandemic was felt around the world. The restrictions to our daily lives to contain the virus had far-reaching consequences on how we moved around the last 1,5 years. The number of kilometres driven for business purposes decreased in 2020 by 26% in comparison to the year before (NZMO, 2021). With the lease cars sitting on the driveways, companies were looking to update their mobility policy to facilitate the ‘new normal’ after the pandemic.

In the first part of this report, the mobility trends, market movement towards total mobility solutions, LeasePlan and the changing mobility needs of the employer and employee are analysed.

The call to create more sustainable and flexible corporate mobility solutions were present in the different analyses. The market is rapidly moving in the direction where the employee chooses between different modalities to travel the needed business kilometres. The direct competitors of LeasePlan are working on total mobility solutions that, next to the traditional lease car, include shared car services, public transport and e-bikes. LeasePlan is currently moving in the same direction with the development of a total mobility solution.

The employees are divided in their view towards the lease car. There is a growing group that is actively avoiding the lease car choosing for a cash option even though they are eligible for a lease car. They do not want the rigidity of a four-year contract. The counterpart is the group that uses the lease car for personal mobility needs. When the lease car was stationary for corporate kilometres during COVID-19, it was still regularly being used to drive privately.

Using the current strengths of LeasePlan and the insights from the analyses, an ecosystem was designed to transform the lease car into a shared modality. SharedLease is a new proposition that LeasePlan integrates within their future total mobility solution. The new proposition allows colleagues without a lease car to make business kilometres in an appropriate car. The lease car drivers will receive credits when they make the car available to their colleagues. With these credits, they can purchase a vacation car. Solving one of the main reasons employees do not want an electric lease car is range anxiety (Crothers, 2020). In this report, SharedLease is elaborated and the horizon before and after is presented.

SharedLease allows LeasePlan to venture towards shared car services while staying within their current Car-as-a-Service strategy. Meanwhile, the changing mobility needs due to the ‘new normal’ after the COVID-19 pandemic are met, giving the employee the needed flexibility.

List of abbreviations

BD	Business Development
BEV	Battery Electric Vehicle
BMC	Business Model Canvas
C-19	COVID-19
CaaS	Car-as-a-Service
DDL	Delft Design Lab
EV	Electric Vehicle
FCEV	Fuel Cell Electric Vehicle
HR	Human Resources
IDE	Industrial Design Engineering
LC	Lease Car
LCD	Lease Car Driver
LCU	Lease Car User
LCV	Light Commercial Vehicle
LP	LeasePlan
LPNL	LeasePlan Nederland
MaaS	Mobility-as-a-Service
MT	Management Team
MVP	Minimal Viable Product
VNA	De Vereniging van Nederlandse Autoleasemaatschappijen
NVL	Nederlandse Vereniging van Leasemaatschappijen
NZMO	Nationaal Zakelijk Mobiliteit Onderzoek
PHEV	Plug-in Hybrid Electrical Vehicle
PT	Public Transport
RFI	Request For Information
SPMS lab	Seamless Personal Mobility Services Lab
TMS	Total Mobility Solution
VVE	Vereniging van Eigenaren
WPC	Wagenparkcoördinatie

List of definitions

Benefit car
A lease car that the employee receives as a secondary employment condition.

Client
The person or organisation that pays the leasing fee. With private lease, this is a person. When talking about leasing to a company, the employer is seen as the client. In this report, both the terms client and employer are used. They are responsible for the creation and implementation of the mobility policy.

Employee
An employee is someone who gets paid to work for a person or company. In this report, the employee is seen as the person that makes active use of the mobility policy.

Employer
In the context of this project, the employer is the person responsible for the creation and implementation of the mobility policy. Within large corporations, this is done by a dedicated mobility manager.

Lease Car Driver (LCD)
The lease car driver is the person that chooses the lease car and pays the taxation for private use.

Lease Car User (LCU)
The lease car user uses the lease car on a pay-per-use basis. During the work hours they can book a car to drive the needed business kilometres.

Mobility as a Service (MaaS)
A new transport concept that integrates existing and new mobility services into one single digital platform, providing customised door-to-door transport and offering personalised trip planning and payment options. Instead of owning individual modes of transportation, or to complement them, customers would purchase mobility service packages tailored to their individual needs, or simply pay per trip (Durand et al., 2018).

Nationaal Zakelijk Mobiliteit Onderzoek (NZMO)
It is a research performed by 'De Vereniging van Nederlandse Autoleasemaatschappijen' (VNA) looking into trends within corporate mobility. 600 companies and 3.100 employees were analysed.

Total Mobility Solution (TMS)
A total mobility solution in the corporate mobility sector means that employees can choose between different commute and business travel modalities. The choice of a lease car or lease e-bike will be expanded with modalities like public transport, shared vehicles, and ride-hailing services. These different modalities can be used via a central mobility application.

Tool car
A lease car that is received if the employee drives more than a predetermined trash hold by the employer. For example, a sales employee gets a tool car if they drive more than 20.000km per year.

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Introduction

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General Introduction

The playing field of this graduation project is the world of corporate mobility. Frost & Sullivan (2016) have researched the corporate mobility sector and developed a definition; *When talking about corporate mobility, we mean all local, regional and international travel requirements of a business (including commuting and business travel) on behalf of the company. Next to the travel activity, all the associated facilities, processes, policies and products required to determine need, control policy, manage the travel activity and financially reconcile are included in this definition.*

LeasePlan (LP), founded in 1963, has decades of experience in this field. LeasePlan is the largest global leasing company with a turnover of €10,1 billion and a fleet of 1,9 million vehicles in over 30 countries worldwide (LeasePlan, 2019). Globally, LP has 6600 employees, for LeasePlan Nederland (LPNL) that is just above 900 with their headquarters in Amstelveen. Currently, 94% of LP's fleet is allocated to corporate clients and SME's, the remaining 6% is private lease. Traditionally LeasePlan provides these companies with leasing and fleet management products and services. LeasePlan specialises in Car-as-a-Service (CaaS) business model, unburdening the clients with the ownership of a car or fleet and turning it into a full-service subscription. In 2018, LP ventured out into the business of selling used ex-lease cars directly to consumers via a new online sales platform called CarNext.com. At the beginning of 2020, LP added e-bikes to the list of vehicles that their customers can lease.

Like many other sectors, corporate mobility is ever-changing with technological developments. With the technological advancements around connected cars through GPS, mobile data communication, route planning systems and telematics new forms of usage of the vehicles are possible. The user has the capability to reserve and unlock the car from his pocket, giving rise to new business models within (shared) mobility (Veeneman, van Kuijk & Hiemstra-van Mastrigt, 2020).

LeasePlan has noticed that the demand for corporate mobility is changing. Their clients demand a solution that includes more modalities, providing more flexibility in their corporate mobility. However, in the previous years, there was more talk than action around the topic. In the same time the lease car market kept growing, this growth in 2019 was around 8,6% (NVL, 2019). This changed with the COVID-19 (C-19) pandemic. The pandemic has had (and is still having) an enormous effect on the daily lives of people all over the world. With global lockdown measurements and the call to work at home, the need and implementation of mobility changed drastically. At the moment, all corporations are thinking about the way they will organise corporate mobility in the future. It is believed that the trend of working from home will continue in a hybrid form once the lockdown measures are withdrawn (Lund, 2020). The situation around C-19 has and will further accelerate trends that were already on the table.

LeasePlan
What's next?

Project Introduction

This project is carried out in collaboration with LPNL and the Seamless Personal Mobility Services Lab of the Faculty Industrial Design Engineering (TU Delft). In LPNL, this graduation project falls under the supervision of the business development (BD) team. With a team of six people, BD is responsible for developing and testing new propositions that can be implemented within the LPNL organisation. LPNL is positioned within LeasePlan Corporation, that oversees all the national entities of LP. The Netherlands is one of the leading countries within LP, meaning that LPNL takes the lead in developing and testing new propositions in the field of mobility.

The other partner in this project is the Seamless Personal Mobility Services Lab (SPMS lab) which is one of the Delft Design Labs (DDL). DDL is an initiative of the faculty Industrial Design Engineering (IDE) of the TU Delft. These different labs aim to unite students, researchers, companies, governments and organisations to catalyse knowledge development and work on design projects across different themes. In case of the SPMS lab this allows for collaboration between students, researchers and partners of the lab and use the knowledge gained from previous studies in the field of MaaS, shared and personal mobility. The partners from the industry are: 9292, GVB, Ministry of Infrastructure and Water Management, CROW, DOVA, RET, Rover and Translink.

LPNL wants to move from a company that provides lease cars to a company that provides a total mobility solution (TMS) for their clients. This is a reactive measure triggered by the demand of corporate clients faced with changing mobility requirements enhanced by the C-19 pandemic. This TMS means that users can choose between different modalities for their commute and business travel. The choice of a lease car or lease e-bike will be expanded with modalities like public transport, shared vehicles and for example ride-hailing services.

The call for this TMS is mainly heard at the top of the corporate sector, within companies that have a fleet of more than 250 lease cars. Therefore, this segment will be the scope of this project. LPNL is interested in the motivation of these corporate clients to move towards a TMS. What are the needs that are not fulfilled with the current solution and what will the future of corporate mobility bring? These requirements need to be identified before a valid proposition can be set up. Therefore, the assignment from LP for this graduation project is:

How can LPNL stay relevant in the movement of the corporate mobility sector towards a total mobility solution?

Project Approach

To keep an overview of this 20-week project, a structure is needed that can be shaped to the project's demands and can incorporate the needed design phases. This structure was found in the double diamond model developed by the British Design Council (2005). The project can be seen as a design process and is divided into four phases.

Part 1: Discover
This phase aims to get a clear view and a deeper understanding of the context around the research question. Being new in the world of car leasing allows this project to start with an unbiased view. LP as a company and the ecosystem around it should be understood (Chapter 3), as well as the development around shared mobility and MaaS (Chapter 2). To understand the clients and user needs and wishes, in-depth interviews were conducted in this phase (Chapter 4 & 5).

Part 2: Define
All the insights of the analysis, the outcome of the client's interviews and knowledge gained concerning user needs are bundled and translated into a design brief (Chapter 7). The design brief will be the gateway between the two diamonds. In the design brief, the general direction of the develop phase becomes clear. To ensure that all the previous phase insights are preserved, they are converted into future concepts' requirements.

Part 3: Develop
After converging towards the design brief, in the develop phase, it is time to diverge again. This is the phase where the ideation process starts. The right problem is found and now it is time to solve it in the right way. The different stakeholders have been involved in the ideation phase: LP employees, employers, mobility providers and users.

Part 4: Deliver
SharedLease is presented. The concept should be evaluated to ensure that it is the right solution to the defined problem. This is done with the stakeholders that were contacted during the project. Afterwards, the concept is further developed into a valid business proposition. Furthermore, a roadmap is presented that include a pilot strategy and a future vision.

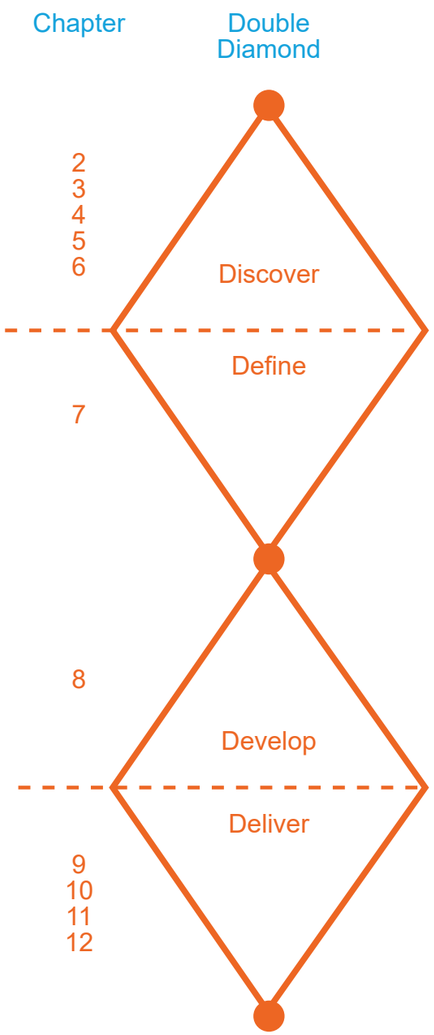


Figure 1: Double Diamond Model

Discover

1

Mobility Trends
Current Situation
Employer Needs
Employee Needs
Conclusion Discover

2. Mobility Trends

In this chapter trends that are defining the environment of mobility are analysed. These developments are researched and the analysis is made what impact they have on the mobility sector.

Goal

- Identify the prominent trends that are present in the mobility sector
- Link the trends and their current developments to the project
- Discover which opportunities the trends create for LP

Method

A mixture of literature and desktop research.

Shared Mobility

Shared mobility is a system where the users share a vehicle as a group (e.g. ride-sharing) or over time (e.g. car-sharing or bike sharing). The system creates a hybrid between public transport and the use of privately owned mobility. Because of the scope of this project, the emphasis will be on shared car services. Because of technological advances (connected vehicles), the different propositions and users of shared mobility solutions snowballed (Veeneman et al., 2020).

The shared mobility market has a value of over 60 billion US dollars and McKinsey's Future of mobility department expects a yearly growth rate of over 20% through 2030. The discrepancy with these seemingly strong numbers is that only 1% of the total kilometres travelled is done with a shared modality (McKinsey, 2019). One of the reasons that McKinsey's partner Philipp Kampshoff mentioned is that different use cases are not accounted for. E.g. using shared modalities during a multi-model trip or using them with young children (needing child seats) is still a challenging endeavour.

Also, in the Netherlands, the shared car market is growing. The Green Deal autodelen II is a collaboration between Crow and its partners within the mobility sector. The expectation was set to increase the number of users to 700.000 at the end of 2021 (Crow, 2019). This goal was already achieved in 2020, having 730.000 users in October 2020 (Crow, 2020). That is a 42% growth relative to the previous year. The growth rate of the number of shared cars lacks behind. There were 61.000 shared cars driving around in the Netherlands, less than the expected 100.000 cars (growing 27% compared to 2019).

The trend of shared mobility can also be seen in corporate mobility. 29% of the companies in the 'Nationaal Zakelijk Mobiliteits Onderzoek' (NZMO) (2021) indicate that they want to explore the offering of shared modalities. This trend is also seen within LP. Nearly all tenders of corporate clients with a fleet larger than 250 cars include the wish for shared vehicles within a TMS (LP, 2021).

Electrification

Sustainability is becoming an essential pillar within many corporations (Dutton & Anderson, 2020). Taking social responsibility for the care of the planet is an image that companies like to show to consumers. Not only in their products and services, but also in activities that happen out of sight of their customers. A process clearly related to emissions and pollution is mobility.

Companies grasp the electrification of their fleet as an excellent opportunity to lower the company's carbon footprint. Due to a lower taxation on private use, makes the environmental choice also an attractive economical option. The lower taxation on private use was a governmental decision to make electric driving more interesting. The taxation for a fully electric car in 2019 was 4% of the list price of the car. This gradually increased to 12% in 2021 (12% for the first €40.000 of the list price and 22% above €40.000) against the 22% addition on the list price for diesel- and petrol-powered vehicles (see figure 2).

	Diesel	Elektrisch	Elektrisch
Aanschafwaarde	€ 40.000	€ 40.000	€ 75.000
Privékilometers	> 500 per jaar	> 500 per jaar	> 500 per jaar
Bijtellingspercentage	22%	12%	12% over € 40.000 22% over € 35.000
Bijtelling	€ 8.800	€ 4.800	€ 12.500
Extra belasting*	€ 3.265	€ 1.781	€ 4.637

Figure 2: Taxation on lease cars (Rabobank, 2021)

There are multiple indicators that this trend will keep gaining momentum. The sales of electric vehicles in the Netherlands are growing each year (Netherlands Enterprise Agency, 2021)(Table 1).

Realization: EV as percentage of new passenger car sales			
	All EVs (BEV, FCEV, PHEV)*	Zero-emission (BEC, FCEH)	BEV
2015	9,6%	0,8%	0,8%
2016	5,8%	1,1%	1,1%
2017	2,2%	1,9%	1,9%
2018	6,3%	5,5%	5,5%
2019	14,9%	13,7%	13,7%
2020	24,8%	20,6%	20,5%

* BEV = Battery electric Vehicle, FCEV = Fuel Cell Electric Vehicle and PHEV = Plug-in hybrid Electrical Vehicle

Table 1: Sale of EV in percentage in the Netherlands

Within LP this trend is also visible as the percentage of electric lease cars has risen from 2,1% in 2018 to 14,9% in 2020. LP wants to extrapolate this growth towards their vision to have a 100% carbon free fleet in 2030.

The Netherlands scored second in the yearly EV readiness index of LP. In this index, countries are scored on EV registrations, the maturity of EV infrastructure and government incentives. The infrastructure behind the electric car for charging is growing rapidly, making driving the car more hassle-free.

The industry around the electric car is moving forward quickly. A few years ago, there was only a small selection of fully electric vehicles. Now, there are hundreds of electric car models on the market. Furthermore, the prices are going down each year (Cox Automotive, 2021). This price drop will continue due to higher sales numbers and decreasing prices of battery packs (Lee, 2020).

Mobility-as-a-Service

Mobility-as-a-Service (MaaS) is a transport concept that integrates existing and new mobility services into one single digital platform, providing customised multi-modal door to door transport and offering trip planning, booking and payment options. Instead of owning individual modes of transportation, or to complement them, customers would purchase mobility service packages tailored to their individual needs, or simply pay per trip (Durand et al., 2018).

Jittrapirom et al. (2017) stated nine core characteristics after an extensive literature review. When understanding these nine characteristics and further deepening and validating them with newer literature, a clear view of MaaS can be formed.

