SI-DRIVE
Social Innovation: Driving Force of Social Change

SOCIAL INNOVATION IN MOBILITY AND TRANSPORT: CASE STUDY RESULTS

POLICY FIELD MOBILITY AND TRANSPORT
D8.3

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Remark:
This case study summary is an own interpretation of the case study conductors and policy field leaders based on the information and data accessible and given by the initiatives.

1 INTRODUCTION

Two central challenges make mobility and transport a fundamental field for studying social innovation from a European perspective. First, the challenge of overcoming the currently high CO_2 emission, air pollution, congestion, and noise levels. There is potential to reduce these negative effects of transport through social innovations. Secondly, mobility is a key characteristic of a modern society in order to give access to places, goods and services and thus it is central for getting access to societal life. Ensuring the mobility of all groups of society is a crucial step for moving towards a socially inclusive society and a territorially cohesive European Union. As these current challenges will not be tackled easily, they will also remain to be of future relevance, especially against the background of an expected increase of transport during the next decades.

A key objective of the European Union's council of Ministers of Transport is establishing **sustainable mobility and transport systems** characterised by low energy consumption and improved mobility for users through better transport times and routes[1]. Besides congestion and high noise levels, the main argument for the current mobility and transport system being not sustainable is the significant oil dependency and high causation of CO_2 emissions (EC 2011).

An important strategy for realising a sustainable transport system is the *avoid-shift-improve* (ASI) approach: If possible, trips should be avoided, shifted towards non-motorised or public transport modes, and technological advancements should improve transport modes in terms of energy efficiency (Koch et al. 2005, Bakker et al. 2014). The ASI approach was developed two decades ago in Germany and by now has experienced vast diffusion through major policy programs (though it is sometimes labelled differently or followed without direct mentioning). At EU-level, emphasis is put on shifting transport towards non-motorised or public transport and on improving technological components in order to achieve high energy efficiency. For example, the European Commission's communication on 'A sustainable future for transport' supports an integrated, technology-led and user-friendly transport system (cf. EC 2009). This shall be realised through maintenance of infrastructure, safety and security issues, technologies that accelerate the transition to a low-carbon society, market opening and fostering competition. Behavioural change towards transport avoidance, for example through education and information activities, plays a less prominent role.

The second major challenge is ensuring mobility of all groups of society in order to give access to places, goods and services. The objective resulting from this challenge is achieving inclusive mobility and transport systems that do not exclude parts of society through limited transport options. Church and Frost (1999, cited from Gaffron et al. 2001, p. 8f.) concretise social exclusion connected to transport by defining the following, often intertwined categories:

- "physical exclusion
  - barriers that inhibit accessibility of services; such barriers affect many groups of people such as children, the elderly, people with shopping or prams, the mobility or visually impaired, people with hearing impairments or those who do not speak English [or other countries' languages, the authors]
- geographical exclusion
  - peripheral, poor transport provision and resulting inaccessibility can create exclusion not just in rural areas but also in areas on the urban fringe or in smaller towns and cities
- exclusion from facilities
  - distance of facilities (shopping, health, leisure, education) form people ' s homes, making access, especially without a car difficult; this problem is exacerbated by the growing popularity of out of centre facilities and "flight" of facilities (post-offices, banks, shops and supermarkets) form problem areas
- economic exclusion
  - high monetary and temporal costs of travel can prevent or limit access to jobs and thus income time-based exclusion
  - difficulties pertaining to the organisation of childcare and other caring commitments while allowing adequate time to travel given transport network constraints

[1] http://www.consilium.europa.eu/policies/tte?lang=en. In fact, the understanding of the term "sustainability" in the referred document and in transport and mobility more general, is clearly related to the term's ecological dimension (CO_2 reduction as means to mitigate climate change). Social and economic issues as the other two sustainability dimensions are of minor priority.

- fear-based exclusion
    - worry, fear and even terror influence how public spaces and public transport are used, especially by women, children and the elderly
- space exclusion
    - security and space management strategies can discourage socially excluded individuals from using public transport spaces".

A widely accepted strategy to achieving the objective of inclusive mobility systems is the 4A-approach that is also of relevance for other policy fields such as health and education. Mobility and transport have to be *available, accessible*, *affordable*, and *acceptable* (see UN 2013). A transport mode has to be existent where people live and work (available). Its usage should be convenient in terms of waiting time, the provided information, and should not exclude some groups (e.g. people with reduced mobility) (accessible). It should be financially affordable for all. Last but not least it should be designed in a way that people can use a transport mode without fear and concerns. This means it should be adjusted to cultural values and norms of its societal context (acceptable).

Next to an environmental/sustainability and social/inclusive dimension, the policy field of mobility and transport has a strong economic dimension. Transport is an important economic sector with considerable share of GDP in many countries (cf. Rodrigue 2013) and a plethora of other sectors depend on transport infrastructures and logistics. Examples are sectors based on the trade of goods and tourism. Economics of mobility and transport are strongly interwoven with social change. This may be exemplified by five waves of socio-economic development showing the interrelatedness of economic growth and transport: seaports and the early development of international trade, rivers and canals and inland distribution systems for heavy goods, railways (freight, accessibility, mobility of passengers), roads (industrial and commercial markets, door-to-door delivery), airways and information technologies (economic globalisation) (cf. Rodrigue 2013).

Against this background, this comparative SI-Drive report contains case study analyses of social innovation initiatives in transport and mobility, which refer to the challenges and approaches mentioned above. The overall aim is to elaborate how practice fields of social innovation (understood as bundles of similar social innovation initiatives) contribute to the social change necessary for tackling the challenges.

The report is structured as follows: It commences with elaborating the methodology applied across all SI-Drive policy fields in order to make transparent the approach of data generation. It then discusses characteristics of the practice field of shared car usage by focussing on e.g. its learning mechanisms, actors involved and growth attributes; and by analysing related in-depth case studies conducted as part of the SI-Drive's empirical work. The same analytical approach is then applied to the practice field mobility for vulnerable groups. The report concludes with elaborating and comparing the two practice fields' mechanisms of social change, such as learning, diffusion, selection and variation.

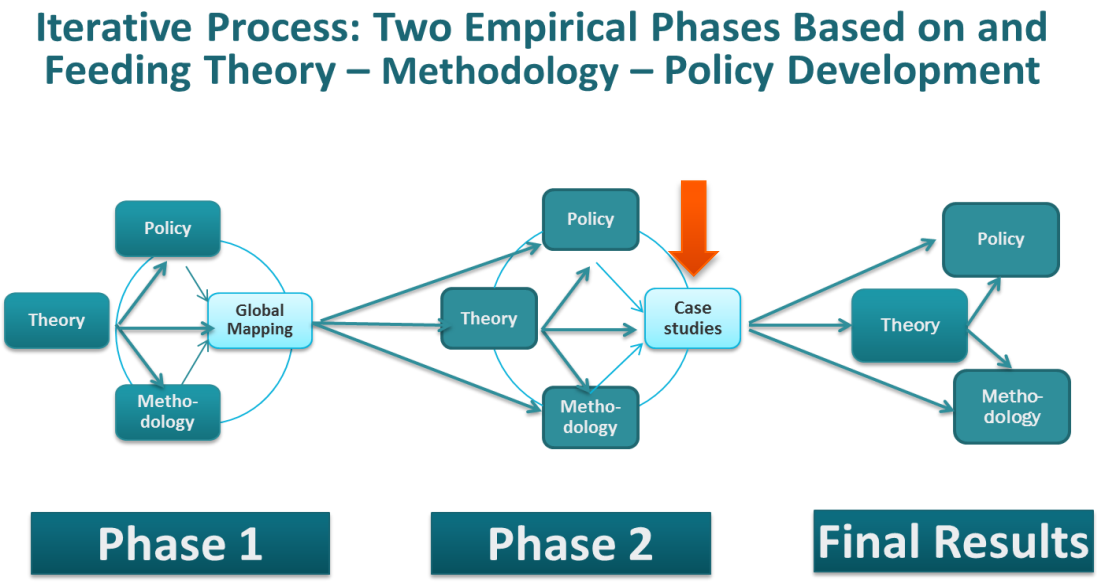
2 METHODOLOGY AND DESIGN

2.1 SI-DRIVE METHODOLOGY

The SI-DRIVE methodology is constructed as an iterative research process characterised by two empirical phases based on and feeding the three central research pillars of SI-DRIVE: theory, methodology and policy. Starting with a first theoretical, methodological and policy and foresight framework the empirical phase 1 led to a global mapping of Social Innovation: comparative analysis of 1.005 cases worldwide, seven policy field reports, global regional report, external database screening, and eight first policy and foresight workshops. These results led to the improvement of the three pillars and set the ground for the second empirical phase: the in-depth case studies, which results will be presented her and in a reporting of each of the seven policy fields of SI-DRIVE. Finally, the results of both empirical phases will lead to a summarizing comparative analysis in each of the policy field and to the final theoretical framework, the final methodology and the final policy and foresight recommendations of SI-DRIVE.

Thus, the chosen triangulation and combination of quantitative and qualitative methods has also a sequential aspect: While the quantitative approach is more appropriate for the analysis of 1.005 mapped social innovation cases, the qualitative methodology is more relevant for the in-depth case studies (based on the quantitative and qualitative analysis of the first empirical phase).

Figure 1: Continuously Updated Research Cycle

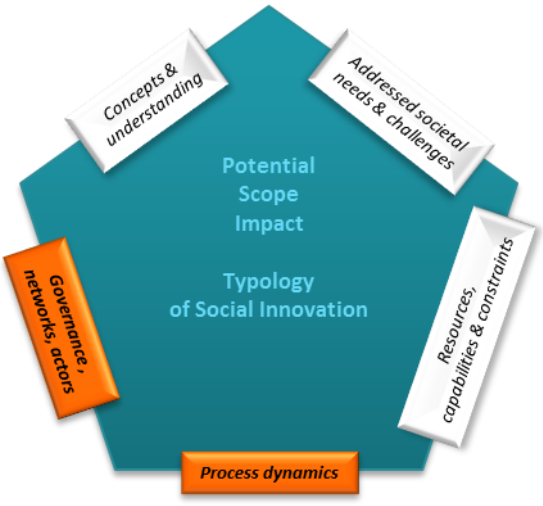


So, this report is summarizing and analysing the case studies conducted in the policy field Mobility and Transport, delivering a further depiction for the final comparative analysis within the policy field at the end of the project.

2.1.1 Background and Central Questions of the Case Studies

The focus of this qualitative research is on the dynamic **interrelation between social innovation, the practice field and various mechanisms of social change**. Therefore the guiding meta-question for the case studies of SI DRIVE is focusing on **mechanisms of social change**:

Does Social Innovation actively use, reflect or contribute to the defined mechanisms of social change (see annex)? Can we identify other, additional mechanisms?



All these mechanisms are reflected in the five key dimension, but putting a focus on social change. Related to the five key dimensions of SI-DRIVE the main focus of the case studies is on **Governance, Networks and Actors** as well as on **Process Dynamics**, mainly asking which changes appear and are driven by what/whom (see also the research foci in the Annex). Within these focused key dimensions and mechanisms of change **factors of success** (and **failure**) are of high importance as well.

The **degree of social change** is also considered: **diffusion** in society, degree of **institutionalisation**, and **importance of the practice field / initiative** for everyday life and local communities.

Therefore, the main objectives of the case studies are aiming at a better understanding of

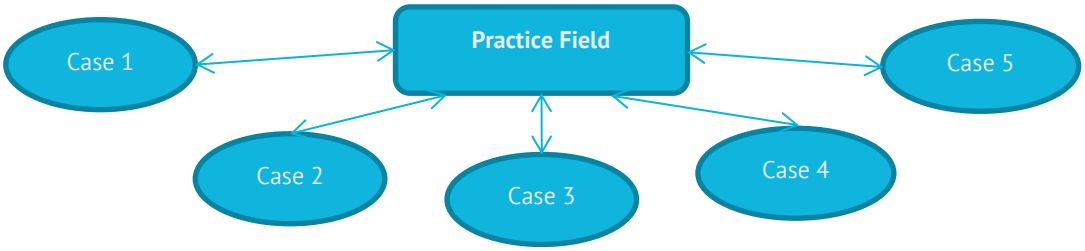
- the **processes and dynamics** of social innovation in relation to social change (institutionalisation, diffusion and imitation of social practices)
- the **functions and roles of actors and networks** for the development, diffusion, imitation and institutionalisation of social innovations
- including the identification of **critical success (and failure) factors**, leading to social change.

2.1.2 Methodological Design

The methodology is consisting of two levels for the selection and analysis of cases:

- Selection of the relevant **practice fields** (about 2 or 3 in each policy field)
  Main criteria: Importance for the policy field, already leading to social change
  Main interview partners: different kind of representatives of the practice field, e.g. associations, interest groups, politicians, leaders, etc. - representing the Social Innovation Ecosystem or sectors (**public, private, civil society, and science)**
  additional documented material, documents analysis.
- Selection of social innovation **initiatives related to the chosen practice field** (about 4 to 5 cases)
  Main criteria: Connection and contribution of the initiatives to a practice field.
  Main interview partners: people who were *actively* involved in developing the social innovation initiative, project organisers/participants/actors, users and beneficiaries – representing the Social Innovation Ecosystem or sectors (**public, private, civil society, and science)**
  complemented by additional document analysis.

Because there might be only limited information for the chosen **practice field**, the results of the case studies with the single initiatives will be used as a background for the practice field examination and analyses (**hybrid approach**).



All in all about ten cases were conducted within each policy field, ending up at 82 case studies. The cases were selected on the background of given framework and the partners' knowledge and experience. Beneath practical points like access to and willingness of social innovations to participate and a general regional variety the following aspects were taken into account:

- For the **selection of the practice field**: The (strategical) relevance for the policy field, the differentiation/ spread of single cases, and an advanced development phase (cases that are already in the implementation, impact phase).
- For the **selection of the related cases**: The selected cases should be already highly developed (implementation or better impact phase, embedded in networks, movements or umbrella organisations), and be representative for the practice field showing its variety in terms of social demands and regions.

Against this background the cases were **selected from the existing mapping data base**. If there was a new important case of high interest (not in the database) there was the possibility to add at least **one additional case** per policy field. Because the global mapping stressed that social innovations often comprise more than one policy field **overlapping cases** were taken into account and finally assigned by the policy field leaders.

The template developed for the case studies had a **common, but flexible structure**. This means that the main topics and the related main questions have to be reflected, additional questions helped to structure the deepening of topics appearing as relevant from the interviewees or interviewers perspective, and from the particular context of the initiatives, the actors of the social innovations or practice fields.

While the case study inquiry followed the context and perspective of a single initiative, the structure of the reporting document is starting with the practice field as the overarching context for the related case studies, bundling and summarising the results of the different related cases, illustrating the practice field, summarizing the given topics (reflected in the single case studies).

Therefore the structure of the template for the case study inquiry is the other way round as the template for the reporting:

1. The **case study inquiry** (**bottom-up:** initiative perspective as the starting point) started with the perspective of the initiative, leading to the overarching perspective of the related practice field in the end: focusing on the context of the concrete initiative (starting with the idea, passing the development process and ending with the impact perspective) → leading to and completed by the practice field context (integration of the initiative in the broader practice field background, conclusions, institutionalisation).
2. This **reporting document** (**top down:** context of the practice field as the starting point) is structured the other way round starting with the overarching practice field perspective, activating the overall on social change oriented perspective as a context at the beginning and reflecting the social innovation initiatives from this background.

Already given and available information from the mapping and internet/documents were integrated in the interview template first, including information of the practice field. The practice field information already gathered in the case studies (earlier) were updated continuously in the case study guide.

For the field work and the analysis a common and obligatory structure across all the seven policy fields was developed (case study template, QCA questionnaire, reporting template). The following procedure is characterising the case study performance:

1. Extraction of the given information from the mapping database and integration into the reporting template, interview guide for the specific initiatives.
2. Search for additional documented materials (internet, literature, etc.) and integration of the results in the template as well.
3. Selection and inquiry of key persons for the practice field and the related cases.
4. Interviews, group discussions, site visits etc. (of **all the relevant actors** of the initiative, **including if possible the users, beneficiaries**)
5. Reporting within the given template (integrating all the information of the database, interviews and group discussion in one template).
6. Qualitative Comparative Analysis (QCA)
7. Summarising reporting document (done by the work package leaders).

Within the case study template the questions did not vary a lot between social innovation projects and social practices, but the answers relating to the questions are expected to vary to the different levels of uptake. For instance, in a more mature case/practice field there may be a wider set of competitors as a context feature (e.g. car sharing), whereas in a case that is still in its infancy (although it should be well implemented and show dimensions of success as well) competition may be very different in quality or limited in total. We speak of a social practice when there is already a set of different initiatives, when the original initiators of first social innovation projects (sometimes) are already difficult to identify, variation of the original initiatives have already been applied, maybe a bundle of initiatives exist (institutionalized in a practice field), they have different business models (if any), their services vary, accordingly users vary, incremental differentiation between various offerings.

2.2 MOBILITY AND TRANSPORT: PRACTICE FIELDS AND CASE SELECTION

Shared Mobility is a growing phenomenon all over the word. It is a broad field referring to practices of sharing cars, taxis, parking spots, etc.... Three practice fields of shared mobility have been analysed in the SI-Drive work package of mobility and transport – bicycle sharing, parking spot sharing and shared car usage. They refer to a specific resource that is shared – bicycles, parking spots or cars. In this in-depth comparative analysis, focus is on the complex and widely distributed practice field of shared car usage. The second practice field of the in-depth analysis refers to initiatives aiming at improving “mobility of vulnerable groups”. Vulnerability is understood both in a physical (e.g. through physical disabilities) and social sense (e.g. mobility of women, mobility of LGBTs etc.).

Both practice fields are directly addressing the challenges elaborated in the introduction. The practice field of shared car usage combines initiatives answering environmental and urban mobility challenges, while the practice field of vulnerable groups is aiming at inclusion of all social groups.

Analysis of the two practice fields is structured according to context specifics, processes and dynamics, actors and networks, critical success (and failure) factors, mechanisms of social change, and growth and spread of the practice fields.

3 PRACTICE FIELD A: SHARED CAR USAGE

The practice field of "Shared car usage" includes two main streams of social practices – car-sharing schemes and carpooling or ride sharing. Although there are differences between the two streams (see figure 2 below), the core idea behind all projects is the same – sharing a car as a resource and reducing travel related costs. Therefore, during the Mapping 1, all types of initiatives based on this idea were included: organised car clubs, ride sharing, lift schemes, co-voiturage, peer-to-peer car-sharing, Mitfahrgelegenheit, volunteer driving schemes etc. All initiatives aim at complementing or substituting individual car transport, taxi schemes, public transport and traditional rent-a-car schemes with more flexible and cheaper opportunities. Table 1 below summarizes the cases mapped in SI-DRIVE in the practice field of shared car usage and provides information about their model and organization of service.

Table 1: Practice field Car-sharing cases mapped

Project name	Country	Model
Wundercar	Germany	Ride-sharing platform for the urban area; Real time matching
Uber	USA/ Europe / Worldwide	Ride-sharing platform for the urban area; Real time matching; Other services for on demand mobility in cities worldwide
Carpooling.com	Europe	Ride sharing on long distance
Aha!Car	Bulgaria	Ride sharing on long distance
Ants	North Europe	Ride sharing platform; Long distance; traditional carpooling
Car-sharing.ie	Ireland	Ride sharing platform; long distance; traditional carpooling
Liftshare	United Kingdome	Ride sharing platform; traditional carpooling
GreenRiders	Finland	Ride sharing platform; traditional carpooling
Bílfar	Iceland	Ride sharing platform; traditional carpooling
Slugging	USA	Unorganized ride sharing; not online
Car Sharing Utrecht	The Netherlands	City owned car-sharing platform; Stations based
Autolib	France/Europe	Car-sharing with electrical cars; stations based
WeGo Car sharing	The Netherlands	peer-to-peer car-sharing platform (changed model to B2C)
Car2Go	Germany/Europe/USA	Flexible car-sharing

There are three main points where the initiatives differ:

- **First, the resource that is shared and respectively the saved costs**. In car-sharing schemes users save costs for owning a car by sharing a vehicle with other people. In the case of carpooling users save costs for a specific trip by traveling with other people in the same vehicle.
- **Second, the business models vary between traditional Business-to-consumer (B2C) and Peer-to-peer (P2P) models**. Among the car-sharing schemes, there are examples for both types of business models and prearrangement is always required. On the contrary, core of the carpooling initiatives is peer interaction –

peer-to-peer models, where users organise to travel together. This interaction could appear occasionally (with no former prearrangement) or with the help of a matching agency[2].

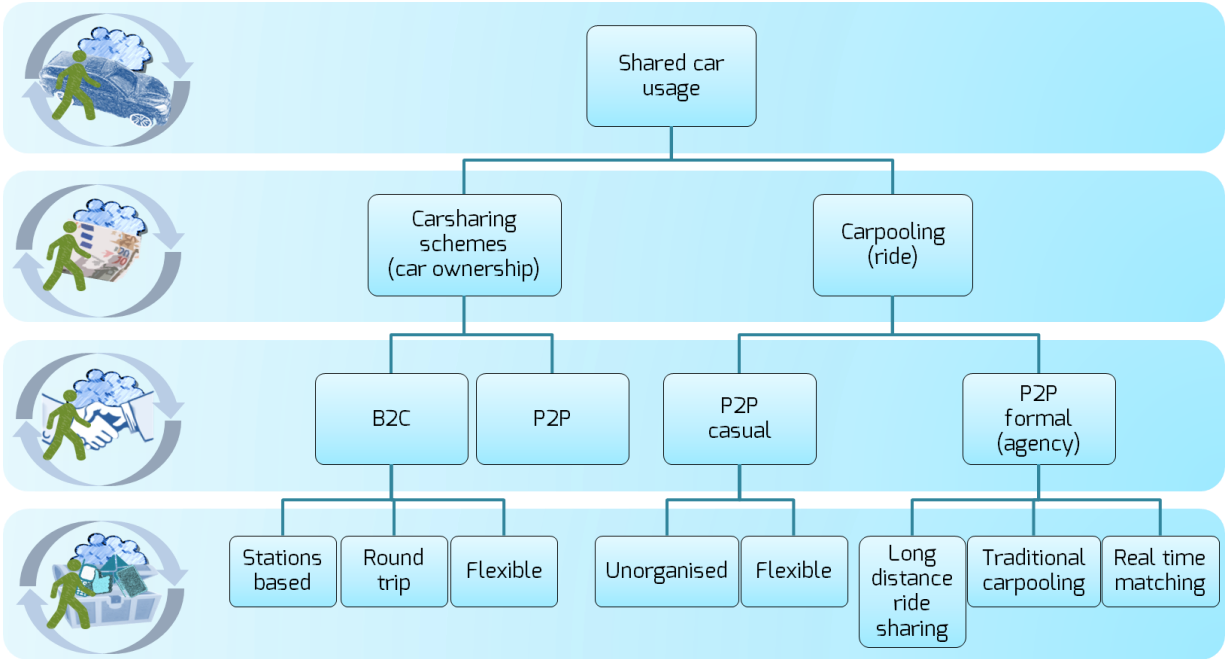
- **Third, the initiatives vary broadly in their service models**. Car-sharing schemes are popular in three main service forms: a round trip, where the car had to be returned to the starting point location; stations based service, where the shared car can be parked on different pre-established locations; and flexible service, where the car can be parked anywhere. All these service models are based on B2C organisation. In the cases of P2P schemes the share of the car is directly organised between the users involved.

Carpooling initiatives also vary in their implementation. The best known and long practiced models are those of occasional carpooling, which can occur as unorganised (e.g. hitchhiking) or as flexible, where there is still no prearrangement between users, however there are certain established pick up points (e.g. slugging: a practice popular in some big US cities in order to use the HOV [highly occupied vehicle] lanes). Nowadays, the formal P2P carpooling initiatives through an agency gain popularity. There are three distinguishable service models organised in this manner: traditional carpooling, where users prearrange to travel together (on short or long trips); long distance ride sharing, which is a variation of the traditional carpooling for long distances (usually between cities); and the newest forms of real time ride matching, where users are connected in real time to share spontaneous trips.

A commonality in the practice field is the strong use of technology. Very few of the service models listed above do not require any technological features to work. Such are unorganised carpooling, slugging and some initiatives of P2P car-sharing schemes. All other services models rely strongly on technology for all the stages of the service: most common features are booking and prearrangement via websites, social media or mobile applications. In the case of real time ride matching, the usage of online device is mandatory in order to be able to make a request or respond immediately. A lot of car-sharing schemes provide their users with chip- or magnetic cards for identification and easy accesses to vehicles. In addition to that, most of the transactions for these services today are made through online payment, with the exception of the casual and some agency organised models of carpooling.

Figure 2 summarizes the different models of initiatives known in the practice field of car-sharing based on their resource to share, business and service models.

Figure 2: Practice field Shared car usage: State of the Art



Source: own visualisation based on the results of the mapping and previous classifications of Cohen & Kietzmann, 2014, Furuhata et al., 2013, Agatz et al., 2012 and Chan & Shaheen, 2012.

[2] Carpooling through an agency is not classified as Business-to-consumer (B2C) model since in the B2C initiatives the company owns the resources for share. The "agency" provides the platform where the users find each other, however it does not own vehicles or employ drivers. Some controversies around the service model of agencies as Uber give a reason to assume that it is possible the category B2C to be applicable for carpooling in the future.

The in-depth case studies conducted within the work package represent the complexity and diversity of the practice field illustrated above. Table 2 gives on overview of the conducted case studies, their country of origin and model according to the State of the Art summary. Two case studies represent carpooling projects (one in Bulgaria and one in the United Kingdom) and two are from the field of car-sharing (one in Austria and one in the Netherlands). In addition the case of Uber was studied as an example of latest trends in urban carpooling and a case with international importance. Because of the micro-level and clearly individual dimension of UBER's business model, it was considered as a very unique business case with clear connection to the sharing economy. At this level, UBER is comparable with companies such as AirBNB which started as a socially innovative company. Furthermore, it is a prominent case to study conflicts related to shared car usage. At the end of this chapter (p. 18) summaries of all case studies are provided.

Table 2: Shared Car Usage – In-Depth Case Studies

Case studies	Country	Model
Aha!Car	Bulgaria	Ride sharing on long distance
Liftshare.com	United Kingdom	Ride sharing platform; traditional carpooling
My Wheels	The Netherlands	Car-sharing website; peer-to-peer and business-to-consumer
CARUSO	Austria	Car-sharing scheme (traditional and peer-to-peer)
Uber	USA / Europe / Worldwide	Ride-sharing platform for the urban area; Real time matching; Other services for on demand mobility in cities worldwide

3.1 CROSS-CASE STUDY ANALYSIS OF PRACTICE FIELD A

The studied initiatives are of national importance. On the one hand, they provide information for the process dynamics and actor constellations of social innovations in the field of Mobility and Transport, and on the other they shed light on the contextual differences in their home countries. In addition, extra research was conducted on the case of Uber, to better understand the global development of the practice field.

3.1.1 Context specifics of shared car usage

Two main factors determine the context specifics of the cases: cultural specifics and political actions.

Cultural context

The cultural context includes the societal understanding and acceptance of the practice field. Even though shared mobility is gaining popularity, especially in the light of the growing "sharing economy", the cases show a different degree of acceptance and implementation of the new trends in the different countries. For example in Bulgaria, organised carpooling is being exercised not through a specific agency but through Facebook groups. According to the interviewees, the Bulgarian society relies very strongly on Facebook for social communication and organization and does not trust formal institutions such as agencies. This behaviour implies another understanding for security using online platforms and even sharing. Therefore, formal platforms as known in other parts of the world have limited success in Bulgaria, as the interviewees say, and the demand for ride-sharing is simply solved through other channels.

In the United Kingdom and the Netherlands the practice field of sharing cars and rides has a longer history and the two studied initiatives have their origin in pre-online times in the late 1990s. Therefore, the experts interviewed seem to have more experience in the adaptation of the original idea to new societal demands. However the founder of Liftshare.com in UK still sees overcoming societal concerns about carpooling as a challenge. For all initiatives awareness among users, politicians and businesses is mentioned as a necessity for scaling. The society needs more reassurance of the positive effects of sharing vehicles for their everyday life in order to accept it.

