

Mobility in prioritised areas: inputs from the final-users

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Abstract

The deliverable D2.2 presents the results obtained from stakeholders' interviews and focus groups with vulnerable users 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), Buzau (Romania), North and South-East Luxembourg.

These activities identify the mobility needs of different vulnerable groups (low income and unemployed, elderly people, people with reduced mobility, women, migrants and ethnic minorities, children and young people, people living in rural and deprived areas) and compare them with the results from the desktop research on transport poverty from D2.1.

The scope of the deliverable is to provide the foundation for the project's next activities: the identification and development of new mobility options and business models in the HiReach project areas of study.

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 simultaneously combine the needs of several 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 well-regulated business environment.

The HiReach mechanism for exploring, generating and testing inclusive mobility solutions is based on the creative work of startups 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), Buzau (Romania), North and South-East Luxembourg.

Disclaimer

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Executive summary

The goal of this Deliverable (D2.2 - Mobility in prioritised areas: inputs from the final users), final output of WP2 (Analysis of mobility needs and capabilities), is to compare the results of HiReach desktop research on transport poverty (see Deliverable 2.1) with those obtained in the field and to provide the foundation for the project's next activities: i) identification of new mobility options and business models and ii) development of mobility solutions.

HiReach's fieldwork results, here reported, represent a first-timer. Stakeholders' interviews and focus groups with final users were carried out in six different countries, covering a large range of social layers and geographical diversity (urban, peri-urban and rural). This deliverable reports in detail the fieldwork conducted and the obtained findings with regard to the mobility needs of different vulnerable groups.

Transport authorities, planners and service providers

Among the various stakeholders interviewed in HiReach, there is a **growing attention to the mobility needs of vulnerable groups**. On the other hand, the **mindset of many stakeholders is still focused on users' physical impediments or low income** and many still approach transport services in a traditional way, which means serving mainly 'basic' needs without taking into account 'social needs' and the wider role of mobility in people's lives. Another important issue is the **question of budget**: with less subsidies and shrinking budgets for public transport, it is difficult to find the necessary resources for new transport services.

Final users

The final users engaged in the focus groups were very communicative and articulate in expressing their mobility needs and problems, and they presented a wide range of options to fight transport poverty: from very **basic requests**, such as better sidewalks and safe bike-parking, to **suggestions for bottom-up and peer-to-peer car-sharing**. The participants also expressed a **widespread lack of trust toward public authorities and especially public transport suppliers**. This is sometimes due to **poor public transport services**, and sometimes the result of users' own **high expectations**. This feeling of disappointment is often accompanied by a sort of fatalism, which impedes any action and leaves the users waiting for top-down actions.

On a more theoretical level, we should also notice how transport poverty is the product of concomitant elements. While the scientific debate focuses on singular characteristics of or singular factors leading to transport poverty, the focus groups revealed that we should rather consider transport poverty as a multi-layered phenomenon.

What is next?

Based on the fieldwork results, we suggest to focus in the next HiReach steps on:

- 1) Moving to a customer-driven service and to bottom-up approaches (and how they can foster new innovative transport solutions);
- 2) Understanding carefully the expectations and the capabilities of final users, transport suppliers and the impact of local regulations;

- 3) Exploring the final users' attitudes toward traditional and new transport suppliers (including peer-to-peer solutions);
- 4) Keeping in mind the relevance of budgetary and financial mechanisms when implementing new innovative solutions.

To sum up, we will face in the next phases of HiReach the following opportunities and limits:

<u>Opportunities:</u> <ul style="list-style-type: none">• Bottom-up• Positive view of biking and other low-tech and "alternative" systems• Openness to shared transport systems (esp. in rural areas)• Reducing car use	<u>Limits:</u> <ul style="list-style-type: none">• Weak knowledge by suppliers and planners (which asks finding solutions that are addressing not only users but also policy-makers)• Top-down dominant approach• Weak trust in PT and authorities• Car as dominant
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1 Introduction

This chapter presents the goals of this Deliverable, as well as the rationale and objectives of the fieldwork conducted in HiReach. Thereby, it briefly recaps the outline of the HiReach project and the role of the fieldwork within the project.

1.1 Background

HiReach is a Horizon 2020 (H2020) project that aims **to contribute to the eradication of transport poverty**. The European Union and its Member States support accessibility for their citizens, since good accessibility makes the European economies thrive, promotes inclusion and fosters the well-being of inhabitants. The **European Union particularly focuses on improving accessibility for vulnerable social groups** such as the elderly, the disabled and people living in remote or deprived regions, so as to arrive at a state of affairs with a 'mobility for all'. HiReach assists the European Union in achieving this goal.

More in particular, HiReach fosters social innovation processes through an in depth (micro) analysis of capabilities and attitudes of different social groups and their direct involvement as co-users and co-owners of new mobility solutions. The proposed solutions will be implemented by products scaling up, backed by mobile information technologies and social innovations, using open tools, technology transfer and start-up development techniques to find and exploit new business ideas that reach low accessibility social groups and areas.

In order to gain a better mobilization of social forces and to better frame the elements characterizing transport poverty, HiReach developed a Work Package (**WP2**) devoted to the **analysis of mobility needs and capabilities**. WP2 is split up in methodological terms. While D2.1 (Mobility in prioritised areas: mapping the field) relies fully on desk research, D2.2 (Mobility in prioritised areas: inputs from the final users) is based on field research in six selected study regions. The fieldwork research design was based on the outcomes of D2.1.

Deliverable D2.1 was the result of desk research and encompasses an appraisal of i) spatial specificities and common factors of mobility challenges (Task 2.1); ii) mobility socio-economic landscape(s) (Task 2.2); iii) visible and hidden mobility needs and attitudes (Task 2.3). D2.1 had the goal to map the definitions, concepts and backgrounds of transport poverty in "prioritised areas", such as rural, remote and deprived urban areas, as defined by the H2020 MG-8-4-2017 call. This asked for an analysis of the social and spatial elements causing, mitigating or influencing transport poverty, needs and exclusion, assessing each of these elements in terms of spatial factors, demographics and mobility patterns. The target of that Deliverable was thus to have a rich and ready to use theoretical background which can fruitfully support the following stages of the HiReach project and can fuel its final achievements.

This Deliverable D2.2 complements the first WP2 deliverable by putting the desktop results in relation with the results obtained in the field, enhancing findings from D2.1, but also contrasting them with the more unfiltered, unabstracted challenges of everyday

(im)mobility. D2.2 outlines the results from the case studies in the study regions and the stakeholders' engagement process. Consequently, a much broader and deeper knowledge is provided by D2.2, but also a much clearer picture that opens up pathways for new perspectives on social exclusion and transport poverty. Eventually, the differences and commonalities of different groups vulnerable to social exclusion are also identified, providing the foundation for the work that will be undertaken in the next HiReach project phases.

1.2 Activities on the field: rationale and objectives

While desk research activities are necessary to outline and update the understanding of the topic of transport poverty and inclusive mobility, fieldwork is needed to confirm results from the desktop research and enhance the understanding and definition of transport poverty by experiences from actual users. Hence, **six study regions** were identified at the beginning of the HiReach project, where research with experts and final users from different social groups should be conducted, in order to achieve an in-depth understanding of transport and accessibility problems experienced in different countries at urban, peri-urban and rural level. The fieldwork methodology relies on interviews with experts and on focus group discussions with end-users and stakeholders.

Within **WP2 Task 2.4** (Listening to local experts and users), in a first step, in each local study region, **interviews were conducted with representatives of local authorities, transport operators, non-governmental organizations and interest groups** (e.g. representing persons with disabilities, unemployed persons, children, elderly, migrants, women and other vulnerable to exclusion citizens). These interviews had the objective to identify social as well as transport-related disadvantages in each local study region.

Together with the experts, HiReach researchers evaluated and reflected on ongoing initiatives and policies regarding transport poverty and similar topics. By addressing local experts in the field, from different sectors and backgrounds, a comprehensive and holistic picture could be drawn about general mobility and accessibility challenges in each region, as well as specific challenges of socially vulnerable groups. Due to different perspectives on the topic, this picture is complex and multifaceted even on the local level and becomes even more challenging when comparing different study regions.

The second step was the conduction of **focus group sessions with members of socially vulnerable groups**, to further validate and explore their mobility and accessibility challenges. The focus group sessions allowed to discuss the previously identified problems from different, sometimes surprising perspectives with the final users. Apart from verifying existing knowledge, new issues were raised or linkages to other aspects of everyday life were drawn that the researchers did not imagine earlier.

All focus group sessions were conducted with great enthusiasm, involvement and creativity from both the researchers' and participants' sides. The local HiReach teams collaborated closely with local organizations to create a comfortable and safe environment for the focus group participants. In many cases, the fieldwork conducted in HiReach was the first time that local stakeholders discussed the specific challenges of vulnerable social groups in everyday mobility. Furthermore, in doing fieldwork with recently arrived refugees in Germany and Luxembourg, HiReach has conducted pioneering

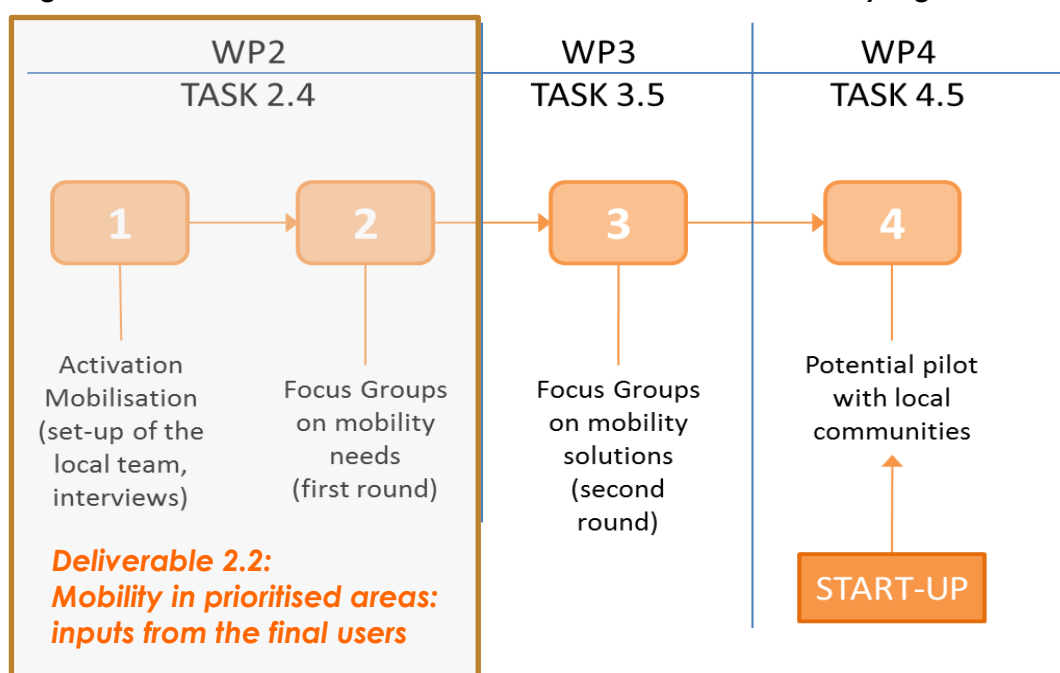
research work and delivered important insights on the mobility challenges of one of the most vulnerable social groups in Europe.

Activities on the field (both interviews and focus group sessions) took place in the six selected study regions during the period June 2018 – October 2018.

The results of the performed fieldwork will be instrumental for the further steps in the HiReach project. Based on the results of Deliverable 2.2, new mobility options and business models will be identified. In **WP3** (Identification of new mobility options and business models), **Task 3.5** (Appraisal of mobility solutions and their potential impacts on inclusive mobility and equity), the participants of focus groups conducted in WP2 will again be engaged to assess innovative transport solutions in order to understand to which degree these innovations might affect their behavior or their direct involvement as prosumers; as well as to help generate further ideas on how the previously identified problems could be addressed and solved.

In a third step, ideally the same research participants in the study regions will also be considered and involved, when small-scale, modular and easily replicable solutions will be developed and tested in **WP4** (Development of mobility solutions), **Task 4.5** (Testing of solutions).

Figure 1-1: Workflow and “waves” of fieldwork in the HiReach study regions



Source: Own elaboration

1.3 Structure of the document

This deliverable is organized in five chapters. In **the introductory chapter**, the goals of the deliverable as well as the rationale and objectives of the fieldwork conducted in HiReach are presented.

The methodology of the fieldwork conducted in WP2 of HiReach is outlined in **Chapter 2**. First, it is explained how fieldwork and desktop research are linked in HiReach and it is highlighted that the methodological design of the fieldwork activities builds upon the results of the desk research. The major topics identified in the desktop research phase that serve as input for the fieldwork phase are presented. In the remainder of the chapter, the methodology of the interviews and focus group sessions conducted are described in detail, as well as the tools taken up to activate research participants. The chapter closes with the ethical considerations of the fieldwork in HiReach and thoughts on the potential and limits of the research.

The spatial aspects of the fieldwork are dealt with in **Chapter 3**, where the six study regions of HiReach are presented in detail. At the beginning, the criteria for selection of the study regions are outlined. Then, for each study region, the spatial characteristics and the socio-economic and socio-demographic specificities are elaborated on. Bringing together both desktop and fieldwork research results, the transport situation in each study region is illustrated, including incidences of transport poverty encountered. Each study region description ends with an overview of ongoing local initiatives and the most important stakeholders.

While Chapter 3 approaches the fieldwork findings from a spatial perspective, the results presented in **Chapter 4** are structured according to social indicators. For each of the vulnerable social groups analysed in HiReach, results from the fieldwork are presented, highlighting each groups' main social characteristics, the mobility needs they have and the mobility barriers they encounter. Thereby, the root causes of transport poverty for the respective social groups are identified in different study regions. At the end of each subchapter, the findings from the different HiReach study regions are compared, highlighting the similarities and differences.

In **Chapter 5**, the results from the fieldwork are summarized, differentiating between planners' and other stakeholders' perspectives on one side, and the final users' perspective on the other. As a conclusion, the opportunities and limits for innovative mobility solutions are highlighted (also considering the specificities of each study region). The deliverable ends with an outlook on the next steps to be taken in the HiReach project that are at the same time preliminary recommendations to stakeholders and planners.

Apart from the **authors of this deliverable**: Tobias Kuttler, Massimo Moraglio (TUB), Simone Bosetti, Cosimo Chiffi (TRT), Patrick van Egmond (LUXM), Delphine Grandsart (EPF), the following partners contributed to this Deliverable by **performing the fieldwork in the respective countries**: Norman Döge, Mahendra Singh Chouhan (TUB, Germany), Andrea Selan, Patrizia Malgieri (TRT, Italy), Martin Kracheel, François Sprumont (LUXM, Luxembourg), Dariya Rublova, Akrivi Vivian Kiousi, Maggie Poupli (INTRA, Greece), Vasco Reis, André Freitas, Susana Castelo, Fátima Santos (TIS, Portugal), Valentin Iordache and Andrei Gheorghiu (UPB, Romania). The HiReach project expresses its gratitude to all the contributors.

2 Methodology

In this chapter, the methodology of the fieldwork conducted in WP2 of HiReach is outlined. First, it is explained how fieldwork and desktop research are linked in HiReach and it is highlighted that the methodological design of the fieldwork activities builds upon the results of the desk research.

The major topics identified in the desktop research phase that serve as input for the fieldwork phase are presented. In the remainder of the chapter, the methodology of the interviews and focus group sessions conducted are described in detail, as well as the tools taken up to activate research participants. The chapter closes with the ethical considerations of the fieldwork in HiReach and thoughts on the potential and limits of the research.

2.1 Linking desktop and fieldwork research

Work Package 2 (Analysis of mobility needs and capabilities) was divided in desk research and fieldwork, coordinated in such a way that the content and the methodological design of the fieldwork activities should build upon the results of the desk research.

In the preliminary desk research on social and spatial elements of transport poverty and mobility needs, on the one hand, major topics were identified that were taken up and explored more deeply during the fieldwork phase. On the other hand, major knowledge gaps were identified that needed to be addressed during the fieldwork phase.

Hence, some of the identified **major topics** that resulted from the desk research and were further explored in the fieldwork were:

- **Contextuality of transport poverty experiences.** Desk research highlighted that experiences of, and vulnerability to transport poverty, are highly contextual. Accessibility, (im)mobility, social disadvantage and material poverty are estimated and evaluated differently across Europe. By addressing different social groups in different study regions, HiReach was able to explore different understandings and experiences of transport poverty in the respective contexts.
- **Identifying differences and common elements of transport poverty.** Desk research revealed that similar patterns of transport poverty could be encountered in different parts of Europe. While incidences of transport poverty were identified and understood from the local context in the HiReach fieldwork, it was also necessary to identify common elements and repeated patterns across Europe. For that reason, it was important to find a methodology that allowed comparison between study regions (see also Section 2.6 below).
- **Spatial aspects of transport poverty.** Desk research results highlighted that spatial aspects – e.g. the urban, the peri-/suburban and the rural context – are often only implicitly taken into account in the analysis of transport poverty. Hence, HiReach fieldwork activities were conducted in such a way that a large variety of spatial

characteristics were analysed. This included on one end of the spectrum, remote rural regions in mountainous Portugal (Guarda) and small islands in Greece (Naxos and Iraklia) with very different spatial characteristics, but similar challenges. On the other end, this included high-density urban areas in Germany (Esslingen and Göppingen) and Romania (Buzău), that apart from sharing the common characteristics of high density could not be more different in terms of social, economic and transport indicators. Such targeted focus on spatial characteristics on top of exploration of social vulnerability greatly enriched the fieldwork.

- **Transport poverty and social exclusion.** During the desk research, it became clear that transport disadvantage and transport-related social exclusion are not synonymous with each other: it is possible to be socially excluded but still have good access to transport or to be transport disadvantaged but socially included. One of the guiding questions of the fieldwork activities was hence to explore how, when and in combination with which other factors, experiences of transport and social disadvantage lead to social exclusion.
- **Broaden the perspective on transport poverty and its definition.** Desk research, especially in Task 2.3 (Assessment of mobility needs), highlighted the importance of mobility and accessibility for quality of life *beyond* basic needs (work, education, health, etc.). It showed that mobility caters to the social needs of people, or vice versa, if barriers in mobility exist in an increasingly mobile society, social isolation can be the result. Desk research also brought to light the importance of “motility” – the potential to move – for people’s ability of shaping one’s life. Due to these desk research results, fieldwork activities also focused on social needs, the social benefits of transport supply and the wider role of mobility in people’s lives.

The following **knowledge gaps** identified in the desk research were addressed in the fieldwork activities:

- **Limited knowledge about transport poverty of particular social groups, such as children and young people as well as migrants, ethnic minorities and refugees.** The travel behavior of immigrants and their attitudes towards different travel modes are scarcely researched in Europe. Studies about mobility needs and problems of children and young people are equally scarce. By conducting focus group sessions with children and young people in two study regions, and with refugees in two other study regions, HiReach project has filled this knowledge gap.
- **Material poverty and transport disadvantage.** Desk research revealed that there is substantial knowledge on the relationship between material deprivation, unemployment and access to transport, e.g. on affordability, car dependence and forced car ownership. However, much of the literature relates to the US context, less research has been conducted in Europe so far. In the HiReach fieldwork, aspects of material deprivation have been explored in-depth in expert interviews and focus group sessions.
- **Aptitude for innovative and digital solutions.** Desk research shows that from the users’ perspective, substantial limitations and hesitations exist towards exploring different mobility options. One of these factors is strong car dependence that is linked to car-oriented lifestyles as well as mobility socialization. Such car dependence can become a mobility barrier in old age. Another barrier to new

mobility solutions is the digital aptitude of users. Desk research showed that use of digital tools is still comparatively low in southern and eastern parts of Europe, which is a barrier to developing solutions for certain user groups such as the elderly. These topics have been further explored in fieldwork in the study regions.

- **Extent of informal peer-to-peer mobility in Europe.** Informal peer-to-peer support in mobility, such as giving rides to friends, neighbours and family members, is common all over Europe, especially in rural regions with limited public transport supply. However, there is very little evidence about these phenomena in literature, and the extent of such forms of mobility support is difficult to estimate. Due to limited research on this topic so far, in the discussions with participants of the focus group sessions, these questions have been explicitly addressed.

By identifying major research topics and knowledge gaps in desktop research and translating these findings into research questions for the fieldwork phase, desktop and fieldwork research were effectively linked in HiReach. Due to this approach, HiReach was able to broaden and deepen the current understanding and definition of transport poverty substantially.

2.2 Interviews

Semi-structured individual interviews are a formal exchange on a given set of pre-defined questions, usually in a particular order, using an 'interview guide', which is a list of questions and topics that need to be covered during the conversation.

The interviewer sticks to the guide, but is also able to follow relevant paths in the exchange that may differ from the guide. It is usually a one-to-one and face-to-face (physical presence) based interaction between an interviewer and an interviewee.

An advantage of semi-structured individual interviews is that they are sufficiently structured to address specific dimensions of transport poverty/inclusive mobility while leaving sufficient space for experts to contribute new meanings to the topic.

Additionally, they allow to build a connection and a trust based relationship that enables the interviewee to share different kinds of maybe sensitive information.

HiReach aimed to collect data about experiences with transport poverty, about values and decisions that support or counteract transport poverty, and about ideologies or cultural aspects that might support or sustain it. All HiReach study regions used the methodology of semi-structured interviews to collect information on the local situation with regard to transport poverty, the characteristics in terms of spatial divide, local initiatives to counteract transport poverty and ideas on potential new solutions.

On the basis of a set of pre-defined questions, different topics were discussed with local experts and practitioners. It allowed the local HiReach partners to address specific dimensions of transport poverty and inclusive mobility while leaving sufficient space for experts to contribute new meanings to the topic.

Additionally, it allowed them to build a connection and a trust-based relationship that enables the interviewee to share different kinds of maybe sensitive information. More precisely the interviews had the following **objectives**:

- Collect information and insights from stakeholders/experts;

- Identify cases of transport poverty in the study region and mobility challenges of vulnerable groups;
- Analyse interests, capabilities and existing behaviours of our target groups via these experts;
- Review and evaluate past and ongoing initiatives to tackle transport poverty;
- Identify new, potential initiatives.

The following **categories of experts and stakeholders** were targeted:

- 1) transport operators;
- 2) local authorities and administrators;
- 3) planners and practitioners;
- 4) interest groups, NGOs and advocacy groups (e.g. representing persons with disabilities, unemployed persons, children, elderly, migrants, other vulnerable to exclusion citizens).

Following an initial mapping, experts and stakeholders were individually interviewed using a semi-structured interview guide.

Each HiReach local partner interviewed at **least two experts per target group as well as minimum one local transport operator and one local authority**. The full list of experts that have been interviewed in the different HiReach study regions can be found in Annex 1.

All interviews were conducted face-to-face and recorded. The interviewers planned for a sufficient time frame as well as a calm, quiet and safe environment for interviewer and interviewee. Following an introduction into the HiReach project and a short recap of the topic, the interviewers started with a so-called icebreaking question, for example: What country/city do you come from? How did you get here for the interview? How did you move around this week? How does public transport work in your region? At the end of the interviews, the interviewers shortly summarized some of the main points in order to both double check on the mutual understanding as well as to give the interviewee the opportunity to provide additional information.

The HiReach **interview guide** is provided in Annex 2. It proposed different questions for different expert groups (e.g. local authority, local transport operator, NGO). First, all local actors were asked to sketch an overall picture of transport poverty in the area, to identify groups that are vulnerable to transport poverty as well as their precise vulnerabilities (affordability, accessibility etc.) and main mobility needs. Furthermore, it was explored whether ICT solutions are available to solve such issues and whether these are accepted by the users. A key objective was also to identify the professional experiences of local experts in relation to transport poverty.

Both local authorities and NGOs were asked to evaluate the overall quality of life in their respective region, the economic situation and outlook. In addition, they were invited to elaborate on the most relevant types of social disadvantages encountered, the social situation and the presence of strong communities/social cohesion.

Interviews with the local authorities focused on the public policies in place to counteract transport poverty, whereas the NGOs were questioned on their activities. Both were asked to explain potential barriers encountered, e.g. funding, organisational issues, etc.

The public transport operators and mobility services providers were specifically asked to explain in more detail the service provided, the equipment used, the information schemes used, as well as their observations regarding transport poverty within their service area. Also, their cooperation with other public and private actors was discussed.

A final question to all interview partners was how the HiReach project could help them further and what were their expectations towards the project. Also, they were asked to introduce other stakeholders that could be of interest to HiReach.

2.3 Focus groups

Focus groups are a group interview method with representatives from an identified target group. A focus group typically consists of three to ten persons who are present at the same time in the same location to discuss their needs and experiences or a prototype based on input from the moderator (Preece et al. 2015, pp. 237–238).

It is important to keep the number of participants limited as more participants don't allow for the interactional setting and techniques that characterize focus group interviews. Moreover, HiReach deals with vulnerable groups and therefore we have to make sure that every voice feels heard in this process.

The HiReach partners conducted semi-structured focus group interviews, wherewith it was possible to:

- validate selected data findings (e.g. identified problems of our target groups);
- look for aspects regarding the mobility behaviour that we might have missed (problems and needs);
- explore first ideas and solutions to tackle transport poverty of our target groups.

The focus groups have allowed the HiReach partners to interview participants about their mobility needs and experience, their familiarity with mobility solutions and, last but not least, their attitude towards (possible) novel mobility options.

In each selected study regions, at least two vulnerable groups were targeted (cf. below, Chapter 3). The aim was to conduct **two focus groups per targeted social group in each of the local study regions, which means four focus group session overall per study region**. The full list of all focus groups are provided in Annex 3.

While preparing and conducting focus group interviews, it was important to avoid bias, to probe for additional information and to include all participants as much as possible. Interviewers and focus group facilitators were asked to keep an open mind and avoid stereotyping or the information bias trap.

The focus groups were generally structured in the following way:

- 1) Warm up / ice-breaking with the entire group (share your mobility experience, problems etc.); the idea here was that participants get to know each other and that the facilitator(s) get a better impression of the group;
- 2) Discussion between participants on different mobility issues, based on artefacts provided by the facilitator, for example design and usability of public transport information websites based on enlarged screenshots, maps etc. The key idea here

was to make every participant contribute, also the ones that do not dare to express themselves in front of the whole group;

- 3) Use of a big paper map where participants can draw, stick, write, post (sticky notes) their experiences with transport poverty on the respective locations;
- 4) Finally, a short brainstorming about ideas / suggestions for future solutions.

The focus groups were conducted in the local language / mother tongue of target users, e.g. Greek, Italian, Romanian, German, Arabic, etc.

Some focus groups were rather homogenous, meaning with participants from only one target group; others were heterogeneous, with participants from different target groups.

In general, the duration of the focus groups was between 1,5h to 2 hours. Some drinks and light snacks for the participants were provided.

2.4 Participant activation

The focus group participants were recruited by each local HiReach project partner directly, as well as through local multipliers such as representatives of associations, NGOs or/and public administrations or with the support of the concerned HiReach Take-up Group member.

All partners were requested to follow the ethics requirements to deal with vulnerable groups, as set in HiReach project deliverables D6.1 and D6.2 (Ethics Requirements), see Section 2.5 below.

Engaging migrants and ethnic minorities in focus group discussions was expected to be difficult due to language barriers. Hence, in the case of refugees, social organizations such as the Red Cross in Luxembourg and the Arbeiterwohlfahrt (short AWO, a social welfare organization for the working population) were engaged to facilitate the recruitment and discussions. The governmental institutions provided advice, yet due to their very strict guidelines it was hard to involve them timely into our project.

In general, elderly people were very open to join the focus group sessions. The city / county authorities in most HiReach study regions actively assisted (e.g. Buzău, Guarda, Southern Salento). In certain cases, special transport services were arranged for the elderly to enable them to join the focus group sessions. Other multipliers e.g. in the German study area included independent elderly organisations, municipal social services organising social activities for elderly, as well as senior citizen associations organising community transport services.

Children and women were approached via the municipalities (in Greece and Romania). All other participants were informed either through the municipality, or directly by the local partners.

Each of the Hireach study regions set up a **dedicated web page** integrated in the overall HiReach website (hireach-project.eu/content/study-areas). These web pages were mainly used to provide the local multipliers, assisting organisations, experts interviewed and participants of the focus groups with specific information on the HiReach project in their local language. It was not used to recruit experts and participants because in most cases local contacts had already been established and hence it was more efficient to address

participants directly. The HiReach roll-ups and flyers produced in the local languages were effectively used as supporting materials for all expert interviews and focus groups.

2.5 Ethics considerations and requirements

In Task 2.4 (Listening to local experts and users), leading to the current Deliverable 2.2, HiReach has explored final users' experiences through a series of focus group sessions. Research activities involving the final users have been conducted according to the European and national legislation in force concerning vulnerable groups of citizens and the requirements for informed consent. As such, HiReach partners have conformed to the legislation and regulations in force in the countries where the research has been carried out as well as with the EC Ethical Legislation.

Special attention had to be given to preventing the risk of enhancing vulnerability and stigmatisation of individuals, especially for the most vulnerable groups. In this respect, involvement of children, migrants and refugees and other adults that are unable to give informed consent had to be treated with utmost caution.

In the fieldwork research, therefore the following measures were taken:

- **Involvement and confidentiality of local partners:** Every study region has a project partner and a local supporter – member of the Take-Up Group (TuG) – who is responsible for the identification and involvement of local stakeholders, to facilitate the recruitment of focus group participants. All project partners agreed on a confidentiality statement by signing the project Consortium Agreement, hence they committed that no sensitive personal information or data will be disclosed.
- **Participation of refugees and migrants:** Special attention has been given to avoid ethnocentricity, showing respect for participants' ethnicity, language, religion, gender and sexual orientation. NGOs and other institutions with relevant experience were involved in organizing and conducting focus groups with migrants and refugees, in order to provide legal advice, psychological support, language interpreting and/or legally appointed supervision. By involving these intermediate institutions, it was ensured that only persons with a legal status and documentation participated. It was also made clear to participants from migrant or refugee groups that the (non) participation in the focus groups and therefore in the research project has no positive or negative impact on their status and circumstances.
- **Measures to prevent the risk of enhancing vulnerability and stigmatisation of individuals/groups:** No sensitive data was collected on any individual's political opinions, religious or philosophical beliefs, trade-union membership, genetic data, biometric data, health, sex life or sexual orientation. The only exception was made for racial/ethnic origin, which was included to understand possible differences in terms of transport poverty.
- **Informed consent:** HiReach project partners provided informed consent material in hard copies to all participants of the focus groups. The informed consent form assured that the participation is clearly communicated and understood as opt-in, meaning as a free choice and deliberate decision and that this agreement can be withdrawn or changed at any point of the process without any negative consequences. After the person recruited in the research was informed, s/he was

asked to complete and sign the informed consent form. The consent form included a statement that the participant was given an opportunity to ask questions about the study, including how the data is going to be used, and all the questions asked by the participant have been answered correctly and to the best of the researcher's ability. The informed consent form was signed twice, and each participant kept one copy. In the case of migrants and refugees, translations and oral interpretation of the consent form were provided by trained interpreters, who assured a proper explanation and understanding of the goals of the project as well as of the data collection. Children were directly involved in focus groups in order to capture in a more appropriate way their view on existing mobility offers, as well as to understand their needs. In order to guarantee the ethics requirements, their parents were asked to sign the informed consent form.

- **Ethics board and ethics approval:** An ethics board was formed, that supervises how the HiReach project partners handle both data collection and the participation of the target groups. In particular, the EB reviews and approves:
 - Activities involving human participants;
 - Activities involving human participants in the public arena if s/he is to be interviewed and/or private papers accessed;
 - Activities involving secondary use of data (use of data initially collected for another purpose) – if any form of identifier is involved and/or if private information pertaining to individuals is involved;
 - Activities involving the collection and storage of personal data.

Furthermore, ethics statements by each project partner responsible for the activities in the local study areas were submitted to and approved by the ethics board, before the planned activities started. In the ethics statement, each partner included information on the measures taken to respect the autonomy of participating individuals, maximise the benefit of the research, minimize harm and being fair to research participants.

- **Data protection:** Measures that ensure that the process of collecting and processing personal data complies with the General Data Protection Regulation (EU Regulation 2016/679, GDPR).

2.6 Potential, challenges and limits of the methodology

As pointed out earlier, the case studies conducted in HiReach had two main objectives. The first objective was the comprehensive description of transport poverty in each study region. The other objective was to draw general conclusions and to allow a comparison between findings from different regions across Europe, hence the transfer of findings.

The **objective of generalization and transfer of case study findings** requires some additional methodological remarks, as this **needs to be treated with caution**. Lincoln and Guba (2000, p. 27) state that “generalizations are assertions of enduring value that are context-free”. But case study results can never be fully detached from the context.

As a consequence, generalizations from case study results can lead to reductionism, that may be misleading once these findings act as input for problem solving. This is even more important when comparing the findings from different study regions. Specific local

conditions or patterns can never be exactly the same elsewhere; furthermore, these conditions and patterns are only partially stable, certain aspects of it may change quite quickly. Temporality and place-boundedness of case study research hence puts limits to generalization, transferability and comparison (Lincoln and Guba 2000, pp. 31–36).

When findings are compared across study regions taking the specific local conditions into account, comparison is a valuable tool to draw conclusions that are abstracted from the local context. It is important however to understand these abstracted findings as particular observations that are neither specific (local) nor general (universal), but located on a continuum. Lincoln and Guba (2000, p. 39) call generalizations that are sensitive to the specific local conditions “working hypotheses”: “Any generalization is a working hypothesis, not a conclusion. [...] Working hypotheses are tentative both for the situation in which they are first uncovered and for other situations; there are always differences in context from situation to situation, and even the single situation differs over time.”

Hence, **generalized findings from the comparison in HiReach can be understood as working hypotheses.** However, the fieldwork in HiReach is based on an in-depth investigation of the theory of transport poverty as well as a review of earlier empirical evidence about transport poverty. Hence, in HiReach we can draw on these findings and bring the fieldwork and desk research in relation with each other. Such a strategy of “theoretical inference” (Gomm et al. 2000, pp. 102–105) makes generalized conclusions more appropriate.

