

Drivers and barriers of organisational frameworks aimed at delivering innovative mobility options

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Abstract

This deliverable brings together the drivers and barriers of organisational frameworks aimed at delivering innovative and inclusive mobility options. It contains recommendations and guidelines on how to implement mobility solutions to cope with transport poverty tailored for different stakeholders: users and communities, policy makers and public authorities, operators and entrepreneurs,

The deliverable is built from a mapping of institutional, legislative, resource, technical, and social-related innovation drivers and through the identification of potential barriers of inclusive planning practices that lead to innovative solutions.

About HiReach

HiReach aims at addressing the mobility needs of different groups vulnerable to transport poverty and social exclusion like people with temporarily or permanent reduced mobility, children, young and elderly people, women, migrants and ethnic minorities, low income and unemployed, to favour more inclusive and flexible mobility solutions. The project also analyses geographical and spatial elements affecting transport poverty to figure out mobility options that can serve the needs of such groups in different target areas like urban-peripheral, peri-urban, rural, and remote or deprived territories.

By combining different attributes of available transport concepts and bottom-up initiatives with new operational schemes and IT applications, HiReach explores viable business models for small scale, modular and easily replicable mobility services that can be provided at affordable prices and/or with minimum subsidies. For the first time, community transport services, informal ridesharing and van pooling, innovative ride-hailing mobility services and on-demand public transport are assessed within the scope of a new collaborative and fair business environment.

The HiReach mechanism for exploring, generating and testing inclusive mobility solutions is based on the creative work of and innovative entrepreneurs, but also on social innovation through the direct involvement of different social groups as developers, co-users and co-owners of the proposed solutions. HiReach is working in 6 EU study regions: Counties of Esslingen and Göppingen (Germany), Naxos and Small Cyclades (Greece), Inner Area Southern Salento (Italy), Guarda and Torres Vedras (Portugal), Buzău (Romania), North and South-East Luxembourg.

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Acronyms and abbreviations

ACRONYM	DEFINITION
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
CRDP	Convention for Rights of Persons with Disabilities
DRT	Demand Responsive Transport
EC	European Commission
EU	European Union
ICT	Information and Communication Technology
ITS	Intelligent Transport Systems
MaaS	Mobility as a Service
MMTIS	Multimodal Travel Information Services
MVP	Minimum Viable Products
NGO	Non-Governmental Organization
NTA	National Transport Authority (Ireland)
P2P	Peer to Peer
PHV	Private Hire Vehicles
PHV	Private Hire Vehicle
PRM	People with Reduced Mobility
PSO	Public Service Obligation
PT	Public Transport
SDG	Sustainable Development Goal
TNC	Transportation Network Companies
VTC	Voiture de Transport avec Chauffeur (French)
WP	Work Package

Executive summary

The present deliverable is a cornerstone for verifying, validating and consolidating the findings and analysis performed in the HiReach project so far.

From a methodological point of view, this deliverable also marks the end of the first and second stage of the project's conceptual framework, which aimed, respectively, to analyse transport poverty (theoretically and on the field) and to explore sustainable and inclusive mobility solutions, before stepping into the final stage which addresses the development of new mobility options.

This deliverable supports future HiReach work by synthesizing key recommendations that can offer a roadmap for the implementation of successful strategies to cope with transport poverty.

First of all, **a brief overview of the problems arising from transport poverty and of possible inclusive mobility solutions** tackling these problems, as resulted from previous desk research and fieldwork activities in HiReach study regions, is provided. It is described how transport poverty can be approached from different perspectives and zooms in on the mobility needs of vulnerable user groups. An overview of the 20 handpicked inclusive mobility services and options analysed by the project is also provided.

Drivers and barriers for the implementation of inclusive mobility solutions have been subsequently clustered and described according to the following dimensions:

- Information and Communication Technologies,
- Collaborative economy and social innovation,
- Market-based elements and fair competition,
- Legal, institutional and regulatory issues.

Building on the analysis of these elements, a number of questions shall be addressed (and have been answered):

- What is the market for innovation in the transport sector?
- Are deprived and rural areas a field of interest for start-ups and entrepreneurs?
- Should inclusive services be offered for free?
- Does size matter?

The **recommendations and guidelines** on how to implement mobility solutions to cope with transport poverty have been finally provided having in mind three specific target groups: **1) users and communities; 2) policy makers and public authorities and 3) entrepreneurs and investors.**

Of course there are some overlaps and complementarities among those three different perspectives. For this reason, each stakeholder (either the users, the public authorities or the entrepreneurs) should be aware of the elements that apply to the two other target groups.

Recommendations for users and communities

HiReach adopts a user-centric and not a technology-push approach for the understanding and design of innovative and inclusive mobility solutions. Several community-led initiatives have been identified and the project considers the role of local communities fundamental in striving for more inclusive mobility policies.

Users can be owners, producers and consumers of inclusive mobility options. In this sense they are the first active component of every policy and can also create (as it already happens both through formal organisations and informally) self-sustaining and independent models that do not entirely rely on public interventions and/or profit-driven services.

Recommendations for this target group are:

1. Start with a complete and transparent diagnosis of problems and needs,
2. Reclaim proper inclusive mobility policies and schemes,
3. Find the right balance in public-community partnerships,
4. Change behaviour and invest in promotion and try out,
5. Collaborate with other organisations, link with startups and innovative entrepreneurs,
6. Invest in digital technologies and supporting infrastructures.

Recommendations for policy makers and public authorities

HiReach has a mandate to offer policy makers and public authorities a vision for improved mobility for vulnerable social groups and in priority areas in which innovation is spurred in order to achieve high levels of accessibility with flexible and inclusive transport solutions.

The roadmap for public administration bodies at all levels basically starts from a global diagnosis of transport capacity and demand (in terms of 'motility'), coupled with a clear vision, inter-institutional and community engagement. National and regional public authorities could create an advanced optimisation scheme and platform, integrating all forms of available publicly-contracted transport and capable of managing trip requests, ideally in real time and applying dynamic routing.

Besides this planning and technological layer, it would be necessary to avoid that any target group is prevented from accessing transport for financial reasons.

Lastly, it is important that innovative enterprises, irrespective of their size, are engaged, by recognizing entrepreneurs and small-scale investors as major drivers of innovation when selecting priorities for investment.

Recommendations for this target group are:

1. Secure and combine funding streams,
2. Develop a clear vision and strive for coordination across sectors and territorial levels,
3. Understand mobility needs and potential supply,
4. Enlarge and integrate different inclusive mobility options,
5. Foster Open data policies,
6. Develop an integrated social pricing system.

7. Support SMEs and innovative entrepreneurs towards existing funding opportunities that can reduce investment risks

Recommendations for entrepreneurs and investors

These (preliminary) set of recommendations are based on the lessons learned in the early stages of the project. In fact, they are based mostly on the case studies analysed in different countries, which has presented us with a number of challenges.

Firstly, given the case studies' diversity, it is difficult to draw general lessons about market elements as in-depth information on their rationale and business models is not always available. Secondly, it can be sometimes difficult to delineate the specific intervention of the entrepreneurs and differentiate it from the other relevant players (i.e. public authorities and transport operators).

Despite this, the present review suggests some background preconditions that seem to favour and encourage the development of innovative products or services through the involvement of entrepreneurs and investors:

1. Pursue combined transport solutions,
2. Look for additional funding and revenue streams,
3. Compete or collaborate for innovative public transport and inclusive mobility services,
4. Make use of open data.

1 Introduction

This chapter introduces the purpose and scope of the Deliverable, within the workflow of HiReach Work Package 3 (Identification of new mobility options and business models). It also indicates the whole document structure and anticipates the content of each chapter in order to help the reader move through the document and understand better its relevance within the HiReach project.

1.1 Purpose and scope

HiReach is a three-year EU-funded Horizon 2020 project that aims at eliminating transport poverty by generating new mobility solutions that reach low accessibility social groups and areas.

This deliverable is part of Work Package 3 (WP3) that consists in the "Identification of new mobility options and business models". This work package has a pivotal role in the HiReach workflow as it embeds the activities of the second step of the project ("Explore"), bridging the first step ("Analyse", directly linked with WP2 – Analysis of mobility needs and capabilities) with the third and final one ("Develop", i.e. WP4 – Development of mobility solutions).

In this second step, HiReach has explored and critically assessed new, efficient, inclusive, affordable and accessible mobility solutions and public transport models, as well as existing innovative organizational and operational frameworks aimed at delivering such new mobility solutions.

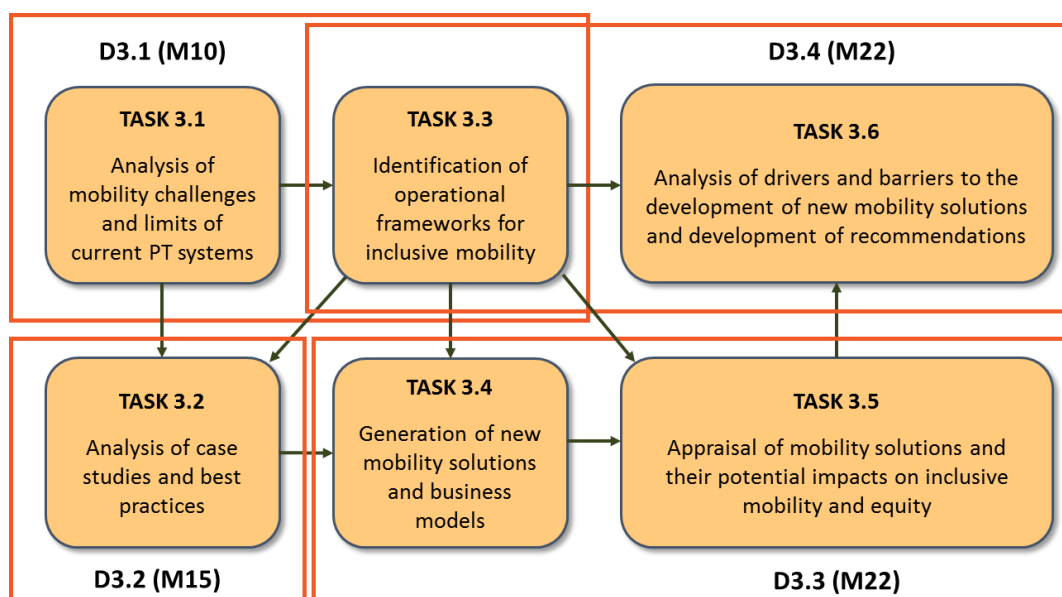
The first output of WP3 was **Deliverable 3.1**, which analysed and discussed the reasons behind transport exclusion, allowing for a preliminary assessment of the limits and drawbacks of current supply of PT systems and other mobility services, in terms of inclusion and accessibility for the vulnerable social groups targeted by HiReach. Available mobility options were classified (publicly contracted, market-based, community-based services) and the challenges and limits of the current transport offer and frameworks were identified.

Afterwards, **Deliverable 3.2** researched a series of frameworks and mobility solutions from different geographical areas and countries, in order to identify case studies and best practices. This has helped to determine which aspects of these solutions indeed lead to improved accessibility, better mobility and more equity in prioritised areas. 20 case studies of innovative transport solutions have been considered to understand their advantages and limitations.

After having analysed these 20 case studies, **Deliverable 3.3** assesses the acceptance of such innovative solutions by a variety of vulnerable social groups, including the potential change in travel behaviour and the expected impacts in terms of inclusive mobility and equity. This has been achieved through the engagement of vulnerable users in focus groups in the six HiReach study regions.

Finally, this **Deliverable 3.4** reports on the drivers and barriers of organisational frameworks aimed at delivering innovative mobility options. This includes recommendations on how to implement mobility solutions to cope with transport poverty, tailored to different stakeholders, including public authorities, operators/new enterprises, and users, in the form of guidelines and recommendations.

Figure 1-1: D3.4 in the workflow of HiReach WP3 (Identification of new mobility options and business models)



Source: Own elaboration

1.2 Structure of the document

This deliverable is organised in 5 chapters and one annex.

Chapter 1 introduces the content of the document, its scope within the HiReach project and its connection to the other deliverables and to the entire WP3.

Chapter 2 presents a brief overview of the problems arising from transport poverty and of possible inclusive mobility solutions tackling these problems as resulted from previous HiReach activities, i.e. desk research and fieldwork activities in the HiReach study regions. It describes how transport poverty can be approached from different perspectives and zooms in on the mobility needs of vulnerable user groups. It also provides a brief overview of the 20 handpicked inclusive mobility services and options analysed by the project.

Chapter 3 focuses on drivers and barriers of the different identified business models and organizational schemes and highlights policy and regulatory elements that might spur or hinder their development.

Chapter 4 presents a series of recommendations and guidelines, specifically addressed to three target groups: users and communities, policy makers and public authorities, entrepreneurs and investors.

Finally, **Chapter 5** provides some concluding remarks and suggests the next steps that will sprout from this deliverable.

In **Annex** the policy, legal and regulatory frameworks that are relevant in the context of inclusive mobility are reported. All these elements have been considered also in previous steps of WP3, and are included here as a reference.

2 Problems and solutions for inclusive mobility

This chapter presents a brief overview of the problems arising from transport poverty and of possible inclusive mobility solutions tackling these problems, as resulted from previous desk research and fieldwork activities in HiReach study regions.

It describes how transport poverty can be approached from different perspectives and zooms in on the mobility needs of vulnerable user groups. It also provides a brief overview of the 20 handpicked inclusive mobility services and options analysed by the project, some specific elements of which will be further described in Chapter 3.

2.1 Problems and needs arising from transport poverty

As described in HiReach project Deliverable 2.1 (Kuttler et al. 2018), transport poverty can be approached from three different interrelated perspectives.

The *first* is related to **transport affordability**, which refers to the extra costs that households need to pay for transportation to access basic services and activities.

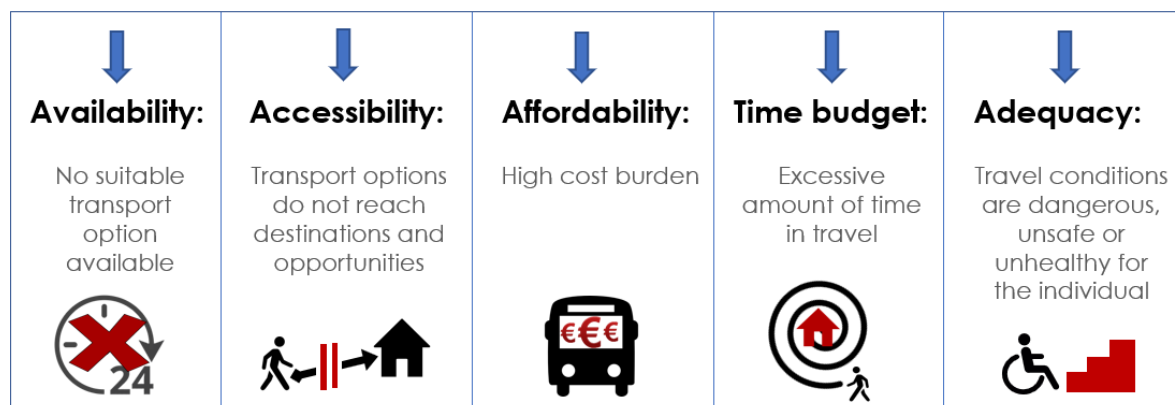
The *second* perspective refers to **accessibility poverty**, which considers the issues that people encounter to reach key services at reasonable cost, in reasonable time, with reasonable ease and in reasonably safe conditions. Poor accessibility has a negative impact on a person's ability to participate in basic activities. Solving accessibility problems may be about providing transport but also about locating and delivering key services and activities in such a way that it becomes easier for people to reach them.

The *third* perspective refers to **mobility poverty**, which focuses on other, less obvious, barriers to people's ability and potential to move. Mobility poverty takes into perspective social status and power relations involved, due to which, vulnerable groups experience reduced mobility and accessibility levels (Massey 1994; Kenyon et al. 2002; Cass et al. 2005; Hannam et al. 2006).

An individual is transport poor if:

- There is no transport option available that is suited to the individual's physical condition and capabilities (**availability**),
- The existing transport options do not reach destinations where the individual can fulfil his/her daily activity needs, in order to maintain a reasonable quality of life (**accessibility**),
- The necessary weekly amount spent on transport leaves the household with a residual income below the official poverty line (**affordability**),
- The individual needs to spend an excessive amount of time travelling, leading to time poverty or social isolation (**time budget**),
- The prevailing travel conditions are dangerous, unsafe or unhealthy for the individual (**adequacy**).

Figure 2-1: Conditions of transport poverty



Source: Own elaboration, after (Lucas et al. 2016)

There are some factors which have a big impact on transport poverty. Spatial factors like density, location in the rural-urban environment and accessibility have a strong impact on individual mobility needs and behaviour. Other factors that directly influence personal mobility are the economic and employment situation of a region, as well as individual socio-economic factors, such as age and income. Educational attainment and opportunities as well as perceptions of environmental conditions and other aspects related to quality of life can influence a person's decisions. These likely have a spatial component, such as choices and constraints for residential locations and mobility.