Another cultural difference is noticeable in the acceptance and importance of private companies. In Bulgaria, for example, one reason for the trust in Facebook is named to be the lack of trust in formal organisations as private companies. In Austria, on the contrary, private companies are seen as a driver for the car-sharing schemes. The example from Austria reports to gain successes thanks to private companies which promote the service to their employees. In Bulgaria, corporate carpooling is having almost no success, due to no engagement from the private companies.

Role of policy
Regarding the awareness and acceptance in society, political actions in the form of laws, funding and support play an important role. As a highly regulated policy field for new players and practices it is difficult to penetrate the existing Mobility and Transport system, especially if they are competitive to the existing services. The Uber case represents a clear example of that. The company encounters political opposition in the countries where it implements its services. Uber is seen as a direct competition to the taxi industry, despite differences in the business model: it offers software only, treats drivers as self-employed and connects private drivers with citizens. All these points raise questions of how Uber and similar services should be best regulated; do they fall under the regulation of the existing employment laws or are there any changes needed? The different countries solve this question in different ways (e.g. USA created a new category of Transport Network Companies (TNC) for services as Uber (MacMillan, 2015); in Europe, due to the complexity of the law system in the European Union it is still disputable how and on which level the services should be regulated). Therefore, an important impact of the Uber case is on the legal framework regarding technology based mobility services and it shapes the practice field on a worldwide basis.

While Uber's impact spreads internationally, the other four cases represent initiatives of national importance. Their growth is also influenced by political actions and their impact plays a role for the practice field on a national level. All initiatives' representatives interviewed stress their openness to work together with political actors to promote car-sharing. However the receptiveness, as well from the public as from the authorities, is different. In Bulgaria and UK, the initiatives encounter laws (transportation law in Bulgaria and environmental in the UK) as a barrier for scaling. In addition interviewees say that politicians do not recognize the positive effects of car-sharing yet and respectively do not support them actively. In all case studies the initiators of SI express their wishes for additional measures at the political level, in order for the society to profit from sharing cars (e.g. including carpooling in the legal framework for transport services, providing benefits for car-sharers, working together with car-sharing service providers, introducing car-sharing lanes on the roads, to name a few).

A certain division between the different political levels was identified – local, national, international. All cases encounter different experiences with national and local politics and authorities and for some cases measures at the European level also play a role:

- Local policy: Considering that all initiatives are developed because of a local demand or a societal challenge in the existing transportation system, it is not surprising that local authorities are open to SI aiming to improve or complement these systems. This is the case with the car-sharing scheme MyWheels in the Netherlands and Liftshare.com in UK where the initiatives have worked together with local authorities on sustainable solutions. In both case studies the support and cooperation with local authorities willing to implement sustainable solutions is underlined.
- National policy: National politics on the other hand sometimes hinder the social innovation process by not paying adequate attention to vehicle-sharing initiatives. Even though there are national laws and actions aiming at sustainable transport systems (e.g. programmes for Corporative Social Responsibility, or reduction of CO2 footprint), in all cases there are barriers mentioned at the national level: in Bulgaria an amendment in the transport-services law caused a public discussion about the legality of carpooling altogether, which resulted in uncertainty about the services; in the Netherlands the car-sharing scheme provider MyWheels reports that car-sharing service providers are not granted with the same rights as for example rent-a-car providers, especially regarding sending fines to drivers, making violations during using their car-sharing vehicles (e.g. fines for speeding); in the UK the environmental law requiring companies to report and reduce their CO_2 footprint does not recognise vehicle-sharing initiatives as important enough measure, so that companies do not make implementing such schemes a priority; in Austria the regulation on minimum compulsory parking spaces was a first barrier for implementing car-sharing in certain residential complexes. This contradiction between national strategies for sustainability and the lack of active support for the practice field all together is reported in all case studies.

- International policy: The 4 case studies coming from EU-countries are also strongly influenced by the EU-policy. The European Union is following programmes for sustainable transport and is financing the development of sustainable solutions (e.g. through the programme "Do the right mix" the development of the mobile application of the Bulgarian case Aha!Car was funded). The role of the EU so far is mostly related to support und funding rather than being a direct regulator. However, as mentioned above, the Uber case escalated to be decided on European level. The verdict at the European court of Justice will decide if Uber-like services should be treated as transport services or as online platforms and therefore will decide if they will be regulated at a national or European level. This decision will shape the practice field in a new way once more.

3.1.2 Processes and Dynamics

The projects in the practice field of shared car usage are usually born from specific **personal demand** of the founders. They are created to respond to the lack of public transport connections, accessibility issues or to the high costs (e.g. Aha!Car was created because the two founders had no option to travel to their home town; Liftshare emerged from the need for affordable transport on long distance for students in the UK; My Wheel started as a one-man solution by the founder who started sharing his car with his neighbours so it does not stay unused for so long). The development and growth of the solution is therefore driven by **expressed and latent demand**. Personal demand is the starting point from which the creators assume that others may profit from the initiative too. From there they start developing strategy and business plan for growth. Part of the strategy for the car-sharing scheme My Wheels however is the cooperation with local coordinators, who identify communities with expressed demand for car-sharing. The company than uses the insides from the local coordinators to decide, where to place cars and spread the platform.

A very important factor for all case studies is the form of organisation. All projects are organised as **formal organisations**: Aha!Car as a stock listed-company, My Wheels and Liftshare as social enterprises, Caruso as a cooperative. With the formal organisation the projects become an official and reliable partner for other actors, who want to work with them or support them. The four projects follow **non-for-profit strategies** from the start, so that the revenues from the services go back for development of the SI. In all interviews the strong **social values** were underlined as a leading factor for the companies. The projects are created first and foremost to create social welfare, stress the founders. This includes strategies for clean environment, reducing CO_2 emissions, congestions, CSR etc. which are mentioned in the interviews. These core objectives of the four national initiatives contrast with the Uber picture – a company which growth speaks for commercial success at first place. Uber is often criticised for its commercial objectives and unfair competitive advantage by disregarding existing regulations (Feeney, 2015), however that does not undermine its impact for the practice field as a change maker.

Some of the cases analysed are pioneers in their contexts, such as Uber in the field of real-time ride matching, but My Wheels in the Netherlands, CARUSO in Austria and Liftshare in the UK are projects with long history. Considering the dynamics in the practice field, however there is a certain **copying and adaptation of solutions** between the projects in the practice field. The creator of Aha!Car admits that he and his colleague started with a market study to identify best practices and features for their platform. CARUSO was developed after series of R&D projects and even Liftshare, which was new for UK in the mid-1990s, was inspired by the previous experience of the founder with similar practices in other countries. As will be discussed below, the practice field of car-sharing has a long history and therefore a constant learning and adaptation is inevitable. The projects here are more variations of the same idea, adapted to the specific context, rather than each time brand new solutions.

3.1.3 Actors and networks

The leading actors in all initiatives are their **founders**. However, their work is complemented by **additional actors with a specific role**. At first place all cases have looked for support regarding the technological part of the solution. And while Aha!Car and Liftshare relied on the IT specialists to develop and support the online platforms, My Wheels and CARUSO go even further by cooperating with companies developing specific automobile technologies (i.e. board computers). Uber is known to cooperate with leading technology-developers in order to improve their services and create new ones (cf. Lardinois, 2017 and Stuflesser, 2016). Another set of actors represent cooperation for gaining of critical mass and new users. Such actors are festivals, local authorities, local firms, social movements and others. However these are very often short-term partnerships.

None of the case studies reports **embeddedness under an umbrella organisations**, specific networks or professionalised organisations for sharing cars. This fact speaks for the lack of professionalization inside the practice field. However, the four national projects report close work with **umbrella organisations and social movements** (either umbrella organizations for social enterprises in general like 'Social Enterprise NL' in which My Wheels is participating, or social movements for sustainability and environment friendly initiatives as the social movement "Gorichka" which works together with Aha!Car in Bulgaria). These cooperations underline once again the self-defining and organisation of the projects as social enterprises, identifying themselves as actors contributing to social welfare.

Social values are identified by the initiatives as main criteria for choosing partners in the four case studies. Aha!Car and Liftshare even report to have refused to work together with big competitors as BlaBlaCar or Uber because of their commercial objectives. Corresponding objectives for creating social welfare between the partners is a factor for cooperation.

3.1.4 Critical success (and failure) factors

Important factors for growth are social and economic crises. Liftshare, for example, encountered that during crises as high fuel prices, congestion fees or strikes, the number of rides provided on the Liftshare.com platform increases. However, there are **no specific critical events** identified by the four case studies that have contributed to the growth or have hindered the initiatives. Still, there are some success factors mentioned:

The most important success factor for all projects is finding a working **business model and following a communication strategy**. In all case studies other initiatives were mentioned that have failed because of their lack of strategic thinking. Another important factor connected to the first one is the capacity to change and adapt the innovation to the changing conditions and demand. Aha!Car for example has fast realized that their initial idea for a multifunctional carpooling platform is going to have limited success in Bulgaria so they complemented it with carpooling for visually impaired and offering corporative carpooling solutions. Liftshare reports to invest a lot in research and development and to experiment constantly with new ideas and models. Similar is the story of CARUSO, which is a product of multiple research projects. My Wheels has changed its organization structure and conducted a user research to identify better the needs of their users. The **capacity for change and learning are critical factors for success**. Together with **sufficient awareness in society**, the founders believe these lead to broad acceptance of the practice field and social change.

The need for awareness and communication of the benefits from vehicles-sharing are identified as necessary, but ther is not enough done at a public level so far. All initiatives express their disappointment from the lack of explicit support for sharing cars from the national governments. The governments' actions are, as mentioned above, often even encountered as a barrier. Other **barriers** mentioned are the insufficient funding, the lack of trust in the society that still should be overcome (in some context more than in others, i.e. Bulgaria) and finding reliable personnel (Liftshare).

3.1.5 Mechanisms of social change

The most important mechanisms of social change identified from the case studies in the practice field of Car-sharing are **learning, variation, diffusion of (technological) innovation** and to some degree **competition**. The following part of the report elaborates on all mechanisms in the SI-Drive framework and their importance for the practice field:

- **Learning**:

  As already mentioned the initiatives in the practice field of shared usage of cars are developed from personal experience and often based on market and society studies. The ability to change strategies and models of opperation is identified as a leading success factor. Therefore one can encounter a **constant learning process** in the social innovations. On the one hand there is learning about mobility habits of users through previously failed models (e.g. Aha!Car and Liftshare), and through specific research (e.g. My Wheels and CARUSO). In the case of My Wheels a **lack of scientific research** on car-sharing is encountered, which led to conducting their own research. Learning is encountered as the most important factor for growth along with the ability to change models and to evolve (My Wheels has evolved from one-man solution to platform with large group of members; Aha!Car has changed from traditional formal platform to platform adapted for visually impaired users and selling corporate solutions; Liftshare has grown from university project to a company developing

multiple sustainable solutions). However there is no specific learning channel or strategy. The initiatives seem to be **learning by doing**.

The strong dependence on technology means also new requirements for the users: an access to the appropriate hardware (mobile phone and computer with internet) is required as well as access to the right IT-skills to work with it. In addition, social skills are required, since the solutions are based on social interaction between peers. Users need on the one hand to be familiar with the new technological trends and on the other to be open to social interactions with other people (the social capability is however restricted by the new technological innovation in car-sharing schemes where cars could be accessed via magnetic card, which eliminates the need for personal exchange of keys). Therefore the **absorptive capacity** of users is also very important for the development of the practice field. However, it differs depending to the context. In the Aha!Car case study in Bulgaria, for example, is reported that Bulgarian users are reluctant to accept the benefits a formal platform is offering them because there is a general social mistrust in corporations. On the other hand they are so used and convinced by the flexibility and mobile usability of Facebook that Aha!Car fast realised, that there is a mobile application needed to reach to them.

- **Variation**:

  Variation is very important mechanism in the practice field. As seen in the "State of the Art" overview, all emerging projects are variations of the same idea – sharing a car or sharing a ride. In their implementation the projects are similar in the point that they relay strongly on technology and **new collective ideas and beliefs**. Among those common beliefs that shape the practice field are the sharing economy and the environmental issues. The sharing economy has grown to a global phenomenon based on the idea that sharing is better than owning (Vaughan & Daverio, 2016), which is one of the leading ideas behind every vehicle-sharing initiative. The debate about global warming, CO_2 emissions, air pollution etc. has raised the awareness of society about one's personal role in these processes. All initiatives underline the positive environmental effects from using shared car solutions, to the point that Liftshare and My Wheels even calculate the saved emissions per trip or shared vehicle.

  In their organization the projects vary **depending on the context**. In some cases they are organized and registered as formal social enterprises according to the national law system (e.g. My Wheels and CARUSO are not-for-profit associations), in others they are registered as private companies (e.g. Aha!Car and Uber). The case of Uber represents a new solution with a clear for-profit business model, however technologically it is similar to the other solutions.

  Uber is also an example for **incremental innovation** that has paved the way for other similar services. On the one hand it is one of the first real-time ride matching platforms and sharing economy models, and on the other through the legal battles that followed its diffusion, it provoked a rethinking of the existing law systems worldwide. Its model and variation of its technology can be found in other similar projects.

- **Selection**:

  There is certain dynamic that characterises the practice field. There are some cases in the SI-Drive database that despite their previous success do not exist anymore because they have been bought by competitors (i.e. Mitfahrgelegenheit.de was a pioneer in the long distance carpooling in Germany and even Europe, however it was bought by BlaBlaCar in 2015) or have changed radically in order to stay on the market (i.e. WeGo, a car-sharing scheme in NL, has completely switched from SI to a business car-sharing company). In all case studies there are several projects in the respective country mentioned that have not survived. As a reason for their failure the innovators identify a lack of or weak business model. **Sustainable business models** and clear communication strategy are the two success factors underlined by the social innovations. They all express a deliberate effort for spread and diffusion, however the innovators rarely set clear goals and definitions for success from the beginning; willingness to change and believe in the social welfare is what drives them forward.

- **Conflict**:

  There are **no explicit conflicts** mentioned that have contributed to the development of any of the case studies or other known projects in the practice field. The spread of certain technology solutions, however, as well as arisen tensions in the past years have contributed for development as is seen in the case of Uber.

- **Tension and adaptation**:

  The rise of internet based technologies and services in the past years caused tension all over the world. The European Commission particularly made it a priority to find common way to regulate services in the sharing economy (European Commission, 2016). The fast spread of Uber is one example for a project that has caused worldwide tension and led to system changes. As already mentioned there were protests against the service in several countries and there were legal actions necessary that resulted in some cases in new laws (i.e. USA so far). A main reason for the tension was that Uber became direct competitor to the taxi industry, which is a long established player on the market. In countries like Bulgaria, where such initiatives are, as already mentioned, new, there are tensions regarding the construction of an appropriate legal framework. All these examples show that the coping mechanisms and **adaptation of the established systems** to the new requirements in the society, represented by a variety of Sis, are **slow and heavy, but very real**.

- **Cooperation**:

  None of the initiatives in the case studies reported embeddedness in overarching organisations in the sector as networks or umbrella organizations. And while for car-sharing schemes there are such organisations, even though in other countries (e.g. Car-sharing.de an association representing the interests of German car-sharing providers), there are no such organisations known for carpooling.

  The initiatives report however to be working closely with or being members of **social movements** and umbrella organisations for social enterprises which once again underline their self-defining as innovations for social welfare.

- **Competition**:

  Competition, on the contrary to cooperation, is recognized in the case studies as a driver for innovation and change of models in the practice field. All projects report to be looking closely at other projects in the field, in order to stay ahead. This kind of behaviour benefits innovation in the practice field and could be advantage for success. There is however also a downside in the big competition in the practice field, because the emerging of new initiatives is shrinking the market for other SIs. If there are too many platforms “people would not be able to see the forest from the trees anymore” (My Wheels). In order to succeed a platform should be well-known and findable, which is easier when there are less, is the conclusion of My Wheels.

- **Diffusion of (technological) innovations**:

  Technology is one of the pillars that the projects in the practice field are built upon. Most importantly ICT (mobile phones, websites, internet etc.) play a major role for the diffusion of Sis in the practice field. The projects admit also to have copied functionality and features from competitors or even from other markets (e.g. payment from eBay, Facebook as a community). In addition there are also companies, which work on new technologies and determine in this way the direction for the whole practice field. My Wheels, for example, is working on a system to check driving licences automatically and on a self-learning system to avoid abuse from incorrect users; Uber, on the other hand, first set the standard for real-time ride matching by providing technology for different services in one application, online payment and now it is working on self-driving cars, a completely new field in the mobility and transport market (Biggs, 2015). In this way it was and still is defining the technology of the practice field all together. The creator of Aha!Car admits, that in his experience, users are looking and relying even more on mobile solutions for instant connectivity.

  The dynamics and absorptiveness of technology inside the practice field show that the projects likewise profit from existing technology and develop new ones. Technology is the strongest complementary innovation the initiatives are developing.

  In addition to that, however, new beliefs and values are being established through the diffusion of the practice field, namely the acceptance of sharing of cars. In all case studies, some resistance from the society

is reported from the start, but gradually this resistance is being overturned. This result is not only seen in this practice field, but also in other similar practices in the sharing economy. However the founders of initiatives consider that more should be done to support quicker change, especially with support from national governments. All initiatives wish for more awareness from governments about the positive aspects of sharing cars and for more support from an appropriate legal framework.

- **Planning and institutionalisation of change**:

  Planning for system change in the practice field of shared usage of cars is hardly identifiable in the cases. The long history of the practice field (see below) shows that the practice field has always lived in complementarity to the existing system or as a concrete answer to specific problems, however radical measures for changing the system are still not visible. Nevertheless the general spread of the practice field in the last years, the availability and constant push by technological solutions, as well as the developments of similar processes in other policy fields contribute to a system change.

  There is a change noticeable in how people perceive local community and friends, observes Lyftshare. System change is seen also in the way people communicate with each other, in the use of technology to connect in real time. The initiatives, even though most of them with local or national importance, also follow their vison for system change: Aha!Car and Liftshare are working on convincing society in the benefits of carpooling; My Wheels even stresses out that "in the end people should not have to use cars at all, but travel everywhere by public transport" (My Wheels case study). Therefore the initiatives are aiming at some degree of system change. However, the level of institutionalisation of the practice field is still week. There are no recognised umbrella organisations, networks or professional organisations in the practice field. There is little cooperation between initiatives. The national and local initiatives are trying to work with authorities to achieve change, however this is still with very limited success: Aha!Car is participating in discussions about the new legislation proposal in Bulgaria, however there is no evidence so far that their opinion has been taken into account; Liftshare is working with local authorities to develop sustainable solutions for them, however all initiatives are requiring more support from the national level for the practice field.

  The pressure for system change at this point comes mostly from international players such as Uber or from the growth of the sharing economy in general. The impact of the individual initiatives (the SI-Drive case studies) has still not led to an institutionalisation of system change.

3.2 GROWTH/SPREAD OF THE PRACTICE FIELD

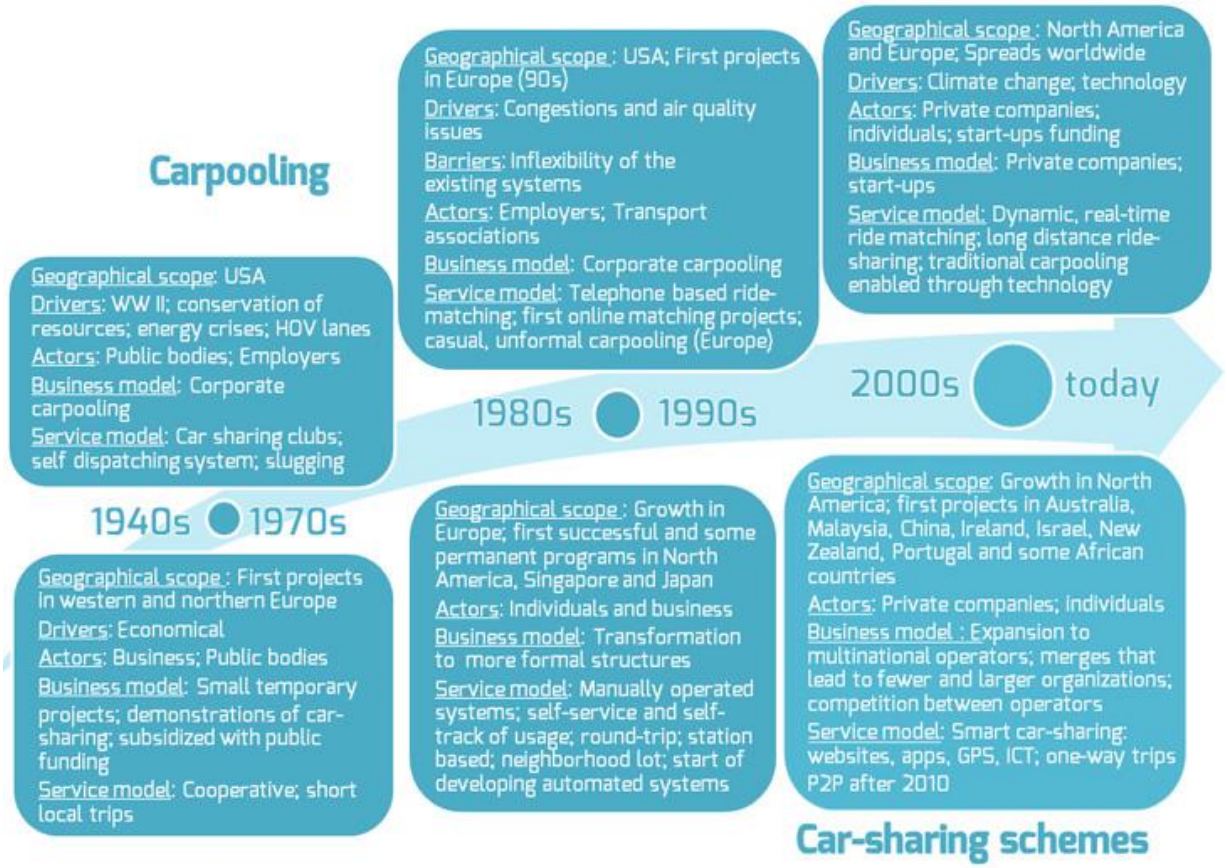
Sharing a vehicle and a trip is a social practice with long history. Both streams in the practice field have their origin somewhere in the middle of the 20th century[3], however they developed and spread differently (see figure 3 below). Three bright development phases can be identified in both streams: an early phase with pilot projects, phase of establishment of the idea, and phase of global spread. Through these phases the incentives for the initiatives changed, as well as the actors involved and the organisational models, so that the new demands can be matched. Based on literature analysis the following development points in the two streams can be identified:

- Scope: While car-sharing schemes started in Europe and transferred overseas in the second half of the 20th century, carpooling originates and grows firstly in the United States and transfers to Europe in the 90s. Today both streams are popular around the world.
- Drivers: Economic reasons for fuel preservation and travel costs were a trigger for the first initiatives. This is especially visible in the carpooling initiatives in USA, where the idea was even government supported, in order to save fuel during the fuel crises. With economic growth and development of transportation systems in the western world new challenges occurred (congestions, CO2 emissions, air and noise pollution, lack of parking spaces). Tackling those challenges became a new incentive for vehicle-sharing initiatives at the end of the previous century. The international spread of the initiatives nowadays is mainly thanks to ICT development and the easy and cheap access to new technology, which is reflected in the new emerging service models.
- Actors and business models: The implementing actors in both streams included public bodies in the beginning. Carpooling in USA was very strongly supported by the government, while the European car-sharing initiatives were used more as an experiment of the practice however deliberate effort for their diffusion was not apparent. Later on emphasis was further put onto corporate carpooling organised by the employers in USA, while car-sharing in Europe was more and more organised by the private sector. Today, both streams are dominated from the private sector with start-ups emerging locally and companies going international (e.g. Uber, BlaBlaCar – European leader in long-distance carpooling or Zipcar – internationally known car-sharing company from USA). Actors from the classical automotive industry are also encountering the potential of such services and are joining the market of shared mobility (e.g. Daimlers' Car2Go and BMWs' DriveNow are leaders in the urban, flexible car-sharing in Germany and are going international in the past years). The spread and diffusion of the shared mobility idea is leading to competition and growth of the market.
- Service model: There is significant development in the service models in both streams since the beginning of the practice field. While at the beginning the initiatives were more locally oriented, dependant on small groups as co-workers or cooperatives, with technological development this started to change. In the second half of the 20th century the first technology based (first via telephone and later via internet) carpooling centrals emerged in USA. The manually operated systems of car-sharing also proved to be undesirable due to lack of flexibility and effort was put into developing the first automated systems. Today in both streams the initiatives are striving to be dynamic and flexible; they relay strongly on technology: real-time ride matching in carpooling, based on mobile devices, internet and GPS and smart car-sharing through mobile applications, websites and magnetic cards. More and more of the service is left in the hands of the users (drivers and passengers), while the implementing organisations are taking care of the software solution and, in the case of car-sharing, the vehicle fleet.

Despite the differences car-sharing and carpooling offer a more efficient car usage through technology and peers interaction. Furthermore, today they both represent a solution for the demand for sustainable transport and are part of the ever growing field of shared mobility.

[3] First projects for car-sharing are recorded in Europe in 1948 (Shaheen et al, 1998) and first projects in carpooling in 1942 in USA (Chan & Shaheen, 2012).

Figure 3: Practice field Shared car usage: Development



Source: own visualization based on Chan & Shaheen, 2012, Shaheen & Choen, 2008, Wegmann et al, 2007 and Shaheen et al, 1998.

3.3 SOCIAL INNOVATION INITIATIVES RELATED TO THE PRACTICE FIELD

3.3.1 Case A1: (Aha!Car, Bulgaria)

Description, development of the Social Innovation Initiative

The platform Aha!Car in Bulgaria is a platform for carpooling. It supports a webpage and a mobile application for direct connection of people travelling in the same direction. Started in 2013 the platform is seen as a pioneer in the field of formal organized carpooling in Bulgaria (Interview with the founder). It was born from the personal demand of the creators to travel in an area where there is a lack on public transport connections. The business model in the beginning was to make the platform free to use, gain critical mass of users and sell banner space for advertisement. Mainly due to context specifics however this strategy did not have the expected success.

Bulgaria is one of the few countries where organized carpooling happens not through formal platforms, but via Facebook groups. Recording to the founder of the platform, Kaloyan Iliev, the demand for carpooling in the country was very early solved by Facebook, thanks to its' popularity, simplicity and possibility for use on mobile phones. In addition, the general mistrust of the Bulgarian public in formal corporations makes it even harder for a formal platform to be accepted as a substitution for Facebook.

Since the very beginning the creators formalised the platform as a stock company, implemented a strategy for marketing, for non-profit business model, for clean environment, reduction of CO_2 emissions; they put the social aspect at the core of the project and started communicating with non-profit organisations and movements with the same values. In 2014 the creators were invited to one forum called "Zaedno" (Together) organised by the non-profit organisation "Gorichka" (Forest) devoted to bring together people with different backgrounds (business, private citizens, asylum, people with disabilities etc.). At this forum the creators met with disabled people (in wheelchairs and visually impaired). From the conversations with them came the idea to adapt the platform to be easy useful from visually impaired users. A new initiative they called "Vodachi" (Guides). This new project became the social part of the platform.

Since the initial ideal did not work as expected the platform needed a new business model to finance the social part of the project. In 2015 a multinational company located in Bulgaria hired Aha!Car to develop an inter-corporation carpooling system. With this first request from a business client the founders changed the business model - selling carpooling solutions to companies and financing this way the project "Guides". This new strategy is still in its implementation phase.

Since 2016, new legislation from Bulgarian parliament emerged as a new barrier. The amendments to the transportation law aim, in the words of the legislators, to deal with unregistered transportation companies presenting themselves as carpooling companies. The proposed measures however had caused public uncertainty and mistrust about carpooling in general which projects as lesser use of platforms such as Aha!Car. It is still unclear though how this legislation is going to affect carpooling in Bulgaria in the future.

Actors, partnerships, alliances, networks

The project is still very small in number of partners involved. It started as an initiative of two founders, however one of them since had stepped back. The other one (the interviewee) is the main responsible for the project and is the one working on further developing, marketing and communication strategies. Next to him an IT specialist was needed to develop and support the technological parts of the project. The three of them are the partners caring the initiative.