Whether findings from different study regions can be generalized and compared is not only important in the context of analysis, but even more in upcoming tasks of the HiReach project when applicable solutions will be developed. Some solutions may not be applicable to specific local contexts, or may need adjustments to be successful in the long run. The dual approach of desktop and fieldwork research in the analysis phase is a strength of the HiReach project; it allows detecting regional differences and enables practitioners to implement the most suitable solutions from the start.

3 Study regions

In this chapter, the spatial aspects of the fieldwork will be dealt with. The six study regions of HiReach will be presented in detail. At the beginning, the criteria for selection of the study regions are outlined. Then, for each study region, the spatial characteristics and the socio-economic and socio-demographic specificities are elaborated on. Bringing together both desktop and fieldwork research results, the transport situation in each study region is illustrated, including incidences of transport poverty encountered. Each study region description ends with an overview of ongoing local initiatives and the most important stakeholders.

At the start of the HiReach project, **six study regions were preliminarily identified looking at different factors**, including the geographical representativeness and in particular the presence of committed and interested local authorities. It was also intensively discussed how to balance different social and spatial layers in the final selection of study regions.

In the following subchapters, a description of the selection process is provided, and each study region is presented in detail.

In the HiReach fieldwork, seven vulnerable social groups were addressed:

- 1) Low income and unemployed people
- 2) Elderly people
- 3) People with reduced mobility
- 4) Women
- 5) Migrants and ethnic minorities
- 6) Children and young people
- 7) People living in remote, rural or deprived urban areas.

The aim was to select the study regions in such a way that **each vulnerable social group was addressed as primary target group in at least two study regions**. Additionally, several vulnerable groups should be approached as secondary target groups in further study regions. The results from the different study regions were then to be compared and put into perspective (see also Chapter 2.6).

3.1 Selection of the study regions and targeted vulnerable groups

The assessment and final selection of study regions was part of WP2 Task 2.4. The inception phase of this task was devoted to the in-depth analysis of geographical, socio-economic and other negative factors (i.e. deprived, dispersed or rural peripheral), transport and accessibility problems and running experiences and initiatives that could be plugged-in or scaled-up by HiReach.

Furthermore, the selection process **considered evidence from recent research showing that transport poverty is a multifaceted phenomenon appearing in both beneficial and disadvantaged socio-economic environments**. It is possible that on the very micro-level individuals subjectively experience a form of transport disadvantage and subsequent

social exclusion even with high socio-economic status; the perception of disadvantage and marginalization can even be stronger in dynamic and prosperous regions characterized by high mobility levels. Thus, socio-economic disadvantage (most importantly absolute/relative poverty) is only one of the indicators for transport poverty. HiReach incorporates such perspectives by also analyzing transport poverty on the micro-level in comparatively better-off regions.

Study regions have been assessed according to the following criteria:

- 1) **Targeted HiReach vulnerable social groups:** presence and opportunities to involve and mix mobility needs of different user groups, namely:
 - Low income and unemployed people
 - Elderly people
 - People with reduced mobility
 - Women
 - Migrants and ethnic minorities
 - Children and young people
 - People living in remote, rural or deprived urban areas.
- 2) **Assessment of socio-demographic negative factors:** e.g. poverty indicators (absolute/relative), GDP per capita, purchasing power, unemployment rate, ageing ration, education levels, access to health services, access to goods and services, housing, gender imbalances, etc.
- 3) **Targeted HiReach geographical characteristics:** rural, peri-urban, urban.
- 4) **Assessment of geographical negative factors:** remote areas, dispersed and/or scattered settlement structure, topography, etc.
- 5) **Characteristics of the transport and mobility system:** modal split, motorization, road network, public transport coverage, service levels of public transport, accessibility and barrier-free design of public transport, etc.
- 6) **Ongoing initiatives to be scaled-up/connected to HiReach:** volunteer services, sharing/peer-to-peer models, integrated mobility platforms, public/private DRT services, etc.
- 7) **Key stakeholders:** groups, associations, NGOs, local experts or public/private transport operators etc.
- 8) **Other aspects:** information on beneficial or unfavourable aspects e.g. start-ups being active in the field, social innovation initiatives, etc.

According to these criteria, every HiReach partner contributing to the fieldwork (i.e. TRT, INTRA, TUB, LUXM, UPB, TIS) was asked to evaluate the suggested options using an assessment tool (see

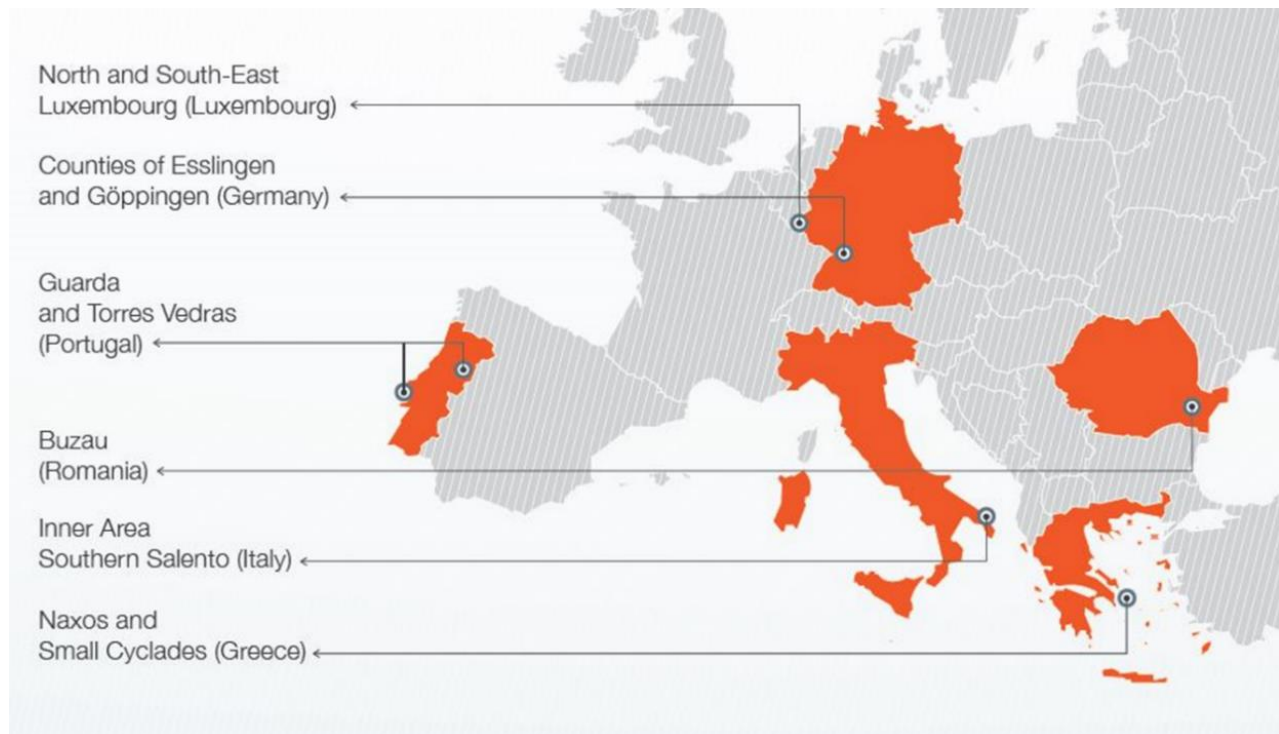
Annex 4). Thereby, it was not the aim to identify the most deprived or marginalized regions, or those with lowest accessibility, but rather to **identify a set of case study regions that present a variety of different spatial, social and transport characteristics that can occur in Europe.**

Through such a variety, it is possible to relate to a high number of similar cases and situations in other parts of Europe, and by theoretical inference draw general conclusions while being sensitive to the local context (see Chapter 2.6). Thus, while the case studies do

not claim representativeness for the respective countries, the particular European region or the European Union as a whole, the study methodology has nevertheless enabled HiReach to provide a holistic picture of the phenomenon of transport poverty in the European Union.

The following case study regions were finally selected for in-depth analysis:

Figure 3-1: HiReach study regions



Source: Own elaboration

Table 3-1: HiReach study regions with spatial layers and vulnerable groups addressed

COUNTRY	AREA	GEO LAYER	SOCIAL LAYER						
			CHILDREN	ELDERLY PEOPLE	PEOPLE WITH REDUCED MOBILITY	WOMEN	MIGRANTS AND ETHNIC MINORITIES	LOW INCOME AND UNEMPLOYED	POPULATION LIVING IN REMOTE RURAL AND DEPRIVED AREAS
Germany	Counties of Esslingen and Göppingen	Peri-urban with mixed rural and urban		●		●	●		
Greece	Naxos and Small Cyclades	Remote rural	●		●				●
Italy	Inner Area Southern Salento	Remote peri-urban		●	●	●			●
Luxemb.	North and south-east Luxembourg	Peri-urban and rural				●	●		●
Portugal	Guarda	Urban and remote rural		●				●	●
Romania	Buzau	Urban/Sub-urban	●	●	●			●	●

Main target ●
Secondary target ●

Source: Own elaboration

3.2 Germany: Counties of Esslingen and Göppingen

3.2.1 Background

Location and spatial characteristics

The study region is located in south-west Germany, in the state of Baden-Württemberg. More specifically it is located south-east of the state capital Stuttgart and is part of the metropolitan region of Stuttgart.

The study region comprises 18 municipalities in the counties of Esslingen and Göppingen and the counties' main towns Esslingen and Göppingen that are the major supply centres in the region. The 18 municipalities have a total population of 131.955 (17% of both counties' total population). The city of Esslingen has 91.271 inhabitants and the city of Göppingen has 56,781 inhabitants (19% of both counties' total population). The area size of both counties is 1,284 km².

Figure 3-2: Historical core of Esslingen city



Figure 3-3: Neckar Valley



Source: Kuttler/Technische Universität Berlin (left), Schiefelbusch/NVBW (right)

The study region is located in a sprawling, polycentric area characterized by scattered settlements alternating with industrial estates. The region is classified as peri-urban with mixed urban (medium-size and small towns with historic cores, new suburban style quarters) and rural, low-density settlements.

Figure 3-4: Location of the counties of Esslingen and Göppingen in Baden-Württemberg



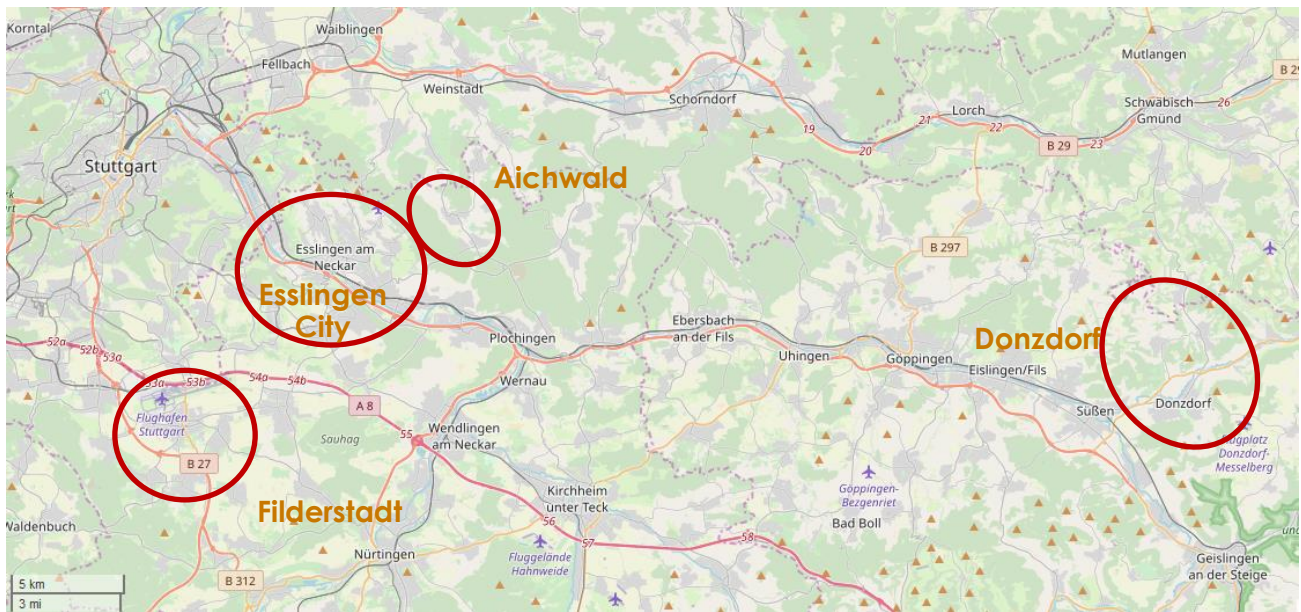
Source: Wikimedia Commons

Population density in the county of Esslingen is generally higher than in the county of Göppingen; thus Esslingen county can be characterized as a peri-urban area, while Göppingen county has a peri-urban to rural character. Population density ranges from 70/km² in Hohenstadt to 1.966/km² in the City of Esslingen (Statistisches Landesamt Baden-Württemberg 2017f).

Although the villages in the case study region still have a rural form, with natural landscape above 90% of the municipal area (agriculture and forest) (Statistisches Landesamt Baden-Württemberg 2017i), they are highly urbanized by lifestyles. Outward commuting to Stuttgart and other industrial centres is common.

Functionally, the study region is strongly oriented towards Stuttgart. Major employers of the car industry are located in the suburbs around Stuttgart (Böblingen / Sindelfingen / Kornwestheim). Other major employment centers are Tübingen, Nürtingen and Reutlingen, locations of universities and other important educational institutions.

Figure 3-5: Fieldwork sites in the Esslingen/Göppingen region



Source: Open Street Map

Socio-demographics and socio-economics

The population of Esslingen county has been growing at a rate of 3.5% between 2007 and 2017, while population in the county of Göppingen stagnated (Statistisches Landesamt Baden-Württemberg 2017h). Both counties have a slightly higher share of elderly people compared to the state average.

Compared to other regions in Europe and Germany, the Stuttgart metropolitan area is a wealthy region. Baden-Württemberg has the second lowest unemployment rate in Germany and the third highest disposable income per inhabitant. Unemployment is low in both counties (3.4% in Esslingen, 3.7% in Göppingen - 2017), but slightly higher than the Baden-Württemberg average of 3.5%.

The larger cities exhibit higher unemployment, especially among migrant groups. Disposable income per capita is higher than state average in the two counties (Esslingen: 24,908 Euro, Göppingen: 23,985 Euro), but lower than in the state capital of Stuttgart (Statistisches Landesamt Baden-Württemberg 2017e, 2016).

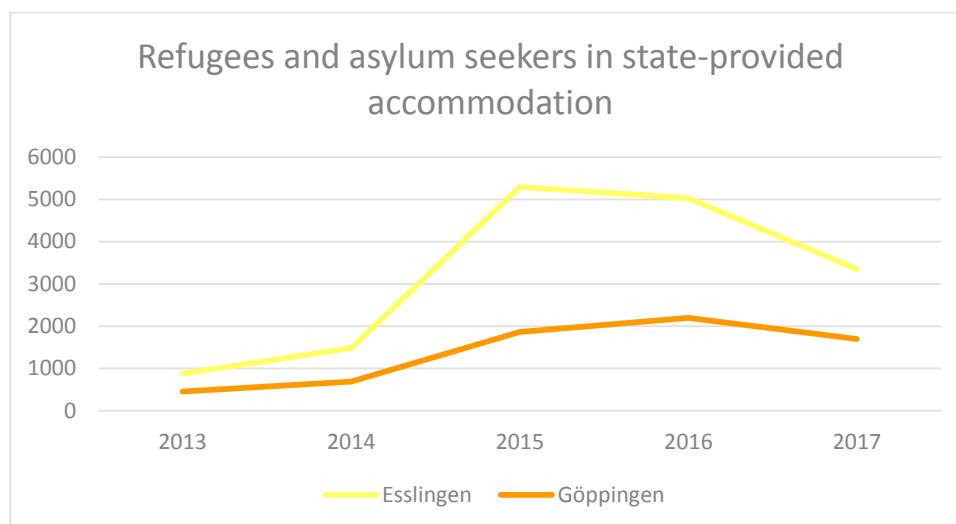
Table 3-2: Esslingen/Göppingen, main social indicators

STUDY REGION (COUNTIES)	POPULATION	POP. GROWTH (%) 2007-2017	DENSITY (POP./SQM)	ABOVE AGE 65 (%)	MIGRANTS (%)	DISPOSABLE INCOME /INHABITANT (EURO)	UNEMPLOYMENT RATE (%)	CAR OWNERSHIP PER 1,000 INHAB.
Esslingen	524,127	2.9	817	20.3	15,6	24,908	3.4	714
Göppingen	252,749	-0.9	393	21.3	14,4	23,985	3.7	745

Sources: Statistisches Landesamt Baden-Württemberg 2017a, 2017b, 2017c, 2017d, 2015b, 2017e, 2017f, 2015a, 2017g, 2017h, 2018b, 2018a;

The share of population with a migrant background is higher in the study region than the average in Baden-Württemberg (16.9% in Esslingen county, 15.9% in Göppingen county - 2017). A high share of refugees was accommodated in the study region (see Figure 3-6). In Germany, asylum seekers and refugees are assigned to the states according to a quota proportional to the total population of the state.

The same mechanism applies to the counties in each state. For the county of Esslingen, the share is 5.8% and for the county of Göppingen it is 2.8% of the total refugees assigned to the state of Baden-Württemberg (Landratsamt Esslingen 2015; Landkreis Göppingen 2016). In 2015 and 2016 respectively, the two counties in the study region reached a peak in the number of refugees. Since then the number is decreasing.

Figure 3-6: Esslingen/Göppingen, refugees and asylum seekers in state-provided accommodation


Sources: AWO Kreisverband Esslingen 2018; Landkreis Göppingen 2017

For the so-called “initial accommodation”, refugees are housed in estates and flats that are provided by the county administration. Both counties have a decentralized approach to initial accommodation: there are 126 facilities in 36 municipalities in Esslingen and 72 facilities in Göppingen. Refugees live also in more rural municipalities. A common

challenge for refugees is the search for a new dwelling (private or municipality-provided) after initial accommodation is phased out after two years, due to the tense rental market.

Characteristics of fieldwork locations

In the case study region, four municipalities were identified as suitable for a closer analysis: the municipalities of Esslingen, Aichwald and Filderstadt in the county of Esslingen, and Donzdorf in the county of Göppingen.

These municipalities represent a variety of social and spatial characteristics:

- **The city of Esslingen** is a highly urbanized area in the Neckar valley south-east of Stuttgart, having the highest population density (1,966 inhabitants/km²) and the highest share of migrants (21.4%) in the case study region (Statistisches Landesamt Baden-Württemberg 2017a). It is the seat of the county administration and an important supply center for the region. There is a relatively high proportion of unemployed persons, compared to the low level of unemployment in Esslingen county, the Stuttgart region and the whole state of Baden-Württemberg.

It is important to note that almost one fourth of the employed residents of Esslingen have completed tertiary education (Statistisches Landesamt Baden-Württemberg 2015a). After Munich and Frankfurt, the Stuttgart metropolitan region is the region with the highest rental prices in Germany. Esslingen is among the 50 German cities with the highest rental prices for newly rented apartments and these prices yearly increase by 4% (Neuhöfer 2017).

Due to this tense housing situation, many people move farther away from the employment centers in Stuttgart, increasing commuting distances. Real estate prices are substantially lower in municipalities without train connection, hence commuting from these municipalities often involves cars.

Filderstadt is an association of municipalities formed in 1975 by uniting five small, historically rural, villages. It is located on a plateau south of Stuttgart, bordering the state capital. Due to high population growth between 1950 and 1980, the municipality now has a suburban character with historical cores. While the central part of Filderstadt has a dense urban character, most of the houses in the municipality are single detached houses or row houses, both types usually with large plots of gardens and greenery. On vacant land between the five villages, agriculture is practiced.

Population density is more than double in Filderstadt compared to Aichwald, but still lower than in Esslingen (Statistisches Landesamt Baden-Württemberg 2017f). Compared to Aichwald, Filderstadt is a young municipality, with 18.7% of inhabitants being above 65 years old (Statistisches Landesamt Baden-Württemberg 2017c). Commuting to Stuttgart and Esslingen and other centres of employment is very common, however one of the largest employers in the region, the airport of Stuttgart, is partially located within the Filderstadt city limits. Between 2006 and 2016, Filderstadt experienced a population growth of above 4% (Statistisches Landesamt Baden-Württemberg 2017g).

- **Aichwald** is an association of municipalities in the vicinity of Esslingen located on a plateau, hence the topography is hilly. It consists of five small settlements with originally rural characteristics that were joined to form a new municipality in 1974. Between 1950 and 1980 the population almost quadrupled, reflecting the high economic growth in the Stuttgart metropolitan area. In this period, the original rural

estates of the villages were completed by new development areas of single-detached and row-houses.

Commuting to Stuttgart and Esslingen and other centres of employment is common, functionally making Aichwald a part of Stuttgart's peri-urban area, while maintaining its largely rural characteristics (agriculture is still practiced in the municipality). Aichwald has a high share of elderly inhabitants (average age is 47.3; 27% of the population is above 65 years old) (Statistisches Landesamt Baden-Württemberg 2017c).

- **Donzdorf** is among the municipalities with the lowest population density in the case study region (272 inhabitants/km²) (Statistisches Landesamt Baden-Württemberg 2017f). It is located on a plateau east of the city of Göppingen, at a distance of roughly 60 km to Stuttgart. The municipality consists of a core village and numerous small hamlets and homesteads.

While commuting to the cities of Göppingen and Stuttgart is common, agriculture is also still present (more than half of the municipality's area is agricultural land). Population growth was more moderate in Donzdorf than in the other three municipalities; between 1950 and 1980 the population less than doubled. Since the beginning of the 1990s, the population decreases, lately at a rate of -1.7% yearly (Statistisches Landesamt Baden-Württemberg 2017g).

Table 3-3: Esslingen/Göppingen, main social indicators of fieldwork sites

FIELDWORK SITES (MUNICIPALITIES)	POPULATION	POP. GROWTH (%) 2007-2017	DENSITY (POP./SQM)	ABOVE AGE 65 (%)	MIGRANTS (%)	UN-EMPLOYED /1.000 INHABITANTS	CAR OWNERSHIP PER 1,000 INHABITANTS
Esslingen City	91,271	0.5	1,966	20.6	21.4	62.2	611
Aichwald	7,470	-3	509	27	7.1	29.7	805
Filderstadt	45,807	4.2	1,188	18.7	17.6	36.1	609
Donzdorf	10,822	-1.7	272	23.9	10.4	39.3	656

Sources: Statistisches Landesamt Baden-Württemberg 2017a, 2017b, 2017c, 2017d, 2015b, 2017e, 2017f, 2015a, 2017g, 2017h, 2018b, 2018a;

3.2.2 Transport characteristics and transport poverty symptoms

Both road and public transport systems are very well developed in the region. Public transport coverage is comprehensive. The city of Esslingen and several other municipalities are served by frequent suburban train services to Stuttgart and other regional trains, with headways of half a hour or often less. The region is also served by long distance trains. The international airport of Stuttgart is very close to the study region.

Despite a well-developed public transport system, **mobility in the greater Stuttgart region is car-based.** Motorization rates range from 609 vehicles per 1,000 inhabitants (in Filderstadt

in the vicinity of Stuttgart) to more than 850 in rural municipalities (Statistisches Landesamt Baden-Württemberg 2018b). Ownership of cars is constantly growing.

The public transportation system is concentrated on Stuttgart and the need of commuting to the city. The railway routes lead radially from or to Stuttgart. This means that municipalities in the hilly areas around Stuttgart are less well connected. Furthermore, due to rail and road public transport being governed separately, and on different spatial levels, public buses usually do not run across county regions. Hence, while every surrounding county is well connected to the state capital, tangential connections between the counties are rare and have only recently come more into focus.

Another challenge is that **outside the valleys, bus services are less frequent to major supply centres** (frequency ½ to 1 hour). In some villages, **public transport is mostly oriented towards students**, with low service levels in evenings and during school holidays. Furthermore, mobility within municipalities (different districts or scattered parts of municipalities) is a challenge. Only in larger towns, such as in the cities of Esslingen and Göppingen, there is extensive coverage of public transportation. Some municipalities such as Filderstadt and Aichwald are formed by 5 or more historically independent villages that are not very well connected to each other by public transport. Again, existing services are mostly oriented towards the requirements of student transportation. Within such municipalities, citizen buses are providing transportation services for intra-municipal travel.

Due to comparatively lower service levels of public transportation in the hilly regions in the north and south of the study area, accessibility by car to major employment centres such as Stuttgart is much better than by public transport. This is especially evident in the southern part of the study region, located along the motorway 8 that directly connects the region with Stuttgart. Motorization rates are highest in the municipalities along the motorway.

As outlined in the introduction, unemployment in the study region is low, and income levels are high. Hence, social disadvantage and **social exclusion due to material poverty are phenomena that are rarely experienced**. Furthermore, high motorization rates and comprehensive public transport coverage result in high accessibility across the whole study region. Concluding, the individual risk to experience transport poverty is low.

Consequently, transport poverty and the mobility needs of vulnerable groups are not a priority of most transport authorities and administrations in the region. From the interviews, it became clear that they **see it as their responsibility to provide mass transport and not mobility solutions for vulnerable groups**. Special mobility needs are perceived as “individual transport” and hence not in the scope of public transportation authorities. Regarding vulnerable groups with low financial means, the responsibility is considered to be with the social departments of municipalities and counties.

This focus on basic and mass transport needs has a few major implications for vulnerable groups in the region:

- **Disadvantages due to high cost of public transport.** The ticket costs in the Stuttgart metropolitan region are high in German comparison, hence for low-income and unemployed people, the cost can be a major barrier to mobility. In Germany, many municipalities provide a monthly “social ticket” to low-income individuals at a

heavily reduced price. Such offers are made by each city and county individually for registered citizens. The county of Göppingen offers such a ticket since beginning of 2017. However, in Esslingen county, such a ticket is not offered nor planned.

- **Transport needs of vulnerable groups are neglected.** Generally, the public transport coverage is best during commuting hours on weekdays, hence those who work late nights, early mornings or on weekends can experience mobility issues. Another barrier exists for people with reduced mobility. Unlike in other German regions, special mobility services (door-to-door) for disabled people do not exist in Esslingen and Göppingen.
- **Losing sight of future challenges.** Currently, quality of life, life satisfaction and overall level of income are high in the study region. Hence, **individuals as well as local and regional transport administrations and transport authorities do not perceive future mobility in the region as a major challenge.**

However, due to high rents in the region, already today more and more people have to move further away to more remote places but need to commute to the Stuttgart region. The result is that in rural areas, the remaining population is either old age or low-income. Due to limited public transportation, mobility of low-income groups is car-based, leading to incidences of **forced car ownership**. Such incidences are likely to increase in the future.

The transport ministry of Baden-Württemberg has recognized these challenges and cross-sectoral working groups between different ministries (transport, rural development, social affairs, spatial planning) have been set up. However, on the local and regional level there is still a tendency to neglect the challenges of the future, also because the single administrations do not have the legal mandate to govern proactively. In the future, low-income and unemployed people, people with mobility impairments and elderly people in rural areas will potentially suffer the most from this development.

- **Neglect of social needs of individuals and social benefits of mobility.** Transport administrations and authorities focus on basic mobility needs; they do not consider the social aspect of traveling as significant, and do not consider its wider benefits. This is demonstrated by the fact that often their **motivation to collaborate with and support citizen bus associations is limited.**

They consider citizen buses as a service that primarily serves basic needs, so needs that they consider to be sufficiently covered. Hence, they suspect a competition between citizen buses, public transportation and taxi operators. Citizen bus associations often complain that local and regional public transport administrations misconceive the nature of citizen bus services. Even if the social aspect of these services is understood, the authorities perceive the citizen buses as "inducing demand". The wider social benefits of citizen buses are not in the scope and horizon of the clearly defined tasks and competencies of transport authorities and administrations as they are structured today. However, since 2003 citizen buses in the counties of Esslingen and Göppingen exist and the number is growing; each implementation is preceded by intense negotiations between the local communities and the transport administrations about legal issues and the operating model. Hence, stakeholders in the Esslingen and Göppingen region are

experienced in the citizen bus discussion, compared to other regions where citizen buses do not exist.

3.2.3 Ongoing initiatives

The “Competence Centre for New Forms of Public Transport” (Kompetenzzentrum neuer ÖPNV) at the Nahverkehrsgesellschaft (Local Public Transport Agency) Baden-Württemberg (NVBW) is exploring **new approaches to mobility especially in rural areas and supports their implementation**. The centre offers counselling for local initiatives to implement a community-based mobility service. Also, the state supports initiatives with funding for the vehicle and since 2018, funding for the operational costs of community transport.

An important public transport service in rural areas, especially on weekends and late-evening hours is the “**Ruftaxi**”, small buses that need to be booked in advance (at least 20 minutes). Different than demand-responsive transport, they run on regular routes with fixed timings. Transport authorities constantly improve these services. In many regions of Baden-Württemberg, a Ruftaxi can be booked via internet or a smartphone application.

More and more municipalities in Baden-Württemberg are implementing forms of **community transport**. The most common form is the **citizen bus** (Bürgerbus), a public transport service which relies on unpaid volunteers for most or all tasks, in particular for driving the vehicles. The majority of the funding of a citizen bus is raised locally in close collaboration with other local stakeholders. The vehicles used are usually minibuses or large passenger cars. While citizen buses usually run on fixed schedules and routes, there are other flexible services that have the character of an on-demand service. Customers are mostly elderly people and passengers with reduced mobility; however, citizen buses by law are a form of public transport open to the whole public.

Community transport solutions were first implemented in Germany in 1985. Since then, the number of services has increased to more than 250. In Baden-Württemberg to date, 84 citizen buses are running and 12 on-demand services. Additionally, there are numerous voluntary services with restricted public usage, such as ridesharing and carpooling services for elderly people. In the counties of Esslingen and Göppingen, citizen buses are operated since 2003. Meanwhile the number of citizen buses has increased to 13 services and several more voluntary services in varied forms.

3.2.4 Local actors and key stakeholders

The most important stakeholder of public transportation is the Verkehrsverbund Stuttgart VVS, the **transport authority** covering the state capital Stuttgart and the four adjacent counties, a region of more than 3,000 km² and 2.4 million inhabitants. The VVS is a cooperation between public transport providers in the region (50%) and the public administrations (the independent city of Stuttgart and the counties). It provides an extensive network of suburban and commuter trains, subways, light rail and buses with a total length of 7,500 km. The transport region has integrated timetables and effective connection schedules. In 2017, it carried 382 Mio passengers (Verkehrsverbund Stuttgart 2018).

In the study region, 13 **citizen bus associations** are active. Furthermore, local senior support groups run voluntary transportation services for elderly people. These associations are

embedded in the local communities and very well connected to the local administrations and economy. To better coordinate the activities of the citizen bus associations in Baden-Württemberg and Germany, a citizen bus umbrella organization was formed. Its headquarters are located in Wendlingen in the case study region.

The Nahverkehrsgesellschaft (**Local Public Transport Agency**) Baden-Württemberg (NVBW) is a member of the HiReach Take-up Group.

Figure 3-7: The Citizen Bus of UHINGEN (Göppingen county) at the train station



Source: Schiefelbusch/NVBW

Figure 3-8: Interior of the Citizen Bus in EBERSBACH (Göppingen county)



Figure 3-9: The Citizen Bus in EBERSBACH is wheelchair accessible



Source: Schiefelbusch/NVBW

Figure 3-10: Elderly people often use the Citizen Bus for grocery shopping



3.3 Greece: Naxos and Small Cyclades

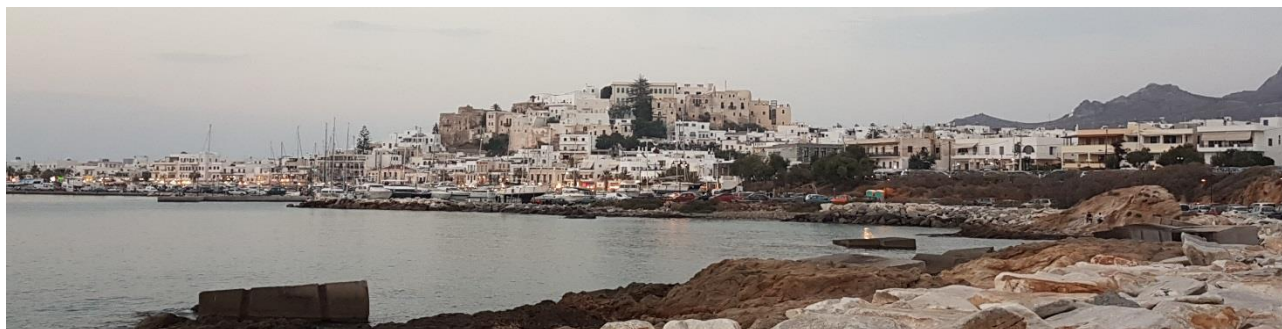
3.3.1 Background

Location and spatial characteristics

Naxos and Small Cyclades is a municipality in the Naxos regional unit, South Aegean region, Greece. It consists of the island of Naxos (the largest of the Cycladic islands) and the surrounding smaller islands of the Small Cyclades: Donousa, Iraklia, Koufonisia, Schoinoussa and several smaller islands.

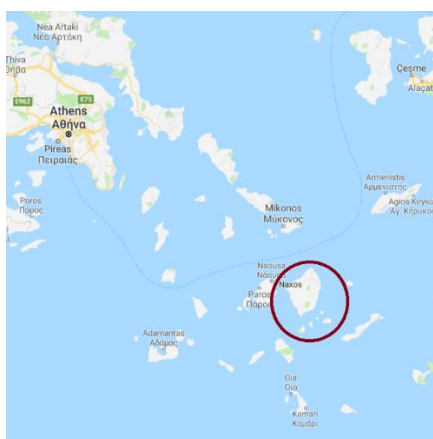
The seat of the municipality is the town Naxos. The municipality has an area of 495,76 km² and a population of 18,904 inhabitants (7,070 – in Naxos town) according to the population and housing census 2011 (National Statistical Service of Greece 2017).