HiReach make a distinction between (central) urban areas and other spatial contexts presenting elements of vulnerability namely rural, peri-urban, urban peripheral, remote and deprived areas.

The project targets seven vulnerable user groups, as shown in the following figure.

Figure 2-2: Spatial characteristics and vulnerable user groups targeted by HiReach

Analysing geographical and spatial elements affecting transport poverty

Target areas:



Addressing the needs of potentially vulnerable groups to favour INCLUSIVE MOBILITY



Source: http://hireach-project.eu/images/HiReach_Infographic_v.06.pdf

Spatial differences and similarities between EU member states and regions have been preliminarily identified and analysed in HiReach. Some regions of the northern and southern member countries are very sparsely populated; these regions display very different characteristics not only in contrast to the dense urban regions of central Europe, but also in contrast to urban areas within the same country. Although recent territorial

transformations in eastern European Member States, characteristics of urban and rural areas between Eastern and Western Europe remain often very different. Finally, all over Europe, some parts of cities are located in peripheral locations, difficult to reach especially by public transport.

The notion is widely accepted that transportation is essential to the vitality of communities. It provides access to employment, health care, education, as well as to other services and economic activities which are nowadays of great importance. Targeting inclusiveness means considering the needs of different users and thereby aiming for equal levels of accessibility for everyone, including vulnerable to exclusion groups.

The impact of transport-related and socio-economic disadvantage is different for each vulnerable segment, since all of them exhibit unique mobility features and requirements.

Low income and unemployed people typically rely on the less costly modes of transport: walking, cycling and public transport. For longer distances, their primary mode is the latter. There are important differences between low income and unemployed people: the latter have fewer compulsory travels (as they do not work) and tend to have more free time. Consequently, unemployed people can spend more time travelling and are in a better position to adjust their mobility needs to the conditions of the transport system. The lower value of time for both low income and unemployed people may help to explain why they use the less costly modes (e.g. walking or public transport), which are also typically the slowest ones.

Added to this, people with limited financial means tend to live in areas with lower house rents, which are mainly located away from the prime and central urban areas. The outcome is the need to travel for longer distances. As often these areas are poorly served by public transport, people either must accept unsuitable jobs (or must decline better jobs that are inaccessible) or must commute for very long periods, reducing their available time, quality of life and income. Sometimes accessibility is so poor that people are forced to car ownership, which further stresses their limited monthly budgets and reduces the ability to generate wealth (necessary to move to better areas and to find better jobs). There is thus the need to improve accessibility for these people, so that they can have more opportunities for social interaction and higher chances of finding better jobs.

Elderly people are another segment with particular mobility requirements. Nowadays, people continue to be active for more years. As a result, elderly people have increasingly intensive mobility patterns (e.g. visiting relatives and friends, taking children to school, attending health or religious services, or shopping), particularly considering that they are normally unoccupied. Even so, aging leads to cognitive problems and physical impairments, which limits car driving and creates diverse transport-related barriers (e.g. reaching bus/metro/tram/train stops, accessing bus/metro/tram/train vehicles, difficulties of reading and understanding information – timetables or destinations, or even fear and apprehension of travelling alone). Public transport systems should therefore be adapted to the specific needs of the elderly.

People with reduced mobility (PRM) constitute a highly heterogeneous group, due to the high diversity of disabilities (e.g. physical or psychological, temporary or permanent). The fact is for PRM, the standard transport system exhibits some sorts of barriers, limiting their mobility. It is thus unsurprising that the most frequent mode of transport used by this segment is the car as passenger. Age also plays a relevant role, because physical and psychological capabilities reduce over time. Hence, for these people, accessibility of the

transport system (means of transport) is crucial to support an independent life, fulfil their mobility needs and increase their social interactions.

Women have in general less access to private vehicles than men and, also as a consequence of it, are more likely to use public transport. They have also less free time than men being more engaged in family care and domestic work and are more likely to combine trips/make trip chains than to make separate trips.

Poor mobility and access to transport, but also absence of properly designed public transport services to be fit for women needs (links and timetables) and unsafe transport conditions, can therefore prevent women from fulfilling their mobility needs and entering the labour market or lead women to choose less profitable jobs because they are closer to home or easier to travel to. Mobility poverty can have a very high negative impact on their quality of life and well-being. This situation is particularly relevant in rural areas and is aggravated in case of low income as the cost of transport imposes further limitations.

Migrants and ethnic minorities have gained increased visibility in recent years, due to social and political unrest in several regions neighbouring the European Union. Both segments are at high risk of poverty for a number of reasons. They tend to have (very) limited financial capabilities, not only because they might have fled from their home (without possessions) but also because unemployment rates are relatively high. Consequently, they are less likely to own a car. In addition, language is another barrier to integration in local communities (e.g., finding a job or getting a driver's licence) or to access public transport systems, as information is commonly available in the national language only (except for the biggest cities).

Due to these dynamics, migrants and ethnic minorities tend to live together in communities, often in social rented houses in the periphery of the cities. Such low income areas are often poorly served by public transport services, which further aggravates the mobility situation and limits opportunities for social interactions. Nevertheless, and unsurprisingly, the main modes of transport used by this group of people are walking and public transport.

Children and young people are amongst the main users of public transport (above all, because they have not reached the legal age to possess a driver's licence). Hence, access to the transport system is of utmost relevancy to the fulfilment of their daily mobility needs. Low income households or people living in rural areas may encounter additional difficulties.

Firstly, because those areas tend to be served by low quality public transport services (e.g. low frequency, reduced number of routes and destinations). Secondly, fares can be another barrier for low income people. This situation is particularly relevant in secondary and tertiary education as there are fewer schools, forcing people to travel more and for longer distances (resulting in higher fares). Additionally, in areas of poor accessibility, often there are limited opportunities for walking, cycling or using public transport independently. As a consequence, parents drive children directly to the school, which has a negative effect on children's development, autonomy, self-esteem and overall health.

People living in rural and deprived areas are particularly vulnerable. Services and activities are commonly concentrated in the more densely populated area and sparsely distributed in rural areas. Hence, people tend to travel more and longer in these regions. In addition, quality and maintenance of roadways tend to be inferior and, commonly, cycle lanes are

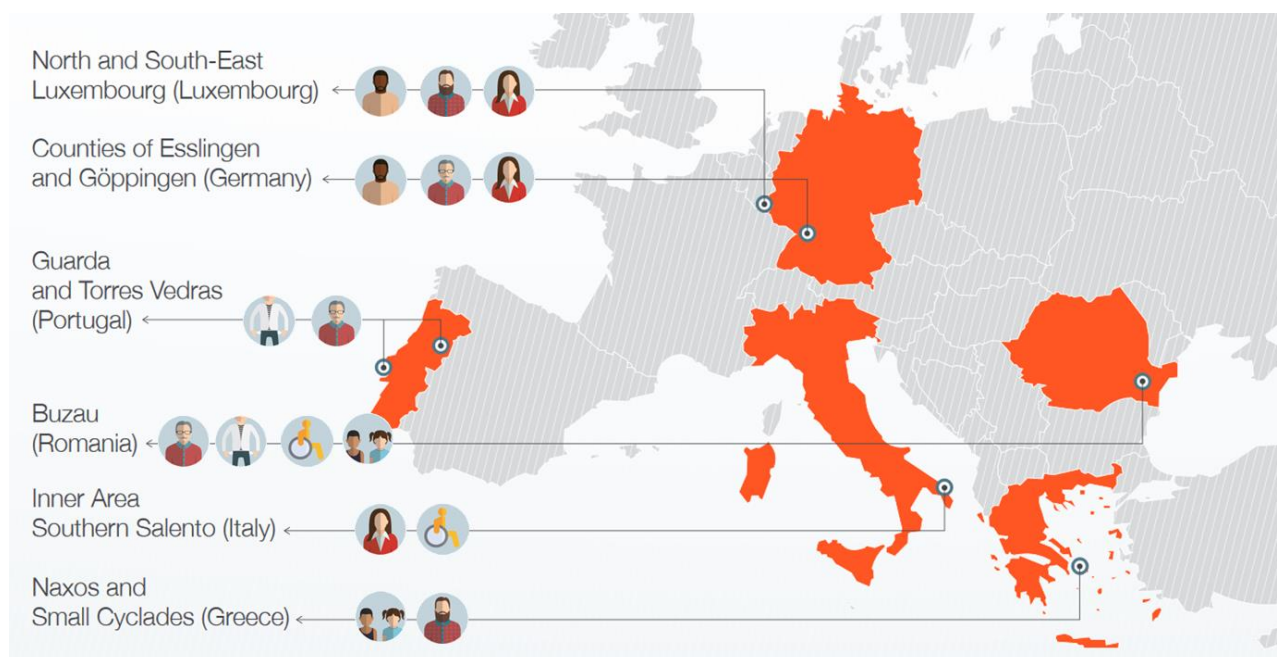
not existent. Walking and cycling are thus more unsafe and often unpractical (compared with urban areas).

Public transport services are also relatively limited, in terms of frequency and routes. Also, the more rural an area is, the farther apart are the public transport stops. Thus, accessibility to public transport is often insufficient, which reduces the opportunities for social interactions. Consequently, people living in rural areas are often forced to own a car, because it is the only mode of transport able to fulfil their mobility needs. Transport-disadvantaged groups, such as non-car owners, low income and unemployed people, elderly, women, migrants and ethnic minorities, and young people, see their mobility situation further aggravated.

People can become part of a vulnerable group (permanently or temporarily) during their life cycle or can belong to more than one group. Inclusive mobility is therefore about **solutions that can meet multiple needs at the same time, tailored to address vulnerability in general and not designed for a specific vulnerable group.**

HiReach has conducted **fieldwork activities in six study regions having different spatial characteristics and involving different vulnerable groups in Germany, Luxembourg, Italy, Portugal, Greece and Romania.** Local actors, stakeholders, experts and user groups were directly involved through tailored interviews and two round of focus groups to investigate respectively needs and attitudes towards specific inclusive services.

Figure 2-3: HiReach study regions and targeted social groups



Source: Own elaboration

During the first round of focus groups with final users, **different causes of transport poverty** have been confirmed and/or further identified. Among the most interesting outcomes we should mention the wide range of solutions to transport poverty issues based on real needs that were raised by the participants themselves. This goes from very basic requests, such as better sidewalks and safe bike parking (as in the case of Buzău), to suggestions for

bottom-up and peer-to-peer car-sharing (as for Naxos and Small Cyclades), and tailor-made, flexible on-demand services (as demanded in Guarda).

There is often (but not everywhere) a lack of trust towards public authorities and more specifically towards public transport suppliers. This is sometimes the consequence of poor services, and sometimes the result of the users' own high expectations. It is also important to notice how this lack of trust is often accompanied by a sort of fatalism, which impedes any action and leaves the users waiting for top-down actions.

Many users are trapped in a total dependence on cars, which are depicted as a mixed blessing. At the end of the day, in poorly accessible areas, private motor vehicles are often the only reliable transport means – at least for those who have access to a car (as driver or passenger). This car dependency, in the absence of realistic alternatives, makes low-income groups highly vulnerable to policies that seek to limit car use (e.g. through road pricing, taxation or ban of highly pollutant old vehicles).

In the focus group sessions, it also became clear how mainly men have priority in the use of automobiles, which leaves women with fewer transport options, those being very challenging and time-consuming. Worst, a still dominant aggressive use of cars is also reported. Beside its related risks, this limits any opportunity to share the roads, and eventually it hampers the development of other forms of non-motorized transport, such as cycling.

The focus groups confirmed how we should consider transport poverty as a multi-layered phenomenon. Indeed, while the categorization of social and spatial layers is important from an analytical perspective, the final users confirmed how everyone, in practice, tends to belong to more than one vulnerable group, which accentuates and increases the risk of transport poverty.

The cases of Naxos and Iraklia magnify the traditional transport problem of remote areas, adding island isolation to overall rural difficult accessibility. The Greek case also showed clearly how children and elderly are those paying the highest price: we have clear evidence of geographical isolation and poor-quality transport systems further triggering social exclusion. Also, the relation between transport poverty and geographical scale is evident, again comparing Naxos (18,904 inhabitants) with Iraklia (141).

The cognitive appropriation and understanding of transport modes was also addressed in the focus groups. For example, in Romania, children and young people are fully aware of the cycling system, asking for its improvement (bike lanes, facilities where to park the bike safely), in order to be able to go to school by bike, and thus reducing their dependency on other transport means. And in Germany, senior drivers, especially males, find it difficult to change from car use to buses, declaring they find it difficult to understand how public transport works.

With regard to elderly people, the focus groups (not only in Germany) confirmed that “younger” elderly (also when retired) have very active lifestyles. It is an important outcome, which asks to be better analysed (and should be leveraged for bottom-up initiatives), and means we should avoid stereotypical visions about this social group.

It can be summarized that **transport poverty is the result of a complex mix of:**

- physical and mental condition and characteristics;
- social characteristics of the personal environment, household and family situation;

- spatial situation, especially including prices of housing;
- the offered transportation services.

2.2 Solutions for inclusive mobility: organisational and operational frameworks

As mentioned above, there are five main aspects to transport poverty (availability, accessibility, affordability, time budget and adequacy), and it can be stated that an individual is transport poor if at least one of the five conditions is not met to satisfaction. That's why inclusive mobility options need to be promoted or created. These would help vulnerable individuals to overcome mobility barriers.

Availability (including reliability) and affordability are crucial for those with low income and no access to cars. Availability and accessibility of destinations are major problems for people living in rural and deprived areas. Adequacy is the most meaningful transport barrier for people with reduced mobility. Again in terms of adequacy, especially for elderly and women, safety is a fundamental precondition for using public transport. Healthy travel conditions are crucial especially for children and young people and the absence of understandable information on available mobility options (e.g. in different languages or being the system itself difficult to understand) can affect people with disabilities (e.g. blind) but also migrants and ethnic minorities.

The analysis of social and spatial disadvantages supports a focus on improving accessibility for all vulnerable groups, in order to increase the potential for activity participation.

As described in HiReach Deliverable 3.1 (Chiffi et al. 2018), three main clusters of mobility options and services have been analysed as fields of application for inclusive mobility.

Publicly-contracted transport services are delivered by public transport operators or local businesses (e.g. taxi companies receiving subsidies in rural areas), but may also be directly organised by a public entity (own-account services include for example transport of people with temporary or permanent disabilities operated by rehab centres or hospitals, or transport of pupils operated by the school). Adaptations and overall improvement of conventional public transport (typically scheduled bus and rail services) can make these services better "fitted for all". On the other hand, quite often special and dedicated services are organised and funded by public authorities: school buses, door-to-door minibus/van services for people with disabilities or healthcare needs, but also demand responsive transport (DRT) services in low density and rural areas or in off-peak times.

Market-based mobility services are of a commercial nature, with the objective of resulting in a profit to the entity that owns it or has invested in it. This includes more traditional options like on street taxis and pre-booked private hire vehicles (PHV), but other solutions are nowadays offered as well by vehicle sharing and ride hailing companies that can directly or indirectly operate a fleet. New business models have been developed within the so-called shared economy paradigm, facilitated by technology advancements (i.e. ride-hailing services organised by the so called Transportation Network Companies or TNCs).

Community-based mobility options include community transport services provided by non-profit entities receiving minimum subsidies (e.g. in rural areas or for special transport services), informal or peer-to-peer ride-sharing (carpooling), shared “village cars” or peer-to-peer car sharing and community-owned bus services often referred to as “citizen buses”.

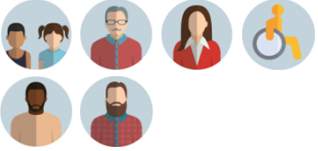
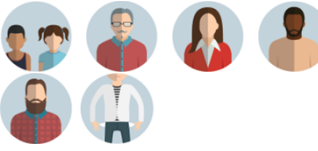
Following this classification, **20 handpicked innovative transport solutions** implemented in different regions and countries in and outside the EU were subsequently analysed in HiReach Deliverable 3.2 (van Egmond et al. 2019) considering their organisational and operational frameworks, the business potential and how each solution can be transferred to other regions, embedded technologies and interoperability rules and aspects related to social innovation.






















Four domains have been considered as relevant elements of innovation and used for both the selection and the assessment of the case studies. Such domains are:






- Implementing new organisational and/or business models, including back-office solutions that assure a better integration or exploitation of the offered services: **Integrating** new organizational and business solutions.
- Providing services or developed strategies that help to upgrade the image and attractiveness of the present public transport offer and other mobility options: **Upgrading** the present service offer.
- Enabling technologies (ICT solutions) and interoperability rules that increase the access and usage of the services (e.g. real-time booking systems, integrated ticketing, multimodal travel planners, etc.): **Augmenting** the existing services.
- Developing new forms of transport services based on sharing economy and community-based principles that allow for more efficient use of the means of transport: **Sharing** solutions.







Each case study's main characteristics are hereafter briefly described. Some specific elements as well as their drivers and barriers will be taken up again in the next chapters.



