# A consumer perspective on shared mobility concepts: the case of GoUrban Vienna

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# Affidavit

I hereby affirm that this Bachelor's Thesis represents my own written work and that I have used no sources and aids other than those indicated. All passages quoted from publications or paraphrased from these sources are properly cited and attributed.

The thesis was not submitted in the same or in a substantially similar version, not even partially, to another examination board and was not published elsewhere.

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# Abstract

The aim of this study is to determine which major factors attract customers to a Green Shared Mobility concept, specifically an e-scooter sharing concept. Building on a review of existing literature, challenges and recent developments in sustainability are discussed, followed by a case study of goUrban, a Viennese-based start-up, to determine which audiences should be targeted in expanding the customer base of e-scooter sharing. With a sample of 57, a survey has been conducted in order to analyze the demand factors for e-scooter sharing.

The study's findings are the following: there are no correlations between specific demographics nor for sustainability mindsets regarding the demand for the e-scooter sharing concepts, however this could imply that at least in urban areas, there is a broad potential through all demographics.

The study recommends that: companies should focus on addressing grievance issues such as lack of hygiene wherever they exist and try to fix aspects of their services that have a negative impact on sustainability such as vehicle production. If this results in an increase in prices, increasing per minute fares is more viable than increasing monthly or other large-scale fares.

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# List of Abbreviations

CC      Collaborative Consumption

CSR     Corporate Social Responsibility

C2C     Consumer to Consumer

ICT     Information Communication Technology

InnoZ   Innovation Centre for Mobility and Societal Change

P2P     Peer to Peer

SSCM    Sustainable Supply Chain Management

SMSP    Shared Mobility Service Provider

# 1 Introduction

## 1.1 Background Information

Despite the fact that some companies already proved that you can benefit from implementing a 100% green approach, there is still a lot of scepticism regarding this term (Makower & Pike, 2008).

In the past, protecting the environment and acting in a sustainable way was always associated with additional cost. Noah Walley and Bradley Whitehead wrote an article about this issue called "It is not easy to be Green" (1994). With the rise of social businesses and due to the alarming developments of the environment, however, being green can add an additional value aspect for companies (Clarke et al., 1994). The goal of changing business to a 100% green mode is to create a win-win situation, both from the economic and environmental point of view. Moreover, on a macro-economic level this approach makes sense as well because of the fact that a strong global economy is only successful and sustainable if it integrates economic, social, and environmental wellbeing (Adger, Arnell, & Tompkins, 2005).

The 2015 introduced United Nations Sustainable Development Goals support this idea, by demanding to integrate the economic, environmental and social components of sustainable development in a balanced way. Of course, one can also argue that the commitment to the environment is a normative obligation to honour the human rights and to guarantee the wellbeing of future generations. Therefore, being 100% green is particularly part of the long-term strategy and must necessarily be integrated in the mission as well as the vision of organizations. The definition of Green Marketing (or sustainable/environmental/organic Marketing) is the act of selling products and/or services based on their environmental benefits. This kind of products or services can be environmentally friendly themselves or made in an environmentally friendly way – or both (Belz & Peattie, 2009).

This paper will focus on a particular development of green economy: shared mobility. Shared mobility is part of a broader socio-economic trend that has been labelled the "Sharing Economy", in which "widespread usage of emerging information and communications technology (ICT), particularly smartphones, enables new forms of market interaction that can enable both new services and improved efficiency in asset

utilization. Rather than individual physical items being purchased, owned, controlled, maintained and used solely by their owner, in shared-mobility systems the physical assets (bicycles, apartments, automobiles, small aircraft, etc.) are accessed sequentially by multiple users on a pay-per-use basis" (Le Vine & Polak 2015, p. 407).

The most prominent examples for the developing sharing economy are car-sharing services such as Uber and Lyft, as well as the accommodation service AirBnb. While these examples enjoy widespread popularity and use, several other forms of sharing economy are currently emerging and it can be assumed that this trend will only increase in the near future. The popularity of the sharing economy has grown over the past few years and will most likely continue to grow. However, in some areas it has also sparked controversy and backlash. An example for this is the clash between "traditional" cab drivers and Uber drivers, which first occurred in the city of New York in 2015, where mayor Bill DeBlasio suggested imposing limitations on Uber's services, with the goal to protect the established cab business. However, after complaints from the residents, the plans were dropped (Meyer, 2015, p. 3). In several European countries, similar debates have occurred, with Italy, Denmark, Hungary, and Bulgaria partially or completely banning the service (Rhodes, 2017).

Therefore, the future of sharing economy services remains questionable, notwithstanding the increasing popularity, with questions such as: How can aspects of labour and customer's rights be reconciled in the light of the challenges the Sharing Economy poses? Is the Sharing Economy potentially a hype, a bubble waiting to burst? Or is it a viable solution to the socio-economic problems of the 21st century, including, for instance, the increasing environmental crisis? The latter aspect, the impact of Sharing Economy solutions on environmental sustainability, will be further analysed in this paper.

This thesis therefore shall explore and discuss an emerging example of green sharing economy in the form of a Viennese start-up, goUrban, which specializes in the sharing of e-scooters, thus making green mobility accessible via the sharing economy. With this, this paper aims to make a contribution to the ongoing debate on the benefits and dangers of the sharing economy, focusing on one of the most pressing matters that our society is currently facing.

E-scooters have been chosen as an example because the market exploded last year with numbers of scooters on the streets almost four times those of 2016. Thanks to present market satisfaction as well as new service provider announcements, a further increase in numbers is to be expected. These facts lead to the assumption that by the end of 2018, more than 10.000 scooters will be shared and used globally (Innovation Centre for Mobility and Societal Change GmbH, 2017).

## 1.2   Thesis objectives

In order to give viable business advice to the Viennese based e-scooter mobility start-up provider named goUrban, a survey has been conducted regarding price sensitivity of users combined with the aspect of sustainability.

A Nielsen Company study (2015) found out that especially Millennials with higher education are the kind of consumers who are willing to pay extra for green business solutions. This matches perfectly with goUrban's chosen target group in the e-scooter-sharing business. But also 51% of the asked Boomers in this specific survey stated that they are ready to pay a premium for this extra value. The key success factor is to constantly advertise the advantages of green products and services. Not just to inform customers about the environmental and social consequences of their choices, but also to educate them. Consumers must be aware that their behaviour can have a real impact and is important in order to protect the environment. It must become clear that ecological problems are not just the problem of businesses anymore, but that also consumers can actively play a key role.

Therefore, marketers have to give feedback to their audience in order for them to make a difference (La Roche, Bergeron, & Barbaro-Forelo, 2001). Furthermore, it is crucial to also target the consumers who are still undecided whether they are willing to pay a premium for a green product, since according to several studies (La Roche, Bergeron, & Barbaro-Forelo, 2001) they represent a rather large group.

Other studies found out that green businesses have a higher productivity because employees feel more satisfied with their work. Another very interesting point is that usually companies which decided to follow this green approach have very good prospects in terms of networking with other players in this segment. Especially that point is something fundamental for the future of goUrban (Kahle & Eda, 2013).

The second main argument of implementing a 100% green business approach is cost savings. Probably the arguments you find in the literature concerning this point is less relevant for goUrban - waste utilization and input sparing – but actually goUrban is saving a lot on the fact that they do not use fossil fuel-based scooters and that the maintenance of e-vehicles is less costly (Collins, 2008). One of the biggest challenges for these kind of marketing practices is, like very often in this segment, the information asymmetry. Questions such as, do customers really understand the additional value of the product? Need to be posed. What if customers don't? This could have two main consequences: the organization does not receive the additional revenues, or marketers use the confusion and falsely claim something is 100% green. This practice is called green washing – the form of spin in which green PR or green marketing is deceptively used to promote the perception that an organization's products, aims or policies are environmentally friendly (La Roche, Bergeron, & Barbaro-Forelo, 2001).

Based on the preceding discussion, this study is led by the following research questions: How big is the potential for green Sharing Economy solutions? What are possible target groups for marketing such solutions? And which requirements need to be met by start-ups in order for sustainable Sharing Economy solutions to gain traction?

More specifically this study focuses on GoUrban concept and questions: *How do residents of Vienna perceive the concept of GoUrban and are there significant differences between consumer groups, their focus on sustainability and intentions to use the concept?*

In doing so, the thesis aims to explore how starts-up in the framework of shared economy business models can attract the attention of customers. Furthermore, the thesis can recommend strategies how to attract and retain customers making use of such innovative and sustainable-oriented business models.

# 2 Shared mobility – development and status quo

The following chapter is going to describe the shared mobility concept as a whole in order to gain an overall understanding of the industry. The specification of particular e-scooters will be discussed later.

When we talk about ''shared mobility'' we understand the shared use of any vehicle, which enables users to benefit from this innovative transportation strategy in order to have short-term access to transportation modes when needed (U.S. Department of Transportation Federal Highway Administration Office of Operations, 2016). Included in the term shared mobility, mobility services such as car-sharing, bike-sharing and scooter-sharing are often the subject of matter. Alternative methods such as paratransit, shuttles as well as private transit services are also part of the concept, yet will not be discussed any further in this thesis. In the context of car-sharing, bike-sharing and scooter-sharing are typically unattended and concentrated in a network of locations where information and communication technology (ICT) and other technological innovations facilitate the transaction of vehicle or bicycle rental (U.S. Department of Transportation Federal Highway Administration Office of Operations, 2016).

In the beginning, car-sharing as a form of alternative mobility was primarily practiced in Switzerland and in Germany in ecologically sensitive districts (Loose, 2010). From that, these service providers operated professionally and in the course of several years developed the classic, station-based car-sharing we know today. The first car-sharing offer rose in Austria in the year 1997 (Loose, 2010).

This phenomenon evolved on the one hand, thanks to the internet and the simplified booking systems. On the other hand, due to the market entry of major automobile corporations, who enhanced the situation by offering so-called ''free-floating'' car-sharing offers. The user group consists of about 16 per cent of the population in Austria (Statistics Austria, 2011). In Germany, more than a million participants were registered at 150 car sharing providers at the based offers, which lead back to the fact that user numbers have increased considerably to 660,000 since the introduction of the first provider in the year 2012 (Bundesverband CarSharing e.V., 2015).

More than 1.6 million users who share more than 24,000 vehicles (Shaheen & Cohen, 2013) were counted in the USA in July 2014. For Europe, the service company 'Frost & Sullivan' estimates millions of users of classic or Free-floating car-sharing and 240,000 car-sharing vehicles in the year 2020 (Singh & Shankar, 2012). There are more and more offers also in the commercial area that put car-sharing vehicles for enterprises, administrations and organizations for professionally conditional drives at disposal (Corporate car-sharing). Frost and Sullivan counted about 2,000 car-sharing vehicles in enterprises in the year 2013 and expect an increase up to 100,000 vehicles in the year 2020 (Frost & Sullivan, 2015).

Thus, taking this into account one can see the strong demand for sharing in the area of mobility.

The next section will focus on Scooter-sharing in particular. The facts and figures shown will help us to understand to what extent this newly created industry has grown.

## 2.1 E-Scooter sharing a new trend

The report of the Innovation Centre for Mobility and Societal change (InnoZ) states that scooter-sharing started in San Francisco in 2012. In 2015, only eight cities around the world incorporated scooter-sharing providers, however this changed significantly in 2016 and 2017. As of last year, thirty cities have scooter-sharing businesses in their area. The report furthermore states that almost 80% of those are located here in Europe. The picture below (Figure 1) created by the ZHAW University of Zurich shows the amount of scooters, their providers and where they operate.
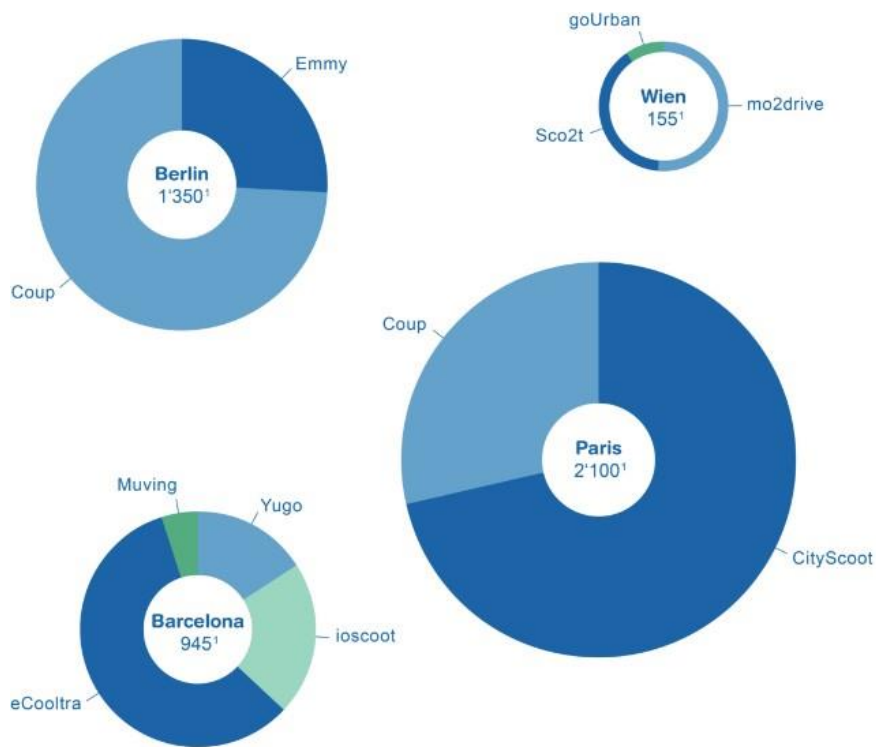
*Figure 1: Number of scooters and their providers in several big European cities (Aeberhard et al., 2018)*

Thus, based on this, we can conclude that, in terms of fleet sizes, Berlin and Paris are by far the largest international hubs. The aforementioned epicentres of scooter-sharing activity host 41% of the global scooter-sharing fleets. Each of these cities performs as home base to two operators (COUP, emmy, and Cityscoot) covering an area of between 90 km² (Paris) and 99 km² (Berlin) (Innovation Centre for Mobility and Societal Change GmbH, 2017).

However, not only in Europe we see a positive response to this trend. Many new programs have been announced in various other global cities. According to the InnoZ Report (2017) in Tokyo, with the stakeholder Yamaha, a big player will enter the business. Additionally, on the Japanese island Ishigaki, another major scooter manufacturer named Gogoro is also set to establish its business. However, a large portion of announced expansion plans are Europe-based, which in turn means that the strong dominance of the European market will most likely not change in the next few years (Innovation Centre for Mobility and Societal Change GmbH, 2017).

"2017 has also been the first year, in the brief 5-year scootersharing history, where schemes folded. The main reasons for these closures were (amongst other issues) a lack of municipal support, a lack of scaling capital or scooters which were too complex or heavy. City schemes closed in Frankfurt, Hamburg, Paris, Rome, Milan and Catania. In particular, the Italian case of *Enjoy* (Rome, Milan and Catania) demonstrates that while three-wheeled scooters might be safe, two-wheeled light-weight scooter is the customer's favourite choice. However, this does not mean that city-centric scootersharing is without future, as Hamburg, Milan and Paris readily prove. In these cities, either another provider started after the closure of an old system or other providers were present before and remain active" (Innovation Centre for Mobility and Societal Change GmbH, 2017).

After these shutdowns, there are still 38 active city schemes around the world operating. Two of those are station-based systems, which means that there is a determined number of rental locations where the respective scooter sharing business is operating, both of them outside of Europe. The remaining 36 schemes are all operating on the so called free floating system. This term is used when users are allowed to freely choose the drop-off site within a defined service area. Based on the analysis of the InnoZ report (2017) we can hence conclude that the free-floating scheme dominates the global market.

As stated earlier, the market exploded last year with numbers of scooters on the streets almost four times as high as in 2016. Thanks to present market satisfaction as well as new service provider announcements, a further rise in numbers is to be expected. These facts lead to the assumption that by the end of 2018, more than 10,000 scooters will be shared and used globally (Innovation Centre for Mobility and Societal Change GmbH, 2017). Figure 2 provides a visual understanding of the numbers of scooters per country.

**Market development: Scooters per country**

| Country | Scooters |
|---------|----------|
| Germany | 2,495 |
| France | 2,100 |
| Spain | 1,491 |
| USA | > 500 |
| Italy | 350 |
| Mexico | 300 |
| Austria | 215 |
| Taiwan | 200 |
| Portugal | 170 |
| Poland | 100 |
| Belgium | 65 |
| Lebanon | 15 |

**76 %** of scooters in Germany, France and Spain

Scootersharing has arrived in 12 countries. However, three out of four scooters remain distributed within these three main western European markets.

*Figure 2: Market Development: Scooters per country (Innovation Centre for Mobility and Societal Change GmbH, 2017)*

When it comes to the market penetration of certain providers, we may say that COUP, Cityscoot, emmy and eCooltra own two thirds of the global scooter-sharing fleet. The remaining 17 companies active in the market operate the rest. Since according to the InnoZ report (2017), the scooter-sharing industry initially saw more diversity in terms of ownership, we will see whether or not this sector will follow the example of the car- and bike-sharing sector, where large stakeholders have established their business field over time (e.g. Car2Go, DriveNow and Nextbike from Germany, Zipcar from the US or Ofo and Mobike from China).

The electric scooter has been the dominant choice over combustion engines since the beginning in 2012. 92% of scooters used by sharing providers around the world are electric. "The dominant manufacturers in terms of deployed scooters are currently Govecs (40 %), Gogoro (20 %) and Torrot (11 %). Two out of five scooters are currently provided by Govecs; every 5th scooter by Gogoro. The other 12 manufacturers provide just 40 % of all scooters. Besides Govecs, Gogoro and Torrot, other electric scooter suppliers are emco, Genze, Kymco, NIU and the suppliers of sharing businesses ioscoot, Econduce, JedenSlad and LOOP (21 %)" (Innovation Centre for Mobility and Societal Change GmbH, 2017).

Regarding the global user numbers, we cannot say with certainty how many there are, however, according to estimates, there are currently around 350,000 users. Even

though these estimates may not be 100% correct we may safely say that a positive trend currently and in the future is clearly visible.

Since the scooter sharing sector lacks a scientific identification of users, the Innovation Centre for Mobility and Societal Change (2017) received mobility data from a German operator. They described their findings regarding the typical user as: "He is in his early thirties, is a young urban professional, commutes in an (sic) multi- and intermodal way, does not own a private motorized vehicle and is bicycle-affine. Since 2015, he has used scootersharing 82 times, being up to 35 times a year. (...) Long-term smartphone tracking has shown that scootersharing accounted for less than 2 % of his private motorized vehicle (car and scooter) usage and less than 0,1 % of his overall travelled kms during that period".