Figure 3-11: Town of Chora on Naxos Island

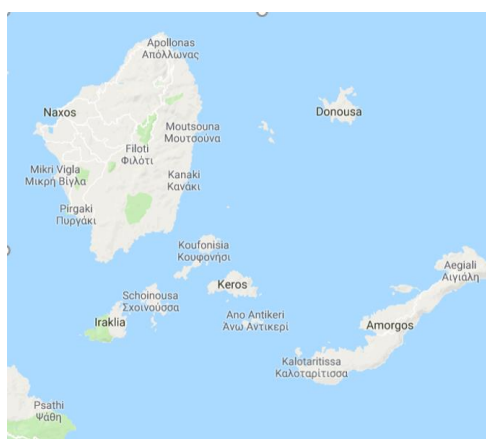


Source: Intrasoft

Figure 3-12: Location of Naxos and Small Cyclades and fieldwork sites



Cyclades



Naxos and Iraklia



Mountain villages investigated (red circle) vs Naxos town (Chora) - (blue circle)

Source: Google Maps

Within the study region the local HiReach team has selected the two islands of **Naxos** and **Iraklia**. Naxos was selected because it is a bigger island with considerable infrastructure (health, education, supply). Iraklia was selected because of it is in the vicinity of Naxos and depends on the supply centre of Naxos. It is of smaller size than the main island and does not have public transportation.

The isolation factor that characterizes the islands (being areas surrounded by the sea) is often combined with other negative factors that could create a **“double” isolation**. This double isolation generates mobility problems that are more relevant for different vulnerable social groups such as elderly people, children, women and people with reduced mobility.

Deep remoteness, isolation and problematic accessibility explain serious **development gaps** compared to continental regions, but also between big and small islands in the same island region, and even within the same island. Islands are also vulnerable ecosystems, particularly exposed to natural phenomena and uncontrolled environmental influences. Weather conditions of the island can shape mobility on and between the islands very concretely, e.g. when ferry transportation is reduced or stalled due to hazardous weather conditions.

Figure 3-13: Naxos ferry port



Source: Intrasoftware

Naxos

Naxos is **predominantly rural with dispersed settlement structure**. Besides Naxos town, there are 22 villages in Naxos island (ranging from 10 to 2,000 residents). With the exception of Naxos town (Chora) and the surrounding areas, the region is low-densely populated. Naxos port is located in Chora, together with the airport establishing the link to Athens and other parts of Greece. HiReach fieldwork concentrated on the remote mountain areas which were found the most disadvantaged in terms of accessibility and transport coverage. The distances between the mountain villages and Naxos town are significant (28-45 km), while some of these villages are located quite closely to each other.

Iraklia

After the 2011 local government reform, Iraklia became part of the municipality named Naxos and Small Cyclades. It is a small island of 17.8 km² with a population of 141 inhabitants (according to the 2011 census). The distance from Naxos town is about 1 hour and 15 minutes by ferry boat. Like Naxos, Iraklia is a **rural region** and its population is split between two villages, Agios Georgios (where the island port is located) and Panagia (the inland village 4 km from the port).

Figure 3-14: Port of Iraklia



Source: Intrasoftware

Socio-demographics and socio-economics

Like other islands in the Cycladic group, Naxos and the Small Cyclades have experienced a **rapid development of tourism**. Tourism started in Naxos since the 1980s, but during the last decade the tourists' flows have significantly increased (reaching around 500,000/year) and the tourism model has changed (from camping to good hotels and services). Tourism is the main source of income and development.

According to the fieldwork findings, the quality of life has improved in the last years thanks to tourism development, which also led to an increase in the number of permanent residents and the number of businesses, especially in the seaside/plain touristic villages. This has also had a positive impact on population income.

However, **things are different for the inland and mountain areas, which do not seem to benefit from the economic growth as they attract almost no tourism.** Income from agricultural activities, which characterize the region, is not sufficient anymore and there are almost no new work opportunities. Residents are also gradually shifting their professional activities from agriculture to tourism, which results on the one hand in decrease in the population and outmigration to more touristic places (with the exception of a few villages where people are well-known for their local attachment and do not want to leave their places of living), and on the other hand in long-distance commuting.

Table 3-4: Naxos and Small Cyclades, main social indicators

STUDY REGION	POPULATION	DENSITY (POP./SQM)	ABOVE AGE 65 (%)	UNEMPLOYMENT RATE (%)	CAR OWNERSHIP PER 1,000 INHABITANTS
Regional Unit Naxos*	20,877	49	19.3	15.2	660

* *Regional Unit Naxos includes: Municipalities of Naxos and Small Cyclades, Municipality of Amorgos*

Sources: Eurostat 2018, Hellenic Statistical Authority 2011a, 2011b, 2011c

Table 3-5: Naxos and Small Cyclades, population of fieldwork sites

FIELDWORK SITES	POPULATION
Naxos municipality*	18,904
Naxos Town	7,070
Iraklia	141

**Naxos municipality includes: island of Naxos + Small Cyclades: Donousa, Iraklia, Koufonisia, Schoinoussa and several smaller islands*

Sources: Eurostat 2018, Hellenic Statistical Authority 2011a, 2011b, 2011c

With regard to available infrastructure and services in the mountain regions, the villages usually have a mini-market, a pharmacy and a rural doctor. Other services, supermarkets and banks are available either in a big village or in Naxos town. There is one ambulance in the island, but it needs to cover long distances (up to 50 km) on the mountain road (that is not in a good condition) to reach the patients in the mountain areas. In winter, some of the most remote villages get isolated by the snow.

3.3.2 Transport characteristics and transport poverty symptoms

Due to the different nature and characteristics of transport disadvantages observed in Naxos and Iraklia, the two cases will be described separately.

Naxos

There is in general a **lack of and/or poorly maintained infrastructure**. Roads are fairly good around Naxos town and the seaside touristic areas, while they are much worse in the

mountains. There are significant differences between villages with regard to infrastructure and services available, distances and road quality.

Private cars are the most popular mode of transport in Naxos, especially in the mountain areas, both for men and women. Usually, there are two cars per household. The car is considered as the most convenient, efficient and satisfactory means of transport.

Public bus coverage is good in and around Naxos town and the seaside touristic regions, while **in the mountain areas the service is poor and very infrequent** (only two rides per day). Buses frequently do not stick to their schedules and serve many villages per ride covering many kilometres in the mountain area. For the passengers, this is translated in very long trips and travel time. The general opinion is that bus tickets are expensive, especially to reach the most remote settlements. There are reduced fares for some passenger categories (e.g. children). Children can also get free tickets for the routes they use for their after-school activities (e.g. sports).

There is a **lack of informative schemes** and geo-tracking equipment: "Smart stops" infrastructure (including apps for smartphones) to inform passengers on the time of bus arrival has been placed in 2015 but is still not operational.

The only official on-demand service in the island is a **taxi service**, but the local people do not use it, as it is too expensive for them.

Ferry boats are quite frequent in summer but there is a strong dependence on weather conditions and ticket prices are considered high by the residents. Flying is becoming more and more popular for travels outside Naxos (e.g. to Athens) due to the denser schedule and lower costs (sometimes even lower than ferry boats). In summer, for example, there are at least 6 flights per day to/from Athens.

Locals also use **sea taxis** to reach nearby islands to visit friends, to deal with legal issues (in Syros), as well as for health reasons (to reach a bigger hospital). There are three medical boats for urgent health issues, but sometimes there is no driver. In some remote areas there are serious safety issues with small ports that cannot be used e.g. under bad weather conditions. Upgrade of the existent port infrastructure is needed.

Informal ride-sharing (with no fees) is very popular in Naxos mountain regions either on a one-off or on a regular basis. The residents are usually aware of the travel needs of their neighbours and relatives and help out by driving them. There is no specific matching service, all is done through informal arrangements between friends, neighbours, relatives.

On the contrary, **cycling and walking are not popular transport modes** due to the mountainous topography of the place, the lack of appropriate infrastructure and safety concerns (e.g. dangerous driving, no cycling culture). Motorbike are much more used in comparison.

Although material poverty was not mentioned in interviews and focus groups sessions as a major issue, the link between economic situation and transport disadvantage is still very important. The **seniors** (in their majority, taking low pensions) and **low-income residents** of mountain villages who cannot afford a car or high petrol costs face serious mobility problems. These two categories are among the most vulnerable in the remote mountain villages of Naxos, together with people with disabilities and children. Their basic needs are commonly served through informal ride-sharing with neighbours or relatives. However, other needs are unmet.

Children in remote mountain areas face the consequences of remoteness of their villages from the schools/after-school activities and of the limited transport opportunities. School buses are subsidized by the regional authority and are for free for the pupils. The disadvantage is that the bus passes through many villages collecting pupils and the routes for those from the most remote places are long (up to 1 hour). Another issue is that the school buses very frequently have delays. As the schedule of these buses is aligned only with the school timings, they are not available for after-school activities.

Children need to cross even longer distances (up to 45 km) to reach their after-school activities, which in their majority are concentrated in Naxos town. Since the public bus services are inadequate in the mountain areas (bus twice a day), children cannot move independently and have to be driven by their parents. Remoteness, necessity to travel long distances and limited transport options result in tiredness, difficulties in joining after-school activities and lack of socializing.

Despite the difficulties they face, many of the residents of mountain regions do not want to permanently change their place of living (to e.g. closer to their place of work). Only the youngest showed their willingness to leave their village and, in general, the island to follow their study and career paths.

For **disabled people**, specially equipped mini-vans bring pupils to special schools, but in general there is a serious lack of infrastructure in the island for the people with mobility limitations. There is also a specially equipped mini-van to service the Centre of Creative Work for People with Disabilities. Despite these amenities, especially disabled people with mental disabilities can be considered as socially excluded in Naxos. Due to the lack of culture and education on this, their relatives tend to keep them hidden at home. This shows that the infrastructural efforts to date are not sufficient to change the situation for disabled for the better.

Travels outside Naxos are necessary for all the residents to reach services not available in the island. There are ferry boats connecting Naxos with Athens and with quite many islands, but the timetables are not always convenient (especially in winter) and tickets are considered expensive. There is an airport in the island and for the long-distance travels, e.g. to Athens, people tend to use airplanes. Thanks to the rapid development of tourism in the island in the last years, prices are sometimes cheaper than for the ferry boats.

The Municipality is investigating **new transport solutions**, for example, the utilisation of mini-vans and "combined" transport: different bus lines in mountain Naxos with frequent itinerary to big (mountain) villages, connected to other bus lines which link the capital town and the port with only the main mountain village(s). They are also considering supplying the island with the necessary infrastructure (e.g. adequate number of good small ports) and services for sea transportation within Naxos and Small Cyclades for everyday needs of the residents.

Iraklia

Due to Iraklia's remoteness and isolation, **transport disadvantage is common for all the residents**. The lack of services (including health services, public services, banks) and shops results in full dependency on the larger neighbouring island Naxos and hence on the maritime transport schedules. Although almost all the adults in the island drive their own cars, there are no petrol stations nor car repair shops.

All the above-mentioned issues are partially solved by the services of the local ferry boat line connecting Small Cyclades islands with Naxos even in bad weather conditions. Its services are highly appreciated by the residents, as they rely on it for their provisions and all the necessary travels to Naxos. The tickets for the local ferry are subsidized by the state and are free-of-charge for the Small Cyclades residents.

For inland connections, **people use private cars as there are no other means**. No public buses are available in Iraklia. Only in summer there is a bus that serves the touristic routes. Bicycles are not considered as an appropriate means of transport, due to the mountainous topography.

Transport disadvantages are more evident for those categories who do not own or cannot drive a car (**children, elderly people and people with physical impairments**). Informal free-of-charge ride-sharing is very popular as in Naxos. People also provide informal home delivery to the neighbours e.g. goods and parcels brought by the local ferry boat.

Due to total absence of relevant infrastructure there is a serious problem for people with physical mobility limitations to move anywhere in the island.

The major social disadvantage for the children is the lack of possibilities for socializing with their peers, even at school where there are extremely few children. However, they do not seem to feel socially excluded as in general, the social ties in the island are very strong.

3.3.3 Ongoing initiatives

During the HiReach project timeframe, the municipality of Naxos and Small Cyclades will be elaborating its first **Sustainable Urban Mobility Plan (SUMP)** with a strong focus on social inclusiveness, on finding transport solutions that meet the needs of the residents in both peak and non-peak months and on solving important problems such as the mobility of vulnerable groups (e.g. students). This period is ideal for testing quick-win measures and pilot solutions that could be later implemented as permanent measures.

Other initiatives already in place include:

- Mini-vans for the schools for the children and adults with special needs – subsidised to be free of charge for the users.
- Subsidies for pupils' transportation by the Municipality and the Regional authority (free school buses, free tickets for the pupils for public buses for specific hours).
- There are 3 medical boats for urgent transfer of people to the hospital to the bigger islands, but sometimes there is no driver.
- At least one taxi for each village (note, however, that taxi is almost never used by the locals due to high costs).
- Free tickets for ferry boats for residents of Small Cyclades subsidized by the state.
- Using a specific communication system recently introduced by KTEL, the public bus operator, drivers inform each other regarding traffic or issues they may encounter, so as to avoid further problems. So, for example if a driver finds himself stuck in traffic in a specific area, he would inform all the drivers so as to change routes.

3.3.4 Local actors and key stakeholders

- The Municipality of Naxos and Small Cyclades.
- Public Bus Company (KTEL).

- Taxi (companies) owners.
- Sea taxi owners.
- Local ferry boat line connecting Naxos with Small Cyclades islands.
- School authorities (primary and high school directors).
- The Centre for Creative Work for People with Disabilities.

Apart from the key local players, the knowledge, the experience and the network of contacts of **CIVINET CY-EL**, a network of local public authorities of Greece and Cyprus dedicated to promoting sustainable mobility, have also been exploited. CIVINET CY-EL is a member of the HiReach Take-Up Group.

3.4 Italy: Inner Area Southern Salento

3.4.1 Background

Location and spatial characteristics

The inner area "Southern Salento – Cape of Leuca" is an association of 18 municipalities in the extreme south-east of the Province of Lecce in the Apulia Region (Italy). It occupies the southernmost part of the Salento peninsula, one of the many *finisterrae* of the European continent.

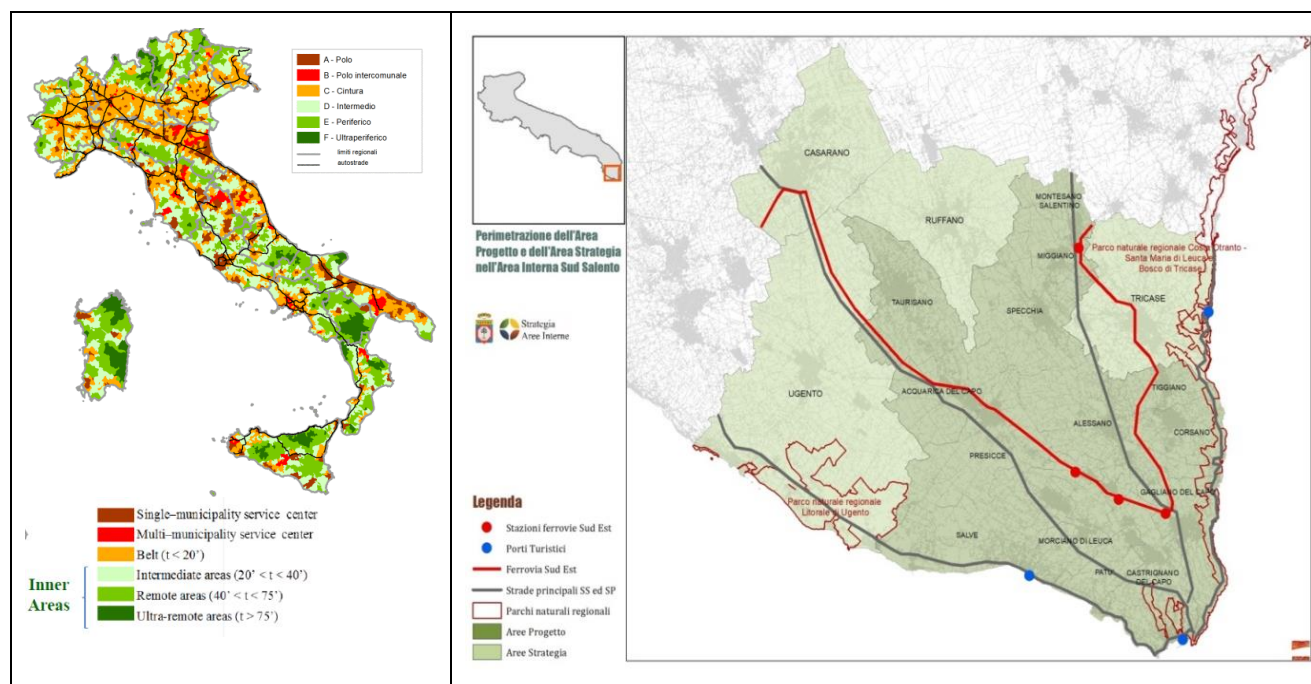
"Inner areas", as defined by the national cohesion and development programme SNAI¹ that embraces all Italian remote and mountain areas, are territories distant from centres offering essential services and thus characterized by phenomena of depopulation and degradation.

The municipalities that are part of the official inner area of Southern Salento are Acquarica del Capo, Alessano, Castrignano del Capo, Corsano, Gagliano del Capo, Miggiano, Montesano Salentino, Morciano di Leuca, Patù, Presicce, Taurisano, Salve, Specchia and Tiggiano. Four additional municipalities (Tricase, Ruffano, Casarano and Ugento) are included in the wider strategy area being the main nearest "service centres" of the Leuca Cape. The main service node is the provincial capital Lecce that is 80 km far away from the most remote town.

Fieldwork for HiReach took place in the municipalities of Patù and Tricase (see Table 3-7).

¹ <http://old2018.agenziacoessione.gov.it/it/arint>

Figure 3-15: Perimeter of the Inner Area and Strategy Area of Southern Salento

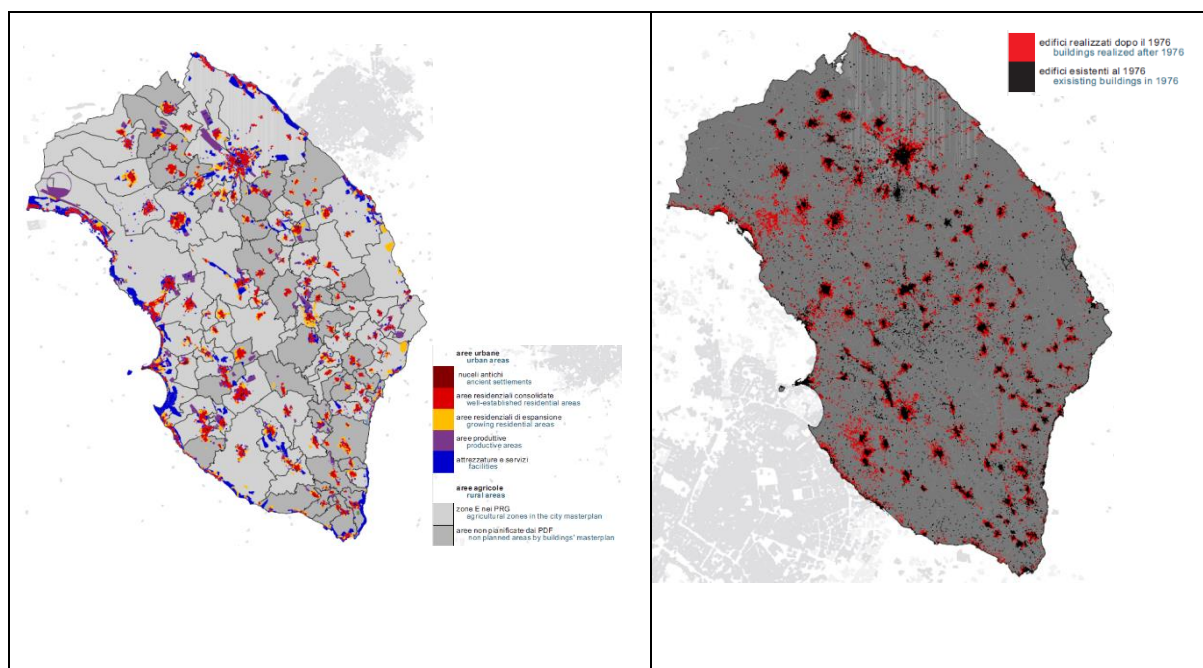


Source: Inner Area Southern Salento

The total number of inhabitants is 67,775 in the inner area and is almost double in the overall strategy area reaching 127,758 residents according to official 2017 statistics. The total area size is 469 km².

The Italian study region is a **polycentric scattered area** characterized by the presence of numerous compact historical towns but not villages nor isolated settlements. It can be classified as **remote peri-urban** with the presence of coastal settlements (marinas belonging to inner towns) and rural farms in the countryside.

When looking at the mosaic of the city masterplans of the provincial territory it is possible to note a concentration and densification of the built-up areas around almost all town centres. From the second picture, obtained selecting what has been built over the last decades, the province appears to reveal phenomena of dispersion but more along its western Jonian coast and not in the Cape of Leuca. This territory has been identified by the provincial territorial plan (PTCP) as a large widespread city or città diffusa (Province of Lecce 2001) .

Figure 3-16: Southern Salento, built-up areas and dispersion in the Province of Lecce


Source: Territorial Coordination Plan for the Province of Lecce - territories of a new modernity, 2001

On a total surface of 246 km², Salve is the largest town of the inner area (33 km²), while the two smallest municipalities are Tiggiano and Miggiano, both with an area of just 8 km². The average population density of the area is 275 inhabitants per km².

Socio-demographics and socio-economics

The majority of the towns located in the eastern part of the Salento peninsula have a total population between 1,000 and 5,000 inhabitants. The resident population of the inner area decreased by 0.6% between 2001 and 2011, whereas in the last 10 years (2007-2017) the loss of inhabitants was 2,804 in absolute numbers of (-4%).

Table 3-6: Inner Area Southern Salento, main social indicators

STUDY REGION	POPULATION	POP. GROWTH (%) 2007-2017	DENSITY (POP./SQM)	ABOVE AGE 65 (%)	MIGRANTS (%)	UNEMPLOYMENT RATE (%)	CAR OWNERSHIP PER 1,000 INHABITANTS
Southern Salento Inner Area	67,775	-4.0	275	23.6	2.2	17.1	576
Southern Salento Strategy Area (includes the Inner Area)	127,758	-2.1	273	22.7	2.3	17.5	584

Sources: Tuttitalia 2018; Istituto Nazionale di Statistica 2018; Automobile Club d'Italia 2018

The national statistics institute ISTAT calculates a “social and material vulnerability index” for all Italian cities as part of their 8mila census database²: the inner area of Southern Salento is linked to ratios with high risk and medium-high risk of vulnerability (Istituto Nazionale di Statistica 2018). Again, according to the census database, unemployment rate is higher for women (16 to 31%) and young people (23 to 52%). There is a high share of elderly people living alone (22 to 30%).

The so-called TAC industrial district (textile, clothing and shoes industries) almost disappeared in recent years due to the competition of other countries with lower labour costs (i.e. Romania, China). Until the mid-nineties it was the main industry in terms of number of employees, but from 1996 to 2014 the TAC lost more than 13.000 jobs and saw the closure of over 900 enterprises at provincial level. Despite this, some manufacturers still exist. The area is also a fast-growing tourism destination with employment opportunities increasing during the summer period.

All municipalities have a primary school. The percentage of classes with less than 15 pupils is high compared to the average of other inner areas in Apulia (19.2% vs. 13.7%). Also, the number of secondary schools is low: only 14.3% of the municipalities has a secondary school building, against 37.1% of the regional average of inner areas (Regione Puglia 2016).

The large majority of commuting trips in Southern Salento are made by private transport (61 to 66%) according to 2011 census data. The motorization rate (57 in the inner area / 59 in the strategy area) is lower than the Italian average of 62 cars/100 inhabitants but still quite high (Istituto Nazionale di Statistica 2018).

Below some of the main social indicators of the fieldwork sites can be found.

Table 3-7: Inner Area Southern Salento, main social indicators of fieldwork sites

FIELDWORK SITES (MUNICIPALITIES)	POPULATION	POP. GROWTH (%) 2007-2017	DENSITY (POP./SQM)	ABOVE AGE 65 (%)	MIGRANTS (%)	UNEMPLOYMENT RATE (%)	CAR OWNERSHIP PER 1,000 INHABITANTS
Patù	1.685	-3,3	194	24,7	4,2	15,1	561
Tricase	17.621	-1,5	407	21,3	2	13,9	596

Sources: Tuttitalia 2018; Istituto Nazionale di Statistica 2018; Automobile Club d'Italia 2018

3.4.2 Transport characteristics and transport poverty symptoms

The Salento territory is not linked up with the rest of the world by any large infrastructure. The closest motorways start from Taranto and Bari and the national railway network ends in Lecce with no high-speed trains in service. This results in **higher costs of interconnection**

² <http://ottomilacensus.istat.it/>

with vast and distant markets. However, recent investments and expansion of flights operating from the airport in Brindisi have partly reduced the gap.

At the same time the **local road and rail infrastructure of Salento is dense.** The Provincial Territorial Plan identified two main structuring elements: the "tube" of State roads, along which heavy and fast road traffic is concentrated, and the "sponge", made up of a close-knit road network of provincial, municipal and rural links (Province of Lecce 2001).

State roads SS16 and SS275 descend to the Cape of Leuca from Lecce along the Adriatic side, linking also the service centres of Maglie and Tricase. Similarly, on the Jonian side, SS101 and SS274 link the main centres of Nardò, Gallipoli and Ugento. These roads create an incomplete rhombus as the project upgrading the SS275 in Southern Salento is still in the planning phase.

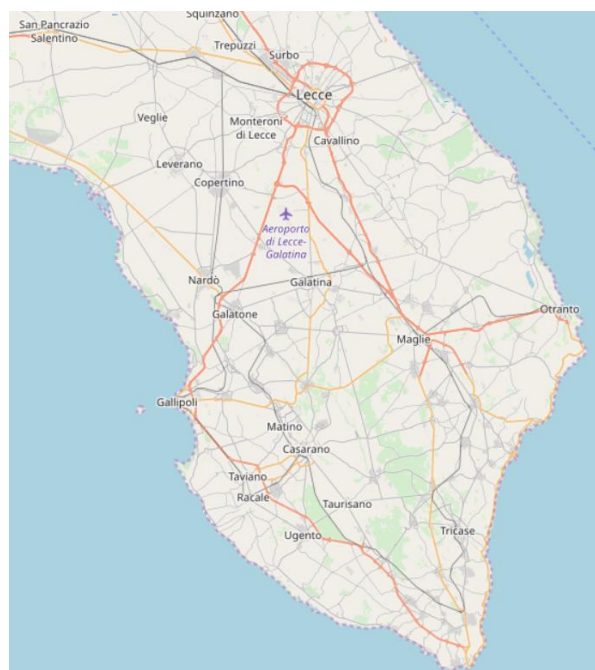
The inner area is served by the local railway company Ferrovie del Sud Est (FSE) (see In addition, the competition from private transport but also inter-urban public transport by road, the latter designed more as substitution than integrated with rail services, are the opposing elements that have up to today prevented a more intense use of the railway, the latter not always being able to provide a competitive service due to origins and destinations of trips.

Figure 3-17). Created in the second half of the 19th century mostly to transport agricultural products, this non-electrified rail network is made up of different lines that cover almost entirely the provincial territory with its 55 stations (one every 5.3 km). In August 2016 its network was taken over by the FS Group (Ferrovie dello Stato) due to financial problems at the company.

However, the **rail infrastructure's potential for passenger transport was never fully exploited and the overall performance of the service is very low** (the load factor is below 15% as reported during the interview with an expert from the transport operator Ferrovie Sud Est) due to old rolling stock and lack of upgrade and proper maintenance of the infrastructure, including station buildings.

The maximum speed has been set by the national safety authority for railways ANSF to only 50 km/h so that travel times are very long on almost every connection: the fastest train takes 2 hours to cover 66 km between the southernmost station of Gagliano del Capo and Lecce along the Adriatic line.

In addition, the competition from private transport but also inter-urban public transport by road, the latter designed more as substitution than integrated with rail services, are the opposing elements that have up to today prevented a more intense use of the railway, the latter not always being able to provide a competitive service due to origins and destinations of trips.

Figure 3-17: Road and railway network in Southern Salento


Road network



Railway network (Ferrovie del Sud Est)

Source: Open Street Map, Ferrovie del Sud Est e Servizi Automobilistici Srl 2018

Public transport by road in the area is managed by the regional consortium of PT operators COTRAP but also by FSE buses (as substitutive railway services). **The bus network is not organized on a hierarchical basis and the service is often organized only to serve students with many overlapping bus lines.** Quite often only 2 bus rides per day serve the centres of small towns. During the summer period the “Salentoibus” service, a network of direct bus lines with higher frequency, is operated to provide public transport accessibility to the coast and support tourism.

The Apulia Region has recently finalised a large bus renewal programme as part of its cohesion policy and use of EU funds for the programming period 2014-2020: 241 new buses have been purchased by the COTRAP operators. All of them are accessible to people with reduced mobility. Also, FSE Railways (which is part of the national railways) have purchased new buses with similar characteristics.

The Local Health Service (ASL Lecce) manages **special transport services for disabled users**. Currently the service is provided with 18 specially equipped minibuses (throughout the province) of 17 and 9 seats plus some cars. It only allows users to travel to mental health centres, socio-educational and rehabilitative services after a request by the local health centre. The service is totally free for the users.

School transport for primary schools, including special transport services for disabled users, is organized and funded directly by the municipalities whereas secondary school students with reduced mobility can use special school transport services organized by the Province of Lecce.

The University of Salento provides a daily transport service to students with reduced mobility with only one minibus in the city of Lecce (from home or railway station/bus stop to the university and vice versa). Only one trip per week can be organized from outside the city (provinces of Lecce, Brindisi and Taranto) depending on availability and capacity of the vehicle.

The wider theme of transport, particularly collective public transport, **was not part of the political agenda of local administrations for many years**. Now the level of attention is higher but there is a lack of knowledge about its functioning and potential, and thus in identifying proper solutions to be transposed in policies and actions. Still for many local politicians, public transport is seen as a component of tourism-related strategies or limited to school transport needs and not as a basic service for the society (i.e. for commuting purposes or for addressing transport poverty issues).

The vision of some local policy makers in the Inner Area accelerated the process of widening the scope of the local governance to include also sustainable mobility and public transport. This process has influenced the drafting of the Inner Area strategy and is progressively moving from the reclamation of improvements and investments in infrastructure (e.g. main roads) to higher level of service in collective public transport (i.e. renovation of the local railway and more frequent and faster buses and trains).

All interviewed stakeholders, experts and participants at focus groups identified mobility as crucial issue because it intercepts different dimensions such as access to work, education, family care and independency as well as work-life balance. The term and meaning of transport poverty are not known but awareness of transport poverty effects and conditions is very high.

The overall perception among interviewees is that the **collective mobility system is almost inexistent, inefficient and of very poor quality**. This also inhibits the possibility of accessing social services for some vulnerable groups like elderly people living alone or immigrants without a car.

3.4.3 Ongoing initiatives

The towns of Southern Salento – Cape of Leuca have structured their territorial strategy around the specific issue of mobility. The **preliminary strategy document** has been approved by the National SNAI Committee and the Apulia Region whereas the final strategy is currently under development and should be approved early 2019.

The Province of Lecce has drafted a **new Local Public Transport Plan** (bus only) that is now under revision by the Department of Transport of the Apulia Region. Both the draft plan and the regional guidelines specifically refer to the need for tailored services in inner areas including also more flexible transport services. None of these services are currently operated in the inner area apart from sanitary transport services. The Region has also dedicated specific **funds to inner areas for drafting tailored SUMP**s and has launched a call programme for social innovation initiatives called Puglia Sociale IN (<https://www.pugliasocialein.it>) also linked to inclusive mobility solutions.

Past experiences on the implementation of the so-called “**Territorial Time and Space Plans**” or PTTS showed interesting results both on the improvement of knowledge about mobility behaviours and on the activation of pilots to improve mobility. For instance, the PTTS of Casarano has thoroughly analysed mobility needs of students and pupils indicating

also a range of possible solutions mostly referring to the need of restructuring the local PT network and service (Regione Puglia 2018).

3.4.4 Local actors and key stakeholders

The Inner Area is managed by the **Assembly of the Mayors** and is coordinated by the municipality of Tiggiano. The mayor of Patù, Gabriele Abaterusso, is responsible for the mobility component of the strategy and is involved as deputy Take-up Group member in HiReach.

The Managing Authority of the Cohesion Programme and the **Department of Transport of the Apulia Region** are responsible for the implementation of the strategies of the 4 inner areas identified in the region, namely Monti Dauni, Gargano, Alta Murgia and Southern Salento.

The **National SNAI Committee** has designated Eng. Angelo Santo Luongo as delegate on mobility and transport issues for all inner areas. He is supporting the drafting of the strategy document including the testing of new mobility solutions linked to HiReach results.

Figure 3-18: Interviews with experts in the Southern Salento study region



Source: TRT

The Inner Area has already involved several stakeholders in the preliminary activities to set-up the overall strategy, but also for the preparation of a recent urban regeneration project: a wide list of stakeholders ranging from educational institutions to local associations is already available and some of them have been actively involved for the preparation of the HiReach focus groups.

Public transport operators are Ferrovie del Sud Est (local railway and buses), the regional consortium of bus operators COTRAP and the company Tundo Autoservizi SpA that manages all special transport services in the area. There are also several local companies operating car/minibus hire with driver.

3.5 Luxembourg: North and South-East areas

3.5.1 Background

Location and spatial characteristics

The country of Luxembourg has about 580,000 inhabitants. The city of Luxembourg is the seat of several institutions of the European Union, including the European Court of Justice, the European Court of Auditors, the Secretariat of the European Parliament, the European Investment Bank, the European Investment Fund, and the European Stability Mechanism.