In addition to the three individual partners they had some additional support from other organisations. The advertisement agency InterImage Ltd., which implemented the programme "Do the right mix" of the European Commission, funded the mobile application of Aha!Car. Another valuable partner was the social movement (NPO) "Gorichka", which invited them to forums and discussions, helped to build up contacts and present the project to the business and the brighter public. They partnered also with different non-profits, environment friendly festivals which provided their main costumers during the summers of 2014 and 2015. No long-term partnerships have been

established however, neither is the company embedded in an umbrella organisations, since there aren't any such organisations in Bulgaria.

The driving force for the founders since the beginning was their own enthusiasm. Since the platform is not for profit they invest their own capital and time to make it work. The main criteria for choosing new partners are that these need to share the same values as the founding fathers.

Innovative solution

The experience the creators have as business entrepreneurs has helped them to realise what such a project needs – namely a business model and a clear strategy. To find the best formula they did rely on market studies for every step – first before the platform was launched and then for "Guides" they did a study among visually impaired people as well to better understand their needs.

In this regard there are several types of innovation incorporated in the project:

- Service innovation: in the first place the platform offers a new, improved way for carpooling in Bulgaria since the platform offers features unavailable in Facebook (rating system, feedback for users, fair prise calculator, ladies car etc.). In addition it is the first platform to be "translated" for visually impaired people. The platform was adapted in such a way that the software helps visually impaired internet users to read the information. Another side of the service innovation is the opportunity to provide carpooling solutions to corporations. The basic functionality stays the same, however Aha!Car personalises it for internal, corporation use only.
- Technological innovation: the adaptation of the software platform for visually impaired people and the corporate solutions it is providing are the two main technological innovations. In addition to that the project is benefiting and is based on existing ICT (i.e. website and mobile application).
- Organisational innovation: Aha!Car is a formal, officially registered stock company. As already explained this is quite new in the field of carpooling in Bulgaria.

The main innovation level is the service innovation, however it depends on the technology and organisation to exist and become successful.

Gaining momentum

The founder admits in the interview that they had underestimated the power of Facebook for carpooling in Bulgaria. At first they tried to further improve the initial idea for a carpooling platform by developing the mobile application. Since this step didn't show the expected success either, they realised pretty soon that the initial ideas and business strategy would not work. However, due to the partnership with "Gorichka" and open air festivals they managed to get popular.

The biggest challenge for the project since the beginning was financing. At the beginning the founders invested their own capital. After a first request for a closed corporative group in 2014 they saw potential in offering business carpooling to be the next successful strategy. Soon after the first corporative group started there was a second request from another company, which also wanted to implement measures for Corporative Social Responsibility (CSR). However after one year of operation the first client cancelled the partnership. The reasons for that are believed to be in the lack of communication and responsibility of the company itself to popularise the carpooling opportunity among its employees. There is a strong possibility the same to happen with the other client, even though the founder of Aha!Car is trying to convince them that additional, small measures are needed in order to make the project work for them.

The founder of the platform is constantly trying to promote it, find new clients and participate in the dialogue about the new legislation. He firmly believes that such new ideas need a clear and constant communication strategy. His leadership and efforts are a success factor for the innovation so far.

Complementary innovation

What the platform needs in complementary to its features and business model is awareness in society how it can be beneficial for car-poolers. On the one hand regular users need to rethink the security and flexibility Facebook is giving them and get to know the features a formal platform is offering. On the other hand more awareness among visually impaired people is needed so they feel safe to use the platform. Even though they cooperated during the adaptation process, after "Guides" was put in operation there was reluctance among visually impaired users to use it.

Another change in attitude needed is in the lack of responsibility shown from corporations. From the case study it is clear that the business has to take its part in implementing corporate carpooling seriously and support it in order for it to work in business environment.

In addition what is needed is an appropriate, supportive legal framework so all users feel comfortable choosing carpooling as an option. That will probably influence a behavioural change regarding the platform, since at the moment Bulgarian users show themselves as not very responsive to this new idea and model.

One complementary innovation which works in favour of the project from the beginning is as mentioned above the use of technology. It is playing a pivotal role in this case in every step of the way – website, mobile application, adaptation for visually impaired people, corporate carpooling.

Impact, diffusion and imitation

The project has not achieved the level of impact what was hoped for from what was expected to be possible at the beginning. The creators believed that a multifunctional platform should have a big success in number of users and degree of popularity. This didn't happen however. Now the project is in a second implementation phase, where the social project "Pathfinders" and the business model "closed corporative group" are being implemented. It is still too soon to judge the impact of these projects.

Nevertheless Aha!Car is the most popular carpool-platform in Bulgaria. Popular means that non-profit organizations, social movements for sustainable living, business and politicians know them well, invite them to events and discussions etc. As a result of their popularity the creator participated in several interviews and conversations concerning carpooling and the new law. He also participated in a personal meeting with the responsible legislator. However there is no evidence that the legislator has taken his opinion into account.

The project has won some awards for green business, such as first place for "Investor in the environment" at the Annual Responsible Business Awards 2014 of Bulgarian Business Leaders Forum (BBLF) in 2014.

And even though the (unmeasured) impact is still desirable the project could make a great difference for visually impaired car-poolers and empower them to travel more autonomously. The objective now is to reach out to the visually impaired, which is however depending on funding. As mentioned before awareness in general is an important point. The diffusion in the meaning of more users and business clients is desirable but not yet achieved.

Another important point is the ability of the project to adapt and overcome obstacles. On the one hand the creators were learning by doing and changed strategies when it was necessary. They first learned from other platforms to build up their own and then they were also learning from the society and its needs, especially by the conversations with visually impaired people.

From the user side perspective it is harder, it is harder to see impact. Bulgarian users need time and a lot of convincing to get warm to the idea of using apps instead of Facebook. And the visually impaired also need more convincing and learning that the platform would empower them to be more autonomous.

The project did enlarge the target group with its new strategy, however there is no transfer to other territories happening.

Role of policy

There is a discrepancy between political actors at the European and at the national levels. There is also contradiction in the national policy regarding carpooling.

- European level: the programme "Do the right mix" of the European Commission, which supports projects for sustainable mobility and combination of transport modes, was implemented in Bulgaria by the agency "InterImage". Through that programme the agency funded the creation of the mobile application of Aha!Car. So the European programme was their initial external funding.
- On a national level, there is the programme "Corporative social responsibility" which presses corporations to implement green measures into their business. Carpooling is one of these supported measures, so thanks to that programme Aha!Car found their first clients for their new strategy. This political influence is however indirect.

Direct impact on the platform and carpooling in general has the new national law proposal which aims to control illegal transport. However so far it is unclear how this law will treat carpooling (Facebook groups and platforms). There was attempt to prohibit carpooling altogether, but it did not come along. Now the unclear situation causes uncertainty and in this way presents a barrier for carpooling platforms as Aha!Car. It seems that the legislator is working actively with the representatives of the Transport industry (bus transport cooperatives). In the discussions from summer 2016 representatives of the carpooling side were also integrated in the discussion. It is still not clear how the new law will regulate these services (EconomyMagazin.bg, 2016).

In the opinion of the creator: the place of policy is to create a legal framework. Politicians need to define carpooling and make clear what is allowed and what isn't, he underlines. It is necessary also to say how carpooling should be legally practiced. Both interviewees (the platform creator and an administrator of a Facebook group for carpooling) declare themselves open to cooperate with the legislators to create fair environment for carpooling and make it safe (by providing data to authorities for example). They also express their wish for more action from the political side to support carpooling like tax-reduction or parking spaces. In this way politics could be actively supporting the social innovation. However now this is not the case.

Connectivity to the practice field

The practice field shared car usage and in particular its stream of carpooling is still relatively new to Bulgaria. As stressed in an article about carpooling there was little demand for it in Bulgaria, but nevertheless it is growing constantly in the past years. One reason for that is that Bulgarians are not so receptive to the idea of sharing their vehicle with strangers. Some time is needed to overcome this psychological barrier. The Facebook groups were from the beginning the answer to the demand for carpooling and are still the leading channel for carpooling (Dnes.bg, 2014). They were borne because of direct demand for the service, both interviewees stress out.

In this line the contribution of Aha!Car for shaping the practice field is not that big. It is visible and possible however on the level of public discussions about carpooling. Since the platform is an officially registered firm, it is a reliable partner for dialog and as mentioned earlier it is often being invited for conversations.

3.3.2 Case A2: (Liftshare.com, United Kingdom)

Description, development of the Social Innovation Initiative

Liftshare.com is a ride-sharing service based in Norwich, UK. It is available on a webpage, where users can offer or find a ride, travel together and share costs for a trip. Even though it is an online service now, Liftashare started in 1996 as a pin-board service at the University of Bristol. The idea emerged from a personal demand of affordable transport experienced by the founder and was also based on his experience of similar services in other countries. Two years later, as a part of a student project, the service went online and is growing ever since.

The initial business model was of paid membership (£10/year), which with a critical mass of 10,000 people would give the project the necessary capital to develop further and expand. However, the founder soon realised that people were open to using the service, but did not want to pay for it. So he changed strategies and made it free to use. In 1999, he set up a dedicated carpooling website for Glastonbury Festival-goers (Shankleman, 2015). The strategy was to achieve a higher critical mass of members and offer free memberships, despite no marketing budget (Clabburn, 2016). Afterwards, he also started working with companies and local councils to develop carpooling solutions for them.

With this initiative, Liftshare aims to resolve social problems concerning affordable transport. The company operates as a carpooling platform and also develops solutions for sustainable transport. In its 18 years of existence, Liftshare.com has changed strategies multiple times and worked with local authorities, companies and schools to minimize congestion and CO2 emissions. The founder's objective is to raise awareness about the positive effects of ride sharing and help incorporate the idea in the daily life of communities, cities and business.

Actors, partnerships, alliances, networks

Liftshare did not have any partners during their early days, but now, they work with a lot of people and have many supporters. For instance, Liftshare has had huge success working hand-in-hand with Stagecoach (a bus transport company believed to be in competition with Liftshare). In the beginning, the founder relied on friends, family and favours. In 1999, he started collaborating with a company in Hampshire for £40,000 (10% of the company's share). The company offered to handle the technical side of Liftshare, but eventually got caught in the dotcom hype and ended the collaboration. In 2002, the founder hired his first employee. He gradually employed more people to manage the sales, marketing, and technical aspects of Liftshare.

Liftshare received its first support from the Glastonbury festival. Their first client was south Gloucestershire council. The council wanted Liftshare to solve transport problems in an area north of Bristol; tenders from London and Norfolk, and a few other companies followed this. Initially, Ali and his friend developed a business plan, but this had to be up scaled so they could cater to bigger companies. Students of London Business School did some work for Liftshare and came up with a strong strategic 5-year growth plan for Liftshare in the UK. Several local authorities and businesses signed up in a couple of years. The ministers appreciated and spoke positively about Liftshare's work, but made no contributions to encourage/improve car sharing within the UK.

Liftshare's car sharing and travel planning products deliver economic, social and environmental benefits for all, according to the founder. Their corporate clients include Tesco, GlaxoSmithKline and Heathrow Airport, which pay Liftshare fees to organize ride-sharing networks for staff (Loughborough, 2016). Also in their list are a majority of local councils and many universities, providing them with branded websites and apps to help employees catch a ride together (Shankleman, 2015).

The main criteria for collaboration with partners are that they understand and accept the social goals of Liftshare. In addition, they need to trust in Liftshare and be willing to change.

There is no policy initiative or umbrella organization, and car-sharing is completely overlooked, says Ali. There are no professional memberships either. Carplus in the UK committed to do something in this direction, but failed to produce outputs. According to the interview, car-sharing industry in the UK has Liftshare and a few other smaller companies, who do not like working with Liftshare.

Innovative solution

Ali, the founder, gained much experience on sharing from the offline world before he started Liftshare. He had seen car-sharing in his school days, he had hitchhiked during his year off at the University, travelled around the world and shared rides. He soon discovered that such shared experiences not only saved costs, but were also enriching in terms of meeting new people and making new friends. The whole idea for the project is based on his personal experience.

Liftshare is primarily a **Service innovation**. It was one of the very first public websites with a database, connecting people together (at least in the UK). It is one of the very first social networks that did mapping online and in that matter one of the first companies to offer organised carpooling. In some things, Liftshare led, in others, they followed. They followed/took things from different markets (e.g. online payment from eBay, social networking from Facebook

etc.) and incorporated them in carpooling. They strongly depend on ICT and technological innovations. In a nutshell, Liftshare is people powered, technology enabled, personalized mobility platform. It is a convenient service on demand, on-the-go. It is an integration of Internet, mobile, and social networking platforms (Clabburn, 2016).

The company changes its strategy/approach practically every day. They do at least 20 experiments a month. In 2016, they went live with a website with a 100 changes to it. They have learnt to change really fast, because user expectations change really fast. Particularly, with the amount of money coming into this sector, the way in which people view applications, mobility, websites, and real time solutions is changing really fast. In terms of changes to their company, Liftshare has undergone changes in strategy, market, awareness, technology, and the team.

Gaining momentum

Liftshare had to create the market from scratch, and a lot of work was put into identifying a suitable market for the company to operate. There was no sustainable transport market when Liftshare began their work in the late 90s. The market for sustainable transport came into existence 7-8 years later, when the government introduced sustainable transport planners, and released funding worth millions to the local authorities for sustainable transport projects. The local councils were instructed by the government to employ people designated to plan sustainable transport for the local communities. At this stage, Liftshare had a clear strategy to target the employees designated to work on sustainable transport in each council, and talk to them about Liftshare's benefits. In terms of a strategy for targeting corporates, Liftshare concentrated on demonstrating how they could add value to these companies.

Key factors at different stages that determined the success of Liftshare include:

- Finding a working business model;
- Having the right people at the right place;
- Identifying corporates and councils, who were willing to pay and arrange for transport services for staff/people via Liftshare;
- Recognizing the changes within markets with time, and acknowledging the importance of brand and usability;
- Rebuilding and constantly updating the system for Liftshare to keep up with the ever changing market demands;
- Charismatic leadership.

Despite the market for sustainable transport being huge at one point, Liftshare had started to slow down in its growth. The company grew very well up until 2007. However, the banking crisis and subsequent recession slowed down their growth. Memberships continued to rise, but their profits were down. The main driver for Liftshare has always been helping people to share cars, which continued to grow well, but as a company, they were not generating revenues as fast as they were in their earlier years. They again started to pick pace in 2015, and saw faster growth. The company has since maintained its fast growth rate.

Liftshare currently has 24 employees. They have employed 70 people altogether since they first began. Some employees have been with them for as long as 16 years. Some employees left because they were not competent, and some left because Liftshare changed its strategy and their skills were not needed anymore.

At a policy level, Liftshare believes that enough is not being done. In fact, political measures are encountered more as a barrier; for instance, the Scope 1, 2, and 3 Carbon Emissions[4]. The government made it mandatory for companies to abide by Scope 1, while they could choose to follow Scope 2, and Scope 3 was stated optional. Community transport, including business travel was included within Scope 3. All the CSR teams within companies were focused on office energy, lighting, and other aspects mentioned under Scope 1 and 2. They mostly dismissed operations within their transport departments, because transport was now at the bottom of their list, with Scope 3 being made optional. This massively backfired for Liftshare. It was said that the government could not track emissions from transport, which is why it was placed at the bottom of the scope list.

[4] In UK there is a requirement for companies to report their greenhouse gas (GHG) footprint. The requirement divides GHG emissions in 3 groups: Direct, Electricity, Indirect and Other. Community transport and business travel were categorized under scope 3 (Boles, 2016).

Complementary innovation

Many complementary innovations contribute to Liftshare's success: technology, Internet, online payments, GPS tracking, etc. Many things that Liftshare thought would never be possible with people are now considered normal. As technology becomes more accessible, it makes entering the market easier from a tech point of view, not the marketing point of view. Technology is one of the pillars on which Liftshare has been built. As technology evolves, Liftshare has to grow and evolve with it.

The challenge, however, is getting people to try car-sharing for the first time. Once people try it, they repeat sharing in the future. This shows that there is massive latent demand. People might not use car-sharing on a daily basis, but they would use it when desirable, because it is cheaper, more fun, and less stressful. The big question however remains, what's going to get people to give car-sharing a go the first time?

Within the company, it is about Liftshare's values and one's ability to learn. In terms of staff, Liftshare assesses their ability to learn and perform well, whilst producing positive impact. For the employed teams, learning fast is essential, and their performance has to be world class. Liftshare's operations hugely depend on the Tech team, so it is very important for them to have the right people on that team.

Impact, diffusion and imitation

Liftshare did not define success as such. They still believe they have a long way to go before they can call themselves successful. In 2007, Liftshare had a 5-year business plan to go global. It was expecting to make profits from the plan, and further invest in other 'sharing' ideas. It was a very high level ambitious plan, which had an exciting start, but also many complexities. If Liftshare had been operating from someplace like San Francisco, they believe they would have had enough people believing in their work, making them a huge success. The UK, however, tends to be good at supporting R&D and is very weak in supporting growing companies such as Liftshare. The 5-year global business plan had barriers, in that, it was an over ambitious business plan, and this was not helped by the British attitude of not supporting growing companies. Thus, the plan ultimately failed. However, Liftshare's very first business model still works out the best for them. The processes have changed with time, and so has the structure.

The company introduced share options for people in 2005, but never with the vision of selling the share, but to say, if Liftshare ever raised money, the shareholders would benefit out of it. Liftshare also introduced profit related bonuses, where 20% of the profits were turned back to the team, and the rest would go into Research and Development and their other projects.

When fuel prices went up, more people shared cars. When congestion charges were introduced in London, commuting by buses became the talk of the town. There was no account of the impact of car-sharing, when according to Liftshare, the number of people sharing cars was much higher than the number of people who commuted by buses. In 2014, the company registered 1 million trips per month (Clabburn, 2016).

Trying to get people to believe in Liftshare's values, and getting them involved requires effective communication. Policies have been one of the main barriers, and talking to government officials has fetched no results for Liftshare so far. Liftshare has dispersed through communities, be it employment or festival communities. It has dispersed through the UK, across EU, and the world. The idea has spread through word of mouth and marketing. It is not just the people working for Liftshare who have contributed in the diffusion process, but also those working with them, who have taken it to another area and imitated the concept. That is one reason why the company has trademarks in terms of names and logos, but no patents. As a social initiative, they find that protecting social ideas does not serve the true purpose of a social innovation, because then there will be no diffusion. If the concept is protected, there will be no scope for imitation, and the solution will fail to achieve any wider impact.

Lift sharing works well when there is critical mass. The big question for Liftshare is - is it better to have more competition, or protect itself and keep the market? Clearly, for critical mass, it is better for Liftshare to protect itself. However, if the market is bigger, peers can potentially help each other and promote the whole thing together. Liftshare is still on the fence about what is better. Liftshare believes that if a local community can implement car sharing better, then they will help the community in achieving the desired results, so there can be mutual learning.

Liftshare's website and activities were recognized by the DETR (Department of Environment, Transport and the Regions), and over 50 University Unions, including Bristol, Manchester, Nottingham, London and Oxford Brookes. The whole scheme was part of a University Computer Science project, designed by students for students (Clabburn, 2016).

Role of policy

There is a need for more focused policies in the field, is the opinion of the founder. So far, the national policy has only backfired at Liftshare, instead of helping it (3 Scopes of the mandatory GHG reporting). Ali identifies that policy programmes play an important role, particularly, in establishing the first exponential part of the S curve, that is, when a business is set to take off. However, there is much more to be done on a political level for car sharing.

According to him, for a policy maker, efficient energy use is the most important thing when devising a policy on issues such as sustainable travel. Energy use per head can be easily calculated using total energy use and number of users consuming that energy in a given area. The government can introduce rewards for councils to say, if you decrease energy consumption per person, you are entitled to discounts or will become eligible for grants in the area. This will give local council the power to look at all options available to them and choose the most efficient ones. For instance, with sustainable transport, the councils can explore the options of walking, cycling, buses, car sharing, and community transport services such as dial-a-ride. This will let them assess which option works best for the city, and they can learn much about sustainable transport from that one high level metric.

Dedicated car-sharing lanes on the UK roads and publishing data on the effectiveness of different transport modes will be helpful, overall.

Connectivity to the practice field

Liftshare is a pioneer in terms of formalizing and organizing car sharing in the UK, and that means, it is contributing in shaping the practice field since the very beginning. There was no online car-sharing service available anywhere in the world as far as Liftshare is aware, and they were the first in the field. There have been car-sharing services at either just the corporate level or public only services, but nobody before Liftshare did it on a scale as wide as them. They worked towards bringing changes in the insurance policies to make car sharing legal within the UK. They have also proved that car sharing, without expensive memberships, can work and create significant impact.

In the UK, every time there has been a crisis, Liftshare has done well. However, UK has far fewer emergencies in comparison to what they face in France, for example. Also, the French are generally more receptive to renting than owning, thinks the founder. In entering the UK market, Liftshare were well aware that they were stepping into one of the hardest markets. There is sharing in the UK, but it is not the same as car-sharing in Sweden, New Zealand or any other country, where people are more receptive to the whole idea of sharing, stresses Ali. With the growth of sharing economy, however, that is slowly changing and car-sharing has become a fashion. Every cultural festival in the UK is boasting a car-sharing scheme, which is being hugely welcomed by the festivalgoers. Liftshare is often seen as an early example of the Sharing economy - new business models for sharing resources, instead of owning them (Cave, 2013).

Ali recognises competition as a driving force for the practice field that keeps companies on their toes to do something new and innovative to stay ahead.

Liftshare is all about car-sharing and mobility, but it also impacts poverty and environment. It attacks poverty in terms of making affordable transport available through sharing. It contributes to the environment, as sharing a car helps reduce pollution and is environmentally friendly. In instances of rising fuel prices and high cost of living, or when the recession hits, shared resources and options like car sharing become a popular choice.

3.3.3 Case A3: (MyWheels, the Netherlands)

Description, development of the Social Innovation Initiative

My Wheels is a platform for sharing cars based in the Netherlands that offers as well peer-to-peer car-sharing (private households sharing their car) as 'classic' car-sharing (offering cars owned by My Wheels or another professional car rental organization at specific locations). The idea was born from one man in 1993 who started sharing his car with his neighbours and has organically grown since then. My Wheels addresses the need of people for mobility and more concrete the use of a car, but who want to reduce the costs of this mobility (in terms of finances or the costs for the environment). Next to that, My Wheels stimulates social contact by offering peer-to-peer car-sharing.

The business model of My Wheels is that they gain a share of the rides that people book on the platform. Currently My Wheels is a cooperative association and it is officially registered as a social enterprise. It is a not for profit organisation, which means in practice that revenues are used to strengthen the company. The company is community oriented and works with local coordinators (volunteers) to identify communities with demand for car-sharing.

The organisation has grown a lot since 1993 but kept its idealism and strive for societal welfare. They even go as far as stressing that in the end people should not have to use cars at all, but travel everywhere by public transport. As that is not feasible yet, car-sharing is a good second option. Important goals they say to strive for are reducing CO_2 emissions produced by cars and reducing the amount of cars parked in the streets.

Actors, partnerships, alliances, networks

The main initial responsible for the initiative was the founder, who is not so actively involved in the initiative anymore. During the course of the initiative there has been contact and cooperation with various types of organisations, listed below:

- Government / local councils: cooperation on the local level.
- Local car rental companies and car dealers: started cooperating locally for the repair and rental of cars.
- Student housing organisation 'SSH' in Utrecht: placing cars in the proximity of student houses. SSH advertises the services of My Wheels to the students.
- Companies that develop car systems: My Wheels is pioneering in building in systems in cars so that users can log in with a card (such as a public transport card). This requires an innovative and currently still costly system that needs to be built in in the cars. My Wheels cooperates with companies who develop and install these systems.
- Insurance companies: My Wheels cooperates with insurance companies who insure the cars.
- Dutch auto mobility association "ANWB": The ANWB is a national organisation for auto mobility in the Netherlands. My Wheels has cooperated with them. They wanted to start a platform of their own, but stopped developing it.
- Environmental organisation "Natuur & Milieu" (translation: nature and environment): cooperated with them on the topic of environment.
- Public transport organisations: cooperation to try to stimulate that people use a combination of public transportation and car-sharing. Some public transport organisations see car-sharing as competition however.

The roles of these partners could be summarised as follows:

- Boosting the number of cars or members on the platform (car dealers, SSH, public transport organisations)
- Increasing the positive impact on societal goals (ANWB, Natuur & Milieu)
- Ensuring that the users of the platform are properly insured (insurance companies)
- Developing and implementing technology that enables efficient car-sharing (companies that develop car systems)

There are some forces that determine the dynamics between the parties mentioned and other possible partners. My Wheels CEO Karina Tiekstra stresses that it is important to determine a strategy first before engaging in more cooperation. It is mostly interesting for an initiative such as My Wheels to cooperate with initiatives/organisations that are about the same size or larger as them, have national coverage or appearance and have corresponding interests and goals (not necessarily the same, but it should be possible to align them). It also helps if the other organisation is not for profit, just as My Wheels. Because in that case you can help each other maintain your position and/or grow, to achieve your goals and have more impact. There are a lot of smaller social innovation initiatives in the mobility sector or related domains that you can cooperate with, but in the context of growth that is less interesting.

Sometimes it is easy to start a cooperation, but to actually make something happen within that cooperation is more difficult. It is beneficial to set up cooperation in other markets than mobility. The automotive domain is explored as well but the experience of My Wheels is that companies in that domain operate quite traditionally and have difficulties re-inventing their business.

Desired future partners are parties that can help increase the number of cars or members on the platform.

There are no professional networks in the specific field of operation of My Wheels (car-sharing). My Wheels is connected however to the network 'Social Enterprise NL', in which Dutch social enterprises are united. This organisation stimulates contact between different social enterprises. They also offer training for starting social entrepreneurs. My Wheels is a relatively large and experienced organisation within this network.

Innovative solution

What makes My Wheels unique is that it is not commercial, but a social enterprise and first and foremost striving for achieving societal goals. Also, the combination of peer-to-peer and classical car-sharing on one platform is unique.

The insight leading to the initial start of the project was one man noticing that he and his neighbours could gain from sharing a car. From that moment onwards My Wheels has learnt a lot about their communities. Since they started already in 1993 they have relatively a lot of history and corresponding experience. They can now benefit from these experiences. The main things they have learnt over the years:

- Where are potential users located?
- Why do people share or use cars and who are potential users?
- At which locations is car-sharing successful?
- How can you reach different user groups in your communication strategy?
- What kind of people will potentially misuse the service?

There is not a lot of scientific research about car-sharing. My Wheels finished carrying out user research among their members in 2016 and was still analysing the results at the moment of the interviews. The first results show that an important reason for wanting to use a car is for leisure (trips to parents during the weekend for instance). There are many people who do not use their car during the week because they use public transport to go to work. Or people who use their car during the week to go to work but who do not use it during weekends.

Further, what they have learned from their users is that mostly young people are interested in car-sharing, but the largest current user group is people between the ages of 45 and 65. The largest part of the users is motivated because of concerns about the environment. Reducing costs is also an important motivation. Also a lot of people take part in car-sharing because they noticed a car from a car-sharing company in their neighbourhood, so it is convenient. When they see one car in the street they start thinking about it. The company also has some knowledge about how to prevent misuse of the service and fraud.

My Wheels is active in different forms of innovation:

- Service innovation: the service that it offered is that you can use a car at any time without owning it, or renting it out. The central idea is to move from possession to use.

- Technological innovation: the application of board computers that make it possible to log in with a card is a technological innovation that My Wheels is one of the first to apply. They started using that eight years ago and now car manufacturers are starting to embrace it. Currently these are only built in in the cars owned by My Wheels. The problem is that they are still quite expensive (about 400-500 euros). The next step is to ask rental companies that they cooperate with to install it also in their cars.
- Organisational innovation: My Wheels is officially a social enterprise and is experimenting with commercial operation while maintaining societal values. In the past they worked with a principle called sociocracy. That involves a different way of decision making by using a system with different circles (personnel, customers, top). In every circle, someone from another circle takes place and can join in the decision making. Decision making was based on consent. When you oppose to something you need to have a good motivation for why you do not want that. My Wheels functioned like this for a while, but it turned out to be too difficult to take fast decisions. For instance top circle would only gather once every three months. That is why they stopped working with this model.
- System innovation: My Wheels want to change the mobility system; it works on making the mobility system more sustainable. Car-sharing is a step towards a situation in which every location can be reached by public transportation. Eventually My Wheels should not be needed anymore.