From that we may conclude that the majority of users are young urban individuals and according to operators male. Furthermore, these services are primarily used for commuting or leisure time activities and many users additionally are members of other shared mobility services and own a public transport pass.

# 3  Literature review

In this chapter, definitions of certain crucial terms in the context of this paper, such as "sharing" and "sustainability" will be discussed considering varying and sometimes contradicting definitions of these terms in the existing literature. Moreover, the principles of Sustainable Supply Chain Management will be discussed, with specific regards to its dimensions of consumer behavior and marketing practices, and again featuring a review of the existing literature on the subject.

## 3.1  The definition of sharing

Sharing has two different meanings. On the one hand, it means that something is divided and then distributed among several people, on the other hand, it can mean that several people have something in common. These two definitions are described by Tomalty as "zero-sum" und "non zero-sum". "Zero-sum" means that one possesses less of the divided good, whereas "non zero sum" means that the people did not lose anything in the act of sharing (Tomalty, 2014, p. 18-19). Belk (2010, p.720) refers to sharing as probably the most fundamental economic system of human kind.

Sharing is therefore a very old phenomenon. We nevertheless experience it by opportunities given from digitalization in a completely new form. New technologies often make a safe and controlled handing over of the split good possible even without presence of the owner. The peers (in the technical language participants of the Sharing Economy) are globally connected to each other.

These new technologies created e-commerce landscapes which enabled users to experience those new markets in a much more efficient way (Hawlitscheck, Teubner & Gimpel, 2016). Whereas described by (Gefen & Straub, 2004), in the last decade e-commerce was mainly characterized by B2B constellations. We now encounter the rapid growth of consumer to consumer (C2C) market platforms. On such platforms, private persons come together to share goods as well as services in large scale '' peer-to-peer'' networks that often promise a more social, sustainable, convenient, anti-capitalistic or inexpensive alternative to usual means of consumption (Belk, 2007; Leismann, Schmitt, Rohn & Baedeker, 2013; Matzner, Chasin & Todenhöfer, 2015)

### 3.1.1    Definition of the Sharing Economy

In 2008, Professor Lawrence Lessing at Harvard Law School was one of the first people to use the term "sharing economy" Thanks to technological advances in IT, lending as well as borrowing is gaining increasing relevance next to purchasing. The TIME magazine even added the sharing economy to a list of the 10 ideas to change the world (Walsh, 2011).

Rachel Botsman's statement meets it quite well: ´´The Sharing Economy lacks a shared definition.´´ (Botsman, 2013). There is not an explicit definition of the Sharing Economy that is used by experts in that field of study. It is much easier to define the Sharing Economy using its characteristics. Stephany characterizes the Sharing Economy community as the provision of assets used only a little to an online community (Stephany 2015, p.9). The use of goods is given priority, while the ownership is often less relevant in the Sharing Economy. Moreover, the use of smartphone Apps is characteristic for the Sharing Economy, through which the transaction costs turn out to be very low.

Botsman and Rogers (2011) distinguish 3 different kinds of sharing: product service systems, redistribution markets and collaborative lifestyles. Product service systems

are defined as "a marketable set of products and services that are capable of jointly fulfilling customers´ needs in an economical and sustainable manner" (Reim, Parida, & Örtqvist, 2014). Products, which are connected to a greater capital expenditure, are no longer in the possession of a single person – these services are provided in exchange for a fee. Customer do not pay for the good itself but for the utilization of that good. BMW, Mercedes and other car manufacturer offer their products via car-sharing as new business models for instance.

Social networks are the so-called redistribution markets, where used goods are sold. These products can be resold, exchanged or given away. Botsman und Rogers (2011) see this specific type of sharing as the sustainable approach of taking actions. Collaborative Consumption or Collaborative lifestyle refers to the sharing of material and immaterial goods. All kinds of different things can be shared in this model- cars, living space, ideas, money even time on a local as well as global level. This is the most strongly distinctive category of the Sharing Economy.

So we may conclude that the sharing economy cannot be defined per se, but rather is a framework of various characteristics where the use of a good is given priority and not the possession. The following section refers to another structure that often goes hand in hand with the above stated framework, which gives us the opportunity to further deepen our understanding about this topic.

### 3.1.2   The Collaborative Consumption Culture

Usually the concept of collaborative consumption and the sharing economy are very much associated with each other. Nowadays there are several other terms which have been developed such as the collaborative economy (Owyang, 2015), but the core meaning defined as ''an economic system based on sharing underused assets or services, for free or for a fee, directly from individuals'' by (Botsman, 2015) remains the same. However, we need to differentiate between the sharing and pseudo-sharing activities (Belk, 2013). Habibi, Kim, & Laroche (2016) explained the collaborative consumption to a continuum from pure sharing to pure exchange model. So is for example Couch-Surfing (a platform where people may sleep at other people's homes) as a form of pure sharing. The second example Zipcar (a car sharing service) as pure exchange; and lastly Airbnb (accommodation sharing platform) as in between.

We therefore may identify the collaborative consumption as a way of consuming. The following section analyzes this concept more extensively with the help of new technologies we now see collaborative consumption as a way of sharing, renting, gifting, bartering, swapping, lending and borrowing (Piscielli, Cooper, & Fischer, 2014). By making use of this socio economic model, namely the shared usage of various commodities, it is portrayed how to elude waste and furthermore have alternative usages for unwanted goods amongst individuals thanks to new technologies and community interaction (Botsman & Rogers 2011). Botsman and Rogers (2011) also state that this new mode of sharing is becoming increasingly more popular due to its efficiency to match millions of ''haves'' with millions of ''wants''.

The big success stories of Uber and Airbnb all fall under the category of collaborative consumption. The terms "Sharing Economy", "Peer Economy", "Collaborative Economy" and "Collaborative Consumption" (CC) are used synonymously (Botsman, 2013). The special feature of the P2P market (peer-to-peer) lies in the fact that the customers are tied into the business model. Peers with different needs complement themselves and therefore cause mutual benefit. Various platforms from that model usually serve as intermediary with security features. The business models of the Collaborative Consumption profit from the network effect: the more people the platform engages with, the bigger the benefit for every single user. This results in the fact that companies are strongly dependent on the actions of the peers. The network effect also makes it more difficult to replace the market leader.

After establishing a definition of sustainability, sustainability aspects of the sharing economy will be discussed in the following chapters, as well as ecological, economical and social aspects of sustainability, before introducing the concept of Sustainable Supply Chain Management (SSCM) and discussing aspects of consumer behavior.

## 3.2   The term sustainability

**A definition**

The roots of this definition originally come from the forestry. In the year of 1713, the captain of Freiburg named Hans Carl of Carlowitz emphasized the importance of sustainable forestry in state forests. The background of his thoughts were the heavily deforested mining areas, due to the high demand for wood. This resulted in the fact

that wood had to be imported and thus caused higher efforts as well as higher prices for wood. His basic principle was rather easy: The amount of cut down wood shall not be bigger than the amount that can regrow (Hauff, 2014). The next report that globally received a great deal of attention, was ''Limits of Growth'' of Dennis Meadows and his wife Donella Meadows in 1972. They described the contradiction of the constant increase in population and the given limited resources. Subsequently the report resulted in heavy discussions and furthermore resulted in the first UN Conference on Environment and Development in the very same year in Stockholm. Thereupon, various environmental organizations were formed within the UN which in 1980 compiled the ''World Conservation Strategy''. This was the first time the term ''Sustainable Development'' was used in a bigger economic and political circle (Hauff, 2014). In the following years additional initiatives for the consolidation of the global environmental consciousness were made which will not be addressed here.

The next big milestone in the creation of the term sustainability was the Brundtland report in 1983. Because of rising ecological, economic and social problems the committee of the United Nations under the chairmanship of the Norwegian prime minister Gro Harlem Brundtland elaborated a global approach. The report emphasized the importance of the sustainable development and therefore was the starting signal for international engagement. Besides the global perspective and the link between the environmental and development aspect one big characteristic is distributive justice according to the report. In this connection sustainable development received much attention and led to a foundation numerous publications. The Brundtland report defines sustainable development as follows: ''Sustainable Development is development that meets the need of the present without compromising the ability of future generations to meet their own needs.'' (Hauff, 2014)

There are a lot of further definitions of the term sustainability circulating in the literature, however their core meaning very much resembles that of the aforementioned Bruntland report. Therefore, the Brundtland definition will be the one that is being referred to whenever sustainability is addressed in this paper.

In the following section, more specific aspects of sustainability, including the ecological, economic, and social dimension, will be discussed.

### 3.2.1 The sustainability dilemma

The international economic policy is based on the constant rivalry of economic growth. Every nation tries to make the best from its possibilities to gain influence. In this case the prisoner´s dilemma fits very well. Due to lacking international cooperation, the trust is missing between countries. Most countries act in their own self-interest and neglect the consequences their behavior has on our planet. They are very well aware of the negative implications, yet hope that they do not end up being the victim. Rich industrial nations are less strongly affected from pollution, the climate warming and other consequences from climate change than developing countries, which are established in the primary sector. However, they are responsible for these negative changes. Europe, the USA and Japan, 20% of the world population, use 80% of the wealth and leave two thirds of the climate-related damages (Müller, 2014).

Back to the growth related aspect: several factors lead to the growth idea of our society. An enormous population growth especially in Asia and Africa subsequently leads to a strong economic growth. Simultaneously, consumption grows and natural resources are burdened more and more strongly. A global population policy or national family policy is not available - strong growth rates are the consequence. World population increases to 2,6 people every second and a new 16 km x 16 km big area of arable land must be taken into operation in order to feed alone the additional humans that are born within the last 24 hours (Behlau 2012, p.7).

Moreover, the effect of the social growth logic comes into play. Capitalism brings strong income differences. To avoid social tensions, the state is forced to reduce these differences or to support underprivileged layers of society. A compulsive redistribution is avoided by the lobbyists in the democracy. The only alternative is an increase in income and the general satisfaction of growth. In reality however, the prosperous capitalists participate excessively in the growth and the income gap continues to increase (Behlau 2012, p.8).

The political urge for increase results as a consequence. Countries set themselves a goal to grow year by year. In numerous countries, what is produced is actually much more than is actually needed. The consumer is encouraged to consume- often things which he or she does not really need. Furthermore, states often increase their public expenditure to boost their economy (Behlau 2012, p.9). This also results in the fact

that certain countries invest in projects that are not needed. The best example is China: they set themselves the objective to an economic growth of 6-8 % every year. Within the last few years the natural production did not suffice. Nevertheless, to accomplish the goal, the state invests more and more in infrastructure. These projects are not financed with their own money and it is doubted strongly that the investments amortize (Rickards, 2017).

The permanent strive for welfare people neglect the long-term consequences of their actions. During the industrialization one did not show any consideration towards the environment and sustainability was a concept for only few people. Only in the course of the time man recognized which consequences his egotistical behavior will bring, which is why a trend towards long term thinking is noticeable. The following forces led to a strengthened sustainability consciousness (Hardke & Prehn, 2001):

- Change in biogeochemistry: Including global warming caused by the reduction of the ozone layer as well as the accumulation of nuclear waste.

- Reduction and destruction of the bio-resources: The irreversible deforestation of the rain forests or the overfishing leads to the reduction of important natural resources.

- Ongoing toxicity: In the agrarian economy the use of pesticides and herbicides that worsen the soil quality. Toxic chemicals and waste represent a growing problem.

- Social disruption: The steady population growth in combination with the worldwide gradually increasing social tensions. The unfair distribution of worldwide, as well as domestic wealth is a central topic. This puts on the one hand the system of capitalism in question, while on the other hand the ethical aspect of our behavior is given priority.

- The continuing misery of the steadily growing population: The world population is growing and simultaneously the problems. More than 2.7 billion people live without sanitary facilities, 1.4 billion in existential poverty, 1.3 billion must get by without clean water and 1 billion do not possess a home.

### 3.2.2 The dimensions of sustainability

This section will focus on three dimensions that are related to a sustainable development. "As sharing economy business models will change over time due to changing customers' requirements, changing markets, technologies, structures and etc. it will be recognized as a part of sharing economy driven by separate sustainability drivers: social drivers, economic drivers, environmental and technological drivers" (Daunoriené et al., 2015, p. 838) see Figure 3.
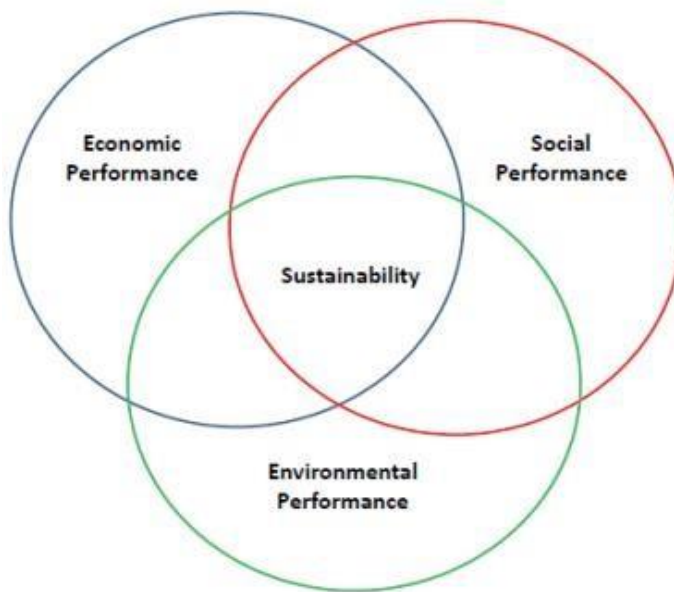


***Figure 3: Sustainability as the intersection of 3BL performance*** *(Syahruddin & Kalchschmidt, 2018)*

**The ecological dimension**

Ecological sustainability deals with the preservation of nature for future generations. The aim is to use natural resources to an extent that is bearable for our environment. The concept climatic change goes hand-in-hand with sustainability (Kollmuss & Agyeman, 2002). Because of the greenhouse effect, the increased CO2 emissions lead to an acceleration of the climate warming. This in turn has drastic effects on our environment. Besides the increase of natural disasters, great worries arise due to the melting of glaciers and water scarcity in southern areas. Moreover, negative externalities like pollution or the dying out of a variety of animal species and some parts of the flora emerge.

Therefore, we need to become conscious of our ecological responsibility to manage and reduce the aforementioned developments (Steger, 2013). However, conservation is not only a matter for governments and environmental organizations, but also consumers have to take their responsibility when making purchase decisions (Steger, 2013)

**The economic dimension**

The economic dimension refers to the responsibility of companies for our environment. Whether one makes profits or not is not the principle rule, but under which circumstances. The Corporate Social Responsibility (CSR) judges enterprises companies according to sustainable criteria. Among other things the following questions are evaluated: Which interest groups apart from investors/owner of the enterprise are satisfied? How are employees, suppliers and consumers satisfied? Which consequences does the company have on the environment/local business?

In this study, we will focus on the market-oriented CSR activities as well as the environmentally oriented CSR activities. The first activity mentioned above refers to the quick response of a business regarding a consumers' need or complaint to name a few (Turyakira, Venter & Smith, 2014). Additionally, according to the (European Commission, 2011) market-oriented CSR activities include targeting improvements in product quality and safety, providing voluntary customer services, charging fair prices, ethical marketing, timely payments, cooperation with local partners, promoting good standards in supply chains, and supporting the creation of local/regional business cooperatives.

Poláše (2010) states that in order to ensure businesses long term success, a long lasting quality sales network is essential. This is also agreed by (Ali, Rehman, Ali, Yousaf, & Zia, 2010) who are certain about the fact that market-oriented CSR will increase customer loyalty which eventually transfer the business in a better economical state.

Secondly, we mentioned environmentally oriented CSR concepts, which translate over to more pro-environmental behaviour, which aims at decreasing negative impacts on our environment (Turyakira et, al. 2014). Dealing with pollution, waste and energy in

the most environmentally friendly manner will in turn positively influence a company's competitiveness (European Commission, 2010).

**The social dimension**

When it comes to sustainability, the social dimension is likely to be neglected (Littig & Giessler, 2004). The focus usually lies on ecological and economic objectives, however these cannot be reached without attention to the social component. The definition of social sustainability is often very differently discussed in the literature. The following definition is based on the most important aspects. Social          sustainability describes the respectful as well as humane togetherness in a community. Values like trust, equal opportunities and justice are marked in a socially lasting society. The various interpretations of this definition also very much depends on the point of view. If one only takes basic needs like diet, housing, clothes, sexuality, health care as well as access to clean drinking water and sanitary facilities into account, then it is primarily about the long-term safeguarding of the material basis of human existence. If one extends the definition to immaterial needs like education, culture, leisure time, self-realization etc. then in order to satisfy those needs, a bigger scope of action is necessary (Littig & Giessler, 2004). Only in this case the necessary circumstances are provided that enable people to pursue a decent living (Littig & Giessler, 2004)

In addition to material fortune, every person also has social fortune at his or her disposal, which is not quantifiable in currency or other units. Social capital can nevertheless be analyzed in detail. Putnam subdivides it into three levels (Hagen, 2018):

- The micro level contains the most familiar people such as families and friends.

- The meso level refers to people from the extended circle of friends such as people at work, in organizations or other networks.

- The macro level refers to the identification with a community in a political and cultural aspect. These Individuals usually have not met each other in person; common values and engagement connects.

The aim of social sustainability is to strengthen social capital at all levels in order to prevent therefore social disruption.

In the next section, our focus lies on sustainable supply chain, which incorporates all of the above stated dimensions in order to optimize conventional supply chains. By discussing driving factors and barriers, the reader should get an understanding as to why companies should incorporate such methods.

## 3.3   The meaning of Sustainable Supply Chain Management (SSCM)

During the last 20 years, there has been a shift towards not only optimizing operations in certain facilities but expanding them over the entire supply chain. This results in the fact that the highest value can be produced at the lowest possible cost. However, the greatest possible value along the entire supply chain might suffer because of the demand for a low-cost production (Linton, Klassen, & Jayaraman, 2007).

Sustainable Supply Chain Management (SSCM) is an important subject for the entrepreneurial sustainable management movement at the moment. It aims at all value chains to form ideal circumstances under the consideration of economic, social and ecological dimensions. SSCM therefore goes beyond the main conventional Supply Chain management, which is concentrated on economic aspects only (Handfield & Nichols, 1999).

SSCM is frequently established in the field of procurement of an enterprise. Since it is recognized as a new challenge for companies, enterprises also form in-house measures in order to implement a sustainable supply chain. SSCM has steadily gained importance for companies in the course of the internationalization of the production. Examples of the textile and toy industry show clearly that social and environmental aspects also can have influence on the business success of an enterprise (Schaltegger & Harms, 2010).