The South of Luxembourg can be considered as one of the most active regions in terms of economy. Most jobs are concentrated in and around the City of Luxembourg. In 2016, the City of Luxembourg had almost 170,000 employees, 47% of the country's total employment. Most of the residents live in this part of the country. The other main economic urban zone is Belval, located on the territory of the city of Esch-sur-Alzette.

The relatively **deprived areas** are located towards the south-east and south-west borders in the former steel industry area. The North as well as the neighbouring cross-border areas can be considered rural. The population in the north of the country is more dispersed and accounts for about 80,000 inhabitants.

Figure 3-19: Road network of Luxembourg and fieldwork sites



Source: Grand Duchy of Luxembourg 2018c

The public transport network is in both cases less dense than in the economic centres. In HiReach the focus is particularly on these two areas.

The topic of transport poverty in terms of spatial characteristics is specifically related to the price of housing and land. Due to the concentration of employment in the City of Luxembourg the average advertised price differs highly between the economic centre and the HiReach focus areas. In 2015, the average advertised price for the purchase of an apartment in the territory of the City of Luxembourg amounted up to around 7,100 EUR / m² against 5,200 EUR / m² for the rest of the country and 5,500 EUR / m² for a house in the City of Luxembourg against 3,900 EUR / m² for the rest of the country (Conseil Economique et Social 2017).

The same is true for the cost of constructible land. The median price of land located about 30 minutes from Luxembourg-Ville is about 38% of the median value in the capital. At a driving distance of 60 minutes from the capital into the heart of the fieldwork sites, the median price is five times lower than the median price recorded in Luxembourg City.

Socio-demographics and socio-economics

A particularity of Luxembourg is its high level of multiculturalism. People of many different nationalities reside in the country. Only 55.5% of the population has the Luxembourgish nationality, of which a high proportion has parents of another nationality. Over 16.4% of the residents have the Portuguese nationality, 6.6% French, and 21.5% of the population has another nationality. The majority of cross-border commuters and families have the nationality of their place of residence (e.g. French in France). However, a starting trend can be observed of young families, even of Luxembourgish origin, due to the high prices of housing, to move cross-border.

There is a large difference in terms of risk of poverty per nationality and social group within Luxembourg. The poverty risk is 7.9% for the residents with the Luxembourgish nationality, yet rises up to 30% for Portuguese. This seems mainly related to the difference in access to the job market as well as the time of residing in the country.

From the 1960s on Luxembourg developed an important banking and related service sector. About 35% of its GDP comes from the financial sector. In total, the service sector accounts for around 78% of the economy.

Public administration is almost fully taken care of by residents with the Luxembourgish nationality. The financial sector specifically recruits on the basis of achieved level of higher education and experience. The share of cross-border commuters decreases higher up the management level (Le Portail statistique du Luxembourg 2017). The tertiary service jobs (e.g. shops, restaurants, day care, commerce) are filled by cross-border commuters and others (e.g. cleaning, company restauration, and the construction sector) with lower educated residents, of which a large share of Portuguese and an increasing amount of eastern European workers.

About 5% of the population suffers from material and social poverty and 15% has an income lower than 60% of the average (21,200€/year). Most suffering from poverty are single parent families. Likewise, there is a risk for elderly over 65, yet the latter are compensated with social transfers. Luxembourg welcomes about 2,000 to 2,500 refugees annually (Ministry of Foreign and European Affairs 2017).

Table 3-8: Luxembourg, main social indicators

STUDY REGION	POPULATION	POP. GROWTH (%)	DENSITY (POP./SQM)	ABOVE AGE 65 (%)	MIGRANTS (%)	UNEMPLOYMENT RATE (%)	CAR OWNERSHIP /1,000 INHABS
Luxembourg state	602,005	2,4	215	14	47.9	5.5	672

Sources: OECD 2018; Grand Duchy of Luxembourg 2018b; World Bank 2017

3.5.2 Transport characteristics and transport poverty symptoms

Luxembourg has the **highest number of vehicles per capita** (672 cars / 1,000 inhabitants) in Europe. About 97% of the households within Luxembourg have at least one private car. On average there are about 1.4 cars per household (TIRLux 2017).

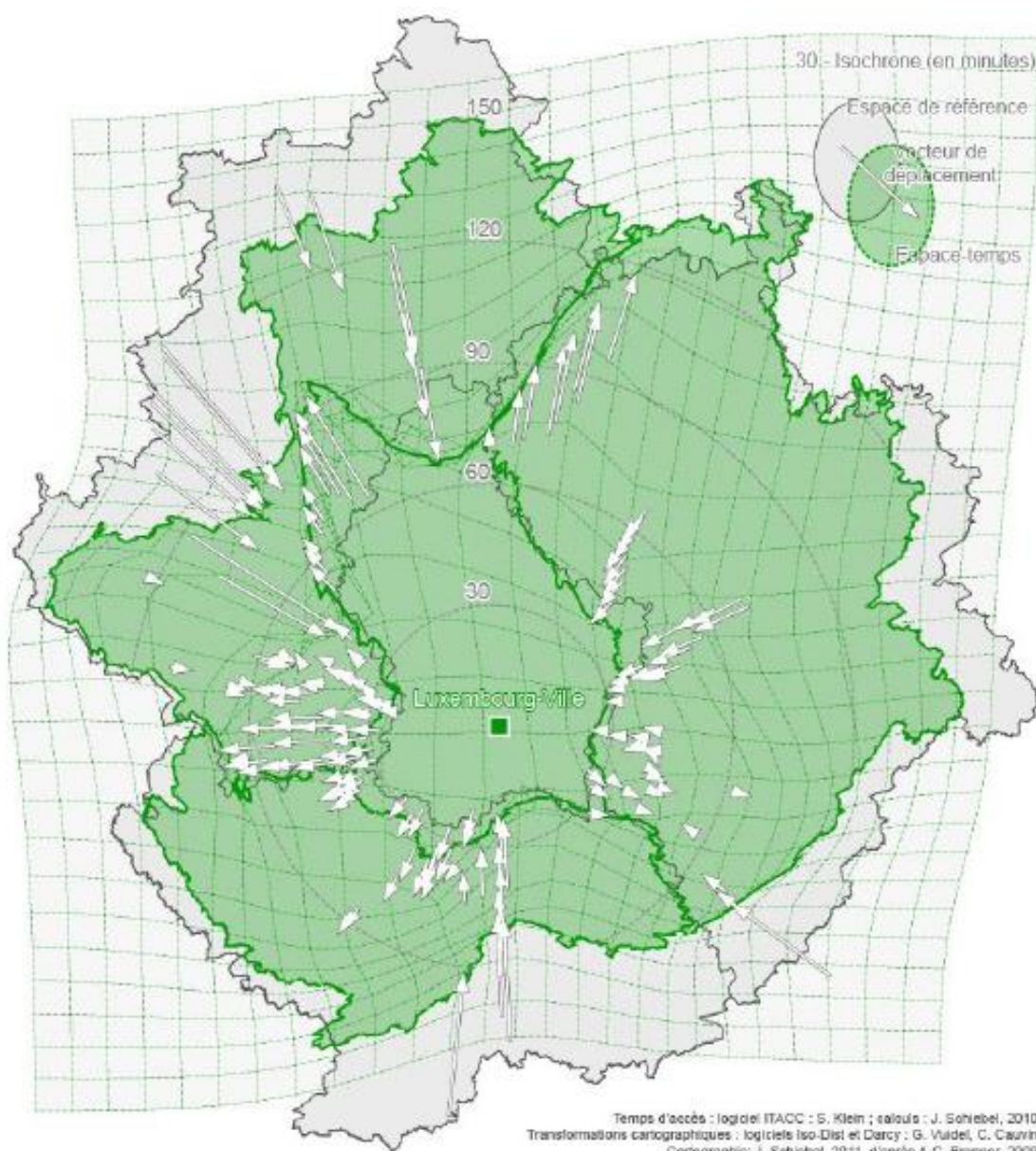
Most households without a private vehicle are resident in the City of Luxembourg and/or they are mostly single-person households whose age is between 18 and 24 years old, followed by the age group above 75 years old.

A particularity of the mobility in Luxembourg is its **cross-border traffic**. Almost 60% of the about 410,000 country's workforce commutes daily between Luxembourg and neighbouring regions in Belgium, France and Germany. Over 30% of the car traffic in Luxembourg is cross-border.

Within Luxembourg state about 76% of the population lives at 300m of a bus stop, 6% at 1,000m or more (Klein and Schmitz 2011). The main public transport provision is organized by the Ministry of Infrastructure and Sustainable Development for the regional transport (RGTR), by the city of Luxembourg (AVL) and by the communities of the south (TICE). Train transport is organized by the national rail operator (CFL). The Transport Community (Verkéiersverbond) is responsible for the ticketing and information system.

Only 7% of the daily cross-border commuting is done by **public transport** (i.e. bus and train, either as a sole mode for about one third of them or by combining it with a private car (park and ride)). This low use of public transport is probably the consequence in part of insufficient accessibility, especially in case of a multitude of destinations of the commute (e.g. school and work).

A study carried out in 2009 identified that 40% of the cross-border regional public transport stops, mainly bus stops, are close (i.e., up to 5 km) to the Luxembourg border. About 12% are located within a reach of 5 km up to 10 km from the border. About 27% of the stops are in a range from 10 up to 30 km yet are mainly train stops. In the following graph has been tried to visualize the difference in accessibility during peak hours towards the economic center, Luxembourg City (Schiebel et al. 2012).

Figure 3-20: Luxembourg City , difference in accessibility during peak hours

Source: Schiebel et al. 2012, p. 10

The transport infrastructure of Luxembourg is concentrated on the main car and train access towards Luxembourg City . Access by the main highway and rail based public transport to the country's economic centre is very convenient and fast, while there are relatively long distances to cover from all cross-border residences that are beyond these main transport corridors. Reaching a trip destination other than Luxembourg City , or multiple destinations, is much more problematic.

Whereas the population in the South of Luxemburg benefits from a relatively high access to public transport this is not the case in the northern parts of the country.

The combination of concentration of the economic activity in the south, large differences in real estate market prices, yet also a widely shared desire to access home ownership (69% of home ownership) leads to an **increasing distance between home and job location**.

In particular the younger generations tend to move further away from the cities toward the urban periphery or rural areas, or even beyond the borders of the Grand Duchy. This creates a diffuse urbanization resulting in longer and longer journeys and an increased need for mobility and higher **incidence of transport poverty due to a discrepancy with the present offer**.

Besides the main public transport offer three specific public transport services are offered for the residents of Luxembourg, adapted to the needs of **people with reduced mobility** and allowing them an active participation in social life and an increase in autonomy (see Section 3.5.3).

A recent study shows that in the areas with low levels of (or no) public transport provision, the “car budget” is double compared to the highly urbanized areas and consumes 20 up to 30% of the household revenues.

Two thirds of the population in Luxembourg lives in areas with predominantly rural characteristics. The north of the country is more dispersedly populated and accounts for about 80,000 inhabitants. It is more rural and lies in the Ardennes.

In 2010, almost 44% of the country's workforce was commuting daily to Luxembourg from neighbouring regions in Belgium, France and Germany (Grand Duchy of Luxembourg 2018d). Our focus has been on Luxembourg residents living close to the southern border.

Within those groups not all households in this area can be considered transport poor, as they may either be able to use public transport to reach their main destinations, or due to a well-off socio-economic situation have easy access to car usages, without it **consuming a high share of their household budget**.

Nevertheless, a large group of households can be considered at risk of transport poverty; the root causes of which are in those cases a mix of the socio-economic situation of the household, the spatial and economic characteristics of Luxembourg, the transport offer in comparison to the location of their activity destinations (e.g. work, leisure, etc.).

A choice of living in a certain area is based on multiple aspects. The price of housing is presently one of the most important variables; hence, the socio-economic situation of the households determines to an ever larger extent the “choice” of the place of residence. The present transport offer is also taken into consideration, yet often it is taken for granted that all transportation has to take place by car. This leads to situations where transportation could take up to 30% of the household budget, depending on the household income, and the available mobility options and accessibility are low in comparison to the need of mobility for a certain level of quality of life.

3.5.3 Ongoing initiatives

Public transport is highly subsidized in the country of Luxembourg. With a 2€ ticket it is possible to travel for two hours everywhere in the country. Children and young people under 20 travel for free. A monthly ticket costs 25€ within a specific zone, and 50€ for unlimited travel. The government just announced to make the whole public transport free

for all travellers (December 2018). Travel outside the country with public transport is covered by the pricing schemes of the respective neighbouring countries. A call-a-bus service is organized within the City of Luxembourg. The price is a little higher than the normal public transport yet set at 2€ for disabled travellers likewise for their accompanying person. There are specific cross-border fares for travel on the regional bus service from and towards Luxembourg as well as the Luxembourg national and city public transport operators.

In Luxembourg the following three services are noteworthy when considering **transport services for the HiReach target groups**:

- The "CAPABS" service transports students that need differentiated education, as well as disabled employees to social workplaces or centres for the physically and/or multi-handicapped. In 2016, this service carried out 686 trips daily and is organized by the Ministry of Sustainable Development and Infrastructure.
- The "ADAPTO" service provides transport for occasional trips of disabled citizens and others with permanently reduced mobility.³ At the end of 2015, about 5,500 residents had an Adapto card, as so to say potential customers. The service can be used for occasional trips up to a maximum of 15 times a month.

The service is available on the territory of the Grand Duchy of Luxembourg 7 days a week from 7am to 10pm (on Fridays and Saturdays departures are allowed until midnight). The customer buys a ticket from the driver at the start of the journey. A single trip costs 5€, a return trip 8€, also for any accompanying person. A trip has to be booked at least 1 up to 2 days in advance. The passenger can call any of the 27 aggregated transporters.

- The "Bummelbus" is transport on demand running in the northern part of Luxembourg state.⁴ Its service area includes 39 municipalities. The Bummelbus complements available public transport for the 80,000 inhabitants. All citizens have access to this service for short-distance journeys, especially within the municipalities and neighbouring villages / towns. The cost per trip depends on the distance, between 2 Euros for a trip below ten kilometres to 7 Euro for a trip up to 35 kilometres. Tickets for children can be obtained at a reduced rate. The service is presently run with 50 vans (up to 9 places).

It is part of a social reintegration initiative: the drivers were all unemployed before taking up the job as a driver. Through a two-year maximum contract they are offered an opportunity to requalify for the job market. The Bummelbus offers a means of transport for adults to go shopping, for medical visits, visiting friends, leisure and work. It allows families to bring their children to leisure activities. Young people who don't own a car can also use it.

³<https://guichet.public.lu/en/citoyens/transports-mobilite/transports-commun/cartes-transports/carte-mobilite-reduite-adapto.html#bloub-1>

⁴ <http://www.fpe.lu/services/bummelbus/>

3.5.4 Local actors and key stakeholders

The **Ministry of Infrastructure and Sustainable Development** (MDDI) is responsible for the organization of specific transport services for persons with permanent disabilities, i.e. disabilities that restrict their autonomous mobility and do not allow them to travel freely by car or public transport. About 5,500 Luxembourgish residents have an Adapto card and can potentially make use of the service. A request first has to be sent to the Ministry, Info-handicap, or the Adapto service desk. The Adapto transport service complements public transport by offering individual journeys carried out by recognized bus companies using specially equipped small vehicles.

Since 1993, the **National Disability Information and Meeting Centre** (Info-handicap) assists persons with disabilities, their families, professionals and provides specific information. The service benefits from an agreement with the Ministry of Family and Integration. Info-handicap operates as a federation bringing together (in 2013) 53 organizations of and for people with disabilities that are active in many fields. Some of its members are managers of services and institutions, while others are self-help or support groups. In-handicap has a consulting role towards the Ministry as regards the organization of disabled passenger transport.

The **Luxembourg Reception and Integration Agency** (OLAI) is in charge of implementing the Grand Duchy of Luxembourg's reception and integration policy. The integration policy applies to all foreigners, that is, to European Union citizens as well as to third-country nationals. OLAI also organizes the reception, accommodation, and social supervision of applicants for international protection.

The Verkéiersverbond (**Transport Community**) is a public entity that operates under the responsibility of the Ministry of Infrastructure and Sustainable Development. It provides public transport information and advice and makes proposals to the ministry for schedules, lines and tariffs.

It tries to work in close collaboration with and integrates the services of its mobility partners i.e. the City of Luxembourg Buses (AVL), the Luxembourg National Railways Company (CFL), the Luxembourg Federation of Bus Operators and of Autocars (FLEAA), regional bus scheme (RGTR) and Intercommunal Person Transport in the Canton of Esch-sur-Alzette (TICE).

Created in 1998, the **Forum for Employment (FPE)** is a non-profit organization that assists unemployed persons (unemployment rate in 2018 was 5.8%) to get back on the job market. The organization covers the entire northern part of the country as well as certain communities in the west. The social objectives of the organization are to initiate and support initiatives against unemployment. They provide the unemployed that are engaged within the FPE with an opportunity to acquire professional experience as well as accompanying vocational and social training. Through active collaboration with employers and adequate work-placement projects for each age and profile of employees, they help them to (re-)integrate into the job market.

Since 2012, the FPE receives an annual co-funding from the Ministry of Labor and Employment. The funding rate is based on the number of supervised workers. The contribution in own revenue for the Employment Forum amounts to about 30%. The cooperation agreement for 2017 provided for the supervision of 370 employees.

They are offered first a fixed-term contract for 5 months, that can be renewed up to the legal limit of 2 years. Other contracts in the form of a traineeship are also used. In total 630 unemployed people were engaged in 2017, of which 178 within the frame of the Bummelbus, the majority as driver.

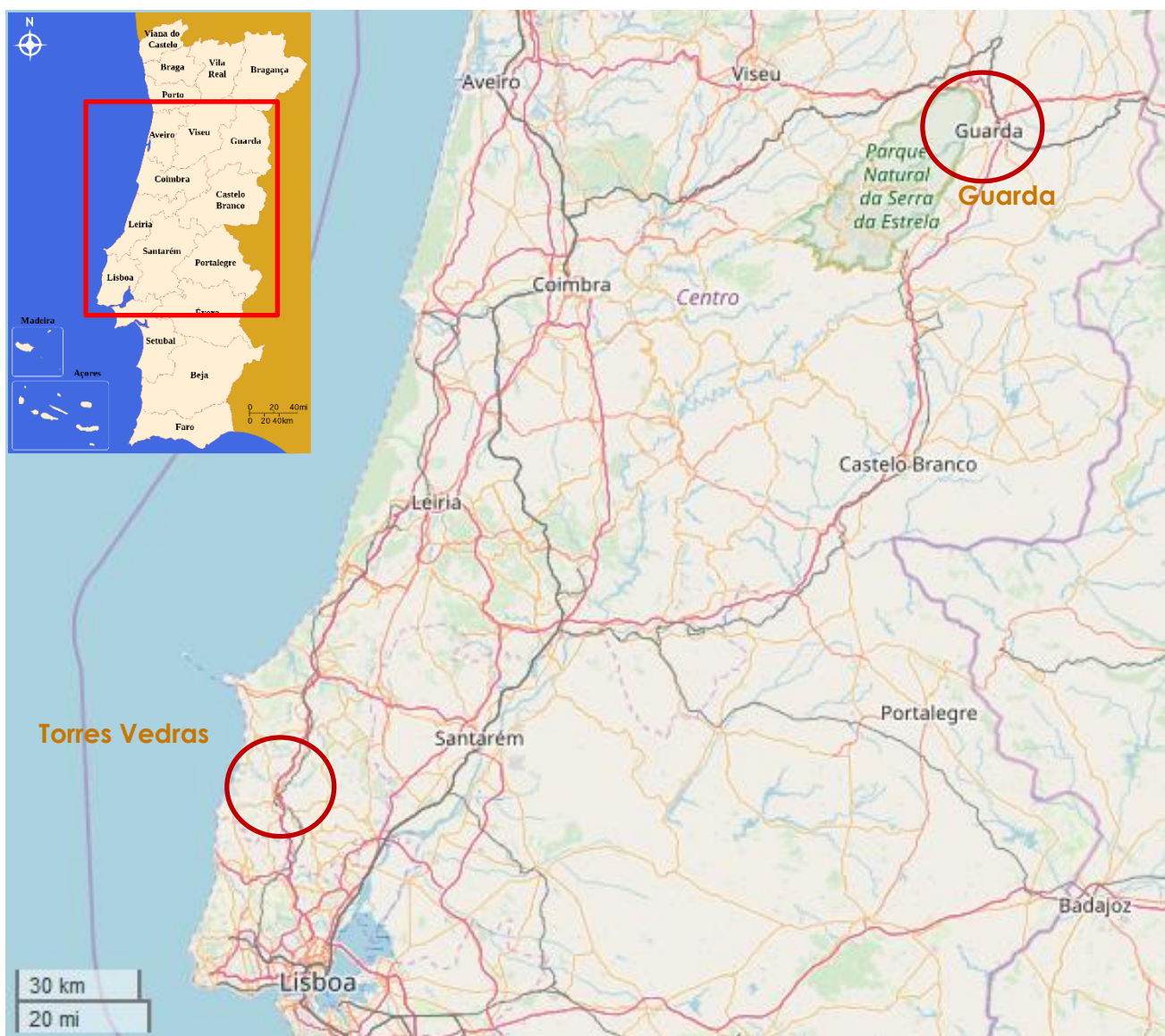
3.6 Portugal: Guarda and Torres Vedras

3.6.1 Background

Location and spatial characteristics

In Portugal, two fieldwork sites were selected: one in the city of Torres Vedras, north of Lisbon, and one in the city of Guarda, in the mountains. In Torres Vedras, only interviews were conducted, while in Guarda both interviews and focus group sessions were organized.

Figure 3-21: Location of Guarda and Torres Vedras in Portugal



Source: Open Street Map, Wikimedia Commons

Guarda

The study region lies in the northeast of Portugal and features Guarda as the largest city in the district. Guarda is the highest city in continental Portugal (altitude 1,056 m), located in a mountainous area, nestled to Serra da Estrela (the highest mountain in mainland Portugal).

The municipality of Guarda comprises 43 parishes. In the rural areas there is forest-related and some agricultural activity.

Guarda is a municipality of 42,000 inhabitants scattered across a 712 km² territory. The area can be classified as mountainous and monocentric, with an important urban area (City of Guarda), a few small-sized villages and many (very) small rural settlements.

Figure 3-22: Guarda



Source: TIS.pt

Torres Vedras

Torres Vedras is a municipality located approximately 50 km north of the capital Lisbon, on the west central coast of Portugal. It is a small but rather vibrant community, with a track record in mobility policies and the city where the CIVITAS FORUM 2017 was organized. The population density of Torres Vedras is high due to its proximity to the country capital.

Figure 3-23: Torres Vedras



Source: TIS.pt

The municipality of Torres Vedras comprises 13 administrative parishes with differences in terms of population density, ranging from 412 to 72 inhabitants per km².

Torres Vedras counts 79,000 inhabitants on a 407 km² territory. The population is dispersed across 21 agglomerations, many with a population of less than 200 inhabitants. About 25% of the population live in the city of Torres Vedras (which makes it a microscopic city at EU level, with only roughly 20,000 inhabitants). Nearly 55% live along the coastline and the remaining 20% live in more remote and less accessible areas.

Socio-demographics and socio-economics

Guarda

Deep rural settlements are inhabited mainly by (middle-aged or) elderly people. The younger population is concentrated in the main City of Guarda.

Elderly people living in deep rural and peripheral territories face increasing mobility problems, as the public transport offer is limited. They quite often have to resort to taxi services that are far more expensive and only available in some places.

People living in deep rural areas tend to have a low income and, hence, difficulties to afford a private car. They are often not employed and live from local agricultural and forest activities.

Some of the main indicators concerning target groups at risk for transport poverty are listed below.

Table 3-9: Guarda, main indicators concerning target groups at risk for transport poverty

DIMENSION	INDICATOR	GUARDA	PORTUGAL
Transport	Motorization rate	663	559
	Modal share of public transport	10.1	19.7
Elderly people	Old-age-dependency ratio	31.9	28.8
	% people above 65 years old	20.9	19.0
Low income and unemployed	Purchasing power per capita	96.3	100
	Unemployment rate	13.1	13.2
People living in rural and deprived areas	Population density (per km ²)	59.7	114.5

Source: PORDATA 2018

Torres Vedras

According to transport experts interviewed, there is a "**digital divide**" in Torres Vedras. Many old persons do not have a smartphone or have adapted mobile phones with big buttons and shortcuts to emergency and phone numbers of their relatives. This is due to the persistence of high illiteracy rates.

Some of the main indicators concerning target groups at risk for transport poverty are listed below.

Table 3-10: Torres Vedras, main indicators concerning target groups at risk for transport poverty

DIMENSION	INDICATOR	GUARDA	PORTUGAL
Transport	Motorization rate	615	559
	Modal share of public transport	18.5	19.7
Migrants and ethnic minorities	% of foreign-born population	3.9	3.8
Elderly people	Old-age-dependency ratio	30	28.8
	% people above 65 years old	19.6	19.0
Low income and unemployed	Purchasing power per capita	93.2	100
	Unemployment rate	10.1	13.2
People living in rural and deprived areas	Population density (per km ²)	195.2	114.5
	Illiteracy rate	5.8	5.2

Source: PORDATA 2018

3.6.2 Transport characteristics and transport poverty symptoms

Both Torres Vedras and Guarda are **car dependent cities** (as shown by high motorization rates) and personal mobility is not easy without a car. All categories of vulnerable groups (with the exception of the ones living in the urban centre) are to a certain extent regarded as 'transport poor'.

The majority of the population is **dispersed across the territory**. Some services are concentrated in the city centre and others, such as a popular retail park or the university, are located in areas that can hardly be accessed by any other mode than by car. Hence, those who don't have access to cars increasingly face unmet mobility needs, as public transport services are reduced more and more due to the decreasing ridership.

Guarda

The municipality of Guarda features higher motorization rates than the average of the country and, consequently, a much lower share of public transport usage in a wide and sparsely populated territory. The number of old people living in the region is also higher than the national average.

Guarda has a railway station (about 3 km from the centre), which includes a small freight terminal and offers international services for passengers towards Salamanca and Madrid, some domestic services to the surrounding municipalities and districts and to the capital Lisbon.

The region is served by some important motorways, all of which are tolled.

The availability of road infrastructure is widely acceptable, with some settlements being served by small local roads. During rough winter times, some roads are closed due to icy conditions. Public transport frequency from the small villages to the city centre is limited to one or two trips per day and none on weekends and during school holidays. The urban service in the city of Guarda features 5 public transport routes and taxi offer has been

declining due to lack of usage, especially in remote settlements and even in the city, during the night.

There is no in-depth knowledge about transport needs in the region, especially concerning the population that is more isolated and has no direct link with the local associations and NGOs that operate in rural areas. They might need tailor-made services, however due to lack of evidence about their actual requirements, to date it is difficult to design and implement such solutions. The municipality, up until now, has been mostly concerned with the mobility of school children, but is now assuming new responsibilities as transport authority. Vulnerable groups' mobility needs are therefore moved to the top of the political agenda.

Vulnerability to transport poverty often depends on people's physical abilities. Especially elderly people who are not able to drive anymore themselves are suddenly becoming dependent on the available public transport services and their personal support networks. It was particularly striking that the elderly people in Guarda showed a **strong reluctance towards using technical and digital devices** (smartphone, internet and mobile apps), specifically among those who live in rural villages, whereas the elderly people who live closer to the city typically are more acquainted with such things.

Mobility needs are more often expressed among men, who enjoy going out with friends and going to the city to visit relatives. Elderly people, especially women that live in rural areas, do not express many mobility needs, except for punctual medical appointments and the visit to the city market. That **women** did not mention social needs (meeting relatives and friends) is insofar striking as it can be assumed that they are also interested in visiting relatives and friends. Such an observation may support the conclusion that the social needs of women have been neglected for a long time, and particularly when their transportation needs are concerned.

The **unemployed group** disregard local PT services and have a negative perception about it, arguing that it does not fit to their current lifestyles. It is also considered expensive.

Vulnerability to transport poverty is especially felt by the small **group of people that has not a direct access to car**. Transport poverty would even be higher if there was not the existence of social community links between the population. The situation is also improved due to several itinerant services that move around the villages in designated days to conveniently sell goods and due to the increased role that Internet plays in terms of facilitating remote access to services (e.g. banking, or postal) and goods that otherwise would be unreachable. This has significantly diminished the need to carry out some trips. However, as pointed out above, especially the elderly are hesitant to use the internet, hence these services are not accessible to everyone.

Public transport is not regarded as good, mainly due to the lack of frequency. The concept of forced car ownership seems to be valid for the Guarda case study as Guarda has a much higher share of car ownership than the average of the country.

Torres Vedras

The modal split in Torres Vedras, according to the National Institute of Statistics, shifted away from sustainable modes between 2001 and 2011. During this period, the share for soft modes, including walking, declined from 30 to 14% while the share of private cars grew from 55 to 66%.

Nowadays, according to a recent local mobility and transport study (Camara Municipal Torres Vedras 2017), about 40,000 vehicles enter the city every day. Because of its **proximity to Lisbon** and good connections with public transport by road, Torres Vedras has become a popular place for long-term parking among those commuting into Lisbon. About 10,000 people commute from Torres Vedras to workplaces and schools in the capital and the cars they leave behind are creating urban design and parking space problems for the city.

There are currently **several public transport providers** in Torres Vedras. One can find 4 road PT operators (Barraqueiro Oeste, Boa Viagem, Mafrense and Rodoviária do Tejo). The municipal company that manages the bike-sharing scheme (called "PromoTorres") also manages the on-street parking areas. Taxi coverage is not ideal, because most taxi drivers work by phone and have private agreements with companies and institutions.

In consequence, sometimes the offer in small parishes ceases to exist, making the local population even more isolated. There is a rail station and rail track linking Lisbon to Torres Vedras but this service has been diminishing dramatically and nowadays one cannot label it as a public transport service anymore (a passenger seeking to travel from Lisbon to Torres Vedras takes three times more time by rail than by bus and has to make several interchanges).

The road PT service between Lisbon and Torres Vedras can be called a "rail service performed with buses", because the number of users is very high and it should ideally be transferred to rail (it would be the optimal and environmental-wise use of existing resources). With regard to transport of injured or ill citizens, the service is mainly provided by first aid non-governmental organizations (NGOs). They provide such assistance in the frame of contracts established directly with the national government for social security.

All in all, considering the above-mentioned characteristics of the two territories (Guarda and Torres Vedras) and the higher concentration of diverse rural-related characteristics in the first of them, it was decided to conduct the in-depth focus group workshops specifically in the region of Guarda.

3.6.3 Ongoing initiatives

Guarda

There is strong political support from the **Municipality of Guarda** to the HiReach project (member of the Take-up Group). It seems that this is the first consistent and well-structured initiative implemented in the region with the objective to conduct research and deploy "soft" mobility policies capable of fulfilling the needs of people who live in sparsely populated areas. Previous experiences were oriented to the need to build infrastructure, to improve access in the area, especially for private vehicles.

Torres Vedras

The city of Torres Vedras is developing a large urban bicycle road network to complement the existing transport network for commuting to schools and workplaces. Currently there are 34 km of cycle lanes in the council and the city wishes to reach a 40-km milestone soon. The cycling network expansion will also include supporting facilities such as bicycle parking and docking areas. The objective is to raise awareness that cycling can be a convenient option to commute and not only for leisure.

There are four bus lines in the city, run by the public transport operator Barraqueiro. The municipality also runs a door-to-door van which is dedicated to people with mobility impairment (between 2013 and 2016 a total of 1.722 trips were performed with this service).

The city of Torres Vedras belongs to a national network of 25 cities with charging infrastructure for electric cars: the MOBI.E Project.

The municipality has introduced a "walking bus" with three different routes, for students wishing to go to school in a group, duly supervised by municipal staff. However, acceptance and participation rates are currently low (about 4 students per route/day). To leverage the scheme, the municipality understands that there is a need to "gamify" this initiative and make it more appealing for students, colleagues and schools involved (with specific awards for each stakeholder).

To conclude, the city is very **active in the development of mobility initiatives**, although it can be argued that most are urban-centered (e.g. the bike-sharing scheme and the door-to-door public transport service) and there is a lack of action outside that territory.

3.6.4 Local actors and key stakeholders

Guarda

In Guarda these are the main local actors and key stakeholders that are of interest for the HiReach project due to the role they play in helping people fulfil their mobility needs:

- Municipality of Guarda
- Parishes
- Rural police
- Public transport operator
- Social security
- NGOs, such as a religious organization that is a social service provider.

Figure 3-24: Interviews with stakeholders in Guarda



Source: TIS.pt

There has been a keen interest of the interviewees in the project, especially among the presidents of isolated parishes. Rural-based stakeholders are not used to being in the focus of such projects. Hence, their expectations are fairly high.

Torres Vedras

In Torres Vedras the main local actors and key stakeholders include:

- Municipality
- Parishes
- Public transport operator
- NGOs that provide transport solutions to vulnerable people.