Characteristics of MaaS	
Integration of transport modes	Demand orientation
Tariff option	Registration requirements
One Platform	Personalisation
Multiple actors	Customisation
Use of technologies	

Table 2: Jittrapirom et al. (2017) has defined nine core characteristics

In appendix A an elaborate explanation of these 9 characteristics can be found. As stated by Jittrapirom et al. (2017) in Table 2, the MaaS solution should be centred around the user. However, when searching for literature around MaaS, the user is often not a subject. Topics as the integration of modalities, data sharing, business models and creating a correct definition are popular literature subjects. On the one hand, it is understandable because the MaaS concept is new and still has many technical challenges that should be overcome. However, it is crucial to involve the end-user in this process. Minimizing the chance that the technical solution will not be in line with the desires and needs of the users.

In this part, the focus is on the different groups of people who are or are not interested in using MaaS and their motives. Alonso-González (2020) has researched these groups and made different clusters. These clusters can be seen in Table 3.

Name cluster	Description
MaaS ready individuals (32%)	These users tend to be highly educated, young, have a slightly above average income and live in the highest urbanised areas. In the work of Alemi (2018), Clewlow (2016) and Shaheen et al. (2012), similar characteristics have been found for users that are likely to adapt to travelling within a MaaS ecosystem. This cluster has the highest willingness to pay for the service.
Mobility neutrals (25%)	A rather extensive cluster that scores average on the willingness to adapt and can be described as undecided and neutral minded. The willingness shows that even if they look neutral, they are open to adopting new mobility services. This groups defining characteristic is that it has a high percentage of elderly (+65).
Technological car-lovers (22%)	The individuals within this cluster have a neutral attitude toward shared mobility. However, this cluster is characterised by its strong preference for privately owned mobility. More specific owning a car. This is a result of the perceived needs or/and enthusiasm for the car. The characteristics of this group are a high percentage of households with children, a slight over representative of men and a high percentage of car owners.
Multimodal public transport supporters (15%)	This clusters scores high on the willingness to use MaaS applications. The difference with the 'MaaS ready individuals' is that while they prefer shared and on demand mobility, this cluster prefers the more traditional PT. This could be explained by a lower willingness to pay for a MaaS Service, and while the other characteristics match with the 'MaaS ready individuals', they have a slightly lower average income.
Anti-new-mobility individuals (6%)	A small cluster that is very unlikely to adopt a new mobility solution. Their willingness to use a MaaS solution is 12%, the lowest of all the clusters. The individuals within this group are evenly spread between age groups. After the 'Technological car-lovers, this group has the highest percentage of people that own a car.

Table 3: MaaS User Clusters Alonso-González (2020)

Autonomous vehicles

Of the five mobility trends described in this chapter, the autonomous vehicle is the trend with the most extended timeline. However, multiple companies are investing in this technology and implementing intermediate steps in current car models. Adaptive cruise control and lane assistance are features in modern cars to simplify the driving experience.

The Society of Automotive Engineers (SAE) defines six levels of driving automation ranging from 0 (fully manual) to 5 (fully autonomous) (SAE, 2018).

Level 0 No autonomy: Driver is in full control
Level 1 Driver assistance: System assist the driver while driving, e.g. cruise control.
Level 2 Partly automated: Function as braking and accelerating can be performed by the system in specific situations.
Level 3 Highly automated: Combining different driving functions allowing the vehicle to take control for extended periods of time. Driver needs to be able to intervene in any moment.
Level 4 Fully automated: The system is in control of the vehicle most of the time. Then the driver is not needed and can focus on other things than driving. In specific situations the driver is still needed.
Level 5 Full automation: The system has full control over the time at any given moment or situation. The car can drive with or without passengers.

A more extended description of the different levels can be found in appendix B.

Incremental changes are present in the current cars that indicate the development in the field of autonomous driving. The mobility industry will see a revolution in possibilities when the first level 5 cars enter the market. New business models can be applied within the field of shared mobility. Companies that have a strong proposition that contains shared mobility have a severe advantage when integrating autonomous vehicles.

COVID-19

C-19 is less a trend, but a situation that significantly influences corporate mobility and has been a catalyst for several trends in the mobility sector: working from home, shared mobility, and research around MaaS.

In the context of this graduation, C-19 made the substantive situation interesting. All the contacted companies were working on their mobility policy because of the changing times. Making it the perfect time window to discuss preferred changes in that new policy.

TMS was a subject that generated much talk without much action. In 2020, C-19 kept employees at home, decreasing the number of business kilometres travelled by car by 26% compared with the previous year (NZMO, 2021). The prediction is that working from home will partially stay after the pandemic (Lund, 2020). Companies have their own policies for dealing with the new normal after the pandemic. During the interviews, all companies indicated a hybrid form of working from home and at the office. This magnifies the call for more flexibility within mobility possibilities of the employees. A TMS is seen as a solution to this new demand. Companies include these questions in tenders and requests for information (RFI) that they put in the market.

Conclusion

- Car-sharing is picking up momentum within corporate mobility. However, LeasePlan has not yet taken action to invest in the opportunities that come along.
- The role of LeasePlan in a MaaS ecosystem depends on the actions they take with the development of the TMS. First, they should invest in keeping the relationship with the employer and employee. However, LeasePlan should not be hesitant towards opportunities that arise if they also position themselves as a modality provider.
- It is an exciting time to do this project. C-19 accelerates the developments around new mobility policies. Companies are actively looking for new ways to shape their corporate mobility.

3. Current Situation

The field of corporate mobility is crowded and due to the C-19 situation changing faster than ever before. This chapter aims to get an understanding of the current situation of the corporate mobility field. The focus is on the total landscape, with LP being a prominent player in this field with a lot of experience. In the internal analysis, LP is analysed, looking at conventional leasing and the movement towards shared mobility and MaaS. Subsequently, the competition is analysed to get an overview of the current propositions on the market.

Internal analysis of LeasePlan

Goal

- Getting an understanding of the structure and product/services that LP offers.
- Getting to know the vision of LP on corporate mobility

Method

Information was gathered through desktop research and conversations with different departments within LP that had a touchpoint with the project. These exploratory talks were bundled with the desktop research to gather the needed insights.

Vision LeasePlan

With the global slogan ‘What’s Next’ launched in 2017, LP portrays its future vision (LeasePlan, 2017). Central to this vision is sustainability. LP aims that their funded fleet has a net-zero tailpipe emission in 2030. They lead by example and have electrified their entire fleet of cars for their employees. Secondly is the move from car ownership to usage. With Car-as-a-Service, LP became a trusted mobility partner for their customers. They are helping companies to bring their mobility policy into reality while giving the user the pleasure of using a personal car without the burden of maintenance. To increase this ease of use, LP focuses on digitization. With this digitization they aim to run the entire process of car leasing and fleet management within a digital infrastructure. This makes it easier to connect the separate LP branches around the world.

Car-as-a-Service

LP purchases, funds and manages vehicles (cars and light commercial vehicles (LCV)) for their customers. Next to the car, LP provides services to manage the fleet of business clients. They provide full-service around the vehicle. Behind the 1,9 million cars that drive around the following value chain can be identified (LeasePlan, 2019)(see Figure 3).

Purchasing

LP buys the fleet of cars. Every car that is on the Dutch market can be leased via LeasePlan. LP can make this claim because they are an independent lease company, meaning they are not associated with a brand or manufacturer. Given that LP owns the cars, they manage a big part of the value chain in this way.

Financing

There are two main options when talking about leasing a car: financial and operational lease. With an operational lease, the vehicle will always be owned by LP. The lessee pays a monthly fee and in return, gets a fully serviced car. Depending on the vehicle, length of the contract, and number of kilometres per month, the height of the monthly fee is calculated. The finance lease entails that the person who leases the car will own the car at the end of the contract.

Fleet management

For customers that lease multiple vehicles, LP can unburden them by taking away the management of their fleet. With the help of LP’s fleet management software and consultancy, the companies’ mobility policies are translated to an up-to-date fleet.

Maintenance management services

LP uses an extensive network of preferred third-parties service providers. This means that they work with partners that, e.g., service the cars, repair damage and change tires. When the user needs a corrective or preventive service, they will be linked to the most desired partner service provider (based on location and availability).

Figure 3:Value Chain (LeasePlan, 2019)

Insurance and damage handling

Euro insurances DAC is a subsidiary of LP. The key focus of DAC is to seamlessly integrate the insurance processes with the leasing activities of LP, giving a value-added experience to LP clients. Because the insurances are accommodated at a subsidiary company, LP is insured to have competitive pricing.

Fuel, accident and rental management

Like the Maintenance management services network, LP works with a large network of third-party suppliers to ensure optimal fuel, accident and rental management for their clients. With the 24/7 customer service, the client is unburdened with problems that occur. With the users depending on their lease car for their mobility, fast service is a must-have.

Used Cars

In LP, they see themselves active in two markets: Car-as-a-service and the high-quality 3–4-year-old used car market. Through CarNext.com, LP has a pan-European marketplace to sell their used cars. In 2019, 39,600 vehicles were sold to consumers in 23 countries (LeasePlan, 2019). The supply of CarNext.com comes from the LP fleet as well as third-party suppliers. In 2019 LP invested €45 million as an additional strategic investment. CarNext.com is working on gaining more consumer awareness. An example is the sponsorship agreement they have with F1 driver Max Verstappen since 2019 (see Figure 4). By adding CarNext.com, LP strengthen their position by adding an extra step in the value chain of the car.

Figure 4: Max Verstappen with CarNext.com on his helmet

Customer segments

As can be seen in Figure 5, Corporate clients (companies with more than 25 lease cars) accounted for 73% of the fleet (LeasePlan, 2021). Most of these corporations are substantial organisations with extensive fleet management needs. The industries where the LP clients are active can be seen in figure 5. The SME market consists of employers that have 2 to 25 lease cars. While the private lease segment is currently the smallest with 7%, it is growing the fastest, doubling in percentage from 2017 (LeasePlan, 2017).

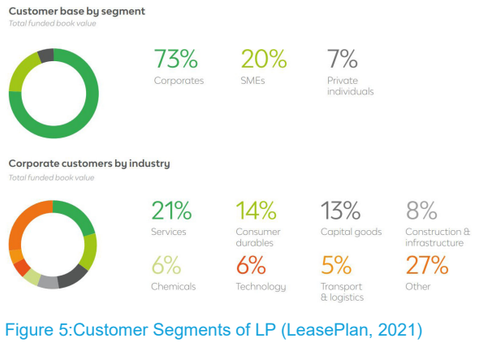


Figure 5:Customer Segments of LP (LeasePlan, 2021)

Private lease is a growing market worldwide, but is most prevalent in France, Italy, the Netherlands, Spain and the UK (LeasePlan, 2020). LP offers private lease products within their own brand name. In the Netherlands, LP collaborates with the ANWB. Private lease fits well within the trend, from ownership to usership, that can be seen in multiple sectors (Merrill, 2020). The private customers value the safety, certainty and financial predictability offered by Car-as-a-Service subscriptions. The private lease market is expected to keep growing in the coming years

Towards Mobility-as-a-Service

In the last few years, LeasePlan has seen that MaaS is a development that needs to be taken seriously. Other competitors (Athlon, ALD and Arval) have already dedicated B2B solutions that provide multi-modal transport. LP is afraid that they are too late for the party. Realising this fact, the concept of a TMS appeared on the agenda and multiple projects have started since then to enter this market segment.

AutoDelen

AutoDelen is the corporate car-sharing service of LP. Companies can choose to share a car between employees or across different departments internally. Sharing the cars between different companies that are located close to each other is also an option.

The car can be reserved and opened via the dedicated app. Inside the board computer, there are the keys and a fuel/recharge card. For the employer, there are three different payment modules: pay-per-use, rental or leasing. If a company wants to try car sharing, rental is a flexible option with a minimum of three months. The costs of €579 per car per month rental are more expensive than the €499 for the lease option. The shortest period in this module is one year. Both options are only suitable for internal car-sharing. With the pay-per-use model, the costs are €7,50 per hour and €0,13 per km. In this module, car-sharing between companies is possible.

At the moment, 200 shared cars are being used by clients of LP. Almost 2/3 of these shared cars are driving for municipalities or cities. The question is, with a shared fleet of 200 cars, has this concept reached its full potential? With the up rise of concepts like Amber (chapter 3), it could be expected that there would be more interest in shared corporate mobility.

LeasePlan Tripp

LeasePlan Tripp is a new service in the pilot phase. The pilot launched in February 2021. This Service proposition collaborates with a real estate investment company in the Netherlands (CBRE) and a facility company (The James Company). In the real estate company parking lot, two EVs and three e-bikes (one is a cargo bike) are available (Figure 6).

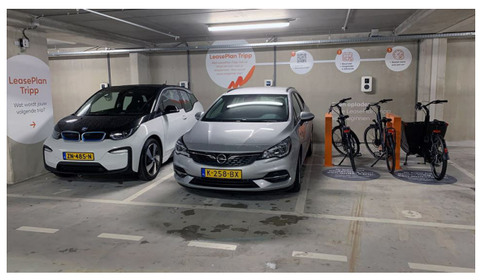


Figure 6: The setup of LeasePlan Tripp

Tripp operates in a closed environment because only the residents of the property can book the vehicles. Via the app, users can reserve, unlock and pay for the trips they make. There are no fixed subscription costs, only a fee based on the actual use (pay-per-use).

If the pilot is a success during the period over six months, Tripp will expand to the other housing properties and partner up with other real-estate companies to further deploy Tripp. The success relies on the number of users and the occupancy rate of the vehicles. If the pilot at CBRE is a success, they predict that it has a substantial market potential with more than 150.000 owners' associations (Dutch: Vereniging van Eigenaren (VVE)) in the Netherlands.

Mobility card

A mobility card bundles multiple mobility functionalities in one card. The exact functionalities differ per provider. In most cases, the following are included: travelling with public transport, fuelling or charging, taxis, ride-hailing services and shared vehicles. The employer gets the expenses of the trips made with the different modalities on one invoice. Since the end of 2020, LP has started a collaboration with XXImo. Before the mobility card provider was called Radiuz, after the fusion of these two companies, they continued as XXImo (March 2021). XXImo and LP have a lead collaboration. This entails that when LP sells the mobility card of XXImo to a client, they get a fixed fee per card. When a client is interested in including a mobility card into their mobility solution, LP will include XXImo in the conversation. At the moment, the products of LP and XXImo are not linked. However, this could be the case if the collaboration is further developed.

Before the collaboration, LP researched the market of mobility card providers. In this phase, XXImo was the preferred partner. In collaboration with XXImo, there are conversations about how to integrate both companies' solutions. One of the biggest questions is whether the resulting product should be branded as LeasePlan with the mobility card solution of XXImo being part of it as a white label system, or the other way around: use the XXImo branded platform where leasing with LP is one of the options. In future mobility concepts, LP is open to working with XXImo, but writing a tender for a new partner is also a possible option.

E-bikes

LPNL announced a new partnership together with Fietsenwinkel.nl. This means that the clients and their lease drivers can lease an electric bicycle through LP from January 2020.

It is a full-service lease proposition that is being rolled out under the label ‘hellorider’. International Bike Group (IBG), the parent company of Fietsenwinkel.nl, will make the electric lease bicycles (e-bikes) exclusively available to LP customers. Through this partnership, the customers are offered national coverage, a choice of various premium brands and a solid service organization.

This collaboration shows that LP is looking for new opportunities beyond leasing cars and are venturing into propositions that include other mobility means.

Conclusion

- LeasePlan is a strong global player in the leasing market. With a healthy proposition that is focussed on optimizing the Car-as-a-Service business model and selling used cars directly to consumers. Helping the employer and employee with unburdening all the hassle from car ownership and fleet management.
- LeasePlan has a clear vision on moving from ownership of a car to usage.
- Via different initiatives and new business proposals, LeasePlan is entering the market of shared mobility and Mobility-as-a-Service. However, these activities are recent and do not have a substantial effect yet on the number of vehicles leased. The push of LeasePlan towards Mobility-as-a-Service is done in a bottom-up approach.

Analysis corporate mobility market

In the last 50 years, the leasing sector grew from the start of the ‘leasing’ concept to a sector with a volume of €6 billion per year (NVL, 2018). Today, 61% of the newly bought cars and LCV in the Netherlands are done via a leasing contract. In numbers that are 318.300 of the 522.500 vehicles per year (VNA, 2020). In the Netherlands alone, there are over 800 leasing companies. In Table 4, the top 10 leasing companies are listed by the size of their fleet. These ten companies together make up 71,5% of the market.

To scope down this enormous field of 800+ competitors, we are looking at the companies integrating any form of shared mobility or MaaS within the corporate mobility landscape.

	Number of cars and LCV in fleet	
1	LeasePlan	189.220
2	VW Pon Financial Services	165.100
3	Athlon Car Lease	113.500
4	Alphabet	85.574
5	International Car Lease Holding	83.200
6	ALD Automotive	70.882
7	Mercedes-Benz Financial Lease	66.130
8	Renault Finance	49.800
9	Arval	47.450
10	BMW Group Financial Services	44.494
	Total	915.350
	Total lease companies Top-100	1.280.100
	Percentage Top-10 of Top-100	71,5%

Table 4: Top 10 leasing companies NL (AUMACON, 2021)

Competitors in the total mobility solutions market

Goal

- Get an overview of the corporate mobility market.
- Inventory of the activities of direct competitors of LP.
- Understanding the difference between the traditional leasing companies and the new players towards MaaS solutions for the corporate sector.

Method

To structure this analysis, the four-level of competition by Lehmann & Winer (2008) was used to find the different competitors and divide them into four levels. Through desktop research and insights from the interviews conducted in chapter 4, a holistic view of the market is constructed.

1. Product form competition

In this layer, the focus is on companies that provide a similar product as LeasePlan. At this stage of the project, the product or service is not fully defined yet. Because LP is moving towards a TMS, the leasing companies that are making a similar move are considered in layer 1.