However, bad environmental and social conditions of suppliers will not only have a negative impact on a company's image but also might result in a decline in revenues. A Sustainable Supply Chain management therefore becomes on the one hand, a part of the risk management; on the other hand, however it is seen as an approach at realizing entrepreneurial chances. An area of tension is therefore often the case (Schaltegger & Harms, 2010).

Additionally, through the increasing importance of the internet and especially social media, reputational risks have increased dramatically, yet they enable a quick dissemination of information on the given social or ecological injustices. Because of the increasing consciousness for sustainability topics this became an important aspect for consumers (Harms, Hansen, & Schaltegger, 2011).

**Table 1: Drivers and barriers of SSCM** *(Denoël, 2015, p. 9)*

| | Enablers/Drivers | Barriers |
|---|---|---|
| Internal | Top management commitment<br>Employee involvement<br>Training and education<br>Performance management<br>  – Monitoring, evaluation, reporting and sanction<br>  – Metrics to quantify sustainability benefits in a SC<br>Corporate culture supporting sustainable issue<br>Risk management<br>Availability of funds<br>Having management systems implemented (such as ISO 14001, SA 8000)<br>Specifying a SSCM strategy and aligning it with corporate strategy<br>Internal CSR practices already in place<br>Information sharing<br>Communication and transparency in the SC<br>Organisational size (big firm) | Higher costs<br>Coordination complexity/effort<br>Insufficient or missing communication in the SC<br>Lack of management commitment<br>Traditional accounting methods used in performance management<br>Lack of training and education<br>Lack of understanding of how to incorporate sustainability in SCM<br>Other SCM priorities<br>Lack of corporate structure and processes<br>Organisational size (small firm) |
| External | Stakeholders influence:<br>Government and regulations<br>Pressure from NGOs<br>Pressure from customers<br>Pressure from competitors<br>Pressure from investors<br>Collaboration with suppliers | Government and regulations<br>Competitive pressure<br>Consumers desire for lower prices<br>Poor supplier commitment<br>Green washing from medias<br>Less regulated industries |
| Source: Adapted from Seuring & Müller (2008); Tay et al. (2014); Faisal (2010); Carter & Rogers (2008) | | |

From this table 1, we may deduce several observations. For one, there is a wide variety of often corresponding and intersecting factors, both external and internal, that may complicate SSCM. However, while a lot of the driving factors are constant, and will continue to grow in importance, as has been previously established (such as increasing external pressure from customers due to social media), a lot of the barriers are not nearly as permanent, but resolvable and relatively easy to overcome (such as lack of training and understanding). It is therefore plausible to assume that many of the driving factors here will remain constant or grow, while at least some of the barriers will decrease in influence, leading to a more widespread implementation of SSCM. Furthermore, we may conclude that responsibility does not exclusively lie with the

management, but with every individual, and that regulations and cost factors are the most permanent barriers.

In the following some examples are shown how different companies in the automotive industry are improving their green supply chain management. 8.6 Mio. EUR have been invested by SEAT in building the appropriate infrastructure in order to decrease the travel distance of finished cars to the port of Barcelona between two locations in Spain. That way the company was able to save up to 57.000 drives by transportation trucks each year (Hunke & Prause 2014) Another example of how sustainability efforts in logistics are established is shown by Audi. Due to the vast variety of small part deliveries, which were distributed CO2 cost heavily, new machines as well as architectural improvements were introduced (Hunke & Prause 2014). This act saved up to 500 tons of CO2 every year and hence received the sustainability award of the Federal Association Logistic Austria and Germany (Hunke & Prause, 2014)

Efforts concerning a SSCM from businesses have certainly increased in recent years. This directly correlates to the next chapter, which briefly describes consumer behavior and its association to a sustainable environment. Businesses have noticed a change in consumer behavior and have, hence adapted their SSCM in order to be more appealing to consumers. This brings us to the next section, which gives insights into the pro environmental behavior in order to deepen our understanding as to why people follow this manner.

## 3.4   Consumer Behavior - The pro-environmental behavior

The oldest framework, which was developed, in order to analyze why people act environmental friendly was based on the assumption that educating people about environmental problems would automatically result in a pro-environmental behavior (Adams, 2006). However, these were proven wrong in the 1970s (Kollmuss & Agyeman, 2010). Studies revealed that being aware of a certain issue concerning our environment does not lead to a positive behavior towards the environment. Nevertheless, NGOs tend to dominantly focus on old schemes, such as educating people, this does not result in a more sophisticated behavior (Kollmuss & Agyeman, 2010).

The problem therefore lies in our habits (Kollmuss & Agyeman, 2002). Changing our behavior or adapting to new circumstances also in a very minor way, causes certain difficulties. (Rajecki, 1982) defined four causes referring to that matter:

- *"Direct versus indirect experience*: Direct experiences have a stronger influence on people's behavior than indirect experiences. In other words, indirect experiences, such as learning about an environmental problem in school as opposed to directly experiencing it (e.g. seeing the dead fish in the river) will lead to weaker correlation between attitude and behavior.

- *Normative influences*: Social norms, cultural traditions, and family customs influence and shape people's attitudes, e.g. if the dominant culture propagates a lifestyle that is unsustainable, pro-environmental behavior is less likely to occur and the gap between attitude and action will widen.

- *Temporal discrepancy*: Inconsistency in results occur when data collection for attitudes and data collection for the action lie far apart (e.g. after Chernobyl, an overwhelming majority of Swiss people were opposed to nuclear energy; yet a memorandum two years later that put a 10-year halt to building any new nuclear reactors in Switzerland was approved by only a very narrow margin). Temporal discrepancy refers to the fact that people's attitudes change over time.

- *Attitude-behavior measurement*: Often the measured attitudes are much broader in scope (e.g. Do you care about the environment?) than the measured actions (e.g. Do you recycle?). This leads to large discrepancies in results." See Figure 4:

modified from: David Regis D. (1990), http://helios.ex.ac.uk/~dregis/
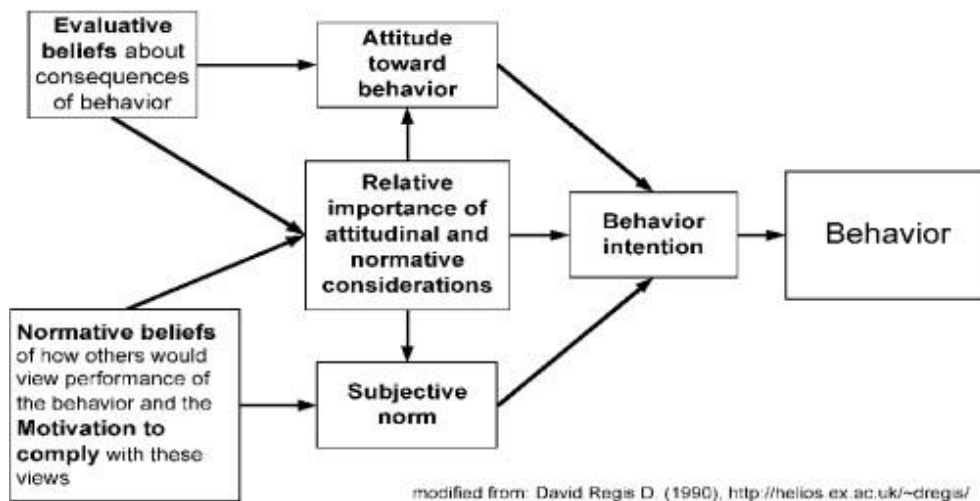
**Figure 4: Theory of reasoned action** (Ajzen & Fishbein, 1980)

The following section explains the above listed points concerning the discrepancy between attitude and behavior through their correlation.

(Ajzen & Fishbein, 1980) and (Fishbein & Ajzen, 1975) in Theory of reasoned Action and Theory of Planned Behavior addressed issues concerning the last two items. According to them it is rather difficult to design studies in which attitudes and behavior are measured and compared. They came up with the idea that a high correlation between attitude and behavior can only be developed if the attitude is measured towards that particular behavior. So for instance, comparing attitude towards climate change and driving behavior normally shows no correlation, even though people are very much concerned about climate change. This results in the fact that attitude towards climate change is not closely related to the driving behavior of people. (Kollmuss & Agyeman, 2002).

We may conclude that attitudes are not determined by behavior directly but rather influence our behavior, which has an impact on our actions. Therefore, "the ultimate determinants of any behavior are the behavioral beliefs concerning its consequences and normative (social) beliefs concerning the prescriptions of others" (Ajzen & Fishbein, 1980).

In this section, a second framework concerning pro-environmental behavior, which has been developed based on Ajzen and Fishberg´s (1980) by Hines, Hungerford and Tomera in a Model of Responsible Environmental Behavior is shortly discussed. An

analysis based on 128 pro-environmental behavior research studies has been conducted in order to find variables that refer to a pro-environmental behavior (Hines et al., 1986-87; Hungerford & Volk 1990; Sia et al. 1985-86), see Figure 3.

- *"Knowledge of issues*: The person has to be familiar with the environmental problem and its causes.

- *Knowledge of action strategies*: The person has to know how he or she has to act to lower his or her impact on the environmental problem.

- *Locus of control*: This represents an individual's perception of whether he or she has the ability to bring about change through his or her own behavior. People with a strong internal locus of control believe that their actions can bring about change. People with an external locus of control, on the other hand, feel that their actions are insignificant, and feel that change can only be brought about by powerful others.

- *Attitudes*: People with strong pro-environmental attitudes were found to be more likely to engage in pro-environmental behavior, yet the relationship between attitudes and actions proved to be weak.

- *Verbal commitment*: The communicated willingness to take action also gave some indication about the person's willingness to engage in pro-environmental behavior.

- *Individual sense of responsibility*: People with a greater sense of personal responsibility are more likely to have engaged in environmentally responsible behavior."

According to Kollmuss and Agyeman, we can conclude that although this framework might be more advanced than Ajzen and Fishbein´s, we cannot identify the pro-environmental behavior sufficiently. They furthermore state that the relationship between knowledge and attitudes, attitudes and intentions, and intentions and actual responsible behavior are too weak. Hines et al. (1986-87) believes that there are several additional factors that influence this behavior that also refer to the ´situational factors´, which consist of social pressure, economic constraints as well as opportunities. Therefore, it is necessary to establish in the upcoming section which

characteristics define the 'green consumer' and what drives him to a pro-environmental consuming behavior.

### 3.4.1   The Green consumer

An exact identification of the concept of a 'green consumer' is hardly possible. The strict distinction between green and non-green behavior characteristics would be a too strong simplification of the actual reality. Consumers are individuals which neither act rationally nor foreseeably. A wide field full of compromises and external effects lies between a perceived green or non-green behavior as well as changing preferences and situation dependent decisions. If a consumer likes to live his life in a way that has little effects on our environment, then every consumption decision becomes a matter of conscience. Attitudes towards recycling, water consumption or the use of different means of transportation are key for an eco-sensitive life (Banerjee, Gulas, & Iyer, 1995 ). Every decision is therefore a compromise between environmental awareness and accepting the limitations of such awareness (Banerjee, Gulas, & Iyer, 1995 ).

Akehurst and colleagues describe the 1990s as the "Decade of the environment" (Akehust, Afonso, & Goncalves, 2012). The development of the green market seemed to really boom at the beginning of the decade. The market share of new consolidated green products in the USA increased from 1.1% in the year 1986 to 13.4% within only 5 years and the green advertising movement also developed rapidly. The share of green advertising in the TV rose within a year from 1989 to 1990 by 376%. Green printing campaigns even were able to increase their market share by 430% (Ottman, 1993).

The growth rates in the green segment rose little furthermore, the market shares, however, remained in the niche sector and did not reach the expected values. Years of stagnation followed in the green market. The number of green marketing campaigns as well as the public interest in the environment conscious behavior declined. For approximately 10 years the environmental interest has taken up again as well as the marketing of green product. Yet the green market is a niche market to this day (Hartmann & Apaolaza-Ibanez, 2009).

We may conclude that external factors determine a customer's perception towards a green behavior, rather than the actual self-developed attitude. The increasing

awareness of green products is rising, yet we still find ourselves in a niche market with this movement. In order to gain more knowledge regarding the receptivity to green ads, further research has been done that is discussed in the following section.

### 3.4.2 Marketing Practices- Consumer receptivity to green ads

(McGuire, 1976) developed the idea related to how the credibility of a delivered message is dependent on various facets, such as the content as well as the receiver. Studies have shown that one's ecological concern comes from ecological consumption related behavior and the acceptance to green ads (Ellen, Wiener, & Cobb- Walgren, 1991; Kassarjian, 1971; Kinnear, Taylor, & Ahmend, 1974).

Furthermore, Thorsten, Page and Moore (1995) discovered that ,''look what we are doing corporate image''- ads and ,''instructional, let's teach our children about the environment- ads create more value concerning consumer attitudes than conventional product claims. This leads to the observation that bringing the corporate image in the foreground results in a more effective receptivity for consumers than focusing on product assertions. MacKenzie & Lutz (1989) described ad credibility as ''the extent to which the consumer perceives claims made about the brand in the ad to be truthful and believable''.

Since the claims for ecologically themed ads cannot be seen right away but rather in the future, an exploitation of marketing purposes has been developed (Gary-Lee, Scammon, & Mayer, 1994). In general, we can say that when consumers are not able to test the claims since they are not linked to the product itself but rely on environmental facts, then they have the most potential to be delivered as stated by (Carlson, Grove, & Kangun, 1993)

Most studies that have been conducted found the consumer viewer claim as credible, however none have actually measured whether or not the actual ad has been credible or not. This means that according to (MacKenzie & Lutz, 1989) ad credibility is the most essential aspect towards a positive ad attitude.

The following model shows a credibility model and its hypotheses conducted by Seiler and Kucza (2017), see Figure 5:
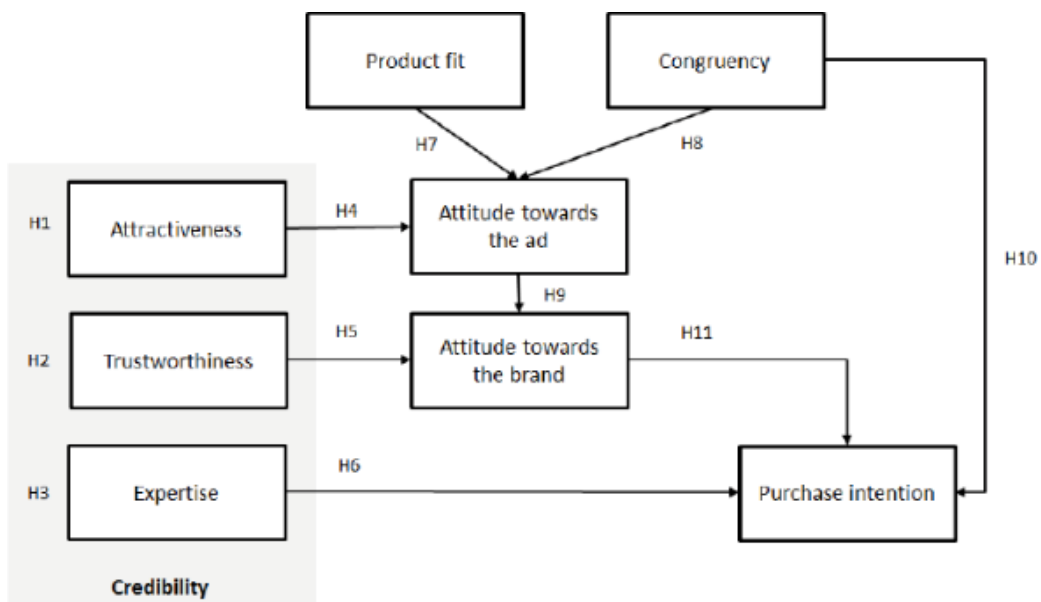
*Figure 5: Conceptual Model (Seiler & Kuzca, 2017)*

For the sake of this thesis, we will not discuss all of the above hypotheses developed by Seiler and Kucza (2017) but instead focus on the Trustworthiness, Attitude towards the ad, Attitude towards the brand and the Purchase intentions that go along with the credibility of an ad.

**Trustworthiness**

(Ohanian, 1991) states that a character who is delivering a message plays an important role, in addition findings of McGinnies and Ward (1980) have shown that an expert source that is communicating a trustworthy message may induce an opinion change, which furthermore underlines this assumption. Therefore, Seiler and Kucza developed a hypothesis that trustworthiness positively affects the credibility.

**Attitude towards the ad**

Seiler and Kucza (2017) have drawn this implication based on the source credibility model of Hovland and Weiss (1951). Seiler and Kucza define this model as ''Source credibility has a positive effect on the effectiveness of the message, and from the observation that credibility has a positive effect on attitudes and the behavior of individuals''. They therefore come up with the hypothesis that credibility positively affects the attitude towards the ad.

**Attitude towards the brand and purchase intention**

Seiler's and Kucza's hypothesis (2017) that an attitude towards the brand positively influences purchase intensions is derived from current research (Goldsmith et al., 2000; Hartmann & Apaolaza-Ibanez, 2012; Lutz et al., 1983; Shah et al., 2012; Spears and Singh, 2004; Teng et al., 2007; Wu and Lo, 2009)

In order to gain further knowledge on that topic we will develop ad claims for the e-scooter mobility brand ,''go-Urban'' we will conduct further aspects which include credibility, brand attitude and attitude towards an ad.

Concluding the literature review, we may state that in spite of the existence of a wide variety of definitions of terms such as sustainability, and several counter-trends such as the stagnation of green business during the late 1990s, most existing literature points towards an increase in the relevance and economic growth of sustainable economic enterprises, and the same is valid for Sharing Economy solutions. Thus, in this paper, an assessment of a start-up in the field of green Shared Mobility is executed in the following chapter.

# 4 GoUrban-Case Study

## 4.1 The company profile

The form of company is a private limited company ("GmbH") with the name **"goUrban e-Mobility GmbH".**

Founded in 2016, the seat of the company is located in Vienna, Austria. The company is structured throughout three organizational divisions: the business department, which is subdivided into financials and sales, led by Jonathan Gleixner, and marketing, led by Michael Lenz. The technological department with all technical and industrial development matters is executed by Bojan Jukic.

After analyzing the Viennese market, they found out that one specific element of the sharing economy marked was not satisfied yet – e-scooter sharing within urban areas. Car sharing provider using vehicles with traditional internal combustion engines and bike sharing providers already entered successfully the market of Vienna and proved that the Viennese citizens are ready for the sharing economy model. goUrban's mission statement is: "Make electric vehicles accessible to everyone". Figure 6 provides an overview of their business model canvas.