Additionally, My Wheels stimulates the creation of new values. They try to convince people that they do not need to travel everywhere by car. It is difficult to realise behavioural change in that respect. It needs a lot of time. The easiest way is to address the reduction of costs as a motivation for behavioural change. Also comfort plays an important role: there is no maintenance, you do not need to buy a car. One of the interviewees stressed: "When you talk to people on birthday parties they will say that they are showing sustainable behaviour by using My Wheels, but in the back of their minds they mostly base their decision on comfort and costs. They will not do it when it is much more expensive".

Gaining momentum

In 2003 the initiative My Wheels become more professional and serious. They incorporated a similar initiative from the city of Culemborg and were growing. At one point there were 200 cars being shared. This was only 'classical' car-sharing. In 2012 My Wheels started offering possibilities for peer-to-peer car-sharing on their platform. Peer-to-peer car-sharing gave a totally different dimension to car-sharing. This is also where the growth in the number of members is. In 2016 the founder Henry Mentink takes a step back and Karina Tiekstra takes over as CEO. Karina's goals are to ensure a healthy growth of the organisation and determine a strategy to do so. The challenge is to incorporate a more entrepreneurial way of thinking and acting without losing the original ideals.

The initiative has changed over time in several ways. First of all it has grown from being an idea of one man to a platform with a large group of members. It has also changed from only 'classical' car-sharing like explained before, to the addition of peer-to-peer car-sharing to the platform. There have also been changes in the way the organisation behind the platform functions. My Wheels has used an alternative decision making system for some time but also stopped working like that again.

There were different drivers of the initiative mentioned by the interviewees:

- Community: the community (the members and volunteers) of My Wheels is a strong driver of the initiative. They explain part of the success. In many cases, when the initiative runs well locally, there is someone locally that cares about it. The eyes and ears of locals make sure the initiative runs well. That is why the community is that important.
- Local government: local governments play an important role as driving forces of My Wheels. They can inform consumers about possibilities. In the Dutch city of Zutphen, people who pick up their driving license receive a flyer with information about car-sharing.
- The online platform: the ease and comfort of the platform is a strong driver for the initiative. My Wheels spent effort to optimize its functionality by for instance adding new possibilities, which stimulates the use of the platform.

Concluding, the drivers and success factors for My Wheels are the combination of local strength (the communities and governments) and a well running platform.

The interviewees also mentioned several barriers in the development of the initiative:

- Money: You need to maintain a balance between social impact and commercial value. However in the market you need to compete with commercial parties.
- Government: The government often does not participate to make life easier for My Wheels. My Wheels is connected to a 'Green deal' about car-sharing, a Dutch subsidy programme for stimulating sustainable innovation. However more can be done from the side of the government to make car-sharing grow.
- Contact: For members of My Wheels it can be a barrier to use the peer-to-peer services of My Wheels that you need to have contact with someone (can be a neighbour). You need to go to someone's house, ring the bell and get a key. Also you need to be prepared to drive in someone's car. Not everyone feels comfortable with that.
- Getting rid of your car: Another barrier to get engaged in car-sharing is to get rid of your car (if you are not the offering party). Many people feel more comfortable owning a car than not owning one. Someone said that he felt that he needed a car, to be able to drive his pregnant wife to the hospital.
- Abuse of the platform: There are people who abuse the platform. It is difficult to recognize these 'crooks', because you do not have personal contact with the members of the platform. That is why My Wheels uses artificial intelligence to filter out users with malicious intents.

Competition is not explicitly recognised as a barrier, but as a downside. There is competition from several organisations, but they all have their specific focus. Greenwheels for instance has a strong connection with public transport, for instance placing cars near train stations. Many initiatives are being started related to car-sharing. Also local governments start services for sharing electric cars. However, with that many initiatives people cannot see the forest for the trees. Karina: "I do not believe in having a lot of different platforms. At one moment in time you will be flooded by all kinds of initiatives and commercial parties."

Complementary innovation

As has been described before in this case study, My Wheels implements many new possibilities and incorporates new knowledge, that they partly develop themselves as the user research to better understand the characteristics and needs of their members.

Elaborating on the interviews, the organisation of My Wheels is driven by expressed and latent demand. It is driven by expressed demand because members and volunteers from the local communities of My Wheels notice a demand for cars to share in their environment and give a signal to My Wheels. They respond to this signal, the expressed demand, by installing a car in that spot. There is also a latent demand served, because as they indicate it often happens that they place a car somewhere and people start to think about the possibility of car-sharing because they encounter the possibility. This shows that the demand was already there somewhere, but not activated until they noticed the possibility.

In addition to knowing better the target group there are multiple ways in which technology plays a role in the My Wheels initiative. First, the development and application of the board computer. The cars that are delivered nowadays are more and more equipped for car-sharing. Mostly because in many cases a key is no longer needed, but board computers make it possible to open a car with your phone or a card. Technology can mean a lot for car-sharing opportunities, according to My Wheels. The downside is that less social interaction is needed because the aspect of exchanging the keys is lost when you can use a card or phone. Related to this development, the new parties that enter the market are companies that can develop and build in these board computers in cars.

Second, technological developments concerning the website or platform play a role. Examples are links in the platform to other companies and a payment system that handles payments automatically and quickly.

Next to that, My Wheels is looking at a system to check driving licences automatically.

Lastly, they work on a self-learning system for recognising people who you do not want to have as clients because there is a large risk of abuse. Parties like Snappcar are also working on this.

For these kinds of developments it is important, on the one hand, to look at what other companies are doing and try to learn from them. On the other hand, the producers of the innovation (My Wheels itself) need employees with the skills to spot new technological and social innovation opportunities. Also they need to cooperate with other organisations, such as an organisation developing the board computers. Their users (both the car sharers and car users) need to have sufficient online skills to work with the platform, enough trust in the platform and the people using it and enough 'social skills' to interact with their neighbours.

Impact, diffusion and imitation

At the start of My Wheels there were no goals set. It has grown very gradually. The founder really enjoyed and was good at the community aspect of the initiative. Visiting the communities, giving presentations. For him it was important that the initiative grew gradually and that the users were happy. But he was not so concerned with setting goals. The new director is more involved in setting goals.

My Wheels has impact on a number of terrains. First of all, every car sharer stands for a certain reduction in CO2 emissions. This has also been quantified by My Wheels. In 2019 they aim to have 180 car sharers on the platform, and a couple of million less CO2 emissions. Also car-sharing decreases the number of cars parked in the streets.

A welcome side effect of car-sharing is that it increases the contact between neighbours when they share a car. This has become slightly less with the introduction of the board computer however.

At the moment car-sharing is most successful in larger cities. This can be explained from the larger numbers of inhabitants and less parking space.

Because of the long history of My Wheels they are recognized by the media. It also increases their findability online. They like to share their knowledge to improve the professionality of the car-sharing sector. Within that sector, each party has their own profile and approach. Because of the variety in users, you need to have different messages in your communication strategy. For one user it is relevant to know how many trees have been spared, for the other how much money they saved.

In order to use the platform there are also some basic requirements. The users of the platform (both the car sharers and car users) need to have the following capacities:

- Sufficient online skills to work with the platform and be able to make bookings
- Enough trust in the platform and the people using it and enough 'social skills' to interact with their neighbours.
- Naturally, people who want to share a car need to own a car and the car users need a driving license.

In order to spread My Wheels needs some action from their members and volunteers. The strategy of the company is that it should spread itself. People do not become members just like that, they need to hear about it from someone. And you would like to hear something about how they experiences My Wheels from someone you trust before you engage in the platform. To get this kind of commitment also the rating system that My Wheels has is important. That shows other people how a car/car sharer is rated.

The initiative of My Wheels itself has grown but has not been imitated, adapted or transferred in a different context. There are however several initiatives with overlapping activities as My Wheels, such as Snappcar (peer-to-peer car-sharing) or Greenwheels ('classic' car-sharing). Also there are platforms like My Wheels but with slightly different activities, such as Blablacar (sharing rides with other people). The interviewees of My Wheels mentioned that they know about several platforms that have started over the years, but have also stopped again. This shows that it is not easy to establish a recognized and well running platform. Also they indicated that it might not be desirable to have too many platforms, as people would not be able to see the forest for the trees anymore.

Role of policy

There are several aspects of the local and national policy context that influenced the development of the initiative. First, the interest in car-sharing differs a lot between different local governments. Some of them are very involved in

car-sharing. Such as the local council of the city of Wageningen. My Wheels is involved there in a team with meetings on this topic.

Also it differs a lot between local governments how quickly certain processes can be arranged. For instance in Amsterdam it takes ages to request a parking spot, and in Wageningen it is arranged in a day. That also has to do with the availability of parking spaces.

The interviewees of My Wheels mentioned different roles of the Dutch government in car-sharing. Partly these roles are already being played, but they could be taken up further.

- Providing of information: the government provides information to citizens and could provide more information about the possibilities of car-sharing.
- Set requirements when inviting tenders for public transportation: local governments are obligated to invite tenders for public transportation. Public transportation companies need to compete for acquiring such a tender. Those governments could set requirements regarding stimulating car-sharing in combination with public transport. It is important from a government perspective to look at the big picture of the mobility in a region.

Elaborating on the interviews it can be concluded that it would be beneficial to the development of car-sharing if it was more recognized by the government. For example to work out solutions to problems that car-sharing companies now face, such as not being able to transfer fines to the drivers.

The current national policy is that car rental companies can send fines to the person who was driving the car at the time of causing the fine. However, as car-sharing companies are not official car rental companies, they are not allowed to do that. Which means that in case someone rents a car from My Wheels and they get fines, the bill is for My Wheels in case that person does not pay it voluntarily. It happens that people rent a car for a day and get 5 or 6 fines. This is very costly for My Wheels and has a large effect on their business model. There should be a solution for this problem, but as car-sharing is not on the agenda of the local and national government, no such solution is developed.

Another possible policy solution that would stimulate car-sharing would be to make car possession more expensive.

Connectivity to the practice field

The My Wheels initiative can be said to have contributed in shaping the practice field of car-sharing in the Netherlands because they started early, already in 1993, and were one of the first car-sharing intitiatives. Also they have developed themselves and included new types of car-sharing, namely peer-to-peer car-sharing.

The practice field of car-sharing was shaped by different forms of new knowledge, amongst which:

- Technological developments: My Wheels described technological developments such as board computers, IT-systems to improve your platform and artificial intelligence to detect (probable) abuse of the services. In some of these technologies they are leading in implementing them, but each car-sharing initiative will use these kinds of technologies to some extent.
- User needs and motivations: In the case of My Wheels they learnt a lot about their users over the years. This will also have shaped other initiatives in the practice field. Also the motivations and needs of users are not the same for everyone. A successful car-sharing initiative must therefore address multiple types of users.
- Climate change developments: Developments in research and discussions about climate change and CO2 emissions had an influence on the practice field of car-sharing that is largely directed at lowering the amount of CO2 emissions by decreasing the number of cars and rides. The discussions about the topics of sustainability and climate change led to an increased awareness throughout society of the importance of sustainability and it changed norms and ideas. From these changes both the demand for car-sharing and the motivation to start initiatives in this area has partly grown.
- Ways to cooperate: Car-sharing initiatives are learning about useful cooperation with other companies. In the case of My Wheels they learnt that the most interesting cooperation is with organisations of similar size, national scope and no conflicting interests. The interviewees also mentioned cooperation of competitors with the national public railways, placing cars close to train stations.

Derived from the interviews with My Wheels, the policy context has influence over the development of car-sharing initiatives. As they are often newcomers in the mobility sector, they are not yet included in certain laws and regulations. My Wheels named their problems with not being allowed legally to send fines to the drivers, as this is only allowed for by official car rental companies. This is a Dutch example, but probably these kinds of frictions will occur in all countries where car-sharing comes up and newcomers enter the mobility sector.

Policy could also play a positive role by for instance putting policies in place that make it less attractive to own a car (especially when you do not drive it often). At the moment there are no such policies in the Netherlands.

As was mentioned before there are new collective ideas in society that shape the practice field of car-sharing. Discussions in science, politics and civil society about the topics of sustainability and climate change led to an increased awareness throughout society of the importance of sustainability. A development that is related to this, is the upcoming 'sharing economy', in which it becomes more important that you can use a product than to own it. What also plays a role in the development of car-sharing, and My Wheels in particular, is the over crowdedness of many cities. One goal of My Wheels is to decrease the amount of cars parked, so that there is more room in the streets to do other things. From these new collective ideas both the demand for car-sharing and the motivation to start initiatives in this area has partly grown. In order for the initiative to grow, more people should become open to the idea of sharing their car, using someone else's car, or using a car owned by a car-sharing company. And possibly getting rid of their own car.

Based on the interviews with My Wheels competition indeed plays a role in the practice field of car-sharing. There are several existing car-sharing initiatives with different backgrounds, profiles and slightly different services. Also new initiatives come up, and sometimes also go under again. It is not easy to set up a well-recognised and well-functioning platform. Different car-sharing initiatives keep an eye on each other to not get behind in the development. Initiatives that innovate and stay relevant to their users maintain their position. So in that sense innovation can be a competitive advantage.

As far as the researchers are aware, there are no institutional structures that determine interactions in the overall practice field of car-sharing. Based on the interviews with My Wheels it can be said that there are car-sharing initiatives with different origins and therefore different internal structures. My Wheels is a social enterprise and therefore different from car-sharing initiatives that are operated by commercial companies.

In the Netherlands, and also in other countries, several car-sharing initiatives exist next to each other. The impression from the Dutch situation is that most are diffusing by growing in number of users and cars offered on the platform. Also initiatives join forces, as happened in the earlier days of My Wheels. From the interviews we understand that it is better to have a few organisations with more locations, than many different organisations. As the platform should be well-known and findable, which is easier when they are less.

3.3.4 Case A4: (CARUSO, Austria)

Description, development of the Social Innovation Initiative

CARUSO Car-sharing Cooperative is a social business for providing sustainable mobility services to its members as their contribution to solving societal problems. The project operates both as a peer-to-peer car-sharing model and since recently as a traditional car-sharing model with electric vehicles in Vorarlberg, Austria's most-western Province. In addition, they also provide „equipment only" for smaller private car-sharing groups across Austria. CARUSO is particularly aiming to bring car-sharing also to rural areas and smaller towns in rural areas car-dependence will prevail for some time.

What is special about Caruso Car-sharing is that the vehicles of very different partner types – businesses (real estate developers, construction companies, etc.), public institutions (municipalities, hospitals, etc.) as well as private persons – can be booked through various participation and contracting models.

In its current form the project operates since 2015. However there is much longer history behind it, which helped to shape the present implementation. In 2004 the founder (SV) takes over the business representation of DenzelDrive (traditional car-sharing scheme) – also to find out why car-sharing does (not) seem to work. A year later he starts to construct apartment complex with the idea to integrate his idea of "car-free living" (i.e. living without having to own a car). He wants to construct half the number of street-level parking spaces as prescribed by law and use the money saved to provide car-sharing. However, the city of Bregenz as planning authority insisted on the full number of prescribed spaces. In the same year Rhomberg construction company starts a research and development project funded by the national programme „Buildings of the Future". SV joins and provides "open" car-sharing with Denzel-Drive for residents and neighbourhood. Acceptance was limited despite a 200€ welcome bonus. As users were able to afford their own vehicles and did not like the idea of „sharing" – and the fact that the out-of-state license plate of Denzel cars was not acceptable for them, the venture turned out not to be financially sustainable. At the same time, SV starts to implement "alternative" car-sharing in his own apartment complex – with a different approach. For this purpose, he needs a technological solution for trip logging on a board computer via smart phone as nobody wants to keep a physical log-book and the reservation process should be available around the clock.

In 2009 the first research project called „Car-sharing Networks" starts with the aim of developing a better technological solution for board computers. A year later, 2010, the second research project „Caruso" is intended to develop a software solution for the reservation system. The focus is now on user-innovation with 20 test groups participating. At the same time, electric vehicles from another project on regional „model region electric mobility" are used to test e-car-sharing. Even though the technology works well, acceptance remains low and lots of persuasive efforts are still needed. In 2011, the third research project „e-Caruso" develops the software for electric vehicles and board computers. In the following year there is again a contact with property developer Rhomberg on a local project. Rhomberg is highly interested in car-sharing in residential complexes because he sees a great future but he also requires a business plan. In 2014 the fourth research proposal – this time a large-scale R&D effort is submitted for public funding yet rejected and the development slows down considerably. A half-time employee financed by partner Rhomberg keeps networking and other critical activities going.

Finally, in June 2015 the Car-sharing Cooperative „Caruso" is presented to the public. In 2016 Caruso also offers „traditional" car-sharing with electric vehicles around train stations and soon around highway exits. This is also due to the Province's Secretary for Public Transport and Mobility Management support who suggested to provide basic car-sharing at train stations (especially as DenzelDrive pulled out of the market). In the same year SV takes educational leave.

Actors, partnerships, alliances, networks

- The idea was initially heavily pushed by SV, supported by an IT specialist to programme software.
- Local business tycoon Rhomberg (construction company) is vital as „door opener" and multiplier for business and political groups in the region. SV and Rhomberg meet at a conference in Vienna and decide to collaborate on what they see as both societally relevant as well as economically feasible.

After a series of research and development projects as well as lot of persuasive activities to enhance acceptance among users/sharers, things went very quickly. Thanks to the involvement of the Rhomberg company the Secretary for Public Transport believed in the project and provided its approval and support. Afterwards the Cooperative was established as non-profit association. The cars were provided by CARUSO itself or private citizens.

The first partner was invited to provide the necessary technology, i.e. program the software solutions necessary to provide smooth car-sharing administration. This partner is still active in an associated company and does programming work for CARUSO.

The second main partner in the cooperation network was business tycoon Rhomberg. As real estate developer and construction company, he provided the first "market" for CARUSO car-sharing to the residents.

Innovative solution

The basic idea to sharing cars was basically for **environmental reasons** –to reduce emissions and save valuable (public) space in residential areas.

The main **insights** came from the following **key aspects** over the years:

- How can we offer a mobility service based on car-sharing that is **complimentary** to other **sustainable mobility modes** such as public transport, walking or cycling? [multi-modality]
- Who are key partners (and promoters) in the region (and beyond)?

CARUSO addresses several forms of innovation:

- Service innovation: from owning to sharing cars
- Technological innovation: programming of driver's logbook, reservation system, etc.
- Organisational/institutional innovation: established as non-for-profit "association"
- User innovation: focus groups and first user feedback provided valuable input to service development.

Gaining momentum

CARUSO has no particular marketing strategy. They contact companies directly and reach customers through them. The founder underlines, that the employees trust their companies and therefore are open to CARUSO as it is recommended by the company. The founder believes that going through the companies is the best chance for promoting car-sharing. This thought is underlined once more by the fact, that their main driver is the cooperation with the local business tycoon who acts as "door opener" to corporate as well as political decision-makers.

Several barriers are also mentioned:

- City planning: regulations on minimum compulsory parking spaces in residential complexes.
- Taxation: the legal framework has worked against the project in some cases. An example is company A that wanted to implement car-sharing for their employees, however taxation was unclear. Taxation authorities were unable to provide a solution, since the laws were not advanced at that time. Company A did not want to run the risk of tax evasion and thus did not join.
- Region: it is difficult to add municipalities to the Association which are not in the region of Vorarlberg.

The success factors identified are as follows:

- The idea and the stamina of the founder
- The availability of public funds to conduct several consecutive research projects and thus lay the foundation for the future business
- The commitment of 'business tycoon' Rhomberg as multiplier and door opener in the Province

Based on the interview, it may be safely said that – though the Association is a social business and thus geared towards societal needs – the founder himself is more focusing on the entrepreneurial aspects of setting up the business.

The political involvement in the project is at several levels:

- City governments initially insisted on current legislation regarding minimum compulsory parking spaces, thus not taking in car-sharing's potential to reduce number of parking spaces.
- Municipalities were first movers.
- Provincial government provided financial support for purchasing the electric vehicles.
- The national level functioned as additional enabling environment mainly through funding programmes. CARUSO initially received support and advice from "Mobility of the Future" programme" for developing its technological solutions and user acceptance testing.

Complementary innovation

Innovation was driven by the vision of the founder. The first years, there was no or very limited demand perceived by potential users. It was only after some companies joined the project and brought in their fleet as car-sharing vehicles that acceptance rose considerably through employees.

Technology played a major role in the beginning as the drivers' logbook, the onboard computer and the reservation system needed to be programmed.

Impact, diffusion and imitation

A sustainable mobility system can only be established when all interest groups act in concert (source: www.caruso.at). CARUSO thus targets private and public sector as well as civil society in offering different car-sharing services to provide sustainable mobility options in the Vorarlberg (the most-western province of Austria).

As the association has only recently been established, there are no (publicly available) data on usage etc.

Learning processes by users: User acceptance played a key role. In the beginning, residents of the buildings did not see the need to use car-sharing as they could afford a (second) car. Furthermore, the idea of sharing did not seem appealing to them. It was only after companies (private, public) joined the initiative, that interest rose. For car-sharing to thrive and spread, users need to be open to adapt their attitudes and behaviours regarding shared mobility. Some of them are also "sponsors" of the vehicle in their neighbourhood and receive free miles in exchange for light maintenance work.

As regarding to the business model CARUSO Car-sharing is an association with the aim of supporting its members economically and socially through the common operation. As the association is open in terms of number of members, this business model was ideal for realizing CARUSO's objectives.

The CARUSO Car-sharing Association is a **social business**. That means that is business purpose is exclusively geared towards solving important societal problems and investors forego speculative profits. Profits of Caruso are re-invested according to the Association's purpose and drawn by their members.

The Caruso Car-sharing Association defines four groups of members:

- private companies/organisations
- real estate developers/real estate sector
- public sector, public sector companies
- Private people

Companies and organizations depend on efficient mobility to fulfil their tasks. They cause a lot of traffic and thus use too many resources. With modern car-sharing they can organize corporate and commuting journeys much more efficiently. The Association helps to lift this potential. It develops tailored concepts and implements them with its members.

Residential neighbourhoods where several people live next to each other lend themselves to car-sharing. The real estate sector can lay foundations for sustainable mobility. CARUSO helps to successfully implement ambitious car-sharing projects in residential areas. More mobility for the residents, more space for living and fewer parking spaces and costs are convincing arguments.

The public sector defines frameworks and can thus contribute significantly to the performance of car-sharing (and also has own fleets to contribute to the sharing model).

To win civil society as a car-sharing provider and user is Caruso's ultimate goal. Every single person can support the development towards sustainable mobility as member of the Association.

There are other regional car-sharing providers in Austria with a focus on residential complexes. CARUSO with its „hybrid“ car-sharing (peer-to-peer, traditional) plus the fact that it is organized as an association makes it quite unique in Austria.

In the course of the case study it is clarified that there is no umbrella organisation for car-sharing in Austria. CARUSO recently joint the German national car-sharing umbrella organisation where there was a suggestion to start also an Austrian one. However, as the founder underlines, all car-sharing schemes are competitors to each other and there is lack of trust among them. He, however, believes that such cooperation could benefit all parties.

Role of policy

There are different roles of the Austrian provincial and national governments:

- **Funding** of the initial research and development activities (three consecutive projects were financed in the **national** programme “ways2go”).
- **Promote the idea and provide (co)funding for infrastructure investments**: the **Provincial Government** of Vorarlberg provided funds to purchase the electric vehicle. The Secretary for Public Transport and Mobility was instrumental in providing information on extending the business towards railway stations and highway exits as these activities will benefit the travellers in the region.

Connectivity to the practice field

The topics of sustainability and climate change have led to an increased awareness throughout society of the importance of sustainability. The idea of environmental sustainability is a strong motivation and driver in the car-sharing practice field. There is however very limited information on the practice field of Car-sharing in Austria, so it is quite impossible to drive parallels with the case study.

3.3.5 Case A5: (Uber, USA/Europe)

Due to geographical location and the inability to reach a contact person, the case study on Uber is based on desk research. Therefore, specific questions about actors' constellations, gaining moment or in depth drivers and barriers cannot be addressed. Nevertheless, the available information online allows us to picture the brief development of the innovation, its innovative character, impact on global scale and connectivity to the practice field. These points are further described below with regard to the SI-Drive theoretical framework.

Description, development of the Social Innovation Initiative

Uber, Inc. started as a limousine service provider in California, USA in 2009 and grew to be a worldwide known mobility service provider with various services: SUV on-demand transport, peer-to-peer rides and even food-delivery (Uber Webseite[5]). Nowadays the company operates in 540 cities on 6 continents (Uber Webseite[6]).

The most popular and controversial Uber-service in the past years is the mobile application for peer-to-peer services where drivers and passengers can connect in real-time to ride together on a short notice. Therefore, in the literature Uber is usually described as a real time ride-matching service (Cohen & Kietzmann, 2014). Through the log-in on the mobile application all users are turned into potential drivers or passengers. The internet based software allows them to stay connected and find each other in real time. Therefore, private users are being integrated in the mobility service system in cities. All transactions in this process (connectivity, request, answer, payment, feedback) are managed by the company. ‘In return’ Uber takes a percentage of the price for a ride. This type of organization became a reason for legal debates all over the world and raised the question for regulating new, internet based services, for connecting peers.

The Uber **business model** is one of a commercial company. It falls in the category of venture capital start-ups, emerging from the Silicon Valley in California, although its growth takes it out of the ‘start-up’ position and turns it

[5] Uber Webseite: https://www.uber.com/legal/usa/terms (last accessed 27.10.2015).
[6] Uber Website: https://www.uber.com/en/cities/ (last accessed 05.12.2016).

into a leader in this part of the practice field. The company is funded by investments and by revenues from its services. The experts had calculated Ubers' value at more than $50 billion in 2015 and over $60 billion in 2016 (Chen, 2015 and Sorkin, 2016), which makes it a highly commercial initiative in the field of carpooling.

Innovative solution

Uber's innovation capacity can be seen in several levels:

- Service innovation: On the first place Uber's technological solution offers a fast and easy, free of charge channel for connecting drivers and passengers. The company offers several services for on-demand transportation on one platform: Uber Black, SUV, Lux with professional drivers; UberX (USA)/UberPop (Europe)/UberPool for P2P rides with private drivers; UberTaxi for Taxi drivers etc. From social innovation point of view the P2P services are most important since they represent a new way of transport services between private citizens which can connect directly through the application. In addition the technical organization of the service itself is also an innovation in the service area. The mandatory feedback and rating systems inside the application provide an overview about every-users "behaviour" on the platform and could be considered internal security measure against service misuse.
- Organizational innovation: Another important innovation in the Uber case is their organization. For its services with professional drivers, Uber acts as a traditional employer and service provider. However, in the peer-to-peer services the drivers are treated as self-employed and Uber sees itself as an agency for connecting peers (Casinge, 2015). It does not directly employ drivers nor does it own any cars. As a company Uber is responsible for the software i.e. the mobile application and website where people register and connect. This type of organization, however, became an object for criticism in various countries around the world and led to legal discussions about the "agency"-status of the company (Robinson, 2015 and Louch, 2015).
- Technological innovation: technology is in the heart of Uber. The company could be seen as a pioneer in the real-time matching shared mobility services. Everyone logged in the application is turned into potential driver or passenger and could appear on an interactive map. One mobile application offers the opportunity to choose from and use all Uber services. The interactive map integrated in the application itself makes it possible to follow the ride in real time and provides GPS-navigation for the drivers with no additional software needed. All payments are electronic through the application.

This technical organization requires constant internet connection on the one hand and a mobile phone on the other. Users should know how to work with this technology in order to use it. Therefore, **absorptive capacity** for new technologies is required.

Impact, diffusion and imitation

The impact of Uber today is twofold: a) in its global spread and b) in its legal controversy.

- Firstly, Uber grew to be worldwide known service provider. As mentioned above, the company is represented on 6 continents. This fact speaks for its successful diffusion strategy and the openness of users to services of this kind.
- Secondly, the controversial model contributed to legal debates about those kinds of new services, which are not yet covered by the existing law systems. After long debates and protests in USA, for example, a new mobility service category was created in the state of California to cope with the new service: Transport Network Companies (TNC) (MacMillan, 2015).