Table 2-1: Details of HiReach case studies and potentially targeted vulnerable user groups

CASE STUDY	TYPE OF SERVICE AND DESCRIPTION	AREA	VULNERABLE USER GROUP
1. Boleia (Portugal)	Ridesharing/car-pooling platform Developed by a small Portuguese company, Boleia distinguishes itself by not receiving any commission payment from the final users. Its business model is orientated towards big employers, cities and events with whom Boleia collaborates to offer tailored platforms.	Rural, Peri-Urban, Urban	
2. Bummelbus (Luxembourg)	Rural on-demand bus driven by unemployed people Bummelbus is a combination of a social project and a mobility service offering door-to-door trips in rural Luxembourg by means of on demand minibuses. Long-time unemployed people are coached and	Rural	

CASE STUDY	TYPE OF SERVICE AND DESCRIPTION	AREA	VULNERABLE USER GROUP
	employed as drivers.		
3. Bürgerbus Aichwald (Germany)	Community bus for elderly people The German Bürgerbus (Citizen Bus) is a community transport scheme existing since 1985 that fulfils a complementary role in the public transport system and cater for situations of low demand. It is operated with volunteer drivers (usually retired people).	Rural	 
4. Buurtkar (Belgium)	Mobile shop and social service centre The Buurtkar ('neighbourhood cart') is a mobile shop and service centre in the municipality of Bornem. People come to the Buurtkar to buy (fresh) food or other goods but can also find an ATM and receive information on local public services. The driver is a civil servant of the social department and also brings groceries inside or helps with small tasks in the house.	Rural, Peri-urban	   
5. Dörpsmobil (Germany)	Community e-car/Car club The "Dörpsmobil" (village car) is an e-car sharing solution launched by the Mayor of the small municipality of Klixbüll. The service is being used by all members of the founding carrier organization (a registered local association): residents, employees of local companies and the municipality as well, which guarantees a minimum usage of the vehicle in order to sustain the scheme.	Rural	   
6. Fairfahrt (Germany)	Rural ridesharing platform making use of fixed and virtual stops Fairfahrt (fair-ride in German) is organized in and around the rural area of Hessen in Germany. Car drivers on their way to a specific place can pick-up persons at one of the five designated stations and offer them a free ride. Riders have to register first and receive an ID card allowing them to request a ride at one of these five stations.	Rural	      
7. Fietsmeesters (The Netherlands)	Cycling training program Fietsmeesters has the goal to achieve safer cycling through the organization of workshop at schools, practical cycling lessons and cycling education. The initiative is specifically targeted at children, migrants (especially women), and elderly people. It is operated in the city of Utrecht, in the Netherlands.	Urban	   

CASE STUDY	TYPE OF SERVICE AND DESCRIPTION	AREA	VULNERABLE USER GROUP
8. FlexTrafik (Denmark)	Demand-responsive transport scheme FlexTrafik is a demand-responsive transport platform in Denmark that collects and coordinates the ride requests of all those citizens who do not have the opportunity to use regular public transport. It is a demand-driven service meaning that it is organized according to the users' needs and does not follow a fixed route plan.	Rural, Peri-Urban, Urban	
9. GoOpti (Slovenia)	Shared airport transfers (ride-hailing service) GoOpti is a demand-responsive transportation network that provides a matching to passengers requiring a transfer (shared, private, or customized) between airports and smaller towns/cities. The service was launched in Slovenia and currently operates in several European countries.	Rural, Peri-Urban, Urban	
10. GoOV APP (The Netherlands)	Public transport smart travel assistant GoOV is an app that supports independent travel with public transport, acting as a smart travel assistant. The app helps travellers (especially people with a disability, but other groups may also find it helpful) in every step from trip origin to destination, providing detailed route navigation and up-to-date dynamic public transport information. GoOV also offers the opportunity to continuously monitor (actively, or passively) users requiring further guidance.	Rural, Peri-Urban, Urban	
11. Local Link (Ireland)	Rural transport scheme Local Link is a rural transport program in Ireland, since 2002. The scheme provides a year-round transport service in sparsely populated areas, where public transport stopped operating due to low levels of demand. The service has nearly 900 drivers serving almost 2 million passengers in 17 separate administrative areas.	Rural	
12. Locomobile (Belgium)	Social taxi Locomobile is a social taxi service that offers a service at an affordable price, compensating the insufficient offer of public transport in certain areas. The service is available in 19 different municipalities in the province of Luxembourg, in Belgium.	Rural	

CASE STUDY	TYPE OF SERVICE AND DESCRIPTION	AREA	VULNERABLE USER GROUP
13. PickMeApp (Italy)	Ride-hailing service PickMeApp is an on-demand transport service that offers a mobility solution specifically tailored to children, elderly, and disabled people. It offers a door-to-door service, with online booking and payments, and GPS traceability through a special bracelet. The service currently operates in the Italian cities of Potenza and Salerno.	Peri-urban, Urban	
14. Pink Taxi (International)	Marketplace platform for women-only taxi services Pink Taxi is a marketplace platform for women-only taxi services that was launched in London in 2006. The idea of the service is to provide a safe transportation option to female passengers and to empower their role in society. The service uses innovative technology and relies on blockchain for its implementation.	Urban	
15. Transport a la Demanda in Catalonia (Spain)	Demand-responsive transport scheme Transport a la demanda (TAD) consists of different demand-responsive transport services in Catalonia that are implemented in low demand areas. More than 200 services are currently operated and supported with public funding by the region.	Rural, Peri-urban, Urban	
16. Taxi Colectivos Beja (Portugal)	Shared taxi Beja is a collective-taxi initiative offering a mix of fixed and on-demand routes and schedules deployed by taxis. The service operates since 2000 in the municipality of Beja, in Portugal.	Rural, Peri-urban, Urban	
17. Uber (International)	Ride-hailing service Uber is a worldwide well-known ride-hailing service, that provides transport on demand through a driver-passenger matching platform. The service operates only in certain cities and differs from a taxi service mainly for two reasons: the cost is estimated beforehand and the price for the customer depends on the current supply and demand.	Peri-urban, Urban	
18. Village House Service Centre (Finland)	Community service centre Rather than a proper transport service, the Village House is a centre that can accommodate different services provided according to the needs of the local inhabitants, who otherwise would have to	Rural	

CASE STUDY	TYPE OF SERVICE AND DESCRIPTION	AREA	VULNERABLE USER GROUP
	travel to other places or larger communities. The Village House is located in Finland, in a small municipality near the border with Russia.		
19. Welcome to Berlin Ticket (Germany)	Public transport ticket for refugees The Welcome To Berlin ticket is a specific programme offering refugees the opportunity to use public transport upon their arrival in Berlin, Germany. The program allows refugees to use public transport for free in a first stage. Later on, it offers a significant discount on the monthly fare.	Urban	
20. ZOOV (The Netherlands)	Demand-responsive transport scheme ZOOV is a transport on demand service for people that do not have any other possibility to travel within the Achterhoek region, in the Netherlands. The service is operated by 40 vehicles, including cars, taxis and small buses mainly covering rural areas and small villages.	Rural, Peri-Urban	



Source: Own elaboration

From the analysis of the different clusters of mobility options and the characteristics and functioning of real world practices, it is possible to identify **four main typologies of organisational and operational frameworks for inclusive mobility** as in the following table.

Table 2-2: Organisational and operational frameworks for inclusive mobility solutions

TYPE OF SERVICE/SOLUTION	WHO ORGANISES THE SERVICE	WHO OPERATES THE SERVICE	HOW IT WORKS
Dedicated public silos <i>These are transport services typically run or contracted by the public sector, focusing on specific social groups, areas and travel purposes, but that are not integrated nor optimised.</i>			

TYPE OF SERVICE/SOLUTION	WHO ORGANISES THE SERVICE	WHO OPERATES THE SERVICE	HOW IT WORKS
<p>Typical examples are school transport, special transport for medical/rehabilitative purposes only or scheduled fixed rural transport services</p> <p>In many cases, free passes and/or discounted fares are granted to certain social groups.</p>	<p>Local authorities (municipalities, regions), Local Health Services, the Social Security or PT operators usually take the initiative for such services.</p>	<p>Public authorities (in-house), charities/not for profit organisations (CTS) or transport operators (PT, Taxi, PHV).</p>	<p>Its provision is predefined in terms of quality and quantity according to the contract with very limited flexibility.</p>
<p>Inclusive and integrated public schemes</p> <p><i>In this cluster, publicly-contracted transport services (cf. above) are mixed together in order to optimise the use of resources, meet the demand of more vulnerable user groups/geographical contexts and/or expand travel purposes and possibilities.</i></p>			
<p>Key examples range from services that are expanded to include more travel purposes like commuting, socio-recreational travel and personal care (e.g. the Valys scheme in the Netherlands), those making use of more flexible schemes (shared taxis, regiotaxi/ZOOV, TAD) to those combining together different vehicles/providers and operational schemes (scheduled/DRT), often making use of IT components (Flextrafik, Local Link).</p>	<p>National/regional authorities, transport agencies.</p>	<p>Transport operators (PT, Taxi, PHV), charities/not for profit organisations.</p>	<p>Quality/standards are predefined but quantity/service provision is adapted to the demand. It can be linked to a predefined planned amount of resources (e.g. personal/territorial km budget) or varies according to the demand. Contracts are by definition flexible.</p>
<p>Community-driven and collaborative schemes with a social purpose</p> <p><i>This category incorporates all services and solutions that need the active involvement of local communities to be organised and operated. Citizens are both users and producers and receive few subsidies or little support from public authorities or private entities. Resources (vehicles, time) and costs are shared among the members of the club/community.</i></p>			

TYPE OF SERVICE/SOLUTION	WHO ORGANISES THE SERVICE	WHO OPERATES THE SERVICE	HOW IT WORKS
Bürgerbus, Village Cars (Dörpsmobil), car clubs, peer-to-peer ride-sharing (carpooling), Village House/Local Link Offices.	Public authorities, social entrepreneurs or formal/informal groups of citizens.	Peers, clubs/associations.	Public or private entities usually provide guidance or tools (e.g. platforms) whereas the solution/service is offered and provided by one or more member of the club/community.
Market-based commercial services <i>This category includes all services and solutions provided for remuneration or profit.</i>			
Ride-hailing solutions (GoOpti, PickMeApp, UBER, UBERpop), Private Hire Vehicles, Taxis, PinkTaxi, car sharing.	TNC, transport operators.	Professional operators.	Services are offered only to those target groups and in areas where there is enough demand and revenues/profit.

Source: Own elaboration

A cross-analysis of all case studies studied by HiReach has allowed to emphasize the advantages and limitations associated with each mobility solution and to identify the initiatives with the highest potential to be replicated in other regions/countries.

The main **drivers** i.e. success factors include:

- a strong cross-sectoral commitment,
- the presence of a well-established and simple organisational schemes,
- the voluntary commitment of the initiators,
- the support (financial or other) from a city, a municipality or even the national government,
- the IT systems, which make the service function in a smart and innovative way, and
- a flexible operational model.

On the other hand, the principal **barriers** or challenges are:

- convincing people to use mobility services other than public transport or their own car,
- increasing the usage of the service to make it more profitable,
- the difficulty to get permanent funding from a public authority,
- the difficulty to coordinate all the tasks if many stakeholders are involved, and
- the instalment of technology.

Most of the case studies described above rely on environmentally friendly solutions and have the potential to be transferred to another region/country provided that they are adapted to the local conditions, taking into account size of administrative area, resources available, cultural differences, etc. Also, in some cases they could be extended to a wider group of users compared to the one(s) originally targeted.

In sparsely populated regions, where public transport doesn't exist or is not efficient, new and innovative mobility services can have a big potential because people can rely on it and there is not much competition. Viability is increased especially if the service can be expanded to cover multiple purposes (e.g. school or special needs transport) thus allowing the combination of funding streams while increasing attractiveness.

3 Inclusive mobility solutions: drivers and barriers to their implementation

This chapter focuses on drivers and barriers affecting the development of inclusive mobility solutions. The analysis is based on the results of both desk research and fieldwork activities carried out by HiReach and it is complemented by additional references and analysis and practical examples.

The following aspects are addressed and analysed in more detail: Information and Communication Technology features and usage, social innovation and collaborative economy, market penetration and fair competition, institutional and regulatory issues.

Finally, we highlight key questions for the development of inclusive mobility solutions.

3.1 Information and Communication Technologies

The term 'Information and Communication Technology' (ICT) refers to a wide variety of products and services. We can distinguish in-vehicle ICT, infrastructure related ICT and personal ICT, but even these categories don't cover the full range of technologies. Here, the focus is on personal ICT (use of individuals).

As the importance and value of information increases, Information and Communication Technology is rapidly evolving and taking centre stage in everyday life. This is particularly evident in the transport sector, where ICT became a fundamental driver and is greatly influencing our mobility and travel choices as well as travel experience.

Mobile technology, in particular, has experienced an immense growth around the world, and the mobile phone penetration rate is still increasing, among all social groups. With modern developments of high speed Internet via 5G, data exchange can occur in real time, making it possible for mobile applications to follow the continuously changing transport flows, to gather real time information, and distribute it instantaneously to all interested parties. The mobile phone allows travellers to not only easily plan their (multimodal) trips, but also to communicate and access internet-based added-value services while on the move.

ICT applications can support information distribution but also data gathering. **The main issue in this case is the ability of the citizens to use the application** (at least the basic features) in order to obtain relevant results.

ICTs, when accessible and available, can serve as critical enablers that allow vulnerable user groups like persons with disabilities or elderly people to realise full and effective opportunities to participate, on the basis of equality, in all aspects of society and development (United Nations 2012). ICTs can help such vulnerable users to have a greater access to knowledge and support independent living, provided that they are designed according to web-accessibility standards.

From the focus groups organised in HiReach with end-users, it resulted that **there are some specific categories, like elderly, that hardly use ICT solutions**. Only very few elderly people

in the HiReach study regions access Internet daily, and ICT is used by them mainly for communicating, and less for accessing information or navigation. Advanced age, low education, low income and disability have been shown to predict low ICT usage among seniors (Friemel 2016). But ICT use can also be beneficial for older adults. Computers and internet also provide many services that support autonomy in old age by facilitating the execution of many routine tasks through e-services (e.g. banking, shopping, and communication with social and health services). Older adults with good cognitive skills are much better positioned to benefit from the web-based services available (Freese et al. 2006).

The level of ICT solutions acceptance differs between urban and rural users too. It is clearly lower for older users living in a rural environment, as on the other side, users living in a city are faced with technology in many cases on a daily basis.

The highest acceptance level can be found among **children and youth**, who would easily adopt any ICT solution for their mobility, if available.

Women can have limited access to ICT solutions and it may be more difficult for them to learn how to use them for many reasons like material barriers (this also applies to low income persons), social and cultural barriers (time consuming domestic responsibilities, less access to education or opportunities to gain technology skills), psychological barriers (low confidence in their abilities, different stereotypes) or political and institutional barriers (Cummings and O'Neil 2015).

Low income individuals are also facing impediments in using ICT solutions, mainly because of low digital literacy or lack of access to smart devices or Internet connections (Dillahun et al. 2017). Limited access to electronic payment methods (most of them do not possess a credit card) can be also another additional barrier.

Regarding the development and introduction of ICT solutions, **a serious barrier is their cost and the users' willingness to pay for it**, which is usually low (Przemyslaw 2018). A solution could be for these costs to be covered exclusively by the service provider, without compensating by increasing the price.

Across all user groups, **it is important that ICTs are designed in a user-friendly and accessible way** in order to convince people to use it.

In an increasingly digital age, information and communication technologies offer new ways of addressing the needs of those members of our society who present accentuated vulnerabilities. While there have been great advances in the development of specialized assistive technology, such as microprocessor-controlled prosthetics or digital hearing aids, more general-purpose technologies, such as ordinary computers, tablets and smartphones, offer significant opportunities for broader social and economic inclusion of persons with certain vulnerabilities like disabled people. Real-life examples include:

- a blind person may be informed of the next stop through audio announcements on the bus;
- a wheelchair user may find out on the internet how to access the public transport system (what vehicles are equipped with ramps, what stops are accessible, etc.);
- a person who has lost the use of their limbs, may use voice-recognition software to give commands;
- a blind person can read printed paper documents by using the camera, audio and text-recognition capabilities of a smartphone.

All these examples show that the ICTs in widespread use today can make a significant difference in the lives of vulnerable users thus representing a fundamental driver for the development and spreading of inclusive mobility solutions.

The SIMON Project

An example worth mentioning where ICT was the backbone of the inclusive transport solution implemented, is the SIMON Project (<http://simon-project.eu/project/>) that focused on two different applications to enhance the mobility of vulnerable groups: targeting the **modernization of the EU parking badge for the disabled**, and enabling **mobile navigation solutions presenting specific relevant information (e.g. on accessibility) for older and impaired users**.

SIMON uses different adaptors to retrieve and dispense information from various sources related to public transport networks in the pilot cities (Madrid, Lisbon, Parma and Reading) and to give information related specifically to accessibility issues – e.g. the location of lifts and ramps but also information about parking spaces.