These are the lease companies that have ventured out into the direction of MaaS. LP already stated that they are afraid that they are late to the party when offering integrating MaaS in their products and services. In the last years, multiple lease companies have introduced a mobility solution that incorporates more than the traditional lease car. Athlon, ALD and Arval, all big lease companies, have already launched their one-stop shop for mobility. In appendix C, a brief overview can be found of the three solutions. The conclusion is that the different solutions are in essence very similar. In offered modalities, duration of contract and key benefits.

2. Product category competition

In the first layer, the focus was on solutions from other leasing companies. In this second layer, we look at all the MaaS solutions available in the market today. There are a few notable elements:

- In the last two years, this segment has seen a significant increase in the number of companies.
- Most of the companies in this layer are backed by large corporations. The first reason for this is that these new companies need capital to make the necessary investments. A second reason is that big traditional mobility and automotive corporations are trying to catch the speeding train of MaaS. Investing in a small and promising company gives them an easier way to get into the MaaS sector rather than building a concept from the ground up.

In the table in Appendix C, an in-depth analysis can be found of the companies and the B2B or B2C products of level 1 and 2. When introducing a new business model including the option of car leasing, these companies will be the direct competitors.

When comparing the different concepts, several similarities are present:

- Flexibility: All the companies stress the fact that they will provide flexibility to the employer and employee. This flexibility is to indicate that the employee has more options to travel.
- Sustainability: Reduction of CO2 is a benefit that most mobility solutions mention (some see this as an employee benefit while others see it as an employer benefit).
- Simplicity: At first glance, giving more mobility choices does not sound like simplifying the process. The simplicity lies in the fact that employers have less administration work because all the costs of the different means of transport are billed on one invoice directly from the mobility company instead of separate expense declarations coming from employees. Simplicity for the employee comes in the form of a single platform where the different means of transportation are bundled.
- A correlation can be seen between the means of transport available in the different solutions and the type of provider. When offering lease cars and bikes, other mobility options are limited (primarily public transport). These platforms are launched as additional products of existing leasing companies. The solutions that come from new companies developed for the MaaS solution focus on shared mobility and do not offer cars and bikes for long-term individual use like lease cars and bikes. Arval and XXImo are the exceptions, integrating the full spectrum via collaborations with third parties to include all the different modes of transport.

3. Generic Competition

In the generic competition layer, MaaS solutions and different ways for employees to travel are included. This layer is filled with different transport modes like shared scooters and cars, public transport, taxis…

NS, RET, and other carriers working towards a MaaS solution are between layers 2 and 3. On the one hand, they function as a common carrier without focusing on corporate clients and integrating different transport modes. On the other hand, RET launched the 'Mobiliteits Manager', a mobility card specific for companies. Furthermore, in 2021 NS, RET and HTM will launch the MaaS-platform RiVier, where travellers can find all the public transport in one place (NS, 2020).

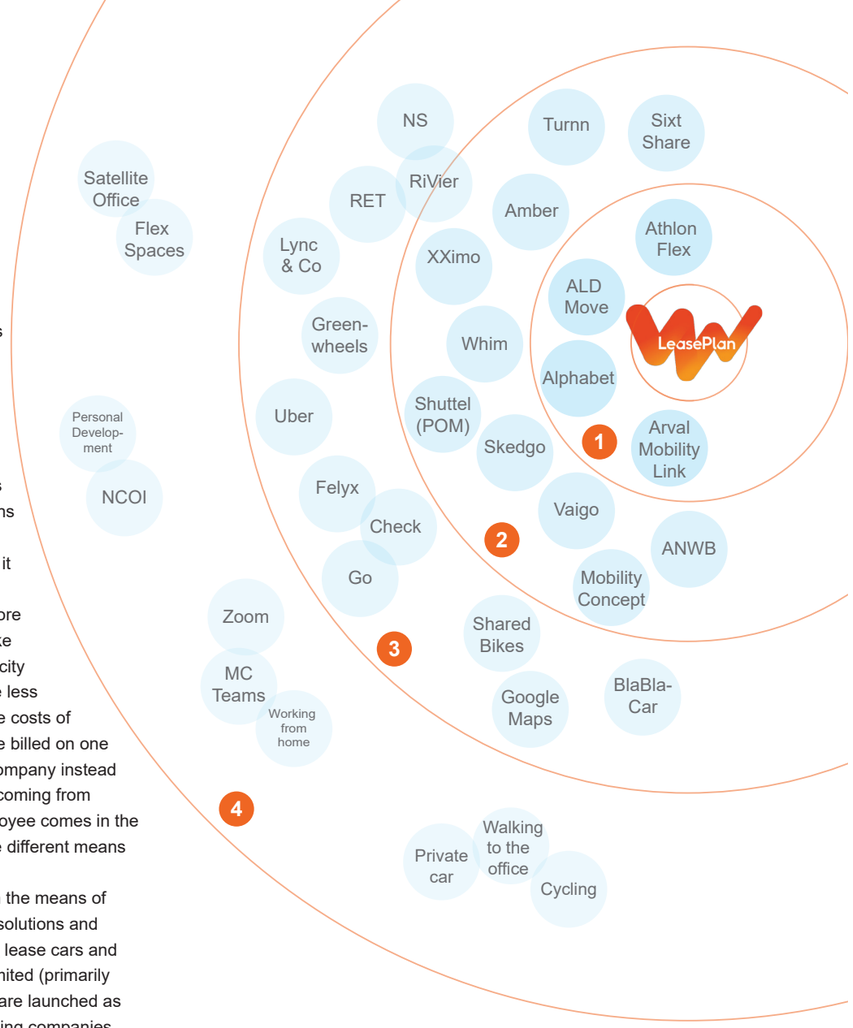


Figure 7: The four-level of competition by Lehmann & Winer (2008)

In 2019, seven regional MaaS pilots would start in phases. Each pilot has a different focus on a policy object or target group. During each pilot, a specific MaaS app is tested. Of the seven, three pilots are focused on the corporate traveller. These are in the regions Eindhoven, Zuid-As (Amsterdam) and Rotterdam-The Hague. Unfortunately, because of the situation around C-19, the pilots are postponed. However, once the results are in, they could be an essential inside in which direction the corporate mobility market is headed.

4. Budget competition

This is a very general layer where we look further than all the conventional mobility. Included are companies that resolve the need for corporate mobility—for example, working from home via video conferencing tools like Zoom and MS Teams. The company investing in satellite offices or flex workplaces closer to employees also undermine the need for a lease car. Another example that came out of the interviews is that employers want to create a budget that includes elements other than mobility. Meaning that the budget could also be spend on personal development. An employee could spend it on an expensive training instead of a lease car.

Amber

In the competitor analysis, it is worth pointing out Amber, a mobility company launched in 2019. Amber aims to enhance the number of electric cars on the road and strives towards a society where the car's use will be central instead of the ownership. To achieve this goal, Amber believes that sharing should be a fully-fledged alternative to owning a car. There are multiple reasons to focus on Amber. Amber started by targeting corporate users. With the situation around C-19, they broadened their scope towards private users.
The second reason is that the proposition seems to be working, as discovered during the interviews (chapter 4). Amber is mentioned multiple times as a must-have in future mobility solutions. Companies are already using Amber and like the ease of the service. For the employees without a lease car, Amber is a practical solution for carpooling during their commute to work or for their business trips. Their coverage grew from Eindhoven and Tilburg to over 90 hubs in the middle and south of the Netherlands. Today Amber facilitates on average 13.279 drivers per day (Drive Amber, 2021).

The usage of Amber is centred around an app (like many other shared vehicles: Felyx, Green wheels...) shown in Figure 8. The user can reserve, unlock and pay within the app. A few USP's that Amber has:

- The car can be dropped off at a different location than the location you started (even in a different city).
- In Tilburg and Den Bosch, the service area is spread out over entire neighbourhoods. In Eindhoven, the entire city centre is a hub, which means that the user can leave the car on every public parking spot (without paying).
- Amber guarantees a ride when you book up front. If the user lives inside a service area, drop off at your front door is available. Otherwise, the car will be available at a hub near you.

Conclusion

- The lease market is very crowded and is moving fast towards providing total mobility solutions for the customer.
- Companies from different origins are trying to enter the Mobility-as-a-Service market. This is done by combining their strengths in a collaboration, introducing new companies, taking over smaller initiatives or launching new services.
- The direct competitors of LeasePlan (other big leasing companies) are moving in the same direction as LeasePlan. ALD, Athlon and Arval have identified the same market needs. In some cases, they are multiple steps ahead.

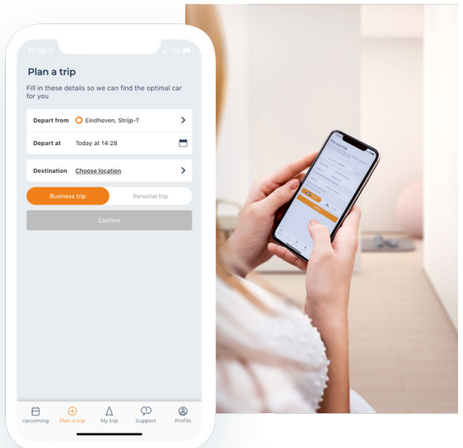


Figure 8:The Amber App

4. Employer Needs Analysis

In 2020 the 'Nationaal Zakelijke Mobiliteitsonderzoek' (NZMO) did a research with 600 companies. This research found that 26% of the companies indicate that their fleet will decrease in the future. For large companies with between 200-999 employees and companies with more than 1000 employees, this decrease is estimated at 41% and 38%. Around 16% predict that their fleet will grow in the coming time (NZMO, 2021).

The main reasons for this decline are:

- Total mobility need will decline (because of the new normal after C-19) (64%)
- Offer fewer benefit cars to employees (54%)
- Actively decreasing the number of tool cars (38%)
- Making the switch to mobility budget (31%)
- Making better use of the fleet; shared cars (29%)

To get a better understanding of these changing client's needs, interviews were conducted with companies that fall within the scope of this project. In this chapter the set-up and results of these interviews can be found.

Interviews

Goal

Interviews were conducted to better understand how companies deal with their corporate mobility and to identify the triggers and barriers to revise their mobility policy.

- Get a broad understanding of how companies organise their corporate mobility and what they need to accomplish this.
- Get an overview of the future of corporate mobility within their company.
- Identify triggers and barriers that arise when talking about, developing and implementing a new mobility solution.

Method

Patton (2002) states that interviews allow the interviewer to understand the way of thinking and a persons' perspective. To ensure a free-flowing conversation, the research was done using semi-structured interviews. With the help of an interview guide, the interviews were guided so that similar results were expected of all the interviews. After the first interview, the interview guide was updated to make room for a more elaborate discussion at the end of the interview on the general project direction. The interview guide can be found in Appendix D. When constructing the interview guide, the value proposition canvas (Osterwalder, 2010) was used as a backbone (Figure 9). In this book, it is stated that the value proposition is created alongside customer profiles. Three topics are essential within these customer profiles—the gains, the pains, and the customer job. In the interviews, the focus is on the gains and the pains.

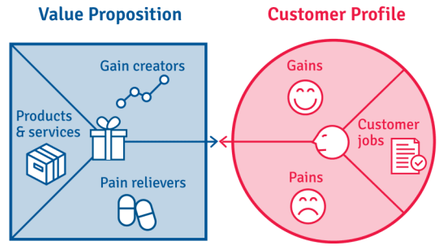


Figure 9:Value proposition canvas (Osterwalder, 2010)

Each interview started with a brief introduction of the participants and the general idea behind the research. Secondly, the current mobility solution of the company was mapped out. Thirdly, a future vision was explored, ranging from tomorrow's ideas until their vision on corporate mobility in 2030. The last topic discussed is the path from this moment towards this future vision, taking into account the benefits and obstacles that the companies identify.

After asking for consent, the interviews were done online and recorded using Microsoft Teams' build-in function and were later re-watched and analysed. The answers of the interviewees were noted down in bullets (Appendix D). The bullets were clustered using Miro. From the clustering, meaningful insights and trends were extruded (Appendix D).

Setup

To select the companies that were interesting to interview, the focus was on creating a diverse group. In total eight companies were interviewed, seven of these companies were LP clients. It was interesting to include a non-client perspective, with no lease cars. In Figure 10 the dispersion can be seen of the percentage of employees driving a lease car within the interviewed companies. The level of interest in a TMS can also be seen in Figure 11.

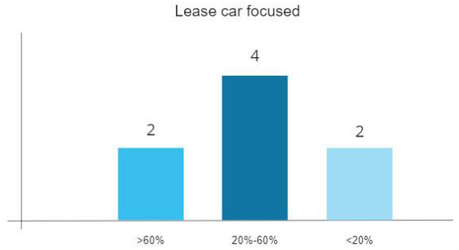


Figure 10: Dispersion of employee % with a lease car

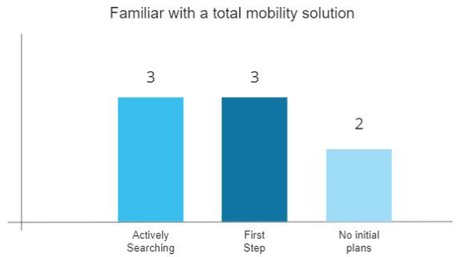


Figure 11: Dispersion interest towards a TMS

Looking at the industry these companies operate in, a good dispersion over the different sectors is achieved: services, consumer durables, construction & infrastructure, chemicals, technology and capital goods. Because of the scope of the project all the companies had more than a fleet with at least 25 vehicles. With five of the eight companies, the interview was with the dedicated mobility manager, with the other three the interview was conducted with the human resources (HR) or procurement manager. The interviews were conducted via Microsoft Teams and were, on average, 60 minutes long.

Results

For a long time, a lease car was a secondary employment agreement easily given to employees. In different sectors, it was expected that a lease car was granted when getting the job—resulting in large fleets for the companies, often consisting mainly of benefit cars. During the interviews, five of the eight companies indicate that they want to decrease their current fleet size.

- Because of the way of working after C-19, with companies stimulating or demanding more work from home and the familiarity with digital meetings (via Zoom, teams…), fewer employees will make the minimum business km's to qualify for a tool car. None of the companies indicated that they were going to lower this threshold.
- The most significant effect on the fleet size will be the reduction of the number of benefit lease cars. Companies see them as a big cost and during C-19 the benefit car was mostly used for private use. Two companies wanted to get rid of the entire fleet of benefit cars. The reason for reducing the number of benefit cars is that the employer no longer sees the balance between the added value and the costs of the benefit car.
- Companies see an opportunity in new modalities like shared cars and/or public transport.

The corporations with substantial fleets and multiple arrangements to facilitate the employee in their mobility demand have appointed a mobility manager to arrange and carry out the mobility policy. A trend was clear with the mobility managers that they had a strong opinion and vision on the company's future mobility policy. This can lead to drastic changes that the rest of the company or the market is not yet ready for. Corporate mobility is a sensitive topic within companies. Different corporate bodies are involved in the decisions. The management team (MT), HR, finance and the work council all have different interests in how this policy is carried out.

In all the interviews, sustainability was high on the agenda. Electrification of the fleet was the main concrete action companies were taking to reduce their CO2 footprint. However, few companies were already investing in the movement towards a greener mobility solution. Only one

company made funds available to increase the speed of electrification of their fleet. Companies saw that employees were taking over their old (fuel-driven) lease car instead of leasing a compulsory EV. The main reason, that came out of their internal research, was that the employees had range anxiety with the lease cars. A study from Forbes showed that the smaller range of an EV was one of the main three reasons consumers did not buy an EV (Crothers, 2020). Next to the switch to EV's, there were no concrete plans to travel more sustainably.

A problem that was heard multiple times during interviews was the disparity between employees, which means that the difference in benefits between mobility solutions offered to the employee was too big. The cost difference of accommodating an employee with a lease car or pay out a km allowance is substantial. This grew with the new fiscally governmental policy that the km allowance should be flexible, meaning that the employee only receives the allowance when they make the kilometres. This is not the case when receiving a lease car and mobility budget that stays the same.

Conclusion

- Corporations are taking the situation around C-19 as an opportunity to revise their policy on corporate mobility seriously.
- The trend for downsizing the fleet was mentioned during the meetings as an activity that has already started. The two main reasons were the reduction of business travel and the high cost of the benefit cars.
- Sustainability is high on the agenda, but companies act according to their own standards. Guidance is needed to actualise these goals. At the moment, electrification of the fleet is the most heard concrete development to reduce carbon dioxide emissions. However, during implementation, employers feel friction with their employees.
- Companies are looking for new propositions to provide shared modalities to their employees. They see car-sharing as a promising solution to the demand for more flexibility

5. Employee Needs Analysis

> *With the employer, you get a foot in the door, but you can only stay if the employees likes the solution*
> *~ Account manager LP*

In the last chapters, the focus was on LP as a company and their corporate clients. Logical because we need to understand the capabilities of LP and the needs of the client. The quote above means that first, you need an interesting proposal that will win over the client. They will eventually have to pay for the solution and make the call to go through with it. However, it will only become a success if the end-user (the employees) like to use the product. It needs to be clear, simple and friendly to use. In the Discover phase of this project, we will do user interviews to get a feeling about how the user feels about their current mobility solution provided by the employer.

User Research

Goal

- To find out what the users think about the mobility solutions provided by the employer
- See if the findings that were present in chapter 4 are also visible to the employees.
- Find out if the results of the interview can be matched with the user clusters developed by Alonso-González (2020) (chapter 2.3)

Method

User clusters were made with the findings of the client interviews, literature review and user research performed by external parties (e.g. the NZMO (2021)) and internal questionnaires performed by LP's clients.

The created user clusters where tested with user interviews. During the interviews, an interview guide was used to structure the interviews. However, a more conversation-like style is preferred to talk more freely about the subject. This resulted in a less strict interview structure and just steering the conversation towards the different topics. The interview guide can be found in appendix D. When choosing the sample size, the choice was made to do five interviews with a diverse set of people that covered the different user clusters. The interviewees were from different companies and covered variety in age, gender and mobility needs.