The idea to introduce an e-scooter sharing system in Vienna was based on two main reasons: First, to address climate change countries adopted the Paris Agreement at the CO21 in 2015, which aims to lead the world towards an emission free policy. Therefore, cities all over the world are seeking for solutions to tackle their mobility issues and to meet the ambitious targets. Even though efficient mobility and transportation systems are fundamental for the economy and wealth of a city, mobility also has some negative drawbacks – pollution, noise, huge amount of public space needed, etc. Especially during peak hours citizens of urban regions are faced with traffic jams and shortage of parking.
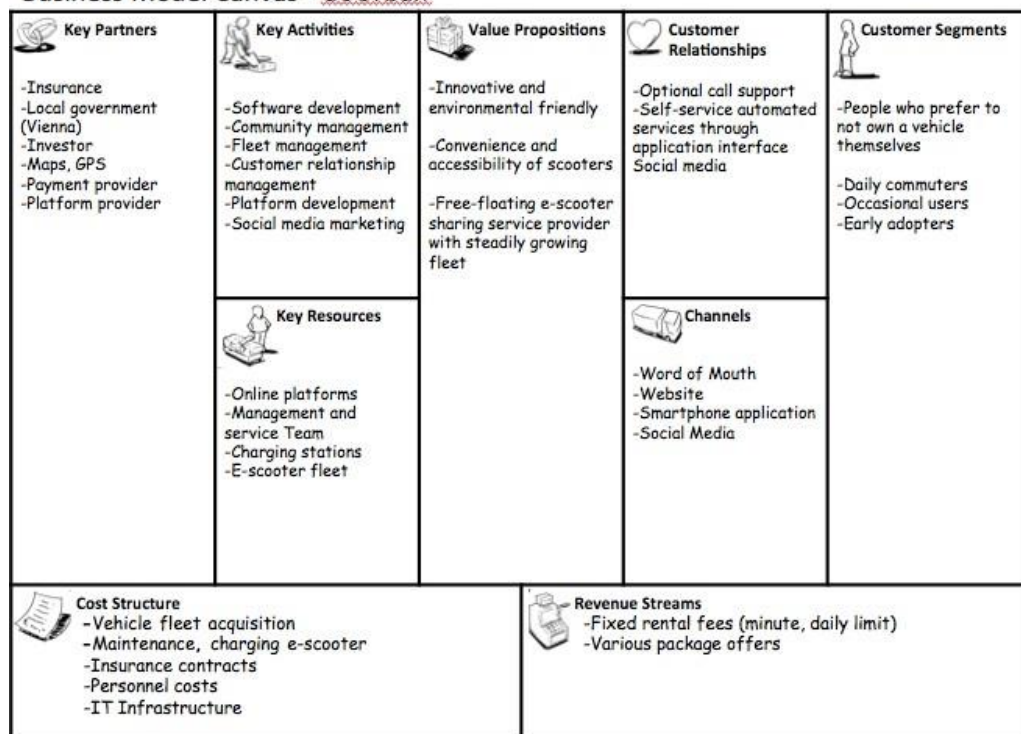
This not only leads to longer and unnecessary journeys, which can have a negative impact for a lot of businesses, yet also has very bad effects on the environment. Traffic in European cities is responsible for the emission of 40 percent of the total amount of carbon dioxide, 70 percent of other harmful substances and causes of course a lot of

noise. Moreover, mobility also implies a high number of accidents (Commission of the european communities, 2007).

A way to tackle these issues is the sharing economy - the second main reason why the goUrban founders decided to open up their own start-up. It is not only a way to reduce the need of residents for private vehicles, but also a more sustainable way to tackle the mobility issue of cities. Therefore, the European Commission published already in 2007 guidelines to promote vehicle sharing.

Moreover, the fact that in Austria since 2004 the number of two wheeled vehicles is constantly growing makes the scooter segment in the sharing economy appealing for them. In the course of just a few months, the goUrban founders were able to place 50 electrical scooters in the city center of Vienna. In 2018, 150 additional scooters are planned to enter the city. Recently, goUrban received a six-figure investment and were part in a famous Austrian TV-show, in which startups have the possibility to present themselves and have lucrative collaborations with the Viennese city government.

### Business Model Canvas - GoUrban

| Key Partners | Key Activities | Value Propositions | Customer Relationships | Customer Segments |
|---|---|---|---|---|
| -Insurance<br>-Local government (Vienna)<br>-Investor<br>-Maps, GPS<br>-Payment provider<br>-Platform provider | -Software development<br>-Community management<br>-Fleet management<br>-Customer relationship management<br>-Platform development<br>-Social media marketing | -Innovative and environmental friendly<br><br>-Convenience and accessibility of scooters<br><br>-Free-floating e-scooter sharing service provider with steadily growing fleet | -Optional call support<br>-Self-service automated services through application interface Social media | -People who prefer to not own a vehicle themselves<br><br>-Daily commuters<br>-Occasional users<br>-Early adopters |
| | **Key Resources**<br>-Online platforms<br>-Management and service Team<br>-Charging stations<br>-E-scooter fleet | | **Channels**<br>-Word of Mouth<br>-Website<br>-Smartphone application<br>-Social Media | |

| Cost Structure | Revenue Streams |
|---|---|
| -Vehicle fleet acquisition<br>-Maintenance, charging e-scooter<br>-Insurance contracts<br>-Personnel costs<br>-IT Infrastructure | -Fixed rental fees (minute, daily limit)<br>-Various package offers |

*Figure 6: Business Model Canvas goUrban*

Here we can see that cooperations with external partners are a key factor for goUrban, notably the city, but also mapping providers, payment providers, and investors. An interesting fact is that they develop their own app software, rather than relying mostly on external solutions.

Generally, it seems to be a wise decision for a Shared Mobility provider to rely mostly on digital advertising, social media, and word of mouth, as goUrban does.

As for the customer segments, we can see that they are divided among daily commuters, occasional users, and early adapters. Since early adapters are naturally limited in numbers, and occasional users don't generate a lot of revenue, the key to expanding the business would be to attract more daily commuters. Therefore, the survey, which will be discussed later, focuses in one section entirely on the question of which segment of commuters would have the most potential for a targeted marketing campaign.

## 4.2   How does goUrban work?

After the download of the app and a quick registration, all customers with a valid B driving license can have access to their product. They created the software of the application by themselves, which gives them the possibility to tailor it to their own needs.

The founders decided to provide a free-floating rental system, which means that scooters do not have to be returned to a fixed point but can be parked anywhere within the operating area. Each of their scooters is equipped with two differently sized helmets and disposable hygiene caps. By providing the possibility to transport two people on the scooter they already differentiate themselves from the majority of their competitors.

Furthermore, an integrated navigation system within their application helps customers through the rental process and contains not only a navigation system, but also recommendations for restaurants and other activities.

The price for using their scooters is with 0,21 €/minute just a bit more expensive than using the public transport in Vienna. Using a scooter instead, however, is for sure

faster, more fun and gives the user more flexibility. When reaching the desired destination, customers can leave the scooter there without worrying about short term parking restrictions because of a cooperation with the city government of Vienna. GoUrban is also offering special packages to tourists, who want to discover the city by scooter and the company additionally offers attractive B2B parcels.

GoUrban does not rely on any permanent charging infrastructure because the scooters are equipped with easily changeable batteries. Their employees can check the status of the scooters batteries via app and change them when needed. Bikes are used for this service to ensure that also here their activities are based on green processes.

To conclude, goUrbans̓ e-scooters are a practical tool for door-to-door transportation which can be used whenever you need it. They are not only a flexible solution which removes the struggle of finding parking in the city, but more importantly offer the users a cost-effective and green alternative to other means of transportation. However, E-scooters are not enough for being defined as sustainable, considering that the reduced emissions at the time of using the scooters could be offset by the emissions in the sourcing of the scooters (transported from China) or by the disposal of batteries in a linear economy perspective. For redefining goUrban as a sustainable company we should analyse the entire life cycle of our product, with the awareness that the use of the products is not the only activity that contributes to its overall emissions.

Thus, their proposal reflects a holistic approach to sustainability in which the environmental impact is minimized at every stage of the supply chain. The green rethink of the supply chain requires starting from a Green product design and should also require the shift from a linear economy framework (take, make, dispose) to a Circular Economy one. Circular Economy was defined by the Ellen Macarthur foundation as a system regenerative and restorative by design and intention, in which product design is inspired by modularity and in which renewable energies are the main source of energy. In a circular economy the end-of-life and the waste concept are replaced by the 4R framework- Reduce, Reuse, Recycle and Recovery.

The green supply chain approach is not only a way to mitigate harm from supply chain activities, but it should represent a source of competitive advantage, considering that this will permit the company to:

- Attract the attention of Social Venture Capital.

- Being eventually sponsored and supported by the City Council of Vienna, where the Green Party is ruling

- Differentiate themselves from the competition and from potential new entrants.

- Attract new eco-conscious customers/citizens.

# 5   Methodology

In this section emphasis will be put on how the research was conducted, which methods were chosen and what kind of survey has been used in order to analyse the findings of this thesis.

## 5.1   General types of research design

According to (Kerlinger, 1986) "a research design is a plan, structure and strategy of investigating so conceived as to obtain answers to research question or problems", thus, a research design is a plan which is adopted in order to answer a question in a valid way.

The following are three of the most common research designs.

**Descriptive Research**

"The goal of descriptive research is to describe a phenomenon and its characteristics. This research is more concerned with what rather than how or why something has happened. Therefore, observation and survey tools are often used to gather data" (Gall, Gall, & Borg, 2007). Furthermore Fox, and  Bayat (2007) state that descriptive research is "aimed at casting light on current issues or problems through a process of data collection that enables them to describe the situation more completely than was possible without employing this method"

So we can say that descriptive research is describing a situation, subject or behavior and is therefore used to answer questions to a research question or a problem. In addition the focus lies on gathering quantifiable information in order to statistically analyze a target audience or a particular subject without manipulating variables in any way (Center for Innovation in Research and Teaching , 2018). It aims at bringing light to new knowledge or awareness which otherwise would have gone unnoticed.

**Explanatory Research**

Explanatory research aims at conducting research in regards to a problem which was not well researched before. This design hence focuses on explaining all aspects of a given study in a detailed manner. Researchers generally start with a general idea and

later on use research as a tool in order to identify a problem that was not studied before in-depth. Therefore, it is meant to provide details where only a small amount of information exists in the mind of a researcher (Yousaf, 2018).

**Exploratory Research**

This type of research is conducted in order to study a problem, which has not been clearly defined yet. In order to analyze this problem, exploratory research is not aimed at providing final evidence, but rather attempts to give insights to a problem. Furthermore, researchers should be willing to change the direction of their initial thoughts as a result of the new data as well as new insights, which are derived from the conducted research (Saunders et. al, 2012).

**Qualitative and Quantitative Research**

It is also vital to differentiate between quantitative and qualitative research when attempting to answer a research question. Quantitative research can be defined as research that explains phenomena according to numerical data. In a broader perspective, it may be defined as testing a theory consisting of variables that are measured with numbers and analyzed with statistics in order to explain whether or not the theory explains the phenomena of interest (Creswell, 1994). Health University of UTAH (n.d.) states that quantitative studies therefore focus on proving or disproving a hypothesis in a cause-effect manner and findings should be generalizable and applicable to other populations (Leung, 2015). The data is often generated by means of surveys that represent a controlled environment in order to isolate causal effects (Kelley et al., 2003).

Qualitative research, on the other hand, as described by the University of Utah (2018) seeks an in-depth understanding of social phenomena. The focus lies on the "why" and relies on the direct experience of human beings using interviews, documents and observation.

For this thesis, which follows a descriptive research principle, a quantitative, survey-based approach has been chosen in order to answer the research question and to analyze the different variables in regards to customer awareness to sustainability. The survey included already pre-determined answer options as well as several open

questions. A survey has been chosen in order to generalize results and apply them to other population groups.

**Marketing**

Marketing research is the function that links the consumer, customer, and public to the marketer through information that is used to identify and define marketing opportunities and problems in order to generate, refine, and evaluate marketing actions, monitor marketing performance and improve understanding of marketing as a process. "Marketing research specifies the information required to address these issues, designs the method for collecting information, manages and implements the data collection process, analyzes the results, and communicates the findings and their implications (American Marketing Association, 2018).

This information is of particular importance for businesses in order to conduct primary data surveys. Furthermore, it gives businesses an idea whether or not the offered service or product triggers a specific need of a customer. Hair et al., (2013) state that doing marketing research will eventually give companies a competitive advantage over others in the same market due to the information that is available to them.

## 5.2 Survey

To answer the research question and in order to test the hypotheses, an online survey was conducted and subsequently evaluated statistically. The questionnaire was based on the literature analysed in the previous part of this thesis and was designed to find out about the price sensitivity of potential users in combination to their attitude towards sustainability. Also, their level of education and their primary choice of mobility were considered. The survey included multiple choice questions, as well as open questions and questions, where participants had to rate a character on a specific range, for example the amount of environmental awareness on a scale between 0 and 100. It was created on the platform Surveymonkey, where it stayed active for 30 days. The participants obtained a link that lead to the survey on the platform Surveymonkey and was spread via e-mail as a convenience sampling technique, partakers have to be residents of Vienna and minimal 18 years of age.

## 5.3   Participants

A complete sample of N=57 people were examined. The respondents were divided into three groups, the public transport users, the ones who own their own car or scooter and the ones that own and use their bicycle most of the time. The strategy behind building these groups was, that these respondents have different reasons for using their preferred transportation method and that they must also have different reasons for choosing platforms like goUrban as their future preferred mode of transportation.

## 5.4   Statistical analysis

The data obtained by the survey were evaluated with the program SPSS by IBM. For interdependent samples, the student's t-test method was used to determine whether there is a connection between two factors. The t-test, developed by William Sealy Gosset in 1908, is a parametric testing method which analyses whether two sample groups differ in their statistical mean (Rasch et al., 2014).

The following hypotheses were tested:

- H1: There is a positive connection between environmental consciousness and demand for e-scooter-sharing.
- H2: There is a positive connection between formal education level and demand for e-scooter-sharing.
- H3: There is no connection between existing use of shared mobility and demand for e-scooter-sharing.
- H4: Respondents who already use other forms of shared mobility will display a higher interest in e-scooter-sharing service.
  H5: Respondents who use bikes as their primary form of mobility will display an increased interest in e-scooter-sharing service compared to those using public transportation and car users.
  H6 Younger respondents will display an increased demand for e-scooter-sharing.

These hypotheses serve the purpose of evaluating a possible marketing target group for goUrban, which may serve as a vital scientific contribution to their expansion plans. For any company hoping to expand their customer base, it is important not to waste money by advertising too broadly, or targeting the wrong audience altogether. This is even more important for start-ups, where an ill-planned advertising campaign

in a crucial expansion phase can, in a worst-case scenario, cause the start-up to fold altogether.

Therefore, hypothesis 1 will answer the question whether a company like goUrban should mainly target an already environmentally conscious segment of the public, which could be achieved, for instance, through advertising in organic shops. Hypothesis 2 will answer the question whether it should specifically target people with a certain level of formal education (one might think of advertising on campus, for instance). Hypotheses 3,4 and 5 will explore the connection between existing mobility choices and demand for shared mobility services, while hypothesis 6 will explore correlations between young respondents and their willingness to use an e-scooter-sharing provider as this represents the focus group.

# 6 Results

## 6.1 Sample description

Out of the 57 subjects that participated in the study, only 42 persons were included in the statistical analysis, because the other 15 participants did not provide the information that was needed for testing the given hypotheses.

The sample consists of 45% men and 55% women, so the gender distribution was almost equally spread and it includes a higher proportion of young, than older participants (see Table 2). Accordingly, out of the respondents 26% of individuals were between 18 and 22 years old, while 40% belonged to the age group of 23 to 39 years of age and only 12% were older than 40 years.

The majority of the sample holds a master´s degree (n=17, 40%) or is higher educated, while the highest education of 9 people is a bachelor´s degree (21%). 13 participants hold a high-school diploma (31%) and only 5% have no higher educational degree. One participant did not provide information about his or her education.

Out of the sample, 43% were currently employed, 21% were self-employed and 31% were University students, while 5% were unemployed at the time they were questioned.

The vast majority of the participants are from Austria (n=37, 88%), while 3 are from Germany (7%) and only two come from a different country (US, India and Lebanon) (5%).

### Table 2: Sample characteristics (n=42)

|  |  | N | % |
|---|---|---|---|
| Sex | male | 19 | 45% |
|  | female | 23 | 55% |
| Age | 18-22 years | 11 | 26% |
|  | 23-29 years | 17 | 40% |
|  | 30-35 years | 6 | 14% |
|  | 36-40 years | 3 | 7% |
|  | > 40 years | 5 | 12% |
|  | missing | 0 | 0% |
| Education | High-school diploma | 13 | 31% |
|  | Bachelor | 9 | 21% |
|  | Master and higher | 17 | 40% |
|  | No degree | 2 | 5% |
|  | missing | 1 | 2% |
| Occupation | University student | 13 | 31% |
|  | Employee | 18 | 43% |
|  | Self-employed | 9 | 21% |
|  | Not employed at the moment | 2 | 5% |
| Country | Austria | 37 | 88% |
|  | Germany | 3 | 7% |
|  | Other | 2 | 5% |
| Total |  | 42 | 100% |

### Environmental awareness and sociodemographics

The amount of environmental awareness of the participants was stated on a scale from 0 to 100 and in the sample it´s mean is M=69.00 (SD=20.31). A quarter of the respondents rated their environmental awareness on this scale higher than 81, while another quarter rated it lower than 53.

The male participants mean environmental awareness stated on this scale is M=66.26 (SD=15.58), while women stated their awareness higher with a mean of 71.26 (SD=23.63). There is no significant gender difference in the environmental awareness (t(40)=-0.79, p=.434) and there was also no significant correlation found between a person's age and environmental awareness (r(s)=.12, p=.442).

Also between the groups with different degrees of education there was no significant difference in the environmental awareness found (t(40)=1.26, p=.215). The mean of the participants holding a high-school diploma is M=65.92 (SD=21.88), while the one of the respondents that have no higher educational degree is 74.00 (SD=16.92).