Figure 3-25: Interviews with stakeholders in Torres Vedras



Source: TIS.pt

3.7 Romania: Buzău

3.7.1 Background

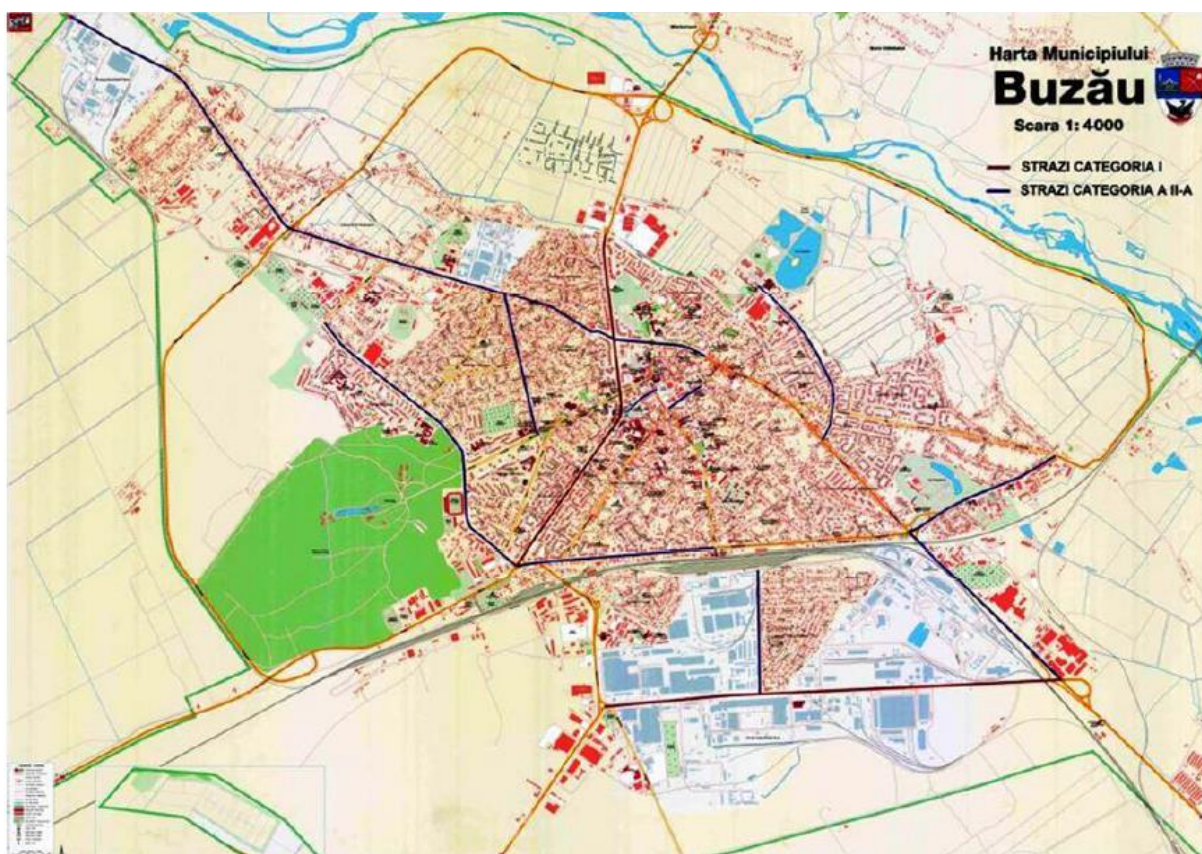
Location and spatial characteristics

Buzău city is the capital of Buzău county, in the South Eastern part of Romania. It is located in the central area of the county, on the right bank of the Buzău river, at an altitude of 101 meters above sea level. The distance to Bucharest is about 100 km. The area of Buzău city covers ca. 82 km².

Buzău is located at the junction of 3 main roads:

- E85 Bucharest – Siret (Ukraine border)
- DN1B Ploiești – Buzău
- DN2B Buzău – Brăila (towards the Republic of Moldova).

Figure 3-26: Main roads in Buzău



Source: City of Buzău 2016

The European road E85 starts in Lithuania and from there runs south through Belarus, Ukraine, Romania and Bulgaria until Greece, thus linking the southern and northern part of Europe. National roads passing through Buzău connect Transylvania with the Danube ports and the Black Sea coast. Also, Buzău is an important railway node for both freight

and passenger transport. Due to its location, Buzău is an attraction point for transit, and also for commuters.

Socio-demographics and socio-economics

Buzău city is the main socio-economic and industrial center in Buzău county.

On 1 January 2017, according to the National Institute of Statistics, the municipality had a stable population of 134.457 inhabitants. A downward trend can be observed: in 2011 Buzău still had 140,875 inhabitants, and 148,839 in 2002. According to NIS data, between 2011 and 2017 there has been an increase in the number of elderly persons, while the number of children and adults is constantly decreasing (National Institute of Statistics of Romania 2018).

Table 3-11: Buzău, main social indicators

STUDY REGION AND FIELDWORK SITE	POPULATION	UNEMPLOYMENT RATE (%)
Buzău City	134,457	0.73 ¹
Nicolae Titulescu and Simileasca neighborhoods	654	68 ²

Sources: National Institute of Statistics of Romania 2018 (1), Buzău City Hall (2)

Buzău's economic activity is based on industry and services – services account for 81.5% of the economy. The number of employees – around 50.000 – has stayed relatively constant between 2006-2015. The secondary sector – industries and construction – has a weight of 18.4%. Finally, the primary sector – agriculture, forestry, fishing – is responsible for only 0.1%. At the end of 2016, the total number of operating enterprises was 8,416, the enterprise density being 62.6 per 1,000 inhabitants (National Institute of Statistics of Romania 2018).

HiReach fieldwork has focused on a deprived area in the western part of Buzău, consisting essentially of two districts: **Nicolae Titulescu** (partially) and **Simileasca**.

Figure 3-27: Buzău, Simileasca area



Source: Own elaboration

About 10% of the Buzău population lives here. These two neighbourhoods share common social, economic, infrastructure, basic services and development potential. Both are linked to the city centre via Str. Transylvania. The population in the proposed area is considered disadvantaged in terms of human capital, work occupancy and housing.

Based on a survey conducted in the study area, the following figures illustrate the main problems in the study area:

- 7.5% people with disabilities or chronic disease
- 68% unemployed people aged between 15-64 years
- 61% of the population in the area graduated only gymnasium
- 80% of the population in the area belong to the Roma minority.

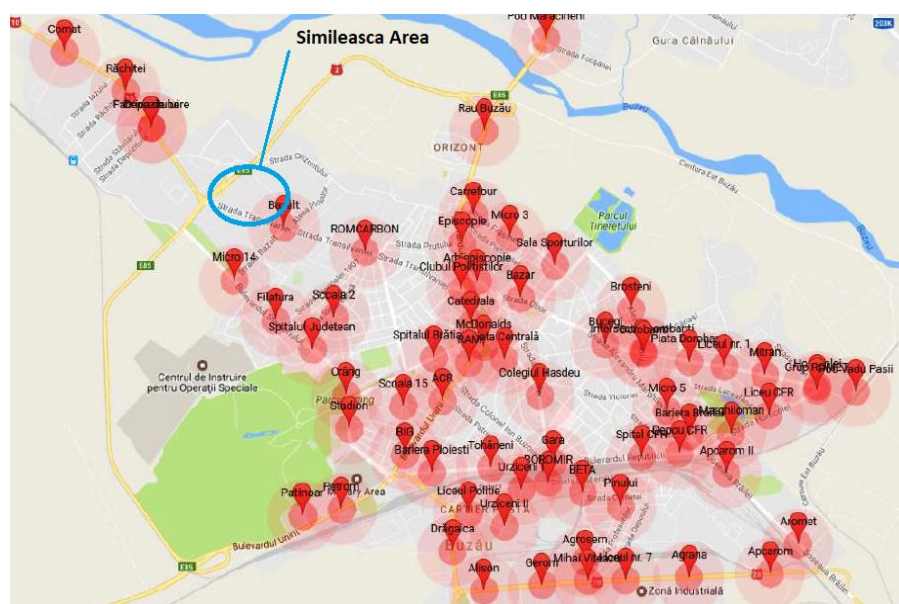
35% are children between 0-17 years. There is also a growing number of elderly people. An additional problem is overcrowded houses (less than 14 m² / person).

3.7.2 Transport characteristics and poverty symptoms

As mentioned above, Buzău is located at the junction of 3 main roads. It is also an important railway node, connecting Bucharest/Ploiești to the East and North-East of Romania. There are three railway stations: Central Station, Buzău Sud and North Buzău. In addition, there are three bus stations: South, Marghiloman and North-XXL. From these bus stations, private transport companies operate regular interurban services to other cities or municipalities in the area.

Local public transport services are offered on 10 main bus routes (Lines 1-10) and on 8 secondary routes (Lines 1M, 2M, 4M, 5M, 6M, 7M, 8M and 10M). Public transport is operated by both public and private operators. The main local public transport routes are serviced by TRANS-BUS SA Buzău. As can be seen in the figure below, the degree of public transport coverage is relatively appropriate, although there are several areas where transport demand is not (adequately) covered.

Figure 3-28: Public transport service coverage in Buzău



Source: Own elaboration

Dynamic, real-time information regarding the bus schedule is not available. Bus routes are overlapping, and the timing schedules of different operators are not coordinated. Also, the interconnection between urban and interurban traffic is not well assured and intermodal transfer points are missing. On the positive side, all the buses have facilities for persons with a disability (low floors, ramps, dedicated spaces for wheelchairs).

Buzău has a beltway, used especially by heavy vehicles and for private transit. The parking policy does not discourage the use of private vehicles in the city center. The absence of an adaptive traffic management system leads to traffic jams and low average speeds, both for private and public vehicles.

Considering the modal split, 30% of all trips is done by private cars, 19% by public transport, 1% by bicycle, 50% on foot (City of Buzău 2016, p. 76). The high share of pedestrian trips is mainly due to the fact that public transport is considered inadequate by many people (so that walking is sometimes faster than having to wait a long time for the bus to arrive, especially considering that the city is rather small) and expensive (some people cannot afford a PT ticket, especially if there is no kiosk nearby and they have to buy a ticket from the driver which costs more).

The quality of road infrastructure is poor, especially in disadvantaged areas, with an increasing number of road casualties in the last 2 years, most accidents involving pedestrians. There are sidewalks and recreational / leisure areas in the city for pedestrians (parks, markets, the central area), but no specific infrastructure for cycling.

Private cars are used for occasional travel, not for daily use, as fuel is expensive and taxes are high. Not everyone has access to a car and/or a driver's license (especially young and elderly people). People with a disability need dedicated parking spots.

In remote areas not adequately served by public transport, **car-sharing** could be an alternative, but the high fuel cost remains an issue. Many people rely on someone else to drive the car (e.g. young people, elderly, people with a disability).

Taxis are sometimes an option, but they are considered expensive in most cases. Young people like to form a group and share the ride. People with a disability prefer a taxi to public transport, because it will take them close to their destination point.

Last year, the **public transport** system changed in Buzău. Before, mini-buses were used by a variety of local service providers. The Municipality decided to buy larger and more comfortable buses, with air conditioning and dedicated places and special equipment for people with a disability.

The overall estimation of public transport services is mixed. While many people consider the services inadequate and expensive, others are generally pleased with the capacity, frequency and timetable. Some miss the mini-buses though, because these were cheaper, faster and offered a more frequent service. In any case, further improvements can still be made such as auditory announcements (in vehicles and at stops) and better passenger information. The service should become more reliable, as now the bus timetable is not always respected. Buses can be crowded, especially during peak hours or in the winter, and have a low frequency during holidays. Services also stop too early in the evening, forcing travellers to use other – more expensive – means of transport.

Public transport services are not equally distributed across the city, especially public transport accessibility in peri-urban areas needs to be improved. It should be noted that the public transport operator tries to serve new areas by extending existing lines or introducing new ones. Also, more frequent interurban transport services are needed.

Public transport is free for various categories of disadvantaged people, usually within the city limits and for one bus route. However, there are still some issues. For example, people with disabilities need to go to the city hall every month to renew their transport pass. Some students, who live in the suburbs or in the countryside near Buzău, need to use several bus routes and must pay extra – which they can hardly afford.

Another issue is that a ticket costs 50% more when bought on board of the bus, whereas ticket kiosks are scarce. This is especially a problem for people living in remote areas, as they often have no other choice than to buy the ticket from the driver. Some people use public transport without paying, provoking and trying to intimidate by their behavior the onboard personnel and the driver. This situation is improving though, thanks to discussions between local citizens and authorities, subsidies for socially disadvantaged groups and their integration in society with the help from NGOs.

As mentioned, there is room for improvement with regard to passenger information. IT solutions are in the process of being developed and implemented for ticketing, passenger counting and information provision (boards in stations and on buses, travel planning apps). Apps can be a solution to assist people when using public transport, including for people with a visual impairment. It should be noted though that elderly people may be reluctant to use such new technologies.

There is a need to increase the usage of non-motorized means of transport. **Cycling** currently has a very low modal share in Buzău. Especially in remote areas of the city, proper cycling infrastructure is lacking. In addition, the poor road quality forces drivers to go around holes in the asphalt, creating an even more unsafe environment for cyclists. Hence, cyclists often cycle on the sidewalks, making walking more unsafe too. Besides cycling tracks, what could also help is additional (secure and monitored) bike parking space, which would encourage children to come to school by bike.

With respect to **walking**, the poor quality of the pavement sometimes represents an inconvenience, especially in remote areas of the city where walking – even with children – is the only option to reach school or other destinations. People with a visual impairment complain that wrongly parked cars sometimes create problems and that this should be monitored more strictly. Tactile markings are only present at public transport stops. At junctions, intersections or traffic lights, and generally in the vicinity of the bus stops, such facilities are still missing.

When they are short of money, people tend to switch from motorized transportation to bicycle, skateboard, non-motorized scooter or walking. People who need assistance when travelling, ask relatives or neighbours for help. If they cannot find the adequate support, or they do not have enough money, they may give up travel.

In Romania, the **concept of transport poverty** is not well-known as such, and it is not an element that must be considered when developing a transport system. In many cases only people with a physical disability are considered, due to a law that forces public transport operators to purchase vehicles with a low floor and special ramps for wheelchairs. Other than that, there are no specific national regulations to increase the mobility of vulnerable groups. The city of Buzău has implemented measures to improve the mobility of different categories of citizens, but these are not grouped in a unitary plan to tackle mobility barriers. For example:

- unemployed people are encouraged to use public transport by giving them a free monthly subscription on a bus line;
- retirees benefit from free public transport on a bus line, or a subscription with reduced fee for the entire city;
- there were initiatives to cut subscription fees for people with a low income.

Also, the transport schedule has changed lately quite frequently, at the request and to accommodate the needs of travellers in different areas.

The main issue, according to the Municipality of Buzău, is that there are no relevant studies known at city hall level and there is a **lack of information about the real problems** (for which solutions could be formulated) of vulnerable groups. Also, to tackle transport poverty, the Municipality would need more experienced staff, a favourable regulatory framework and sometimes money, if the solutions are expensive.

The **root causes** for transport poverty in Buzău include:

- low income vs. (too) high cost for transport (public transport, fuel, taxis)
- remoteness from the city centre, jobs, schools and Pension's House
- inadequate public transport coverage of the area
- lack of appropriate and accessible information on the (public) transport system
- no driver's license, inability to drive, no access to a car
- no support from family, mainly due to the migration of the workforce abroad
- lack of proper infrastructure for safe walking and cycling.

3.7.3 Ongoing initiatives

From the **Sustainable Urban Mobility Plan** (SUMP, developed in 2016) it results that Buzău city is a pole that attracts traffic from the surrounding cities, mainly commuters. The SUMP has defined the following main objectives for the peri-urban area:

- the increase of public transport accessibility and
- environmental protection by encouraging a modal shift from private car use to public transport (City of Buzău 2016).

Currently, the main projects with an impact on mobility are:

- Modernizing and improving road infrastructure, including two major boulevards in the city centre; implementing dedicated lanes for public transport (ensuring connections to the North, West and South)
- Implementing an adaptive traffic management system for the main axes of the city with prioritization for public transport
- Development of an intermodal hub in the city for facilitating peri-urban – urban interchanges
- Implementation of a new parking policy which intends to discourage private vehicle access in the centre of the city
- Development of two park-and-ride systems
- Expansion and modernization of pedestrian areas
- Implementing bicycle routes and a bike-sharing system.

For all these projects feasibility studies have been done and they are all in the process of obtaining funds for the implementation.

In addition, a social inclusion strategy is prepared in order to obtain European support for projects aiming at improving the situation for socially disadvantaged groups (elderly people, people who are unemployed or have a low income).

3.7.4 Local actors and key stakeholders

The main stakeholders in this study area are **Buzău Municipality** (Transport Department), HiReach Take-up Group member, and **TRANS-BUS SA Buzău** (public transport operator).

Vulnerable groups may express their mobility concerns through social networks (online or offline); any issues are then transmitted to the authorities via a representative from an NGO.

For example, suggestions may thus be formulated with regard to improving public transport, taking into account the needs of specific groups e.g. the elderly or people with a disability. However, generally speaking, Romanian vulnerable groups are so used to being disadvantaged that they do not even consider the possibility of raising concern about their situation. They often do not know who to address, and do not trust that someone will indeed listen to them and try to change something for their benefit.

The cooperation between the city hall, public transport operator, and people responsible for transport issues representing different entities (like NGOs, schools, etc.) is thus quite important, but more direct involvement of the community (vulnerable groups) is needed to solve the existing problems.

4 Vulnerable social groups

This chapter is structured according to social layers. For each of the vulnerable social groups analysed in HiReach, results from the fieldwork are presented, highlighting each group's main social characteristics, the mobility needs they have and the mobility barriers they encounter. Thereby, the root causes of transport poverty for the respective social groups are identified in different study regions. At the end of each subchapter, the findings from the different HiReach study regions are compared, highlighting the similarities and differences.

In the HiReach fieldwork, seven vulnerable social groups were addressed:

- 1) Low income and unemployed people
- 2) Elderly people
- 3) People with reduced mobility
- 4) Women
- 5) Migrants and ethnic minorities
- 6) Children and young people
- 7) People living in remote, rural or deprived urban areas.

The study regions were selected and the methodology designed in such a way that each vulnerable social group was addressed as primary target group in at least two study regions. Additionally, several vulnerable groups were approached as secondary target groups in further study regions (see also Section 3.1 above). The results from the different study regions were then compared and put into perspective (see also Chapter 2.6).

4.1 Low-income and unemployed

4.1.1 Findings from Guarda

Nine people attended the focus group for low income and unemployed people in Guarda: seven women and two men, aged between 24 and 58 (the average age was 38). One person lives in the city centre, four live in peri-urban areas, and another four in remote villages. Most of them own a car and are very active and mobile, performing a fairly high number of daily trips. Only one participant, a 58-year old lady, has no car. She makes very few trips and when she does, she asks an acquaintance to give her a ride or (in very rare cases) uses a taxi.

In addition to the focus group, interviews were carried out in order to obtain more information on the needs of unemployed people or people with a low income in Guarda.

Figure 4-1: Focus group session with low-income and unemployed persons in Guarda

Source: TIS.pt

The unemployment rate in Guarda is 13.1%, hence represents the national average of Portugal (13,2%). However, purchasing power per capita is slightly lower than the national average (96,3%) (PORDATA 2018).

According to the social security service in Guarda, the number of unemployed persons has gone down in recent years and now mainly concerns residents of the city of Guarda, where transport problems are less acute than in the surrounding more remote areas. Also, it is important to realise that low income is not only a problem of people who are unemployed. For example, many elderly people in the region survive on very low allowances, so when they don't have a car and need to take a taxi once or twice, they will end up with no money left to feed themselves.

Mobility needs, transport poverty and social exclusion

With regard to **mobility needs**, it became clear that access to transport is a **crucial precondition in order to be able to find a new job and revert from the current unemployment status**. When seeking new job opportunities, the focus group participants always bear in mind the related transport costs (fuel, tolls, car maintenance). One participant of the focus groups stated that she was offered an unpaid internship in another municipality nearby but had to decline the invitation due to transport costs because she would have to make 140 km daily for commuting.

There was consensus among participants about the willingness to look for job vacancies beyond the council borders and within a 40-minute car-range, although this range is increasing due to the scarcity of job opportunities in the region. Long-distance travel is also needed for access to health care (some specialised medical services are not available in the region) and to attend classes or training programmes. Apart from such 'compulsory' trips, other mobility needs include leisure travel, e.g. to go to the gym or the swimming pool, or to visit friends and family who don't live nearby. Some people refrain from such trips because they can't afford them.

The focus group participants do not use **public transport**, even occasionally, as they have a very negative perception of it. Local public transport is expensive and delivers poor

value for money, as the frequency is very low (sometimes only one trip in the morning and one return trip in the evening) and schedules do not meet people's needs – particularly when travelling outside the city centre and/or outside school hours.

The system is not considered to be up to modern standards by the participants, as the ironic quote from one participant shows: *"Local buses are older than the city cathedral"*. Another participant, who describes herself as car-addict, stated: *"I already promised my children to take them in a ride by bus so they know «how it is», but still haven't done this because the service is simply bad and not appealing"*.

Public transport is mostly used by students, as schedules and routes are tailored to their needs. But even then, sometimes parents pick them up in order to avoid wasting time waiting for the bus. Buses are old, not accessible for elderly people. Plus, there is a general lack of communication (no marketing) by the public transport operator. Bus shelters, for example, do not display the bus schedule. A municipal card exists which grants long-term unemployed people 60% discount on urban buses, but apparently the focus group participants are not aware of this or don't use it. In addition, for some people even 40% of the price for a monthly pass is still a lot of money.

Despite the fact that the station is outside the city centre, for long-distance travel, public transport (**by rail**) is envisaged as a sound and convenient choice, as it is cheaper than going by car (especially when the costs are not shared among several passengers). Moreover, unlike local buses, rail services are punctual and reliable, comfortable, and the customer service works well. It is worth noting that for such interregional rail services, people don't mind looking for discounts and booking in advance.

The **car** is considered as the ideal mode of transport for local use, because it is comfortable, convenient and reliable. There are no traffic jams and no problems to find a parking spot. As mentioned, PT is not considered as a viable alternative. Nevertheless, private car use is expensive (accounting for on average 20-25% of the participants' available income – which is considered normal). Toll costs are referred to as a major difficulty for getting outside the city and this is a bottleneck for people living in rural areas, where job opportunities are scarce.

Owning a car is considered essential even if it is costly, as one participant described: *"I prefer not to think about the costs for the car, because it is really something I need to spend"*.

Those who don't own a car rely on relatives and friends. Informal **carpooling**, especially in the remote villages, is popular. Younger people usually travel together by car to attend events in the evening, because there is no other cheap option to travel across parishes. Such shared services could also be organised by employers. One of the focus group attendants mentioned that when she worked in a major factory (that has been closed), a van used to pick up everybody at home; the extra price for this was considered worth it in view of the convenience. **Taxis** are expensive, which is why this is hardly an option for unemployed people. In isolated villages, and even in the city after 11PM, no taxis are available anyway.

In Guarda, there is no tradition of **cycling** as a way to commute. The cobblestone pavements in the city do not ease the circulation of bicycles. Cycling is therefore only seen as a sports activity around the city. For distances below 4 km, **walking** is considered a

valid option for people who don't own a car. Many (esp. younger) people enjoy walking also in their free time.

Interestingly, the people from the focus group **do not think of themselves as suffering from transport poverty**, because they have access to a car and have the chance to use their spare time to chauffeur their family and friends to school, supermarkets, medical appointments etc. They label other groups – old people living alone in remote villages, children who totally depend on their parents to take them everywhere – as more vulnerable than themselves. Also, they feel that transport poverty in the region is mitigated by the availability of retailers who travel to the villages to sell their products (albeit at a higher price) and especially by the Internet that has significantly diminished the need to carry out some trips.

Nevertheless, one can expect that people who are unemployed for a long time can be more at risk of social exclusion. Considering the high cost of transport, it would be crucial to understand if the prospect of not finding a job and losing the unemployment allowance would make them change their mobility behaviour and what would be the impact.

To conclude, the main incidence of transport poverty among unemployed people in Guarda derives from limitations in access to new job opportunities. In rural regions, where job vacancies are scarce, there is a need to be willing to perform longer trips which come with a cost, especially if involving the need to pay for highway tolls.

Solutions

Several solutions were mentioned during the focus group session.

It was mentioned that toll costs are a major difficulty, especially for those living in rural areas. The idea was suggested that discounts on toll rates should be allowed for permanent residents.

Participants also mentioned necessary improvements to public transport. A public transport system with less rigid, more flexible services (a high-quality minibus was suggested, connecting the different neighbouring villages to the city centre) and tariffs (rather than fixed monthly passes) would be required.

As informal carpooling is popular, **schemes for ride-sharing** would be welcomed, for example a portal where people can announce that they will make a short-distance trip (e.g. "Boleias"), and somebody can drive along and share costs. Internet access is seen as an enabler for such services. A possible barrier is that some, especially women, may not feel comfortable sharing a ride with someone they don't know.

As a final remark, focus group participants recognized that **changing mobility habits** is not straightforward and requires time. For any new mobility solution to be picked up, an active communication campaign would be necessary, so that the local community is aware of it and understands how it works. When invited to think about what the future will bring in terms of modal choices, they see themselves continuing to use the car, except if a breakthrough innovation would occur in public transport, that would be more Uber-like and less expensive. New technologies could facilitate this.

Table 4-1: Summary of causes of transport poverty encountered by low-income and unemployed people in Guarda

CAUSE	IMPACT ON TRANSPORT POVERTY
Limited financial means	<ul style="list-style-type: none"> • Car usage: high fuel costs, maintenance, tolls → accounting for on average 20-25% of the participants' available income • 60% discount on urban buses for unemployed, but focus group participants are not aware of this or don't use it • Taxis are expensive → hardly an option for unemployed people
Car-pooling considered unsafe	<ul style="list-style-type: none"> • Especially women, may not feel comfortable sharing a ride with someone they don't know
Inadequate bus services	<ul style="list-style-type: none"> • Mobility barriers make it difficult to find a new job and revert from the current unemployment status • Low value for money and overall low appeal of public transport • Schedules do not meet people's needs – particularly when travelling outside the city centre and/or outside school hours

Source: Own elaboration

4.1.2 Findings from Buzău

Six people attended the focus group for low income and unemployed people in Buzău: five men and one woman, all of them aged between 30 and 60. Some of them own a car, others do not have a driver's license and walk or use public transport. All the participants live in the peripheral area of the city. Some are unemployed, but most of them make a living by doing different activities (no stable work place). There are few opportunities for employment in the city and the level of pay is lower than the country average. Employers are hesitant to hire Roma and poor people. However, this situation seems to be improving. The material conditions are, obviously, poor for this group.

Unemployment rate in the fieldwork site of Buzău is 68% in the age group 15-64 years, compared to 4,2% in Buzău county and 4,1% in Romania in September 2018 (National Institute of Statistics of Romania 2018). Unemployment and low income are also linked to low education levels: 61% of the population in the fieldwork area graduated gymnasium cycle. 80% belong to the Roma minority. Material poverty is adding up to other forms of disadvantages in the area, such as housing conditions. Many families live in overcrowded accommodation with less than 14 m² per person.

In addition to the focus group, several interviews were carried out (with representatives from local NGOs, schools, the municipality, the public transport operator) in order to find out more on the needs of (unemployed) people with a low income in Buzău.

Material deprivation is a challenge especially for elderly people in Buzău. It was hence also a dominant topic in another focus group session, conducted with elderly people in Buzău (see Chapter 4.2.3). Many elderly people in Buzău face financial restrictions or even deprivation. Elderly people have to spend their pension wisely, taking care of priorities first. Some elderly need to work at older age to earn additional money to their pension schemes, for example as taxi drivers. Sometimes, retired people feel disadvantaged in comparison with persons who are receiving social welfare incomes greater than their pension for which they have worked a whole life.

Mobility needs, transport poverty and social exclusion

Participants' **mobility needs** are associated with the activities they are performing, characterized by irregularity as they do not have a steady job, which implies different routes and transport needs every day. On the other hand, there are also some more stable mobility needs, e.g. for taking children to kindergarten or to school.

The following **root causes for transport poverty** were identified:

- low income
- remoteness from the city centre, schools, utilities
- unsuitable bus service coverage (urban and interurban), far away bus stops
- high public transport fares and limited access to regular fares
- lack of bicycle lanes, lack of proper sidewalks for pedestrians.

Public transportation is used most often, despite the fact that its coverage in the area is low. Due to their restricted financial means, low-income and unemployed citizens urgently need cheaper and more accessible transport services. Unemployed people are encouraged to use public transport by giving them a free monthly subscription on a bus line. But for other family members, the fares are still an issue:

- students travelling large distances do not receive a free ticket for the whole journey and have to pay part of it themselves which they can hardly afford;
- tickets can be bought in some specific sales points at a lower price, but for people living in remote areas these options are not available and they have to pay more, buying the ticket from the driver.

There are many situations in which people, even with children, must **walk** to school or other required destinations. **Bicycles** are used too. However, in order for these non-motorized means of transport to become a safe alternative, better road infrastructure is needed with sidewalks and bicycle lanes. Currently, there is no proper infrastructure for walking or cycling and in addition, the poor road quality forces drivers to go around holes in the asphalt, creating an even more unsafe environment for cyclists.

Solutions

Generally, the focus group participants felt socially disadvantaged by the lack of public transport coverage (both urban and interurban), leaving them without a proper alternative for transport. The authorities are aware of this issue and will consider it when developing new mobility solutions for the city.

Ride-sharing could be a solution, but there is still the issue of fuel cost. People are usually able to find a neighbour/friend to take them along for longer journeys, the fuel cost being divided among all the travellers.

To conclude, the focus group participants asked for better public transport coverage to avoid having to walk large distances or take taxis, more kiosks where they can buy regular fare tickets easily, and better infrastructure for safe walking and cycling.

Table 4-2: Summary of causes of transport poverty encountered by low-income and unemployed people in Buzău

CAUSE	IMPACT ON TRANSPORT POVERTY
Limited financial means	<ul style="list-style-type: none"> Free monthly PT subscription, but only on one line Fares on other bus lines are a little too high Especially disadvantage and a financial burden for those living in the suburbs or the countryside near Buzău High fuel costs
Road infrastructure is not suitable for cycling and walking	<ul style="list-style-type: none"> Safety issues
Low bus frequency	<ul style="list-style-type: none"> Forces people to use other – more expensive – means of transport

Source: Own elaboration

4.1.3 Comparison and summary

HiReach **desktop research** (conducted in WP2) has shown that low-income and unemployed people typically rely on less costly **modes of transport**: walking, cycling and public transport. On the other hand, they tend to live in more remote areas where house rents are lower but public transport coverage is poor, which means that they are forced to buy a car, posing a substantial financial burden on households (**forced car ownership**). Another result of this is the need to travel for longer distances and being confronted with having to walk or cycle in unsafe conditions.

The **fieldwork** basically confirmed these findings. People with a low income in **Buzău** indeed rely to a large extent on public transport – even though in deprived areas, where the poorest people live, the supply is inadequate and does not cover all of their needs – since in many cases they cannot afford a private car or other means of transport. In addition, they walk (sometimes long distances) and (to a lesser extent) cycle – even though this is quite unsafe due to the poor quality of road infrastructure.

In **Guarda**, the unemployed people who attended the focus group do not use public transport at all (only for longer distances, to avoid toll costs, they take the train) because it offers poor value for money and doesn't meet their needs. Instead, they rely on private vehicles to access basic services and secure job opportunities (often this involves travelling long distances) – even though this is expensive (20-25% of the available income), which supports the notion of “forced car ownership”. There is no culture of cycling, but walking is considered an option for distances up to 4 km.

With regard to **mobility behavior**, HiReach **desk research** found that unemployed people have more free time and need to travel less; they can adjust their mobility needs to the existing transport system and afford to spend more time travelling. People with a low income tend to be less mobile, limiting themselves to compulsory trips, such as to work, health services or food shops.

The assumption that unemployed people are less mobile does not apply to the focus group participants in **Guarda**. Most are very active and perform a large number of trips, because they use their spare time to chauffeur family and friends to school, shops,

appointments etc. On the other hand, the high cost associated with transport means that some people who are unemployed for a long time may give up some non-compulsory (leisure) travel (this was not the case for the focus group participants but was mentioned in one of the interviews). The fieldwork has also confirmed that a lack of (available and affordable) transport options means that **people must either accept unsuitable jobs (or decline better jobs that are inaccessible) or commute for very long periods**, reducing their available time, quality of life and income.

Finally, fieldwork has also shown that transport needs indeed **depend on the community's overall accessibility and social expectations**. Guarda has a much higher car ownership rate than the rest of Portugal; however, the risk of transport poverty for people who do not possess a car is mitigated by the fact that there are strong social links among the community and it is common for people to carpool with each other. Carpooling is also common in Buzău (the fuel cost is then divided among all the travellers) but in this case public transport is an (albeit imperfect) solution as well.

4.2 Elderly people

4.2.1 Findings from Esslingen and Göppingen

Two focus group sessions were conducted with elderly people in this study region: one in Filderstadt, a municipality bordering the city of Stuttgart with peri-urban and suburban characteristics, and a second one in Aichwald, a unionized municipality consisting of five small settlements. Although located very closely to highly urbanized areas, Aichwald has maintained its rural character.

Both sessions were attended by a mix of ages among the elderly. Most participants were between the ages of 60 and 75, some between 75 and 88. Younger participants were highly active in local volunteering organizations, particularly in citizen bus or other ridesharing organizations. The older ones had been active members in the local communities earlier. In both focus group sessions, the majority of the participants were men, while only two participants in each session were women. All participants lived independently, in single-detached or row-houses typical for the peri-urban region of Stuttgart. It is important to mention that many of the elderly in the Stuttgart region have a high standard of living, in European and even German comparison. This applies also to all participants of the focus groups.

The mobility needs of elderly people were also discussed with experts, such as representatives of senior citizen associations, citizen bus organizations, transport operators and public transport administrations.

Figure 4-2: Focus group session with elderly persons in Aichwald (Esslingen county)



Source: Kuttler/Technische Universität Berlin

Figure 4-3: Focus group session with elderly persons in Filderstadt (Esslingen county)



Source: Kuttler/Technische Universität Berlin

Mobility needs, transport poverty and social exclusion

The elderly in the region heavily rely on private motorized vehicles. The motorization rate is 609 vehicles per 1,000 inhabitants in Filderstadt, and 805 in Aichwald. With two exceptions, the participants in both focus group drive their own cars. They expressed that losing the ability to drive one's own car is often a turning point in life, but most of the younger elderly do not like to think about that. Instead they insist on driving as long as possible, and many participants express that they enjoy driving.

However, one participant also stated that **driving has become more difficult** for him: *"In the last ten years I began disliking driving my own car because of increased traffic and aggressive behavior of other car drivers. It is not fun anymore to drive a car."* Due to that attitude, other transport options are either unknown or not seriously considered.