The interviews were conducted in the same time frame as the user interviews of Deloitte. Giving the opportunity to combine the interview guides and share the insights.

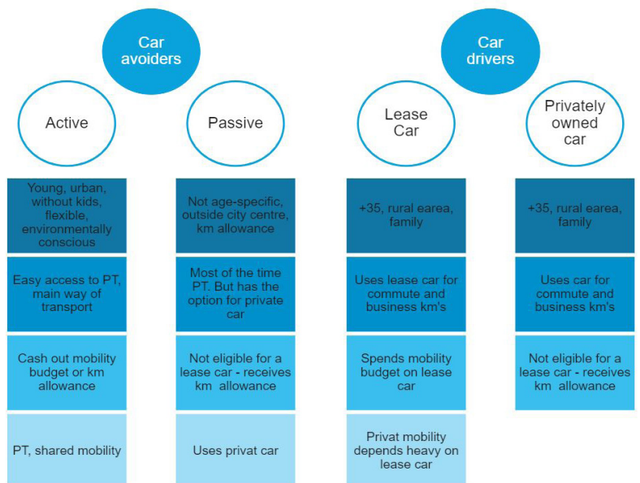


Figure 12: Four user clusters based on

Results

In Figure 13 the four clusters can be found. They can be categorised into two main groups: the car avoiders and car drivers. These groups could be compared to the cluster made by Alonso-González (2020) (chapter 2). The active car avoider fits within the characteristics of the 'MaaS ready individuals' cluster. They see the benefits of not owning a car and using alternative modalities to fill their mobility needs. The passive car avoiders can be linked with the cluster 'Multimodal public transport supporters' seen in Table 3. This group is less keen on using shared mobility and stick with PT and, if needed, their own car.

The Technological car-lovers have the same interest as the car drivers. With a significant dependence on their car for their private mobility. In this group, both the lease car and the privately-owned car is represented.

However, not only the categorisation of these groups is interesting also the shift between the groups will be meaningful. In a survey performed internally by one of the interviewed companies (2021) with 479 participants, a clear shift was seen between the pre-Covid commuting method and the preferred way of commuting after the pandemic. The most significant shift is from using a private car to commute with PT or PT in combination with a bike or car. 3% of the employees prefer a shared car as the preferred way to commute to work. At the office nearby PT, the lease car has a slight loss in terms of popularity.

Conclusion

- The employees are divided in their view towards the lease car. There is a growing group that is actively avoiding the lease car choosing for a cash option even though they are eligible for a lease car. They do not want the rigidity of a four-year contract, they are looking for flexible way to provide in their business kilometres. The counterpart is the group that uses the lease car for personal mobility needs. When the lease car was stationary for corporate kilometres during COVID-19, it was still regularly being used to drive privately.
- The clusters developed by Alonso-González (2020) can be adapted to fit within this research that is more specific on the role of the lease car. It shows that the different kind of needs seen at research around MaaS users matches the needs of employees in the context of corporate mobility.

6. Conclusion Discover

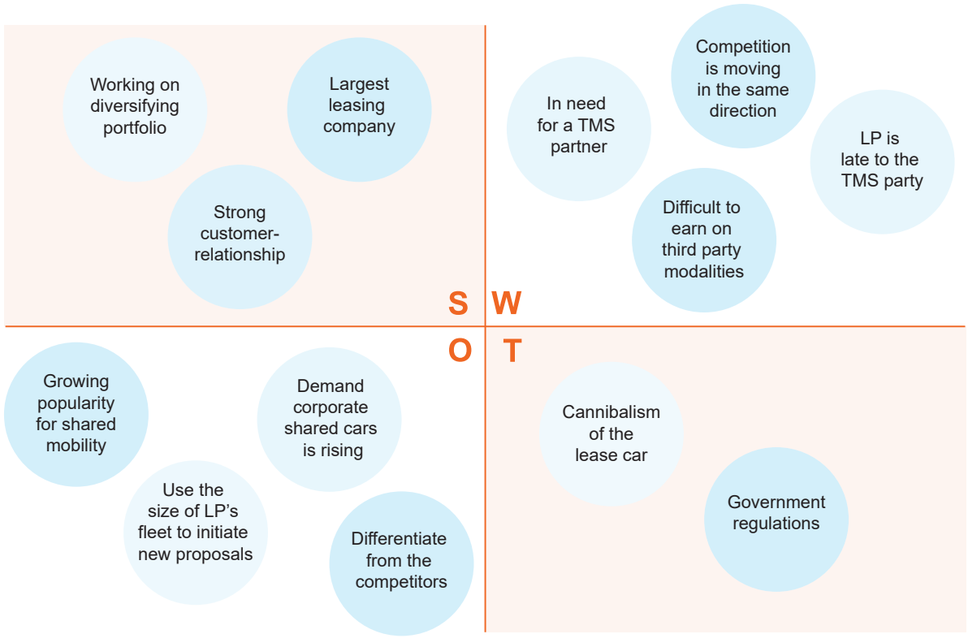


Figure 13: SWOT analysis of LP

The changes that LP is anticipating towards providing their corporate clients with a TMS, meaning that they provide added modalities, comes with risks and difficulties. However, these changes will also provide new opportunities for LP. These elements are summarised in the SWOT analysis (Figure 13). In these chapter the different elements are explained.

Cannibalism of the lease car

When providing the user with more options than just a lease car and making switching easier, it should be considered that a lease driver might be tempted to switch to other means of transport. A different view on this problem is that if LP does not move towards a total mobility solution that the client calls for, the damage in loss of clients and loss of lease cars will be even more significant.

Difficulty to earn from the added modalities

Currently, LP is considering a collaboration with a third party to offer the mobility card to clients. With this mobility card, the employee is granted access to different modalities. E.g. XXImo, this card includes all public transport, Greenwheels, Fetch, Taxiboeken.nl, eCab, Uber, parking and fuel/charging. During the Deloitte project, it became clear that it is difficult to get a margin on third-party mobility providers, especially if LP does not own the platform.

An opportunity that comes with providing a total mobility solution towards the LP clients is that LP can easily plug in new modalities. For example, if LP would provide a shared free-floating car service, it would have a platform that could be used to integrate these new modalities.

Differentiate from the competitors

As seen in chapter 3, the competitors in the car lease sector are moving towards total mobility solutions. Arval, ALD and Athlon have launched a variation on a one-stop-shop solution. Whether LP can differentiate when providing a total mobility solution is crucial for the success of its concept.

These competitors and LP do not have the ability to launch a TMS on their own at the moment. Instead, they use white-label solutions that are available in the market. The pilot partner for the TMS, is one of these parties that provide leasing companies with a TMS where they can integrate their lease cars. However, this white-label product is also the basis of the proposition of one of LP's direct competitors. Therefore, the functionalities that will be included in LP's TMS will be the same as in the current TMS of the competitor (see Chapter 3). The difference lies in the modalities that the leasing companies bring to the TMS, the lease cars and the service around these. Here lies an opportunity for LP. If LP can differentiate within the lease car proposition and bring something to the table that helps employers and employees in their mobility needs, it will give LP an advantage in tenders concerning total mobility solutions.

Growing popularity of shared mobility

In the different analyses performed in this graduation, it was shown that shared mobility has gained momentum and is predicted to grow in market share and number of users in the coming years. Corporate mobility is an interesting segment for shared mobility solutions. Both employer and employee have stated their interests in using shared cars for business travel. However, at the moment, only a small percentage of the travelled business kilometres are travelled in shared modalities. Furthermore, government regulations around taxation and the use of corporate shared vehicles are complicated (Belastingdienst, 2020). These hurdles must be overcome to make corporate shared mobility a success.

The demand for shared vehicles rising in the B2C and B2B market is an interesting opportunity for LP. If LP can use its current strength of being the world's largest leasing company to its benefit, there is significant potential in becoming a strong player in the shared mobility market.

MaaS

With the development of the TMS, a step in the direction of a MaaS solution is made. The user can choose from different modalities for their business trips. However, planning the trip is currently not an option in the app. With the pilot partner, this can be an option to implement. In their platform, this feature is already embedded. In other words, the final form of the TMS is still under development. Thus, making it difficult to focus this graduation on the current form of the TMS.

In 2019, a graduation project was performed in collaboration with LP that researched and designed a MaaS ecosystem. This graduation report was focused on the role that LP should take in this possible MaaS ecosystem and the correlating products that suited this positioning (van Dalen, 2019). If a strategic roadmap of future developments around the TMS would be the main focus of this graduation, the outcome would become very similar to the result of van Dalen (2019). Because of this, the development of a MaaS solution will not be further included in the design brief of this graduation.

Define

Design Brief

2

7. Design Brief

Problem statement

The perceived value of a lease car is declining among employers. The decline is emphasised due to the current situation around C-19. Because of the fewer business kilometres driven in 2020, many lease cars were standing idle on driveways and mainly used for private mobility needs.

Both employees and employers are looking for a more flexible and sustainable way to drive their business kilometres. They want to achieve this flexibility by providing different modalities and new ways of using mobility. At the moment, LP does not have the traction and products to fulfil these new mobility needs.

Shared mobility, more specific shared cars, will grow in popularity (argumentation see Chapter 2). Both the employer and employee see benefits in using shared modalities. The trend can be seen as a threat to the traditional lease car. This design project will challenge this threat and use it as an opportunity. The findings of the previous chapters and the unique characteristics of LP are used to make LP a strong player in the shared mobility sector.

Design goal

Design an **ecosystem** *where the lease car can* **seamlessly operate** *as a shared vehicle so that it meets the client and user's mobility needs and is* **valuable for all stakeholders**

Ecosystem

The lease car is a well-known phenomenon in the corporate mobility sector. Changing the rules on the usage will impact the interaction with the car. If different people use the car, a new system is needed to ensure the correct functioning of the car. Tracking availability, incentivisation and new mobility policies are components that the new ecosystem will need to incorporate.

Seamlessly operate

The proposed design should unburden the client lease car drivers and lease car users so that the interaction with the system feels like a seamless experience. Because of the added functionalities, the way of interaction with the lease car will change.

Valuable for all stakeholders

When LP, the employer or the employee do not see the added value of the concept, the right to exist is then challenging to argue. In the design and conceptualisation phase, the emphasis should be on creating a proposition and story that convinces all stakeholders and demonstrates that the lease car can be more valuable. Within mobility, and more specifically within shared mobility, many different propositions exist that are slightly different but offer the same service.

Design Requirements

Employer

- Reducing the gap between employees with and without a lease car (more uniformity among employees).
- Increase the value of the lease car for the employer.
- In line with the sustainability goals of the client. Stimulate the use of and switch to EV

LeasePlan

- Should work in the total mobility solution that comes out of the Deloitte project.
- Should provide in the business km that are now not driven in a lease car. Being competitive with new shared mobility solutions like Amber
- The new proposition should differentiate LP from direct competitors.

Employees

- Both the employees with and without a lease car should see benefits using the concept.
- The employees that normally do not receive a lease car should have easier access to a car for their business kilometres.
- The lease car driver values the private mobility aspect of the lease car and this should not change in the concept.

Develop

3

Ideation
Creative Sessions

8. Ideation

The design brief in the previous chapter outlines a clear scope where the final concept needs to fit into. The ideation phase will focus on bringing the insights of analyses, the design requirements and the new findings of multiple creative sessions together into one concept.

During the creative sessions, input is collected with different points of view. Using people with a wide variety in backgrounds both within and outside LP resulted in a multiple variety of new ideas and inspirations. Furthermore, it allows validating the ideas that come out of the personal creative process. During the group and one-on-one sessions with stakeholders, different ideas were discussed and input was collected.

Relationship mapping with SPMS Lab

Participants

The 5 participants of this session were researchers and students from the SPMS lab. They have extensive knowledge in the field of mobility.

Goal

Because of their background in mobility, the goal of this session was to collect input on system level and brainstorm on the relationship between the different elements within the ecosystem.

Session

Due to the C-19 restrictions, the session was done in an online environment. Therefore, Zoom was used for communications and Miro as an online whiteboard. The session started with brainwriting on different smaller creative statements related to the overall theme or project specifics. During these exercises, the participants got to know the background of the project and the scope. The results can be found in Appendix D.

The main exercise was about the relationship between the elements of the ecosystem. LP, employer, lease car driver and lease car user were given. The participants were free to add additional elements. Figure 14, shows that the participants all have a different view of the role of LP. Most of them see the need for an extra stakeholder within the system that functions as a platform. This platform should function as a portal between the LP and the users of the system. This matches with the design requirement that it should function within the TMS that LP is developing. The TMS will have a portal for the employer who can see data on the travel behaviour of the employees. For the employees there will be an app to select the wanted modalities and check the status of their mobility budget.

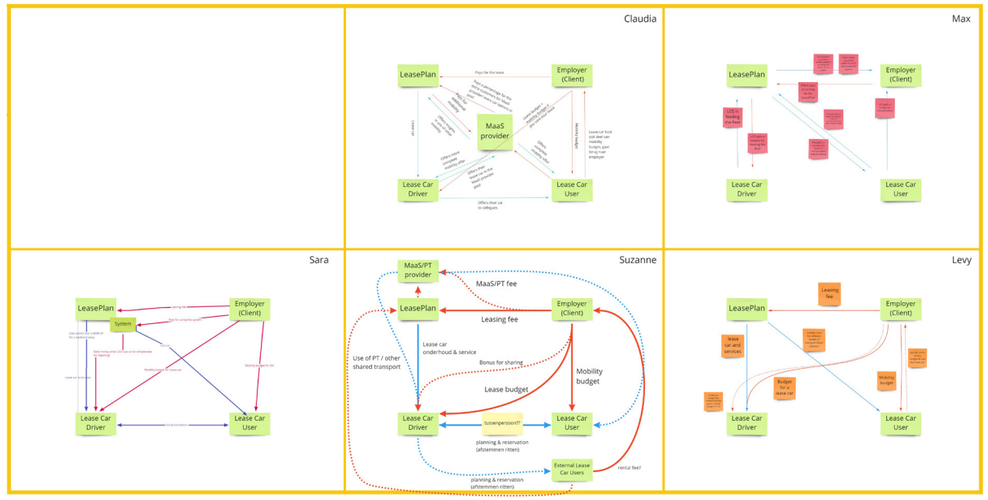


Figure 14: Part of the creative outcome session SPMS lab

User Journey with Designers

Participants
Four fellow IDE master students.

Goal
The goal of this session was to go through the different journeys of the lease car driver and lease car user when using the lease car as a shared modality. The outcome of the brainstorm is input for the journeys found in chapter 10.

Session
The session had the same setting and structure as the previous session, with the addition of a short explanation, that of the concept. The participants were told that the lease car could be shared during office hours. The lease car has two users instead of traditional one user. The lease car driver is the person that chooses the lease car and pays the taxation for private use (‘bijtelling’) and the lease car user is the person that can borrow the car during work hours. The main exercise was a collective brainstorm on the interaction with the lease car and ecosystem by the lease driver and the colleague who lends the car.

The result is a draft version of the journeys (Figure 15). The different actions of these two groups of users are linked to the tasks that the system needs to perform. The ideas correlate with previous made journeys which confirm these ideas. However in some areas new interaction were presented:

- Clearly identify which lease cars are available
- The lease car drivers should see when the lease car is planned to return (updates during the trip). This gives them the information on when they can use their car.
- The possibilities to give feedback on a trip (both ways)

Sessions with internal LP stakeholders

Sessions with LP colleagues were used to talk about specific elements of the concept. The decision to do multiple one-on-one interviews rather than a group session is because of the need to do it online. With a group that is not fully acquainted with online brainstorm sessions, the course of the session is more challenging to maintain. In one-on-one sessions, the problems and different situations can be examined in the field of expertise of the participant.

These reasons weighted more heavily than the loss of building on each other’s ideas and sharing inspiration between participants that would happen in a group session.

Tax Specialist
Goal
The session was with the tax specialist within LP who is specialised in shared mobility within the corporate sector. The goal was to understand the current situation on taxation on private use of (shared) lease cars.

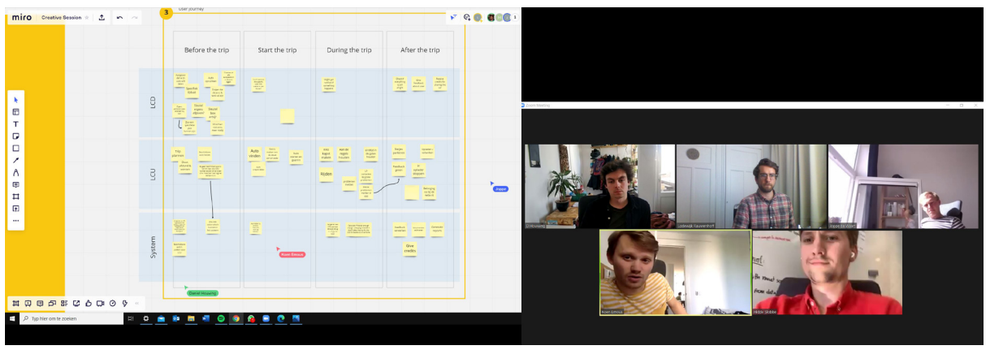


Figure 15: Setup up of the online group sessions

Results
At the moment, it is complicated to use a corporate shared car for private use. This is because the tax authorities do not allow that an employee uses the shared/pool car for private use.

There is a work around made in collaboration with ‘De Vereniging van Nederlandse Autoleasemaatschappijen’ (VNA). This states that an employer can rent available shared cars to their employees against market conform prices. However, in practice, because of the height of the prices, this workaround is not being used.

‘Ter beschiking staan’ means for whom the car available is. For example, a lease car is available for the lease driver, meaning that he is obligated to pay the tax of the lease car. If the lease car is available for ten people, ten people are obligated to pay the same tax.