*Mode of transportation*

45% and by that most of the participants chose the public transport as their favourite means of transport, while 33% preferred their own bicycle and 21% their own car (see Figure 7). The alternative of choosing an e-scooter was not selected by any person of the sample.
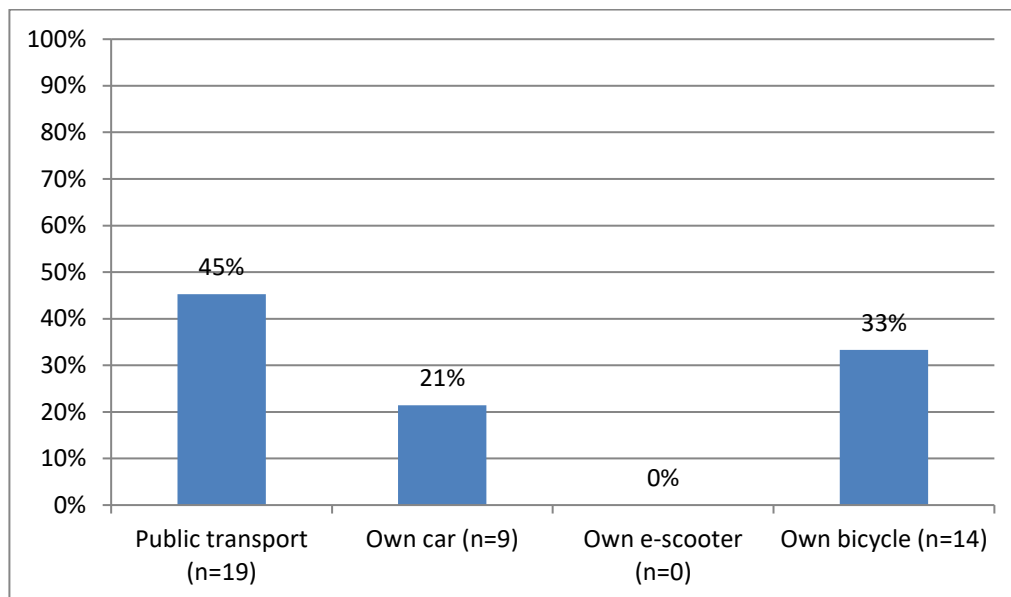


*Figure 7: Preferred means of transport (n=42)*

As reason why they used the car as preferred means of transport, most respondents chose the answer that it is the "Most comfortable way to move around in the city" (Mean rank=1.57), while the other alternatives were all chosen less often with comparable mean ranks in between 2.63 and 2.75 (see Table 3).

*Table 3: Mean ranks of reasons for using the car as preferred means of transport*

|  | N | Mean Rank |
|---|---|---|
| Most comfortable way to move around in the city | 7 | 1.57 |

| | N | Mean Rank |
|---|---|---|
| I don't like using public transport because it is too crowded for me | 8 | 2.63 |
| I don't like using public transport because it is too slow for me | 7 | 2.71 |
| I live further outside and have to travel a lot in the city so I need the car in order to be faster | 8 | 2.75 |

Out of the respondents who preferred using a bicycle as main means of transport most stated that they did so, because it is the fastest way to move around the city (Mean rank=1.44) (see Table 4). The other reasons to use the bicycle were chosen far less often with all their mean ranks laying above 3.11.

***Table 4: Mean ranks of reasons for using the bicycle as preferred means of transport***

| | N | Mean Rank |
|---|---|---|
| Fastest way to move around in the city | 9 | 1.44 |
| The fitness aspect of it | 9 | 3.11 |
| It is the cheapest transportation I know | 9 | 3.56 |
| I don't like using public transport because it is too crowded for me | 8 | 3.63 |

The most chosen reasons for using the public transport as preferred means of transport was "It is the fastest way to get me through the city due to traffic jams etc." (mean rank= 2.00) and "Cheapest way to move around in the city" (M=2,27) (see Table 5). The other reasons for using the public transport didn´t matter that much for the respondents with mean ranks over 2.87.

***Table 5: Mean ranks of reasons for using the public transport as preferred means of transport***

| | N | Mean Rank |
|---|---|---|

| | | |
|---|---|---|
| It is the fastest way to get me through the city due to traffic jams etc. | 21 | 2.00 |
| Cheapest way to move around in the city | 22 | 2.27 |
| I am conscious about pollution and think that this is the most environmentally friendly way | 23 | 2.87 |
| I don't have to think about finding a parking space | 21 | 2.90 |

***Transportation mode and sociodemographic***

There was no significant difference in the preferred means of transport between men and women (Fisher Exact Test: 3.08, p=.212, n=42) or between the different education groups ($\chi^2$(2)=0.25, p=.883, n=42) or age groups (Fisher Exact Test: 6.18, p=670, n=42).

57% of the participants and thus the majority stated, that they have already used a shared mobility service provider, while 43% have never used one before.

There was no statistical relevant connection found between the choice of the preferred means of transport and the use of a shared mobility service provider (SMSP) ($\chi^2$(2)=0.89, p=.641, n=42). 64% and by that most of the respondents that use the bicycle as main means of transport also used a SMSP before (see Figure 8). Also in the group of people using the public transport as preferred means of transport a majority of 58% has already used a SMSP, while it was only used by 44% of the ones that preferred the car as means of transport.
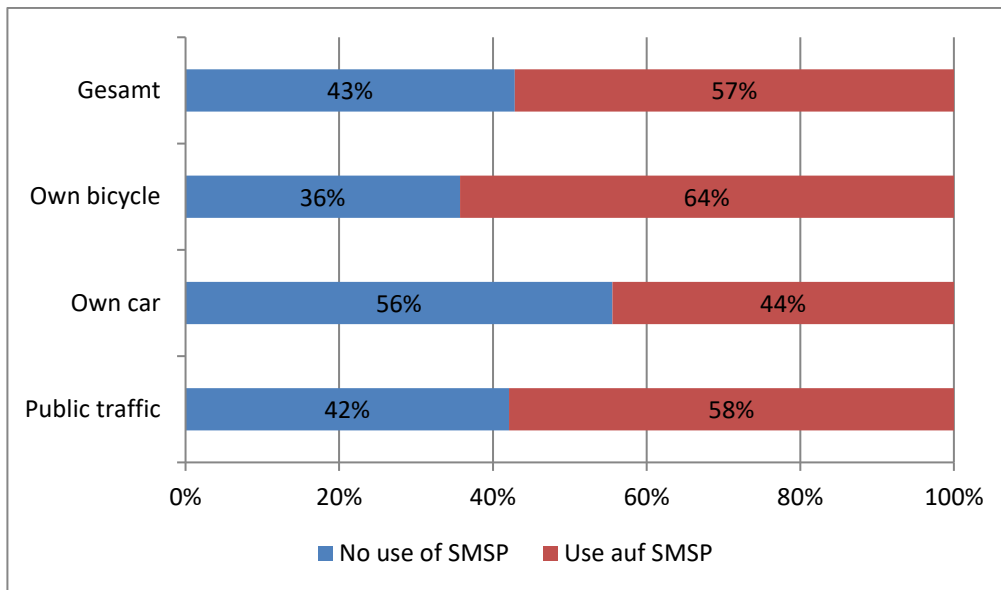
*Figure 8: Use of shared mobility service provider (SMSP) by groups of preferred means of transport*

Men and women did not show a significant difference in their use of a SMSP ($\chi^2(1)=1.80$, p=.179, n=42), with 68% of the male participants and 48% of the female ones using it, but a significant difference was found between the different age groups (Fisher Exact Test: 9.95, p=.027, n=42). While none of the participants over the age of 40 used a SMSP, in the age group between 18 and 22 years 46% did so (see Figure 9). The highest rate of people using a SMSP occurred in the age group between 30 and 35 (83%) and there was also a high usage in the age groups between 23 and 29 years (71%) and 36 to 40 years (67%).
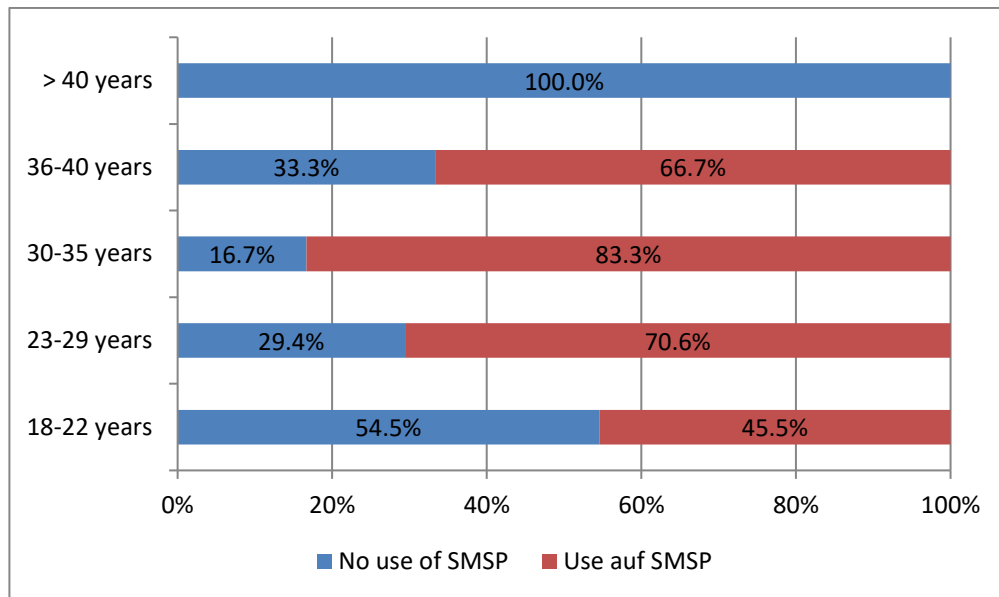
*Figure 9: Use of shared mobility service provider (SMSP) divided by age groups*

A significant difference in the use of a SMSP was also observed in the different education groups ($\chi 2(1)$=7.08, p=.008, n=42), where far more participants with (73%) than without (31%) university education have used SMSP before.

## 6.2 Testing the hypotheses

### 6.2.1 Environmental consciousness and demand for e-scooter-sharing

30 and thus the majority of participants stated that they would like to use e-scooter services in the future (71%), while only 29% plan on using them.

For testing the Hypothesis that there is a positive connection between environmental consciousness and demand for e-scooter-sharing the demand for e-scooter-sharing is the dependent variable, while the environmental consciousness is the independent one.

*H1: There is a positive connection between environmental consciousness and demand for e-scooter-sharing.*

The mean environmental consciousness of the participants that want to use e-scooter-sharing services in the future is M=71.00 (on a scale from 0 to 100, as mentioned before) (SD=19.25), while the mean of the respondents who don´t plan to

use that service is a bit lower at M=64.00 (SD?) but this difference is not significant (t(40)=-1.01, p=.319) (see Figure 10).

Thus, hypothesis 1 cannot be confirmed and it is concluded that there is no connection between environmental consciousness and individual demand for e-scooter-sharing.
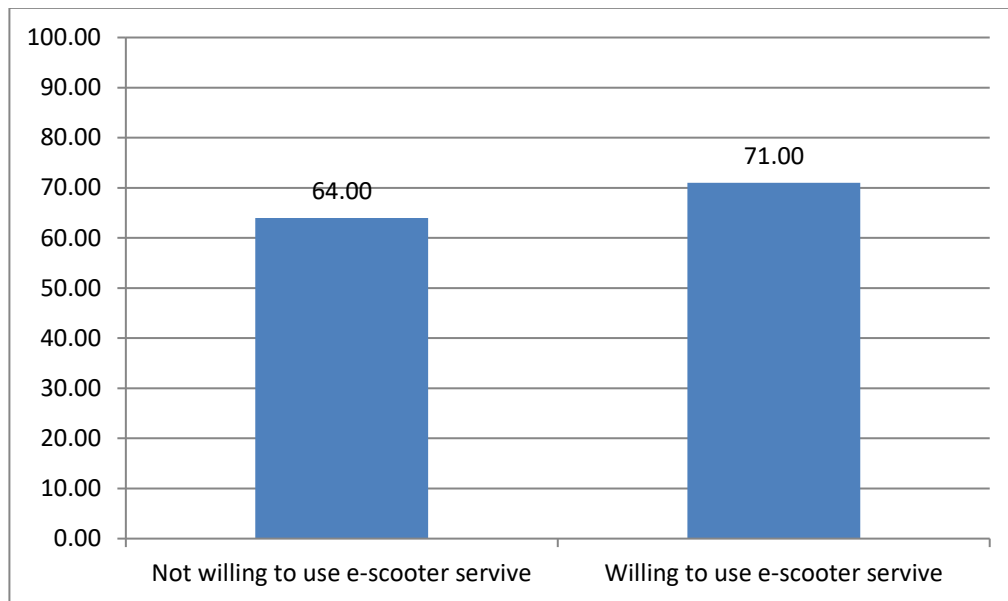


*Figure 10: Connection between environmental consciousness and individual demand for e-scooter-sharing*

### 6.2.2 Educational level and demand for e-scooter-sharing

*H2: There is a positive connection between formal education level and demand for e-scooter-sharing.*

73% and thus a high proportion of the participants holding a high-school diploma would like to use an e-scooter sharing service, while among the respondents without high-school diploma 69% plan on using it (see Figure 11). This difference is not significant ($\chi^2(1)=0.09$, p=.763, n=42), so hypothesis 2 cannot be confirmed which means that there is no connection between formal education level and demand for e-scooter sharing is maintained.
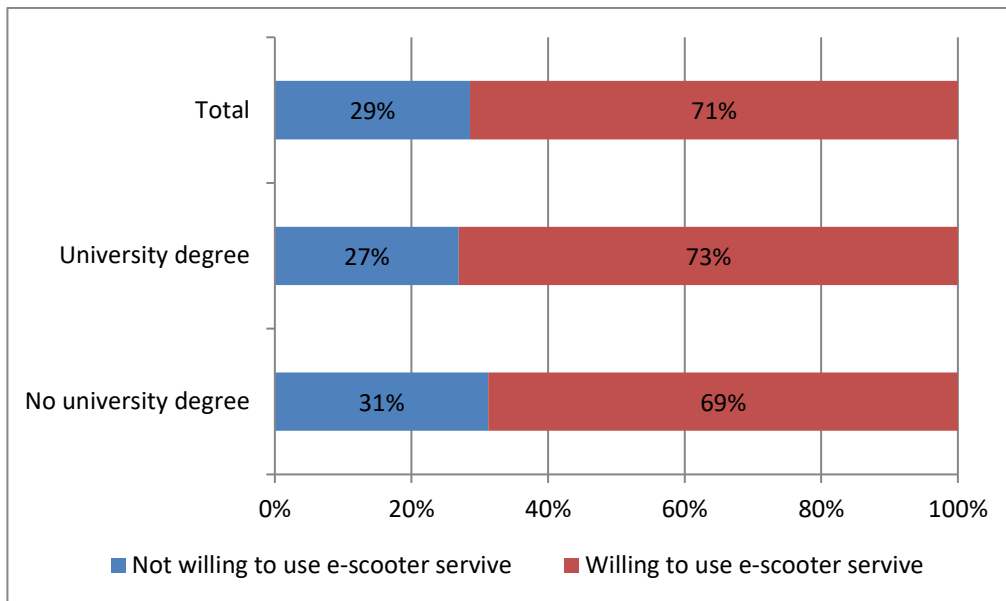
*Figure 11: Connection between formal education level and demand for e-scooter-sharing*

### 6.2.3 Use of shared mobility service provider (SMSP) and demand for e-scooter-sharing

*H3: There is no connection between primary choice of mobility and demand for e-scooter-sharing.*

*H4: Respondents who already used other forms of shared mobility will display a higher interest in e-scooter-sharing service.*

79% of the respondents that used a SMSP before are also willing to use a e-scooter-sharing service, while only 61% of the ones who didn´t use a SMSP before plan to use this service (see Figure 12). The observed difference was not significant ($\chi^2(1)=1,.64$, $p=.200$, $n=42$), so it is deduced that there is no connection between primary choice of mobility and demand for e-scooter-sharing.
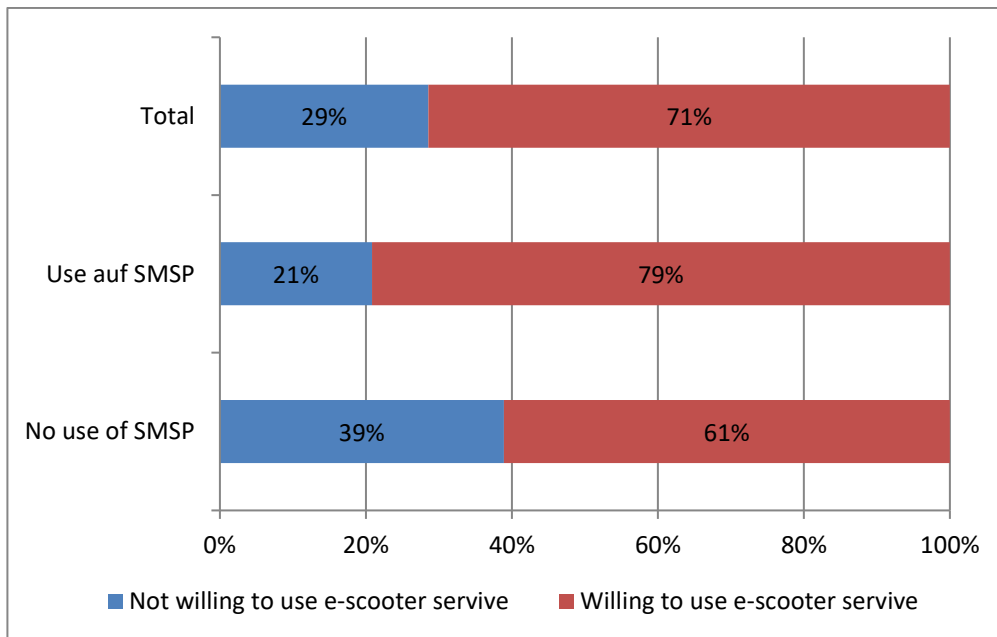
*Figure 12: Connection between use of a SMSP and demand for e-scooter-sharing*

## 6.2.4   Preferred means of transport and demand for e-scooter-sharing

*H5: Respondents who use bikes as their primary form of mobility will display an increased interest in e-scooter-sharing services compared to those using public transport and car users.*

84% and by that most of the respondents who prefer the public transport would also like to use a e-scooter-sharing service, while 56% of the ones who like to use the car most of the time and 64% of the ones who prefer the bicycle plan on using it (see Figure 13). Although the differences in the percentages seem big, there could no significant difference in the amount of people that plan on using an e-scooter-service in future be found between the groups of participants, who preferred a different means of transport like the car, bicycle or public transport (Fisher Exact Test: 3.08, p=202, n=42).