Of special importance for SIMON navigation services and the mobile app is information on the geometry of the outdoor environment (roads, railways, buildings, places of interest, etc.) This is stored in a (read-only) database extracted from OpenStreetMap that is organised hierarchically to enable fast retrieval of data at different zoom levels. Two additional databases specifically developed for the SIMON system, namely the Transit Information Database and the Parking Information Database, improve the quality of the information provided to the citizen, thus complementing the OpenStreetMap data.



Barriers to access ICT include a **lack of awareness of available technologies** and of what can be achieved through their use, a **lack of available training** on how to use them, and

a **lack of financial resources to purchase the hardware, software, network connectivity and specialized support equipment that may be necessary**. Thus, there is a need for initiatives that build awareness, expand digital literacy, finance the acquisition of devices and software, and provide support for the use of ICTs among the users.

In the next table, a brief summary of ICT drivers and usage barriers for a selection of relevant HiReach handpicked solutions is provided.

Table 3-1: ICT drivers and barriers in a selection of HiReach case studies

SOLUTION	DRIVERS	MAIN POTENTIAL BARRIERS
Boleia	The platform is flexible enough to be customized to local needs and requirements. Typically, it is implemented in places where transportation networks are less dense and, as a consequence of this, transport options are also scarce. There are no technical impediments for deploying the platform in a new market and it can also be set-up at a low-cost.	Requirement of basic ICT skills.
GoOV APP	App easy to use, specifically adapted for use by people with a disability (with large buttons, voice announcements, pictograms instead of text etc.)	There is a relatively short but needed learning period during the setup phase: after an initial training session in a small group (+/- 5 travellers and their parents or coaches), to show how the app works and what to do if there is a problem, there is a training period of four to eight weeks, in which trips to the most common travel destinations are practised together, until the parent/guardian/coach indicates that the person can make the journey independently. Then, there is a return session to discuss how it went and how to continue.
Fairfahrt	Easy to use app: drivers don't need to register and users can request trips by means of a personal ICT-based ID card they receive upon registration.	Dedicated infrastructure required. In some poorer areas may be difficult to implement.
Dörpsmobil	Modern ICT solutions (like online calendar) are complemented with classic communication solutions, like phone reservations.	Basic ICT skills required. Also, a connection to Internet is needed, which is a challenge in small villages (with poor GSM coverage and poor connectivity).
FlexTrafik	Based on an optimized schedule algorithm, the software used provides the lowest generalized cost.	The system is complex and, hence, not cheap to be implemented. Also, app development requires specific

SOLUTION	DRIVERS	MAIN POTENTIAL BARRIERS
		adaptations for easy usage by different groups (children, elderly, persons with disabilities, persons requiring medical care).
PickMeApp	Multiple facilities in one app: user registration, route planning, trip booking, payment solutions.	App not adapted to all categories of users: small buttons, no clear guidelines that describe all the possible actions.

Source: Own elaboration

3.2 Collaborative economy and social innovation

In its communication *A European agenda for the collaborative economy*, the European Commission provided a definition of the term '**collaborative economy**': it refers to business models where activities are facilitated by **online platforms** that create an open marketplace for the **temporary usage of goods or services** provided either by **private individuals offering services on an occasional basis** ('peers') or by **service providers acting in a regular or professional capacity**. Three categories of actors are identified: (i) service providers who share assets, resources, time and/or skills; (ii) users of these; and (iii) intermediaries that connect – via an online platform – providers with users and that facilitate transactions between them ('collaborative platforms'). Collaborative economy transactions generally do not involve a change of ownership and can be carried out for profit or not-for-profit (European Commission 2016).

A broader definition is given by the innovation charity Nesta (Nesta 2014) which defines the collaborative economy as having five traits: enabled by **internet technologies**, connecting distributed networks of **people and/or assets**, making use of the idling capacity of **tangible and intangible assets**, encouraging meaningful **interactions and trust**, and embracing **openness, inclusivity and the commons**.

Business models and digital technologies are therefore key features of any form of modern collaborative consumption but indeed **the scope of not-for-profit collaboration among the citizens is wider** and includes a myriad of small-scale and often informal, non-IT interactions. The most direct examples are ridesharing (carpooling) and ride-hailing, that are long-established forms of collaborative mobility among – typically restricted – informal groups of users (friends, relatives, colleagues, neighbours).

By conducting fieldwork activities in study regions having different spatial characteristics (rural, peri-urban, peripheral, etc.) and investigating attitudes and travel patterns of several vulnerable user groups, HiReach demonstrated that **the role of informal groups and local associations, irrespective of the presence of new business models and of the use of digital technologies, is often crucial in order to solve transport poverty issues**. In almost all the investigated areas, awareness of the potential of collaborative forms of transport is particularly high bringing together also the reclamation of better public services and policies (i.e. public transport, infrastructures, proper funding and tailored mobility plans).

In this respect, an important concept that is an integral part of HiReach and is related to the collaborative economy is '**social innovation**'. The overall HiReach approach of

responding to multiple mobility needs from vulnerable users and featuring inclusive mobility solution is a social innovation. According to the definition given by The Young Foundation (2012), social innovation refers to “**new solutions** (products, services, models, markets, processes etc.) **that simultaneously meet a social need** (more effectively than existing solutions) **and lead to new or improved capabilities and relationships and better use of assets and resources**. In other words, social innovations are both good for society and enhance society's capacity to act.”

In the EU several initiatives have been initiated in order to exploit the potential of social innovation. The Horizon 2020 programme has so far funded 206 projects on this subject (including HiReach), a Social Innovation Academy¹ and a Prize² that will reward the best solutions for improving the mobility of older people. Similar initiatives have been launched and detected also at national and regional level like for example in European Nordic countries and Scotland (Copus et al. 2017).

The European Prize for Social Innovation

The current edition of the European Prize for Social Innovation shortlisted 10 mobility solutions after the launch of the competition.

Some of them are focused on vehicles or devices like **WiiGO Retail** (an autonomous engine that follows PRM users and frees them from the physical effort associated with transporting purchases while shopping) or **Path Finder** (a shoe attachment to help people with an unsteady and irregular gait).

Others are more typically associated with door-to-door, on-demand transport services, particularly in rural areas, making use of digital technologies like the **Pink Pick Up** (Norway), **Sopotniki** (Slovenia) or **PlusBus Local Strong** (The Netherlands).

There are also multifaceted solutions combining the use of smartphone apps with other non-transport services like **Adopt Grand Parents** (an intergenerational companionship platform developed in Spain), **Freebird Club** (an Irish peer-to-peer social travel and homestay club for older people) and **Mob4Seniors** (an intelligent individual card that offers cultural, leisure, digital and sports services for senior citizens in Toulouse and its surrounding rural areas, as well as access to an additional hand-in-hand individual physical support service).

Source: https://ec.europa.eu/info/news/10-finalists-announced-horizon-prize-social-innovation-2019-may-24_en



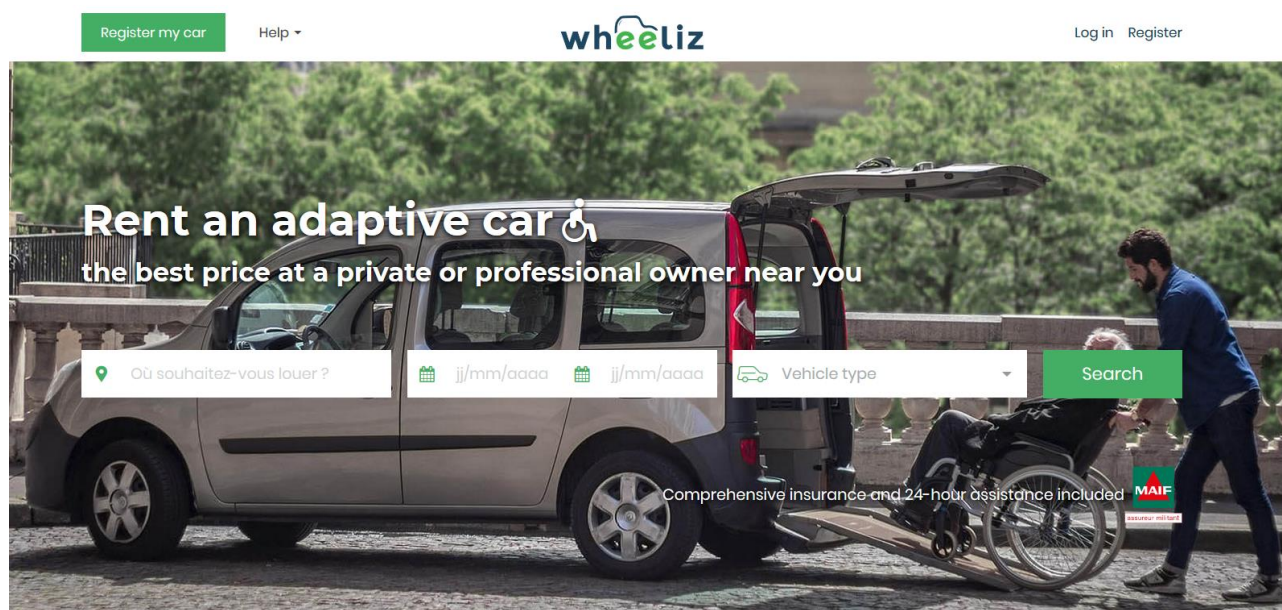
¹ <http://www.socialinnovationacademy.eu>

² www.ec.europa.eu/horizonprize/socialinnovation

Several features of profit-oriented business models common in the collaborative economy can be applied to address social challenges, support sustainable practices, and enable cultural understanding or civic engagement (Lahti and Selosmaa 2013).

The functional link between the collaborative economy and social innovation has been highlighted and further analysed in a recent study on Europe's social purpose collaborative economy carried out by Nesta for DG Growth (Nesta 2016). The interviewed experts confirmed that the majority of debate and policy discussions revolve around a very narrow set of collaborative activities, quite often focusing on two business models, namely Airbnb and Uber. This polarisation can be a barrier for **social purpose collaborative economy models** in the sense that they do **not receive proper attention from funders, policy makers, and the media**. That's why is important to differentiate between profit-driven and purely market-based collaborative models (that may, for example, not be viable in rural areas or fail to address the needs of vulnerable user groups) and those operating with alternative models strongly associated with social innovation (that can be either profit or non-profit) mainly aiming to address societal challenges and achieve societal benefits.

Figure 3-1: WHEELIZ, a website to provide peer-to-peer wheelchair user adapted car rentals



Source: <https://www.wheeliz.com/en/about>

Another barrier to social innovation cited in the Nesta review is the **lack of dedicated investment or supporting programmes** for the social purpose collaborative economy as opposed to profit-driven targeted initiatives. Policy makers need therefore to pay more attention to this sector. More efforts are also needed in order to map running initiatives at both national and regional level. For example, the Puglia Region in Italy (one of the

HiReach study regions and member of the Take-Up Group), has launched a dedicated funding programme PugliaSocialeIN³ and also has a cross-sectoral programme addressed at young entrepreneurs that is already providing support to a start-up⁴ piloting a new ride-hailing service for disabled people making use of real-time GPS and video tracking (a service very similar to the market-based case study of PickMeApp in Italy).

Charities, community groups and social entrepreneurs are generally slower in developing and adopting innovative models and technologies than the private sector and have a limited understanding of collaborative economy models. This is something they have in common with the public sector and more traditional transport operators. With the exception of the Danish Flextrafik, the Irish rural transport scheme Local Link and some other examples, the majority of Community Transport Services and PT schemes are not very 'innovative', neither from the organisational nor from a technological perspective.

The role of **financial incentives or small subsidies for grassroots collaborative solutions** is fundamental. Many of these initiatives need to be supported not only in their initial development (ideation phase) but also afterwards, as they need to be tested by local authorities or in specific local context and, above all, **integrated with public policies** to secure their sustainability in the long term and at the same time increase the sustainability of both the transport sector and increase positive societal impacts.

Within HiReach we have identified successful publicly-coordinated models that make use of communities and volunteers for both reducing the costs associated with the provision of mobility services and at the same time securing ownership and a more demand-driven management of the (often limited and fragmented) resources. This is the case of the Local Link Offices in rural Ireland and the local mobility centres in Wallonia (Belgium) (Chermanne 2019) that integrate and manage a wide range of services (from rural transport and social transport to peer-to-peer car sharing and ridesharing). **These “community-led mobility agencies” need training and support - not only financially but especially with ICT tools and professional expertise** (e.g. for planning the service or for marketing strategies) **from central/regional authorities**.

The use of digital technologies and scalable business models in social purpose collaborative initiatives should be fostered while **securing they do not become a source of competition or disruption for local businesses** (e.g. small local transport operators not integrated in the scheme) **or a way for simply cutting costs and public funding**.

During HiReach fieldwork activities, some local associations managing social services (including transport and assistance to certain vulnerable user groups like elderly or disabled people) argued that public authorities tend to rely too much on volunteers and the third sector without giving proper funding and any concrete support. Some suggested a more balanced approach where the role of the public sector should be to design and coordinate the scheme while at the same time providing resources (e.g. minibuses,

³ <https://www.pugliasocialein.it/>

⁴ <http://pingiovani.regione.puglia.it/vincitori/tad-experience-trasporto-assistenza-disabili-experience>

workspaces and ICT tools like platforms and software) as well as technical support for certain activities (e.g. procurement/contracts, service planning and communication) more than simply transferring money to local organisations.

The following table highlights collaborative and social innovation elements, as well as the main drivers and barriers, for a selection of case studies analysed in HiReach.

Table 3-2: Collaborative and social innovation drivers and barriers in a selection of HiReach case studies

SOLUTION	DRIVERS	MAIN POTENTIAL BARRIERS
Local Link	<p>Direct involvement of communities in the management of the scheme through established Local Link Offices.</p> <p>Contracts to (small) local transport operators for running the services.</p> <p>Flexible approach: combination of scheduled and on-demand door-to-door transport; services are cancelled and resources are shifted to other territories or solutions in case demand and effectiveness is too low.</p> <p>Support from the national transport authority (NTA) for planning the service (software), the branding of the scheme and for communication campaigns.</p>	<p>Very few barriers due to a clear division of roles and responsibilities between NTA and local offices according to competences and skills.</p> <p>System still relying on phone-based booking and predetermined schedules</p>
PickMeApp	<p>Has a social purpose, targeting families, elderly people and people with reduced mobility as primary clients.</p> <p>The GPS bracelet allows the tracking of more vulnerable and not autonomous users (e.g. children) and thus helps to reduce the number of private car trips for chauffeuring relatives.</p> <p>All vehicles are equipped to accommodate also people in wheelchairs.</p>	<p>Being a market-based service not receiving any public subsidy, its business model perfectly fits in the framework of the social purpose collaborative economy but might not be sustainable in other territories due to high fares.</p> <p>A solution could be to distribute cards and discounts to the users through public entities (e.g. using social and health-related funds)</p>
Dörpsmobil	<p>Car club and not a purely peer-to-peer car-sharing scheme managed by a local association. Members are residents, employees and the municipality, the latter guaranteeing a minimum usage to self-sustain the model.</p>	<p>Coordination and management by the community thus relying on active citizenship.</p> <p>In peri-urban contexts the limited availability of shared cars or charging points could prevent usage and membership.</p>
Bummelbus	<p>Combines a transport service in low-demand areas and for special needs</p>	<p>Not community-driven. Very little barriers and very effective. Could be integrated</p>

SOLUTION	DRIVERS	MAIN POTENTIAL BARRIERS
	(PMRs) with a training and job programme with drivers that are unemployed persons.	with ICT applications (e.g. booking, tracking) and other mobility services.
Bürgerbus	Managed directly by seniors and/or retired people that are also driver.	Too basic management schemes and restriction to elderly people prevent the usage by other social categories.

Source: Own elaboration

3.3 Market-based elements and fair competition

Underlying market-based elements and correspondent competition issues that might arise in the business relationship between public authorities, companies and operators, can be identified based on the outcomes of the previous work performed under HiReach WP3.

Inclusive transport services are classified in HiReach Deliverable 3.1 (Chiffi et al. 2018) into three categories, one of them being **market-based mobility services** which have sparked the mobility system in recent years and are contributing to a significant change in the way people relate with the transport service provider.

Market-based transport services need to generate profit. This is a rule of thumb. However, this goal is hard to reach in deprived and sparsely populated regions. Arguably, one can question how they can flourish in areas where the level of demand is low (which can be interpreted as having no market) such as small remote villages, where traditional transport services are costly. Are there alternative business models that could tempt start-ups to enter into this market? Is technology playing a role in diminishing the operating costs and changing the cost structure of services? What are the organizational and structural changes that are needed so that commercial services can thrive? These are some of the intriguing issues that HiReach can help to clarify.

To seek for answers to the abovementioned questions, it is worth reviewing a selection of services referred to in HiReach Deliverable 3.2 (van Egmond et al. 2019) , a summary of which is provided in the table below.