Logically, when the partner of the LCD borrows the car, the car is still available to the LCD. In this case, the partner is not obligated to pay the addition of the lease car. So, the structure within the concept should suggest that only the LCD has the availability over the lease car and that the LCU borrows the car.

Because of the flexible planning and booking of the lease car, it can be argued that the lease car is always available for the LCD. The LCU only borrows the car if that fits within the agenda of the LCD. The main takeaway is that it should be well documented who drives the car and the LCU only uses the lease car for business kilometres.

The tax specialist foresees that the regulation will change around corporate shared mobility. Putting a timeline on this change is challenging. However, with more interest from employers and employees to use shared mobility, the government is prone to make the change in regulation a higher priority. Therefore, to start implementing the concept, this change in regulation is not needed. When the regulation is changed and corporate shared mobility can be used for private trips, the concept can further develop towards a shared mobility service that serves corporate mobility needs (see chapter 11).

Marketing intelligence manager
Goal
Getting information on the willingness of the lease driver to share their lease car with colleagues.

Results
The market intelligence manager regularly collects user data from lease drivers. He does research and benchmarking, both qualitative and quantitative. The needed data was not available and the decision was made to perform a quantitative study on the preferences of lease drivers and the usage of their lease cars.

The setup and results of the study can be found in chapter 12.

Account managers
Goal
Getting an outside view on the project and generating input from LP colleagues that know the needs and wishes of the client.

Different account managers were involved in developing the concept to incorporate their view and the client’s wishes. They have close contact with the clients and know the desires and needs of multiple accounts.

Result
The concept was presented and discussed. The discussion was whether the concept would fit in with the mobility policy of the companies that the account managers supervised. Next to the input of the account managers, three companies were selected that fitted well for the evaluation. The results of this evaluation can be found in chapter 12.

Flexible Fleet Director

Goal

- Getting more insights into the structure of the department flexible fleet. What products and services do they manage?
- Get an overview of the cost structure of AutoDelen and translate this information to the cost structure of SharedLease.

Results

LP offers next to the traditional leasing with a contract from 2 to 5 years also services where the customer can have a much shorter usage of a car. Within LP a pool of around 15.000 cars is managed by Flexible Fleet. This fleet exists of cars that have the following function:

- Around 4.000 rental cars
- Rental to taxi drivers: Taxi drivers can operate as freelancer (Dutch: ZZP'er) with their own car. These customers are managed by flexible fleet.
- Replacement Vehicles: When choosing this option within the lease contract, the user gets a replacement vehicle when their lease car is unavailable.
- AutoDelen: explained in chapter 3.

The hardware that makes a car shareable is telematics. The box that connects the car to the digital fleet is leased from the company MOQO. With the box the car can be unlocked via the app. In combination with a white-label app, the costs are €47,60 per month. The costs for installing the hardware that makes sharing the car possible is €427.

At the moment, Flexible Fleet is looking for a possible new partner for the facilitation of the hardware in the shared vehicles. Increasing the number of vehicles that are going to be used as shared vehicles helps with the negotiation.

Deliver

4

SharedLease Business Model Canvas Roadmap

9. SharedLease

Introducing SharedLease; the ecosystem where lease car drivers (LCD) can share their electric lease car with colleagues. Given the possibility for the colleagues without a lease car to make the needed business kilometres in an appropriate car. The lease car driver will receive credits when they make their car available to their colleagues. With these credits they can purchase different add-ons for their lease car. For example, having a vacation car if the LCD wants to have a gasoline car for ski- or summer holidays or accessories like a towbar or a roof rack.

The lease car will be equipped with the needed hardware to make the car suitable to be used as a shared modality. The software behind the reservations and the needed payment system is embedded in the TMS (chapter 10).

In figure 16 a day in the life of a SharedLease car is portrayed. When the SharedLease car has more than 3 hours of inactivity a LCU can reserve the car for a trip. The LCD gets a notification and the time that the car will return.

In the total mobility solution application, the LCD sees the spent budget and the collected SharedLease credits. With these credits the LCD can set aside to save up enough to utilise a bigger fuel driven car when it is needed. This service is known as the 'AutoExtraPlan' for LP's user. Each month they pay between €79 and €149 depending on the wanted size and luxury of the car (LeasePlan, 2020). The monthly extra is collected in a piggy bank that can be spend when in need for a holiday car. The same is true for SharedLease credits. The size and model of the holiday car is depended on how much credits the LCD has saved.

Lease Car Driver

The LCD can use the SharedLease car for private and business use. LCD pays the addition for the private use of the car. When starting with SharedLease, the LCD will choose the desired lease car.

During the use of the car, the LCD gets an incentive for sharing the car with colleagues.

Lease Car User

The LCU commutes without a car. They are not eligible or do not want a lease car. However, when making business trips having a representable car is sometimes useful. The LCD is looking for the flexibility of a car without ownership. They use their mobility budget to pay-per-use of the car.

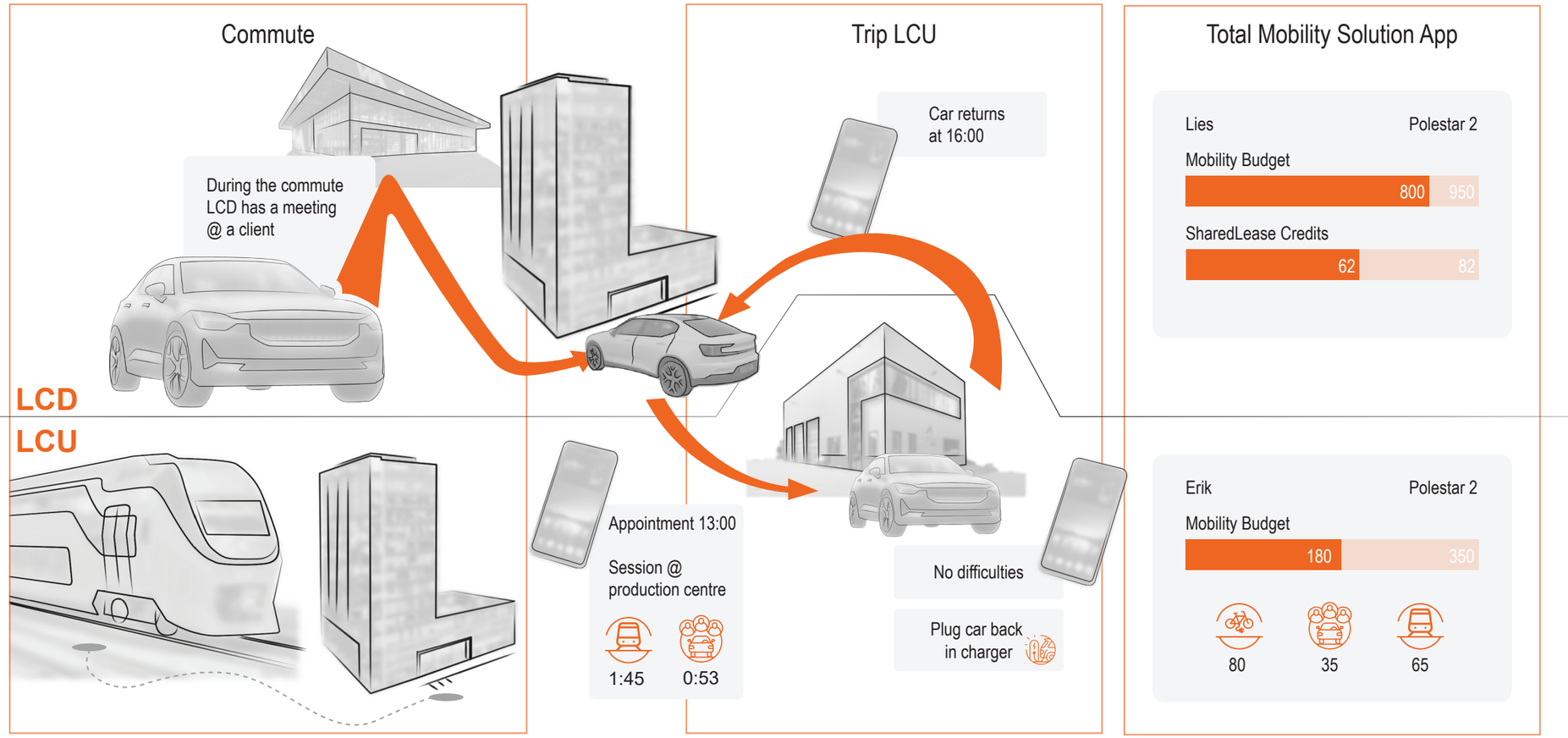


Figure 16: Story board on usage SharedLease

10. Business Model Canvas SharedLease

Method

After gathering input from multiple sources on the different angles of the concept, in this chapter, SharedLease takes shape. Finally, the different pieces come together to form the proposition to use a lease car as a shared modality. To structure the conceptualisation phase, the Business Model Canvas (BMC) (Osterwalder et al., 2010) (Figure 17) was used to ensure that all the different elements of the concept are covert.

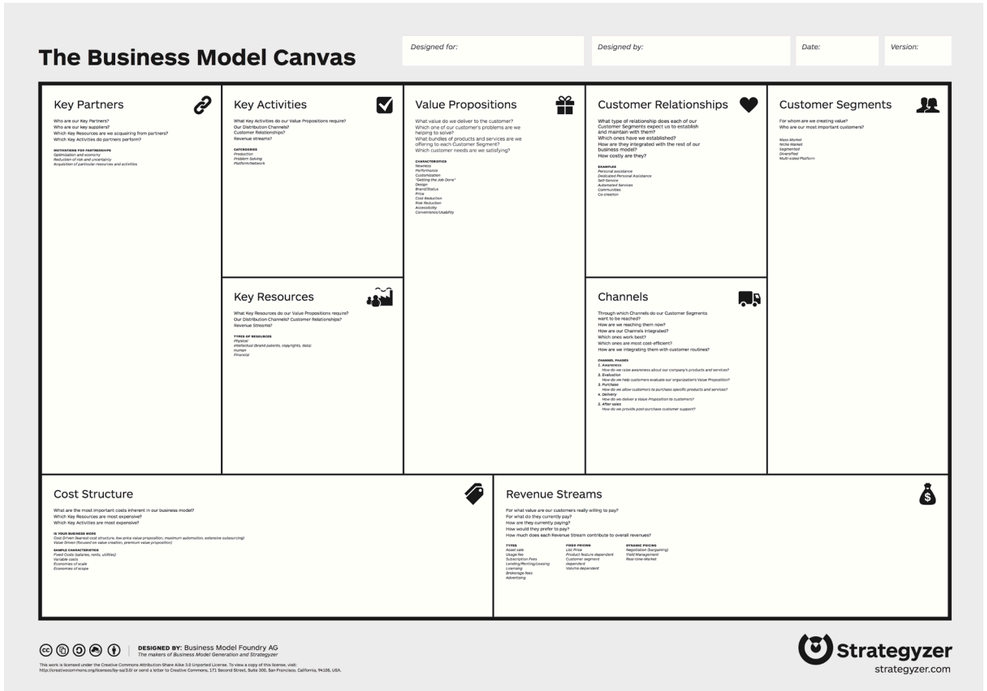


Figure 17: Template Business Model Canvas

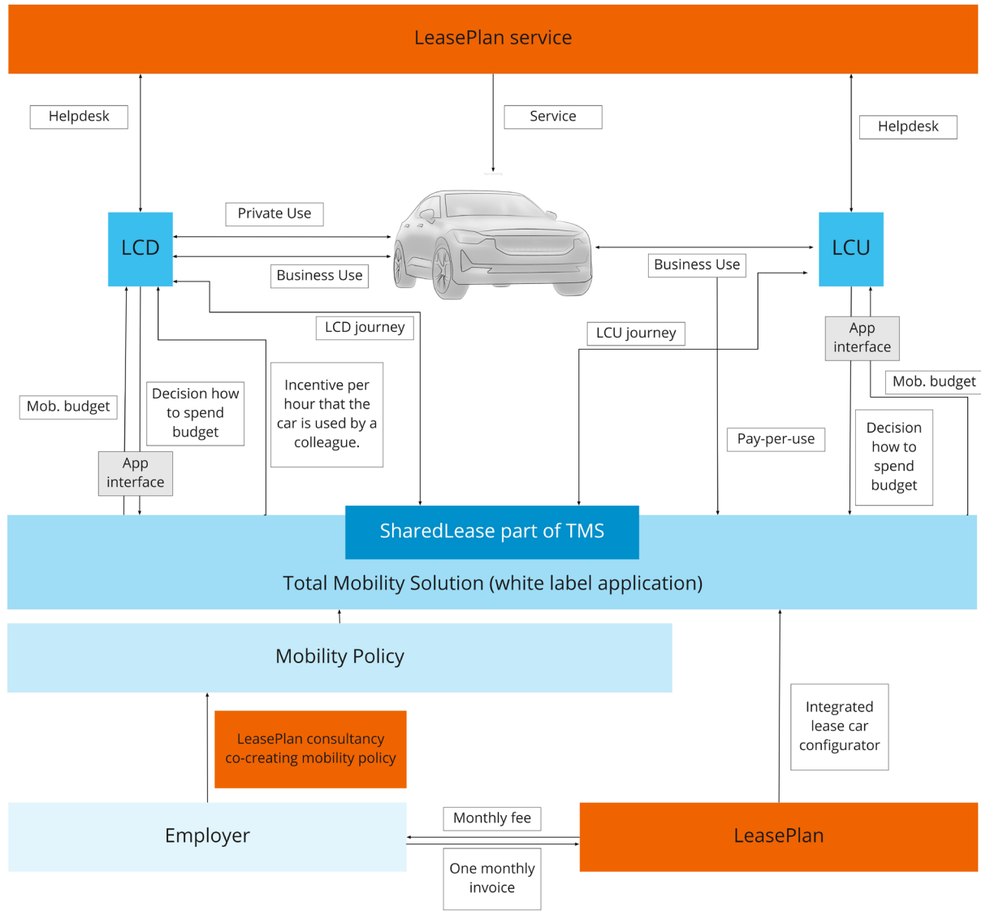


Figure 18: Stakeholders within the SharedLease ecosystem

Key Partners

LeasePlan

LP is one of the main stakeholders in this ecosystem. In chapter 3.1, the information is given about their current situation. Within the BMC, the focus is on the internal stakeholders and departments involved with this concept.

Business Development

BD is the department where new ideas and propositions take shape and one of them is coordinating the TMS proposition. The BD was formed two years ago and since then, they carried out different propositions. The BD team is involved from creating the proposition until the validation after a successful pilot. Afterwards, the BD development team hands the responsibility over to the suiting department within LP.

Flexible Fleet

There is much expertise in car rental and short-term leasing in this department. Flexible Fleet needs to be onboard during the concept development to make the pilot and further advancements a success.

Employer

The employer starts with defining the mobility policy within the company. Companies that have a focus on sustainability and flexibility within their mobility policy are interested in SharedLease.

Employee

The employees are the end-user of the concept. Therefore, we can divide them into two groups: the lease car drivers (LCD) and lease car users (LCU). In chapter 9.5, an in-depth analysis of these groups will be presented.

Platform provider (Mobility card provider)

The concept will function in the environment of the total mobility solution. Given the current developments, LP will have a partner that will provide the technology and platform behind this solution as a white label product. Within the platform, the employee can spend their mobility budget on lease car and e-bikes and the different modalities included in the mobility card (e.g. public transport and shared mobility services). The concept impacts the mobility budget of both the LCD and LCU when sharing the lease car, which means that the platform needs to support these functionalities. Therefore, this concept will need to be included in the roadmap with the eventual partner.

Revenue Streams

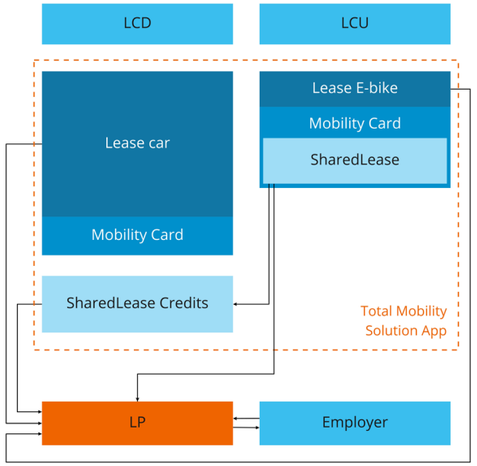


Figure 19: Structure of mobility budget LCD & LCU

Within the app of the TMS the employees get a mobility budget (Figure 19). They chose the modalities that suits their needs and budget. The budget that is not spent can be used via the mobility card. A division is made between the LCD and LCU. The LCD gets an extra element within his mobility budget where he can accumulate SharedLease credits.

When the LCU lends a SharedLease car for a business trip, he pays per hour for the car. This comes from his mobility card budget. Part of the fee flows to the SharedLease credit wallet of the LCD. With this accumulated credit, the LCD can get a vacation car, accessories for his lease car or an e-bike. This means that the credits are spent in the LP environment.

The other part of the hourly fee flows to LP. This part will cover the costs of the extra kilometres driven in the lease car, the cost of the monthly MOQO hardware fee and the discount on the leasing fee of the employer. The discount grows proportionate with the number of shared hours driven in the lease car.

When using this payment structure, the LCD and employer receive an incentive to promote the use of the system, which makes the availability of SharedLease higher for the LCU. For LP, this structure provides the possibility to capitalise on the part of the mobility budget of the LCU, where traditionally, this was not the case. The budget of the LCU goes partly via the LCD and with the other part directly to LP.

For all parties within the system, SharedLease is financially more efficient if the number of SharedLease cars is optimised to the mobility needs of the LCU's. Optimising the number of SharedLease cars reduces the monthly costs and increases the number of shared hours driven in the cars.