Therefore, hypothesis 5 was not confirmed and the preference of special means of transport has no statistical evident effect on the demand for e-scooter sharing.
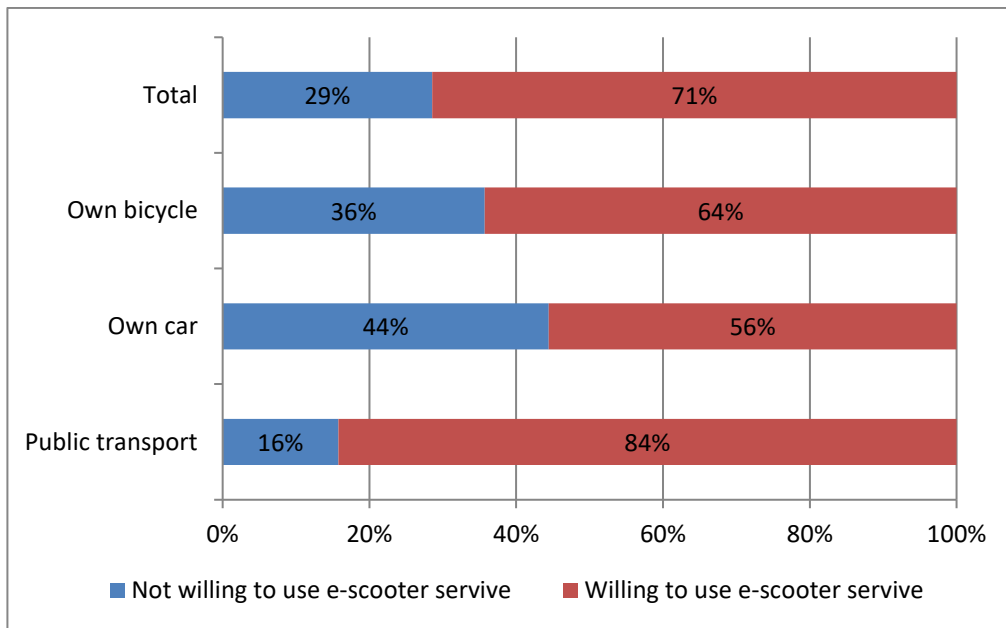
*Figure 13: Connection between the preferred means of transport and the demand for e-scooter-sharing*

### 6.2.5 Age and demand for e-scooter-sharing

*H6: Younger respondents will display an increased demand for e-scooter-sharing.*

For analyzing the question if the age of the participants influences their demand for e-scooter-sharing they were divided into 2 age groups. Respondents in the age of 35 or younger (n=34, 81%) were grouped in the first group and the ones over 35 in the second group (n=8, 19%).

In the younger age group (18-35 years) 77% are willing to share an e-scooter, while in the older group (over 35 years) only 50% plan on doing so (see Figure 14). The difference in the demand for e-scooter sharing in the two age groups is not significant ($\chi^2$(1)=2.22, p=.136, n=42).
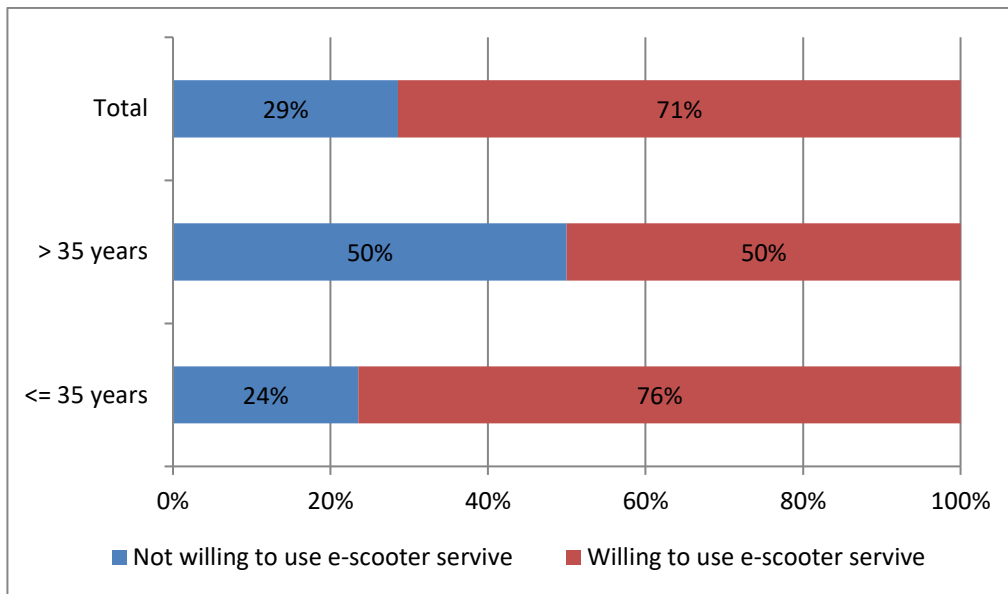
*Figure 14: There is no connection between age and demand for e-scooter-sharing*

## 6.3 Further analysis – intentions to use

64% of the respondents stated, that they would recommend the use of e-scooters to their friends, while 29% would not and 5% did not respond to that question.

A significant correlation between the intention to use an e-scooter by themselves and recommending it to friends was found (Cramer-V=.76, p<.001), so most of the participants that plan on using an e-scooter would also recommend doing so.

There is no correlation between the environmental awareness and the willingness to recommend the use of e-scooters to friends (t(37)=-0.04, p=.581). The respondents who think the use of e-scooters is advisable have a mean environmental awareness of M=69.79 (on a scale from 0 to 100, as mentioned before) (SD=22.47), while the ones that don´t think so have a mean environmental awareness of M=69.50 (SD=16.96).

How much the participants would prefer e-scooters that were entirely produced in the EU was rated on a scale from 0 to 100. The mean value of all responses was M=66.24 (SD=31.82). The preference is not dependent on the sex (t(40)=-1.46, p=.153) or age (r(s)=-.23, p=.145) of the participants. The education did not have a significant influence on the preference either (t(40)=0.69, p=.496).

55% of the respondents would prefer the rental price of an e-scooter that was produced in the EU, while 43% would rather choose the price of an e-scooter that was produced somewhere else. This difference is not significant ($\chi2(1)=0.61$, p=.435). 55% of the participants also preferred the daily rental fee for the e-scooters that were produced in the EU, while 41% choose the daily rental fee for e-scooters that were not produced in the EU (41%), but this difference was not significant either ($\chi2(1)=0.90$, p=.343).

## 6.4    Responses to the open questions

### 6.4.1    Advantages of e-scooter sharing

To the open question what the main advantages of e-scooter sharing are, most participants answers included the eco-friendliness, but also the availability and the price advantage compared to the purchase of an own e-scooter are often stated (see appendix 1). The service is described as convenient, easy to use which allows high mobility. The respondents also see a big advantage in e-scooter sharing because they do not have to pay for parking fees.

### 6.4.2    Disadvantages of e-scooter sharing

When questioned about the main disadvantages of e-scooter sharing, many participants stated the environmentally unfriendly production of the scooters and batteries (see appendix 1). Another point of criticism is the increased danger of accidents (especially under bad weather conditions) and a bigger volume of traffic induced by new e-scooter drivers. Some respondents also perceived the helmets, as they are shared among the users, as unhygienic. Another stated disadvantage was the availability of the service, as it is only usable in specific areas and not on the countryside.

# 7  Conclusion and Recommendations

In general terms, it has been established in this paper that sustainability aspects will continue to gain importance in marketing, as well as aspects of the Sharing Economy. As has been established in chapter 3.3, a lot of the driving factors for SSCM are constant, and will continue to grow in importance, while a lot of the barriers are not nearly as permanent, but resolvable and relatively easy to overcome (such as lack of training and understanding). It is therefore plausible to assume that many of the driving factors here will remain constant or grow, while at least some of the barriers will decrease in influence, leading to a more widespread implementation of SSCM.

Furthermore, this paper summarized a few key misconceptions regarding green marketing that need to be avoided in order to succeed. As was discussed in chapter 3.4.1, an increased environmental consciousness does not automatically lead to more green consumer choices. This seems to be supported by the survey data, which shows no connection between a self-proclaimed environmental consciousness and the demand for e-scooter sharing. Rather, it is a combination of external factors, namely availability and price which drive green consumer choices. The conclusion here is to focus on these aspects in green marketing rather than a purely moralistic approach.

In addition, while the hypotheses all tested negatively, there are some interesting insights among the open-ended questions. Environmental sustainability, availability and pricing compared to buying a scooter were frequently stated as advantages of goUrban's shared mobility concept. Therefore, a marketing campaign should focus on highlighting those aspects as they already seem to be anchored in public recognition as positive characteristics of goUrban's business model.

Availability also plays a big part in their decision process. Marking their e-scooters in their own App is a good idea and necessary for their business model. However, since customers need to download an App of a company they do not know at the beginning, could be a reason to look for another way of transport. In times of data privacy and transparency, downloading Apps especially where you have to give access to your location can become an entry barrier for some people. Therefore, there should be alternative possibilities of using the service that don't require the app, maybe an anonymous pre-paid service via the website.

Regarding the disadvantages, a key factor is the lack of sustainability in production of scooters and batteries. While this is an aspect that is difficult to change, maybe goUrban could improve its standing in this aspect by establishing and communicating recycling efforts in discarded engines and parts. Another option would be, as has been described, to use products from the EU exclusively, resulting in slightly higher per-minute fares. Furthermore, a lot of participants mentioned their issue with a lack of hygiene and the helmets. GoUrban already gives you disposable hygiene caps, which can only be used once and help you to not touch the inside of the helmet with your head. It is a great solution and most e-scooter sharing platforms actually use this solution. Looking at the survey, quite of lot of the people are still not informed about these hygiene measurements. Hence, it is recommended that goUrban to craft a long-lasting Marketing campaign showing these caps on their social media platforms and potentially talk about the cleanness of their helmets as they wash it every week.

Moreover, this thesis advises goUrban to inform the public on the benefits of using e-vehicles compared to average motor vehicles. For instance, compare the numbers and argue that in total the production of an e-scooter is still environmentally friendlier than producing a diesel-motor vehicle. After all, using these kind of transportation methods causes still no pollution at all and should also play a part in the public's thought process. Looking closely at some answers of the survey you can tell, that it is not even that important to the participants that the scooters are made within the EU, as long as people get some insights in the production process and price their rates competitively. To really make an impact and to change people's opinion on the long run, these advertisements and PR campaigns should run on a large scale. Maybe goUrban should collaborate with its competitors or even with the city of Vienna, as less pollution should also be a governmental issue and of huge interest for them.

In conclusion, answering the three research questions, one can state that there is a great potential for green Sharing Economy solutions, as the Sharing Economy as a whole is on the rise, and environmental consciousness has been expressed as a major factor by survey respondents. However, the second question, regarding specific target audiences, is not as easy to answer. The survey results in this matter are inconclusive, although, at best, this could possibly mean that a broad marketing campaign is advisable, since there is potential among all groups, at least in urban contexts.

Regarding the third question, main requirements couldn't be determined due to inconclusive results, but the steps proposed in the previous two paragraphs certainly could contribute to Green Shared Mobility concepts gaining more traction.

## 8 Future research and limitations of the study

Although this study provides important insights into people's perception of shared mobility providers, it is difficult to give specific recommendations to goUrban due to inconclusive survey results. Unfortunately, no significant correlations between target audiences and demand for Shared Mobility could be found. However, one has to keep in mind that the results are limited due to the relatively small sample size. Further evaluation of possible target audiences, especially through broader online surveys with larger samples, would therefore be among the foremost recommendations towards goUrban's expansion plans. Therefore, this study may lack some generalizability with regard to the target audience, which could not be determined. To overcome this shortcoming future research may address the same research problem in a different setting with a larger sample size, which may increase the representativeness of the sample to control the influence of extraneous variables. Finally, the generalization of the findings of this study is not globally applicable due to the above-mentioned limitations.

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# Appendices

## Appendix 1 - Survey questions and answers

### Q1 What is your gender?

Answered: 57   Skipped: 0
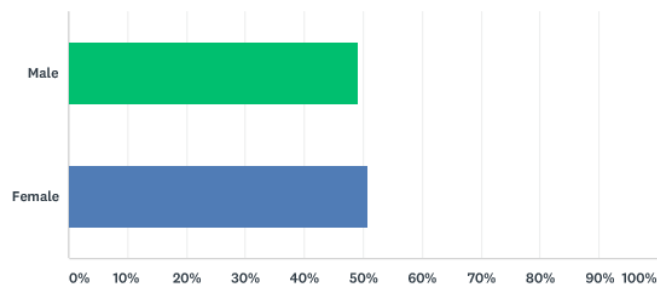


| ANSWER CHOICES | RESPONSES | |
|---|---|---|
| Male | 49.12% | 28 |
| Female | 50.88% | 29 |
| Total Respondents: 57 | | |

### Q2 How old are you?

Answered: 57   Skipped: 0
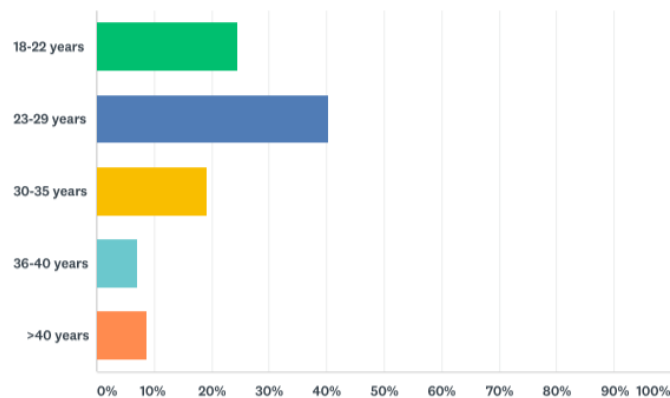


| ANSWER CHOICES | RESPONSES | |
|---|---|---|
| 18-22 years | 24.56% | 14 |
| 23-29 years | 40.35% | 23 |
| 30-35 years | 19.30% | 11 |
| 36-40 years | 7.02% | 4 |
| >40 years | 8.77% | 5 |
| Total Respondents: 57 | | |

## Q3 What is your occupation?

Answered: 57    Skipped: 0
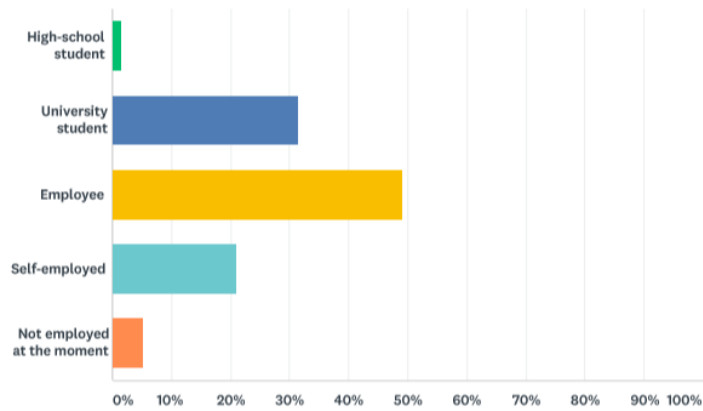


| ANSWER CHOICES | RESPONSES | |
|---|---|---|
| High-school student | 1.75% | 1 |
| University student | 31.58% | 18 |
| Employee | 49.12% | 28 |
| Self-employed | 21.05% | 12 |
| Not employed at the moment | 5.26% | 3 |
| Total Respondents: 57 | | |

## Q4 What is your highest level of education?

Answered: 56    Skipped: 1
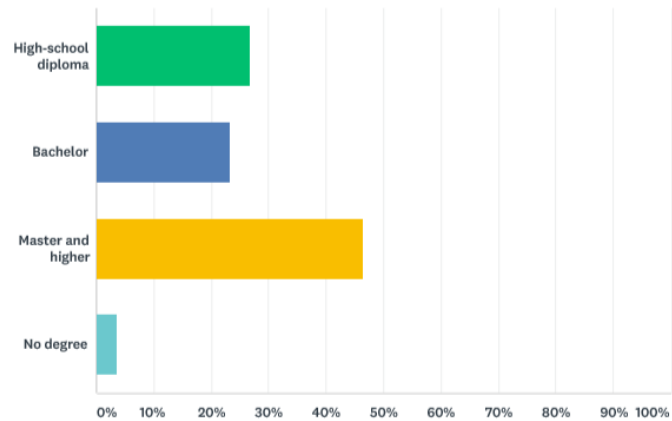


| ANSWER CHOICES | RESPONSES | |
|---|---|---|
| High-school diploma | 26.79% | 15 |
| Bachelor | 23.21% | 13 |
| Master and higher | 46.43% | 26 |
| No degree | 3.57% | 2 |
| Total Respondents: 56 | | |

## Q5 Where are you from?

Answered: 57    Skipped: 0
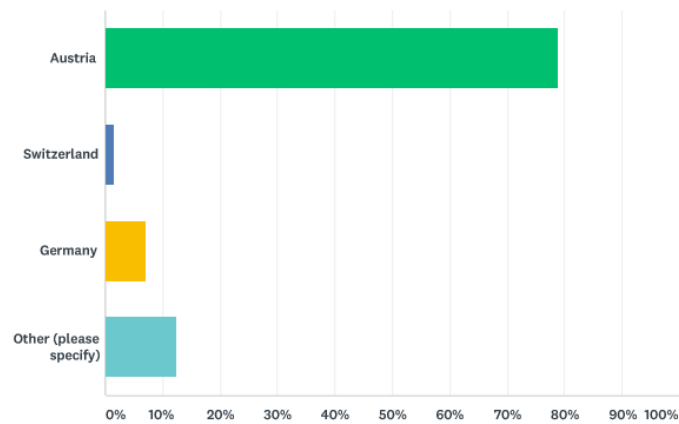


| ANSWER CHOICES | RESPONSES | |
|---|---|---|
| Austria | 78.95% | 45 |
| Switzerland | 1.75% | 1 |
| Germany | 7.02% | 4 |
| Other (please specify) | 12.28% | 7 |
| Total Respondents: 57 | | |

## Q6 Would you consider yourself as an environmentally conscious person? While 5 means, that it is very important to you.
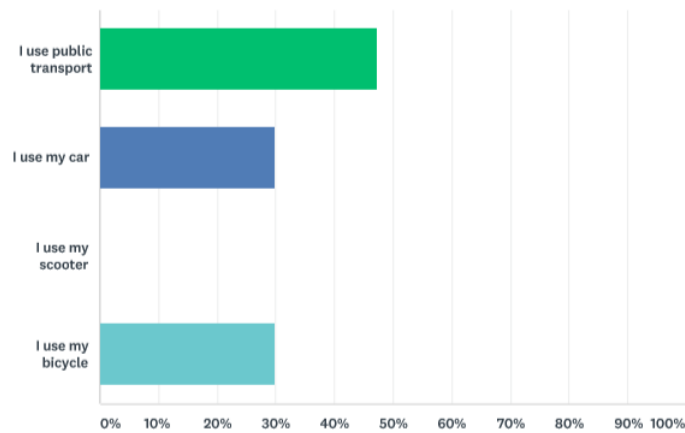
Answered: 57    Skipped: 0
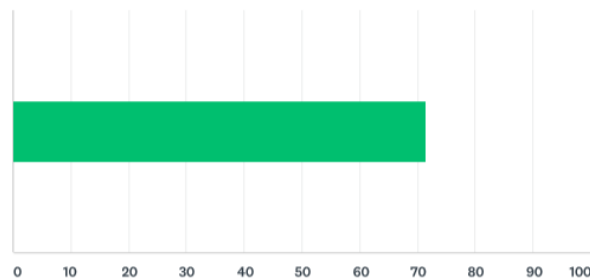


| ANSWER CHOICES | AVERAGE NUMBER | TOTAL NUMBER | RESPONSES |
|---|---|---|---|
| | 72 | 4,077 | 57 |
| Total Respondents: 57 | | | |