Table 3-3: Market-based drivers and barriers in a selection of HiReach case studies

SOLUTION	DRIVERS	MAIN POTENTIAL BARRIERS
Boleia	Portuguese online marketplace for carpooling launched by entrepreneurs with their own capital and managed by a few staff members. The maintenance of the platform is the main (limited) cost category and the business model is based on tailored platforms for companies and public entities. It competes with other platforms that are more profit oriented (like BlaBlaCar) and it	The service has been struggling for some years to become visible and yet the number of registered persons doesn't increase significantly. It yields marginal effects in terms of transport poverty reduction and is sought-after especially for long journeys between major urban hubs.

SOLUTION	DRIVERS	MAIN POTENTIAL BARRIERS
	does not earn a fee for every transaction.	
GoOV	The Dutch App supports independent travel with public transport. Created by entrepreneurs with help of a Technology Fund, it makes use of various open data sources. GoOV is expanding its business through partnerships with PT operators for cross-selling and discounts (and also thanks to high level patronage of the royal family).	Current operating costs are largely supported by municipalities who promote and provide financial incentives to whoever uses it. Besides subsidies, the company has received several financial prizes. It is very niche oriented (children up from 11 years and people with mental disabilities).
Local Link	Similarly to the transport-on-demand in Catalonia and Flexitrafik in Denmark, Local Link (Ireland) is a not for profit service, that arose as a national program precisely to take stock of the lack of transport service in small communities throughout the country.	
PickMeApp	Italian door-to-door market-based ride-hailing service created by a pool of private investors, combined with a regional venture capital fund (Sviluppo Basilicata). The operational and commercial model for franchising seems straightforward and could help an affiliate private partner to earn profits or a public administration to reduce costs.	The service is in theory suitable for elderly people and children, but there are no specific incentives nor policies put in place by local governments to alleviate the burden of the high fare costs.
Pink Taxi	UK door-to-door female-only taxi service. Advertising plays an important role in the revenue generation model.	Franchiser must invest around 350,000 Euros and is entitled to marketing and advertising support. There are no financial incentives for people to use the service (differentiated fares). It also seems less suitable for areas with low demand and for users with less digital skills.
ZOOV	ZOOV is a taxi transport company (according to Dutch law) which works on-demand and with different-size vehicles. Like Locomobile in Belgium, it is a service targeting only those segments that have no other possibility to travel within a region. It is highly subsidized by the Dutch government which makes fares very affordable (lower than regular PT).	Even though there is policy support, the service has only a regional scope and ridership doesn't seem to be increasing.

Source: Own elaboration

Among the group of purely market-driven services that were analysed in Deliverable 3.2, it is noteworthy that many of them don't seem to have grown significantly and/or are not completely fit to the targeted social and territorial layers. Also, we have not found any examples of co-investments i.e. public-private partnerships between the public body and business angels to help launch start-ups.⁵

It can be observed, on the contrary, that *firstly*, **there are several examples of services that were launched as not-for-profit to deal with the limits of public transport, whose success is boosting the market (i.e. an increase in demand can be observed), which in turn makes them desirable from an investor point of view.** In fact, some state programs to support such initiatives in a context of market failure have been successful⁵.

One example is the **Local Link** scheme in Ireland: to counter the widespread withdrawal of commercial services in small and remote settlements, a Rural Transport Programme was rolled out by the Irish department of transport in liaison with the national department of social protection creating community-led local coordination offices and a combination of demand-responsive and scheduled transport services that are run by local companies receiving minimum subsidies. The scheme is extremely flexible, financially sustainable and linked to the demand that is rising because of the quality and effectiveness of the services provided. Also it is worth mentioning that all vulnerable individuals who are entitled to free public transport can use it throughout the country, independently of the regional administrative border. This is a good example to replicate to overcome the lack of public funding and the pain point concerning access to the services that commence and end in areas under the responsibility of different authorities. It also calls for greater national or regional-level transport coordination.

Indeed, it was observed during the fieldwork activities in the HiReach study regions (Kuttler et al. 2019) that, confronted with the scarce employment opportunities in the region where they live, citizens sometimes have to commute long distances to other regions so as to secure a job. Because there is no suitable public transport offer nor integrated tickets, they tend to rely on private vehicles, which is an additional financial burden.

A *second* market-oriented observation is that services that are purely driven by commercial ambitions, i.e. seek profit to the shareholders, represent a **wide variety of services**, ranging from mobile applications targeting specific groups of users, to car-hailing services underpinned by emerging game-changing technologies (for example, cloud computing and sensors, in the case of **PickMeApp**) and are managed by **companies that do not necessarily provide the service themselves, but rather manage and focus on the customer relationship, in what can be regarded as a passenger-centric model.**

A *third conclusion*, based on the HiReach case study analysis, is that **some of the most successful profit-oriented services have been implemented as a complement of other more traditional services (PT and taxis), like GoOV.**

A *fourth* important observation is the **recurrent use of open data by start-ups, as a prerequisite for setting up the value proposition strategy.** This being said, a proxy indicator

⁵ Measured by the fact that both demand and supply have been steadily increasing.

of the openness of the transport system to entrepreneurs is the degree to which local and national authorities share the data on transportation services through open databases. **GoOV** is a running example of a “for-profit” inclusive transport solution that was boosted by the Dutch open data policy⁶ (besides, of course, the decisive leverage effect created by the technology funding that entrepreneurs applied to). It is simultaneously a good example of how new partnerships can flourish when all the mobility ecosystem players use and share open data. In this case, GoOV service subscribers can apply for discounts on PT passes and, GoOV organises training for PT drivers on how to support people with disabilities (which can be considered a positive multiplying effect of the partnership).

Other services, like **Pink Taxi**, are in fact transportation network companies which act purely as intermediators, managing IT platforms and smartphone applications to bundle and combine transport requests and available offer. Similarly to **Uber**, Pink Taxi is a marketplace platform with no assets ownership, matching demand with supply and operating in a legal framework which is still unclear in many countries, as their apps typically do not fall under the existing regulatory provisions.

It is worth mentioning, however, that market-based services are not completely suitable for areas with less demand and for prioritized groups, as there are no reduced fares for those who need it (only some promotions according to the number of trips made). This is an important shortfall for the provision of inclusive transportation schemes which ought to be overcome and assure that economic players can play a role in this market.

Closely related with the previous finding, a *fifth* key take-away is that **market-based services that survive without public funding usually do not consider vulnerable groups' needs and are not adapted to deprived and rural territories**, especially if they are not integrated with other running transport services. Citizens with less financial resources are left with few options that are expensive and may not meet their needs.

3.4 Legal, institutional and regulatory issues

As indicated in HiReach Deliverable 3.1, there is a lot of variation among national legal frameworks defining the boundaries of public service obligations and guaranteeing sufficient quality standards of PT services, both in case of a tendering procedure or a direct award. Since **the overall structure of the market (i.e. competent authorities, level of competition and available funding) varies widely across the EU Member States**, it's not easy to identify one or more clusters of frameworks that can favour inclusivity.

Existing regulations are also mode-specific and sometimes service-specific, i.e. different rules apply to taxi services, education transport, community transport, bus transport, seated patient transport, etc. This has implications on many different operative and organisational issues e.g. driver licensing, operator licensing, route licensing, tax, VAT, insurance, eligibility for public subsidy, whether a fare can be charged, etc.

⁶ In the Netherlands it is mandatory for all PT operators to supply data about their services in a national database.

Flexible public transport making use of DRT schemes might be (and in many cases still is) heavily limited by the absence of proper legislation clarifying what is allowed and what not and by specific provisions in the legislation and contracts (e.g. the prescription for PT services to have a timetable and fixed stops - which DRT services do not necessarily have, taxis and private hire vehicles not being allowed to operate 'out of area', difficulty of predicting the amount of vehicle-km as a basis to draw up PSO contracts and reimburse operators, etc.) Overall, there is a high margin for optimisation and increase of effectiveness that could lead to an expansion of the present offer by exactly removing legal and institutional barriers.

Many of these issues could be overcome by **adapting the existing regulation** as happened in the Netherlands with the deregulation of the taxi industry and the integration of taxis/PHVs in public transport thus creating the (quite successful) development of the RegioTaxi network.

A recent study from the European Commission (2018) has analysed the business and regulatory environment affecting the collaborative economy in the EU. Similarly to other sectors like accommodation and finance, also sharing economy business models in the transport sector are affected by two main elements: **regulatory clarity and market access requirements**.

Regulatory clarity refers to the extent to which the national, regional or local legislative framework explicitly indicates what type of (trans)actions can take place within its legal constraints. Market access requirements are conditions imposed by the regulatory environment on providers or collaborative platforms to operate in the market.

Regulatory clarity in the collaborative transport sector is perhaps the most important factor affecting its development. Shared mobility needs a secure political and legal framework and existing rules and regulations need to be liberalised, albeit not at the expense of citizens' safety and (data) protection. National and regional bespoke legislation should clarify which collaborative platforms or peer providers are allowed to operate and to define what is meant by peer-to-peer transactions in the collaborative transport sector.

Regarding market access, there is a need to develop business-model specific and more harmonised market access requirements at national and/or regional level (e.g. conditions such as entry barriers for taxi and private hire vehicles' drivers to obtain a licence to operate, the number of vehicles allowed to operate, pricing restrictions or qualitative requirements, such as exams or proof of financial ability).

Also the distinction between peer and professional providers is fundamental to encourage engagement of peer providers. Other barriers might be diverging standards and rules for dispatch centre affiliation (e.g. by requiring affiliated drivers to respect certain standards and to participate in training) and of course general licensing requirements (e.g. providers might be required to take out additional insurance or to pass professional exams or certification which makes it more difficult for peer providers to operate).

3.5 Key questions for the development of inclusive mobility solutions

Building on the analysis of drivers and barriers described above, a number of questions for the development of inclusive mobility solutions shall be addressed:

- What is the market for innovation in the transport sector?
- Are deprived and rural areas a field of interest for start-ups and entrepreneurs?
- Should inclusive services be offered for free?
- Does size matter?

What is the market for innovation in the transport sector?

Some of the most disruptive and ground-breaking services that have emerged in the last years **took advantage of loopholes in legislation and in lack of enforcement rules**. They concentrated on customer service (nurturing the relationship with the client, through a customer-centric model) rather than on transport provision.

There is a fairly large market for innovation in the transport sector and it is expected to increase with the advancement of digital platforms pushing the boundaries and provoking a radical paradigm change in the transport business.

However, public transport in rural and remote areas is still a particularly slow-changing sector that relies mainly on public funding particularly because the production costs in those areas are higher than in dense and compact urban areas. The urban-rural divide in terms of transport offer (or lack of it) may be increasing as a consequence.

Are deprived and rural areas a field of interest for start-ups and entrepreneurs?

Even though the “overall structure of the market (i.e. competent authorities, level of competition and available funding) varies widely across the EU Member States” (Chiffi et al. 2018) public transport schemes operating in deprived areas are guaranteed mostly in the framework of Public Service Obligations, which are granted to operators in order to guarantee a minimum quality of public transport, for example in remote areas or at late hours, or to provide lower fares for certain groups⁷ (e.g. children, elderly, persons with reduced mobility).

Without this public funding, many services would (most likely) not be provided as they would not be profitable nor cost-covering, even though they are important for social reasons and for society's welfare as a whole. This is especially important in less dense

⁷ And also to assign a reasonable profit for the operator, based on a rate of return.

spatial contexts, where the specific land-use patterns have led over the years to a decrease in public transport provision and overall ridership figures⁸.

Due to constrained budgets available and increasing competition from other public sectors (health, social security, defence, among others)⁹, it is of utmost importance to have public transport solutions that are cost-efficient and effective. In this context, it is important for governments to embrace innovation, creating a favourable environment for entrepreneurs to help making optimal use of existing and potential resources.

From the transport users' point of view, they just aspire to travel from point A to point B in the fastest, most comfortable and most affordable manner. They are not overly concerned with whether they are using a publicly contracted, a community-based or a market-based service.

Compared to door-to-door ride-hailing services, public transport users are worse off in terms of convenience. Currently, there is still a large difference in cost per ride despite the fact that HiReach demonstrated that on demand PT services can be also operated at lower cost. To fill the gap between public transport and ride-hailing operative costs, it could be an idea **to fund those kind of new 'micro-mobility' schemes on an equal basis and e.g. allow them to participate in public transport tenders – which should focus more on “accessibility” than on providing fixed routes and schedules.**

In fact, there is a major **opportunity here for many public transport operators and public authorities to partner with start-ups** so as to increase their level of flexibility, while also launching new and dynamic on-demand and customer-centric services. Such partnerships are relevant in the sense that new mobility players can bring in a new approach to problems, mixing the agility of start-ups with the risk appetite that is a token of entrepreneurs. It is definitely risky to launch a new transport service in rural and deprived areas. A good example of what is at stake when investing in such contexts was mentioned in a workshop developed by SMARTA, when it was said that “Urban projects get 100% funding - CIVITAS, but rural get less - LEADER 65%. This is because of the associated risk of investing in rural” (Lorenzini 2019).

Hence, operators and public authorities should leave room for the creativity of open minds who think outside the box and are more proactive in providing a lean service and looking for alternative revenue streams (e.g. tailoring services to intercept tourism demand in rural and coastal areas).

⁸ Occasional public transport services that serve one single place cannot satisfy people's mobility needs at large. People need to go to many places for several reasons and therefore rely in many cases of a private car.

⁹ Conventional transport services in rural and deprived areas rely on public subsidies at large. Deliverable 3.1 has evoked a study from Steer Davies Gleave to point out that “local public transport (i.e. bus and rail services) has come under increasing pressure due to cuts in subsidies as a result of funding reductions to local councils”.

Should inclusive services be offered for free?

Several market-based services don't have specific fares for vulnerable users. In fact, the HiReach fieldwork activities have shown that those who need taxis (to make a reference to the most iconic market-based mobility service) are most often those who struggle more to pay for it, but have no choice because no alternatives are offered.

Could this mean that inclusive services should be offered for free?

Instead of providing highly subsidised PT service and/or special/dedicated services for free to some vulnerable groups, a more inclusive and fairly balanced transport system could give value to existing or potential market-based services by assigning incentives directly to the users.

A good example is the Dutch Valys scheme for travellers with reduced mobility. It offers three different options and levels of service (Basis, Accompanied and Free pass), combining reduced taxi fares, intermodality between train and taxis (with reduced train tickets) and further assistance and information. Valys pass holders receive an annual personal km budget (PKB) of 600 km but in case of serious mobility impairment they can apply for a high PKB of 2,250 km/year. Valys clients can travel by taxi for € 0.20 per km (commercial tariff is € 1.13 per km), use the same reduced tariff or free pass also for one or more companions and have access to further assistance and information also through special portable devices.

This issue also came up during the fieldwork activities. To bypass this risk, it is recommended that authorities make a thorough and comprehensive analysis of existing resources and strive for a good balance, prioritizing areas and groups of particular need only after the diagnose is completed.

Does size matter?

The procedures for subsidized public transport procurement are often not adapted to allow the **participation of small innovative companies**, with larger operators typically acting as monopolists as a result. This is a case of unfair competition, as small companies do not operate in the same conditions.

Another problem is that big public transport contracts allow some companies to simultaneously operate services that are not profitable or cost-covering and others that are lucrative. These latter services generate a surplus that offsets the losses of the former ones. Single service operators on the other hand have difficulties in entering into the market in such conditions, and this might be regarded as another concrete market barrier to innovation by new entrants.

Uyarra, recalling the conclusions of former studies carried out in the United States of America, stated that there are a number of arguments to support the idea of helping SMEs in procurement. For instance, it could be argued that small companies must deal with higher costs in terms of regulatory compliance and unequal conditions in credit markets and, consequently, they compete on unequal terms. As such they cannot be subject to equal treatment as they are not equals (Uyarra 2012). Helping SME participation by removing regulatory barriers would favour greater competition and would make the formation of cartels more unlikely. From a dynamic competition perspective, a higher

number of market actors would have a variety increasing effect, raising the number of competing solutions and improving the chance of an innovative solution being selected.

It has to be highlighted that from an inclusive policy perspective it is not relevant which size have the operators, being them local companies, SMEs or big players, but more how they can respond and innovate in designing effective services.

The ambition of policy makers should, therefore, be to help tackle these market distortions and provide fair chance to all companies to contribute to transport poverty answers and services. At the same time, they should not stick to business-as-usual models, but rather explore fresh ideas developed by bright entrepreneurs, who might need support from specialized networks, such as the ones offered by accelerators. Arguably, start-ups can disrupt the transportation sector, by bringing onto the market new transport schemes, business models or practices that make use of recent technological advances and develop tailored software solutions.

4 Recommendations and guidelines on how to deliver innovative and inclusive mobility solutions

This chapter presents a set of recommendations and guidelines for three specific target groups: 1) users and communities; 2) policy makers and public authorities and 3) entrepreneurs and investors.

Of course there are some overlaps and complementarities among those three different perspectives. For this reason, each stakeholder (either the users, the public authorities or the entrepreneurs) should be aware of the elements that apply to the two other target groups.

4.1 Recommendations for users and communities

HiReach adopts a user-centric and not a technology-push approach for the understanding and design of innovative and inclusive mobility solutions.