Cost Structure

The cost structure for SharedLease remains broadly the same compared to traditional leasing of cars. The calculation for the depreciation of a car is an important factor. Research should be done when transforming the car to a shared modality as it will influence the residual value of the car. SharedLease uses the same Maintenance management services and Insurance and damage handling as the traditional lease car. So that part of the cost structure stays the same.

The difference is in preparing a lease car to become a SharedLease car. The required costs can be split into two categories. One-off costs and monthly costs.

One-off

The Inverse Cloudboxx is the hardware that makes the car suited as a shared modality. The installation of the hardware needs to be done once before the car is deployed as a SharedLease car (Table 5). The hardware package is leased from MOQO, so there is also a monthly fee.

Table 5:One-off cost installation hardware

Monthly costs

For the pilot, both the hard- and software of MOQO is used like in the LP Tripp proposition. During the pilot, the same monthly fee can be used. When the SharedLease solution is integrated into the TMS app, only the hardware from MOQO is needed. Therefore, it is expected that the monthly MOQO fee will decrease.

The kilometres that the LCU drives in a SharedLease car do not fall under the kilometres within the leasing contract of the LCD. So these are not accounted for. LP will cover these costs of the extra kilometres with the revenue from the driven hours of the LCU. The exact costs per km differ for each car. However, the extra costs per km stay in the range of 4 to 6 cents per extra km.

Example

Polestar 2 | €53.900 | 4 years | 25.000 km per year
This contract has a monthly fee of € 670,36. If the car's mileage increases to 30.000 km because of the SharedLease km's, the monthly costs go up to €686,41, which is an increase of €16,05. The 5.000 extra kilometres driven in a year, equals 4 cents per km. The used cost matrix can be found in Appendix E.

Key Activities

The strength of LP is in their core business; providing a car-as-a-service, unburdening the user with the ownership of a car. The different service packages available for the LCD are unchanged—keeping the efficient network that LP has built with their third-party service providers. For corporates, the products and services around fleet management stay the same. Meaning that SharedLease fits well within the strongly orientated CaaS strategy of LP.

The key difference is the activity of sharing the lease car between the LCD and LCU. Contact with the LCD is already established via different channels (e.g., the 'Mijn LeasePlan' app and helpdesk). The LCU is a new group of people who previously did not have a customer relationship with LP, which means that LP should invest in getting this new group on board and showing them their strength in building and maintaining this relationship. The activities around the interaction with SharedLease can be seen in different user journeys in Figure 20.

Value Proposition

Employer

*SharedLease helps companies to achieve their **sustainability** goals and to **reduce their mobility costs,** by increasing the **flexibility** and **add value** to the conventional lease cars.*

Added value & reducing mobility cost: The lease car will be used for the business kilometres that otherwise would be driven in private cars or third party shared cars. Combining these modalities into one vehicle reduces the costs and will provide the employer with a financial incentive to use SharedLease.

Needed flexibility: Employees are looking for new ways of providing suited mobility to the employees. Many see that shared cars provide the flexibility that they are looking for. SharedLease

Sustainability goals: Range anxiety is the most heard complaint when electrifying the fleet. SharedLease solves this anxiety by offering a vacation car when needed. This reduces the number of people that buy their fuel lease car when the contract is ending rather than switching to an EV.

LCD

*SharedLease provides the LCD the highly wanted **private mobility** within a corporate shared car ecosystem. The incentive counters the **range anxiety** that keeps employees from leasing an EV.*

Private mobility: The LCD is secured that the lease car can still be used for their personal mobility during the evenings and weekend. This would not be the case if the switch was made to pool or shared cars.

Range anxiety: The EV cannot full fill the mobility needs when going on a ski trip or summer holiday to the south. Receiving a vacation car as an incentive counters this main objection against EV.

LCU

*Shared lease gives the LCU the **flexibility** to use a car when needed without the hassle of leasing, owning or ride-hailing with a third party. The business kilometres that are difficult to do with PT can be done in a* **representative car**.

Flexibility: SharedLease is focussed on purely usage of the car for the LCU. Booking the car for the business trips that are difficult with PT. This gives the LCU more reason to commute with PT rather than a private (fuel) car.

Representative car: All the employees drive around in representative cars which increases that travel comfort of the employee and satisfies the employer.

Key Resources

Digital

LP has a constant strain on its ICT capacities and is conservative when it comes to in-house development of new digital applications. Therefore, initially, the make or buy decision is favoured to buying the digital infrastructure, giving the added fact that a pilot could start earlier and with fewer initial investments.

For the pilot, a version of the MOQO app is used. This application is also used in the Tripp pilot. Testing the MVP does not require full integration with the TMS. Instead, the focus is on a limited development effort from LP. This means that the development of new functionalities and application is outsourced.

After the pilot, the SharedLease proposition is going to be integrated into the TMS app. LP will co-develop the needed features with the partner that develop the white-label mobility platform. Thus, SharedLease can be seen as a new modality that is added to the TMS.

Human Resources

The existing sales, acquisition, procurement and marketing teams are still being used to set up SharedLease.

A new team within Flexible Fleet will be created around SharedLease. This is done after the pilot phase. During the pilot phase, the BD has a managing role, keeping an overview of the progress. The operational side of the pilot is done by the department ‘wagenparkcoordinatie’ (WPC). When the dedicated SharedLease team is formed, they oversee the day-to-day tasks.

Channels

Employers

The existing channels are used to contact the employers.

Employees

The app of the TMS is used as the primary channel towards the employees. Selecting a SharedLease vehicle, booking and keeping track of their mobility budget is done in the app. The channels via which the lease car is serviced and maintained stay the same.

The group of people that comes in contact for the first time with LP are the LCU’s. Before, they did not have a lease car, so there was no reason for any relationship with LP. This will change since they are going to use a LP service. Before and after the trip, the interaction will be done via the TMS app. During the trip, the current LP helpdesk will be used to answer urgent questions.

Customer Segments

Existing employers that lease their cars via LP and are looking for more flexibility. Those are the companies that already have asked for the possibilities around TMS. Companies find it challenging to achieve their sustainability goals of electrifying the fleet. The backlash resulting from range anxiety and not being able to use the car for summer and ski vacation is a reason for companies to delay their switch to only leasing EV’s. The addition of a holiday car within the leasing contract is €80 per month. A cost that most employers do not normally cover for their employees. Getting the vacation car as an incentive for changing their lease car makes the step towards acceptance of EV smaller.

The scalability of this concept is a strong attribute to the broadness of companies that fall into the customer segment. Both the scalability within a company and adding more companies is easily accomplished. A calculation tool needs to be developed to determine the needed amount of SharedLease cars within a company. Parameters that influence the calculation are office location, fleet size, percentage employee receiving a lease car and amount of business kilometres. The number of LCU and their frequency of making business trips is also a critical factor determining the amount of SharedLease cars needed within a company. Companies situated at a location where employees prefer to commute by bike or by public transport increase the number of potential LCU’s. The balance between the LCD and LCU can be regulated by the number of lease cars equipped with SharedLease functionalities.

Companies that have a higher percentage of employees with a lease car, meaning that the LCD/LCU ratio is high. Within these companies, the mobility policy can contain that only, e.g. the juniors can opt for a SharedLease car.

Customer Relationship

In the leasing market, the relationship is very important to maintain. The number of choices between different leasing companies gives the employer leverage to demand good support from LP. LP has become a trusted mobility partner with a strong relationship with its clients. This relationship goes beyond delivering and maintaining the fleet. Think about LP Consultancy that helps create and shape the mobility policies of the company. The account managers with only a few big clients are a good example of the effort LP puts into this customer relationship.

With traditional car lease LP has multiple customer relationships: the employer who pays the bills and the employee who is the user. Because of the different roles, it makes these people's needs and demands towards LP specific for their group. When implementing SharedLease, a new group of users is added to the system. The LCU will interact with the SharedLease ecosystem differently than the LCD. To identify the touchpoints of the LCD, the LCU and the employer, three different journeys (Figure 20) were made. The journey is split up into 12 different steps from informing, inquiring and using the system. With each step, the interaction with SharedLease is documented below.

						Use & Monitor						
	Consulting	Configure Order	Invite	Onboard	Select & Fulfill	Before trip	Start trip	During trip	After trip	Settle	Invoice	Support & Feedback
LCD			Receive personal invitation by email	Log in to personal TMS account Understand Options Agree to T&C	Select modality option(s) within budget Select lease car Select SL option Register for mobility cars	Park + plug in the car Put meetings in agenda + unavailable days Gets notification planning car	If wanted: get notification when the car is leaving	If needed request an update Gets notified when abnormalities occur	Get location of car Feedback on LCU Get overview of credits earned Loop back earned credits to select & fulfill			LP Help desk Quick problem solving via the TMS app
LCU			Receive personal invitation by email	Log in to personal TMS account Understand Options Agree to T&C	Select modality option(s) within budget Register for mobility cars	Plan meeting Plan trip in TMS app Reserve car in TMS app	Find the car (app) Open car (app) Quick damage check Get going	Obey rules Call help desk when problems occur Keep to the time frame	Plug in car Taking all belongings and waste Get overview budget usage and remaining budget			LP Help desk Quick problem solving via the TMS app
Employer	Co-create mobility policy: mobility budget & Rules Calculating ratio LCD and LCU	Configure mobility offer based on mobility policy (e.g. budget, car choices, EV, amount of SharedLease)	Share employers details for invite						Overview of budget usage and total cost overview of impact on missions Insights in travel behavior of employees	Receive salary statement based on budget usage and tax implications of lease	Pay for used modalities and services Get price reduction for shared km's in SharedLease car	LP Help desk TMS employer portal Account manager

Figure 20: Journey of LCD, LCU and employer

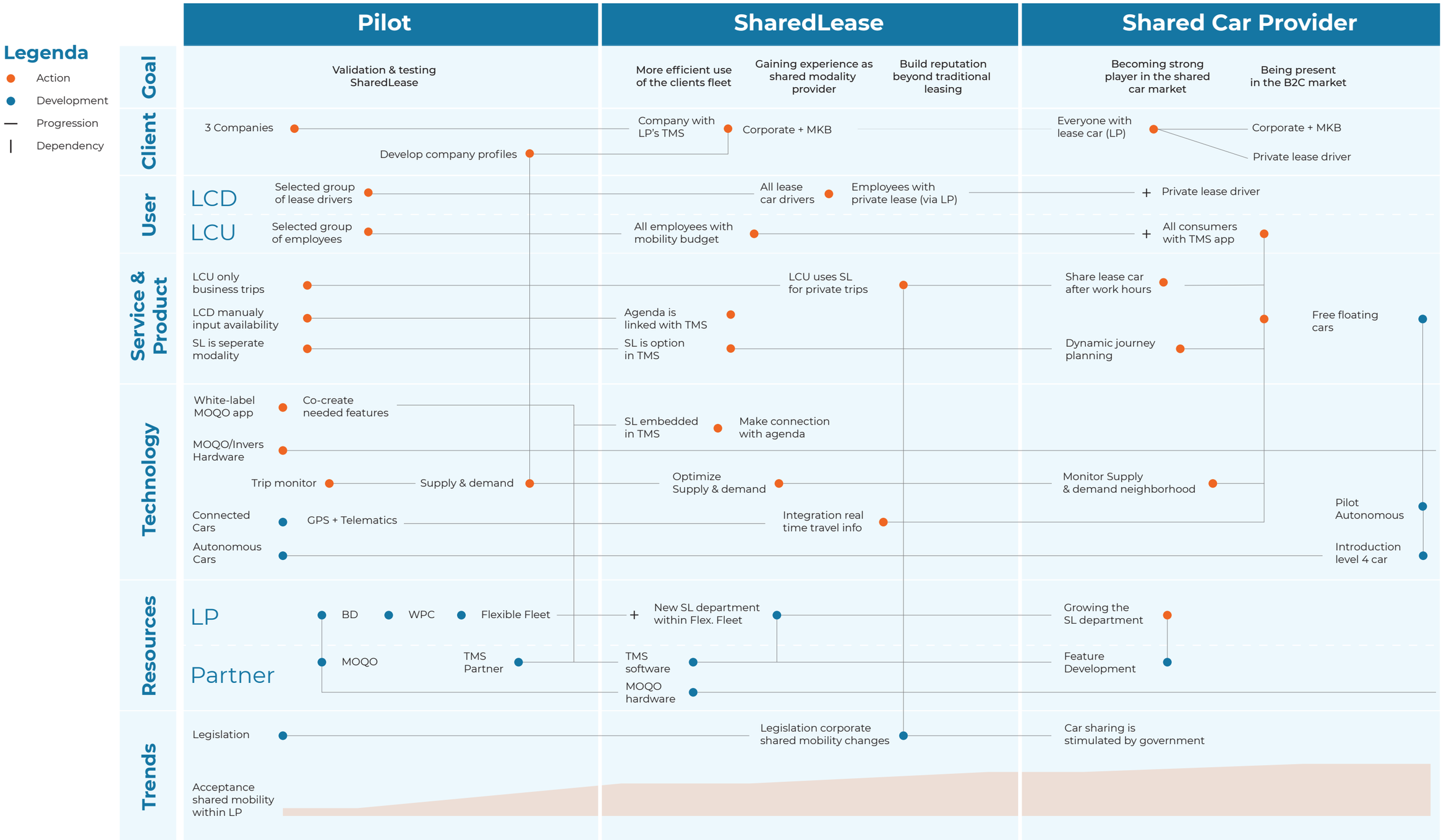


Figure 21: Roadmap with three horizons around SharedLease

11. Roadmap

The roadmap (Figure 21) shows the actions and developments needed towards LeasePlan becoming a shared car provider. This time line is split into three horizons: the pilot phase, implementation of SharedLease and LP becoming a shared car provider. Each horizon has its challenges to overcome before the developments towards the next horizon can start.

The Pilot

The pilot is all about testing the proposition with preferability with the three companies that have already shown interest in exploring shared mobility and fit the employer profile described in 9.7. In addition, this phase is about learning and testing the assumptions made during the design of the proposition.

During the pilot, the following assumptions are tested:

- SharedLease is profitable when an optimised LCD/ LCU rate is found.
- The lease cars have enough time slots where they are not used to facilitate the trips of LCU.
- The LCU makes enough use of the SharedLease cars
- Internally at LP the division of operations between the involved departments is found satisfactory.

The involved internal departments (chapter 10) will set aside FTE's to make the needed hours to set up and execute the pilot. With the experience gathered during the pilot, the new department within Flexible Fleet will be created. When the pilot is a success, the next phase for SharedLease should start. The pilot can be seen as a success when the assumptions are met. Whether the transition will be made from the pilot phase towards SharedLease is made by the MT of LPNL and LP Corporation. In this decision, the business case is the element that will predominate the outcome.

SharedLease

The concept of SharedLease is explained in detail in chapter 9. This concept of SharedLease can be launched when the pilot is successful within the prospective mobility landscape.

The step towards LP as a 'Shared car Provider' has to do with the perspective around the opportunities that shared mobility can bring within LP. To find support for the financial investments, time and effort that comes with implementing the next step, LP needs to be confident that shared mobility is an interesting market opportunity. Although, this switch of perspective takes time, SharedLease can function as a best practice to showcase what shared mobility can mean for LP.

As an external factor, the tax regulation around corporate shared vehicles need to be adapted by allowing private trips of the LCU to be driven in a SharedLease car.

Shared Car Provider

The core business of LP will remain providing lease cars to companies. Hoverer, the usage of the lease cars changes towards a peer-to-peer shared car solution. Giving the possibility for LP to enter the B2C shared mobility market with corporate lease cars.

Furthermore, the LCD can choose, when the car is not stationed at the office, to share it with a pre-selected group of people. That group can exist of neighbours, colleagues, friends or random people. The TMS app is used to facilitate the booking, unlocking and paying off the car. This means that people that are not connected with a company can use the TMS app and drive in the cars leased via LP. The group of LCD's that first existed of corporate lease car drivers and private lease drivers that work within a company that uses LP's TMS will grow to all the people that lease a car via LP. If the data shows that in a neighbourhood, the needs of the LCU's are not met with the number of lease cars, LP can easily place a free-floating shared car in that neighbourhood.

The evolution of this concept from pilot to LP as a shared mobility provider for the B2C market shows gradual change that uses the existing strengths of LP to become involved in the opportunities that shared mobility brings along.

12. Final Evaluation

To validate SharedLease, employees, employers and LP personnel shared their initial reactions. In this chapter the main insides of these different evaluation methods are presented.

Goal

- Testing assumptions
- Gathering feedback on the global idea behind SharedLease and on specific elements
- Adding needed last changes to align with the mobility needs and fit within the mobility policy.

Employer evaluation

Method

SharedLease was validated with separate interviews with three LP clients that were part of the Discover phase. The outcome of the develop and deliver phase was presented and discussed. Afterwards, the SharedLease was presented and a guided discussion was held to understand the comments and observations of the employers (all three interviewees were mobility managers). The questions to guide the discussion can be found in appendix G.

Results

The interviewees recognised the insights that came out of the discover phase when comparing them with the changing mobility needs within their company. The discussion was inline with the results showcased in chapter 4. The interviewees confirmed that shared mobility is gaining popularity in the corporate world to facilitate the business km's. All companies were looking into the different possibilities and were interested to know what the added benefits of SharedLease could bring to their mobility situation.

The shared car solution that fits perfectly with the needs of a company is difficult to find. This because the use cases around a shared car varies within a company and are different for each company. It will be an important role for LP consultancy to advice the employer which solution will work for their company.

In the elaboration of SharedLease the length of the lease contract is not addressed. The employers are looking for more flexibility in the lease contracts of the LCD.

> "Employees are looking for shorter solutions [compared to the four-year lease contract]. The concept solves the very short-term need of a car [car usage for half a day]. But what about using a car for example half a year?"

SharedLease provides in the need of the LCD that knows it wants a lease a car for a longer period (traditional a four-year contract) and with the mobility needs in short-term in the form of a shared car. However, can SharedLease be interesting for people that do not want to commit to a lease car for 4 years?