## Q7 How do you mainly move around in the city(>70% of the time)?

Answered: 57    Skipped: 0



| ANSWER CHOICES | RESPONSES | |
|---|---|---|
| I use public transport | 47.37% | 27 |
| I use my car | 29.82% | 17 |
| I use my scooter | 0.00% | 0 |
| I use my bicycle | 29.82% | 17 |
| Total Respondents: 57 | | |

## Q8 Why do you use your own car/scooter most in the city?Rank your answers by most likely to least

Answered: 15    Skipped: 42
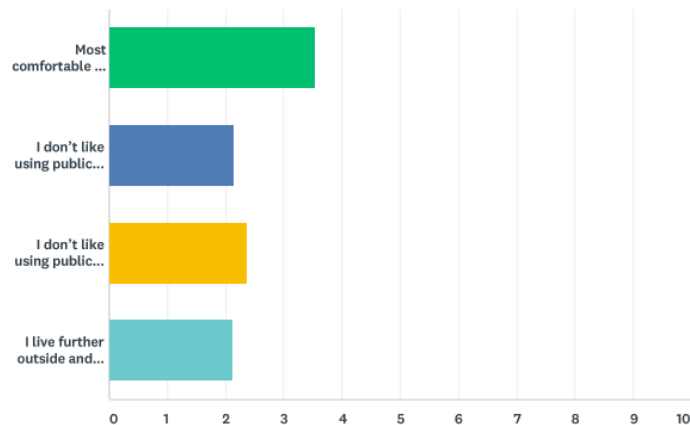


| | 1 | 2 | 3 | 4 | TOTAL | SCORE |
|---|---|---|---|---|---|---|
| Most comfortable way to move around in the city | 69.23% 9 | 15.38% 2 | 15.38% 2 | 0.00% 0 | 13 | 3.54 |
| I don't like using public transport because it is too slow for me | 7.69% 1 | 30.77% 4 | 30.77% 4 | 30.77% 4 | 13 | 2.15 |
| I don't like using public transport because it is too crowded for me | 14.29% 2 | 21.43% 3 | 50.00% 7 | 14.29% 2 | 14 | 2.36 |
| I live further outside and have to travel a lot in the city so I need the car in order to be faster | 14.29% 2 | 35.71% 5 | 0.00% 0 | 50.00% 7 | 14 | 2.14 |

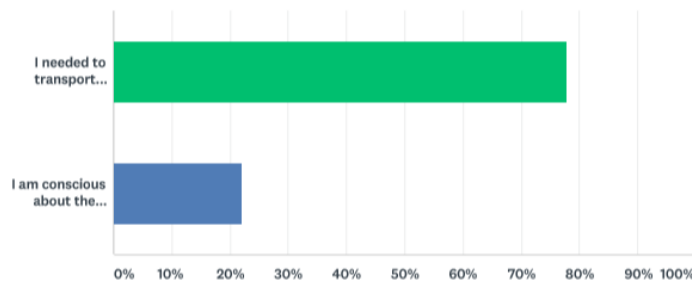## Q9 Have you ever used a shared mobility service provider?

Answered: 16    Skipped: 41
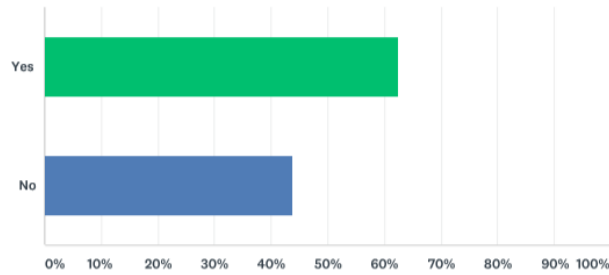


| ANSWER CHOICES | RESPONSES | |
| --- | --- | --- |
| Yes | 62.50% | 10 |
| No | 43.75% | 7 |
| Total Respondents: 16 | | |

## Q10 If Yes: What were the reasons you tried it? (multiple answers possible)If No, please skip to next question!

Answered: 9    Skipped: 48



| ANSWER CHOICES | RESPONSES | |
| --- | --- | --- |
| I needed to transport something and my car/scooter was too small | 77.78% | 7 |
| I am conscious about the environment and want to use a "greener" solution | 22.22% | 2 |
| TOTAL | | 9 |

## Q11 If No:What were the reasons you didn't try it? (multiple answers possible)If Yes, you have already answered it - so please skip to next question!

Answered: 8    Skipped: 49
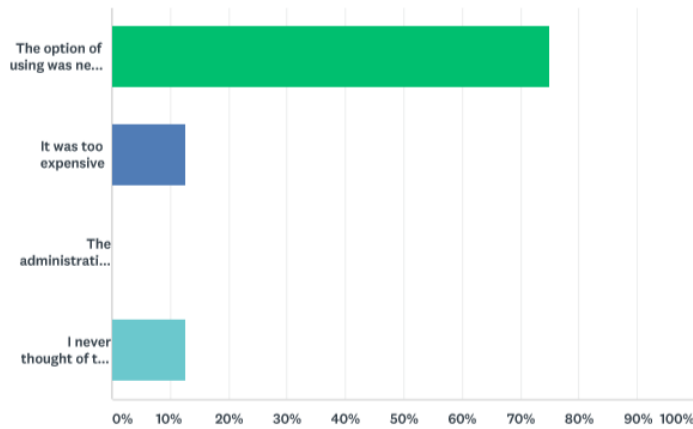


| ANSWER CHOICES | RESPONSES | |
|---|---|---|
| The option of using was never present for me e.g. I didn't get enough information on it/wasn't available for me | 75.00% | 6 |
| It was too expensive | 12.50% | 1 |
| The administration beforehand was too annoying and too lengthy | 0.00% | 0 |
| I never thought of the environmental impact using my car/scooter has on a daily basis | 12.50% | 1 |
| TOTAL | | 8 |

## Q12 Why do you use your own bicycle most in the city?Rank your answers by most likely to least

Answered: 13    Skipped: 44
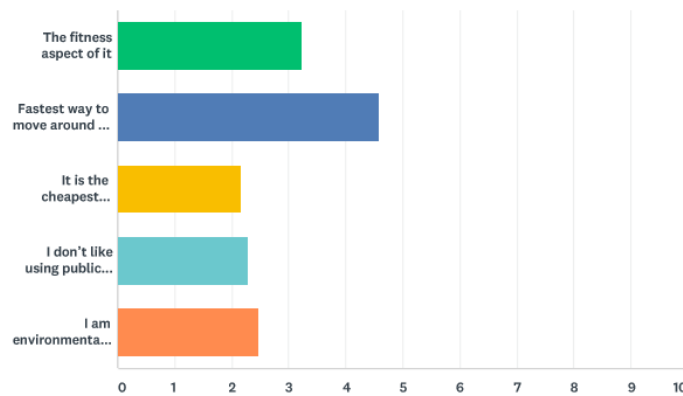


| | 1 | 2 | 3 | 4 | 5 | TOTAL | SCORE |
|---|---|---|---|---|---|---|---|
| The fitness aspect of it | 8.33% 1 | 41.67% 5 | 25.00% 3 | 16.67% 2 | 8.33% 1 | 12 | 3.25 |
| Fastest way to move around in the city | 75.00% 9 | 16.67% 2 | 0.00% 0 | 8.33% 1 | 0.00% 0 | 12 | 4.58 |
| It is the cheapest transportation I know | 8.33% 1 | 16.67% 2 | 0.00% 0 | 33.33% 4 | 41.67% 5 | 12 | 2.17 |
| I don't like using public transport because it is too crowded for me | 0.00% 0 | 18.18% 2 | 27.27% 3 | 18.18% 2 | 36.36% 4 | 11 | 2.27 |
| I am environmentally conscious | 0.00% 0 | 7.69% 1 | 46.15% 6 | 30.77% 4 | 15.38% 2 | 13 | 2.46 |

76

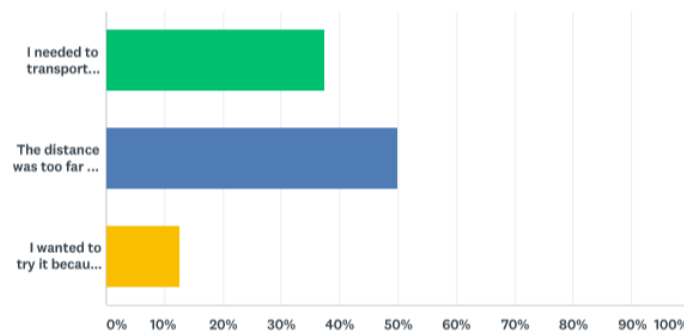## Q13 Have you ever used a shared mobility service provider?

Answered: 14    Skipped: 43
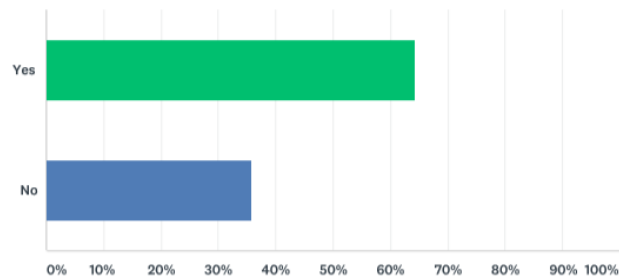


| ANSWER CHOICES | RESPONSES | |
|---|---|---|
| Yes | 64.29% | 9 |
| No | 35.71% | 5 |
| Total Respondents: 14 | | |

## Q14 If Yes: What were the reasons you tried it? (multiple answers possible)If No, please skip to next question!

Answered: 8    Skipped: 49



| ANSWER CHOICES | RESPONSES | |
|---|---|---|
| I needed to transport something and I couldn't with my bicycle | 37.50% | 3 |
| The distance was too far to ride with my bike | 50.00% | 4 |
| I wanted to try it because I saw a great offer in an ad | 12.50% | 1 |
| TOTAL | | 8 |

## Q15 If No:What were the reasons you didn't try it? (multiple answers possible)If Yes, you have already answered it - so please skip to next question!

Answered: 3    Skipped: 54
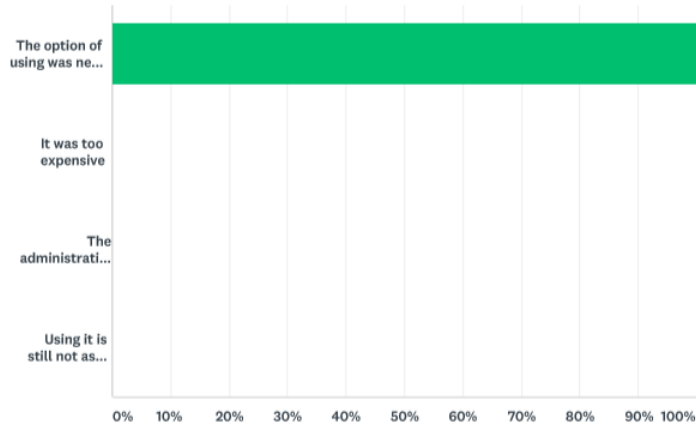


| ANSWER CHOICES | RESPONSES | |
|---|---|---|
| The option of using was never present for me e.g. I didn't get enough information on it/wasn't available for me | 100.00% | 3 |
| It was too expensive | 0.00% | 0 |
| The administration beforehand was too annoying and too lengthy | 0.00% | 0 |
| Using it is still not as environmentally friendly as using my bike | 0.00% | 0 |
| TOTAL | | 3 |

## Q16 Why do you use public transport?Rank your answers by most likely to least likely:

Answered: 26    Skipped: 31
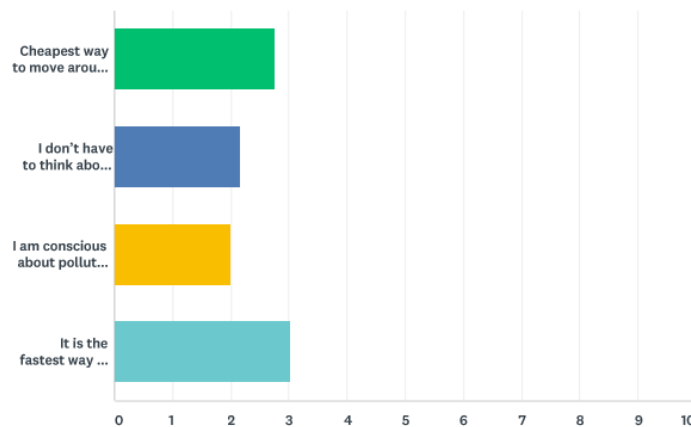


| | 1 | 2 | 3 | 4 | TOTAL | SCORE |
|---|---|---|---|---|---|---|
| Cheapest way to move around in the city | 28.00% 7 | 36.00% 9 | 20.00% 5 | 16.00% 4 | 25 | 2.76 |
| I don't have to think about finding a parking space | 8.33% 2 | 25.00% 6 | 41.67% 10 | 25.00% 6 | 24 | 2.17 |
| I am conscious about pollution and think that this is the most environmentally friendly way | 11.54% 3 | 19.23% 5 | 26.92% 7 | 42.31% 11 | 26 | 2.00 |
| It is the fastest way to get me through the city due to traffic jams etc. | 52.17% 12 | 17.39% 4 | 13.04% 3 | 17.39% 4 | 23 | 3.04 |

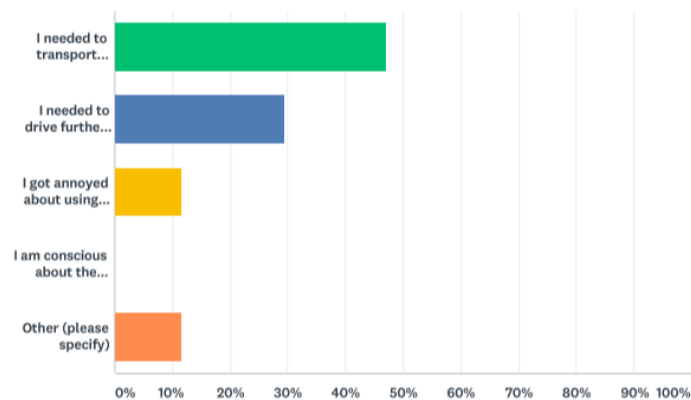## Q17 Have you ever used a shared mobility service provider?

Answered: 28     Skipped: 29
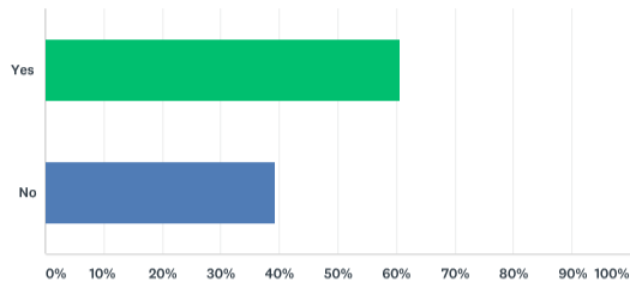


| ANSWER CHOICES | RESPONSES | |
|---|---|---|
| Yes | 60.71% | 17 |
| No | 39.29% | 11 |
| Total Respondents: 28 | | |

## Q18 If Yes: What were the reasons you tried it? (multiple answers possible)If No, please skip to next question!

Answered: 17     Skipped: 40



| ANSWER CHOICES | RESPONSES | |
|---|---|---|
| I needed to transport something and it was still cheaper than using an Uber or a Taxi | 47.06% | 8 |
| I needed to drive further out of the city and taking public transport would be a pain | 29.41% | 5 |
| I got annoyed about using public transport and wanted to drive independently for a while | 11.76% | 2 |
| I am conscious about the environment and want to use a "green" solution | 0.00% | 0 |
| Other (please specify) | 11.76% | 2 |
| TOTAL | | 17 |

| # | OTHER (PLEASE SPECIFY) | DATE |
|---|---|---|
| 1 | I didn't want to walk | 9/2/2018 10:48 AM |
| 2 | Was late and there is no public transport available | 9/1/2018 5:21 PM |

## Q19 If No:What were the reasons you didn't try it? (multiple answers possible)If Yes, you have already answered it - so please skip to next question!

Answered: 15    Skipped: 42
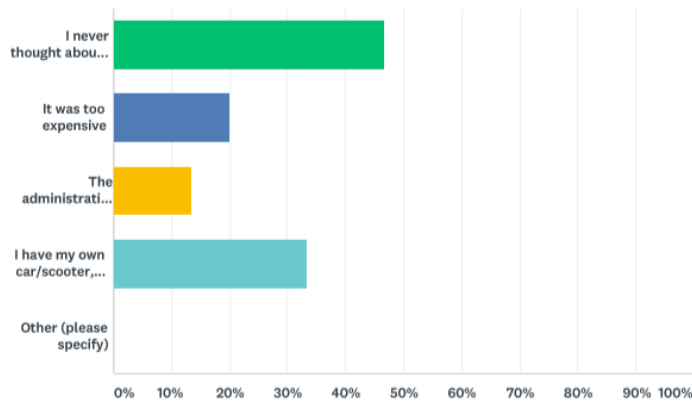


| ANSWER CHOICES | RESPONSES | |
|---|---|---|
| I never thought about it because I am perfectly fine with the public transport | 46.67% | 7 |
| It was too expensive | 20.00% | 3 |
| The administration beforehand was too annoying and too lengthy | 13.33% | 2 |
| I have my own car/scooter, I just don't use it very often | 33.33% | 5 |
| Other (please specify) | 0.00% | 0 |
| Total Respondents: 15 | | |

| # | OTHER (PLEASE SPECIFY) | DATE |
|---|---|---|
| | There are no responses. | |

## Q20 E-Scooters rentals are pretty new on the market and using it as a shared mobility service provider are even newer. What do you think are the pro's and con's about such a service? Please write at least 3 Pros!