Several community-led initiatives have been identified and the project considers the role of local communities fundamental in striving for more inclusive mobility policies.

Users can be owners, producers and consumers of inclusive mobility options. In this sense they are the first active component of every policy and can also create (as it already happens both through formal organisations and informally) self-sustaining and independent models that do not entirely rely on public interventions and/or profit-driven services.

In the following, a set of key recommendations and guidance for users and communities is presented.

1. Start with a complete and transparent diagnosis of problems and needs

Local communities should reinforce their attitude of considering solutions that can meet the needs of more users and for more purposes (including mobility) at the same time through informal or not-for-profit collaboration. Communities are themselves providers of mobility options. It naturally happens in small villages and neighbourhoods but could be less obvious in urban peripheries or in relation to specific needs of certain vulnerable user groups like disabled people and ethnic minorities.

A very first step is a **complete and multifaceted diagnosis of mobility needs and problems in relation to local framework conditions, transport infrastructures, public spaces and mobility services** that have to be fitted for the context, particularly in relation to the effectiveness and adequacy of public transport provision.

This whole exercise should be a **transparent, participatory and co-creative process** open to all members of the society and supported by a facilitator/mediator (that could be provided by an NGO or by the local authority). HiReach has developed and tested a valid method for conducting fieldwork activities based on preliminary data collection,

interviews with key actors/stakeholders and the organisation of focus groups with end-users can be adopted.

Once completed, this diagnosis should be properly communicated through a visual report and disseminated locally and within the county/region.

2. Reclaim proper inclusive mobility policies and schemes

HiReach has demonstrated the existence of more inclusive mobility solutions that can be implemented by public bodies (at national, regional or local level). Communities and organised informal groups of citizens can use these as **inspiration or starting point to reclaim their own innovative, inclusive and integrated schemes.**

Communities should ask to work with policy makers and suggest ways for optimising the usage of available resources (funding and/or vehicles/facilities) instead of focusing on the reclamation of additional funding or an increased offer of more traditional and ineffective/not inclusive nor optimised solutions such a residual PT service (e.g. few fixed-route scheduled bus rides) or special (but segregated) services for disabled people or children. This could lead to a thorough revision of current PT schemes with the introduction of more flexible and demand-based options.

3. Find the right balance in public-community partnerships

Volunteer-driven solutions could be beneficial for local communities because they can expand the range of available mobility options and encourage participation and ownership.

Local communities and volunteers can however not be expected to manage, organise and run a mobility scheme all by themselves. The work of associations and charities should not be regarded by authorities as an easy way to cut costs.

Communities should negotiate proper **partnerships and collaborative schemes with public authorities.** These need to include not only the provision of vehicles, facilities or the coverage of certain operative costs but should integrate also training and technical support for planning, monitoring and promoting the established inclusive mobility system. The case study of Local Link is in this sense very helpful and meaningful.

It has to be underlined that a lot of **successful collaborative models based on real-life best practices across Europe are already available.** Communities should learn from these, together with local public authorities and transport operators. A good way of doing this is to link with existing networks and dissemination platforms like civitas.eu or eltis.org where a lot of opportunities (including workshops and study visits) can be found.

4. Change behaviour and invest in promotion and try out

Sometimes mobility options are already available but the people who could use them are not aware of it. Therefore, **either existing or new services need to be properly communicated and promoted to potential users who can also suggest ways to further adapt solutions to the local context and personal capabilities.**

The community itself should become more flexible and encouraged to use the right solution for each travel need. Awareness should be raised on the contribution every member can give to self-sustain and improve the scheme especially towards the needs of more vulnerable and socially excluded citizens. This is not obvious and has to be accompanied with try-out sessions of the different available or potential mobility options.

5. Collaborate with other organisations, link with startups and innovative entrepreneurs

One of the most common mistakes of not-for-profit and socially-driven organisations is to work separately as lobby groups focusing only on the needs of specific users. Instead, **inclusivity led to the promotion of more horizontal collaborations among existing local associations and groups in managing and/or coordinating mobility solutions** (e.g. local mobility centres).

Communities should look for startups, innovation incubators and innovative entrepreneurs, either existing or newly established in their territory, who have experience with innovative business models and solutions. Through such collaboration and the offer of testbeds for the solutions, ideas can be more easily mixed up and scaled to reach the level of Minimum Viable Products (MVP). It can also help to join forces to gather private investments, sponsors and public funds.

A cornerstone is networking with other active communities across Europe that are already working or are interested in social purpose collaborative mobility models.

6. Invest in digital technologies and supporting infrastructures

HiReach fieldwork has highlighted the role and relevance of non-IT functionalities and organisational schemes. The German Bürgerbus is a good example because it can work just with paper (to record the trip requests and plan the routing), phone calls and of course an active and committed group of seniors.

But informal and simple schemes might reduce the potential to enlarge the service and accommodate the needs of other users. **ICT and internet-based tools are very effective in facilitating the provision and management of many inclusive mobility options.** IT skills and capabilities of both inclusive mobility coordinators and final users should be improved.

Also social purpose business models within the collaborative economy might not have sufficient capital and resources compared to commercial entities. Additional **support is therefore needed to build up for example common IT-infrastructures** (like high speed internet coverage, tailored software and devices) innovative mobile phone and tracking applications as well as shared workspaces and knowledge.

4.2 Recommendations for policy makers and public authorities

HiReach has a mandate to offer policy makers and public authorities a vision for improved mobility for vulnerable social groups and in priority areas in which innovation is spurred in order to achieve high levels of accessibility with flexible and inclusive transport solutions.

The roadmap for public administration bodies at all levels basically starts from a global diagnosis of transport capacity and demand (in terms of 'motility'), coupled with a clear vision, inter-institutional and community engagement. National and regional public

authorities could create an advanced optimisation scheme and platform, integrating all forms of available publicly-contracted transport and capable of managing trip requests, ideally in real time and applying dynamic routing.

Besides this planning and technological layer, it would be necessary to avoid that any target group is prevented from accessing transport for financial reasons.

Lastly, it is important that innovative enterprises, irrespective of their size, are engaged, by recognizing entrepreneurs and small-scale investors as major drivers of innovation when selecting priorities for investment.

HiReach suggests the following recommendations for policy makers and public authorities.

1. Secure and combine funding streams

First and foremost, **funding for tackling transport poverty issues should be properly secured**. It's important to make sure that proper funds are available both in the startup phase (e.g. testing of new schemes or call for proposals for new inclusive mobility services) and to maintain the system/scheme by guaranteeing permanent funding for the communities and the operators.

Secondly, **funding should not necessarily derive from only one single stream** (i.e. from transport budget), but should rather be included in a wider package. Good examples are Local Link which is funded by both the Department of Transport and the Department of Social Protection, or the integrated funding scheme installed in Denmark for flexible transport services.

Last but not least, **strive for cost-efficiency in order to leverage the benefits of available resources by combining multiple services into one inclusive scheme**.

2. Develop a clear vision and strive for coordination across sectors and territorial levels

To pave the way for a new model of inclusive public transport in rural and deprived areas, it is of primary importance to **start with an agreed vision for the transport system and how it should serve the population** to enable equal opportunities in the exercise of citizenship rights and achieve the objectives of social and territorial cohesion. If well conducted, this capacity-building activity can provide a clear regulatory footing, which in turn would guide plans, programs and resource allocation. The vision building should be also conducted through participative processes embedded in large scale policies and applying a user-centered approach.

A strong inter-institutional commitment and a coordinated approach across policy domains and levels of territorial governance is fundamental.

Considering that mobility simply does not follow, in several cases, the administrative borders of a city or region, there is a need for improved cooperation between local authorities, who should **look across boundaries and catchment areas**, and be willing to exchange information and make compromises. National coordination has proved to be successful in the case of Local Link and especially Flextrafik, as the latter amounts to a synergetic integration between different sectors (transport, health, social security). Such high-level coordination can be achieved also at regional level according to the different geographical and administrative characteristics of the Member States.

The existence of **a proper organising authority optimising and integrating all forms of passenger transport for inclusive mobility is a success factor**. Coordination and integrated management is particularly important to achieve economies of scale which are relevant in case of big investments (like the ones related with technology), but should not prevent local authorities and entrepreneurs from stepping in so as to provide the optimum mix of level of service to users and service productivity.

3. Understand mobility needs and potential supply

The critical success factor for transport lies in the degree to which it succeeds in addressing the needs of the communities. Authorities are encouraged here to differentiate between “mobility” – the actual movement – and “motility” – the potential to move. This **analysis of the demand needs to be complemented by an analysis of the potential supply**, through a thorough diagnosis of the resources and services that are there.

Policy makers and public authorities should then roll up their sleeves **and define what levels of service are of general interest** in order to guarantee the access of all people to transport services in conditions of equality and equity. This will enable to better grasp unmet mobility needs and to understand people’s mobility habits and attitudes towards inclusive mobility including their willingness to transport other persons or goods, therefore **seeing citizens as prosumers**.

In doing this, policy makers should adopt **a bottom-up perspective and engage citizens from the very beginning**. The methodology developed by HiReach for conducting fieldwork activities is again a good example on how to act.

But first of all, public transport should be promoted by public authorities (and transport operators as well) to make sure that as many people as possible know and use PT services:

- by making it easy to purchase PT tickets (even with simple and low-tech solutions, e.g. enough presale points),
- by making it visible and easy to understand fare schemes, routes, timetables, etc.,
- by addressing the (often) negative image PT and other services have,
- by convincing people to use it taking advantage of life-changing events as transition points.

4. Enlarge and integrate different inclusive mobility options

Policy makers are invited not to plan “in silo” and rather **to integrate different dedicated transport service segments into one overall scheme**, like special needs transport (i.e. mobility services to hospitals and healthcare centres operated with vehicles accessible also to people in a wheelchair), school transport (including disabled schoolchildren) or tourism (if applicable).

The recommendation is to plan services that are adequate for different user groups and capable to meet different travel needs, paving the ground for a new generation of public procurements that tender for accessibility rather than for single services like public or special transport.

Ideally, this work could lead to the creation of an **optimisation platform integrating all forms of available transport capacity and capable of managing and combining different trip requests and needs from vulnerable users**. This can be achieved also through advanced IT platforms allowing for real time optimisation, dynamic routing and e-payment solutions without excluding non-IT solutions that demonstrated to be viable in certain areas (e.g. rural settlements) and in small communities.

5. Foster Open data policies

The EU digital single market is conceptually formed to ensure that everyone benefits from accessing to open access tools.

To support the development of **MaaS (Mobility as a Service)-like platforms, which combine private and public transport through a unique gateway** and could be achieved at all territorial levels, policy makers should assure that access to the market for new players entails some commitments with regard to information provision favouring the creation of multimodal travel information services.

In turn, the **MaaS IT system prepared by public authorities should be open**. This means that solutions implemented by third party entities (e.g. PT operators, associations of municipalities like AMTU or innovative start-ups) can easily plug in and add their services through the main interface. Here the role of the public domain is mainly the facilitation of the market by ensuring access to relevant transport data and platforms and of course guaranteeing **interoperability of the different systems and data standards**.

6. Develop an integrated social pricing system

Services offered by purely market-based companies do not offer discounted fares for vulnerable segments of the population, which is one of their main shortfalls. The high cost makes these services unattractive to users – especially those with a low income or unemployed people –, which is one of the main reasons why there are very few purely commercial services in rural and deprived areas that have enough clients and hence income to survive.

In order to ensure that **transport is affordable for everyone**, it is thus recommendable that authorities design **an integrated social pricing system based on a stable financing model**.

This model should not disadvantage new forms of mobility (including micro-mobility): these should be financially supported i.e. granted funding just like conventional public transport, whenever they are services of 'general interest' i.e. whenever provided in areas and/or periods where other transport is not available or not sufficient.

7. Support SMEs and innovative entrepreneurs towards existing funding opportunities that can reduce investment risks

From the business point of view, "as regularly confirmed by Innobarometer surveys, very few European companies have had the opportunity to sell innovative solutions to public procurers" (European Commission 2014).

Public procurement is one of the key market-based instruments of the “Europe 2020 strategy” to pursue the objectives of smart, sustainable and inclusive growth. **Existing procurement tools should be suited to pursue common societal goals and the provision of high-quality public services.** It can be made through a SME-oriented policy to take advantage of start-ups potentials and provide them better access to structural funds (hence stimulating growth and qualified jobs).

Initiatives are needed to support public procurement of innovation. Public authorities should not be afraid of future-looking solutions and prepare the ground for a competitive ecosystem. As experts in the field put it: “we should not focus on a solution such as DRT, that seems very well fitted today, but we should create a framework that enables all kind of solutions to emerge, including those we don't know of yet today. We need to leave room for the creativity of open minds. To illustrate this, we can probably also keep the quote attributed to Henry Ford in mind: “If I'd asked people what they wanted, they would have said faster horses” (Lorenzini 2019).

Hence, **authorities involved in the management of operational funding should favour access to startups who can partner with long-established business companies.** The case of GoOV is paradigmatic of good use of funding that allowed entrepreneurs and investors more scope and leverage to seize commercial opportunities.

This policy-mix of creating procurement processes that offer the same chances to innovative companies, regardless of their size and capital, might avoid creating strong monopolistic positions (and the risk that the “winner takes it all”) which may lead to reduce service development and attractiveness. It might consequently help remedying brain drain in conventional operators and attract internationally renowned entrepreneurs and investors to co-create public transport services.

4.3 Recommendations for entrepreneurs and investors

This report does not intend to cover all possible recommendations for entrepreneurs and investors. In fact, HiReach will get back to this issue later at the end of the project, when evidence of their work is clearer, and more assumptions and lessons learned can be derived from the Startup Lab and from the field tests of developed solutions.

These preliminary recommendations are based on the lessons learned in the early stages of the project. In fact, they are based mostly on the case studies analysed in different countries, which has presented us with a number of challenges.

Firstly, given the case studies' diversity, it is difficult to draw general lessons about market elements as in-depth information on their rationale and business models is not always available. Secondly, it can be sometimes difficult to delineate the specific intervention of the entrepreneurs and differentiate it from the other relevant players (i.e. public authorities and transport operators).

Despite this, the present review suggests some background preconditions that seem to favour and encourage the development of innovative products or services through the involvement of entrepreneurs and investors.

1. Pursue combined transport solutions

Entrepreneurs and investors are encouraged to develop services that are **modular**, are likely **to be upscaled** and **combine different target groups** (students, workers, tourists as well, if applicable to the local conditions and potentialities).

It is thus important to be open to not only to accommodate requests from regular passengers but to address other emergent groups' needs. Evidence that a single approach is not sufficient, and that only a broad range of available solutions could make a shift in providing inclusive transport has become evident in cases such as Flextrafik.

2. Look for additional funding and revenue streams

Besides searching for venture capital and risk funding, entrepreneurs and prospective investors should apply for awards with financial incentives. Some successful services, such as GoOV, have won prize money. This is an important leverage for entrepreneurs, not only because of the prize money itself, but also and especially because of the exposure and visibility that it offers.

The Juncker Plan, the **European Commission's programme for small and medium-sized enterprises (SMEs)**, supported by the Investment Plan for Europe, is one of the opportunities available. There are other national-scale funding opportunities for emergent technological companies to leverage upon.

All in all, what is important to retain is the need to create **synergies between funding**, so as to diminish the risk entailed in the overall investment.

On the other side of the coin, when one looks at the revenues, it is important to guarantee **extra revenue streams to entrepreneur's initiative** (e.g. from tourist services, postal services or freight transport).

3. Compete or collaborate for innovative public transport and inclusive mobility services

As the market is opening to competitive tender for contract services, due to the end of the transition period of EU Regulation 1370/2007 on public transport and public service obligation, **entrepreneurs and investors are encouraged to step in and try to leverage public transport services with their assets and ideas through partnerships with transport companies and transport authorities.**

In cases where there is already an incumbent transport service provider which is dominant, new entrants' entrepreneurs are encouraged to complement and integrate, rather than to compete directly. As it was observed in Denmark, where transport is not planned in silo, per mode or per target group, integration, particularly when it leads to minimize costs and optimize transport capacity, is welcomed and nurtured by public bodies.

In rural, remote and deprived areas, where public authorities normally step in to manage transportation, entrepreneurs might be particularly helpful to combine and optimise transport requests with micro mobility schemes, private hire vehicles or bus companies but also private users that materially execute the transport service.

One of the value propositions that entrepreneurs normally generate is **the ability to put the passenger/paying customers first at the heart of the business plan and the capacity, sometimes through machine-learning mechanisms, to build on continuous feedback.**

Another assumption that has become evident is that the diversity of services and requirements makes "software-as-a-service" an area of great interest for the near future. One new service that combines a user-centric approach and a software as a service model is PickMeApp, which is an inclusive software, in the sense that it overcomes the barrier of lack of digital savviness.

4. Make use of open data

In the short term, data that is available for everyone to access, use and share (that is to say, open data) will allow a full range of transport services to be integrated through 'mobility as a service' concepts, allowing seamless payment and booking, and greater choice and convenience.