At the moment, shorter lease contracts start from a period of 12 months and are very expensive. LP is working on adding more flexibility during the development of the TMS. For SharedLease the TMS lease contracts could be taken over.

Another remark was on the amount of different car models that could become a SharedLease car. If it works with a few standard vehicles, it will simplify the process. For the pilot phase this could be a good option to minimize the logistic workload and increase the simplicity for the user.

Some practical remarks were made:

> "Tool cars are a lot on the road, the question is if it is interesting to make it a SharedLease car."

This is covered in chapter 9.7, companies with a fleet of benefit cars are more interesting than a corporate fleet with only tool cars. In general, the usage of the car during office hours is lower. This shows that SharedLease will be interesting for companies with a specific profile. Having a specific profile makes the pool of potential companies smaller. However, if the profile is well described it could also be a strong argument towards the companies that fall into target group. The profile makes it possible to target specific companies. This will help to select fitting companies to do the validation with during the pilot.

> "Can the car only be picked up by the LCU at the office? Some colleagues live in the neighbourhood so picking it up in the morning could be on option."

In the third horizon in the roadmap (chapter 11) this is on option. To reduce the complexity with the legal difference between commute and business kilometres this feature is not included into the initial SharedLease proposition.

LCD willingness to share their lease car

Method

The research has been done using an online survey. This survey was used to understand the participants' willingness to share their lease car. Surveys are relatively a time efficient and inexpensive way to gather data (Williams & Vogt, 2011). To collect the results, Enalyzer software was used. The setup of the survey and the asked questions can be found in appendix H.

The survey was sent to 1600 lease drivers. This number is higher than usual because of the time restriction. A population of 200 participants was seen as a healthy sample for this research. With past experiences of return rates within LP, a selection of 1600 participants was made.

Results

After four days, the intended 200 participants had completed the survey. Thus, the answers of 202 participants were used in the analysis. Because of the time constraint, the results are analysed in Microsoft Excel instead of SPSS.

Lease car usage

During the C-19 pandemic, 77% of the participants indicate that for at least three days, their lease car is not used for at least three consecutive hours. Before the pandemic, this was 69%. These percentages are lower when asked the same question if the car is not used for five consecutive hours—57% at this moment and 48% before the pandemic.

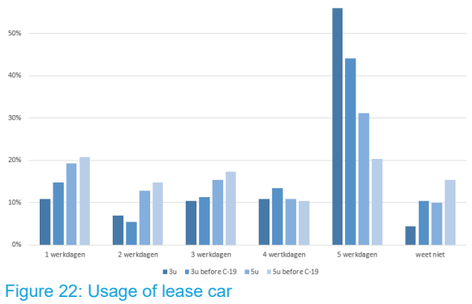


Figure 22: Usage of lease car

The main hypothesis that was tested in the survey was if the lease driver would share their car with colleagues.

Overall willingness to share

We can see in figure 23 that the willingness to share is slightly towards the opposing side. With 47% of the sample indicating that they would (probably) not share their car. 34% of people are positive towards sharing their car within the company. In the comments in the survey, 33 people commented that this was not an option because of their lease contract. The question was asked hypothetically but seeing the comments; this was not always clear. However, if the positive and maybes are combined, 53% of the population would consider the option of sharing their lease car.

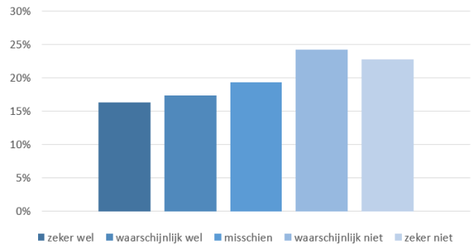


Figure 23: Willingness to share lease car total population

Difference willingness to share between tool and benefit car driver

The hypothesis that employees with a benefit car have a higher willingness to share than an employee with a tool car seems to hold up (Figure 24). With around 60% of the sample being employees with a tool car, the overall willingness to share (Figure 23) will be coloured by the uneven ratio of benefit and tool car drivers.

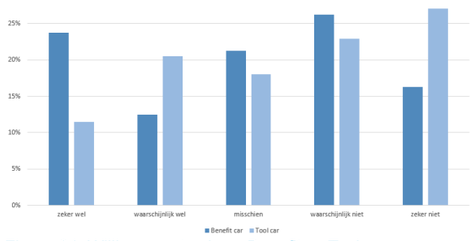


Figure 24: Willingness to share Benefit vs Tool car

Difference willingness to share between age groups

There is a trend that younger people have a higher willingness to share the lease car. It is questionable if the trend is significant (Figure 25). The population is not evenly spread over the different age groups. With 20% in the youngest and oldest age groups and 60% of the population in the age group from 40-59.

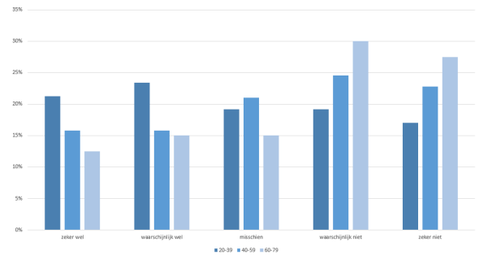


Figure 25: Difference willingness to share between age groups

Difference willingness to share between genders

The result of this plot (Figure 26) can only be seen as an indication. Females are only 10% (19 participants) of the population. So no decisions can be attached to these outcomes. The plot shows that males are stronger against sharing their lease cars. However, females are not significantly more likely to want to share their car. 36% of females selected that they would maybe share their car.

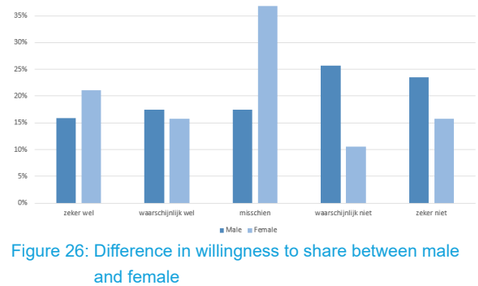


Figure 26: Difference in willingness to share between male and female

Willingness to share with someone outside own company

The willingness to share the lease car with someone outside their organisation is significantly lower than the willingness to share with colleagues. Thus, figure 27 is skewed to the left. An explanation could be that the lease car is seen as a service that the employee gets from the employer and it is not meant to be shared it with people outside the own organisation. The willingness to share was expected to be lower in this instance. However, such a drop was not foreseen. When LP moves from the second to the third horizon in the roadmap, the argumentation behind this lack of willingness to share must be further researched.

When discussing the results with the market intelligence manager, the overall willingness to share was suitable for this stage. Especially when there is more communication around SharedLease it will become cleared what SharedLease could mean for the employees, the willingness to share will go up.

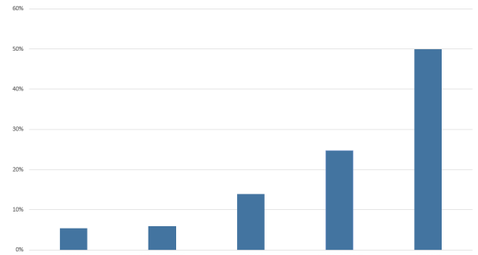


Figure 27: Willingness to share with someone outside own company

Evaluation of roadmap with LeasePlan

Method

The roadmap was discussed with the director of the business development team. It was a free-floating conversation while keeping in mind to cover all elements.

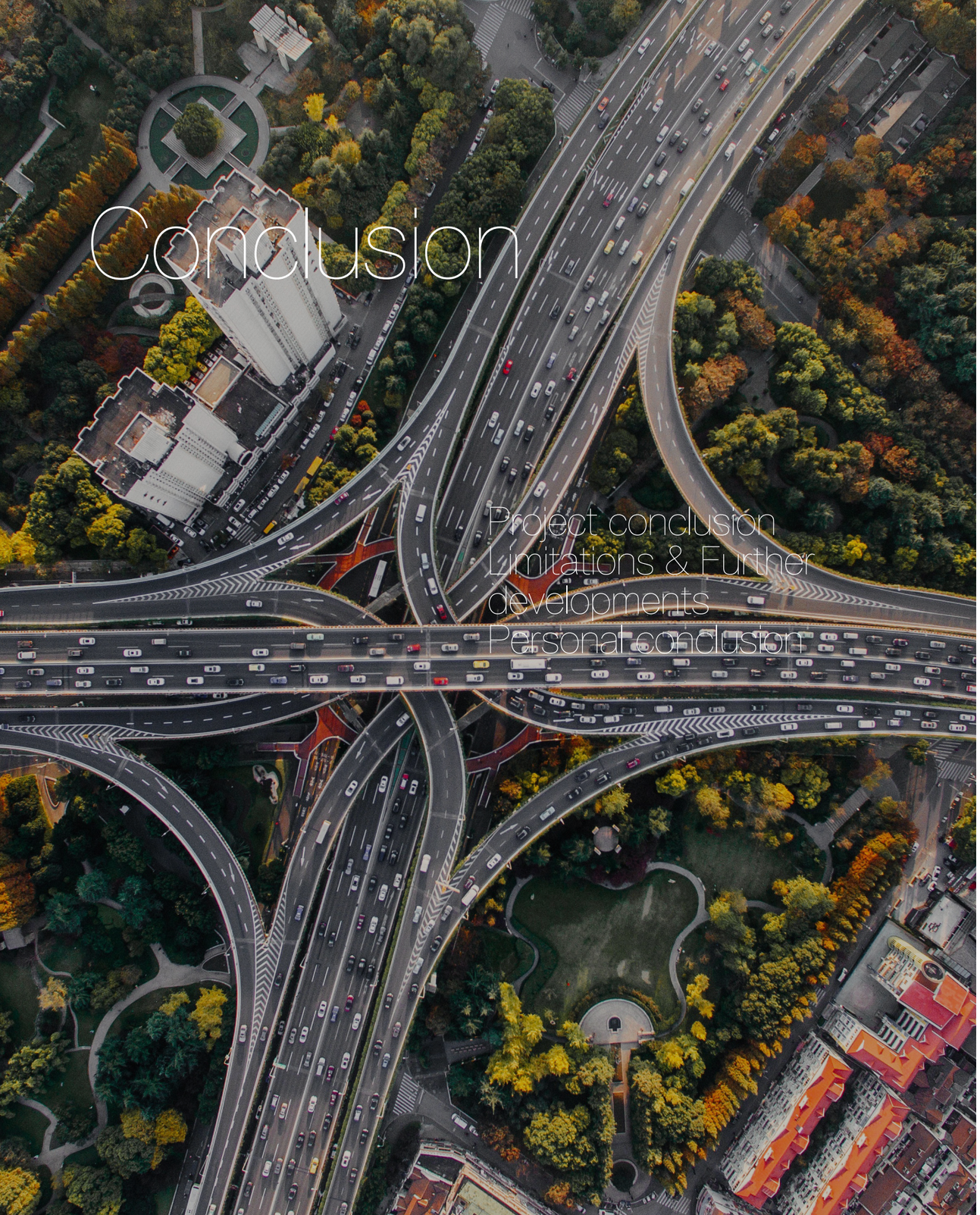
Result

The global feedback is that SharedLease fits in the overall strategy that is focussed on CaaS. For the coming years this will stay the focus of LeasePlan. For the start of the pilot phase SharedLease should be seen separate from the TMS. This will help speed up the validation process because there is no need to wait on results of the MTS pilot. To validate the riskiest assumptions this integration is not yet needed. During the pilot, the role of WPC can not be forgotten. For the success of the pilot they have an important role of coordination of the SharedLease fleet within the pilot companies. Internally it should be clear what their tasks are compared to the BD team.

There are no standard measures that need to be achieved to move out of the pilot phase. The main indicator of a successful pilot is the validation of the business case. The MT needs to be convinced that the business case is strong enough that SharedLease will become profitable in the long run.

Including private lease drivers in the SharedLease phase makes it more complex. The contract of the private lease driver does not include an employer, making it a taxation challenge including them in the company's TMS and giving the incentive. However, since they are already a LP customer, this should be fixable.

The biggest challenge is in the third horizon when LP will become a B2C company offering shared cars. In this phase everyone with a private lease car via LP can share their car with anyone they grant access to. Moving from the corporate into the private mobility sector is a big step. Both in regulation and legislation as well in the mindset and strategic choices of LP. However, this horizon should be seen as a future vision on what shared cars could bring LP. The opportunities in the vision are more important than the limitations and challenges in brings along. In the coming years, the regulation around corporate shared will be updated to facilitate a more modern view in this sector.



Project Conclusion

LeasePlan is the largest leasing and fleet manager company in the world. From the worldwide fleet of 1.9 million vehicles 73% of these vehicles is part of the corporate segment. During interviews with employers and employees it was found that flexibility, sustainability, uniformity and costs were the most important reasons for changes in their mobility policy. This was backed up by recent news articles that put the lease car under pressure. The situation around C-19 made it an interesting period to analyse the mobility needs. The first shock is gone and companies are looking ahead. Creating an updated version of the mobility policy for the ‘new normal’.

Changing mobility policies will not have an immediate effect on the numbers of lease cars . However, corporate mobility is evolving and LP should make the needed changes to stay ahead of the competition. In this graduation project the developments in this sector are described and how LP can utilise these developments to meet the changing mobility needs of the employer and employee.

During the interviews, the trend of using shared modalities for business kilometres was presented to multiple companies. Today the percentage of kilometres that are driven in shared modalities are limited. Companies are still figuring out how to provide these new shared modalities to their employees. As seen in the trend research of shared mobility, specific solutions are needed for specific scenarios. This graduation project was executed in a very interesting time frame. All the companies were, partially due to Covid 19, updating their mobility policy and looking for interesting new modalities for their business travel.

SharedLease will be the way for LP to use its current strength of having an extensive corporate fleet at a big number of companies to venture out towards providing shared corporate mobility. SharedLease is inline with their current strategy that is focussed on CaaS. The lease car will still be the main modality in this new ecosystem; however, the frequency and the users will change. This gives LP the opportunity to both stay within the current strategy and to meet the mobility needs of the employer and employee.

The new group of users, the LCU, gives LP the opportunity to capitalise on the mobility budget that currently is not spend on LP products. In return LP gives the required flexibility to the employee who does not want to “own” a lease car. The lease car driver keeps the lease car for their private mobility needs and the employer can use the lease car, seen as an expensive modality, for more business travel within the company.

The evaluation with LP clients (the employers) showed that there is great interest in new forms of utilising the lease car and using shared cars for business travel. However, it also showed that SharedLease will be profitable for companies with a specific profile.

To conclude; SharedLease is an interesting way to transform the lease car towards a modality that adds more value to the employer and employees. LP attracts a different kind of user (the LCU) towards its CaaS strategy. It also helps to move LP towards other initiatives that involves shared mobility and eventually becoming more familiar with MaaS solutions.

Limitations and Further research

This project research was done around the developments of corporate mobility and the needs of employers of employees. This was done in cooperation with LeasePlan and the Seamless Personal Mobility Services Lab. With the assistance of this partnership, it was decided that the project scope will focus on corporations that are clients of LPNL. Giving that the insights were collected with companies that are active in the Netherlands, we should be careful to use the outcomes of this project in different markets. If LP wants to test SharedLease outside the Dutch corporate mobility market, further research is needed to validate the findings for these markets.

In the develop phase creative sessions were facilitated to gather input and an outsider view on the project. During the sampling of the participants there should have been more focus on creating a diverse group of people. The creative session with designers was only attended by male SPD and IPD students. To get more differentiating ideas for my proposal, a more varied demographics is preferred.

The sessions were hosted online, this had both advantages and disadvantages. This made attendance easy, even from outside the Netherlands. However, I felt compared to my past experiences of face-to-face brainstorms, that the online participants were less involved with the exercises. I missed the opportunity to talk 1-on-1 during the sessions. This was countered by well-prepared Miro boards. The internal sessions were done 1-on-1. This meant that participants could not build on each other's ideas. The reasoning for this approach is found in chapter 8.3. In this stage the main internal stakeholders were involved in the session. However, it is advised to further investigate and test SharedLease with the legal department and with PWC. They will give extra valuable information that is needed for this project to enter into the next stage (preparation for pilot).

When working on the business case, it was difficult to retrieve the correct data on the usage of shared modalities within corporations. Companies indicated that they are planning to use Amber for more shared business travel. This decision was still rather recent and with limited business travel in the past 1,5 years, realistic data on the predicted number of shared kilometres was not existing. This data is needed to evaluate the business case and to make a realistic estimation of the profitability of SharedLease against other shared car solutions. During the upcoming pilot phase of the TMS this data can be retrieved from the pilot customers. To launch SharedLease, a solid financial argumentation is needed.

In the final evaluation the interviewed companies were selected with the help of account managers. However, more research could be done into company profiles to determine which companies are suited for implementing SharedLease. The pilot companies should fit a certain profile. How this company profile is shaped and which parameters are most important to construct this profile needs to be researched.

The survey was postponed due a busy period within the LP market analysis team. This resulted in that the results arrived a few days before the report deadline. The insights from the initial analysis helped to evaluate SharedLease and showed promising results. However, LP could retrieve more insights from the data.


SONETT 3 – 1970


99 TURBO – 1977


900 – 1979


96 – 1980


9000 – 1985


900 AERO – 1986


900 CONVERTIBLE – 1987


900 CONVERTIBLE – 1990


9000 CD – 1990


900 – 1993

Personal Conclusion

The project matched well with my interest, making it enjoyable to work on. I had the opportunity to dive into the mobility sector, which I enjoyed. Getting a holistic overview of the situation was one of my personal development goals. I think that I am safe to say that I succeeded in collecting different points of view on the corporate mobility market. My digital time at LeasePlan was joyous. With daily stand-ups and weekly meetings on the content, my questions were answered quickly. The business development team was interesting to work within; the different backgrounds made it so that there was a lot of cross-pollination. I have learned a lot about proposition design, validation and project management. Working next to my graduation on the TMS proposition within the Deloitte project gave a good alternation in activities. The difference in the structure and implementation between the two projects was fascinating to witness.