Spatial aspects on the local level contribute to the fact that many elderly people rely on their private vehicle. Single detached houses were built in development areas on the fringes of villages and towns, accessible conveniently by car. However, Filderstadt is well connected to the Stuttgart city center by a suburban railway link. Aichwald is served by bus public transport.

A closer look shows that there are differences in perception regarding train and bus services. In the peri-urban areas in the vicinity of Stuttgart, rail connections are available in many municipalities. These options are visible and well known to the seniors. When travelling to downtown Stuttgart, the suburban train is almost the exclusive mode of transportation. The perception of the bus system is mostly negative, both within and between municipalities, regarding many aspects: schedules and frequency, comfort, behaviour of staff, punctuality and information. It is also apparent that elderly often “discover” public transport on leisure trips. A guided leisure trip on public transportation, or a group trip, is often the moment when elderly realize that public transport has advantages and is more reliable and comfortable than they thought.

Elderly people have mostly mobility needs in the local area. These are basic needs such as grocery shopping, appointments with doctors etc. Furthermore, there are social needs that are associated with meeting relatives and friends, as well as participating in social and cultural activities. Many focus group participants reported that they visit their grown-up children in other parts of Germany, and also drive there by car.

Apart from meeting basic needs, social needs are also important when growing old. The differentiation between those two concepts should not be neglected. This shall not overlook that basic needs and social needs of elderly people are often connected. As Hjorthol (2013, pp. 1203–1206) writes, activities like shopping assume wider significance for an elderly person's well-being beyond the basic needs. When friends and relatives are met on shopping trips, such occasions are also social events. Such activities are a personal assurance to be independent and in control of one's life, and an opportunity to meet friends, or just the positive feeling of being out of the house, “on the road” or among people.

- The basic needs:** Those seniors who are materially deprived in the case study region are largely invisible, both to the general public and this research project. On the one hand, this is an almost inevitable consequence of the research approach itself. Individual users were approached via associations that network among and support elderly people. Hence, only those who are well networked, are interested in research questions or are actively engaged in voluntary community work participated in the HiReach focus group sessions.
 The discussion in the focus groups confirmed that elderly people without access to a car are vulnerable to social exclusion.
 In addition, public awareness of the needs of low income individuals is low because this group is a minority in the region. Poverty in such an environment is a stigma, and material deprivation is perceived largely as a result of personal failure.
- The social needs:** Understanding the full picture of transport poverty in the Stuttgart metropolitan region is not possible without understanding the social needs of elderly people.
 As the representative of the senior citizen association of Filderstadt highlights: *„Social isolation is the core problem of elderly people. Mobility plays a huge role in*

reducing isolation and that is why we are working on improving mobility of senior citizens."

For elderly people who most of their life used to drive their own cars for commuting, together with their partner or the children, driving a car alone gives them a feeling of social isolation. Traveling together in groups for leisure trips on public transportation is hence very popular. Giving rides to neighbours or friends is a way of giving support, but it is also a low-key effort to stay in touch and socialize. Mobility is not only the "means" to attend social activities, instead mobility itself becomes the social event.

To conclude, for the group analysed, at first sight one would think there is no "transport poverty" caused by material deprivation in the region. However, as pointed out above, it needs to be differentiated between basic needs, and social needs that are equally important. There is a clear divide between a minority of the elderly people who face material deprivation, while the majority does not encounter financial problems and is able to meet basic needs.

Transport poverty in a narrow sense - due to financial limitations - does exist among a smaller portion of the population, like unemployed or low-income people, and this also applies to elderly people with low financial means. However, when transport poverty is understood in a wider sense including aspects such as social requirements of elderly people, it can be observed that the phenomenon exists among a much larger share of elderly people in the study region, also among those sufficient financial means.

Solutions

The **citizen buses and similar services** studied in the region speak exactly to the social requirements of elderly persons, a need conventional public transportation cannot cater to. While the elderly participants rarely use conventional public transportation, they regularly use these forms of community-based transport. They even decide to use citizen buses for certain trips instead of the own car.

The reason for this decision is the social interaction with the drivers and other riders in the bus. The drivers of the buses find a new social network in the circle of the drivers (or re-establish old ones through their engagement in the associations). For those being at very old age, riding the citizen bus is sometimes the only way to get in touch with other people at all.

One participant highlighted that due to the citizen bus in Aichwald, a person was able leave the house again: *"An elderly person in the village is not able to travel alone anymore, so usually she is not leaving the house. But here husband arranged that she took several tours with the citizen bus around the municipality just to see what is happening and what has changed. She enjoyed it a lot."*

As stated in Chapter 3, the recognition of social needs of elderly people is only slowly progressing among the transport authorities. Because public transport focuses on basic mobility needs of individuals, the wider benefits of social aspects of traveling are not yet in the focus of transport administrations.

Table 4-3: Summary of causes of transport poverty encountered by elderly people in Esslingen/Göppingen

CAUSE	IMPACT ON TRANSPORT POVERTY
Geography/spatial characteristics of the place	<ul style="list-style-type: none"> Public transport stops are often too far away from residences where elderly people live Due to the suburban/peri-urban character of the region, convenient access for elderly people is only possible by car In rural areas, basic services are limited, hence elderly people have to drive longer distances
Physical impairment	<ul style="list-style-type: none"> Although many PT vehicles are accessible, infrastructure at bus/train stations is not barrier-free
High ticket prices	<ul style="list-style-type: none"> There are reduced monthly tickets for elderly people, but single tickets for public transport are relatively costly
Focus on mass public transportation by authorities	<ul style="list-style-type: none"> Special mobility services for elderly people are not installed There is growing support for community-based mobility solutions for elderly people (citizen buses)
High mobility in younger life	<ul style="list-style-type: none"> Desire to travel is high, and it should be independent travel If loss of independent mobility is experienced, the loss of life quality is severe
Car-based mobility patterns	<ul style="list-style-type: none"> Losing the ability to drive is a turning point in elderly people's life Knowledge about alternatives is low Low acceptance especially of public buses
Public transport serves only basic everyday needs	<ul style="list-style-type: none"> Public transport does not cater to the social needs of elderly people

Source: Own elaboration

4.2.2 Findings from Guarda

The focus group sessions in Guarda showed a **diversity of characteristics and needs among elderly people**. The majority of attendees were still very active in terms of involvement in associations and sports activities; there were however three main factors that distinguished between them:

- 1) Age: people between sixty and seventy years old vs. those over seventy;
- 2) Gender;
- 3) Geography: people who live closer to the city center vs. those who live in villages.

The common characteristic that tied all the focus group participants together was that, as they get older, the physical abilities needed for driving fade away and they were therefore **very worried about the prospect of having to give up driving and rely on public transport**. This anxiety is interesting to notice, considering the participants were not that old (average age was 65).

Elderly people that participated in the focus group can be described as having a mix of social characteristics. It was noteworthy that those who live closer to the city centre seemed to have more cultural skills than those who live in the remote villages and that have lived there during all their life. The distance to the city centre is a proxy indicator of

educational attainment among the elderly group; those who live closer to the city show higher levels of education than the others who live further.

Among the elderly in Guarda, **a strong technological divide existed**. A strong resistance to use smartphones, internet and mobile apps was noted among those who live in rural villages, whereas the ones who live closer to the city are typically more acquainted with IT solutions.

But the elderly recognized the increasing importance of the internet for everyday life. One participant argued that *"if 10 or 20 years ago we said that whoever didn't read was illiterate, now illiterate are the persons who don't know how to use the Internet. It has a profound role in our life."* He also regularly volunteered to teach other elderly people how to use the internet.

Figure 4-4: Focus group session with elderly persons in Guarda



Source: TIS.pt

Mobility needs, transport poverty and social exclusion

The elderly perceive Guarda as a **car dependent community**, where some services are concentrated in the city centre and others, such as a popular retail park or the university, are located in areas that can hardly be accessed by any other mode than by car. Hence, most elderly people use their own car for travelling.

The car has a very important role in people's lives, as it became evident from a participant's quote: *"the Portuguese may have nothing else, but at least they have their own cars, thank god for this"*.

Elderly people who live closer to the city use it on a daily basis, but those who live far from the city make less use of the car they own because they travel less. If they don't have their own car, **lifts are often provided by peers**. It could be confirmed that reliance on other people (neighbours and acquaintances) for lifts is still high in rural areas and this contributes to fulfilling some mobility needs.

Those who own a car stress that **they are starting to drive less often due to physical constraints that result from ageing**. They are worried that public transport may not be an option considering their physical condition and that it will not be able to guarantee the maintenance of active life styles in cases where driving is no longer a possibility.

Considering gender differences, **women drive less than men**, are more reluctant to use new technologies and seem to have less mobility needs, especially the ones who live in rural areas. What unites all participants is that they are gradually becoming less fit for driving and more dependent on other persons to take them by car, or on public transport, to maintain an independent way of living.

An important destination for the elderly people is the city centre of Guarda, for health care and grocery shopping. Especially on Wednesday, the city market is considered an important event to visit and socialize. Another important travel purpose is seeing relatives such as children and grand-children that live closer to the city.

Elderly people, especially women who live in rural villages, expressed that punctual medical appointments and the visit to the city market are their main mobility needs. Elderly men expressed different mobility needs, such as going out with friends and going to the city to visit relatives.

The majority of the population in the region of Guarda is dispersed across the territory. Those who don't have access to cars face transport poverty. More and more, their mobility needs are unmet, because public transport services are cut due to decreased ridership. For the small group of elderly people in rural areas that still uses the bus, going to the city of Guarda both ways by public transport is not an option, because that would mean staying in the city for the whole day due to the inexistence of a return trip during lunch time.

The elderly express that local public transport is expensive and delivers poor value for money, and the frequency and schedules do not meet their needs. There is a feeling among elderly people that public transport is lagging behind in investment.

Taxis are also not a convenient option, and especially on weekends, taxis are often not available, as one participants explains: *"It takes a very long time until the taxis arrive and we arrive late to the city. During the weekends taxi are more expensive than in regular days"*.

Life-changing events, such as increasing cognitive problems and physical impairments, are at the origin of mobility problems and hence social exclusion. Poor offer of transport services and non-accessible transport infrastructure are a token of the lack of publicly funded support to elderly people living in remote villages. Social exclusion is experienced by some elderly people living in isolated settlements, caused by a combination of advanced physical constraints and lack of financial resources to move around as they would like.

Due to inadequate public transport, **people who are not fit for driving rely on a network of social solidarity** in case of need.

Even though not mentioned by the focus group participants, the interviews with experts have shown that incidence of transport poverty is not increased among the most materially deprived people due to the **active role of the local associations**, that already address somewhat the most urgent mobility needs.

Solutions

For elderly people living in rural areas, a **minimum requirement would be to recover a public transport service** that can be used during the days when the city market is

organized. This is something that participants from rural villages would warmly welcome, because they say that there is an ancestral tradition of going there to buy fresh food. Furthermore, vehicles are needed that are accessible for people with physical impairments, because the current vehicles have steep stairs, which is a barrier for using them. Elderly people living in rural areas seem to be quite price-sensitive, so if there is a cheap option for travelling in public transport, they would choose it. Also, more affordable prices are needed for single tickets, as the elderly do not use public transport often enough to buy a monthly pass.

Beyond these minimum requirements, **tailor-made public transport options that answer specifically to the needs of the elderly in rural areas should be considered**. The elderly wish for less rigid and more flexible public transport services, paid according to their flexible needs (rather than fixed monthly passes, for example).

They envision a high-quality mini bus, with air conditioning, and schedules that meet their needs. They recognize that the bus cannot make direct connections from their own village to the city centre, so they are willing to have longer trips so that the mini bus can circuit around the other neighbour villages.

Table 4-4: Summary of causes of transport poverty encountered by elderly people in Guarda

CAUSE	IMPACT ON TRANSPORT POVERTY
Geography/spatial characteristics of the place	<ul style="list-style-type: none"> • Accessibility deficits in remote regions for elderly people without cars • Only morning and evening bus trips, no noon-time trips; • Settlements are scattered → many destinations can only be accessed by car
Car-based mobility patterns	<ul style="list-style-type: none"> • Fear of losing the ability to drive and fear of inadequacy of public transport
Physical impairment	<ul style="list-style-type: none"> • Most PT vehicles are old and not accessible for elderly people with physical impairments
Shrinking population in remote rural areas	<ul style="list-style-type: none"> • Public transport coverage decreased → elderly people remaining in rural areas suffer the most
High ticket prices	<ul style="list-style-type: none"> • Low value for money and overall low appeal of public transport
Inadequate bus services	<ul style="list-style-type: none"> • Unequal provision of public transport infrastructure, very limited or no public transport coverage in rural areas
Lack of investment in public transportation	<ul style="list-style-type: none"> • Old buses and infrastructure that are not accessible to physically impaired elderly, low overall appeal of PT
Weather conditions	<ul style="list-style-type: none"> • Walking between villages is difficult and uncomfortable for elderly people

Source: Own elaboration

4.2.3 Findings from Buzău

The focus group participants in Buzău were 4 men and 3 women aged around 65 years old, only one being younger. All the participants live in an urban area, mostly in family households, and one in a single household. 60% of the participants live in an apartment or in a multi-story building. The remaining live in a detached house. Except for one, all

participants face financial limitations; they have to spend their pension wisely, taking care of priorities first: in terms of the material situation, the focus group participants hence represent the majority of elderly people in Buzău.

The focus group participants are well integrated into social networks. Some are members of an elderly association and go to occasional activities. They attend chess, backgammon or rummy games and meetings at the elderly association. They also participate in group excursions on a yearly base. However, participants reported that it is common for elderly people to receive low support from their families, mainly due to the migration of the workforce abroad.

As already pointed out above, material deprivation is a challenge especially for elderly people in Buzău. It was hence a dominant topic in another focus group session conducted with elderly people in Buzău.

One participant stated the problem very openly: „ *We're too poor to spend thoughtlessly*”.

Except for one, all participants in the focus group with elderly people faced financial limitations; they had to spend their pension wisely, taking care of priorities first. Payment of loan rents is a challenge, making the participants vulnerable to personal financial debt. In terms of the material situation, the focus group participants hence represented the majority of elderly people in Buzău who face financial restrictions or even deprivation.

Generally, although there are elderly people that benefit from good military pensions, most others have low incomes or pensions. Some elderly need to work at older age to earn additional money to their pension schemes, for example by being taxi drivers. Sometimes, retired people express that they feel disadvantaged in comparison with socially assisted persons which are receiving social incomes greater than their pension for which they have worked a whole life.

Participants hardly use ICT solutions. Very few participants access the internet daily. They mostly use it for communicating and less for accessing information or navigation. Most of them do not use ICT solutions at all. When they need to organize their mobility, they ask relatives to find information on the internet, use printed maps or talk to other people on the street.

Figure 4-5: Focus group session with elderly persons in Buzău



Source: Politehnica University of Bucharest

Mobility needs, transport poverty and social exclusion

Mostly participants use public transportation. **Public transport in the city of Buzău is free for retired people on one bus line**, and subject to a fee for the other lines. They assess positively the public transport: buses are clean, spacious and they have air conditioning; they also state that public transportation is safe and accessible. The ticket price is reasonable if one uses a monthly pass, but the cost for single tickets is too high.

Since the city has replaced private mini-buses with larger public transport buses in 2018, many elderly people miss the mini-buses because they were cheaper (compared to current fares), faster and they came more often. Also, the bus timetable is not always respected, and the service ends too early in the evening, forcing travellers to use other, more expensive means of transport.

Less than half of the participants have access to a car. Cars are considered very comfortable and fast, however expensive. Those who own a car face challenges of high tax and fuel expenses. Cars are used occasionally when rides are provided by relatives and friends. These opportunities are not available to many of the elderly, because either relatives are not living in the Buzău region, or relatives, neighbours and friends themselves do not have access to cars. For short distances, apart from walking, non-motorized scooters are used in a few cases.

The **dominant mobility needs** of the participating seniors are trips for grocery shopping and attending medical appointments. Also, the elderly must keep connected with the retired people's office (Pensions House) which is located at the edge of the city and is difficult to reach. Other regular travel needs comprise travel for social purposes, such as meeting relatives – e.g. going for a walk with grandchildren. Occasional travel is done for sports activities and events such as fishing and going on vacation. As mentioned, some elderly take part in volunteer activities and meetings in community associations.

The most important aspect of transport poverty for elderly people in Buzău is the personal financial situation. The focus group participants stated that if the material situation would improve some of them would travel more. They also highlighted, while being generally satisfied with public transportation and the free-of-cost service on one line, that buying extra tickets is too expensive. Another issue is that the ticket is 50% more expensive on board of the bus and ticket kiosks are rare (and even not present in every station).

If material poverty and unavailability or inadequacy of transport solutions come together, the elderly face severe forms of transport poverty. In many cases, people decide to reduce their mobility considering the lack of proper solutions. Sometimes they give up travelling completely or switch to walking if they are physically able to.

Those who switch from public or motorized transportation to bicycle or walking face additional challenges. Cycling is hardly an option for the elderly due to the lack of proper infrastructure. In addition, the poor road quality forces drivers to go around holes in the asphalt, creating a more unsafe environment for the cyclists. For these reasons, cyclists often travel on the sidewalks, making walking unsafe too.

Solutions

The participants expressed a need for cheaper, more frequent public transportation services (especially on holidays) and better coverage in Buzău city. Because many elderly

people only travel occasionally with public transport, single tickets for the bus should be cheaper. Furthermore, they demand more frequent interurban public transport services.

The elderly also expressed that they would walk more if the sidewalks were safer and if there were separate bicycle lanes.

Table 4-5: Summary of causes of transport poverty encountered by elderly people in Buzău

CAUSE	IMPACT ON TRANSPORT POVERTY
Material deprivation	<ul style="list-style-type: none"> • Low availability and ownership of cars • High vehicle taxes and fuel prices • Forced car usage and hence budget limitations to cover other essential aspects of life • PT is too expensive for single tickets • Tickets on the bus are more expensive, but tickets are not available at all bus stops • Financial limitations limit mobility overall
Structural adjustment of public transport organization	<ul style="list-style-type: none"> • Replacement of minibus taxis that were more comfortable and flexible • Conventional buses are too crowded now
Physical impairment	<ul style="list-style-type: none"> • Due to limited financial means and lack of alternatives to cars, many people decide to walk, however physical impairments impede walking
Infrequent and inadequate bus services	<ul style="list-style-type: none"> • Bus service not in evenings, low frequency on holidays; • Buses too crowded, especially in winter
Scattered social networks	<ul style="list-style-type: none"> • Missing social support in mobility
Low availability of interurban PT	<ul style="list-style-type: none"> • Interurban travel is cumbersome
Inadequate walking and cycling infrastructure	<ul style="list-style-type: none"> • Bikes and pedestrians have to share sidewalks, making walking unsafe for the elderly

Source: Own elaboration

4.2.4 Comparison and summary

Comparing the above findings, the differences in transport poverty encountered by elderly people are particularly determined by the following factors:

- **Transport supply:** low frequency of public transport services especially in rural areas, inaccessible vehicles and infrastructure, low reliability and low overall appeal of the services were mentioned as primary factors why public transport was not the mode of choice. Those who regularly use public transport do it because of non-availability of a car or other alternatives. Peer-to-peer support in mobility for elderly people was available in all study regions.
- **Financial means:** material levels of elderly people play different roles in the study regions. In the **Esslingen and Göppingen** study region, the majority of the elderly does not face financial limitations, hence the material situation does not limit their mobility. In rural **Guarda** and in the city of **Buzău** however, material deprivation either prevents car ownership or in cases of forced car ownership, limits available budgets for other essentials and hence diminishes quality of life.

- **Mobility impairments:** Not being able to drive the own car anymore can be a turning point in older life. Especially if not acquainted with alternatives, it is difficult to “discover” public transport as a viable option. Accessing public transport can also be difficult, because of vehicles and infrastructure not being equipped accordingly, or distances to bus stops and train stations being too large.
- **Car ownership:** while in the **German** and **Portuguese** cases, the majority of the participating elderly drove cars, this was not the case in **Buzău**. Access to or ownership of a car is seen as necessary or desirable by most elderly participants in all study regions to reach important destinations. Driving a car is part of independent living in older age, giving up driving is considered a loss on quality of life. Those who did not have access to or did not own a car, still stated that the car would be the mode of choice if their financial means allowed ownership.
- **Location of living:** the three case studies presented, cover elderly people living in all three spatial contexts analysed in HiReach: **urban, peri-urban and rural**. In peri-urban and rural areas, the car is the dominant mode of travel, even if it puts a financial burden on elderly individuals. Bus public transport is perceived negatively in both the **German** and **Portuguese** study regions, although the levels of service are very different. Compared to these two study regions, public transport was evaluated better by the elderly in **Buzău** in Romania.

The fieldwork with elderly people has shown that **transport poverty is linked to social exclusion**. However, differences can be identified among the study regions. Generally, not taking the mobility situation into account, the risk of social exclusion of the elderly in the three case study regions is different. In the urban areas of **Buzău**, although income levels are low, elderly people do not feel socially disadvantaged or socially excluded. In **Guarda** however, the risk of social exclusion rises with the distance from the city centre. Elderly in remote rural regions are more often materially deprived and more often lack educational skills than their counterparts living more closely to urban areas.

Social isolation of elderly people is also increased due to migration of younger and higher income strata to urban areas, leading to a further decrease of infrastructure and opportunities in remote rural areas. Those who are physically able are forced to travel to the city to meet every day needs, and couple these needs with social activities.

In order to achieve social inclusion, measures to improve accessibility and mobility need to be tailored to the local context. In **Buzău** and remote rural **Guarda**, improved public transportation services are a prerequisite for meeting both basic everyday needs and social needs, and hence for social inclusion. In **Esslingen and Göppingen**, for the majority of the population the basic everyday needs are met. Hence, in this regard, incidence of transport poverty is less likely and accessibility problems rarely occur. Nevertheless, being mobile and active is an integral part of life for people in the region, including frequent leisure trips.

4.3 People with reduced mobility

4.3.1 Findings from Inner Area Southern Salento

The focus groups with people with reduced mobility (PRM) were organized in the small town of Patù (1,700 inh.) and in Tricase (17,500 inh.), one of the main service centres of the inner area together with Casarano and Ugento.

Key stakeholders interviewed were two social cooperatives working with PRMs (Terra Rossa and Comunità di San Francesco), the University of Salento and the Local Health Service ASL in Lecce.

There were 15 participants at the focus group in Patù and 13 in Tricase. The majority of them were people with permanent reduced mobility but there were also elderly people with gait difficulties, one woman with a broken arm, parents and representatives of the associations *Insieme con i Disabili Onlus*, *Ploiesis*, *Innovability*, *La Ragnatela* and the parasport association *Lupiae Team Salento*. The activism of disabled people or their families is quite common in the province of Lecce.

Some participants came from neighbouring towns of the inner area and especially the involvement and logistics of people in wheelchairs was particularly challenging: they heavily rely on availability of parents and relatives to chauffeur them by private car.

For one participant in a wheelchair from Specchia, HiReach organised a special transport service with a suitably equipped minibus; this service was requested also by two other participants that unfortunately cancelled their participation due to personal problems. These people have a very precise agenda of their daily or occasional activities, based on the available mobility possibilities. They usually plan their trips at least one week in advance but last-minute changes for non-basic trips might also occur due to changes in the availability of parents, relatives and also friends. This was confirmed also during the preparation of the focus groups.

The composition of the two groups was quite heterogeneous with a good balance of women and men and also the presence of disabled people owning and driving a car, people using a motorised wheelchair and elderly people moving (slowly) by foot in the city.

Focus groups were carried out following a participatory method inspired by GOPP (Goal Oriented Project Planning) according to an established approach: emergence of problems (first discussion), definition of problems (by using sticky notes) and clustering of problems. A white message board with a title on top "Which mobility problems do you face in your daily life?" was used to structure the discussion.

Figure 4-6: Focus group sessions with people with reduced mobility in Patù and Tricase

Source: TRT

Mobility needs, transport poverty and social exclusion

The **absence of proper and dedicated public transport alternatives** was quite immediately underlined by the participants as the main element affecting their autonomy and social life. This was also pinpointed during the interviews with the local stakeholders. Special transport services are in fact organized only for home-to-school trips or to reach healthcare services, the latter being mainly used by people with mental impairments and thus not very useful for PRMs. Also, there are no taxi services in the area. Public transport vehicles and services are not accessible to people with reduced mobility because buses and trains are not equipped with lift platforms.

Also, the absence of direct links can create accessibility problems for the users: *"if from my town I have to get to Lecce and I have to change in a second town/stop, here I cannot access the second vehicle"*.

PT personnel is neither adequately trained for assisting them (e.g. some do not know how to lift the platforms) nor for providing travel information. Such information is often confusing and not univocal.

PT services are therefore inadequate and not integrated, quite often planned without taking into account the requirements of persons with a disability (e.g. the ramps are too steep). Services and equipment cannot be used independently and without assistance, which is also a barrier.

The overall perception is that public institutions are not sensitive towards PRMs' basic needs: *"The disabled person seems to be a burden for the municipal administration"*.

There is no **monitoring and evaluation of accessibility requirements of city services, buildings and especially transport infrastructures**: many municipalities have not adopted the PEBA (Plan for the elimination of accessibility barriers) nor nominated a representative to defend the rights of disabled people. Many focus group participants declared they would be available to take up this role.

Universal design principles and accessible PT solutions are well known as well as their potential to benefit the whole community: *"In some cases there is a lack of adequate knowledge from the municipal administration. Some services can also be useful for other categories of users". "In many European cities there are integrated services that are good for all citizens even with beautiful aesthetic solutions and the staff in these cities receive a comprehensive training".*

Also, amenity spaces like beaches and events (e.g. festivals in squares and on the coast) are not accessible to PRMs, which is unfortunate as they too want to have a social life and not be excluded from public activities and the society.

When discussing their current mobility habits relying on the **forced use of the private car**, both as passenger or driver, the absence of dedicated parking slots is perceived as a key barrier also to move within the same town: *"Finding a parking lot is a utopia in my town. I stopped using the car, I prefer to go around in the wheelchair, but I encounter many architectural barriers".*

Parking lots are not only located too far away from the final destination but they are also inaccessible, as no proper attention is paid to the fact that more space on the street is needed to allow a disabled passenger to be able to descend the car, with assistance from a person or by themselves.

It is quite difficult for PRMs to distinguish between accessibility barriers of transport means and other infrastructural barriers: for them the focus is **door-to-door accessibility** thus highlighting problems of e.g. interrupted sidewalks and absence of ramps in public places.

What emerged with emphasis is the **(poor) consideration of other citizens** they have to face (*"At international level, disability is not seen as something related to a disease, but it depends on how society responds to the needs of certain categories of people"*).

Disability is seen as a "strange thing" with disabled people not properly integrated in the society. Also, the topic of accessibility is quite often misrepresented and exploited in a wrong way: it is important to realise that 'people with a disability' constitute a very heterogeneous group and that for e.g. blind people, people with a physical impairment etc. have diversified needs.

Universal design is an important objective that has the potential to improve mobility of PRM's significantly. Universal design solutions are that are focusing on developing one solution that fits the needs of a diversified audience with diversified needs, instead of finding many different solutions for different needs

Table 4-6: Summary of causes of transport poverty encountered by people with reduced mobility in Southern Salento Inner Area

CAUSE	IMPACT ON TRANSPORT POVERTY
Physical disadvantages	<ul style="list-style-type: none"> Difficulties in mobility generally
Cultural barriers of other citizens	<ul style="list-style-type: none"> Disabled people not properly integrated in the society
Inadequate public transport	<ul style="list-style-type: none"> Public transport vehicles and services are not accessible to people with reduced mobility→ Affecting autonomy and social life Absence of direct PT links can create accessibility problems Special transport services not for PRMs
(Forced) use of the private car	<ul style="list-style-type: none"> Absence of dedicated parking Parking lots are also inaccessible because they are too far away from the final destination
Insensitivity of public institutions	<ul style="list-style-type: none"> No monitoring and evaluation of accessibility requirements Universal design principles not taken up Amenity spaces like beaches and events are not accessible

Source: Own elaboration

4.3.2 Findings from Buzău

A group of 13 persons (both men and women) with different kinds of visual impairment participated in the focus group discussion, and talked about their difficulties in using public transport and other issues related to their mobility needs. The focus group was held at the premises of the local branch of the Romanian Association of Visually Impaired People. The president of the association was also interviewed.

Each individual case was discussed and analysed separately, and specific issues noted. People showed different stages of visual impairment, starting with advanced stages of myopia and ending with other types of medical conditions seriously affecting their ability to move and use transport means.

Most of the participants were over 50 years old with several being retired (65-70 years). However, some younger persons were also present (46 years old).

The participating citizens live in the urban area of Buzău and some in the periphery (thus not specifically in the districts of Nicolae Titulescu and Simileasca). The majority have relatives but there were also people living alone. Around 25% of the participants have access to a car (as passengers).

The most crucial vulnerability aspect that emerged for this social group, in addition to their physical disadvantage, is the **financial issue**: they had fairly low pensions and they had to spend the money on medication and daily expenses. Many of the younger vision impaired persons were **unemployed**, mostly because employers avoid offering jobs to people with disabilities. Some of the retired had additional incomes they saved from their past working years.

Mobility needs, transport poverty and social exclusion

Root causes of transport poverty that emerged during the focus group were the **lack of comfortable and accessible buses, lack of appropriate information and warning systems**

(for example they have issues in identifying the bus number, the stops are not announced in the vehicle) and **dependence on car and relatives** due the (obvious) impossibility to drive themselves.

Participants declared that travel conditions on public transport range from "acceptable" to "good" but also asked for more comfort on board of the vehicles. There are smartphone applications to assist vision-impaired people in using public transport as well as phones having voice synthesis and software that may recognize objects, like tickets or various types of banknotes, so some use this technology almost daily. Public transport is free for them, but they must go regularly to the city hall to renew their monthly pass.

Private cars are also used, but people with a visual impairment always need a driver for the car, so this is only an option for persons that have relatives able to drive a car. They also use taxis when necessary or they walk.

Participants also highlighted the **poor quality of the pedestrian ways in some parts of the city, lack of acoustic and tactile markings, low degree of understanding their situation** by others and limited willingness to support visual impaired people with more proper policies.

In fact, in many cases only physically impaired persons are considered by the authorities, and this is due to a law that forces public transport operators to purchase only vehicles with low floor and special ramp for wheelchairs. Sometimes suggestions have been formulated for the public transport operator and changes have been performed in the system to include the specific needs of this specific vulnerable group of people.

Mobility needs are mostly daily trips to the market and occasional trips for medical services. There are also frequent needs related to social activities like going to the association, visiting relatives and friends and more in general for social networking. Local NGOs usually help the participants in satisfying their mobility needs.

Some of the difficulties these persons have to face daily are payments at supermarkets (as they need to discuss with the cashier) and the low degree of understanding of their situation.

There are some specific unmet mobility needs that were specifically identified: **more announcement systems (acoustic) at the bus stops, more parking places for persons with handicap, and law enforcement for people that park private cars everywhere** preventing normal movement of vision impaired persons.

One participants demanded that *"law enforcement for illegal parking of private cars should be improved when obstructing pedestrian ways. Also there need to be more parking spots for persons with handicap."*

Main barriers to tackle transport poverty issues for them are considered the **lack of funding to implement more universal design solutions** for the vision impaired people, **poor legislation and regulations** and even **staff shortage at local administration's departments** dedicated to disabled people's issues.

Table 4-7: Summary of causes of transport poverty encountered by people with visual impairments in Buzău

CAUSE	IMPACT ON TRANSPORT POVERTY
Physical disadvantages	<ul style="list-style-type: none"> • Inability to drive a car • Difficulties in using public transport
Financial issues, unemployment	<ul style="list-style-type: none"> • Barrier to improved mobility
Inadequate public transport for the requirements of vision-impaired, no specific information	<ul style="list-style-type: none"> • Only physically impaired persons are considered by the authorities • Use smartphone applications and other devices for assistance in public transport • Otherwise dependence on car and relatives
Lack of municipal funds	<ul style="list-style-type: none"> • Lack of funding to implement more universal design solutions for the vision impaired people • Poor legislation and regulations • Staff shortage at local administration's departments

Source: Own elaboration

4.3.3 Findings from Naxos and Small Cyclades

In Naxos, instead of a focus group discussion, the HiReach local partner Intrasoftware had a joint interview with three employees of the Municipal Centre of Creative Work for People with Disabilities in Naxos island.

The Centre is situated in a rural area 10-15 min drive from Naxos town, at the same premises with the special school for children with disabilities. There are **13 children and adults in the Centre with combined mental and physical disabilities**. Two special mini-vans are used to pick-up and transport children with disabilities to and from the special school and the Centre. The service is totally free for the users.

In the opinion of the experts, disabled people, especially with mental disabilities, are socially excluded in Naxos. There is no sensitivity among the citizens of the island for the needs of disabled people. People feel ashamed to take their relatives with disabilities out of homes. Even the village where the special school and the Centre are located is known as the village of "*those with problems*". The interview partners highlight that children and adults with disabilities like to go to the school and the Centre as this is almost the only place they can socialize.

The interviewed stakeholders reported that **public buses are not accessible** to people with reduced mobility in Naxos and also the quality of road and public space infrastructures (e.g. sidewalks) is very poor. Moving in a wheelchair can be very difficult.

Also, some parents of disabled children do not own a car and this may cause social isolation for this vulnerable group of people.

The main issues in the opinion of the interviewees is the **lack of a more inclusive mentality and sensitivity from the citizens** and not the mobility issues as such (e.g. people park their cars obstructing the roads so that the mini-bus cannot pass or pass with difficulty).

Improved infrastructures and accessibility for people with limited mobility would be a big help to the caregivers who help them to move around. This is seen as a fundamental driver for allowing social participation of the disabled. They also believe that small-level actions could gradually improve the situation to some degree.

4.3.4 Comparison and summary

There are big differences in the local context between the three analysed study regions: needs and barriers for people with reduced mobility were considered in a medium-sized urban area (Buzău) with a good public transport coverage, a peri-urban remote area (Southern Salento) with scarce PT services and a car-based mobility system and a remote rural zone in an island (Naxos) with a substantial lack of transport options.