It is thus strongly encouraged that **entrepreneurs and investors take advantage of open data sets to build new business models.** Sharing data and coordinating among transport providers will be crucial to overcome transport poverty, especially in areas where fragmentation in service provision is higher, such as in rural and deprived areas.

5 Outlook and next steps

The present deliverable is a cornerstone for verifying, validating and consolidating the findings and analysis performed in the HiReach project so far. It allowed to develop some recommendations which will set the scene for WP4 (Development of mobility solutions).

From a methodological point of view, this deliverable also marks the end of the first and second stage of the project's conceptual framework, which aimed, respectively, to analyse transport poverty (theoretically and on the field) and to explore sustainable and inclusive mobility solutions, before stepping into the final stage which addresses the development of new mobility options.

Indeed, research and collaboration activities carried out in WP3 have allowed partners to explore existing transport solutions throughout the EU and even tried to explore new customized services through a Ideation Multidisciplinary Workshop, in order to gain some valuable preliminary experience in working cooperatively with entrepreneurs, which will minimize the risks of the remaining steps of the project.

Not many European projects have experience in collaborating directly with entrepreneurs. This is a significant advance and an asset that HiReach can bring to shape EU policies. Its success will very much depend on the activities carried out in WP4. Most importantly, WP4 will offer an evaluation methodology to facilitate the surge of new evidence-based policies, capable of tackling the transport poverty.

WP3 has shown that systematic evaluations of public transport in rural and deprived areas are (unsurprisingly) not abundant. Evidence of impact is rather fragmented and restricted to individual 'success' cases that examine alleged factors contributing to their success, rather than real impact.

This Deliverable D3.4 supports future HiReach work by synthesizing key recommendations that can offer a roadmap for the implementation of successful strategies to cope with transport poverty. The effectiveness of these recommendations will strongly depend on the local characteristics and the specific target groups involved, which will both show a large diversity.

In addition, it is important to notice that the structure of the transport market and the ecosystem governance models are not homogeneous across EU Member States either, so a fitness check of the recommendations should be conducted in later stages of the project.

Even though it is consensual that there is (finally) a good momentum for tackling transport poverty, for the pilot tests ahead there is the need for a mix of approaches, both top-down and bottom-up, by identifying and analysing problems and by finding suitable solutions adapted to the local context.

Regardless of the local context, there is a need for community empowerment, developing local knowledge and establishing a vision together with a clear roadmap and strong inter-sectoral commitment.

In cooperation with external actors such as entrepreneurs and the creative industry, but also prospective players that might step in and support the pilot initiatives (external universities, transport authorities, PT operators, among many others that will act as pilot

sponsors) to be carried out in WP4, the project partners will expand and further refine the knowledge required to successfully introduce services and products that meet vulnerable social groups' mobility needs.

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Annex: Frameworks for inclusive mobility

In this annex the policy, legal and regulatory frameworks that could help to lower, directly or indirectly, the identified main conditions of transport poverty are reported.

These frameworks are set on a global level (UN/UNECE), European level (European Commission regulations and implementing acts) or at national, regional and city level. Certain organizational frameworks can be seen as a positively contributing to the development and operation of mobility services for vulnerable users.

All this elements have been considered also in previous steps of WP3, and are included here as a reference.

Policy frameworks

Sustainable Development Goals

The Sustainable Development Goals ¹⁰(SDGs) were adopted in 2015 by all UN Member States and aim at becoming a shared plan for peace and prosperity for people and the planet, now and into the future. There are 17 components of the SDG's and several ones are linked with the question of governance of transport and the transition of smart mobility. The main on sustainable cities and communities is SDG 11, but it is considered that all the 17 SDG's are somehow linked with the question of mobility.

The Inland Transport Committee, supported by the Sustainable Transport Division of UNECE, carries out a number of activities which have a direct impact on the achievement of the 2030 Sustainable Development Agenda. These legal instruments are considered indispensable for developing efficient, harmonized and integrated, safe and sustainable inland transport systems.

Within the SDGs the goal number 10 "reduce inequality within and among countries" is relevant in the frame of HiReach including for example¹¹:

Target 10.1 - By 2030, progressively achieve and sustain income growth of the bottom 40 % of the population at a rate higher than the national average – Transport can provide affordable access to jobs, markets, schools and essential services

Target 10.2 - By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status– Full inclusion requires large improvement in rural and urban transport infrastructure and services to provide access to hundreds of millions that currently lack access

¹⁰ <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

¹¹ <https://sustainabledevelopment.un.org/content/documents/8656Analysis%20of%20transport%20relevance%20of%20SDGs.pdf>

Sustainable Urban Mobility Plans

The Sustainable Urban Mobility Plans (SUMP) concept comes from the 2013 Urban Mobility Package through a broad exchange between stakeholders and planning experts across the EU. The concept describes the main features of a modern and sustainable urban mobility and transport plan. One of the main goals of the SUMP concept is to improve the accessibility of urban areas and to provide high-quality and sustainable mobility and transport to, through and within the urban area.

European Disability Strategy

The European Disability Strategy 2010-2020: A Renewed Commitment to a Barrier-Free Europe¹². This strategy was adopted in 2010 and builds on the UN Convention for Rights of Persons with Disabilities (CRPD). For more details regarding the European Disability Strategy you can refer to D3.1 the analysis of the limits of current transport offer and frameworks.

According to the European Agency for special needs and inclusive education¹³ (EASPD) the overall objective of the European Disability Strategy is to empower persons with disabilities so that they can enjoy their full rights, and benefit fully from participating in society and in the European economy, notably through the single market by means of contributing to compliance with the UN Convention.

This strategy defines eight priority areas which are pursued by actions that require access to Mobility, providing a solid ground for investment into the improvement of Mobility of vulnerable user groups:

1. **Accessibility:** make goods and services accessible to people with disabilities and promote the market of assistive devices.
2. **Participation:** ensure that people with disabilities enjoy all benefits of EU citizenship; remove barriers to equal participation in public life and leisure activities; promote the provision of quality community-based services.
3. **Equality:** combat discrimination based on disability and promote equal opportunities.
4. **Employment:** raise significantly the share of persons with disabilities working in the open labour market. They represent **one-sixth of the EU's overall working-age population**, but their employment rate is comparatively low.
5. **Education and training:** promote inclusive education and lifelong learning for students and pupils with disabilities. **Equal access to quality education and lifelong learning** enable disabled people to participate fully in society and improve their quality of life. The European Commission has launched several educational initiatives for disabled people.

¹² <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0636:FIN:en:PDF>

¹³ https://www.easpd.eu/sites/default/files/sites/default/files/EVENTS/2015/Zadar/eas_001-15_en_ok.pdf

6. **Social protection:** promote decent living conditions, combat poverty and social exclusion.

7. **Health:** promote equal access to health services and related facilities.

8. **External action:** promote the rights of people with disabilities in the EU enlargement and international development programmes.

The challenge of transport for person with is clearly highlighted in the section 2.1.1 Areas of action, accessibility:

Accessibility is a precondition for participation in society and in the economy, but the EU still has a long way to go in achieving this. The Commission proposes to use legislative and other instruments, such as standardisation, to optimise the accessibility of the built environment, transport and ICT in line with the Digital Agenda and Innovation Union flagships.

This Strategy is complemented by the development of an action plan including a list of actions to be done between 2010 and 2015¹⁴. In this document key actions are defined under each priority. For example, the priority of accessibility is defined as: *“Prevent, identify and eliminate obstacles and barriers to accessibility. Key areas include the built environment, transport and information and communication including technologies and services.”* And key action under this priority are for example *“to finalise negotiations in Council on proposal for Regulations on the Rights of persons with reduced mobility travelling by road, rail and sea”*.

The European Accessibility Act is also important to mention as it is present in several actions listed in the action plan. The European Accessibility Act aims to improve the functioning of the internal market for accessible products and services by removing barriers created by divergent legislation. This aim to facilitate the work of companies and will bring benefits for persons with disabilities and elderly people in the EU¹⁵.

The Commission also supports the Academic Network of European Disability experts (ANED), which provides the Commission with analysis of national situations, policies and data. ANED also manages the DOTCOM Online Tool that provides an overview of the key instruments in the Member States and in the EU needed for the implementation of the UNCRPD.

European gender strategy

There is an existing gender equality strategy developed at the EU level¹⁶. This 3 yearlong strategy was developed in 2016.

¹⁴ <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=SEC:2010:1324:FIN:en:PDF>

¹⁵ <https://ec.europa.eu/social/main.jsp?catId=1202>

¹⁶ https://ec.europa.eu/info/sites/info/files/strategic_engagement_en.pdf

The strategic engagement for gender equality 2016-2019 is the framework for the European Commission's future work towards full gender equality.

The strategic engagement focuses on the following 5 priority areas:

1. Increasing female labour market participation and economic independence of women and men;
2. Reducing the gender pay, earnings and pension gaps and thus fighting poverty among women;
3. Promoting equality between women and men in decision-making;
4. Combating gender-based violence and protecting and supporting victims;
5. Promoting gender equality and women's rights across the world.

The strategic engagement sets out objectives in each of these priority areas and identifies more than 30 concrete actions. It reaffirms commitment to gender mainstreaming: a gender equality perspective will be integrated into all EU policies as well as into EU funding programmes¹⁷.

This strategy is completed by annual reports which tend to inform about the main EU initiatives launched or completed in the five thematic areas of the Strategic engagement and presents key trends in the Strategic engagement's indicators. It highlights some practices, innovative projects and successful policies to promote gender equality at national level. For example, the report of 2019¹⁸ highlights the work done in the frame of the women in transport platform¹⁹. Such as the Women in motion project²⁰, an ongoing project since 2016, designed to increase the presence of women (only 15% overall at the time) in traditionally male areas such as technical ones (e.g. maintenance, infrastructure, etc.).

WIM is aimed both at women who work for the Company, improving their working conditions, and at young women and girls who are still students, and who are about to choose their future education and professional path. This platform was launched in November 2017, has continued and new members have joined in 2018. The platform consists now of members from the main employers 'and workers' organisations in the transport sector.

In addition, this strategy is completed by the Gender Action Plan II was launched in 2017 and aims at translating the EU policy and political commitments to gender equality into a set of concrete objectives necessary for achieving results for girls and women, including by promoting more efficient coordination, implementation and monitoring of EU activities

¹⁷https://ec.europa.eu/info/policies/justice-and-fundamental-rights/gender-equality/gender-equality-strategy_en

¹⁸https://ec.europa.eu/info/sites/info/files/aid_development_cooperation_fundamental_rights/annual_report_ge_2019_en_1.pdf

¹⁹ https://ec.europa.eu/transport/themes/social/women-transport-eu-platform-change_en

²⁰ https://ec.europa.eu/transport/themes/social/platform/women-in-motion_en

in this area²¹. The implementation of this action plan is mandatory at the level of Member States.

Collaborative and shared economy

In June 2016 the European Commission published a communication on the European agenda for the collaborative economy. This policy is relevant for the project since several case studies identified in HiReach are based on shared and collaborative economy concepts. In the communication the Commission notes that such concepts can enable individual citizens to offer services, promote new ways of employment and flexible working arrangements, resulting in benefits for consumers such as new services, extended supply (e.g. in the rural areas!) and at lower prices (e.g. carpooling at more affordable prices for low-income / rural areas).

The communication also highlights several challenges that are brought by the emergence of collaborative and shared economy, and provides grounds for potential future regulation of the markets. Nevertheless, the communication acknowledges the rising importance of the recent developments and the potential benefits for the consumers, thus paving the way also for new mobility services that will be able to provide cost effective, legally approved and public authority supported services also to vulnerable users.

Automated driving

In the communication “On the road to automated mobility: An EU strategy for mobility of the future”²², the European Commission highlights how automated driving will change our lives, leading potentially also to lower costs and higher road safety. The communication puts emphasis on the importance of managing the transition to automation in order to make sure future vehicles are embedded in a transport system that favours social inclusion, low emissions and overall efficiency.

For example, the communication mentions that aspects related to social inclusiveness and ways to address the needs of vulnerable users will also play a role in making sure that the gains benefit the society as a whole, including those who may be cut off from mobility services today, such as the **elderly and the disabled**. Particular attention shall be paid to **increased accessibility of remote areas** and wider provision of mobility services. Next, those who cannot drive themselves, such as elderly or disabled people, or are under-served by public transport, could become mobile with the help of driverless vehicles.

²¹ https://ec.europa.eu/europeaid/sites/devco/files/eu_gap_2017.pdf

²² [On the road to automated mobility: An EU strategy for mobility of the future](#)

Legislative and regulatory frameworks

Social measures and passenger rights

Convention on the Rights of Persons with Disabilities (CRPD)

The UNCRPD is the first international legally binding instrument setting minimum standards for rights for people with disabilities, and the first human rights convention to which the EU has become a party. All the EU countries have signed and ratified the Convention. The EU and its Member States are committed to upholding and protecting the rights of persons with disabilities as enshrined in the UN Convention. The core elements of the UN Convention are reflected in the European Disability Strategy 2010-2020, described below.

The UNCRPD was adopted on 13 December 2006 at the United Nations Headquarters in New York, and was opened for signature on 30 March 2007²³. The convention has been ratified by 177 countries and the optional protocol has been ratified by 92 countries.

The Convention is intended as a human rights instrument with an explicit, social development dimension. It adopts a broad categorization of persons with disabilities and reaffirms that all persons with all types of disabilities must enjoy all human rights and fundamental freedoms. It clarifies and qualifies how all categories of rights apply to persons with disabilities and identifies areas where adaptations have to be made for persons with disabilities to effectively exercise their rights and areas where their rights have been violated, and where protection of rights must be reinforced.

The Convention covers a wide range of areas including²⁴:

- Health;
- Education;
- Employment;
- Access to justice;
- Personal security;
- Independent living;
- Access to information.

The Convention works in synergy with previous international texts related to persons with disabilities:

- Standard Rules on the Equalization of Opportunities for Persons with Disabilities - 1994 (not a legally binding treaty)
- World Programme of Action on Disabled Persons - 1982 (not a legally binding treaty)

²³ <https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html>

²⁴ <https://www.equalityhumanrights.com/en/our-human-rights-work/monitoring-and-promoting-un-treaties/un-convention-rights-persons-disabilities>

According to the article 1 of the Convention the purpose of the convention is to promote, protect and ensure the full and equal enjoyment of all human rights and fundamental freedoms by all persons with disabilities, and to promote respect for their inherent dignity. The convention is unique because as it is both a development and a human rights instrument, also because it is a policy instrument which is cross-disability and cross-sectoral and finally because it is legally binding.

The article 20 of the convention in about personal mobility:

States Parties shall take effective measures to ensure personal mobility with the greatest possible independence for persons with disabilities, including by:

- a) Facilitating the personal mobility of persons with disabilities in the manner and at the time of their choice, and at affordable cost;
- b) Facilitating access by persons with disabilities to quality mobility aids, devices, assistive technologies and forms of live assistance and intermediaries, including by making them available at affordable cost;
- c) Providing training in mobility skills to persons with disabilities and to specialist staff working with persons with disabilities;
- d) Encouraging entities that produce mobility aids, devices and assistive technologies to take into account all aspects of mobility for persons with disabilities.

Convention on the Elimination of Discrimination against Women

The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), was adopted in 1979 by the UN General Assembly, and is often described as an international bill of rights for women. Consisting of a preamble and 30 articles, it defines what constitutes discrimination against women and sets up an agenda for national action to end such discrimination²⁵.

The Convention includes, in a single legally binding instrument, provisions requiring the elimination of discrimination on the basis of sex in the enjoyment of civil, political, economic, social and cultural rights²⁶.

The Convention defines discrimination against women as "any distinction, exclusion or restriction made on the basis of sex which has the effect or purpose of impairing or nullifying the recognition, enjoyment or exercise by women, irrespective of their marital status, on a basis of equality of men and women, of human rights and fundamental freedoms in the political, economic, social, cultural, civil or any other field."

By accepting the Convention, States commit themselves to undertake a series of measures to end discrimination against women in all forms, including:

²⁵ <https://www.un.org/womenwatch/daw/cedaw/>

²⁶ <https://iknowpolitics.org/sites/default/files/cedaw-for-youth.pdf>

- To incorporate the principle of equality of men and women in their legal system, abolish all discriminatory laws and adopt appropriate ones prohibiting discrimination against women;
- To establish tribunals and other public institutions to ensure the effective protection of women against discrimination; and
- To ensure elimination of all acts of discrimination against women by persons, organizations or enterprises.

The Convention is the only human rights treaty which affirms the reproductive rights of women and targets culture and tradition as influential forces shaping gender roles and family relations. It affirms women's rights to acquire, change or retain their nationality and the nationality of their children. Countries that have ratified or acceded to the Convention are legally bound to put its provisions into practice. They are also committed to submit national reports, at least every four years, on measures they have taken to comply with their treaty obligations.

The article 14. 2.(h) is relevant in the frame of this research. Indeed this article states the following:

14.2 States Parties shall take all appropriate measures to eliminate discrimination against women in rural areas in order to ensure, on a basis of equality of men and women that they participate in and benefit from rural development and, in particular, shall ensure to such women the right:

(h). To enjoy adequate living conditions, particularly in relation to housing, sanitation, electricity and water supply, transport and communications.