Working at home was challenging, especially at the beginning of the project. In this phase, the information gathering was sometimes obstructed by not being able to ask direct questions to colleagues or fellow students. This changed when the faculty became accessible for students again. The change of scenery and being surrounded by more graduation students created a better atmosphere to concentrate on the project. I still think it is a pity that working in the LeasePlan office was out of the question; the small talk with colleagues at the coffee machine was sorely missed.

A challenge in this project was to find the right balance between working for LeasePlan and reporting the project in an academic way. In the end, the balance shifted towards reporting. Looking back, this shift could have been earlier and more in parallel. I could have been more focused on describing and presenting the SharedLease rather than working a bit too long on the content. I did not get the most out of my drawing and visualisation skills during this project.

I enjoyed the ideation phase. During the creative facilitation of the different creative sessions, I gathered valuable insides for the project and it was fun to get to know more people within LeasePlan. Hosting the sessions in combination with thinking the system through by myself gave a nice alternation of group and individual work.

The past 20 weeks have flown past. As with all exciting design projects, I could have worked for far longer to develop some elements even further. However, the strictness of a 20-week project made it that I planned my work better. The rigid deadlines helped with continuous scoping of what still needs to be done and what would become too much. This project was the closing act of my student time and I enjoyed it.

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Appendix

A. Graduation brief

DESIGN FOR our future

4791

TU Delft

IDE Master Graduation

Project team, Procedural checks and personal Project brief

This document contains the agreements made between student and supervisory team about the student's IDE Master Graduation Project. This document can also include the involvement of an external organisation, however, it does not cover any legal employment relationship that the student and the client (might) agree upon. Next to that, this document facilitates the required procedural checks. In this document:

- The student defines the team, what he/she is going to do/deliver and how that will come about.
- SSC E&SA (Shared Service Center, Education & Student Affairs) reports on the student's registration and study progress.
- IDE's Board of Examiners confirms if the student is allowed to start the Graduation Project.

USE ADOBE ACROBAT READER TO OPEN, EDIT AND SAVE THIS DOCUMENT

Download again and reopen in case you tried other software, such as Preview (Mac) or a webbrowser.

STUDENT DATA & MASTER PROGRAMME

Save this form according the format "IDE Master Graduation Project Brief_familyname_firstname_studentnumber_dd-mm-yyyy".
Complete all blue parts of the form and include the approved Project Brief in your Graduation Report as Appendix 1 !

family name: Rauwenhoff
initials: LWF given name: Lodewijk
student number: 4353226
street & no.:
zipcode & city:
country:
phone:
email:

Your master programme (only select the options that apply to you):
IDE master(s): ( ) IPD ( ) Dfl (X) SPD
2nd non-IDE master:
individual programme: - - (give date of approval)
honours programme: ( ) Honours Programme Master
specialisation / annotation: ( ) Medisign ( ) Tech. in Sustainable Design ( ) Entrepeneurship

SUPERVISORY TEAM **

Fill in the required data for the supervisory team members. Please check the instructions on the right !

** chair: Suzanne Hiemstra-van Mastrigt dept. / section: SDE-MD
** mentor: Sylvia Mooij dept. / section: DOS-MCR
2nd mentor: Viola Kieffer
organisation: LeasePlan Nederland
city: Almere country: The Netherlands

Chair should request the IDE Board of Examiners for approval of a non-IDE mentor, including a motivation letter and c.v..

Second mentor only applies in case the assignment is hosted by an external organisation.

comments (optional): This graduationproject is in collaboration with the Delft Design Lab Seamless Personal Mobility Lab.

Ensure a heterogeneous team. In case you wish to include two team members from the same section, please explain why.

Procedural Checks - IDE Master Graduation

TU Delft

APPROVAL PROJECT BRIEF
To be filled in by the chair of the supervisory team.

chair Suzanne Hiemstra-van Mastrigt date 05 - 03 - 2021 signature

CHECK STUDY PROGRESS
To be filled in by the SSC E&SA (Shared Service Center, Education & Student Affairs), after approval of the project brief by the Chair.
The study progress will be checked for a 2nd time just before the green light meeting.

Master electives no. of EC accumulated in total: 47 EC
Of which, taking the conditional requirements into account, can be part of the exam programme 30 EC
List of electives obtained before the third semester without approval of the BoE

(X) YES all 1st year master courses passed
( ) NO missing 1st year master courses are:

name C. van der Bunt date 08 - 03 - 2021 signature CB

FORMAL APPROVAL GRADUATION PROJECT
To be filled in by the Board of Examiners of IDE TU Delft. Please check the supervisory team and study the parts of the brief marked **.
Next, please assess, (dis)approve and sign this Project Brief, by using the criteria below.

- Does the project fit within the (MSc)-programme of the student (taking into account, if described, the activities done next to the obligatory MSc specific courses)?
- Is the level of the project challenging enough for a MSc IDE graduating student?
- Is the project expected to be doable within 100 working days/20 weeks ?
- Does the composition of the supervisory team comply with the regulations and fit the assignment ?

Content: (V) APPROVED ( ) NOT APPROVED
Procedure: (V) APPROVED ( ) NOT APPROVED

comments

name Monique von Morgen date 16/3/2021 signature MvM

Personal Project Brief - IDE Master Graduation

TU Delft

Designing a client-centred (corporate) mobility solution for LeasePlan project title

Please state the title of your graduation project (above) and the start date and end date (below). Keep the title compact and simple.
Do not use abbreviations. The remainder of this document allows you to define and clarify your graduation project.

start date 19 - 02 - 2021 26 - 07 - 2021 end date

INTRODUCTION **
Please describe, the context of your project, and address the main stakeholders (interests) within this context in a concise yet complete manner. Who are involved, what do they value and how do they currently operate within the given context? What are the main opportunities and limitations you are currently aware of (cultural- and social norms, resources (time, money,...), technology, ...).

Traditionally LeasePlan leases cars to companies and individuals (private lease). Their fleet exists of around 1,7 million cars, driving around in more than 30 countries. From January 2020, they expanded the LeasePlan fleet with e-bikes.

The demand for a more flexible mobility solution that companies can provide for their employees is growing. Due to the COVID-19 situation, companies are contemplating how and where work will be carried out after the pandemic. It is believed that the trend of working from home will continue in a hybrid form once the lockdown measures are withdrawn [1]. An essential part of this challenge is mobility. A critical need for employers will be a degree of flexibility where employees work and commute. Besides, this is an ideal opportunity for LeasePlan's clients to become more sustainable as an organisation. The new business proposition mobility fits well with the concept of mobility as a service (MaaS). MaaS strengthens the idea that personal no longer have the need to own their modes of transport and transition to providing multiple types of transportation through a digital channel as a service. MaaS is focused on a pay-per-use business model where the user is flexible in the form of transport they requiring at that moment.

While LeasePlan is well acquainted with the concept of the car as a service, which is their core business as a leasing company, the concept of MaaS is not part of LeasePlan's main business proposal today (Figure 1). In recent years, partly because of the creation of the Business Development team, MaaS got more attention within LeasePlan. Among other things, this resulted in a collaboration with Radiuz. They provide companies with a platform to manage different mobility solutions for their employees, including public transport, taxies, shared cars and fueling/charging. These services combined provide their clients with a total mobility solution (Figure 2).

1. Lund, S., Madgavkar, A., Manyika, J., & Smit, S. (2020). What's next for remote work: An analysis of 2,000 tasks, 800 jobs, and nine countries.

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introduction (continued): space for images

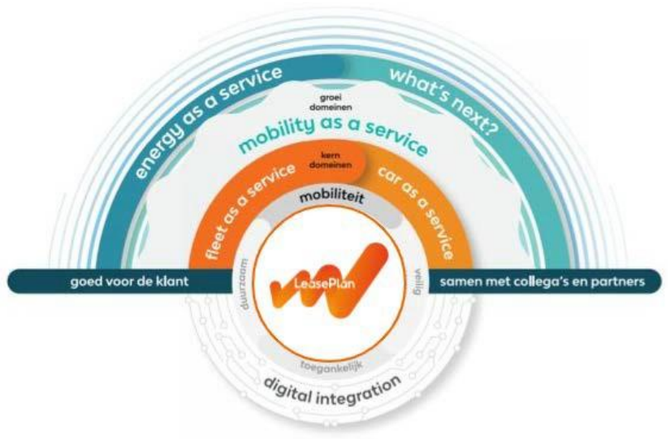


image / figure 1: Visualization of LeasePlan Source: LeasePlan Media

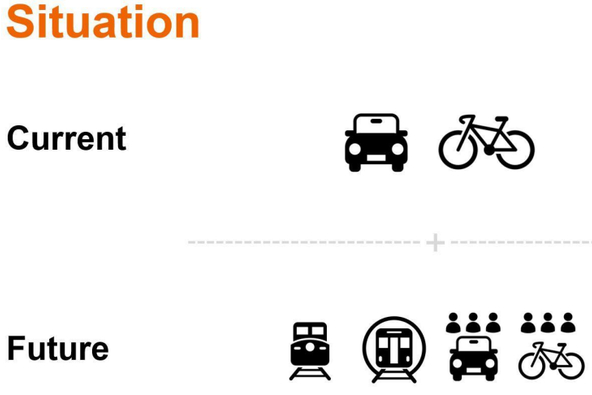


image / figure 2: New forms of transportation needs to be added to the current business proposal

PROBLEM DEFINITION **

Limit and define the scope and solution space of your project to one that is manageable within one Master Graduation Project of 30 EC (= 20 full time weeks or 100 working days) and clearly indicate what issue(s) should be addressed in this project.

LeasePlan has noticed that the demand for corporate mobility is changing. Their clients demand a more inclusive solution that provides more flexibility in their corporate mobility. At this moment, LeasePlan cannot fulfil this demand by providing a lease car and bike. This inclusive mobility solution can include e-bikes and a mobility pass that grants access to public transport and different forms of shared mobility. Providing new modes of transportation to clients comes with new challenges.

Adding MaaS solutions to the current portfolio results in unanswered questions around the new business proposition. How can LeasePlan reshape their business to facilitate these changes? What will be their role in this new ecosystem?

The way to shape the new environment around this more inclusive mobility solution is around the user's requirements. In this case, that will be the clients (employers) and their employees (the end-user). The customer profiles become more complicated than before when they only could choose between leasing cars and e-bikes. When creating a business proposition that will satisfy these parties in a competitive market, their reasoning is critical. What is the reason they find the present proposition ill suiting? What do they expect from a mobility solution?

ASSIGNMENT **

State in 2 or 3 sentences what you are going to research, design, create and / or generate, that will solve (part of) the issue(s) pointed out in "problem definition". Then illustrate this assignment by indicating what kind of solution you expect and / or aim to deliver, for instance: a product, a product-service combination, a strategy illustrated through product or product-service combination ideas, ... In case of a Specialisation and/or Annotation, make sure the assignment reflects this/these.

A new client-centred business proposal around a total mobility solution will be researched and designed to fit LeasePlan during this project. The recommendations will be aggregated and presented in a roadmap.

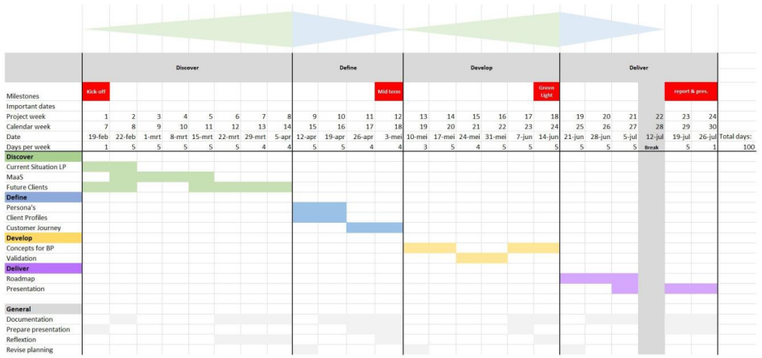
This project aims to include the different LeasePlan clients' needs in the new business proposition around a total mobility solution. The focus will be on LeasePlan's corporate clients, leaving private lease outside this project's scope. The needs of future customers, the different new mobility possibilities and LeasePlan's current situation will be mapped out. LeasePlan has the connection to different clients and the mobility lab has the expertise in the new developments within the MaaS sector. Using these two organisations' knowledge will give a complete view that is needed to perform the analysis. LeasePlan has identified possible launching customers. If so required, other customers can be involved in the research as well. A broad overview of LeasePlan's corporate products and ecosystem will be made during the analyses of the current situation.

The findings will be presented in the form of different persona's, company profiles and customer journeys. The next step is to use these elements to contribute to a valuable business proposition that satisfies LeasePlan and its customers. The different concepts will be presented in a strategic roadmap showing the time pacing of the different elements.

PLANNING AND APPROACH **

Include a Gantt Chart (replace the example below - more examples can be found in Manual 2) that shows the different phases of your project, deliverables you have in mind, meetings, and how you plan to spend your time. Please note that all activities should fit within the given net time of 30 EC = 20 full time weeks or 100 working days, and your planning should include a kick-off meeting, mid-term meeting, green light meeting and graduation ceremony. Illustrate your Gantt Chart by, for instance, explaining your approach, and please indicate periods of part-time activities and/or periods of not spending time on your graduation project, if any, for instance because of holidays or parallel activities.

start date 19 - 2 - 2021 26 - 7 - 2021 end date



The project is based on the Double Diamond Design Process (British Design Council, 2005) [1]. In this process, diverging alternates with converging. In the different phases, there is an emphasis on user centeredness, visualisation and co-creation. During the Discover phase, the customer needs will be mapped out. Besides the customers needs, the current situation, desires, and capabilities of LeasePlan should be research to achieve a representative view of the environment where the business proposal needs to function in. This research will be performed using desktop research, literature research and qualitative interviews with employers and their employees, stakeholders and experts. During Define, the gathered data will be analysed. The different customer profiles, persona ' s and customer journeys are made. These outputs give the design directions the project needs to start with the Develop phase. These results and design directions will be presented in the mid-term presentation.

During the Develop phase, several concepts will be created that enhance the customer ' s experience when using the complete mobility solution. These concepts can include product, service, business or process solutions. A session is organised with LeasePlan employees, stakeholders and clients to enhance the concepts and to validate them. In week 16, there is a green light meeting where the project ' s sufficiency will be discussed. In the Deliver phase, the concepts will be bundled and displayed in a roadmap. There will be a close collaboration with the business development team of LeasePlan and the DDL lab during the project. month, there is a knowledge sharing session with the partners of the lab.

References:

1. British Design Council (2005). Double Diamond Design Process.

MOTIVATION AND PERSONAL AMBITIONS

Explain why you set up this project, what competences you want to prove and learn. For example: acquired competences from your MSc programme, the elective semester, extra-curricular activities (etc.) and point out the competences you have yet developed. Optionally, describe which personal learning ambitions you explicitly want to address in this project, on top of the learning objectives of the Graduation Project, such as: in depth knowledge a on specific subject, broadening your competences or experimenting with a specific tool and/or methodology, ... Stick to no more than five ambitions.

The automotive and mobility sectors have always been a fascination and an interest of mine, following the developments around new cars, the transition to electric and even hydrogen-powered vehicles. Combine this with the trends of digitisation and IoT, gives that it will make an exciting environment for this graduation project.

I'm looking forward to dive into the always-changing world of mobility. Before Corona, we could already see that corporate mobility was changing. This change is accelerated by the new way of working during the pandemic, which means that hopefully there is a lot of traction for this project and all parties will see the need to contribute to it.

Competences I want to learn during this project:

1. Filtering information: what is important
2. Getting a holistic overview
3. Maximising my productivity in a 20-week project

1. I tend to lose myself in the analysis phase of a project. I dive too deep into the subject. The reasons are that I find the subject too interesting and lose track of the scope of the project. To counter this problem, I will focus on keeping myself to the global planning, especially in the first stages of the project. As a tool, I want to use a logbook of my daily activities, giving me better insight if I'm still on track and within the scope of the project. The daily stand-ups with the business development teams of LeasePlan will help as well.

2. I see myself as someone that looks at a problem on a macro level. If I can combine the different views of the employers, employees, LeasePlan, and other stakeholders, this will significantly influence the project's result. Further developing this skill will be an advantage in future strategy projects.

3. It goes hand in hand with point 1. At the beginning of every stage, I want to set goals for deliverables daily.

FINAL COMMENTS

In case your project brief needs final comments, please add any information you think is relevant.

Colophon

Student
Lodewijk Rauwenhoff did his Bachelor of Science in Industrial Design Engineering at the Delft University of Technology. This report is his graduation project for the Strategic Product Design master degree.

Academic Supervisors
Suzanne Hiemstra-van Mastrigt studied Industral Design Engineering (BSc and MSc) at Delft University of Technology, with a specialisation in automotive design. She has performed her PhD research project at TU Delft, faculty of Industrial Design Engineering, on the topic of ‘Comfortable passenger seats’. Curently she is the director of the Seamless Personal Mobility Lab.

Sylvia Mooij received her Master’s degree in Industrial Design Engineering at Delft University of Technology. She has perferomed her PhD research project at TU Delft, faculty of Industrial Design Engineering, on the topic of ‘Product Communication and Information’ . Currently she is the coordinator of the bachelor program of IDE.

Project
This project received project funding for Public-Private Partnerships for Research and Development (PPP allowance) from the Dutch Ministry of Economic Affairs and Climate Policy via CLICKNL.

https://delftdesignlabs.org/seamless-personal-mobility/

Faculty of Industrial Design Engineering
Landbergstraat 15
2628 CE Delft
The Netherlands

Designing an ecosystem to transform the lease car to a shared modality.

Graduation report, July 2021

Seamless Personal Mobility Lab

Lodewijk Rauwenhoff

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Delft Design Labs