In Europe, the debates followed at first protests from the taxi industry against the competition Uber represents for them. The P2P service was banned in several countries for the past 2 years (Casinge, 2015). Later on the "Uber-case" was connected also to the debates about the regulation of the Sharing Economy in general (Robinson, 2015). The main discussion in Europe is about how Uber should be looked at: as a mobility service provider or as an internet platform for connection. In the first case scenario it will underlay strong national mobility regulations while in the second it will be more loosely regulated at EU level. In 2015 this question was broad to the European Court, however there is still no final decision on how such services should be treated in the European Union. Meanwhile the member states react

quite differently. In some EU countries as the Netherlands and Estonia, the service is being supported, while in others (France, Spain and Ireland) stronger regulations are desired (Valero, 2016). In the UK and Switzerland the status of the drivers as self-employed was also broad to court (Osborne, 2016 and Lomas, 2017). It was ruled that drivers should receive compensations as employees and are not to be treated as self-employed, which will mean great costs for Uber and change in the contracts with drivers (Osborne, 2016). This ruling will also affect other branches of the Sharing Economy and the people treated as self-employed in them. However, this ruling is yet to be appealed from the company (ibid.).
Meanwhile Uber is met by lawsuits also in other parts of the world like Brazil, Mexico and India (Haldevang, 2015 and Levine, 2015).

The legal debates represent the **role of policy** in the Uber-case. Politics and most notably legal frameworks present a barrier for the Uber innovative models. Because they are not captured by the laws yet, they stay in contradiction to the existing law system and therefore are being proclaimed as illegal. The lobbing coming from Uber and the fact, that users do demand such service, pushes forward to find a suiting regulation. Once recognized and institutionalized, there will be a door open for other similar services to emerge and operate freely.

Connectivity to the practice field

As mentioned earlier Uber is one of the pioneers in the real-time matching ride services[7]. Its main contribution to the practice field lies in the competition it creates inside the practice field for urban carpooling and in the legal debates. The global expansion of the company makes it very hard for other local initiatives to stand their ground. An example is the ending of Sidecar, one of Ubers' initial competitors, that couldn't cope with the vast competition from leading companies as Uber and Lyft in the USA (Solomon, 2015).

And while the competition factor harms the possibility for emergence of new initiatives, the legal debates help for institutionalizing this most recent part of the practice field. The Uber-case led to rethinking of the existing framework and therefore to discussions for system change. The regulations created to cope with Uber, however, go beyond this one company and will affect the whole practice field. In this manner Uber is contributing for standardizing the practice field on a global scale.

3.4 PRACTICE FIELD CONCLUSIONS

Despite the various forms of shared care usage, there are some commonalities found in the cases. These are

- sharing the resources of a car in order to save costs,
- organisation of trips based on online/internet platforms and social media,
- adequate support of the local public sector, but expressed need for more engagement of national public sector bodies,
- users are organised within an (open) community and need to engage actively in order to use the resources (be a member, organise the trip by booking a car or arranging a shared trip etc.)

Commonalities are seen also in the mentioned barriers, which mostly refer to social acceptance of shared car usage (level of implementation). This implies great efforts of the initiatives/companies to raise awareness for car sharing. Further barriers are related to insufficient support by national policy makers. Especially existing national laws are seen as limiting the opportunities of the sharing-initiatives (contextual policy level). Support of local level policy makers, however, seems to be adequate and public sector bodies are involved in implementing the initiatives. A further success factor is a working business model and a solid communication strategy.

With respect to the relation between the practice field of shared car usage and social change, the following concluding aspects are noticeable.

[7] At about the same time two other similar companies emerged in USA: Sidecar (not operating anymore) and Lyft (https://www.lyft.com/).

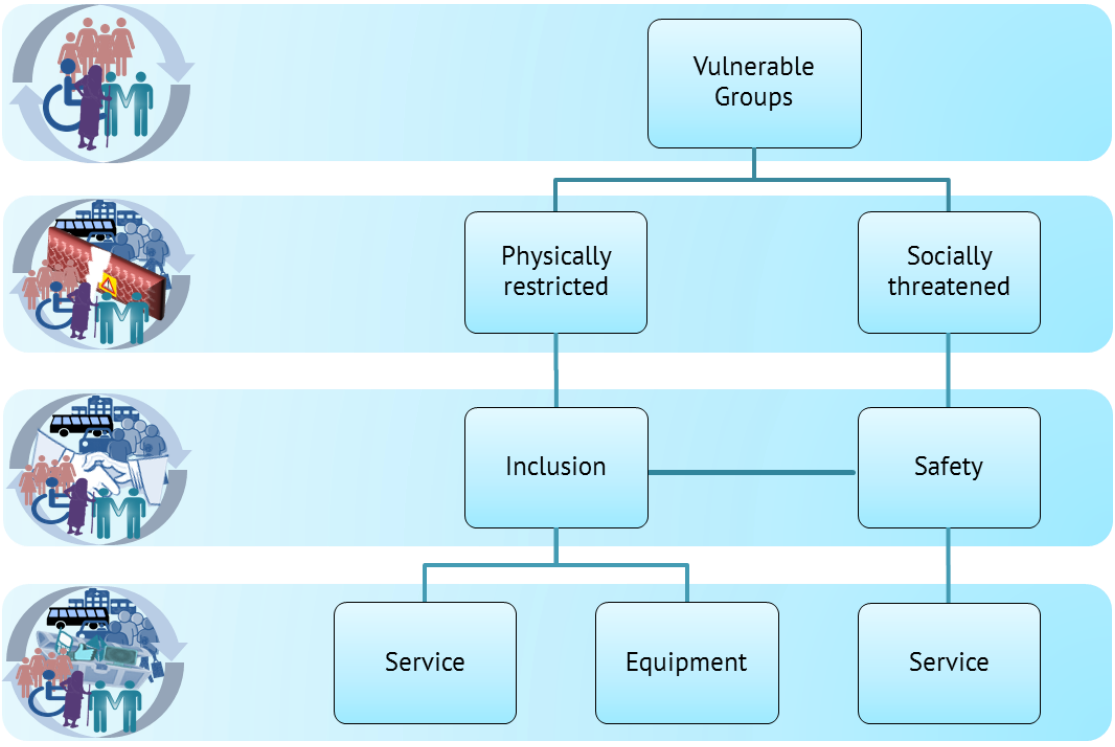
- Strategic learning and high professionalization: The studied initiatives are not the result of ad-hoc reactions of a defined community or group that strives to minimize a socially undesirable solution. Implementation is often based on market and society studies which are part of a professionally developed strategy that also includes business model development and communication plans. A further component is openness towards change and to adjust the business model accordingly. To conclude, there is a targeted and strategic element in achieving social change via shared car usage.
- Great variety, selection in the beginning: There exists a plethora of car-sharing and carpooling initiatives in Europe and across the world, many of them are developed in a bottom-up manner. They have different business models, operate in defined regional areas, at the level of the nation state, or even on worldwide basis. At the same time, economic selection processes in the sense of market leadership begin. To conclude, the field of shared car usage is currently characterised by dynamic diversity that seems to develop towards a more pronounced selection process through which the number of initiatives and business models might be reduced again (cf. the case of UBER). Thus, an important element of social change via vehicle sharing seems to be market concentration towards selected providers and rise of related power structures.
- Technology as a driver of practice field growth and diffusion: Technology is the strongest complementary innovation the initiatives are developing next to the idea of sharing cars. Its success is based on increased digitalisation of society, making it easier to organise 'sharing' based on apps or online platforms. Thus, technology is the important push-factor, whereas the sharing economy and sustainability awareness are pull-factors of the practice field's growth.

4 PRACTICE FIELD B: MOBILITY OF VULNERABLE GROUPS

The practice field "Mobility of vulnerable groups" is 'target group' oriented and combines initiatives, developed to answer a specific demand of a certain social group. During the SI-Drive mapping phase, such projects were categorised in the practice fields: Transportation of people with reduced mobility and Gender sensitive transportation. During the the case studies, however, it became apparent that those 'titles' were not always accurate enough. The founders of Heimwegtelefon, a phone line for people walking home at night, for example, disagreed to categorise the initiative as Gender sensitive since it does not target women exclusively. Moosdorf Dorfmobil, a community based transport service, aims at providing mobility solution for the citizens of Moosdorf, who do not have any other options and are therefore excluded from everyday activities. Through its implementation however, this project is as well citizen initiated community transport, as transportation solution for people with reduced mobility. Taking into consideration, that the initial practice fields, the cases are accounted to, stress the vulnerability certain groups experience in connection to their mobility, for the in-depth analysis exemplifying cases targeting different marginalised groups were chosen for the case studies. This decision allows for comparing and better understanding the context specifics and development of social innovations, targeting the mobility of different vulnerable groups.

Considering the mapping and the case studies, vulnerability is understood here as physical or social temporal or permanent vulnerability. People with reduced mobility due to disabilities, illness, lack of public transport connections or economic reasons, are considered physically vulnerable, since they lack the physical possibility to use existing transport modes. People, who due to their belonging to certain social group (women, transgender, LGBT etc.) feel threatened from violence and assaults using the existing transport modes, are regarded as socially vulnerable. The vulnerability of these target groups presents demand for accessible, affordable and safe transport options, which are often not provided in the existing mobility system. The overarching practice field captures these types of solutions. Figure 4 below gives on overview on the practice field as understood in SI-Drive.

Figure 4: Mobility of Vulnerable Groups at a Glance



As the figure shows, there are three main levels, where the initiatives differ:

- **Firstly**, as already mentioned, the target group is different: on the one hand, there are people with reduced mobility by physical barriers and on the other socially threatened groups.
- **Secondly**, both target groups have very specific leading demand, answered in the provided solution: in the case of physically restricted groups the main goal is inclusion, while by socially threatened groups the aim is securing their safety. Nevertheless, accessibility of goods and services is also always thought through the lens of safety and securing safety guarantees inclusion of people to certain activities they couldn't access before, because of the threats. Therefore, both goals are usually closely connected.
- **Thirdly**, there is a difference in the form of the solutions provided. While safety-issues are mainly answered through services (phone line, mobile application, specific transportation services etc.), solutions for physically restricted groups can appear as well as a service (offering specific transportation options), as by delivering of required equipment (e.g. wheelchairs, car, bus etc.).

This picture of the practice field is reflected from the in-depth case studies. Four case studies were conducted: two targeting physically restricted groups and two targeting socially threatened groups. Table 3 below shows the chosen cases, their origin, target group and demand answered.

Table 3: Mobility of Vulnerable Groups – In-Depth Case Studies

Project name	Country	Target group	Demand	Solution
Heimwegtelefon (phone line for people walking alone at night)	Germany	Pedestrians walking alone at night	Safety	Service
She Taxi	India	Women (entrepreneurs and commuters)	Safety and accessibility	Service
MOOSDORF Dorfmobil (car service for people from a village area)	Austria	Rural area commuters	Accessibility and affordability	Service and equipment
Childe in a chair in a day	United Kingdom	Children in a wheelchair	Accessibility	Equipment and service

In the further elaboration, the four case studies are compared, exploring their context specifics, process dynamics, actors and networks, critical success factors and mechanisms of social change. Since the solutions, the SI provide are so different and demand-dependent, the focus is not on the practice field development, but rather on the initiatives themselves. Nevertheless, some similarities between the countries and SIs could also be identified.

4.1 CROSS-CASE STUDY ANALYSIS OF PRACTICE FIELD B

4.1.1 Context specifics

A first encounter from the case studies is that **the demand for accessible and safe transportation is not context dependent**, but rather can be found in very different contexts. This is especially visible in the two cases regarding socially vulnerable groups. She Taxi is a solution from India, where the society is described as patriarchal and male dominated. The solution is a taxi services led by women drivers and meant for women passengers exclusively. The demand for women centred solution comes from the countries specifics. Women in India face a high risk of assault and violence by using the available public transport and taxis. The impossibility to travel freely at any time of the day and especially at dark restricts their working options and harms their career life. They have fewer options to become entrepreneurs and even when they do create businesses they face lack of recognition as entrepreneurs in general. They often do not have access to important information; they are underestimated and discriminated by banks and

other institutions. Therefore, there are solutions like She Taxi necessary which increases women's safety and security on the roads and empowers them to be more independent in their daily life.

The problem of security, however, is not restricted to countries with patriarchal societies. Solutions aiming at security issues are found also in western countries, especially with regard at women waking/traveling alone at night or the LGBT community. Such solution is Heimwegtelefon in Germany, a phone line for people walking alone at night. Even though the founders admit that women are the majority of their callers, the solution is not exclusively meant for women, but for everyone who feels insecure walking alone.

Another similarity between the two cases is the importance of **critical events**. In India, a savage rape and murder case was the incentive to develop the solution. This critical event came in addition to the already strong demand for women empowerment, as described above. In Germany, on the other hand social conflict was not the first incentive for developing the solution, however due to a critical event the solution gained popularity. The asylum wave in Germany and the multiple reports for sexual harassment on the New Year's Eve 2015/2016 in Cologne started safety discussions all around the country, which resulted in popularity of the phone line. These developments underline that in times of social conflicts the demand for safe transportation options increases.

A third encounter is that such solutions are often driven by **system failure** in the respective context. Child in a chair in a day (further: Chair in a day), for example, is developed as an answer to the long and unwieldy process of wheelchair delivery in the UK. The aim of the project is to make this process more effective and therefore shorter. She Taxi is a project aiming to deal with the ever-growing gender inequality in India. Moosdorf Dorfmobil is created as a substitution for the lack of public transport connections and mobility services in the area. In all three cases the existing system was not working for the target group and a specific solution for their demand was necessary. Heimwegtelefon is the one case, which was created as a complementary to the system, driven by latent demand.

4.1.2 Processes and Dynamics

All four cases studies see themselves as **pioneers** for providing the necessary solution in the respective country, even though the solutions are not necessarily unique on a global scale. The idea for the German phone line is 'borrowed' from a similar solution in Sweden, however there was no such solution in Germany at the time of development; women reserved taxis and buses exist also in other countries[8], but there was no such service in India so far; Child in a Chair in a day established a new, faster process of delivering wheelchairs to kids; and Moosdorf Dorfmobil provided flexible transport connection to the community of Moosdorf, where no other options were available. All four cases gave a push for the development of other solutions, aiming at the same demand, as is discussed below under "Mechanisms of social change".

Despite their current success, all initiatives went through a **recognition phase** at the beginning. Moosdorf Dorfmobil had to reassure political actors, that it does not represent competition to other possible services; Chair in a day experienced mistrust from their medical experts at the beginning, however the success of the new solution overturned that; Heimwegtelefon needed a year to gain media attention and respectively popularity and the She Taxi drivers needed a lot of time and effort to gain recognition from male taxi drivers. For the recognition and popularity of the projects, the actors involved play a significant role.

4.1.3 Actors and networks

Broad actors' constellations are important in all four cases. There are actors from different sectors and areas of expertise involved in the solution. Most importantly the initiatives are often based on close cooperation between public bodies and civil society. The partners involved in the initiatives specialise in different areas, therefore there is a **strong division of tasks**:

- Child in a Chair in a Day is developed from Wizz-Kidz, an organization with long history in providing wheelchairs to people in need, in close cooperation with the National Health Service (NHS), which even recognizes the solution as a "high impact innovation". In addition, they rely on different partners for investments, manufacturers, researchers and their own team of experts.

[8] Reference to the mapping

- She Taxi is an initiative implemented by Gender Park, an organization created from the Indian government to enforce gender equality. Since it is a public lead SI, Gender Park found its other partners through an open contest: one to deliver the service part of the solution (call centre, booking and payment management) and another to provide vehicles and training for the drivers. They also work in cooperation with banks open to support women entrepreneurs. All women drivers are considered actors, implementing the solution, since without them, it cannot exist.
- Moosdorf Dorfmobil was created by the initiative of the towns' mayor, who recognized the demand and put in motion actions to answer it. The solution was financed by a regional program for development from the state of Upper Austria. For the solution to be implemented successfully, it is registered as an association with all users as members.
- Heimwegtelefon was created by two women with no support of public authorities, which makes it the one initiative of the four, which is citizen lead only. Since the founders did not have any entrepreneurial experience, they needed support for the concept development, technical implementation, popularization and most importantly legal aspects. In all areas, they cooperated with people and companies (e.g. Sipgate, a phone line company, secured their phone line account, acquaintances and friends helped with marketing and training etc.), who helped them for free.

The initiatives rely strongly on **volunteers' and pro bono work**: all operators on the Heimwegtelefon phone line are volunteers and the two founders manage the solution in their spare time, since both are working full time jobs; all drivers of Moosdorf Dorfmobil are also volunteers from the community; Chair in a day is on the one hand developed from a charity organisation (WizzKidz) and on the other their partners did their work for free to support the solution. The only exception is She Taxi, where the idea of empowering women to become entrepreneurs and earn money is part of the solution, therefore they work as classical taxi drivers.

The initiators and implementing body of the initiatives are not necessarily part of the vulnerable target group, however if they are not, they are working close with it for a long time. Heimwegtelefon and Moosdorf Dorfmobil are carried out by people personally experiencing the demand for the solution, while Chair in a day and She Taxi are organized and implemented by organizations with long history in the field. As already elaborated, there is **expressed demand** for the solutions recognized, which drives their development.

All initiatives stress out that there are no umbrella organizations or special networks in the fields they are operating in. They are however often developed as a part of or supported by a **policy programme**: Chair in a day works close with NHS to influence the policy for wheelchair services in the country; She Taxi is developed out of the governments' goal to ensure gender equality, which is being made a priority since the mid. 90s and the 2000 Millennium Development Goals; Moosdorf Dorfmobil was financed by the policy programme "Agenda 21" for supporting communities to transition toward sustainable transport and "klimaaktiv", a national initiative by the Austrian Energy Agency, which helped with developing a business plan and publicity (klimaaktiv, 2015). Heimwegtelefon received only indirect support, by participating in a competition for social enterprises under the auspices of German Chancellor Angela Merkel. However, Heimwegtelefon is also the one initiative with bad experience from political attention, since the initiative's name was mentioned in a campaign of the extreme right political party Alternative for Germany (AFD) without the founders' consent. Ever since, they try to distance themselves from political connections and avoid being used for polarisation of the security discussion in the country.

From the case studies the conclusion can be drawn that **national and regional policy** plays a role for diffusion, recognition and funding of the initiatives. If the demand is strongly local, as is the case of Moosdorf Dorfmobil, the involvement of **local political actors** is also crucial. This makes policy one factor for success of the initiatives.

4.1.4 Critical success (and failure) factors

As mentioned earlier, all initiatives have gone through a recognition phase, before gaining success. One common success factor, which helped through this phase, was **rising awareness and publicity** for the existence of the solutions, mainly through media attention. Heimwegtelefon, for example, has existed for a year without any progress until a daily paper did a story on the project and they started receiving media attention. In addition, friends and volunteers started promoting the project on several social media (e.g. Youtube and Facebook). The founders soon realised that constant media coverage, particularly on social media, was very important for their success. This became especially visible when AfD (a German right wing party) used their name without permission and they needed to distance

themselves from such activities and reach as much people as possible. Other publicity strategies include outcome reports and benefits elaboration from the initiatives themselves or public authorities, as well as personal contact, conversations and dialogue with the target group. The endorsement of the initiatives by prominent people is underlined by all interviewees as important publicity factor. In the case of Chair in a Day the recognition of the initiative as impact innovation by NHS boosted the recognition even more.

Another common success factor is **teamwork**. On the one hand, the cooperation of different partners is stressed out. Especially in Chair in a Day and She Taxi the ability of different stakeholders from different sectors to cooperate and work together on the common goal is underlined. On the other hand, the engagement of volunteers and experts is crucial. Moosdorf Dorfmobil shares that even community members who never showed any interest of common projects before, have endorsed the initiative and participate as drivers-volunteers. Heimwegtelefon also points out volunteers' engagement as a pillar for the solution to work. Chair in a Day sees the acceptance and adoption of the solution by the clinical team as critical factor. Similar is the situation in She Taxi where the resourcefulness of women entrepreneurs is stressed out. The absence of committed people is one factor, which can bring failure to the initiatives, as the case of Heimwegtelefon shows, where, after one of the founders stepped back, the project came to a hold for a year until another committed person overtook her responsibilities.

Connected to teamwork, **charismatic leadership** is also a valid success point mentioned in initiatives as Chair in a Day, regarding the CEO of Wizz-Kidz, and Moosdorf Dorfmobil, where collective local leadership is recognised as vital. Another factor is **political commitment**. For She Taxi analysing the problem on a broader scale, generating strong political support for gender equality and relying on proactive bureaucracy ready to acknowledge the potential of technological developments for solving social problems is what brought the project to life. For Moosdorf Dorfmobil the engagement of the mayor was crucial; and Wizz-Kidz as an organisation is staying close to NHS and therefore influencing policy in the field. In addition, **critical social events** could also lead to the development or popularisation of projects targeting vulnerable groups. This is the case with She Taxi and Heimwegtelefon. As already mentioned, She Taxi was developed after a rape and murder case and Heimwegtelefon became very popular after the New Year's Eve events on the Cologne cathedral in Germany.

Through the different success factors, process dynamics and actors' involvement, several mechanisms of social change were identified. Further all mechanisms, recognised in the SI-Drive theoretical framework are discussed from the perspective of the four case studies targeting mobility of vulnerable groups.

4.1.5 Mechanisms of social change

- **Learning**:

  Personal experience, mutual learning, empowerment and capacity building can all be found to some degree in the initiatives.

  Personal experience and knowledge of the founders or implementing organisation are crucial for starting the project and finding a working strategy. Heimwegtelefon is implemented by two individuals, for which lack of entrepreneurial experience is often presented as a barrier for the project, and for whom the success is often based on taking advantage of "windows of opportunity". Chair in a day and She Taxi, on the contrary, profited from the reputation and experience of the implementing organizations and their knowledge of the respective fields of wheelchair supply and gender equality. Nevertheless, the experience inside the implementing organisation grows with the initiative. The founders of Heimwegtelefon have gathered additional knowledge and skills about the phone line, schedule and web page management, legal status etc. and have changed the solution accordingly; the community in Moosdorf got informed on possible solutions before choosing electric vehicle for the community transport, which led to learning how to keep the solution efficient.

  In addition, **mutual learning** is also identified by most initiatives. During the choosing of the first volunteers, Heimwegtelefon realised that gender does not matter for the callers. Initially the Heimwegtelefon team expected women would be more appropriate phone line operators. In Moosdorf Dorfmobil there was mutual learning as well regarding patience, reliability, social skills as well as driving skills and knowledge of the electric vehicle. Chair in a Day works with feedback from their customers to identify their needs and adjust the solution accordingly.

Empowerment and capacity building is another valid aspect, considering that all solutions aim improving the life of a certain vulnerable group. In She Taxi the empowerment is twofold: the women commuters are empowered to be more independent in their mobility in the city and the women drivers are becoming more independent as starting their own business as taxi drivers. In addition, the project is influencing capacity building and change in the way bureaucracy works, to make it more open to initiatives of the kind. Moosdorf Dorfmobil empowers Moosdorf commuters with no access to transportation to sustain everyday activities; and Heimwegtelefon ensures sense of safety for users walking home at night, even though empowerment and capacity building are not explicit objectives for the project.

Capacity building is also important in all projects regarding the **technological part of the solution**. The importance of technology for every case is further elaborated below, at this point is important to underline, that in all initiatives there were learning processes regarding the usage of ICT, positioning systems, online management of schedules or equipment features, as well on the side of the implementers, as on the side of users. In this manner, learning and new knowledge relates to the development of technologically based products and services that induced change in the whole practice field.

- **Variation**:

  As seen so far, the four social innovations are very different from each other; therefore it is not possible to identify new common beliefs and ideas shaping the practice field. However, this variety of demand-dependent initiatives indicates that inclusive mobility on itself is becoming a more common goal on a global scale. In addition, in the specific countries the four initiatives are **laying the ground for other similar projects**: according to Heimwegtelefon there is a common practice of calling friends and family members by walking home at night to ensure security feeling; however there was no other professional line to substitute this practice before them in Germany. As already stated, the idea was borrowed from a line in Sweden, connected directly to the police. The founders also found out that there is an intention in Switzerland to create a similar line with even similar or the same name, which was persuade and implemented in Graz. This indicates spread of the practice field in Europe. Moosdorf mobile also reports about other communities who contacted them for information on how to organise similar initiatives in their area; same exchange of 'best practice' information is found also in Chair in a day and She Taxi.

  This growing of the initiatives to be 'best practice' examples leads to development of **collective beliefs and ideas in the respective countries and fields**. In patriarchal India, there is noticeable resistance to the existing system, which leads to the spread of solutions aiming at gender equality; in the obsolete system for wheelchair provision in the UK Wizz-Kidz provides a new solution, which success leads to rethinking of the whole system; through the political programmes for sustainable transition funding Moosdorf Dorfmobil, awareness about climate change was raised in the communities in Austria and the Moosdorf Dorfmobil is an example for social responsibility regarding environment and inclusive mobility. Therefore, even though the practice field is strongly diversified in demands and solutions, in the respective contexts there are common ideas and beliefs emerging, that lead to social change.

- **Selection**:

  There is little information in the case studies regarding the mechanism of *selection*. Possible reasons for that could be the heterogeneous practice field and therefore the lack of knowledge of the initiatives about the failure or success of other similar initiatives. Considering the process dynamics and spread of the solutions however, the conclusion can be drawn that **imitation** and in some cases **exchange of experience** are important factors for the adoption, diffusion and imitation of initiatives in the practice field. Heimwegtelefon 'borrowed' the idea from a Swedish solution; however there was no personal contact with the other initiative. Chair in a day also reports a similar initiative in another city, which has copied their service model. She Taxi stresses out the spread of similar solutions in other cities and for other social groups (e.g. transgender). And Moosdorf Dorfmobil underlines the information campaigns the community have carried out for other interested communities willing to implement such a project.

- **Conflict**:

  The role of conflict for the practice field was elaborated at the beginning of the chapter. To summarize, conflict is a **valid mechanism** for social change in the case of SI targeting socially vulnerable groups. The existence of such groups in society is a sign for social inequality on itself. This is especially feasible in

polarized, patriarchal society as India or by social crises as the asylum wave in Germany. In the case of physically vulnerable groups the case studies underline more the importance of tension and adaptation than conflict.

- **Tension and adaptation**:

  Chair in a day and Moosdorf Dorfmobil report tension with established industries and organisation at the beginning of the initiatives. In the UK, healthcare service providers recognise the problem with wheelchair waiting times, however there was no solution found. Since Chair in a day is a completely new way of providing the service, they met some mistrust and opposition from other organisations, which faded away when they understood the essence of the solution. There was also some tension between the physicians, used to the regular system, however they also accepted and adapted the solution, after seeing its success. A similar situation was faced by Moosdorf Dorfmobil, where the Chamber of Commerce opposed the solution before realising, that it does not present competition to existing mobility services. The founders report that some of the commuters also needed some time to accept the solution. These developments show that in cases of physically vulnerable groups, tension and adaptation happen as well inside the initiatives as with external organisations.

- **Cooperation**:

  None of the case studies reports about umbrella organisations or professional networks inside their field of operation. Therefore one can conclude that **overarching cooperation is not a valid mechanism of change** in this practice field. Nevertheless, **inside the initiatives** cooperation is very important factor. As described in the previous sections volunteers and stakeholder cooperation are a success factors for all initiatives. Considering that all four cases are pioneers in their countries it is possible that channels of practice field cooperation may emerge in the future with the development of other solutions answering the same demands and the involvement of more stakeholders.

- **Competition**:

  Competition is not recognised as an important mechanism for change from any of the initiatives. Heimwegtelefon reports about similar solutions they know of, which are however either technology based only (e.g. application simulating phone call) or connected to other phone lines (e.g. a phone line of an insurance company connected directly to the police); however there is no initiative so far to substitute calling a friend or family member. Therefore, there is still no competition in this area. Moosdorf Dorfmobile and Chair in a day go further by underlining that their goal is to popularize the solution without presenting any competition to other services. She Taxi drivers do face competition from traditional taxi companies, however this is believed to lead to standardisation of the field of taxi services. There is no competition from similar solutions, aiming at gender equality. A reason for these results once again is believed to be the fact that the initiatives are still new and exceptional for their contexts. With the spread and diffusion of such solutions it is expected that competition may play a role, however at this point this is still not the case.