This article 14.2. (h) is the only article in the Convention especially highlighting the challenge link to transport. This article gather two vulnerable groups of this project: women and people living in rural and deprived areas.

CEDAW has an Optional Protocol that came into force in 2000. As of 2016, 108 countries have signed on to the Optional Protocol. The Optional Protocol is a procedural protocol which introduces additional mechanisms for the implementation of CEDAW. The Optional Protocol allows women and girls (alone or in a group) to submit complaints directly to the CEDAW Committee if they consider their human rights protected by CEDAW are violated, and the CEDAW Committee can provide redress. The Optional Protocol also establishes an inquiry procedure enabling the CEDAW Committee to address systematic and widespread violations, which may be instigated on the basis of information received from any source²⁷.

Convention on the Rights of the Child

The Convention on the Rights of the Child is the world's most widely ratified human rights treaty in history²⁸. The Convention was adopted on November 1989 in New York. The text

²⁷ <https://iknowpolitics.org/sites/default/files/cedaw-for-youth.pdf>

²⁸ <https://www.unicef.org/child-rights-convention/what-is-the-convention>

of the convention consists of 54 articles. This Convention builds upon the Declaration of the Rights of the Child which marked the first major international consensus on the fundamental principles of children's rights²⁹.

The Committee for the Rights of the Child is the body which supervises the implementation of the Convention on the Rights of the Child. The Committee was created by the Convention on February 27th, 1991³⁰. Article 43 of the International Convention on the Rights of the Child provides the composition and the functioning of the Committee on the Rights of the Child. The Committee is an independent and international body which supervises the application of the Convention on the Rights of the Child by the member states. It is made up of 18 self-employed experts on children's rights, with high moral standards. The convention of the right of the child does not explicitly highlight the challenge link to transport, mobility and children rights.

This challenge was present in the General comment No. 14 (2013) from the Committee for the Rights of the Child:

The article IV.A. 1. (b)

The legal duty applies to all decisions and actions that directly or indirectly affect children. Thus, the term "concerning" refers first of all, to measures and decisions directly concerning a child, children as a group or children in general, and secondly, to other measures that have an effect on an individual child, children as a group or children in general, even if they are not the direct targets of the measure. As stated in the Committee's general comment No. 7 (2005), such actions include those aimed at children (e.g. related to health, care or education), as well as actions which include children and other population groups (e.g. related to the environment, housing or transport) (para. 13 (b)). Therefore, "concerning" must be understood in a very broad sense.

The Convention is completed by several optional protocols:

- Optional Protocol to the Convention relating to the Rights of the Child, on the involvement of children in armed conflicts, 2000
- Optional Protocol to the Child's Rights Convention, concerning the sale of children, child prostitution and child pornography, 2000
- Optional Protocol to the Child's Rights Convention regarding the complaints procedure before the Committee on the Rights of the Child, 2011.

International Convention on the Elimination of All Forms of Racial Discrimination

This convention is relevant to present in the frame of this research as it is related for the vulnerable group of migrants and ethnic minorities. The International Convention on the

²⁹ <https://www.humanium.org/en/declaration-rights-child-2/>

³⁰ <https://www.humanium.org/en/committee/>

Elimination of All Forms of Racial Discrimination entered into force in January 1969. The Convention was ratified by 180 countries³¹.

The convention defines racial discrimination as «any distinction, exclusion, restriction or preference based on race, colour, descent, or national or ethnic origin which has the purpose or effect of nullifying or impairing the recognition, enjoyment or exercise, on an equal footing, of human rights and fundamental freedoms in the political, economic, social, cultural or any other field of public life»³².

The contracting states are especially obliged to condemn any act of propaganda and all organizations that rest upon theories of superiority of one race or of a group of persons of a different skin colour or ethnicity that aim to justify promote any sort of racial hatred or racial discrimination. The contracting states shall make the propagation of such bodies of thought as well as any arousal of racial discrimination and violence against a race or a group of persons of a different skin colour or ethnicity a punishable offense.

The UN Committee on the Elimination of Racial Discrimination is the monitoring body of the International Convention on the Elimination of All Forms of Racial Discrimination. Its work is complemented with an individual complaint process defined in the article 14 of the Convention. This process gives the committee the competence to accept information from persons or groups of persons that are victims of violations of one or multiple rights recorded in the covenant and to inspect this information.

The convention explicitly present the existing challenge between racial discrimination and transport.

Article 5 (f) states the following:

In compliance with the fundamental obligations laid down in article 2 of this Convention, States Parties undertake to prohibit and to eliminate racial discrimination in all its forms and to guarantee the right of everyone, without distinction as to race, colour, or national or ethnic origin, to equality before the law, notably in the enjoyment of the following rights:

The right of access to any place or service intended for use by the general public, such as transport hotels, restaurants, cafes, theatres and parks.

*This can also be complemented by national example. Economic and social inclusion of migrants: best practices from Sweden*³³.

In Sweden there are organisations that help low and medium-skilled migrants to find work by organising trainings and mentoring with the objective to facilitate migrants integration into society and enjoy various rights.

Yalla Trappan is an organisation that helps migrant women, the most excluded members of society with little or no formal education.

³¹ <https://www.humanrights.ch/en/standards/un-treaties/racism/>

³² <https://www.humanrights.ch/en/standards/un-treaties/racism/>

³³ [Visiting South Sweden – building bridges between EU civil society and the grassroots level](#)

The Ester Foundation helps migrant women to step into entrepreneurship and coach them on self-esteem and confidence.

Merit is a company contracted by the local authorities to help migrants overcome many challenges, such as language skills, in order to help them find a job.

Bus and coach passengers' rights

Regulation (EU) No 181/2011³⁴ of the European Parliament and of the Council of 16 February 2011 ensures that passengers, including those with a disability or reduced mobility, travelling by bus and coach enjoy the same rights wherever they travel in the European Union (EU). These rights, including the right to information or compensation in the case of delay or cancellation, complement similar rights for sea and inland waterway, air and rail passengers.

This initiative protects the passengers from not being charged a higher price because of his nationality or where the ticket for a bus or coach was purchased. These rights for a bus or coach passenger mainly apply to regular long-distance (more than 250 km) bus and coach services starting or finishing in an EU country. Some of these rights also apply to all regular services.

For more information regarding bus and coach passengers' rights please refer to the section 3.2 of the deliverable 3.1, "analysis of the limits of current transport offer and frameworks".

Service provision and access to market

European Accessibility Act

The European Accessibility Act³⁵ aims to improve the functioning of the internal market for accessible products and services by removing barriers created by divergent legislation. This will facilitate the work of companies and will bring benefits for persons with disabilities and elderly people in the EU.

With the help of the Act, persons with disabilities and elderly people will benefit from more accessible products and services in the market, accessible products and services at more competitive prices, fewer barriers when accessing education and the open labour market and more jobs available where accessibility expertise is needed. The act aims to address specifically also services related to air, bus, rail and waterborne passenger transport.

In the Chapter 3.2 Transport for people with reduced mobility of the HiReach deliverable **D3.1 Analysis of the limits of the current transport offer and frameworks** we describe more in detail the rights of disabled passengers' and limits of the current EU framework for different transport modes.

³⁴ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM:tr0050>

³⁵ <https://ec.europa.eu/social/main.jsp?catId=1202>

Regulation on national and international operation of public passenger transport services

Regulation (EC) No 1370/2007 on public passenger transport services by rail and by road defines rules on how to contract for the provision of public transport services by rail, metro, tram or bus, how to award these contracts and how to compensate for public service obligations. It lays down the conditions under which competent authorities, when imposing or contracting for public service obligations, compensate public service operators for costs incurred and/or grant exclusive rights in return for the discharge of public service obligations (PSO).

This Regulation, which entered into force on 3 December 2009, but allows for a transition period with respect to the provisions for the award of public sector contracts defined in Article 5 until December 2019. It does so by complementing the rules on public procurement and laying down the conditions under which State aid payments foreseen in contracts and concessions for public passenger transport services are compatible with the internal market and exempted from prior notification to the Commission.

Public service obligations may only be imposed where the market does not provide adequate services in terms of price and/or quality³⁶. The selection of service providers must respect the principles of openness, transparency and non-discrimination, even when public procurement procedures may not apply. Compensation must be based on contracts which contain a precise definition of the public service and parameters on how the compensation is to be calculated. Changes in the conditions of a public service after a contract is awarded are likely to require a new procurement procedure. Costs and revenues must be allocated between eligible and non-eligible activities, according to an established methodology. Reasonable profit should be the internal rate of return of the service provider. Efficiency requirements should be imposed so as to incentivize the service provider.

In February 2016 the European Commission published a study on economic and financial effects of the implementation of Regulation 1370/2007 on public passenger transport services, where it highlights the high fragmentation of the public transport in Europe and substantial differences on many crucial aspects. There is a considerable variation between Member States in terms of legislation, approaches to funding, market structure and types of procurement. There is also not much consistency in the number and capabilities of different competent authorities.

The 2008 financial crisis pushed several authorities to make changes to PSO services, to stop infrastructure improvements and increase fares paid by travellers, which differ between Member States substantially.

Next, there is a lack of suitable, modern, accessible and safe bus and coach terminals connected with other transport modes. Such terminals could raise the quality of service as terminal operators can give passengers easier access to information about the services and about passenger rights; terminal staff can provide passengers with disabilities with the assistance they need; and passengers can be better assisted when there are transport

³⁶ [Guidance on the Application of Regulation 1370/2007 on Passenger Transport Services](#)

disruptions. Very importantly, the Regulation did not introduce new accessibility requirements for buses, coaches and terminals and thus not helping to improve the accessibility of vehicles and the transport infrastructure (bus stops and terminals) for passengers with disabilities or reduced mobility. The measures introduced by several Member States – under which operators will in the future be required to use only fleets that can carry passengers with disabilities or reduced mobility – will have only limited results if the transport infrastructure remains inadequate.

Nevertheless, the study identified also a number of benefits brought by Regulation 1370/2007, for example clearer definition of policy objectives as a basis for specifying service requirements and other contractual obligations, greater transparency particularly of methods and levels of compensation including in the case of direct awards, reduced uncertainty for both the competent authority and the service provider over legal obligations, and a more considered approach to the design of public service contracts.

Public service obligation

Public service obligation (PSO) is an obligation imposed on organisations by legislation or contract to provide a service of general interest within the European Union territories. PSOs may operate in any field of public service and is especially relevant for the transport services in addition to postal, banking, energy etc.

Public passenger transport services that society needs as part of its general interest cannot be run commercially, so the relevant national, regional or local EU authorities must ensure these are provided by awarding exclusive rights, compensating them financially, and also by defining rules for how public transport is operated.

The 2007 EC Regulation 1370/2007 on public passenger transport services by rail and by road serves as a legal basis for the implementation of PSO.

For more information regarding public service obligation please refer to the HiReach deliverable **D3.1 Analysis of the limits of current transport offer and frameworks**.

ICT and Interoperability rules

EU-wide ticketing (regulation in preparation)

The DG MOVE commissioned a study with a scope of the study to investigate and provide a comprehensive and neutral analysis on the challenges of delivering EU wide integrated ticketing and payment systems and what possible actions and initiatives at EU level could be foreseen in pursuance of such goal. The purpose is to make a multimodal transport more attractive for users and to promote a more efficient use of existing infrastructure and services. It is a prerequisite for seamless multimodal door-to-door journeys.

Integrated ticketing can be defined as the purchase of a single ticket that allows passengers to travel using different mode(s) of transport provided by one or more operator(s)¹ or as “combining all transport methods in one single ticket” and is considered as the natural partner to full availability of multimodal travel information and planning services. This definition is not generally shared by all the stakeholders: other selling

modalities, such as combined tickets allowing for a connected journey should be considered.

The combined selling of various tickets from different operators would solve some of the problems arising from integrated ticketing, in particular those relating to the liability of various transport operators. Integrated ticketing requires performance of a number of phases as well as the intervention of various players in order to guarantee the lifecycle of the travel chain. The value chain can be divided into back office and transport value.

Regarding vulnerable users, the above-mentioned initiative would decrease the complexity of purchasing the tickets and thus simplify travel for e.g. elderly, children and other vulnerable users.

Multimodal travel information services (MMTIS)

The Commission Delegated Regulation of the ITS Directive setting out specifications for the provision of EU-wide multimodal travel information services (EU 2017/1926) has been formally published in the EU Official Journal in November 2011.

The regulation was adopted as part of the Commission's Mobility Package 'Europe On The Move', which was released on 31 May 2017. It supplements the Directive on Intelligent Transport Systems (ITS) and the Action Plan on deploying ITS.

The delegated act aims to encourage Member states to look for cost-effective ways to digitalise existing static and dynamic data of different transport modes and addresses for example the establishment of national access points, the accessibility, exchange and re-use of static and dynamic travel data using specific data formats and standards (e.g. NeTEx and SIRI), the linking of travel information services, the requirements for proper re-use and the assessment of compliance.

The diagram below shows the basic concept of the implementation of MMTIS and how the data on transport services could be exchanged between different Member States. As a result of having access to data, new services could be developed, with accurate and finally real-time access to transport data, providing better quality transport options for vulnerable users (e.g. rural areas).

Passenger rights in the multimodal context

The European Parliament in 2015 called in a resolution for a proposal covering multimodal journeys with a clear and transparent protection of passengers' rights in the multimodal context, taking account of the specific characteristics of each transport mode and integrated multimodal ticketing. The European Commission recently examined if a more comprehensive approach to protect passengers using various modes of transport would be needed. With a public consultation it tested the level of awareness and transparency on passenger rights and concluded that there is actual need for more transparency and better understanding of actual passenger rights.

In this context the vulnerable users are even more at risk. Without harmonisation of rules the users of multimodal transport will face even more complexity and will not be able to understand their rights.

Business to platform regulation

The business to platform directive: the proposal ³⁷for an EU regulation was put forward in April 2018 by the EC to promote fairness and transparency for business users of online intermediation services. This proposal is mainly directed at online intermediary service providers, regarding the payment of the service on the platform and the contractual relationship. Airbnb, Uber, Facebook, and Amazon among others would be affected by this directive³⁸. The interconnection of these two is so strong that the European Commission (EC) actually uses the term "collaborative economy" and defines it as "business models where activities are facilitated by collaborative platforms that create an open marketplace for the temporary usage of goods or services often provided by private individuals".

The regulation uses some of the principles of consumer law in order to regulate the interactions between service providers (business users in this case) and intermediaries (platforms). One of the measures is the requirement for platforms to provide "plain and intelligible" terms and conditions and other specifications, clearly communicated e.g. via email, and changes need to be communicated with a reasonable notice. To continue, rules on termination of the relationship are prescribed – except in certain circumstances businesses cannot terminate a business user without giving them a specific period of notice and an opportunity to appeal.

Next, the regulation foresees wide-reaching transparency obligation including transparency about any ranking of products or search results, and differentiated treatment of different users. Where online intermediaries decide to restrict or suspend a particular business's access to their platform, they will also need to be transparent about the reasons for this restriction or suspension.

Controversially, the regulation will also require online intermediaries' services to be transparent about the data they hold in relation to business users. These obligations apply equally to both personal and non-personal data, which means the obligations will in some ways go beyond those imposed by GDPR.

In disputes between the intermediaries and the businesses having a relationship with them, the intermediaries will be obliged to provide an effective redress mechanism including an internal complaint handling system with recourse to external mediation to deal with any disputes with business users.

Finally, businesses need to determine whether they are (or may be) caught by the regulation. They will then need to undertake a comprehensive review of their processes and procedures to ensure they comply. All of this will likely need to be achieved before the end of H1 2020.

³⁷ [Regulation on promoting fairness and transparency for business users of online intermediation services](#)

³⁸ [A proposed EU regulation for online platform-to-business relationships](#)

Below are the services that the European Commission initially identified³⁹ that will be affected by the regulation:

eBay	Etsy	Zalando
Fnac MarketPlace	Opodo	Chrono24 Trusted Checkout
Booking.com	Expedia	Hostelworld
TripAdvisor Instant Booking	Skyscanner Direct Booking	Uber
Airbnb	Deliveroo	Microsoft store
UpWorld	Idealo.de	Kindle Direct Publishing
Vimeo	Xbox self-publishing games	Facebook
Google Play	Opera Mobile Store	Samsung Smart TV
LG Smart World	Sony PlayStation	Oculus Gear VR
Alexa Skills		Amazon Marketplace

Although the majority of the identified services are not transport related, it can be assumed that actually several transport-related services will be affected in the future, since more and more are being based on relationships inherent to the platform economy. In the context of mobility services for vulnerable users, this regulation should improve the grounds on which transport services are provided by creating more transparency on conditions and pricing, and thus encouraging (small) businesses to engage with platforms to make their service more accessible and attractive.

³⁹ Commission Staff Working Document, Impact Assessment, SWD(2018) 138 final

Document History

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0.4	3/7/2019	Simone Bosetti (TRT)	First consolidated draft
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