Also, the types of impairment were quite differentiated ranging from predominantly physical immobility related to walking difficulties in Salento to visual impairment in Buzău and mostly mental disease (not specifically addressed as a specific target group in HiReach) in Greece.

What can be highlighted in all the three cases is the **sense of social exclusion and lack of sensitivity** this particular social group has to face in relation to both public institutions and the rest of the local population.

A mobility option is practicable only when the entire trip chain can be guaranteed. The **role of collective public transport** is also perceived as a basic driver to allow PRMs to be autonomous and organise their daily life independently. The improvement of the level of service and accessibility of public transport, especially where totally absent and inaccessible, are definitely common elements on the wish list in all the investigated study regions and communities.

The following clusters of problems can be summarised:

- **High risk of isolation:** people with reduced mobility avoid having an active social life with transport poverty being one of the main reasons for this attitude;
- **Inaccessible or absent collective public transport;**
- **Door-to-door barriers:** accessibility limits or obstacles that are present along an itinerary or on the roads;
- **Lack of sensitivity and inadequate commitment of public institutions**

4.4 Women

4.4.1 Findings from Inner Area Southern Salento

The focus groups with women were organized in Patù and in Tricase. There were ten female participants at the focus group in Patù and seven in Tricase. During the lively focus group discussions, participants were able to identify and define heterogeneous problems.

Key stakeholders and experts interviewed, who were all women themselves, were one foundation working with women (Le Costantine), a social cooperative managing the local anti-violence network (Comunità di San Francesco) and the Deputy National Advisor on

Gender Equality Serenella Molendini, former advisor of the Apulia Region and the Province of Lecce.

The experts identified the topic of mobility as a crucial issue for women because it interlinks different dimensions such as access to work and education, family care, personal fulfilment and more in general the so-called "work-life balance", i.e. the difficulties in coordinating work and personal life that many women have to face. In particular, the interviewed experts recognize that in order to answer to the needs of childcare and assistance of elderly relatives, appropriate facilities (e.g. kindergartens or centers for disabled people) are needed. These are present in Southern Salento and more in general in Apulia thanks to a recent normative reform and specific policy at regional level started since 2006.⁵

Figure 4-7: Focus group session with women in Patù



Source: TRT

Mobility needs, transport poverty and social exclusion.

Both the experts/stakeholders and focus group participants immediately identified the absence of proper public transport options as one of the main barriers affecting the mobility of women. The lack of PT options prevents people from being autonomous and makes them more prone to social isolation.

The following clusters of problems have been identified taking into consideration the results of the two focus group sessions:

⁵ Discipline of the integrated system of social services for the dignity and well-being of women and men of Puglia - Regional Law No. 19/2006 and Regional Regulation No. 4/2007; Regional Law 7/2007, "Rules for Gender Policies and Life-Work Reconciliation Services in Puglia" which transposes the national law 53/2000 "Provisions for the support of maternity and paternity, for the right to treatment and training and for the coordination of city times".

- Inaccessible places, in space and time.** Female participants of both focus groups consider Southern Salento quite difficult to be reached (both by car and by public transport), and also within the area, a lot of time is needed to reach relatively close towns. In this respect, they are aware of the **remoteness of the area** and recognize it as a barrier to development of the local economy and of tourism in particular. They would also need faster options to reach the provincial capital Lecce by bus or train. Also, not every family owns two cars and many women are not used to driving.
- Imbalance in managing work-family life and leisure time.** For the focus group participants, a lot of time is needed and invested in car mobility and it is very difficult to find the right balance between work, family life and leisure time. Men usually provide little help in family care and children are not autonomous in their daily mobility needs, e.g. to go to school or to meet friends in the evening. The result is that parents need to coordinate their work and family life especially for mobility reasons. Also, most people, both women and men, give up some social and leisure activities because it means additional car trips. One participant stated: *"if you drive a lot for working purposes and for family reasons, you tend to avoid additional car trips for leisure and social activities (e.g. meet friends)"*.
- Limitation of opportunities (for women and for their family).** Another aspect highlighted during the focus groups was that people living in Southern Salento have **limited choices in terms of job and education opportunities**. Most of the times they have to commute long distances (e.g. to reach the provincial capital Lecce). The expert Serenella Molendini underlined that unemployed women often give up their training opportunities or first employment because they are not used to driving or there are limited public transport options. Young women have no incentives for attending distant trainings or schools thus compromising their future job/education opportunities and personal growth.
- Difficulties in reaching healthcare and counselling services.** Elderly women have many **difficulties in accessing healthcare and social services** because of transport poverty. A participant working in the local healthcare service in Gagliano del Capo also referred to pregnant women from ethnic minorities facing many problems in reaching hospitals and other local healthcare services because they have no access to a car and there is no PT either. As declared during the interview with the president of the social cooperative Comunità di San Francesco, women at risk of violence have difficulties accessing anti-violence supporting and advising services. They do not have the possibility to move autonomously due to the absence of mobility options. Some of them live in rural areas, others do not have a driving license or cannot use the car because it belongs to their husbands.
- Unsafe places and anxiety when driving.** Moving from a small town to a main "service centre" like Tricase or Casarano, for example for accompanying children to sports or cultural activities means passing through other towns. Changes in traffic rules (e.g. one way directions) with poor or absent signage were indicated as an element creating **difficulties in driving across towns**, especially with kids on-board. Also, absence of proper lighting on secondary roads or police controls creates a sense of unsafety. Participants also mentioned the risk of being more distracted when driving, as a result of the need of combining both work and family duties.

Several times the discussion referred not only to the participants' own needs, but also to those of their relatives. The absence of public transport options **forces young people to use private cars** (as drivers or passengers of driving friends) and this creates anxiety, stress and concerns among parents. Also, women who travel alone on public transport do not feel safe and secure.

Table 4-8: Summary of causes of transport poverty encountered by women in Inner Area Southern Salento

CAUSE	IMPACT ON TRANSPORT POVERTY
Inadequate public transport	<ul style="list-style-type: none"> It is quite difficult to reach Southern Salento and also to move in the area Unemployed women often give up their training opportunities or first employment due to mobility barriers Difficulties in accessing healthcare and social services
Limited availability of cars	<ul style="list-style-type: none"> Car is needed, but not every family owns two cars and many women are not used to driving or do not have a license If only one car is available, car is used by the husband
Children not autonomous in mobility	<ul style="list-style-type: none"> Parents, especially mothers, need to coordinate their work and family life especially for mobility reasons
Unsafe travel conditions	<ul style="list-style-type: none"> Stress and concerns in everyday life can negatively affect concentration while driving Concerns among parents when children are travelling

Source: Own elaboration

4.4.2 Findings from Esslingen and Göppingen

The focus group session with refugees held in Esslingen was attended by eleven women and nine men. The sessions were organized separately for women and men, following the impression that women have different problems than men. This strategy was also chosen in order to assure that women could voice their problems freely without hesitation or interruption by men. Additionally, interviews with representatives from NGOs supporting refugees in their everyday life and from municipalities were conducted, both in Esslingen city and in the town of Donzdorf in Göppingen county.

The results of the two focus groups, including the one on women, are described in Section 4.5.1 **Errore. L'origine riferimento non è stata trovata..** Some key elements are also here briefly highlighted.

Mobility needs, transport poverty and social exclusion

Female participants, similarly to the focus group with male migrants, indicated they heavily rely on public transport and quite often they need to travel with young kids.

Travelling with children, e.g. with a stroller, can pose a problem to them, as one participant highlighted: *"It is difficult for me to get on the train with a stroller. Once the train left before I managed to get on the train with the stroller. Although there were people around, no one offered help to me"*.

Also, women refugees have to travel longer distances, e.g. to reach healthcare facilities and services.

When travelling on public transport, the language was indicated as a key barrier particularly for understanding the tariff and ticket system and to use a ticket machine.

Walking was identified also as a main transport mode particularly for accessing public transport whereas bike usage is not very common.

Figure 4-8: Focus group session with female refugees in Esslingen (Neckar)



Source: Kuttler/Technische Universität Berlin

4.4.3 Findings from North and South-East Luxembourg

In Luxembourg, a focus group session was organised with four women living on the French side across the border of Luxembourg. None of the women had children. One of the participants was in a relationship, the others were single. They all worked in the tertiary service industry in Luxembourg City .

Women were invited to discuss about their mobility needs and related transport poverty issues. Their interpretation of the term transport poverty was “not having realistic” alternative options to the car.

Mobility needs, transport poverty and social exclusion

During the discussion it emerged that **public transport options exist, but they are not used by the participants because they are considered neither convenient nor secure**. The regional bus stop can only be reached by car. The return trip from the workplace would imply also evening travel, which is not considered optimal also because of safety and security concerns.

Such safety concerns and fear of aggression do not only relate to PT usage outside of daytime, but to other services as well such as carpooling: **when available, participants would prefer “women only” options and shared rides**.

Three of the four women are part of a larger group that tries to organize carpooling from a central point cross-border. They all own a car yet rotate the driver role to bear the costs of the gasoline. One participant indicated that she and her partner each have their own car because the partner works in France.

The women were aware of the COPILOTE carpooling initiative of the government that offered reimbursement of the travel costs for a certain period. However, the participants found it too complicated to participate.

The private door-to-door Kussbus service is considered too expensive as an alternative to the car for commuting.

Transport costs take up a significant part of the household budget just like housing. **The choice of living cross-border seems not only to depend on the price of housing, yet also on social reasons to a significant extent** (the women who attended the focus group have the French nationality, family and friends live in the neighbourhood). The choice of working in Luxembourg is made based on the difference in salaries, that outweighs the transportation costs. Nevertheless, the cost in terms of time of travel and social consequences are considered high (e.g. leaving at 6h30 and return at 20h30).

Table 4-9: Summary of causes of transport poverty encountered by women in North and South-East Luxembourg

CAUSE	IMPACT ON TRANSPORT POVERTY
Public transport options considered inconvenient or insecure	<ul style="list-style-type: none"> Using cars or carpooling are considered the main mobility options → car dependency
Availability of financial means	<ul style="list-style-type: none"> Gasoline is expensive, expenses are shared when carpooling is organized among friends/colleagues Private door-to-door Kussbus is not used Housing and transport costs consume a significant part of the household budget → decision to live cross-border
Organized carpooling too complicated	<ul style="list-style-type: none"> Not seen as an option by women

Source: Own elaboration

4.4.4 Comparison and summary

The study regions where mobility needs of women were investigated present two main differences.

The first difference is the **spatial context**. On the one hand, peri-urban and rural Luxembourg and the counties of Göppingen and Esslingen are commuting areas: many people commute to the regional centres where working opportunities are concentrated; on the other hand, in Southern Salento there is not a strong gravitation towards the provincial capital Lecce for commuting purposes because among others also of the low employment rate. The mobility needs here have been widely discussed in relation to short distance and often more occasional trips. It can be observed that mobility needs of female refugees in Baden-Württemberg are more similar to those of Italian women in relation to the distance and motivation of mobility.

The second difference refers to the **social characteristics** of the selected female groups: female migrants in a process of integration in Germany, single women and couples without children in Luxembourg and women very focused on the conciliation of their

individual life with their family duties and care for their relatives (children and elderly) in Salento.

Despite these differences, the **reclamation of more inclusive, safe, affordable and above all efficient public transport is a common request**. Surprisingly, also in an area (Southern Salento) where public transport options were never fully explored nor used by the citizens, the lack of proper collective mobility solutions is perceived as one of the main barriers for a more inclusive and autonomous mobility.

This confirms the notion of forced car ownership in both Luxembourg and Salento as well as **positive attitudes towards more flexible and shared collective mobility options**, i.e. public transport and “women-only” carpooling/ridesharing, the latter also put in practice by some participants.

In two different contexts, Salento and Göppingen/Esslingen, the fundamental role of public transport for the **accessibility to healthcare services for migrant women** has been detected.

The choice of living in a remote (Southern Salento) or cross-border area (France for women commuting to Luxembourg) can be independent of the availability of proper and sustainable transport options and more linked to social reasons (e.g. staying close to relatives or living in the native town/city). The car is the transport mode that is largely used by the women who have access to a car, mainly because there are no other suitable options available. Hence, car ownership can be considered as ‘forced’.

4.5 Migrants and ethnic minorities

During the course of the HiReach research it was found that migrants and ethnic minorities do not seem to be a homogeneous group. Many are well integrated in society. Transport poverty is mostly linked to other aspects of vulnerability (e.g. old age, disability, low income).

There was however one group within this category that seemed to stand out, namely refugees. In the German and Luxembourg case study areas it was possible to have a closer look at the specific needs of this group. The HiReach project thus received a rare insight into the experienced and/or not-experienced transport poverty of refugees, also considering their wider needs to integrate, material deprivation and basic social needs.

4.5.1 Findings from Esslingen and Göppingen

The county of Esslingen has accommodated 5,300 refugees until end of 2016, that is 5.8% of total in Baden-Württemberg. The county of Göppingen accommodated 1,844 refugees by November 2017, which is 2.8% of total in Baden-Württemberg. Both counties have a decentralized approach to initial accommodation, there are 126 facilities in 36 municipalities in Esslingen and 72 facilities in Göppingen. Refugees live in most municipalities of the case study area, also in the more rural ones. Present challenge is the search for accommodation in private dwellings due to the tense rental market.

In Esslingen, two focus groups were conducted. One focus group was attended by male refugees; another by women only.

The focus groups with refugees were organized separately for women and men, following the impression that women have different problems than men. In an all-women group, these needs could directly be addressed. This strategy was also chosen in order to assure that women could voice their problems freely without hesitation or interruption by men.

The male group consisted of nine participants. All men were relatively young, between 20 and 35 years, and two women were around 40. The duration of stay in Esslingen differed between the participants: four participants between had been staying in Germany for 1,5 and 2 years, three participants around 3 years, one participant 4 years and one participant 5 years. Except for one participant, the participants from African origin did not speak German. The participants from Afghanistan and Iran spoke German well, but had difficulties in understanding English. Hence, everything had to be translated two-way by the moderator.

Figure 4-9: Focus group sessions with refugees in Esslingen (Neckar)



Source: Kuttler/Technische Universität Berlin

The female group consisted of 11 participants. Most women were relatively young, between 20 and 30 years, and two women were around 40. One woman was approx. 50 years old, and was accompanied by her daughter, approx. 25 years old. The female focus group was also attended by 1 translator, 3 babies, 2 young children and 2 representatives of AWO (Arbeiterwohlfahrt, an organization for the welfare of workers) to take care of the children.

The participants from African origin did not speak German very well or not at all, while the participant from Iran spoke German well, but had difficulty to understand English. The three participants from Syrian origin did neither speak either German nor English, but Arabic. The Arabic translator spoke German well, but not English. Hence, everything that was said had to be translated two-way English-German by the moderator, and then it was translated into Arabic by the Arabic translator. Most women were newcomers to Germany; three persons had been staying in Esslingen less than 1 year, six between 1 and 2 years, one between 2 and 3 years and one for 5 years.

Most of the participants in both sessions live in collective accommodation in the city of Esslingen, either in the city centre or in the outskirts. Four male refugees are living in the adjacent municipality with suburban character. Two men and one woman live in an adjacent village on the hills with rural character. One woman lives in a town 20 kilometers away from Esslingen.

In addition to the focus group sessions, interviews with representatives from NGOs supporting refugees in their everyday life and from municipalities were conducted, both in Esslingen city and in the town of Donzdorf in Göppingen county.

Mobility needs, transport poverty and social exclusion

In terms of **transport modes used**, refugees in the German case study area heavily rely on public transport. For access to public transportation, walking is the preferred mode, while cycling is also common among male refugees. In particular situations, e.g. when public transportation is not available on weekends or during night/early/late hours, cycling is also used to travel between municipalities.

One participant explained his **challenges**: *"I live outside of Esslingen and I work late night, early morning or weekend shifts. During these times, there are no buses running to the next train station, so I ride my bicycle to the train station. Only then I get to work in time."*

Although almost half of the women in the focus group session know how to ride a bicycle, bike usage among women is not common in Esslingen. **Many women expressed that they would be eager to learn how to ride a bicycle.**

One woman stated: *"I would love to ride a bicycle, but I do not know anyone who could teach me how to ride."* However the women expressed that there are constraints when riding bikes, such as travelling with children.

None of the focus group participants in both sessions owned a car. However, several refugees in the county have a driver's license or are undergoing driver training and exams. On arrival in Baden-Württemberg, refugees receive a lump-sum of 320€ each month, excluding accommodation. If not for school or other education, and for particular trips to appointments with authorities, refugees have to pay for their travel by themselves.

When taking up employment, refugees usually receive low-income jobs, but then also they must pay for their accommodation on their own. This means that their financial situation does not necessarily improve substantially once in employment. Given these constraints, for the refugees, public transport is costly in the counties of Esslingen and Göppingen, and the whole Stuttgart region.

Also, refugees with a reduced budget rely on grocery shopping at discounters, which are not available in all villages where they live. Hence, they have to do grocery shopping at costlier supermarkets or make additional expenses to travel to a discounter. Participants of

the focus group sessions also raised concerns about the costs for travelling with children above the age of six years, and about the latest increase in ticket prices.

For those having direct access to trains (= in the valleys of the Stuttgart region), it is easier to find opportunities for employment, education and meeting friends in other parts of the region. The accommodation system of the authorities has however the character of a "lottery" from the viewpoint of the refugees, because the personal situation and characteristics are usually not considered when accommodation is assigned to them, except perhaps when the refugee social services step in to negotiate with the authorities. However, because every municipality has a "contingent" that needs to be "filled up", there will always be refugees that need to live in more remote areas.

Specific findings on the **mobility problems of women refugees could be obtained through the women-only focus group**. The women have to travel longer distances than men, e.g. to attend a specialized doctor. The language problem seems to be more severe for women, because some of them are illiterate and have difficulties to use a ticket machine. Women also travel more often with young kids in public transport.

For recently arrived refugees it takes some time to understand the complex tariff and ticket system in public transport. The participants were very aware that improving their language skills helps when using public transport. One participant had the opinion that *"refugees have the obligation to learn the public transport system, because it is also a way of becoming integrated in German society."*

Volunteers and the social service for refugees support newcomers by explaining how the public transportation system works.

One finding not to neglect from the focus group sessions was that refugees from African countries reported that they face **discrimination on public transport**. It seems that especially when young African men are travelling in groups, they are suspicious to ticket inspectors and controlled more often.

One participant stated: *"The inspectors do not have much time, they cannot check everyone, so that's why it is happening to us refugees"*. It seems that there is little understanding for their situation.

Apart from the costs, due to **language barriers and being not acquainted with public transportation systems**, obtaining tickets can be cumbersome. Refugees are sometimes caught without valid tickets, and they are severely fined also in situations when they are travelling with a ticket, but the ticket is wrong or not valid anymore.

Table 4-10: Summary of causes of transport poverty encountered by refugees in Esslingen and Göppingen counties

CAUSE	IMPACT ON TRANSPORT POVERTY
Geography/spatial characteristics of the place	<ul style="list-style-type: none"> Accessibility deficits for the refugees that are housed in the more remote and scattered settlements; hence many destinations can only be accessed by car
Availability of financial means	<ul style="list-style-type: none"> Public transport is considered costly, especially considering the limited financial means of the refugees
Language issues	<ul style="list-style-type: none"> For recently arrived refugees it takes some time to understand the complex tariff and ticket system in public transport

Experienced discrimination	<ul style="list-style-type: none"> Especially refugees from African countries face discrimination on public transport
Gender issues	<ul style="list-style-type: none"> Women have a higher need of transport services and travel longer distances The language problem seems to be more severe for women. Some of them are illiterate Women also seem to face more difficulties to use a ticket machine

Source: Own elaboration

4.5.2 Findings from North and South-East Luxembourg

The Luxembourg population is growing annually with about 2% (about 12,000 inhabitants). This is mainly through European citizens migrating to the country. Luxembourg welcomes about 2,000 to 2,500 refugees annually.

The Luxembourg Reception and Integration Agency (OLAI) is in charge of implementing the Grand Duchy of Luxembourg's reception and integration policy. The integration policy applies to all foreigners, that is, to European Union citizens as well as to third-country nationals. OLAI also organizes the reception, accommodation, and social supervision of applicants for international protection. All refugees are offered a free public transport pass. The refugees are offered housing both in rural and remote areas of Luxembourg as well as in the capital of Luxembourg.

In the case of Luxembourg, no distinction was made between male and female refugees. Two mixed focus group meetings took place. Both included young migrants; the first focus group consisted of two males and two females all living in remote/rural areas of Luxembourg. The second focus group consisted of three males and one female, of which one lived in the city centre, the others again in remote/rural areas.

Mobility needs, transport poverty and social exclusion

Most of focus group participants use the **bus as their primary mode of transport** and often commute by bus to Luxembourg City centre on a regular basis. From some housing locations, the train can be used as primary mode of transport. Two participants use the car as their primary mode of transport and they use it to commute to Luxembourg City centre on a daily basis.

When having the financial means and the possibility to use their driving license the migrants indicated their **wish to buy a car** and use it as their primary mode of transport. The car is seen by all migrants as a convenient mode to travel outside of Luxembourg and to do weekend trips. One participant uses the car for the first and last miles and then takes the train to go to the city centre, as there are traffic jams and parking problems in the city. However, if the train line is subject to renovation works etc. the car is the alternative despite the availability of replacement buses which are considered too slow.

The migrants that participated in the focus groups have in general no problems in particular with understanding the public transport network in comparison to the resident population. Especially the younger are well acquainted with internet and smartphone applications. However, one migrant highlighted: *"The internet connections in both bus and train are really too weak to easily communicate with our social network."*

Mobility needs include seeing friends, personal appointments, education and sport. None of the participants (is by legislation allowed to) work at a regular job. One observation that could be made was that the migrants had more mobility needs in terms of travel to the city centre for education and administration. Yet in that respect they seem to be in line with young natives that due to circumstances (in this case due to the attribution of a residence in a rural area) moved from an urbanised environment (in their country of departure).

The main transport issue is related to the **location of their housing**. Last buses in the evening, to the rural places as well as within the city, are too early which limits the participation in social life. The frequency of buses on the weekend is too low (e.g. one bus per hour) which results in only highly planned and anticipated mobility. Taxis are widely regarded as very expensive and therefore not considered a mobility option.

It was rather surprising that there were within the focus groups no particular differences between persons living in remote and rural vs. more urban areas with regard to their perception of the different transport modes.

No particular discrimination was reported during travel. This might be due to the fact that public transport is free for refugees (so no particular issues with ticket control). The high diversity of the Luxembourgish population might also be a reason for a lack of particular discrimination experiences.

Table 4-11: Summary of causes of transport poverty encountered by refugees in Luxembourg

CAUSE	IMPACT ON TRANSPORT POVERTY
Geography/spatial characteristics of the place	<ul style="list-style-type: none"> The public transport services are not sufficient for the higher mobility needs of the migrants housed in rural areas
High mobility in younger life	<ul style="list-style-type: none"> Especially for the younger refugees there is the desire to travel more to integrate into the local society

Source: Own elaboration

4.5.3 Comparison and summary

Due to their particular situation, refugees in both Luxembourg and the German case study area face some forms of transport poverty, although the overall availability of public transport is relatively good in both countries seen from a European perspective. Both cases confirm that **due to lower than average income, costly public transport (in the case of Germany) and higher travel time due to longer distances between house and job locations, refugees are more prone to exclusion**. Although the mobility needs and problems of refugees do not represent the situations of migrants in general, especially not those having been living in EU countries for a long time, migrants are found to experience similar difficulties (Rajé 2004). The German case study showed that these challenges are even more substantial for women, as Uteng (2009) has also pointed out.

In terms of transport modes used, **refugees in both case study areas heavily rely on public transport**, which confirms observations in studies on migrants in other European countries (Tsang and Rohr 2011; Owen and Green 2000, see chapter 3.2.5 of D2.1).

Bike usage among women is not common in the German case study area. In Luxembourg, migrants' attitudes to cycling seem not to be different from those of the native population, even if they probably cycle less, in practice. Most women expressed that they would be eager to learn how to ride a bicycle, but there are constraints such as travelling with children. The assumption that cycling is perceived as an inferior mode of travel (Samek Lodovici and Torchio 2015) could not be confirmed in any of the focus group sessions.

None of the refugees owned a car in Germany. In Luxembourg some did. This seems to confirm the observation that **car-ownership is less likely among migrants**, which could be related to their less favourable economic conditions. However, car ownership of migrants is still much higher than of refugees in EU countries (Samek Lodovici and Torchio 2015). Several refugees in Esslingen county obtained a driver's license or are undergoing driver training and exams. It seems that in general, the moment they have the financial means and right to drive a car they will do so. On the other hand, the younger migrants in Luxembourg expressed also environmental concerns as a reason to continue to use more sustainable modes of transport.

All refugees overall have **financial constraints**. Therefore, public transport is considered costly in the German study region. This confirms observations on travel costs for immigrants in other European regions (Samek Lodovici and Torchio 2015; Assum et al. 2011). In Luxembourg, public transport is free for refugees. The government also just announced that public transport will be free for all (so not just refugees, children and elderly) from next year on.

Beyond the financial constraints, especially for refugees there is a clear link between the place of residence (in general not freely chosen), needs for mobility (in rural and remote vs. in more urban areas), and their own social characteristics (e.g. being used to living in an urbanised area in their country of origin, age group, etc.). This combination of factors leads to an increased risk to experience transport poverty for migrants / refugees, as compared to the native population.

In general, it seems that **migrants living in rural and remote areas** need to travel more often to destinations located in the urban centre, in order to keep in contact with their social networks, yet also for activities related to their integration into the society. Considering the existing transport options, this leads to a higher risk of transport poverty.

Migrants in the urban areas do not show any particular differences in terms of mobility needs or transport poverty compared to the native population, with the exception of financial constraints in terms of procurement of an own car.

An important aspect of transport poverty in the German case is **discrimination**. This supports findings from the HiReach desktop research, including data from an EU-28 survey in 2017 which shows that one in four (24%) respondents felt discriminated against because of their ethnic or immigrant background (European Union Agency for Fundamental Rights 2017). No experiences of discrimination were reported in the Luxembourg case study.

4.6 Children and young people

4.6.1 Findings from Naxos and Small Cyclades

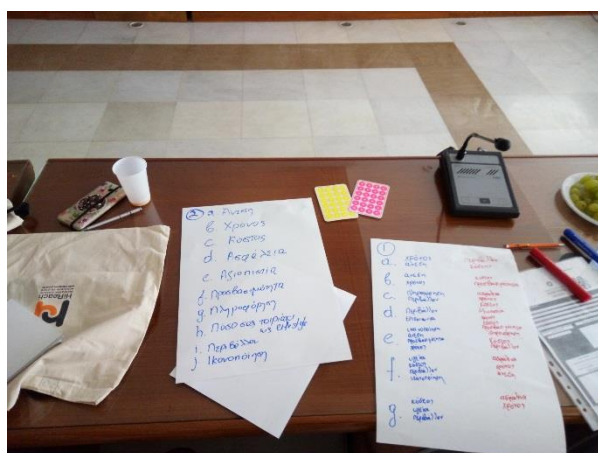
The focus group for children and young people on Naxos island was attended by five girls and one boy, aged between 12-18. They all live in remote mountain villages with no schools or after-school activities. All families have access to one or more cars.

In addition, interviews were carried out with representatives from Naxos Municipality, from school boards of three different schools, and from (public) transport service providers, in order to find out more about the mobility needs of children and young people in Naxos.

Children and young people's main mobility needs include going to school, attend leisure and after-school activities, and socialising with peers.

Children from Naxos mountain villages mostly go to school in other larger villages. For some, school is located 3 km away (quite close), others need to travel long distances. Grown-up children (15-16) even rent flats/houses in larger villages to be able to go to high school – supported by the trend in the last years for children and parents to prefer bigger, modern schools to small village schools – which causes safety concerns and also impacts the family budget. After-school activities are concentrated in Naxos town and another larger village, hence for these activities (sports, language lessons, tutoring schools, etc.) children need to travel even longer distances (up to 30-45 km of mountain road), which is very cumbersome for both the children and their parents who have to drive them.

Figure 4-10: Focus group session with young people in Naxos



Source: Intrasoft

Figure 4-11: Interviews with stakeholders from Naxos



In Iraklia, due to the very small number of pupils, schools are also very small. There are only 5 students (12-18 years old) in secondary school at the moment. Also, there are not enough (qualified) teachers which is why many parents believe it would be better for their children to move to another place (Naxos, Athens) to attend bigger schools.

For after-school activities (e.g. music lessons) and socialising, children need to go to Naxos or other neighbouring islands.

The **main problem** for these children is that opportunities for after-school activities and for socializing with peers are very limited. Also, they are tired and lose a lot of time travelling long distances each day. In Iraklia, even though there are many social gatherings, usually organised around children (school theatre in which parents also participate, dancing teams), socialising with peers is a big issue. There are simply very few pupils at school (in some cases, only one).

Reaching high school age, teenagers feel the need to socialize with their peers even more and thus families frequently decide either to find a place to stay for their children in another location (e.g. Naxos or Athens, with their relatives) so that they can attend a bigger high school, or they move to another location together as a family.

Mobility needs, transport poverty and social exclusion

The following **root causes for transport poverty** were identified that specifically apply to children and young people:

- Long distances to schools and after-school activities
- Bad roads (dangerous to drive, cycle, walk)
- Very limited public transport coverage (in Iraklia, none at all)
- Dependency on the school bus and parents driving to other activities (in Iraklia, there is not even a school bus).

On the island of Naxos, children can take the **public bus** for free to go to sports and other activities. However, due to inadequate PT coverage of remote mountain areas children cannot move independently and have to rely on school buses and parents for their travels instead. The bus schedule is not always followed (according to the public transport operator, who has a monopoly on the island, this is due to problematic parking and in the summer, a high number of tourists driving around) and there is no real-time information ('smart stops' infrastructure was implemented two years ago but does not work).

One participant of the focus group sessions who lives in a small and very remote village 45 km away from the Naxos capital town complained that due to the transport situation he cannot easily take part in social events: *"We have a big issue with meeting our friends as we live in a small village with only 3 children far away from big villages and it is difficult for us to travel as there are almost no buses"*.

Mountain roads are dangerous, especially in the winter. In Iraklia, there are no public buses. Residents travel for free on the ferry though.

In Naxos, **school buses** are subsidized by the regional authority. Almost all the children in mountainous areas use it. The bus is free for pupils, but the downside is that it passes through many villages collecting pupils, and thus some children need to cross very long distances (1 hour or even more). Children get tired and some of them get sick. Another problem is that the school buses have very frequent delays. There is also a lack of safety regulations (children are even standing on the school buses when there is a lack of available seats). Recently, mini-vans were introduced to take children with special needs to specialised schools. On Iraklia, there is no school bus.

The lack of public transport coverage leads to a high dependency on **private car** use. Children rely on their parents or other people to drive them. Informal **carpooling** is implemented traditionally on both islands (in Iraklia, as there is no school bus, also to go to school). There is no specific matching service, all is done through informal arrangements between friends, neighbours, relatives. Sometimes young people hitch-hike. **Taxis** are not used because these are too expensive. In the past there used to be subsidies to support taxi use by locals (for specific, more difficult areas). This is not the case anymore. There are many issues with road safety: bad roads, dangerous driving (especially during the touristic period). In order to be more independent, young people start to ride **motorbikes** at a very young age (16) on unsafe mountain roads.

Cycling and walking are no viable options, again, because of road safety issues (dangerous roads, no pavements or cycle lanes, dangerous driving) and also geography (mountainous: uphill, downhill).

Solutions

The teenagers in the Naxos focus group would like to travel more by themselves, but they do not have the financial means. A **general improvement of the public bus connection** to the mountain areas would be a partial solution as this would allow them to travel more to the places of their interest and not be as dependent on their parents for their mobility needs. With regard to school trips, the use of small vans instead of big buses could be an improvement, following not one very long route, but several shorter ones. There have also been some attempts to organise classes via skype as a solution for children from remote and difficult to access villages (but this does not solve the problem of not being able to socialise with peers).

The focus group participants all agreed that they **would like to have and be able to use a car**. They would prefer this to any collective or public transport means.

One participant stated: *"In the future, we would prefer using our own cars to any other collective mobility solution. The car is a part of our identity"*.

They use Internet very intensively, so they **would easily adopt any ICT solution for their mobility if it were available**. Unlike their parents, they would be willing to leave Naxos to find a better job. A mini-van was suggested for shared routes between families. Even if this would imply some costs, it seems a good solution for them, since informal ride-sharing (with no fees) is already common.

In Iraklia, it was suggested to adapt the ferry boat schedules, as this would enable the children to go to another, bigger island to go to school (with better teachers and more possibilities to socialise). There was also interest in an 'Uber'-like application for boats.

Table 4-12: Summary of causes of transport poverty encountered by children and young people in Naxos and Small Cyclades

CAUSE	IMPACT ON TRANSPORT POVERTY
Spatial Conditions	<ul style="list-style-type: none"> Spatial isolation due to island situation Cycling and walking not viable due to topography
Long distances to schools	<ul style="list-style-type: none"> Children get tired and some of them get sick
Bad roads, dangerous driving	<ul style="list-style-type: none"> Dangerous to drive, cycle, walk
Very limited public transport coverage (in Iraklia none at all)	<ul style="list-style-type: none"> Children rely on school buses and parents for travels High dependency on private car use
Inadequate ferry boat schedule in Iraklia	<ul style="list-style-type: none"> Children have less opportunities to get to Naxos and other islands, e.g. for meeting friends

Source: Own elaboration

4.6.2 Findings from Buzău

The focus group for children and young people in Buzău was attended by girls only, aged around 16-17 and one over 18 years old. They all come from families of up to 4 members, owning 1 or 2 personal cars. Most of the participants live in an urban area, a few in a peri-urban one. The material situation of the participants' families is good, not marked by either lack or luxury. The focus group thus consisted only of children that are quite well-off and

live in non-remote areas. It should be noted that there are other subgroups of children and young people that have even more urgent needs.