- **Diffusion of (technological) innovations**:

  The practice field of Mobility of vulnerable groups is driven by **expressed** and in some cases **latent demand.** Considering that the demands are different in the different countries, it is hard to make a conclusion about the practice field as a whole. However, some case related observations can be made:

  - Heimwegtelefon was started because of the personal demand of the two founders for someone to talk to while on the way home at night. They assumed that other people may also be interested in a professional phone line, which makes latent demand being the driving force here. The idea was, as already mentioned, copied from a similar phone line in Sweden. There are also attempts in Switzerland to create such a line, and as far as the founders know, there are several security applications or other phone lines (e.g. AXA insurance company offers a phone number connected directly to the police). This indicates the expressed demand for safety-securing solutions and the dominance of technology for the practice field, at least from German perspective, since it provides the basic infrastructure for the development of applications, phone lines, communication between volunteers and providers, communication between users and volunteers, etc. Without technology, the ascribed developments would be impossible.

- Moosdorf Dorfmobil as a community service is driven by the expressed demand inside the community, which was encountered through a survey about mobility patterns. Some latent demand was also discovered from community members who did not realise the benefits of the service from the beginning but joined it later. Considering that the solution is exclusively community oriented, the impact is also on the community: social impact by providing mobility independence for people who otherwise cannot afford transport or are dependent on family members; by ensuring community contact and engagement which brings the community members together; by inspiring drivers to achieve certain reduction of CO_2 emissions. For the impact to be reached the SI requires some complementary improvements such as behavioural change towards mobility habits (i.e. adjustment to the idea of sharing rides with other commuters, patients and responsibility to the other passengers and drivers) and some adjustment to the used technology. The electric vehicle runs with solar power from the photovoltaics installations on the roof of the local primary school and requires the drivers to know how to drive it efficiently and maintain it; in addition the reservations of the vehicle are also done increasingly via email. Therefore technology, does not play a leading role in this SI, however it has multiple effects on it.
- She Taxi is similar to Moosdorf Dorfmobil nevertheless the SI here aims at reaching the society as a whole, where the demand for gender equality is very strong. The main goals are to increase the visibility of women in public spaces and their mobility in the cities, which is directly connected to increasing their economic status. The partners' constellation also works for increasing the safety of women drivers and standardize the taxi service in the cities of Kerala. These impacts could be achieved through diffusion of the SI idea. She Taxi has been implemented in three cities in the area of Kerala so far and replicated as She Cabs and Priyadarshini Taxi in two others. The idea is spreading also to other social groups as transgender, since in the spring of 2016 G Taxi has started operation securing mobility option for transgender people in Kerala. In order to reach the whole society however, change in the patriarchal structures, mind-sets and behaviours at public and private spaces are required. Women taxi drivers often have to deal with challenges coming from their family members, male fellow taxi drivers or commuters, which in some cases results in them pulling back from the initiative. Strategies for empowering women and behavioural change should be implemented. In addition technological innovation can be used for addressing social problems, as is the case of She Taxi with its call centre, automobiles and reservation system. Technology is once again not at the heart of the solution, but complementary to achieving the set goals.
- Chair in a Day is the case study where the impact of the SI is in fact measured: 90.6% users benefitted from the solution in 2016, which means they have received the needed wheelchair in just one visit to Wizz-Kidz. The success of the solution is recognised from several other organisations: besides the solution being chosen for high impact innovation by NHS, a fellow organisation in Liverpool copied the model and implemented it under similar name, other organisations also showed interest and attempt for replicating; however this diffusion is still very fragmented. Broader impact can be achieved through the close work with authorities, which are already integrating the Wizz-Kidz approach in some documents to standardize the wheelchair delivery service sector. The cultural barrier of fighting the system has to change for people to see the benefits of Chair in a day and adopt it easily. To do that awareness campaigns are held regularly. Advancement in technology is also critical for offering best and immediate care, especially with regard to equipment. Through the cost savings from optimising the delivery process Wizz-Kidz could invest in better products. They also work on online reservations and purchasing to make it easier and faster for users. Technology is very important for the solution; however the supply chain is the real innovation.

Considering the cases results, the conclusion can be drawn that **technology is a very important complementary innovation** for the practice field. Even though it is not the main driving force, it is an indispensable part of all solutions. In addition, **change in beliefs and behaviour is necessary** to achieve social change. Where system failure is encountered this change is integrated in the solution development.

- **Planning and institutionalization of change**:

  The case studies show that **social change is not necessarily planned** in the solutions, however **where system failure is encountered, institutionalisation and change are main goals**. Heimwegtelefon, for example, does not have a special diffusion strategy for the solution. Increasing the target group is desirable; however the founders do not transfer the idea deliberately to other people. They also would rather protect the initiative as

a name to keep it from misuse and copping, especially in Germany, where the existence of another such solution will present competition. An exchange of experience with interested people from other countries is not excluded; nevertheless they were not contacted so far. Similar is the development in Moosdorf Dorfmobil where the community is open to share their experience with other interested communities and have done it on some seminars and information events; however deliberate effort for diffusion of the solution is not their priority.

Another is the situation by She Taxi, where the gender inequality in the country is recognised as a common problem and its solving is targeted in policy programmes all over the country. There is a geographical diffusion of She Taxi to all metropolis of India, which can be further supported by institutionalization and state government's policy measures. Regarding She Taxi there has been a strong political will and market demand and the solution has also proved to be a successful revenue generating model. Therefore, there has been a clear intention to spread it across the cities in different districts and the project actors are involved in systematic market research identifying demand and sustainability issues. There is recognition of the need to address the unequal distribution of economic benefits, which could be achieved through the diffusion of the idea for a taxi service 'owned and operated by women entrepreneurs'.

Chair in a day is the SI that has system change in its core. Wizz-Kidz spent time to research the reasons for the slow delivery process in the country and developed a strategy for shortening this process. Success is measured by people receiving their needed equipment for one day. Wizz-Kidz is constantly increasing their targets and fulfilling them. As already stated, they have achieved 90.6% one-visit deliveries for 2016. They are deliberately trying to spread the solution by constantly raising awareness about it, talking to people, meeting with organisations and publishing output reports. Political endorsement is recognised as important for the diffusion stage, the implementation itself is due to own efforts and by overcoming mainly cultural barriers of users and staff. The next goal is to implement the solution also for adults, and by that to contribute for changing the system even more.

4.2 GROWTH/SPREAD OF THE PRACTICE FIELD

Considering that all initiatives in the practice field are targeting one specific social group and its demand, it is not possible to identify coherent growth of the practice field. The context specifics and demands of the target groups show growth and spread of the practice field separately in every country, which makes it impossible to draw a common line of development. Nevertheless, the existence of similar projects in different countries encountered during the mapping phase of SI-Drive shows that there is a common trend for securing the mobility of vulnerable groups on a global scale. The implementation of the idea however depends on the local cultural and political specifications.

4.3 SOCIAL INNOVATION INITIATIVES RELATED TO THE PRACTICE FIELD

4.3.1 Case B1: (Heimwegtelefon, Germany)

Description, development of the Social Innovation Initiative

Heimwegtelefon (walking home phone line) is a phone line, created in 2011, which people could call and on which they could talk to someone while they are walking home at night. This gives a sense of security. Through a nice phone call the person has the feeling she/he is not going home alone. Because of that feeling she/he is not just feeling safer but also gives an impression of security. This should help to prevent attacks on the streets because people come out of their victim-role. If there is indeed an attack, the other person on the phone line is in the position to act and call the police. [9]

[9] Heimwegtelefon Website: http://www.heimwegtelefon.de/ (last accessed: 26.01.2017).

The idea for the phone line is not born from a specific conflict or event, but rather from the personal experiences of the founders who frequently called friends or family members when walking home alone at night.

However, the events on the New Year's Eve 2015/2016 in Cologne, Germany were a massive booster of the "Heimwegtelefon". In that night a huge crowd of migrants mostly from Northern Africa had occupied the place in front of the cathedral and sexually harassed women passing through the masses. Altogether, more than 1000 sexual assaults had been reported to the police. So, the project did not start because of a conflict, but because of a social conflict it received popularity in its' second test phase.

The idea for the phone line came during a business trip between the founders, who worked together at the time. They both (women) realised that they are calling friends and family when they walk alone at night. One of them had heard of such initiative in Sweden, which is connected directly to the police. They checked and discovered that there is no such thing in Germany and decided that instead of waiting for the state to come up with the idea, they could start it themselves. After they came up with the name, it was important to decide how the phone line could be reached. They contacted all big phone operators for support, but without any success. Furthermore, it was important to promote the project because even if they start with a phone line, nobody would call since it was unknown. So the next step was to contact all kind of media (especially daily newspapers). But there was no response from anyone for a year. Meanwhile one of the founders changed jobs and went to work for a call centre where she learned how to start and manage the phone line. Thanks to that they registered on Sipgate (company for phone lines) and started the line. But still, nothing happened until the fall 2012 when the newspaper "Morgenpost" contacted them for an interview.

Many other media contacted them and then project started to grow. Around Christmas 2012 they did the first test phase in Berlin. However there were enough phone calls in the first night and they decided to expand it to the whole country. The Berlin public bus media also did some advertisement for the phone line and soon they had more calls, so that it was too much for the two founders to manage the phone line by their own. Since the initiative was still not registered as a formal enterprise by then and they needed careful selection of their helpers, they started with help from friends and family first. In 2013 they started a process for formalising the initiative as a not-for-profit organisation, however due to lack of experience in legal matters they were still insecure of their legal status. Still, with the establishment of the NPO they could hire the first volunteers and participated also on a competition called "Start Social". Meanwhile, they did not have many calls due to the lack of advertisement; shortly after both founders stopped working on the project due to personal reasons and in 2014 it came to a hold. In 2015 one of them decided to iterate the first phase and start new.

In 2015 another partner (a friend of the other founder) came along and there were two main partners again, rethinking the strategy of the project. With the New Year's Eve events on the Cologne cathedral the project became huge at once. They received anonymous help from a supporter on Sipgate and were able to expand the phone line. Now Heimwegtelefon has almost 20 000 followers on Facebook and about 50 volunteers who work on two shifts Sunday to Thursday 8pm - midnight and Friday and Saturday 10pm - 4 am.

Actors, partnerships, alliances, networks

The initiative was and still is managed and developed by two people (women). At the beginning those were the two founders who used to work together. After one of them stepped back, another one replaced her. The relationship between the partners was based on personal contact. They met another woman who was interested to help with the IT part of the project (Webpage) and she joined the team. Now the three of them take the decisions. However the promotion, technical, legal and advisory help comes from different partners.

Media played very important role for **promotion**: Morgenpost did the first interview; FluxFM in Berlin did free advertisement at the beginning; other media reported about the project. The popularization was helped by popular people – authors, models, TV hosts etc.

Phone line support: they rely on volunteers; there are 30 people who are always available to cover shifts. In addition some of them help also with IT problems, educational courses (sexologist), safety issues (police woman), social media (Facebook, SnapChat, Youtube).

Technical support: Sipgate helped them to expand the line by supporting them with 25 free users' licenses.

Advise on different topics and **idea development**: mostly from foundations like Bosch Stiftung and Friedrich-Ebert-Stiftung where they participated in different competitions and participation in the StartSocial competition.

Legal support of a lawyer was required to get a formal status.

The acquisition of additional partners was based on the needs to further develop the project. For example someone with know-how in webpage design was needed to create the required web presence; a lawyer was hired to settle the legal status of the initiative, etc. No specific criteria for choosing additional partners could be named except that they all should be reliable partners. However, the founders refuse to work with extreme right or left political activists/parties.

Innovative solution

The idea for the phone line was borrowed from Sweden. The founders also tried to contact responsible persons at the police in Sweden in order to exchange ideas but never got a response. They knew about other similar projects like an app that could initiate fake calls by pressing one button. The idea that it could be a more professionally operating phone line came from personal experience, that fake calls are not that reliable and keeping family and friends awake late at night is not very convenient. Furthermore, the founders received support from their bosses who had experience in business consultancy and helped them to set priorities.

Even though the strategy was thought through during the one year break, most of the success was achieved due to a mixture of being prepared to take **advantage of "windows of opportunity"**. An example is the installation of the Sipgate phone line organised by an email of an anonymous person. The mail was send to Sipgate with Heimwegtelefon owner as additional recipient. The anonymous person asked Sipgate whether they would be able to sponsor "Heimwegtelefon" and because they were willing to get the Sipgate line "Heimwegtelefon" now has a more professional phone service.

Another learning factor was related to the gender of the volunteers. At first the founders hired mostly female volunteers since mostly women used "Heimwegtelefon". However soon they realised that gender does not matter and also started hiring men. In fact, the two were advised by a psychologist who said that some of the calling people might feel safer with a male voice on the line.

There are different levels of innovation integrated in the project:

- Service innovation: "Heimwegtelefon" has a strong service product component. It is people-oriented, developed bottom up, it is highly immaterial, it is interaction based and cannot be stored. It can be consumed directly upon request of each person who knows the number.
- Organisational innovation: An innovative feature is the way volunteers work in the initiative. They can work from home and live in different places in Germany, but still do people-oriented, voluntary work that has direct impact on the calling person's well-being.
- Technological innovation: "Heimwegtelefon" would not be possible without technological innovations: the massive diffusion of mobile phones, the telephone system (one number, different places, different locations) etc. The back-office part is very much also based on the internet. For example the "job interviews" to recruit volunteers have been done via skype since they come from all over Germany and there is an internet system for creating the schedule for the shifts.

Gaining momentum

The initial strategy was to raise awareness and to make the number public and known to many people. Therefore they contacted a lot of media, however with no success for a long time. The popularity came at once as a snow ball effect started from one media – Morgenpost. There was no direct competition at the time; however they do have to deal with competitors today, which is described below.

The media interest was the first driver, followed by volunteers and Sipgate support. The biggest driver however is still the personal enthusiasm of the founders.

There were also several barriers which had to be overcome:

- Lack of experience as entrepreneurs of the founders was cause for slower development (especially concerning legal problems.
- Finding reliable volunteers: The selection process was slow, since they had to be sure that they can trust every volunteer; they had to keep the volunteer busy so they don't lose interest; difficulty by assigning the shifts.
- Technical problems: managing the webpage; no connection on the phone line; spam emails; hacking of the webpage.
- Lack of time: both founders have full time jobs and manage the phone line in their free time.

The success of the project is based on taking advantage of "windows of opportunity". Even though they developed a promotion strategy from the beginning nothing happened until the Berlin-based newspaper "Morgenpost" contacted them a year later. This was a key event since afterwards they were contacted by many other press to present their initiative.

Another eventuality was the happening at New Year's Eve 2015 in Cologne (see above). After that call numbers increased. An important reason was that security issues were intensively discussed in the media. To give examples of possibilities to protect the initiative, "Heimwegtelefon" was introduced in some media contributions.

An unintended effect was a side-effect of the security discussion in Germany in the connection drawn between "Heimwegtelefon" and extreme right parties. Some local politicians of the party AfD (Alternative for Germany) printed the phone number of "Heimwegtelefon" on their election campaign material without getting permission. It was only removed after an action for injunction (Unterlassungsklage) which was send to the local AfD politician by a lawyer. In the interview, it was clarified that the relation between "Heimwegtelefon" and extreme right actions was made up by some media. For example the founders have been interviewed for a TV contribution together with vigilante groups. Furthermore, "Heimwegtelefon" is mentioned in far right internet forums as an example of how to protect against refugees.

The founders say that "Heimwegtelefon" is not a political initiative at all but they distance themselves from any radical and racist opinion. They constantly work against misuse of the far right.

The most important success factors are the following:

- Media interest (Morgenpost and others) as a booster to make "Heimwegtelefon" popular.
- Reliable volunteers to take phone calls at night.
- A replacement of one founder who left "Heimwegtelefon" for personal reasons through another partner.
- The mail of an anonymous writer to Sipgate leading to a new telephone installation better meeting the needs of "Heimwegtelefon".
- Cologne's new year's eve 2015/16.
- A German Youtube star with many followers has mentioned "Heimwegtelefon" in her channel. As a result the likes of "Heimwegtelefon" on Facebook increased and the target group could be expanded.

It seems like "Heimwegtelefon" is a continuous process of improving the implementation of the idea. The idea itself remained the same from the beginning. But the technical implementation, the way to organise volunteers, the legal status of the initiative, these are all things that need to be managed and ways to manage it are subject of a learning process. In consequence there is incremental change in the entire initiative.

Two critical events have influenced the project in the recent past: the actions of the extreme party Alternative for Germany (AfD) presented a threat that the phone line would be connected with such extreme groups and people. Another issue that needs to be taken care of immediately is to protect the name "Heimwegtelefon". The initiative is now mentioned a lot, also in Austria and Switzerland. The founders fear that there is a risk of copying the name but using different quality standards.

Actions taken to secure successful progression are on different levels.

- Meetings in order to meet the volunteers face to face and in order to say thank you. This is important, because otherwise the entire contact would only be via the internet.
- As mentioned earlier, the telephone installation is constant subject of improvement. The main reason is that professional installations are expensive but "Heimwegtelefon" does not generate turn-over in order to be able to pay for such an installation.
- Constant work against misuse of "Heimwegtelefon" by right wing parties. The problem with AfD was solved in court. However that costs also time and money to get solved. A related issue is a discussion of "Heimwegtelefon" in far right internet forum where "Heimwegtelefon" is mentioned as an example for a mean of protection against refugees.
- Constant media coverage is an important issue. Not only printed media, but even more social media (for example the introduction of "Heimwegtelefon" in Youtube channels).

The asylum wave in Germany and the complaints and violations at the night of New Year 2015/6 started safety discussions all around the country. Some extreme parties and individuals pointed the discussion in the direction of fear from asylums (especially Muslims). This led to more people calling. However the partners do not believe that after the New Years' Eve events the country is more insecure, or the people are more afraid. They believe that through the events people finally understood that there is such thing as Heimwegtelefon and that is why they call.

Complementary innovation

"Heimwegtelefon" was initiated because the founders assumed there would be demand. The assumption was based on their personal experience since both frequently called someone when being on their way home at night.

Later on, caused by the events in Cologne, high demand met their already existing service. During the interview, it was said that in January 2016 they had a call every two minutes.

Complementary actions necessary are awareness about the number and the distancing the phone line from extreme groups. Technology also plays a crucial role, since the entire idea is based on complementarity of technological and social (calling persons and volunteers) aspects. Technology also played an important role for spreading "Heimwegtelefon". Especially social media (Facebook, Youtube) were vehicles to increase reach of target group. The option to use GPS in order to locate the people calling is important to give information to the local police station in case of emergency. This is a feature on which they are working to apply.

Due to the importance of technology there was a third partner necessary to take care of the platform, even though both founders have bright technological skills through their work. We cannot say that a specific technological novelty introduced in the initiative has changed the course of the project. However, the way to organise the shifts of the volunteers is done with an internet tool similar to "doodle". Job interviews are done via "skype".

Impact, diffusion and imitation

The initiative is considered successful by the founders as long as there are phone calls at night. The number of calls depends on different factors such as weather conditions, season, and obviously also on the way security issues are discussed in the German media landscape. It contributes to feeling safe when walking home alone at night, even though concrete impact cannot be measured. It is impossible to say in how far "Heimwegtelefon" has prevented attacks, or has empowered people to walk home alone by taking away their fear.

Diffusion is desirable by increasing the target group and by raising the number of calls. However, there is no intention to transfer the idea to other interested people in order to start a second "Heimwegtelefon". That is why the founders strive to protect the name. The reason is, they say, that a lot of effort, enthusiasm and identity have been put in the initiative and they feel very much connected to "their" project. Furthermore, "Heimwegtelefon" operates on a national basis and there would be no need to implement it in a second place. This would be a competitive initiative. However, the founders are open of course to exchange their experience if a similar initiative starts in other countries.

The key issue of the diffusion strategy was coverage in all sorts of media, especially social media. Likes on Facebook, the mentioning of a Youtube star, a small internet movie about "Heimwegtelefon" are important cornerstones of the diffusion strategy.

Empowerment and capacity building are no explicit objectives for the initiative. However, indirectly "Heimwegtelefon" empowers users to walk home alone at night since it gives a sense of safety.

There is an intention to protect the name "Heimwegtelefon" in the near future in order to prevent that the idea is copied. Their concern is that copying initiatives have lower quality standards concerning the volunteers, the telephone installation etc. Thereby, the image of the 'original' could be discredited as well. Furthermore, the founders have put lots of efforts in making "Heimwegtelefon" successful and they strongly identify with their idea. It would be sad for them if someone 'takes it away' and would compete against them. In addition to that effort they apply Google Alerts to be informed if „Heimwegtelegon" is mentioned somewhere in the web, also to check whether someone strives to copy it. There seems to be interest from Swiss media ("Heimwegtelefon" was mentioned in the Tagblatt) but nobody on Heimwegtelfon did know about that.

Role of policy

There is only one indirect link between "Heimwegtelefon" und policy actors. The project could take part in the "Start social competition" which takes place under the auspices of Chancellor Merkel. "Start social" is a business competition for social enterprises.

Connectivity to the practice field

The initiative contributes to increasing trip safety of vulnerable groups. A lot of dynamic within the practice field in Germany is related to technological development, mostly because of security apps. For this reason, we will focus on the interrelation of technology and the practice field where relevant.

In course of the case study we (the scientists) first suggested the practice field of "gender sensitive transportation". However, the founders disagreed. They do not only see "Heimwegtelefon" as an instrument to increase women's safety since it is available for every person feeling insecure and vulnerable in the moment of walking home. This includes for example LGBT people.

"Heimwegtelefon" has contributed to configuring the practice field in so far, as it is the first German initiative of its kind. Due to its "human" component (volunteers take the calls) it is complementary to security apps or alert buttons at mobile phones. It diversifies the services available in the practice field of "**trip safety of vulnerable groups".**

From a European perspective it contributes to strengthening the practice field by furthering the diffusion of a novel social practice. Originally the idea adapted by "Heimwegtelefon" was developed in Sweden and through "Heimwegtelefon" it is now available in a second context (Germany). In addition, "Heimwegtelefon" raised awareness in Switzerland (in Graz "Heimwegtelefon" was put in operation), so there is potential for a "snowball effect" that would strengthen the practice field even more.

Furthermore, due to the considerable media coverage of "Heimwegtelefon" it has surely increased awareness of security issues of pedestrians walking at night and thereby underpinned the practice field.

Demand surely plays a considerable role in the configuration of the practice field, for example, "Heimwegtelefon" has been developed by users of such services. However, the practice field in Germany is mainly characterised by security apps developed by different kinds of actors. For example the app WayGuard is developed by the insurance AXA as a service or CSR (corporate social responsibility) instrument. WayGuard is connected to the German police, a link that the founders of "Heimwegtelefon" wanted to establish but never succeeded. "KommGutHeim" is another app developed by three students who developed the app in the context of a "5€ business competition".

In fact the social practice of calling a friend or family member when being alone on the way home exists since the wide diffusion of mobile phones. And even before many people used the land line to call the person from whom they departed to say they have arrived safely. Taking this as a starting point of the practice field there has been a lot of

progress up until now through mobile phones, the internet of things and GPS that allow to position people on their way home. We now have apps, and phone lines directly or indirectly connected to the police that can be used instead of calling friends or family members. There is professionalization in the field based on civil engagement (e.g. "Heimwegtelefon") and economic interest (e.g. the insurance AXA or the Komm gut Heim company).

To summarise, learning and new knowledge relates to the development of technologically based products and services that induced change in the practice field.

Alliances between security phone lines like "Heimwegtelefon", the police and security apps are possible. In one case we know of, there exists cooperation between an insurance company (AXA) which has developed a security app and the police. However there are no bright networks for securing trip safety of vulnerable groups as we know of.

Technology is very important, at least in Germany. It provides the basic infrastructure for the development of apps, phone lines, communication between volunteers and providers, communication between users and volunteers, etc. Without technology, the ascribed developments would be impossible. In fact, the amount of alert apps or GPS tracking apps connected to the practice field is an indication for the competition in the field, as well as the concerns of the founders regarding "Heimwegtelefon" to be copied. To conclude, competition is a factor, but we would not say that it massively influences the behaviour of actors or leads to innovation as a competitive strategy.

The example of "Heimwegtelefon" shows also such a spread. They knew that such a phone line existed in Sweden without having ever been in contact with the Swedish initiators. Knowledge exchange or even face-to-face contacts between the two parties (Heimwegtelefons' founders and the Swedish initiators) have not been a necessary precondition to start the same project in Germany. Through "learning by observation" the project was imitated. To continue, also the Swiss awareness of "Heimwegtelefon" was just raised by observation.

We thus assume that observation is an important factor (or selection mechanism) for the adoption, diffusion and imitation of initiatives in the practice field.

We assume that there exist alert apps which are not as frequently used as others. But in fact this is difficult to verify. "Heimwegtelefon" too, was a risky endeavour for a certain period when the project was not known enough and there were just a view calls but many volunteers. In fact, as for all new products, an important reason for failure is not meeting the demand or not making the product popular enough. It should also be mentioned that "Heimwegtelefon" as well as the other alert apps of course is exclusive in the sense that it is only usable by owners of mobile phone, and by some apps, internet access.

4.3.2 Case B2: (She-Taxi, India)

Description, development of the Social Innovation Initiative

The core idea of She Taxi was to come up with safe transport options for women within the city and to create a standard of transport services delivered in cities of Kerala, in order to further help gender equity. Women's safety and security are at risk while commuting in the city and especially during night times it is not possible for them to travel alone. Gender-based violence against women is highly prevalent in the state of Kerala, despite its superior levels of women's educational achievement. Violence against women in public spaces needs to be recognised as a form of conflict. There have been numerous instances in Indian cities, where women commuters were subjected to various forms/threats of abuse such as eve teasing, molestation, physical harm including rape by male cab drivers and other anti-social elements in the city. The growing population of working women and lack of amenities to support their mobility within and outside city in itself is a symbol of conflict representing the inadequacies of urbanization and its governance in the city. She Taxi addresses these conflicts around urbanization and persisting gender gap in the cities of Kerala.

In addition women face a lot of barriers when they try to start their own business: lack of information, technology, training, innovative schemes, concessions, alternative markets, etc. Limited ownership of physical assets by women is

yet another constraint for them to become a successful entrepreneur. She Taxi promotes women entrepreneurship, as the fleet is owned and operated by women as entrepreneurs.

She Taxi is a 24/7 cab service for women travellers exclusively operated by women entrepreneurs in the cities of Kerala. The social innovation project has three important characteristics that form the base of the solution namely (a) Safety and Security of women, (b) Entrepreneurship by women, and (c) Employment for women. She Taxi ensures a safe, responsible and reliable alternative Travel Cab system for the women travellers. It is envisaged that this transformational and unconventional initiative will create an enabling and pro-active environment to address the ever-growing threats on the safety and security of women lives while contributing to the social and economic empowerment of women in the state.

The success of the project has resulted in its replication in other states of India as well into other sub sectors such as She Bus and G Taxi for transgender.

Actors, partnerships, alliances, networks

She Taxi is a multi-stakeholder solution, a public-private partnership that facilitates the whole process. The government, the private sector and the women entrepreneurs are all important stakeholders of this process. Gender Park is the main responsible actor at the policy and implementation level. However, they consider that the key partners of the project are the women entrepreneurs who own, drive and maintain the vehicles under the brand of She Taxi. For the women entrepreneurs, the basic incentives are self-employment with higher income opportunities and autonomy in work. For Gender Park, it is a broader policy space for women empowerment.

As soon as the public authorities approved the project Gender Park issued a public notice in the newspaper dailies to look for vehicle and technical partners. Later on those were chosen: Indus Maruti as the vehicle partner (provide vehicles, drivers training and orientations) and Rain concert as the technical partner (the call centre that coordinates the calls and the rides, marketing, business development, strategic tie ups, safety systems and services and innovative and unconventional revenue models). Along with that they cooperate with Kerala State Women Development Corporation Ltd. (SWDC) and some nationalized banks (mostly State Bank of India, Canara Bank, Syndicate Bank and Corporation Bank), which provide loans to the interested women entrepreneurs.

The involvement of the government secured a favourable environment for cooperation between all the partners. In addition, the disciplinary and technological specialization of each actor helped in the mutual recognition of each actor's roles and responsibilities. For example, Gender Park established by the Government in a technocratic setting, facilitated both policy and technology enabled intervention. Rain Concert was the technical expert, while Maruti Suzuki was the automobile expert. The KSWDC and other banks acted as the financial inclusion agents. Thus, clear cut roles and responsibilities determined a favourable environment encouraging sustainable interaction between the partners.