- Eco-friendly - Allow flexibility - (In Vienna) no parking fees

- the engine only uses electricity   - the mobility is very high   - it is simple to use

-Fast - Low Noise - No exhaust gases

+ cheaper than buying your own scooter + environmentally friendly (Not the production and the disposal)  + easy to find parking spaces (compared to cars)

+greener environment   +much cheaper   +fast way to travel

+opens a new market niche + easier to implement in the market due to a lot of sharing platforms using diesel  +less environmental footprint

1 No fuel emissions   2 silent

Avoiding traffic   Protection of the environment   Cheaper than one-way-tickets

Better for the environment  sustainable  shared economy

Cheap easy convenient

cheap service, fast, environmental sustainable

cheap, convenient fast

Cheaper than buying an own one   Better than a Car in City traffic   Maybe fun factor      Still no friend of E-Mobility

Cheaper than SharedCars

Cheaper then own one; no parking fee; you pay just when you need it;

Easy   Cheap  Environmentally friendly

Easy parking  Fast  Cheap

Easy to find  Easy to sign up  Cheap  Can leave it anywhere

Eco friendly, mobility, low priced

environmental friendly, cheap, easy to get a parking lot

Environmentally friendly   Silent   People do damage

everyone can use it  cheaper than getting your own scooter  good for a city's global image

Fast  Cheap

Fast  easy parking  cheap

Fast, no big parking needed,

Fastest and no Parking problems. Depends

I think in smaller cities the possibilities are not so big

Keine Abgase, umweltfreundlich, praktisch

Less parking problems  cheaper than car-sharing  Fast

money & accessibility

No need to purchase a Scooter.  Cheaper than purchasing one.  environmentally friendly

Ökonomisch, weil keine Abgase  Keine Steuern, kein Benzinverbrauch

Parking  Mobility  Ecological

pro easy  fast  no parking problems

Quick possibility of transportation,   More comfortable than crowded public transportation,  Faster than public transportation

Quick way around the city  Easy to find parking  No traffic jams    Shared helmets

Silent, comfortable for young people,  cheap

Weniger Stau. Umweltschutz. Spontan nutzbar.

## Q21 E-Scooters rentals are quite new on the market and using it as a shared mobility service provider is even newer. What do you think are the pro's and con's about such a service? Please write at least 3 Cons!

- Expensive   - Not always in reach  - Restricted area of usage

- it is not established yet   - it doesn't provide much space   - it is dependent on the weather condition

- less distance  -charging speed  -no benefit for consumers who don't think about the environment

- production and disposal are not environmentally friendly  - could cause more accidents (especially in winter) - could cause more traffic in the City (People who used public transport before)

-Not drivable in winter  -Production of batteries pollute environment  -Availability

1 availability   2 even though they don't emit harmful substances, the CO2 footprint of most electric vehicles are higher than common fuel powers vehicles.   3. Charging times are very high

Dangerous  Damage prone  Where to pick it up?

Dangerous  Weather conditions  Vandalism

Dangerous , not hygienic to share helmets, not nice if the weather is bad

Fastest way  and easy  for Parking. Bad Luck if IT rains or snowing or Cold weather.

High risk of accidents due to inexperienced drivers  Helmet sharing   Low availability

Hygiene

It is not sure if e-scooters always run with "green energy",  No bad weather solution,

Keine Abgase, umweltfreundlich, praktisch

less traffic, traffic noise   batteries are still not green

May be viewed as a nuisance in residential areas when left unused  Not as fast as cars  Limited battery

more dangerous  weather (rain, snow)  no extra transport

Need for planning ahead when using Shared transportation.  Need of additional transportation to an from the Scooter.  Flexibility limited

Not always available  Sometime big effort to get one  Not as environmentally friendly as many people think it is

Not usable for far distance, heavier than bikes, availability

not working out in rural environment  need urban surroundings  people must be open for sharing economy

Prize  Dangerous  Weather

risk of misuse  risk of accident  less use of public transport or bike

Shared helmet  Just one helmet

Sometimes far away  Only for 2 persons  Not available during colder months

the pro is you are faster than per car. It is a possibility for young people.

the technology of the e-scooters needs to be improved to be a safe "transporting system", it needs a lot of electricity: how environmental-friendly is it in reality?  battery of the e-scooter (like the e-bikes) might be dangerous

Theft slow limited to one person

To be decided where to go, on road or passenger way? Scooter stations provided. Organization of managing.

Unsicher im Straßenverkehr   Hässlich   Produced in china?

Verfügbarkeit ungewiss. Umständlich, falls Verteilung der Scooter eher gering ist. Zu teuer, bei regelmäßiger Nutzung
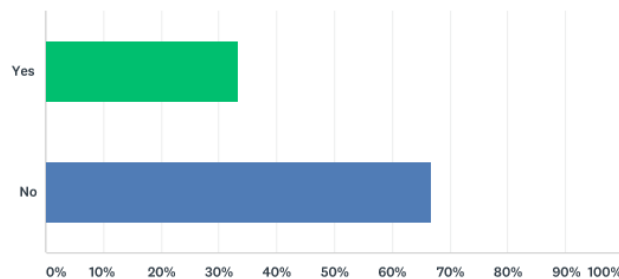
Weather  no storage  small range

weather, safety, price

## Q22 Do you think you have enough information about this business sector?

Answered: 42    Skipped: 15



| ANSWER CHOICES | RESPONSES | |
|---|---|---|
| Yes | 33.33% | 14 |
| No | 66.67% | 28 |
| Total Respondents: 42 | | |

## Q23 Regarding e-mobility in general. What are your thoughts about this rather new trend?

| # | RESPONSES |
|---|-----------|
| 1 | Sustainably, Necessary |
| 2 | E-mobility enables every vehicle to be motorized, which revolutionizes transport in general |
| 3 | like i mentioned before there is not much experience concerning e-mobility and I don't believe that it's more environmental friendly that using a car with petrol because most of the electricity is produced in nuclear power plants, I also believe that you need a lot more electricity if the e-mobility sector will grow and that means more nuclear power plants?! |
| 4 | Schutz der Umwelt |
| 5 | Not as enviromentally friendliy as it seems to be. |
| 6 | Good alternative |
| 7 | I didn't think about it |
| 8 | Electronic cars and scooters are at the end of the day not much more environment friendly because batteries are unrecyclable. We wait for the H20-mobility |
| 9 | Cool |
| 10 | Nice |
| 11 | Right way, specially for public traffic! |
| 12 | As I can tell it is interesting how our technology is evolving and I think this is very important, due to the fact that gasoline produces much waste what effects our whole environment. |
| 13 | Good and necessary |
| 14 | dont know |
| 15 | E-mobility is only good for the environment if the electricity comes from renewable or "green" resources. If it comes for example from a coal-fired powerstation its much worse than a diesel-powerd car |
| 16 | interesting but not developed enough! security lacks (they are super quiet) their range is often too small |
| 17 | Think it willl become very important in the future. The scarcity of fuel and the increasing developement of batteries will push e-mobility further. |
| 18 | It's a common trend but I believe a lot of the people get fooled bye "being environmentally conscious". The fact is that there is no clever way yet to store recycle or destroy e waste without harming the earth. Don't get me wrong fuel powered vehicles aren't any better it's just not the perfect solution we are looking for. |
| 19 | Bad for the Environment at the moment |
| 20 | If batteries improve it's a very good trend |
| 21 | Nothing particular |
| 22 | love it |
| 23 | so, so ? ;) |
| 24 | I have no thoughts about this |
| 25 | It's great, as far as I know it needs a little more research especially regarding the batteries and their disposal |
| 26 | Super Sache, solange die Batterie nicht entsorgt werden muss. |

| 27 | Depends from charger Systems and Power supply |
|----|---|
| 28 | I think is a good way to reduce pollution in the cities (but depending on were is that energy coming from) and also to reduce noise (always when is not dangerous for pedestrians) |
| 29 | Future transportation; less polution; great if more possibilities to load the batteries |
| 30 | Great! |
| 31 | Good way to travel cheap and fast. It is also providing a greener environment |
| 32 | Improves quality of life |
| 33 | It is a new trend I am not sure if it is a trend for the future |
| 34 | Very futuristic and probably not fully thought through |
| 35 | Eco friendly alternative and sustainable |
| 36 | infrastructure, recycling of batteries, usage |
| 37 | xxx |
| 38 | great new development |

## Q24 I find it important to know where the parts of the scooter are fabricated.(Rank it on a scale from 1-5 while 5 means it is very important to me)
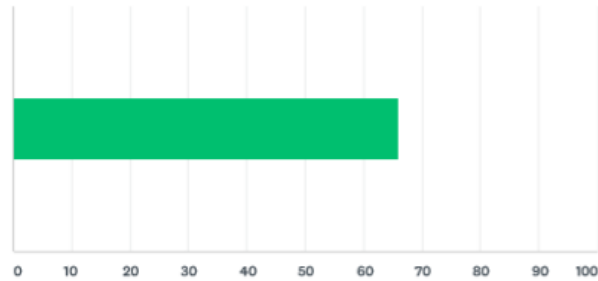
Answered: 43    Skipped: 14
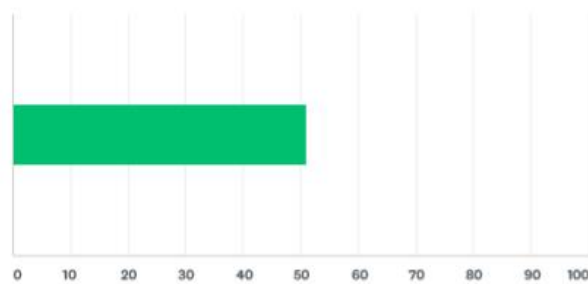


| ANSWER CHOICES | AVERAGE NUMBER | TOTAL NUMBER | RESPONSES |
|---|---|---|---|
| | 51 | 2,191 | 43 |
| Total Respondents: 43 | | | |

## Q25 I prefer products made within the European Union over products sourced outside the EU.(Rank it on a scale from 1-5 while 5 means that I prefer it a lot)
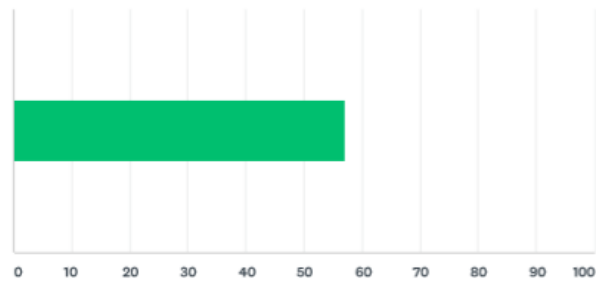
Answered: 43   Skipped: 14



| ANSWER CHOICES | AVERAGE NUMBER | TOTAL NUMBER | RESPONSES |
|---|---|---|---|
| | 66 | 2,842 | 43 |
| Total Respondents: 43 | | | |

## Q26 I am willing to pay more for a rental if I know all elements are produced locally.(Rank it on a scale from 1-5 while 5 means that I am willing to pay a lot more)
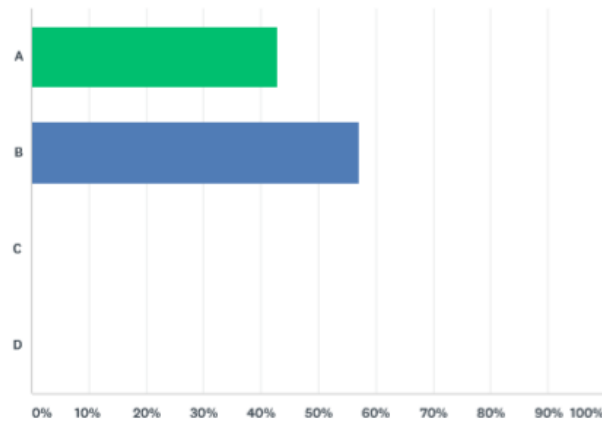
Answered: 43   Skipped: 14



| ANSWER CHOICES | AVERAGE NUMBER | TOTAL NUMBER | RESPONSES |
|---|---|---|---|
| | 57 | 2,452 | 43 |
| Total Respondents: 43 | | | |

Q27 Now imagine you are about to hire an e-scooter. Which ad is the most appealing to you?You will find the images attached. Please choose one option.

Answered: 42    Skipped: 15



| ANSWER CHOICES | RESPONSES | |
| --- | --- | --- |
| A | 42.86% | 18 |
| B | 57.14% | 24 |
| C | 0.00% | 0 |
| D | 0.00% | 0 |
| TOTAL | | 42 |

Advertisement pictures for Q27 and Q28:

## B Ready to change the way you drive completely?

Tired of wasting money on gasoline and feeling like saving the planet bit by bit?

Use our e-scooter sharing platform and use your e-scooter whenever and wherever you are!
Stress-free and with our super easy registration process.

Our e-scooters are all sourced from a local production and we can proudly say, that we are MADE IN EUROPE.

**0.24€** per minute
(parking: €0.14) per minute

## C Ready to change the way you drive completely?

Tired of wasting money on gasoline and feeling like saving the planet bit by bit?

Use our e-scooter sharing platform and use your e-scooter whenever and wherever you are!
Stress-free and with our super easy registration process.

Our e-scooters are all sourced from a local production and we can proudly say, that we are MADE IN EUROPE.

**35,90€** day flat rate

## D Ready to change the way you drive completely?

Tired of wasting money on gasoline and feeling like saving the planet bit by bit?

Use our e-scooter sharing platform and use your e-scooter whenever and wherever you are!
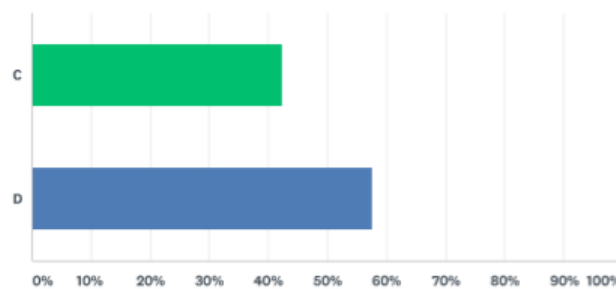Stress-free and with our super easy registration process.

**29,90€** day flat rate

## Q28 Now imagine you are about to hire an e-scooter. Which ad is the most appealing to you?You will find the images attached. Please choose one option.
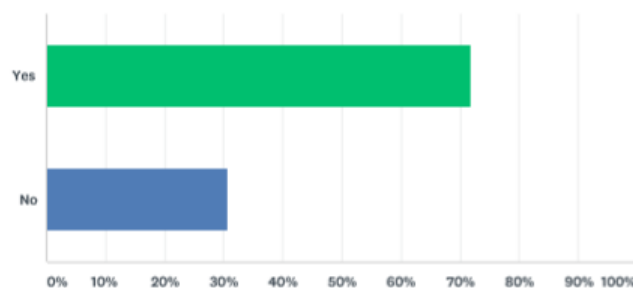
Answered: 40    Skipped: 17

| ANSWER CHOICES | RESPONSES | |
|---|---|---|
| C | 42.50% | 17 |
| D | 57.50% | 23 |
| TOTAL | | 40 |

## Q29 Would you recommend your friends to use e-scooters?

Answered: 39    Skipped: 18

| ANSWER CHOICES | RESPONSES | |
|---|---|---|
| Yes | 71.79% | 28 |
| No | 30.77% | 12 |
| Total Respondents: 39 | | |

## Q30 Would you be willing to use this service yourself in the future?

Answered: 42    Skipped: 15
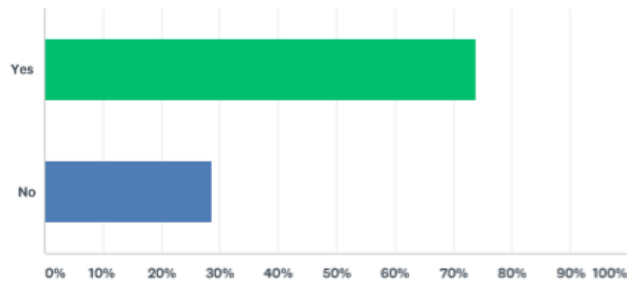


| ANSWER CHOICES | RESPONSES | |
|---|---|---|
| Yes | 73.81% | 31 |
| No | 28.57% | 12 |
| Total Respondents: 42 | | |

## Q31 Under which circumstances would you be willing to use it in the future? Please try to be as specific as possible.

| # | RESPONSES |
|---|---|
| 1 | If I would have no car by my own |
| 2 | As an alternative for public transport |
| 3 | If I knew that the electricity isn't provided by nuclear power plants |
| 4 | When there is no other option for me. |
| 5 | For a cheap price |
| 6 | Easy procedure to hire, hygienic solutions for the helmet |
| 7 | Getting around |
| 8 | Right weather conditions Prize Availability Not enough public transport coverage |
| 9 | Living on country, not in the city. |
| 10 | when I have a limited amount of time and I want to get from point A to B very fast I would probably use the scooter and of course when the weather is nice . |
| 11 | Availability of scooters near to my locations |
| 12 | to drive to a party whrere i need to be fast and dont want to search for a parking lot and i can levae it there |
| 13 | For longer distances where I would not use the bycicle. If I had more destinations it would be way more comfortable than public transportation. |
| 14 | more secure good introduction more know how about scooters in general |
| 15 | If it is sunny outside and Due to the distance it is more convinient to drive with the scooter rather than taking the subway. |
| 16 | 2 seats, 2 helmets, space for shopping items |
| 17 | I simply would not. I can't really see any benefit. If charging times were lower and prices and the waste problem would be solved I'd be willing to give it a try. |
| 18 | During summer to avoid the tram. |
| 19 | If I am on vacation in another big city a would maybe rent one of these. |
| 20 | Instead of paying a public transport ticket, with an e-scooter right next to me |
| 21 | affordable advantages compared to "normal" transport should be striking/pronounced good insurance good telephone service in case of emergency or issues with bike |
| 22 | money & accessibility |
| 23 | Wenn der Weg mit Fahrrad zu lang wäre (40 Minuten aufwärts) |
| 24 | Enough scooters available within my region |
| 25 | Bequem von zu Hause aus funktioniert. Verteilung und Greifbarkeit. Fahrsicherheit, Scooter in einwandfreien Zustand |
| 26 | Easy to use and depends from costs |
| 27 | I will not use it because I consider scooters and motorbikes in general quite dangerous |
| 28 | Anyway scooter are dangerous in traffic |
| 29 | If its easy to pick it up in my neighbourhood |

| 30 | If cars are not allowed anymore nearby the city, I would choose an electric scooter |
| 31 | If easily available |
| 32 | If I am in the mood I will try it |
| 33 | If using Cars in the City was limited |
| 34 | If its available in my city and affordable for me |
| 35 | user friendly system |
| 36 | xx |

## Q32 Which e-scooter sharing platforms do you actually know and can you name them please. If you don't know any, please leave the comment box blank.

| # | RESPONSES |
| --- | --- |
| 1 | Emmy (Berlina), Coup (Berlin), ÖAMTC Scooter Sharing |
| 2 | I don't know one |
| 3 | Bird , Lime |
| 4 | GoUrban |
| 5 | Go Urban |
| 6 | Emmy Scoopy |
| 7 | goUrban |
| 8 | Mo drive Sco2t Gourban |
| 9 | go Urban |
| 10 | GoUrban Scoot2com öamtc scooter sharing The most common ones in Vienna |
| 11 | Gourban |
| 12 | GoUrban ÖAMTC |
| 13 | isn't there one from uber? |
| 14 | Yoom |
| 15 | I do not know any |
| 16 | xxx |