It is a State (government) promoted innovation that is spearheading into a social movement pioneered by not only the civil society, but through multi-stakeholder partnerships. The proactive presence of the State and its ability to facilitate meaningful business partnership with multi-knowledge and multi-cultural stakeholders has proved to be important in developing and managing successful social innovation.

Innovative solution

There were several systemic gaps identified, which the project is answering: no public transport in the state of Kerala was owned or operated by women before; there was no other option for safe transport for women commuters to travel alone especially during the night-time; there were instances of growing atrocities against women while commuting in the cities of Kerala. Therefore the call centre based taxi service is a way forward to safe transport as it provides door to door service to the users and the state-of-the-art solution is empowering women to become entrepreneurs by providing financial assistance and required training through engagement of various stakeholders.

There are several innovation levels to this project:

- Service innovation: She Taxi provides safe transport for women commuters to travel alone especially during the night-time. In addition, the 24/7 fleet services is owned and operated by women only.
- Organisational innovation: The organisation of the project is also quite unique since it is a multi-stakeholder public-private partnership, which receives no funding from the government and still run as a government project.
- Technological innovation: The solution is based on state-of-the art technology provided by the Rain Concert partner. They are providing the call centre for the service that receives the calls from prospective commuters; connects them to the taxi, locating them through GPS, and handles the billing. They also manage all the accounts. Vehicles are being tracked using their service.
- System innovation: As a system innovation is looked at the bright cooperation network and the integration of service, organizational and technological components/expertise of the project. Car manufacturers, technology provider, public department and individual entrepreneurs have their specific roles and incentives, which is quite new for the context.

New beliefs, values and expectations: Through the project women are not looked at just as home-makers anymore, they contribute immensely and play significant role in the city economy. The entrepreneurship is an important source for women empowerment; and increasing their mobility contributes significantly to the development of cities. A success of this project is also setting up expectations for entrepreneurial ventures and Taxis for transgender people and other transport options owned and operated by women (e.g. She Bus). All of this is contributing for behavioural change in first place for the women themselves, since they are now capable of ordering taxi directly from their homes or work place and on the other for the society, which is forced to accept women in a new role of more personal freedom (of movement and entrepreneurship).

Gaining momentum

It was a struggling period for She taxi in the earlier phase. They had no funding or publicity in any way. At the initiation phase, Gender Park had conducted a media seminar inviting all the media. Later they conducted an exhibition and flash mob. It was for the first time that a flash mob was conducted for the publicity of a government project. The volunteers of MAD (Make a Difference) conducted the flash mob for free. After that the project started getting media attention. National and international media (BBC, CNN IBN and NDTV) began to enquire and air stories about She taxi in their channels.

Later the project received some funding from the government during the launching phase. This was only for gaining publicity. Akashavani (state radio channel) and Big FM (private radio channel) have given stories about the project. Consecutively Gender Park took part in “She Walkathon”. Rallies highlighting She Taxi were conducted on women’s day. Many of the She Taxi drivers participated in TV shows, interviews and debates. In addition Ms. Manju Warrier, a prominent film actress who often portrays empowered roles of women, took charge as the brand ambassador of She Taxi. She took up that position without taking any remuneration. All of that helped the project to gain momentum.

The following drivers for the project could be identified:

- Political will for equal distribution of development benefits to different genders.
- Policy environment, where Gender Park is an autonomous body under Department of Social Justice, Govt. of Kerala in 4 cities to look at initiation, implementation and execution for women empowerment.
- Safe options for transportation of women in cities through technological, organizational and product innovation. The multi-stakeholder partnership resulting out of this understanding is a driver on itself.
- Cooperative behaviour of women entrepreneurs in addressing competitive conflicts with their male counterparts (cab drivers in the city streets).
- Women entrepreneurs believed that consistent encouragement from the state government will boost their enterprise. Towards this, they expected that more and more government offices will book their cab for official trips in the state. The more the acceptance by the state, the more the acceptance by the public.
- Slow, but growing support from the public.
- Income generation opportunity through She Taxi is comparatively higher to any other form of women-centred enterprise.

The project received also the Chief Minister's Innovation Award. It was also replicated in Bangalore, Hyderabad, Mumbai and was also currently being extended in the state as She Bus and G Taxi for transgender.

There are also several barriers encountered:

- Lack of mobilization and sensitization within the cities on gender issues.
- Inefficiency in fleet management for taxi services provided by women entrepreneurs in the absence of the state government.
- Patriarchal and discriminative behaviour of male drivers of big vehicles (such as bus and trucks) towards women drivers in the road.
- Competition with male taxi drivers, who fear that their business will be affected with the entry of She taxi.
- Entrants of private cab operators using the same technology such as Uber and Ola.
- Occasional conflicts with some passengers (mainly with patriarchal, elderly men).
- Requires more advertising on the innovation. Simultaneously, the presence of She taxi cabs should be more visible in the streets.
- Few de-motivated women entrepreneurs (largely due to competition, patriarchal family structures etc.) who leave She Taxi as their main occupational strategy.

Competition has been seen as well as a barrier as a driving force for further development. Earlier, Taxis in the city were only owned and operated by men. They were metred taxis that had a standard rate. Today She Taxi has to compete with these men driven taxis as well as with private players like Uber and Ola. Their pricing strategy (of Uber and Ola) is also comparatively lower in comparison to She Taxi. The women entrepreneurs and project officers believe that competition with the other fleet services is important for the standardization of taxi services in cities in terms of technological efficiency, pricing and social protection.

The whole innovation has been deliberate and controlled, with a strong political will by the government. In addition the teamwork of the stakeholders, the innovative ideas and out of the box thinking (compared to the conventional government schemes), creative branding as a government project and the stimulating growth environment (economic growth) in the cities of Kerala contributed to the project's success. In addition charismatic leadership on local and national level was also recognised as an important factor. Nevertheless, the replication of this innovation in other places and within the transportation sub-sector is largely as result of eventualities.

The specific factors that occurred in the different project stages could be summarised as follows:

1) Problem Analysis: The factors during this stage include strong public demand (owing to a brutal rape and murder that happened to a woman in New Delhi in the same period) influencing the state government to shape its gender policy.
2) Generating strong political will: The commitment of the political leaders to transform policy into action.
3) Ideation: A committed and proactive bureaucracy, who was able to appreciate the technological developments of today and finding solutions to social problems accordingly.
4) Securing multi-stakeholder commitment: Convergence of diverse values, interests and knowledge of diverse stakeholders, and consistent steering of the partnership by the government.
5) Selecting and capacity building of women entrepreneurs and cab drivers: Resourcefulness of women entrepreneurs and expertise of the concerned stakeholder (Maruti Suzuki and Rain Concert) in capacity building.
6) Project Implementation: Absence of goal myopia and goal conflicts among different stakeholders. Resourcefulness of women entrepreneurs and willingness of banks to provide initial capital.
7) Advertising and Branding of the enterprise: Volunteerism by the Brand Ambassador Ms. Manju Warrier, without taking any fee for product endorsement.

Complementary innovation

The project is driven by the goal to secure safe city for women commuters in Kerala. There is expressed demand for safe transport options so women can travel alone 24/7 with call centre options for door-to-door services and security

enhancements. This need for transport facilities run and operated by women, which has been never a case in India, is the main reason to start the social innovation.

Complementary innovation is important. In this case, it is specifically concerned to a) Behavioural Innovation, b) Technological Innovation, and c) Innovation in Marketing. Behavioural innovations could be referred to as strategies that women she taxi drivers adhere to deal with challenges met within their families, fellow men cab drivers in the street, and commuters. New information and knowledge related to technological advancement in automobile industry, surveillance and safety measures are crucial. Frequent market research exploring the entry of new/existing competitors and interests of commuters is important. In addition the required skills of self-defence and driving have been imparted through Gender Park and Maruti Suzuki respectively.

There is more needed to be done however. Technological innovation should be aimed at addressing social issues. There needs to be changes in patriarchal structures, mind-sets and behaviours both at public and private spaces. Men and women in households, city spaces and workspaces need to undergo this shift.

Impact, diffusion and imitation

Main goal of the partners involved was from the start to secure safe transport options for women in cities. Every partner had their own aims depending on their role in the project:

- Gender Park: To increase the visibility of women in public spaces. In addition, to increase the mobility of women in the cities, which is big constraint to the allocation of equal share of development benefits.
- Maruti Suzuki: To enhance safety and security of women drivers in the cities of Kerala.
- Rain Concert: To standardize the service delivery by taxi services so as to have increase in safe mobility options in the cities of Kerala.

The main impacts the project has so far are:

- More women feel safe to travel at night.
- The man drivers have started accepting and recognizing women drivers.
- Women have economic profits on their own, which is helping to change mindsets about their competences and capabilities, increase their economic status and social standing.
- Women have more freedom and autonomy in general.

Along with the empowerment and capacity building of women entrepreneurs (cab drivers) and commuters, there is severe capacity building on organizational level since the project relies on the cooperation between governments' bureaucrats, project coordinators and private firms.

The idea of state of the art solutions to impact the social determinants of the life in cities of India can be seen in the programs related to women and children in many states of India. The diffusion of She Taxi is feasible in all the metropolis. Thus there is scope for geographical diffusion, which can be effective only through the support of institutionalized diffusion in terms of respective state government's policy measures. Though, anticipating it to be a slow process, the larger public (women commuters specifically) is beginning to accept she taxi and related innovations as part of their day to day life. For Gender Park and the women entrepreneurs, she taxi has already become part of their day to day life.

She Taxi has been implemented in Trivandrum, Kochi and Calicut in Kerala. It has also been replicated as She Cabs and Priyadarshini Taxi in Hyderabad and Mumbai respectively. Along with these replications there has been diffusion of the idea into different policies and programs in Kerala like that of transgender, where G Taxi has been rolled out this March to have considerable effect on the conditions and invisibility of transgender in the cities of Kerala.

There has been a clear intention to spread the innovation across the cities in different districts. It could be observed that the project actors are involved in systematic market research identifying demand and sustainability issues. Nevertheless, new plans for expansion and growth are in pipeline and could not be disclosed by them during the case study as they were not finalized and approved by the government.

The spread of the project has its explanation also in the sectors specifics. Economic growth, rise in household income to access/afford taxi services (implying a shift from public transport services) and boost in employment opportunities have shaped the growth of the automobile (cab sub-sector) sector in the cities of Kerala. Sector specific innovation has thus supported diffusion processes as it encouraged entrepreneurship through financial assistance, stakeholder management and beneficiary identification within a particular sector.

The safety issues related to spatial mobility among women are still a major constraint to the development processes in the State. This is recognized within all the cities of Kerala that the unequal distribution of development benefits among diverse genders needs to be addressed. Hence, the typical condition of gender differences in the cities of Kerala as well as in other states have supported the diffusion of idea of a taxi service 'owned and operated by women entrepreneurs'.

The entrepreneurship driven model of She Taxi is a newly innovated model and first of its kind initiative in the country's employment business model developed and strategized for the empowerment of women in the state.

Passionate women with an attitude to bring change in the society are brought together with certain other pre qualifications to table with immense opportunities. This includes financial assistance and necessary collaborations – both private as well as public to assure business, technological advancement and to come with unconventional revenue models.

New remuneration schemes were developed like advertisement on the display screens and over body of the taxis.

Role of policy

Policy plays a great role in this project (on national and regional level), since there is long realized necessity to ensure safe travel options for women. Since Beijing Conference 1995 and 2000 Millennium Development Goals, the effort of the government has been to address gender issues. Policy environment at all levels from national level programs for women empowerment to local engagement in engaging with awareness and beneficiary identification has been a key feature of such initiatives.

The Gender policy of the state of Kerala establishes a process and accountability framework to design and monitor gender-informed development projects and programs in the State, across all line departments. The Ministry of Health and Social Justice, Government of Kerala has facilitated the emergence of diverse gender empowerment initiatives under Gender Park to promote gender equity in the state of Kerala. She taxi adopts gender mainstreaming as the key approach to achieve gender equality. It recognizes that men along with women need to be fully involved in the process of social transformation and social change. The primary focus of this change is on women empowerment and rights. The actors follow a results based framework in driving this innovation. The policy also strengthens multi-stakeholder partnerships.

In addition, Kerala had a very vibrant civic culture and the state-public interface in governance is highly decentralized and people centred. This has helped the structure and culture of policy influence.

Connectivity to the practice field

She Taxi is recognised as part of the practice field "Gender sensitive transportation". There is two-sided influence between the practice field and the specific projects in it. The innovation projects like She Taxi, G Taxi, She Bus, Priyadarshini Taxi, Matsyafed contribute to the enrichment of the practice field. However, there is still a large gap to address the challenges faced. At this point the practice field influences the shaping of new projects. There is an expressed demand for women's safety and security, which is addressed by the social innovations.

Innovations in the automobile sector, simultaneous integration with new Information and Communication Technologies has shaped the practice field over time. Another influence of development comes from the shift in policy focus to empowerment of women and mainstreaming gender, along with the country rising as an emerging economy supplemented by technological advancement.

Atrocities, rape and murder of women commuters in cities were always symptoms of conflicts that have resulted in the social practice. And while patriarchal mind-sets and cultural stereotypes result in conflicts, resistance to these structures results in the new practice fields.

Technology also plays big role in the practice field; not only ICT, but also technology for surveillance, communication and ensuring security; as well as technology to manage time and resources.

Crucial for the practice field are however the State and the 'new' bureaucracy that is tech savy and at the same time proactive to women's issues. Public-Private Partnerships is in itself a major institutional space in this practice field. Empowerment and capacity building in this practice field concern women in the country who have to travel in the city and rural spaces for their livelihoods. The engineers designing new automobiles, the ICT professionals and the government should also be sensitive to the needs of diverse categories of gendered identity, their aspirations and needs. There are couple of problems that have to be further addressed: the patriarchal mindsets need to change; the state and civil society should be more vigilant against crimes on women; the education system should aim at empowering both men and women; spaces of decent work should also include gender sensitive transportation modes.

Diverse stakeholders including the state government, private actors and civil society are continuously striving towards improving the living conditions of women in the country. The practice field sustains in this context. However, the scale of atrocities and violence against them is rising even more aggressively. In this context, new innovations need to emerge within the practice fields and one should also consider the possibilities of convergence across diverse practice fields. Competition should strive to achieve the goal of safe and secure transportation of women rather than creating barriers for the practice field. It is too early to say, what impact competition will have on the practice field.

Technology enabled transportation has found a space and women have been discovered by the neoliberal market as a potential customer. To this extent, social change ensuring the safety of women travellers has been achieved at least in some city spaces. However, the gap is still wide in both rural and urban areas. Second, women travellers should be recognized and represented beyond the notion of being customers to those of empowered citizens who rights, aspirations and dignity are safeguarded and guaranteed throughout their lifeworld.

4.3.3 Case B3: (MOOSDORF MACHT MOBIL, Austria)

Description, development of the Social Innovation Initiative

The core idea of "MOOSDORF MACHT MOBIL" is to provide accessible and affordable local mobility services for citizens with reduced mobility (physically, financially, etc.). The service was initiated and is still run by a group of engaged citizens on a voluntary basis.

Moosdorf is a rural community with a population of approx. 1.300 in Upper Austria. Though the provincial capital city of Salzburg is just 30 km away, only one public bus service connects the main village with the regional centres and transport hubs (thus also no public connections with the other 12 hamlets within the municipality). A taxi service also went out of business and thus many community groups without private car ownership or access were facing the risk of mobility poverty. Vital trips to doctors, pharmacies, local stores, but also to church and community events in the municipality were increasingly difficult to realize. There is also no public transport available for journeys to the workplace, which is critical for part-time employees (often mothers with under-age children).

As an answer to this difficulties the mayor of Moosdorf, Manfred Emersberger, invited the community to an information event in March 2011 and presented the idea of starting a project to improve the mobility situation of the community. A working group was established and a project outlined. A community survey was conducted in order to specify the demands for a "Dorfmobil" (= village vehicle). The registered association MOOSDORF MACHT MOBIL (= "Moosdorf mobilizes") was founded at the end of 2012 and an electric vehicle was purchased. The association has now 315 members, representing approx. 20% of total population of the community.

Actors, partnerships, alliances, networks

The local administration and the mayor of Moosdorf, Manfred Emersberger, play a key role for the start and the further development of the project. Due to the mayors effort the project received public funding from the state of Upper Austria through the regional Agenda 21 Network action program. Furthermore, Emersberger helped spreading information about the Dorfmobil like for example through the community newsletter. He and his wife even got involved as drivers of the Dorfmobil.

The steering board members of the association and their members are clearly driven by social responsibility. They felt the need for help within the community and responded to this need in the sense of change agents. The commitment of the car drivers, who work without exception on a voluntary basis, is one of the most important factors for the success of "Moosdorf macht mobil". At the beginning, 25 drivers could be found very quickly and – although there is a certain fluctuation – the number of drivers in the last years remained constantly at 32 and they never encountered any problem by finding available driver for a shift. Some of the drivers also use the service themselves sometimes, for example if they need a bigger car for transportation purposes or to pick up their own car from the garage.

It was highlighted by the interviewees that citizens who are not originally from Moosdorf and even citizens who have never shown any interest in community work so far have engaged as drivers. In this sense, the initiative was able to mobilize latent social capital in the community.

The nature and dynamics within the group is strongly based on trust-based communication and social ties both within the association's steering board and "stakeholder communication" with the local community and beyond.

There are no explicit professional networks in the specific field of operation of MOOSDORF MACHT MOBIL and there is little if no interest in developing an umbrella organization or the like at regional or national levels. The reasons given are that (a) voluntary initiatives such as MOOSDORF MACHT MOBIL are (too) small to provide additional resources for such a task and (b) mutual support is provided bilaterally, also due to the very specialized and highly contextual needs of interested parties (communities).

Innovative solution

The insight leading to the initial start of the project was the main noticing during the Local Agenda 21 process that the supply of local means of transport for citizens with reduced mobility was getting worse. Several engaged citizens formed a working group and developed a project to come up with innovative solutions. The project was supported by a national climate action program ("klimaktiv") which for instance provided assistance in drafting a sound business plan.

Reducing cost was a primary motivation, with social contacts nearly as important. For some also the environmental aspect (electric drive, reducing the number of car trips and thus reduction in CO_2 emissions) was of high concern. However, the initiative does not perceive itself as 'nudge unit', i.e. trying to convince fellow citizens to become more environmentally conscious.

MOOSDORF MACHT MOBIL addresses several forms of innovation:

- Service innovation: the service that it offered is that you can "hire" a car or asking someone to drive you. The central idea is to move from no service to service on demand.
- Technological innovation: the electric vehicle (Renault Kangoo ZE) is the key technological innovation in the service; it is charged by photovoltaic cells mounted on the roof of the nearby primary school.
- Organisational innovation: "Moosdorf macht mobil" is a registered non-for-profit association ("Verein") which allows them to operate mobility services by Austrian law (as serviced of members for members). Consequently, all passengers also need to be members of the association. This way service provision is non-commercial and together with the lively dissemination activities serves the association's purpose.

The project also **stimulates change in behaviours** and attitudes towards mobility. It is difficult to realise behavioural change in that respect and it needs a lot of time. The easiest way is the reduction of costs and comfort as motivations for behavioural change. Social independence plays an important role for people with reduced mobility: there is no need to ask busy family members of neighbours for a favour.

Gaining momentum

The key principle behind this inclusive mobility service is that there is never competition with any commercial or public transport service providers. This is a key principle of the association. Particularly the Chamber of Commerce initially perceived MOOSDORF MACHT MOBIL as potential competition for their members. The association entered into a dialogue with and successfully assure them that the initiative will not harm the business interests of the members as there is not enough "market demand" for a profit-based taxi or similar business.

A clear and consistent communication and 'public relations' strategy seems to have been a critical factor of success for the innovative solution to thrive and gain momentum. This does not only relate to members of the association, but also to stakeholders – in the municipality (local council, businesses as sponsors, provincial governments and lobbying organizations).

According to the case study, the initiative evolved "organically", taking one step at a time and without any major barriers. All decisions were deliberated within the association's steering board and the drivers who feel co-responsible for the success (and failures) of the initiative.

There were different drivers of the initiative:

- Local governments, especially the mayor and the council, play an important role as driving force of MOOSDORF MACHT MOBIL. They initially supported the establishment of a working group in the beginning and contributed for liability insurance for the association. Local council members including the mayor and his wife serve as voluntary drivers and thus act as role models in the community.
- Regular presence at local events (fairs, festivals, etc.) for face-to-face conversations with citizens and the positive local or regional press coverage improved the image of the service in the community and contributed to social acceptance, i.e. overcome the perceived risk of stigmatization by community members.
- The local church and the minister also contributed: an official blessing ceremony of the vehicle and its drivers was held at the beginning and the Dorfmobil has been mentioned in the parish newsletter.

The key factors that determined the success of the initiative and the adoption of the solution are:

- The commitment of the car drivers, who all work on a voluntary basis, is one of the most important factors for the success of MOOSDORF MACHT MOBIL.
- Most of the drivers have never been engaged with any other club activities before. Members see the social relevance of the project for the entire community and feel the need to participate.
- Strong public relations: The PR measures even included the youngest community members. The Dorfmobil was driven to the school to test how many students would fit in the car and the students were invited to take part at a competition to search for a name for the car. The Dorfmobil is usually prominently positioned at village festivals where the drivers spend the tip together; the board members organize Christmas celebrations. All these activities are meant to strengthen the social ties in the community, to create awareness and to enlarge the circle of members using the Dorfmobil.

Political support also played a role. The interest in community transport solutions for people with reduced mobility, however, differs a lot between different levels of government. Whereas local councils are very interested according the spokesperson of MOOSDORF MACHT MOBIL, the provincial government was cautious so as not to provoke any conflict with the Chamber of Commerce. When it became clear that there was no conflict of interest, the Upper Austrian Government provided financial support for purchasing the electric vehicle. The national level functioned as additional enabling environment mainly through funding programmes.

Complementary innovation

There is no explicit action necessary on any specific subsystem of society. However, publicly voiced support by policy-makers, opinion-leaders and decision-makers supports the cause.

Different learning processes developed in the project over time. One of them was the way in which the reservation hotline deals with requests and put them together efficiently. There were also important lessons learned in using an electric car since the range is limited. Handling the charging process correctly is essential to reload the car for subsequent drivers.

Technology does play a minor, yet multiple roles. On the one hand the decision was made by the association consciously to purchase an electric vehicle with long-range and features for easy access. The vehicle is run with solar power from the photovoltaics installations on the roof of the local primary school and thus runs CO_2 neutral. On the other reservation of services is increasingly done via electronic mail (as opposed to call-in via phone) and led several elderly residents of this rural community to learn how to use the internet and electronic mail services.

Impact, diffusion and imitation

There is no active diffusion strategy on behalf of the association and its members. However, MOOSDORF MACHT MOBIL has gained extensive interest from different communities in the region and beyond. This happens through media coverage, but also actively by taking part at information events or lectures and spreading the idea at public events. Since the start in 2013, spokesperson Barbara Zimmermann has already presented the project at more than 100 events. In addition the various articles led to dozens of requests from other communities interested in the concept and in one case even to the implementation of a new project with a similar approach (St. Georgen Mobil, 2016).

Based on the case of Moosdorf itself and its followers, it is safe to say that it is not possible to "copy-paste", i.e. imitate the original idea. Depending on the local context (need, framework conditions, etc.) the solution has to tailored and thus adapted.

MOOSDORF MACHT MOBIL has impacts on a number of domains. Overall, the project is driven by idealism and strives for sustainability and societal welfare.

- Social impact: MOOSDORF MACHT MOBIL was also partly driven by mechanisms of social pressure. Many elderly citizens have adult children working full time and these people do not want to be a burden for their children. The Dorfmobil provides social independency and brings back self-esteem.

  MOOSDORF MACHT MOBIL has grown very gradually with a strong link to the community aspect of the initiative. It is emphasized several times during the interview the social impact of the project and the relevance of the Dorfmobil for the community life.

  Another example of the social impact is the fact that members started events on their own initiative, for example organizing a tour to the chapels in the area or to attend theatre plays in neighbouring communities.
- Economic impact: Trips with the Dorfmobil are affordable for people with reduced mobility and low incomes.
- Environmental impact: Some car drivers strive to reach a certain reduction in CO_2 emissions.

Mutual and social learning play a key role in the development and implementation of the MOOSDORF MACHT MOBIL initiative as well on the side of passengers (patience and reliability with respect to schedule and fellow-travellers) as from drivers (driving and social skills).

The business model of the project is the one of non-for-profit association, where all users (drivers and passengers) have to be members. Members drive and book the e-car for local transport which is run on a semi-"on demand" basis: Trips always start from Moosdorf to another community in the district or end in Moosdorf. Passengers are mainly shuttled individually or in groups from or to their workplace, doctors, church, sometimes to school when students need to be picked up, and special trips to events, elections etc. Children from six years on can be transported without a parent with the latter's consent. Many rides go to the local train station in Lamprechtshausen. Longer trips within a distance of ca. 20 kilometre around Moosdorf are offered once a week and need to be reserved in advance to ensure efficient planning by the organizers.

Revenues comprise annual membership fee and a fee per person and trip. Full membership is an annual fee of ten Euro, family membership consists of one annual membership with additional family members ("auxiliary members") paying only for the actual trips. This membership model is meant to support families in a financially difficult situation.

A trip within the community is 1 Euro, 2 Euro within 10 km and 4.50 Euro within 20 km. In addition, sponsorship of local businesses is sought.

Role of policy

There are different, delimited roles of the Austrian local, provincial and national governments:

- Providing information and advice: the national government provided information to the citizen association, of particular relevance was according to the interviewees the knowledge of how to develop a business plan and which funding programmes can be utilized.
- Providing (co)funding for infrastructure investments: the provincial government of Upper-Austria provided funds to purchase the electric vehicle ("Dorfmobil").

Connectivity to the practice field

In Austria, there are a number of initiatives for community-based transportation services for people with limited mobility. However, the diversity of local demand in terms of target groups, etc. and the diversity of solutions offered to meet these demands has led to a quite fragmented landscape. There are the already established 'players' serving physically or mentally handicapped and recently the emerging civic initiatives for community mobility services. Thus, it is not clear if there is already a 'practice field' with a joint vision and identity.

Respectively, based on the case study, there are no institutional structures that determine interactions in the overall practice field of transportation for people with reduced mobility in Austria. There are well-known and well-established lobbying organizations for the physically or mentally handicapped for instance. However, there is no 'umbrella' or inter-institutional cooperation.

MOOSDORF MACHT MOBIL as one of the first-movers in the field of transportation for people with reduced mobility in this Austrian province can be said to have contributed good practice in alternative mobility services in rural areas. The citizen-initiated "peer-to-peer" service and the electric vehicle as complementary technological innovation have been featured in more than 100 talks and workshops in the past four years. The association is aware of one or two followers in the region have already adopted and adapted the model of MOOSDORF MACHT MOBIL though there may be more that they are not aware of.

Following the interviews, MOOSDORF MACHT MOBIL is driven by expressed and latent demand. Initially a survey was conducted among all residents in the municipality on their mobility patterns and demands. Moreover, it was noticed that certain residential groups – elderly, the young, etc. - i.e. those without ownership or easy access to private cars – were running the risk of mobility poverty due to dramatically decreasing public transport services. There is also latent demand as quite some users of the community did not realize that the service could be beneficial to them at the start. Temporary or unexpected emergency situations (due to health problems, broken-down car, no time to pick up the child from kindergarten, school or music lessons, etc.) made several otherwise sceptic or indifferent members of the local community to call and use the Dorfmobil.

The interviewees indicate that they share their knowledge with other initiatives to improve the professionality. Within that sector, each party has their own profile and approach.

There are no professional networks in the specific field of operation of MOOSDORF MACHT MOBIL that they are aware of in Austria. Municipalities and their citizen initiatives offering alternative mobility services are loosely connected and meet at regional or national events where they present and exchange experiences on their initiatives in the sense of a 'community of practice'.

The topics of sustainability and climate change have led to an increased awareness throughout society of the importance of sustainability. In communities with existing social fabric it is social responsibility for the community that drives these initiatives. Collective ideas such as "sharing economy" is in these (rural) communities "old wine in new bottles" in a sense that neighbourhood help has always been a key ingredient of a vibrant community life.

4.3.4 Case B4: (Child in a Chair in a Day, UK)

Description, development of the Social Innovation Initiative

Whizz-Kidz initially existed to provide wheelchairs for young disabled people. Volunteers ran marathons to raise money for wheelchairs. In the past, the wheelchair problem was vast with people not having access to the equipment they needed. Today, Whizz-Kidz is the biggest provider of paediatric wheelchairs outside NHS (National Health Service), UK. Their initiative 'Child in a Chair in a Day' provides wheelchairs to children in only one visit.

In the national context, people within the healthcare industry recognize that there is a problem associated with wheelchair waiting times. About 70,000 kids require the right piece of equipment. There is recognition of the need to provide right wheelchairs quickly and effectively. As Whizz-Kidz delved further into the journey as a charity, one of their aims was to try and get the public to raise money to fund what the NHS should be providing in the UK.

Whizz-Kidz partnered with the NHS, and worked with 10-11 other NHS trusts in the country to try and improve the wheelchair situation. They engaged with two organizations (described below), so the entire procurement and negotiation at the supply chain was done through pro bono. Whizz-Kidz offers the solution, Child in a Chair in a Day, and now they are also extending the same day equipment service for adults as well.

There are two elements to the solution. Firstly, there is some procurement and secondly, there is some clinical input. Whizz-Kidz has a team of clinicians, so when a user contacts the service requiring a piece of equipment, they do an initial telephone assessment. Whizz-Kidz then reads user notes, understands their requirement, and speaks with healthcare professionals. This pre-work allows Whizz-Kidz to make clinical decisions upfront, before they even see the individual user. When the user turns up, they have fair knowledge of their needs. This massively helps the part of work with the supply chain.

Whizz-Kidz puts most children into chairs immediately through the work done at referral and assessment stages to collect information before they meet the child. They work closely with wheelchair manufacturers to achieve free consignment stock and limit the time for delivery of new chairs. They have agreed on a matrix of equipment from which the therapists can prescribe. Their approach from referral through assessment has a knock on effect in terms of monitoring and maintenance. The choice of chair incorporates future growth of the child, reducing the need to order new chairs in the future. They also operate a proactive check-up policy to review the child's progress with the chair. This helps to better predict when a new chair will be needed and plan accordingly, which feeds back into assessment and provision.

The equipment these days includes modern technology chairs, such as those with a riser function on it, which allows users to move up and down to efficiently carry out simple day-to-day functions (like turning on/off light switches and open/close door knobs), so they can be at the same level as their peers.

Actors, partnerships, alliances, networks

Whizz-Kidz undertook the pilot internally at the Tower Hamlets, a CCG (Clinical Commisioning Group), which was a PCT (Primary Care Trust) at the time. According to the contract set in Tower Hamlets, Barts health had the overall contract, so Whizz-Kidz worked very closely with Barts. Internally, Whizz-Kidz had their own team of therapists, who were the people at coalface, meeting the young people, giving them prescriptions, and doing the assessments, so they were absolutely integral to this initiative. From the wider perspective, supply chain plays a critical role as well. For Whizz-Kidz, it is critical that they establish and maintain good relationships with their manufacturers, so there's less pressure commercially. This also helps in bringing down the costs, and discussing the consignment stock. Say, on a wheelchair, you need a belt, or a harness, or a headrest, or footplates, and you have all of these in stock, it makes the service more flexible in terms of attending to the customers on the day with the piece of equipment that they need. All that's left is for Whizz-Kidz is to invoice it when they use it, so this commercial structure was set up with the help of its manufacturers (Accenture, Tesco).

There were no incentives to start the initiative; it is more about the impact of doing things right, which become the return on your investment. So, if a wheelchair service gets it right and they have seen a customer only once rather

than having them visit the service four times, there's a saving to the entire system. From a commissioning point of view, that is from Barts health point of view, they can save money, because they will be more efficient, and also see more customers in need. At Barts, Whizz-Kidz has great brands coming together. That was another outcome of getting it right. It was mostly all about getting the right outcome for the individual and the young person in need at the time, which also had a knock on effect and benefit to the system.

There are two initial partners to Wizz-Kidz: Tesco, a long-term corporate partner of Whizz-Kidz, dedicated to improving the lives of disabled children and young people in the UK through support for their charity's ambitious and innovative programmes of services and life skills provision, known as the Whizz-Kidz Journey. The partnership started when Tesco's' employees voted for Wizz-Kidz to be their Charity of the year, and raised over £3.4 million during the 12-month period. The Whizz-Kidz partnership reached out to over 250,000 Tesco colleagues across 2,500 sites, and succeeded in engaging new areas of Tesco's business that had never previously been involved in fundraising. The second partner is Accenture, a service provider company specialised in strategy, consulting, digital, technology and operations. Accenture mapped the process for what was currently being done and why it takes so long to receive the right equipment. Both partners were offering pro bono support. Tesco was all about the supply chain, and how Whizz-Kidz could get maximum value from them. On the Accenture side, it was to do with the process and mapping out, which is where the Chair in a Day idea was born, in that, the existing process within wheelchair services was very long and convoluted, which could be a lot more leaner and better for the customer. The whole talk about 'partners' is the usage of a wrong term. They're friends of the system that Whizz-Kidz has relations with. Together, they embarked on this journey rather than having to pick and choose partners.

The national program around improving wheelchair services is being led by NHS, England. The team is engaged in many different strands of work around improvement, which Whizz-Kidz fully supports. Examples include personal health budgets, it is a real drive for giving people choice by giving them money to buy their own wheelchair. There is a national wheelchair alliance, which influences, supports, and has a tight role in executing these improvements. Chair in a Day is what Whizz-Kidz brings to the table to say this is the solution to make things better in the system.

There is no umbrella organization; but Whizz-Kidz tends to be either consulted or be a part of policy. 'Child in a Chair in a Day' has been recognized as NHS' high impact innovation. This initiative is all over the national policy, working towards creating change for the benefit of people.

There are third sector networks, but they tend to focus on broader topics of healthcare. The network that exists within the wheelchair world is the National Wheelchair Managers Forum, which represents all of the 153 wheelchair services across the country. Whizz-Kidz fit into that group and attends associated meetings/conferences.

Innovative solution

Internally, Whizz-Kidz has been providing wheelchairs for 26 years now, so they have tremendous knowledge of the market, of the people they support, of solutions that are available. All of their therapists are ex NHS Occupational Therapists or Physiotherapists, which brings in expert knowledge, and are their driving force. Listening to young people they support was another great source of information, where people were telling them that they wanted better products and quicker, so Whizz-Kidz tried and directly addressed those issues for them.

In terms of lean processes, they have learnt a lot from the experience of working with Barts in terms of understanding the processes and constraints. They have had huge inputs from many people to understand the system and get Chair in a Day right. In addition, tablet computers were introduced for therapists with a direct ordering system to the Whizz-Kidz supply chain, including lean processes for the administrative staff. This also involved development of processes to gather as much front-end clinical information by therapists prior to the clinic in order to select appropriate equipment for that day.

Whizz-Kidz are innovators. The heart of Whizz-Kidz is the young people, so they have a kids' board, and the structure within the organization is very much catered on what the kids are telling them. The wheelchair users are very much part of this journey, so when they had the Chair in a Day process, they engaged with their young people and asked their input all along the course. Whizz-Kidz also offers Chair in a Day through the charity. There is a lot of fundraising, where volunteers run marathons for raising money. People apply to Whizz-Kidz for wheelchairs and they offer the

Chair in a Day service to them. The term disadvantaged is negative. Whizz-Kidz sees such people in need as a group of less abled people. The language of Whizz-Kidz is much more about ability rather than disability.

There are several innovative levels addressed by Chair in a Day:

- Service innovation as Whizz-Kidz improves the service for people who go to them;
- Organizational innovation as Whizz-Kidz touches on culture. It is considered as a baseline standard in provision for routine cases;
- Technological innovation - looking at the equipment that Whizz-Kidz provides, by having negotiations and reducing costs, they can invest in better equipment, so the products that they supply are a whole lot better than they used to be. The technology through which the equipment is provided has improved as well;
- System innovation as Chair in a Day is a system wide process.

Whizz-Kidz touches upon new beliefs, new values, and new expectations. Cultural change came about within the therapist team. Their beliefs and values in the system is all about getting it right for the customer and innovating. In terms of expectations, the numbers continue to increase, and Chair in a Day stands at 90.6% currently, and their new expectations remain for the numbers to only go exponentially higher.

Gaining momentum

Chair in a Day is driven pretty much from the enthusiasm and devotion of the team. All of the senior engagement, be it department of health, NHS England, Westminster, everyone promotes Chair in a Day, so where they can support, they do. Mainly Whizz-Kidz is driving it through with it being an innovation adopted by people locally.

For Whizz-Kidz, the biggest barrier was convincing therapists that Chair in a Day is the right mechanism to follow, because there was this clinical thinking in place that people were trained to provide wheelchairs in a particular way, which can be seen as a barrier nationally, as well. So, Whizz-Kidz started with convincing their own staff to try the Chair in a Day model, which grew from there with visible positive outputs, resulting in more people believing the worth of this model. There was confidence being formed within the Whizz-Kidz team to say 'we can actually see people on the same day' and we're getting it right, and people are coming back to this service'.

Every year, Whizz-Kidz tries and beats the last target. They are at 90.6% this year. For adults in Tower Hamlets, it's 93.7%, and 91.5% for children and adults. With children, Whizz-Kidz gets some very complex cases. The initiative should be called Chair in Day, as it now serves both adults and children.

The evolution of the project has been very deliberate. Whizz-Kidz saw the problem and wanted to improve on it. The process and solutions they came up with have been very deliberate. It's evolved subsequently due to feedback (it depends if you consider active feedback to be deliberate).

Being ranked as the high impact innovation brought Child in a Chair in a Day in the limelight. Five of the innovations were ranked/named that year, and it really boosted Whizz-Kidz, in terms of people being made aware of this initiative. Internal reports and analysis on Chair in a Day and the frontier economics report were released, which gave this innovation the much-needed boost. A report called 'My chair is My Shoes' which talked about Chair in a Day, which helped increase awareness. Chair in a Day has had some VIPs like Borris Johnson, who came to Tower Hamlets at the time, and at other times a few other have promoted it through events and campaigns.

Charismatic leadership is also stressed as success factor locally and nationally. When you look at Whizz-Kidz at its structure, Ruth, the chief executive, is considered to be very driven, charismatic, inspirational and aspirational. The team gives her credit for driving Chair in a Day, and recognizes that having such leadership and direction at the top really helps, which consequently flows down to the directors and heads of teams.

Competition does not play a role. Chair in a Day is a process product, which is benefitting the system so healthcare professionals adopt it. It is helping them provide a better service. From a Chair in a Day point of view, there's no competition. What is interesting is, because of the way NHS is structured, trusts compete on tenders for services, so wheelchair services might come out for tender and different trusts and private organizations go through the tender

process to win that service. What has been observed across a number of such tenders is that Chair in a Day is mentioned as a process that they should be working toward, which is very important for the recognition of the initiative. Whizz-Kidz has found, however, that there has been a lot of conflict with other wheelchair services until they fully understand and realize what Whizz-Kidz is trying to achieve. Whizz-Kidz is happy about how successful some of their conversations have been with influential people across the country, which they see as a real mark of success. People are now imitating/copying what Whizz-Kidz does, for instance, an organization in Liverpool imitates them so closely that they even named their service very similar to Child in a Chair in a Day (chair child in a day/ one day to get child in a chair).

Complementary innovation

The driving force behind this is Whizz-Kidz has people who approach them as a charity needing wheelchairs, so they apply to Chair in a Day through application forms. The only restriction Whizz-Kidz has is the money that they can raise as an organization to address all of those applications.

With technology on the product and the process, using an online computer platform to order equipment has been great. They also launched an innovation called 'man in a van' in autumn 2012 after receiving funding from the department of health, which is about mobile engineering solutions. They have a team of engineers who can go to houses, communities, and schools to provide Chair in a Day in people's own setting. They have three vans with three engineers. They serve clinics across the country, be it community centers or wherever. So, Chair in a Day through mobile solution just makes it easier for people. The vans are stocked with consignment parts, headrests, and supports, all the tools to fix things, making it really easy.

The other part to the technology is that they have done a lot of work on the online application form, so people can now apply for their equipment through a mobile app. It's easier to do it from the desktop, but the information and technology invested in the app allows all of the information to the front end about patient's needs to give the therapists a platform to get it right.

For the website and online platform they engaged independent web developer. In addition, some training for the team was provided in order to make sure that only the right products are being purchased.

In terms of new knowledge, it is not really dependent on new tech or understanding, because it is focused on routine cases. New knowledge is unlikely to have an impact for Child in a Chair in a Day. If new information becomes available, assimilating and implementing it is certainly not integral, it is far more likely to have an impact on the technological evolution than on information. However, what is needed is a close cooperation and understanding between therapists, logistical support and manufacturers in order to deliver fast the required product.

Impact, diffusion and imitation

Success is seen as making the piece of equipment available on the day for as many people as possible. Chair in a Day has been achieving all its set targets. They continue to increase their targets every year in terms of percentage of people they can serve. Their primary aim has not changed, so it is all about offering the right equipment to a child on the same day.

Frontier economics reviewed Chair in a Day, and one thing the service did achieve was the social return on investment. By getting the process and equipment right, the knock on effect to the individual is very vast. Instead of waiting months/years for their equipment, by getting it right, the users are becoming independent quicker, which means their path to further education and work starts earlier for them, so when you look at the return, you get the process right, socially and economically, and the impact is vast.

As a resultant of the above, child in a chair in a day could cover almost 90% cases, and achieved zero waiting list, 98% patient satisfaction, and 60% reduction in pricing.

Where Whizz-Kidz operates, there is diffusion, for instance, in Tower Hamlets. They have brought it to people's attention geographically across many different areas. There has been some duplication, like in Liverpool. There has

been other adoption in other CCGs and trusts, and then nationally, it has been recognized as the high impact innovation. Awareness is being made nationally to everybody, but actually adopting it remains slightly fragmented.

In the last 2-3 years, Whizz-Kidz has been deliberately investing effort to encourage the diffusion of this initiative. They talk everybody about Chair in Day. Every month, they report back on what they do, and if there's a reason behind figures going down, they look into it to understand why. Talking about the initiative is their only strategy for diffusion.

There are no rules and regulations as such, but it is hoped that Chair in a Day can be mentioned within specifications; for instance, when commissioning the service and tendering. Getting into the specifications and documents, like Chair in a Day is doing now could have big impact on things.

There are cultural barriers where a lot of people culturally struggle to make a change, which is not necessarily their fault. It is a product of the system. They are busy firefighting health issues every day, and making things worse is the tight budget they operate on, which is what the NHS is also fighting at the moment, so you can't really blame people for it, but it all creates barrier.

Mutual learning plays great role for the improvement of the initiative. Whizz-Kidz uses feedback for understanding the requirements of the person clinically, but then they also understand their journey. That's how Whizz-Kidz improves.

Any network that Whizz-Kidz can interact with to influence people to participate is desirable. There will not be any Chair in a Day group, because they have already demonstrated that this can be done, and now they are trying to get people involved. Things like personal health budgets have greater impact. Its wider adoption depends on coming from existing structures like CCGs rather than Whizz-Kidz forming an exclusive network.

Regarding their business model, there is no remuneration model. It is based on people's performance and KPIs, so Whizz-Kidz monitors how people perform individually, and sets targets for each role. The overall plan for Chair in a Day is about maximizing as much as possible to help influence and deliver to as many people a chair on the same day.

Wizz-Kidz is a first innovation of its kind. It is a charity and a community interest company, but it is all to do with improving the system and service for the people. They are not a profit making organization, so they want as many people to adopt it. Therefore they have never tried to protect any parts of the solution from imitation.

Role of policy

From a wheelchair perspective, national policy is the part that NHS, England is trying to achieve at the moment. There's a national specification that's being written, which they hope Chair in a Day would influence, so there's a lot happening at a national level, which they hope to be influencing and are influencing already to a considerable extent.

Chair in Day has been mentioned in some policy documents produced by the department of health in NHS, England, so that really helps Whizz-Kidz in talking about what can be achieved. Political endorsement from different policy levels is good. It is the cultural implementation that's the main barrier. Policies are usually set at a national level. National policy settings through the department would be useful and have been useful. Locally, it will be more about putting the initiative within specifications when it is being tendered. There cannot be specific policies on Child in a Chair in a Day, but it can be embedded in other policies around improvement, plus a mention of it in the national specifications and department of health documents will be brilliant.

However, Chair in a Day is fully established and policy had no influence on its establishment. In some ways, local policies would be useful for its diffusion, but not at any stage before that. The aims and ambitions of the project would not have changed and if there were some such policy structures, it would have negated the need for Child in a Chair in a Day, because then such a system would have already been in place.

Connectivity to the practice field

Historically, people are not receiving the right equipment, but people perceptions of disability have modernized. From a cultural and historic point of view, the human rights act and the discrimination act has had an impact on the wider context, socially, on the perception of disability. Wheelchair users now have the biggest voices they've ever had, with

wider platforms to share their stories. Whizz-Kidz supports its young people to have an opportunity to give them feedback and talk about their experience. They work with a company called iWantGreatCare, so users can provide feedback about the service they have had. Many such similar platforms now exist, not just for Whizz-Kidz, but for wheelchair services to make their voice heard. This is now a part of wheelchair contracts. It gives people the opportunity to tell their story, and that brings more focus on getting the story right.

Internally, Whizz-Kidz has been providing wheelchairs for 26 years now, so they have tremendous knowledge of the market, of the people they support, of solutions that are available. Through the initiative 'Chaild in a Chair in a Day' they had influenced the practice field immensely. Going from a standing still staff to one that is achieving 90.6% of Chair in a Day cases reflects massive change in values and beliefs. People have to go on a journey of emotional and psychological change themselves where they have this realization that it is going to be really hard, not being sure that this can be achieved, but then there is something coming through the system showing this can be achieved and then it becomes the norm. 'Child in a Chair in a Day' has been recognized as NHS' high impact innovation. This initiative is all over the national policy, working towards creating change for the benefit of people.

4.4 PRACTICE FIELD CONCLUSIONS

The initiatives vary greatly apart from the common objective to provide or improve mobility of vulnerable groups. Especially organisational forms and business models differ due to the different target groups. However, though being highly individual, there are commonalities found in the contexts of the initiatives.

- People who are engaged in the initiatives perceive failure of the current system and consider gaps produced by the system as non-acceptable. Due to their work, gaps are closed that were not covered by other state or private initiatives.
- Furthermore, the initiatives are dependent on large amounts of voluntary engagement, meaning that economic return does not cover all costs.
- Critical events like the New Year's Eve in Cologne (GER) or a cluster of incidents of sexual harassment of women in India that were broadly discussed in the national and international press have been a driver of the initiative's growth.
- Last but not least, the initiatives consider themselves as pioneers in the field. There is no contact to other initiatives in order to exchange ideas and to enable mutual learning (since these initiatives are very rare).

With respect to the relation between the practice field of mobility for vulnerable groups and social change, the following concluding aspects are noticeable.

Bottom-up ad-hoc initiation and learning something really new: Initiatives are based on a perceived (local) deficit that delimits the mobility of vulnerable groups and on persons that articulate the deficit and start to engage in minimizing it. This required a lot of learning of the actors since there were no previous experiences of how to best start and implement the initiatives. Thus, their reason to start was engagement and the wish to change the situation rather than prior competences related to the field. Furthermore, the initiatives were not connected to any superior umbrella organisations from which to source relevant knowledge. If successfully spread, there is a direct link between individual engagement and social change in this practice field.

Critical events & critical mass: Negative critical events related to underlying societal conflicts have been an accelerator of some of the initiatives. These events have made a substantial contribution to underpin the initiatives. They seem to be an important element of the practice field as a whole and in this regard they can be seen as an indirect lever of social change (critical event → spread of practice field → social change). Their main effect was that the solution offered by an initiative received increased publicity resulting in more users.

5 SUMMARY AND CONCLUSIONS FOR THE POLICY FIELD

This part focusses on comparing the mechanisms of social change between the practice fields in order to elaborate the relation between the practice fields and social change.

As regards *learning*, three distinct characteristics are found within the practice field of shared car usage:

- First, the practice field is subject to a constant learning process. In light of trends such as digitalisation, changed consumer behaviour, and the sharing economy, there is a high dynamic in the practice field constantly requiring adaptation and change of organisational set-ups, technologies, behaviour, business models, etc.
- Second, despite the advanced state of the practice field in terms of awareness, institutionalisation, the variety of actors, economic and social stakes, there is, however, a considerable learning-by-doing component. It roots in a (still) high amount of grassroots-initiatives driven by social values and by high engagement of individual founders/initiators starting from scratch.
- Third, the broad and diverse application of new technologies by providers and users underpins enormous absorptive capacities of all actors in the practice field.

Learning has four distinct characteristics in the practice field of "mobility of vulnerable groups":

- First, it is connected to a very individual process through which personal experience regarding a perceived social problem is turned into action aiming at minimizing the problem. This is the moment where change-making starts.
- Second, many of the initiatives are very unique and there is little chance to learn from the experience of similar initiatives via knowledge transfer. Thus, there is a high degree of mutual learning between social innovators and users and modes of interaction that can be described as symbiotic.
- Furthermore, a learning curve is at the side of users connected to the empowerment enabled by the initiative.
- However, new technologies seem to be less relevant in this practice field. One reason might be lacking capacities to use new technology – an issue that could be reduced by supporting capacity building of target groups (understood as innovators and users).

Variation is very high in the practice field of shared car usage. Not least has the practice field its roots (dating back to the 1940s) in the conscious choice of an alternative mobility which included social and societal aspects rather than individual freedom which still is the mainstream model. In fact, shared car usage is a variation of personal mobility itself. But there is also a lot of variation within the practice field as mentioned above. Variation factors are:

1) different kinds of formal organisations (profit making companies, social enterprises, associations, etc.) who represent the initiatives,
2) the way in which shared car usage is organised (clubs, social media platforms, membership),
3) the way how it is practiced (carpooling, car-sharing (for private or business usage), new phenomena like UBER, etc.),
4) engagement of different kind of actors from public to private sector,
5) differences in the political contexts ranging from showing a certain openness to being totally hesitant), etc.

Lastly, shared car usage was basis for the development of varied (or incremental) sharing systems, especially bike-sharing systems and more recent time parking spot sharing.

Variety in the practice field of mobility of vulnerable groups is also found on different levels. At the initiatives' level distinguishing factors are different needs of the demand side. Naturally, social innovation initiatives differ in their scope depending on whether they have people with reduced mobility, young pupils, women, or single persons walking at night as their target group. On the context-level, the practice field depends on different national and cultural beliefs and ideas for example with respect to an inclusive society and gender equality that have influence on the

scope and way initiatives are developed and implemented. In relation to the practice field level we assume there is a vague snow-ball effect, since social innovation initiatives lay ground for other, slightly varying, projects.

Selection and competition are observable mechanisms in the practice field of shared car usage. The high dynamic, in economic terms described by rapid market entries and exits, by the take-over of companies, and by shifting business models, is an arena of selection at the same time. The development of a potentially oligopolistic market (at least on national level) is possible based on current developments (there already exist some big nationally and internationally operating car sharing companies). Even though there still are manifold small-scale grassroots initiatives as mentioned above. The commonality of successful initiatives is a sustainable business model and a clear communication strategy, independently from whether it is a small initiative or a big company. Selection as an analytically observable mechanism in the practice field mobility of vulnerable groups is almost not present, according to our analysis. The only hint might be related to imitation as a development factor of some initiatives, whereby the decision to imitate (parts of) another initiative is understood as a selection process.

Conflict is not an issue at stake in the practice field of shared car usage. However, it is of relevance in the practice field mobility of vulnerable groups. Here, many initiatives were developed as a response to, or facilitated by social conflicts relating to inequalities, minorities, or the marginalisation of certain societal groups.

Tensions and adaptations are present in shared car usage and many tensions are related to the process of institutionalisation and growth of the practice field. For example, is existing law (in many countries) a barrier for a broader societal diffusion of vehicle sharing. Furthermore, there is competition with established industries (e.g. taxi and UBER). Not least, shared car usage still is an alternative mobility model and requires change in mobility behaviour in order to be practiced. These different stakes and interest are all aspects of a slow adaptation process hindering a rapid diffusion of new ideas and innovations in the field. Tension and adaptation is only a minor mechanism of change in the field mobility of vulnerable groups.

Cooperation structures are similar between shared car usage and mobility for vulnerable groups. While cooperation is strong at the micro-level (e.g. the level of the initiative itself) and defined by various actor types and roles, there are only few umbrella initiatives uniting initiatives of shared car usage or mobility of vulnerable groups under one roof. This is one reason why little knowledge exchange exists between different initiatives, simply because there is a lack of organised knowledge transfer.

Diffusion of (technological) innovation is of clear importance in both practice fields. In fact, shared car usage par excellence describes the interplay and mutual influence of socio-technical components: mobile phones, websites, internet of things, chip cards to open the cars, board computers these are all technologies playing a major role in diffusing, simplifying and growing shared car usage. And because there still is huge market potential, there is also constant need for developing new and improving existing technologies.

Technology is a complementary innovation in mobility for vulnerable groups. In some cases, it enabled to realize a socially innovative idea and thus was a crucial driver for the implementation of an initiative.

Planning and institutionalisation of change: Even though it seems plausible to say that each initiative of shared car usage aims at changing mobility behaviour, there is no concrete “master planning” behind this. It is therefore more adequate to speak of market extension or diffusion of initiatives, than of planned social change as this language is closer related to the business models of the initiatives. Shared car usage is a comparatively institutionalised practice field. However, when it comes to questions of formal institutionalisation (national law, respective urban planning) there still is a long way to go. Actors of the practice field report limited success in working with authorities and decision-makers at national level, which would be a necessary alliance to achieve further progress in institutionalising the field. Social change is not necessarily planned in mobility of vulnerable groups, either. Most initiatives have system failure as a starting point and the vision to improve the present situation. This includes a strong desire to strive for change and institutionalisation.

Table 4 below gives a summarised overview of the mechanisms of social change in both practice fields and their importance for the one or the other.

Table 4: Mechanisms of Social Change in Comparison

Mechanisms of social change	Importance for:	(A) Shared car usage	(B) Mobility of vulnerable groups
Learning	A, B	• Constant learning process • Learning by doing • Absorptive capacity for new technology	• Personal experience of the founders • Mutual learning between social innovators and users • Empowerment of users through the SI • Capacity building for working with up-to-date technology as well on the side of the implementers, as on the side of users
Variation	A, B	• New collective ideas and beliefs (sharing economy, environmental issues) • Variation in the organisational form depending on the national context • Some incremental innovations paving the way for others	• SI laying the ground for other similar projects • Countries' and fields' dependant collective beliefs and ideas • Strong variation in demands (vulnerable groups) and respectively strong variation in SIs
Selection	A	• Dynamic in the practice field – disappearing and emerging of initiatives on global scale • Sustainable business models and clear communication strategy as factors for success	• Little information on selection • Imitation without personal contact and in some cases direct exchange of experience as channels for dissemination of SI
Conflict	B	• no explicit conflicts mentioned	• Social conflicts with inequality, minorities, marginalisation of certain groups
Tension and adaptation	A	• Tension with politicians and law makers • Tension with established industries possible • Slow adaptation process to the new ideas	• Tensions are rear or only at the beginning of the initiatives
Cooperation	limited, more feasible in B	• Lack of professional umbrella organisations for shared car usage • Embeddedness in social movements and umbrella organisations for social enterprises	• No cooperation between different initiatives • Cooperation between different partners inside the initiatives
Competition	A	• Driver for innovation and change of models	• No competition as mechanism of social change
Diffusion of (technological) innovations	very strong in A, B	• ICT (mobile phones, websites, internet etc.) play a major role for diffusion	• Technology as important complementary innovation • Change in beliefs and

		• Applying of functionality and features from competitors or even from other markets • Development of new technology needed for the practice field	behaviour necessary to achieve social change
Planning and institutionalisation of change	limited in A, to some degree in B	• Hardly identifiable planning of change • Week level of institutionalisation of the practice field • Limited success in working with authorities to achieved the desired social change • Impact on change from global developments (Uber, the sharing economy, affordable technology)	• Social change is not necessarily planned • Where system failure is encountered, institutionalisation and change are main goals

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