In addition to the focus group, several interviews were carried out (with representatives from local NGOs, schools, the municipality, the public transport operator) in order to find out more information on the needs of children and young people in Buzău.

Mobility needs, transport poverty and social exclusion

Children and young people's **mobility needs** include daily trips to school, some occasional trips to go shopping, attend extra-curricular classes, practice sports, do volunteer activities, for vacations or visiting relatives, and rarely for extraordinary or emergency situations.

The following **root causes for transport poverty** were identified:

- low bus frequency, lack of appropriate information system
- limited accessibility to regular fares, fares are a little too high, limited subsidies
- road infrastructure is not suitable for cycling
- no drivers' license.

Public transportation is the most common means of transport. In 2017, the main public transport operator, TRANS-BUS, increased its fleet of vehicles and private minibus operators were banned from then on. The focus group participants stated that the travel conditions are good and some of the buses have air conditioning. On the other hand, the minibuses were faster, cheaper (compared to current fares) and more frequent. The bus timetable is a problem. The frequency is too low and the schedule ends too early in the evening which forces people to use other – more expensive – means of transport. Also, the timetable is not always respected, making the services unreliable. Finally, better information about the public transport system is needed.

Public transportation in the city of Buzău is free for high school students, but only on one bus line. Some students need to use different buses and must pay extra fees. Especially for those students living in the suburbs or the countryside near Buzău, and/or with a low family income, it would be necessary to have all transport costs covered. **Accessibility to standard fares is also problematic:** a ticket is 50% more expensive on board of the bus but ticket kiosks are rare, so passengers lose a lot of time to buy a ticket at a regular fare, or else they have to buy several tickets in advance.

The focus group participants felt **socially disadvantaged in comparison to elderly persons**. They benefit from the same subsidies from the public transport operator, but say that they have different needs, due to their age and social status, that necessitate them to travel more often or in different ways, and they feel that they should receive much more support from the authorities. Also, they have an issue regarding giving up non-reserved bus seats to the elderly, considering that they have a long day at school and in some (art) classes they must stand for hours.

One participant stated, referring to elderly people: *"Elderly people are expecting that we give up our seats in the bus or in the station for them. But we have our place as children and they don't care about our physical condition, for example if our feet are hurting because we must stand in class to make drawings. Just as they have rights, we have too."*

Private **cars** are also used, mostly occasionally. Young people stated during the focus group that they would like to make more use of the car but of course, due to their age,

they are too young to obtain a drivers' license, so they depend on the availability of a driver – a relative with a car – to help them. **Taxis** are sometimes an option, mostly when it is possible to form a group and share the ride.

Sometimes **cycling and walking** are good alternatives as well. However, these non-motorized forms of transport are used only in few situations as there is no appropriate infrastructure and safety is an issue. Streets are narrow and overcrowded, and there are no cycling lanes. Also, it would be a good idea to have secure and monitored bike parking space to be able to come to school by bike.

It should be noted that among the group 'children and young people', **some subgroups can be considered especially vulnerable**, namely children with migrant parents (for ex. Roma children – with very little education), children left behind by their parents who went to work abroad, children coming from poor and/or single-parent families, and also children / young people living in remote areas.

According to an interview with a local teacher in Buzău, 1/3 of high school students comes from rural areas. Some children are commuting for 20 to 40 km; some leave in the morning at 6 AM and arrive home at 9 PM; one case was mentioned of two brothers having to walk every day 10 km to reach the closest public transport stop and from there take the bus to Buzău (and vice versa, to return home). Buses are crowded, especially in winter, and not adapted to children's needs. As a result, students coming from further away arrive late at school and sometimes have to leave early to catch the (only) bus back. Once they are old enough to drive, students come to high school with their own cars – if they can afford it.

These disadvantages of children living in remote areas are also acknowledged by their peers, as one participant confirms when he said: *"It does not seem right for our colleagues that do not live in the city to pay for their trip to school"*.

Solutions

Young people who attended the focus group would like to be able to use public transport also late in the evening to avoid taking taxis; they would like a more frequent service and most importantly a more reliable and on-time bus schedule combined with an advanced information system.

Regarding fares, a cheaper public transport service or increased subsidies would be a plus, and more kiosks to be able to easily buy regular fare tickets. A safe usage of non-motorized transport means is also desired.

Table 4-13: Summary of causes of transport poverty encountered by children and young people in Buzău

CAUSE	IMPACT ON TRANSPORT POVERTY
No special provisions for young people	<ul style="list-style-type: none"> Young people feel disadvantaged in comparison to elderly persons They have different needs, due to their age and social status, that necessitate them to travel more often or in different way → more support from the authorities needed
Road infrastructure is not suitable for cycling	<ul style="list-style-type: none"> Safety issues

CAUSE	IMPACT ON TRANSPORT POVERTY
Bus timetable not respected, lack of appropriate information system	<ul style="list-style-type: none"> Unreliability of services
Low bus frequency	<ul style="list-style-type: none"> Forces young people to use other – more expensive – means of transport
Fares are a little too high, limited subsidies	<ul style="list-style-type: none"> Especially disadvantage and a financial burden for those students living in the suburbs or the countryside near Buzău, and/or with a low family income
Ticket are 50% more expensive on board of the bus but ticket kiosks are rare	<ul style="list-style-type: none"> Passengers lose a lot of time to buy a ticket at a regular fare, or else they have to buy several tickets in advance. Again, disadvantage for those students living in the suburbs or the countryside near Buzău
No drivers' license	<ul style="list-style-type: none"> Driving own cars is rarely an option

Source: Own elaboration

4.6.3 Comparison and summary

HiReach desk research has stressed that 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, accessibility to the transport system is of utmost relevancy to the fulfilment of their daily mobility needs.

The fieldwork has confirmed these findings. In **Buzău**, public transport is the most common means of transport for children and young people. Problems encountered are that frequency is too low and the schedule ends too early in the evening. Also, the system is unreliable and better information is needed. PT is free for high school students, but only on one bus line. Some students living farther away have to use more than one bus and pay extra, which is a problem.

In Greece, the focus of the fieldwork was on children living in remote **mountainous areas on Naxos and Iraklia**. Most of the children in Naxos use the school bus and, to a lesser extent because the offer is very limited, the public bus (for free). On the smaller island Iraklia, there are no (school or public) buses so there, children depend entirely on being driven by parents and neighbours. In addition, they may take the ferry boat to Naxos or other Small Cyclades (with or without parents).

Another insight gained during the HiReach desk research was that poor availability of public transport and high fares may prevent young people from having **access to education, work and social interactions**, especially for those living in rural and poorly transport-connected areas and/or from low-income families. This situation is particularly relevant for secondary and tertiary education as there are fewer schools, forcing people to travel more and on longer routes (resulting in higher fares).

From the fieldwork in **Buzău** (interview with a high school teacher), it was confirmed that access to education is a really big problem for students who come from rural areas. They sometimes have to travel very long distances (up to 20 – 40 km, one way) to reach school.

Also, it is expensive as these students have to pay part of the trip themselves, which they cannot afford. The situation in **Naxos and especially Iraklia** that is even more secluded, is very serious: to go to school (esp. high school), attend leisure and after-school activities, or socialise with friends, these children often need to travel (very) long distances. Some older children even move away to bigger villages and rent flats/houses there to be able to go school.

HiReach desk research has stressed that additionally, in areas of poor accessibility, often there are **limited opportunities for walking, cycling or using public transport independently**, which is particularly relevant for children and young people. As a consequence, parents drive children directly to the school. Children's independent mobility has thus seemingly declined during the past 30 years, with trends of increased car usage and accompaniment by adults.

In **Buzău**, cycling and walking are used only in few situations as there is no appropriate infrastructure and safety is an issue. Cycle lanes and (secure and monitored) bike parking space is needed to encourage coming to school by bike. In **Naxos and Iraklia**, cycling and walking are not viable options because of road safety issues (bad roads, dangerous driving) and geography (mountainous area).

Finally, in many western countries, young people seem to be **less car-oriented** than previous generations and exhibit increasingly multimodal behaviour. New status symbols are not cars but internet and phones.

By contrast, young people in **Buzău** and even more in **Naxos** state that they would like to make more use of the car but of course, due to their age, they are too young to obtain a driver's license. They look forward though to being able to drive themselves. On Naxos island especially, one of the barriers mentioned for the implementation of new solutions is the lack of a mentality to endorse sharing and collective solutions.

To conclude, the field research in both Buzău and Naxos has confirmed that **especially children living in rural or deprived areas are at risk to transport poverty**.

4.7 People living in rural and deprived areas

This subchapter focus on social groups that live in geographical areas with characteristics that affect everyday life of residents including mobility negatively. In the HiReach project, the prioritised areas are remote, rural and deprived or peripheral urban areas. For an in-depth investigation of these spatial categories see HiReach Deliverable 2.1.

In the HiReach fieldwork phase, the focus was on the population living in remote or rural areas in different HiReach study regions. Two focus group sessions were conducted on Naxos and Iraklia islands in Greece, complemented by several interviews with local experts. In Luxembourg, also two focus group sessions were conducted in rural areas of North and South-East Luxembourg. This analysis was complemented by a study on a deprived urban neighbourhood in the city of Buzău, Romania.

According to the definition agreed upon in HiReach, **remote and rural areas** are characterized by (see also HiReach Deliverable 2.1):

- Being remote, meaning far away in distance or time or not closely related to a larger agglomeration,
- A dispersed and/or scattered settlement structure,
- A topography that does not support easy and barrier-free movements or prevents the establishment of transport connections that can usually be found in areas considered as easily accessible.

As a result, the term “rural” rather indicates in which contexts the targeted areas are most likely to be found, while it is not assumed right from the beginning that an area that can be considered as “rural” based on socio-demographics and living culture is per se remote.

Deprived and peripheral urban areas, as understood in HiReach, are:

- Parts of cities that have experienced economic and social decline, leaving these districts and neighbourhoods in a state of deprivation. Socio-economic disparities and other form of inequalities are major issues in some cities, impeding the achievement of a decent quality of life for urban citizens.
- Parts of urban regions located in peripheral locations, difficult to reach by public transport. Often residential areas outside the administrative limits of core cities have lower public transport coverage and less frequent connections to these core cities.

This subchapter tries to assess how spatial context factors may lead directly to transport poverty:

- Remote and isolated from other settlements by e.g. topographic prerequisites – which can be a barrier for creating a sufficient transport system, and/or
- Scarcely populated – which makes it unattractive or too hard to organise public transport services from an economic point of view (which would minimize transport poverty among vulnerable groups).
- Deprived urban areas, e.g. large housing estates with spatial concentration of poverty and social disadvantages, often stigmatized or perceived negatively by both outsiders and residents themselves. Sometimes with limited transport supply.
- Peripheral urban settlements, often in hazardous locations, such as Roma settlements at the fringes of cities in southern Europe. Limited or no public transportation offer.

4.7.1 Findings from Naxos and Small Cyclades

Focus group workshops in Naxos collected the inputs of the population in remote rural areas in two different spatial environments.

The first focus group session was conducted on Naxos island (remote rural areas on a bigger island – circa 10k inhabitants – with considerable infrastructure -health, education, supply). Six participants joined the focus group session, five women and one man. The age of the participants was between 40 and 50. Participants live in rural, remote mountain villages which are non-touristic or with limited traditional tourism, about 28-30 km from the main town of Chora where most participants work. All participants are from families with two children, except for one woman being a single mother. Most participants have been living there all their life, and one of the participants came from Athens some years ago.

The second focus group session was conducted on Iraklia island (smaller island – circa 140 inhabitants – in the vicinity that depends on Naxos as the supply centre). Six participants

joined the focus group session, all participants were women. The age ranged from around 30 to 55. The focus group participants live around 4.5 km away from the port of Iraklia. Most participants moved to Iraklia from different places (Athens, Thessaloniki, abroad, etc.) either to work or for personal reasons. The time of their staying / living in Iraklia ranges from 14 months to 26 years. Most participants live permanently in Iraklia and plan to stay there.

Figure 4-12: Focus group sessions with people living in remote rural areas in Naxos (left) and Iraklia (right)



Source: Intrasoft

Mobility needs, transport poverty and social exclusion: Naxos

In Naxos, people living in mountain areas of the island face serious mobility and transportation issues, especially those who also belong to another vulnerable group, such as elderly (or other people with mobility difficulties) and children.

The population in the **mountain regions of Naxos** needs to travel frequently (often on a daily basis) for work, driving children, leisure and culture. Due to a lack of alternatives, the private car is the most popular transport means, which is why many households own more than one car.

However, one participant highlighted the **inconveniences of travelling long distances**: *“Travelling on a daily basis such long distances as we do and on bad roads means tiredness, expenses and risk on the road when driving tired”*

Taxis are used mostly by tourists and **walking and cycling are not feasible** due to the hilly/mountainous topography, as well as safety issues (no bicycle lines, road traffic, no cycling culture). Informal car-sharing (with no fees) is very popular in Naxos mountain areas either on a one-off or on a regular basis. All is done through informal arrangements between friends, neighbours and relatives.

One participant states *“Informal car-sharing is very popular in Naxos mountain areas either on a one-off or on a regular basis.”* Persons who do not own or cannot drive a car (e.g. elderly, young people, low-income, people with a physical impairment) are only able to satisfy basic needs through informal free-of-charge car-sharing.

Due to the long distances towards public infrastructures and poor accessibility of public transport networks, people living in mountain villages do not have much opportunities for leisure and cultural activities, which are only available in the central places (gym, cine, cafe). Their social circles are usually restricted to their direct neighbours. In order to reach services that are not available on Naxos, inhabitants have to use the (expensive and not very convenient) ferryboat connections to Athens and various other islands. Although the mobility situation is very different on the island, the residents do not want to leave the island.

One participant highlights: *"We love our villages and we do not want to move permanently to any other place"*.

In a nutshell, **the level of access to and quality of transport options as well as the social disadvantage depends on the location of the village**: usually, the farther the village is located from the main town the worse the situation is.

Different *barriers* could be identified that prevent the implementation of mobility solutions / improvements (road infrastructure, split bus routes, use of mini-vans, etc.):

- Different transport operators cannot agree on common solutions (e.g. public bus operator and taxi companies),
- Mentality/culture:
 - Ownership of cars is much preferred to public / shared transport,
 - Missing activity and strong individualism among locals (lack of public participation in events / activities improving the situation),
- Lack of organization,
- Inadequate support from the state.

Table 4-14: Summary of causes of transport poverty encountered by people living in remote areas in Naxos

CAUSE	IMPACT ON TRANSPORT POVERTY
Geography/spatial characteristics of the place	<ul style="list-style-type: none"> • Accessibility deficits in mountainous regions (only road connections)
Weather conditions	<ul style="list-style-type: none"> • Accessibility problems in mountainous regions especially during winter times (clouds, fog, rain)
Structural change (economy)	<ul style="list-style-type: none"> • Unequal job distribution and provision of basic public infrastructures (tourism on the shore, agriculture in mountainous areas; shops, medical facilities rather located in the larger centres) forces the population to undertake long-distance trips (esp. for commuting)
Bad road networks and infrastructure	<ul style="list-style-type: none"> • Unbalanced maintenance standards between densely populated and remote areas
Lack of infrastructure for cycling/walking	<ul style="list-style-type: none"> • No cycling lanes, nor pavements (especially in the mountain areas)
Lack of culture in safe driving	<ul style="list-style-type: none"> • Drivers often drive dangerously
Inadequate bus services and high ticket prices	<ul style="list-style-type: none"> • Unequal provision of public transport infrastructure (accessibility of stops is often poor and frequency of

CAUSE	IMPACT ON TRANSPORT POVERTY
	operation is very scarce, ticket prices are relatively high, only limited information about services)
Lack of interest of authorities/state in the remote areas	<ul style="list-style-type: none"> Unwillingness to adjust bus timetables to the mountain villages residents' needs, or add more routes for buses
Lack of state support	<ul style="list-style-type: none"> Lack of financial support for better and safer road infrastructure, infrastructure for disabled

Source: Own elaboration

Mobility needs, transport poverty and social exclusion: Iraklia

In Iraklia, **remoteness and isolation characterize the island as a whole**. Transport poverty is mainly related to the fact that the island is dependent on another, bigger island (Naxos) for supply of services and provisions. This, in turn, creates a strong dependence on the maritime transport schedules and weather conditions.

Within the island, on average people commute 3-4 km by car, to drive children to school, or to go to the port village to take provisions from Naxos.

Due to a lack of services (including health services, apart from a doctor and a nurse) and shops (incl. petrol station) on Iraklia, the islanders are fully dependent on ferry boats, their time-schedules and weather conditions. Tickets for the local ferry to Naxos and Small Cyclades are subsidized by the state and are free-of-charge for the Small Cyclades residents.

Transport disadvantages are more evident for those who do not have/drive a car (children, elderly, people with physical impairments). These people are usually helped by their neighbours. Informal car-sharing (with no fees) and informal home delivery of provisions (e.g. brought by the local ferry boat) are popular. Especially children suffer from not being able to meet friend, as one participant highlights: *"The children of Iraklia miss socializing with their peers"*.

Apart from a seasonal tourist connection, there is **no bus network available**. Due to the geography of the place cycling is also not considered as a real alternative to the car.

Participants would like to establish an informal pooling service, as one participant highlighted: *"We would love to have a mini-van for shared routes between the families even if we will need to pay for it, as long as the cost is reasonable"*.

Especially mobility impaired people face various barriers and are often not able to satisfy their needs.

Although the islanders face certain difficulties related to transport, they do not feel socially excluded or really disadvantaged. In general, they feel happy and are satisfied with their life in Iraklia.

One participant expressed her feelings in this way: *"People in Iraklia developed a community of solidarity and support. We live as one family, taking care of each other"*. Mobility issues would not be a reason for them to move to another place, except for the sake of the children.

Table 4-15: Summary of causes of transport poverty encountered by people living in remote areas in Iraklia

CAUSE	IMPACT ON TRANSPORT POVERTY
Geography/spatial characteristics of the place	<ul style="list-style-type: none"> The isolation factor that characterizes the island (being surrounded by the sea, connection only by the sea to the bigger island Naxos – around 1,5 hours by ferry boat) is often combined with other negative factors
Weather conditions	<ul style="list-style-type: none"> Reduced accessibility of the island by ferry boat under bad weather conditions/in winter
Very limited services/ central facilities on the island	<ul style="list-style-type: none"> Only small shops/mini-markets available, all the other services can be found either in Naxos or Syros/Athens (more specialized). Super market, petrol station are available only in Naxos (need to order provisions from Naxos on a constant basis)
Dependence on ferry boats	<ul style="list-style-type: none"> To access necessary services/provisions
Lack of interest of authorities/state in the remote areas	<ul style="list-style-type: none"> Lack of infrastructures (e.g. no infrastructure for people with mobility limitations), itinerary of ferry boats not always convenient (e.g. for Syros island – twice a week)

Source: Own elaboration

4.7.2 Findings from North and South-East Luxembourg

Most of the economic activity takes place in the South of Luxembourg. The relatively deprived areas are located towards the south-east and south-west borders in the former steel industry area. The North as well as the neighbouring cross-border areas can be considered rural. Accessibility to public transport is in both areas less dense than in the economic centres.

Two focus group discussions with people living in remote rural areas were conducted in Luxembourg. In the first focus group session, six persons participated; in the second session four persons participated. The second session was attended by women only. The focus group sessions were complemented by interviews with experts from the "Forum pour l'emploi" and the Bummelbus service.

Mobility needs, transport poverty and social exclusion

The consequences of regional disparities in the economic development between the northern and the southern part have a direct and indirect effect on transport poverty.

The concentration of the economic activity in the south, large differences in real estate market prices, yet also a widely shared desire to access homeownership leads to an **increasing distance between home and job location**. In particular the younger generations tend to move further away from the cities toward the urban periphery, rural areas, or even beyond the borders. This creates a diffuse urbanization resulting in longer average journeys and an increased need for mobility hence transport poverty.

A recent study shows that in areas with low levels of (or no) public transport provision, the "car budget" is twice as high as compared to highly urbanized areas and consumes 20 up to 30% of the household revenues.

When having access to a car the perceived social exclusion relates to the time spent in transport and the household budget spent on transportation.

Table 4-16: Summary of causes of transport poverty encountered by people living in remote areas in north and south-east Luxembourg

CAUSE	IMPACT ON TRANSPORT POVERTY
Geography/spatial characteristics of the place	<ul style="list-style-type: none"> Long distances to working places / central facilities (travel time)
Regional disparities in economic development	<ul style="list-style-type: none"> Living costs are too high for middle- and low-income groups in the urban centre of Luxembourg, which is why they are forced to move to the less developed northern part of the country leading to long commuting distances and high travel costs.
Lacking/ inadequate public transport options	<ul style="list-style-type: none"> Service times do not correspond to the real demand (schedule, network, location of stops)
Travel costs (time)	<ul style="list-style-type: none"> High travel costs (time), travel consumes a big share of the daily time budget, leaving less time for other activities
Fuel / maintenance costs of private vehicles	<ul style="list-style-type: none"> Consumes a big share (30%) of the net income and reduces the ability to spend money on other activities, investments

Source: Own elaboration

4.7.3 Findings from Buzău

Buzău is the seat of the county with the same name. It is an important railway and road junction. Simileasca is a part of Buzău and serves in the HiReach project as a case study for a deprived urban area with poorer people and less extended public transport.

The territory concerned is located in the western part of Buzău, consisting essentially of two districts, namely: Nicolae Titulescu (partially) and Simileasca.

These neighbourhoods share common social, economic, infrastructure, basic services and development potential. In the two neighbourhoods live approximately 10% of Buzău's population (the majority low-income people).

The focus group session conducted with low-income and unemployed persons living in these two neighbourhoods comprised five men and one woman with ages between 30 and 60 years old. Some of them own a car (and a driving license) and others are without a driver license, using only public transport or walking.

Mobility needs, transport poverty and social exclusion

The modal split in Buzău is as follows: 30% private cars, 19% public transport, 1% biking, 50% walking.

In general the public transport coverage seems to be insufficient. Moreover, there are no cycling facilities (bicycle routes or bike-sharing). For the disadvantaged areas, the main problem is the poor condition of the road infrastructure, for vehicles, cyclists and pedestrians.

The participants of the focus groups included persons with and without cars. The latter reported that they use exclusively public transport or walk. All the participants live in peripheral area of the city (family households).

The participants felt socially disadvantaged by the public transport coverage inside the city, leaving them **no proper alternative for transport**. This issue is known by the authorities and it will be considered when developing new solutions for the city. The tickets are also an issue, as they may be bought in some specific points with a lower fee, but for people living in remote areas these options are not available and they have to pay more, when buying the ticket from the driver.

Table 4-17: Summary of causes of transport poverty encountered by people living in deprived urban areas of Buzău

CAUSE	IMPACT ON TRANSPORT POVERTY
Geography/spatial characteristics of the place	<ul style="list-style-type: none"> Long distances to working places or central facilities result in long travel times
Regional disparities in economic development	<ul style="list-style-type: none"> In the centre of Buzău most of the economic welfare hence central facilities and working places are concentrated, this forces people to commute to the city centre, living closer to the daily trip destinations is no option due to the higher living costs
Lacking / inadequate public transport options	<ul style="list-style-type: none"> Public transport coverage in the peripheral part is not adequate, forcing many people to walk longer distances to access the public transport system
Access to public transport tickets	<ul style="list-style-type: none"> In specific shops public transport tickets are cheaper, this kind of shops are not found in the peripheral areas, resulting in higher travel costs
Fuel / maintenance costs of private vehicles	<ul style="list-style-type: none"> Consumes a big share of the net income and reduces the ability to spend money on other activities, investments
Lacking basic infrastructures (roads, sidewalks, cycling lanes)	<ul style="list-style-type: none"> Although people in this area heavily depend on cheaper (free) transport means, roads, sidewalks and cycling lanes are either in a bad condition or not existing, which forces people to use more expensive alternatives (cars, taxis) or reduce their scope of activity
Road safety	<ul style="list-style-type: none"> Growing numbers of traffic accidents (and fatalities) prevents people from using active modes in the area

Source: Own elaboration

4.7.4 Comparison and summary

In reviewing the information presented in the “cause/impact on transport poverty tables” for each study region, it is evident that either the spatial location (mountains, hills, rural) or the **human geographies (and more remarkably the geographies of the economy) are directly or indirectly impacting transport poverty**.

In this sense, it needs to be underlined that geographic prerequisites like topography, altitude or even the location on an island always has a negative effect on the accessibility of a specific place and its economic potential for development. At the same time, in

already urbanized areas, a second economic transition from the secondary to the tertiary sector took place and led to the emergence of economic centres like the city of Luxembourg or important tourist destinations like the urban centres on Naxos.

Both processes create intensified regional but also inner-urban development disparities that among others are characterized by an unequal distribution of the number of working opportunities and the (also very often) market-driven unequal distribution of services and facilities. Although people living in less-developed areas usually benefit from lower average living costs, they are nevertheless dependent on having access to the above-mentioned economic centres with a higher density of available infrastructure and services (e.g. medical, public, social).

While **natural prerequisites (remoteness, topography and/or weather conditions) can per se limit the number of available mobility options** (e.g. walking or cycling), **man-made resp. policy-made shortcomings of the transport system itself like lacking / inadequate public transport options / missing barrier-free access and high travel costs (money and time) have been reported as heavy burdens limiting the scope of action of all inhabitants** living in remote areas.

In several focus groups it was reported that public transport was in the specific study areas either not available, not meeting the demand or not flexible enough to be a real travel option.

Therefore, in most of these cases people heavily depend on the car or taxi as the only alternative which finally results in:

- long commuting times,
- high monetary cost of motorized individual transport,
- exclusion from societal participation (occupation, medical treatment, social relations).

In some regions people reported that the disproportionately high commitment of neighbours and local communities in creating ride-sharing initiatives, or improved access to online services, were able to alleviate the perceived intensity of transport poverty but often resulted in new dependencies.

In general, it can be concluded that in many of the focus groups the participants considered governmental institutions and state authorities as the most important stakeholders being able (and responsible) to reduce transport poverty significantly.

With regard to adequate strategies, direct investments in transport infrastructures (roads, tracks, stops etc.) are considered as very important. However, this might be only one factor to improve the situation in rural/remote areas. The core problem seems to be the growing development disparities which are – especially in rural areas – leading to shrinking population numbers fostering the general economic decline and the reducing number of services and facilities. This very fundamental phenomenon requires a holistic approach.

5 Summary and conclusions

In this final chapter, the results from the fieldwork phase are summarized, differentiating between planners' and other stakeholders' perspectives on one side, and the final users' perspective on the other. As a conclusion, the chances and limits for innovative mobility solutions are highlighted (also considering the specificities of each study region). The deliverable ends with an outlook on the next steps to be taken in the HiReach project that are at the same time preliminary recommendations to stakeholders and planners.

It is remarkable how HiReach's fieldwork represents a first-timer. Implementing a series of interviews and focus group sessions in six different countries within such a large range of social layers and geographical diversity (urban, peri-urban and rural) is indeed novel, and can definitely improve our capability to recognize and understand transport poverty. Even more, the fieldwork targeted not just final users, but also stakeholders, offering thus a more comprehensive outline of the situation in those areas investigated.

Said so, the goal of this deliverable is both "putting in relation the desktop results with the results obtained in the field, enhancing findings from D2.1", as much as "providing the foundation for the work undertaken in the next WPs", that is, WP3 and WP4, those devoted to scout innovative solutions.

The fieldwork's findings have been listed in the previous chapters: this final part aims to summarize the outcomes, but also to outline – in a bird's eye view – the main results, and finally, frame them into the wider goals of HiReach.

As mentioned, the fieldwork has been developed addressing both final users and stakeholders, considering different social and geographical layers. For sake of clarity, in this final chapter, we will first outline the stakeholders' outcomes, and then we will devote our attention to summarizing the final users' inputs.

5.1 An overview of the fieldwork's outcomes: stakeholders

The consultation of the stakeholders in the HiReach study regions offered some remarkable outcomes. The starting point is a **diversity of understanding of transport poverty in the different regions**. On the positive side, advocates of marginalized groups, as well as bottom-up transport initiatives' managers, are sensitive to the problems. But, on the other hand, there is a sort of vague and unfocused awareness on the side of more 'classical' public transport suppliers.

All in all, we can say that there is a growing attention to the needs of more vulnerable groups, and the necessity to offer a more differentiated transport service. Some stakeholders are aware of the diverse social layers' different needs, but we can define **two bottlenecks which impede the implementation of innovative policies**.

First, the mind-set of many stakeholders is still focused on users' physical impediments or low income, as the main (if not only) limitations in accessing public transport. This leads to actions towards making transport accessible to everyone who has physical impediments,

or to offer discounted fees for the use of public transport. However, despite the initiatives in the past decades to make transport open to everyone – which were not everywhere and not always successful as the case studies have shown – we still witness an **overarching concept of transport service in which the users are depicted as physically healthy, fully aware of the service and fully able to take advantage of it.**

This leads to a second issue: many transport providers approach the service with a product-driven attitude, **without caring enough about customer needs.** In this mind-set, the customer is an undifferentiated user, and the transport supplier takes her/his ability to cope with the service for granted. More, user's needs are too often portrayed as limited to home-work or home-school commuting, without further investigating any possible additional requirements. Now, considering how public transport is often used by captives, we can understand how this can be indeed a big issue, which leads to a mismatch of demand and supply.

So, altogether, while transport managers have some sort of awareness about transport poverty experienced by many social groups, still they use binary categories of:

- Users that are depicted as “normal” and “exceptional”;
- Services that are defined as i) “public” and scheduled versus ii) “private” and schedule-free.

The other important issue is the question of budget, which should not be underestimated. While we can say that not always public transport suppliers are targeting all the final users' needs, it is remarkable to report how they face budget constraints, which hamper the quality of the service. Available budget varies according to areas and countries, but is more or less everywhere based on a rather traditional depiction of the users. Caged into a still dominant product-driven mind-set, **budget constraints push the management to reduce services and keep a “business-as-usual” attitude**, while they lack knowledge, resources and incentives to pursue innovation.

Considering the disruptive changes in the transport markets, and the peculiar difficulties of some social layers, we face a dilemma.

On one side, the lack of supply by traditional transport operators leaves us with **plenty of opportunities to develop innovative projects**; but, on the other hand, too often such new transport solutions (ride-hailing, flexible transport, car-sharing, bike-sharing etc.) address the needs of **“strong” users, those with digital skills, great cognitive abilities and, last but not least, a credit card.**

The combination of these conflicting trends is one of the main outcomes of this first part of the project, and this should be kept in mind very clearly in the next stages of HiReach.

Here we can summarize some **main findings**:

- 1) We can detect a weak knowledge by planners and suppliers about the concept of transport poverty;
- 2) Transport poverty is often still framed in a very traditional way, reducing it to being a result of physical impediments (which should be addressed by special services, not public transport), or low income;
- 3) Altogether, top-down planning is still the dominant approach, and this can be one of the reasons that vulnerable groups' mobility needs remain unmet;

4) The budget is often a big constraint.

5.2 An overview of the fieldwork's outcomes: final users

Among the most interesting outcomes of the focus group sessions with the final users, we should first mention **how those engaged in the discussion were really articulate and communicative**. We are fully aware of the (inherent and unavoidable) limitations of focus groups in the sense that they give a louder voice to those who are already vocal. Still, there was a great interest by users to discuss the topic.

The second element to mention here is the **wide range of options presented in order to fight transport poverty**. 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).

As a third observation, there is often (but not everywhere present) **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 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. On one side, for those who can drive a car (or travel in it as a passenger), at the end of the day, private motor vehicles are the only reliable transport means. In personal situations of low-income, this car dependency, without realistic alternatives, make low-income groups highly vulnerable to policies that seek to limit car use (pricing, taxation or ban of highly pollutant old vehicles).

On the other hand, in the focus group sessions it became clear how mainly men we have a male's priority in the use of automobiles, which leaves **women with fewer opportunities**, 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 transport, such as cycling.

On a more theoretical stance, we should also notice how transport poverty is the product of concomitant elements. While in the scientific debate, there tends to be a focus on singular aspects, such as language or physical barriers, the focus group sessions revealed how **we should rather 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, belongs to more than one group.

This overlapping accentuates and increases the risk of transport poverty. The focus groups also enlightened many of the outcomes of HiReach's desk research as presented in D2.1. For instance, 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 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. In Romania, children and young people are fully aware of the bicycle' socio-technical 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. On the opposite, in Germany, senior drivers, especially males, find difficult to change from car use to buses, declaring they find it difficult to understand how public transport works.

This leads to another observation: not only in Germany, "younger" elderly (also when retired) have very active lifestyles. It is an important outcome, which asks to be better analyzed (and also to be leveraged for bottom-up initiatives), and to avoid stereotypical visions about this social group.

Here, we can summarize how **transport poverty is the result of a complex mix of:**

- 1) Physical and mental condition and characteristics
- 2) Social characteristics of the personal environment, household and family situation
- 3) Spatial situation, especially including prices of housing
- 4) The offered transportation services

5.3 Beyond mapping: hints on transport poverty

HiReach fieldwork's results – and the following discussions triggered by the Take-up Group's members – are a goldmine for moving forward and feed the next stage of the project.

Some user needs are targeting the **very basics of the urban structure**: the request of school facilities for safe road crossings and parking of bikes (e.g. for the young Romanian people) and the need for well-maintained sidewalks (blind people) are indeed related to elementary infrastructure, that can be realized with a very low budget and low investment.

The issue of safety, both real and perceived, as mentioned in other focus groups, is also relevant, and often beyond the control of any transport operators. Still, addressing these concerns can make the difference and unleash a high potential.

But we can also list **simple requests to the public transport operators**, for example to provide more selling points where people can buy a ticket. Possibly the operator aims to reduce the distribution and retailing costs, but scarcity of sales channels becomes also a burden for the passengers, especially those who cannot afford monthly subscriptions. Digitization of the information is also requested. Taking action to meet these requests, which are definitely low profile, can indeed increase the quality and the accessibility of existing services, thus enhancing their appeal.

Once we aim to **define innovative transport regimes coping with transport poverty, we face some challenges and some opportunities**. While we have an array of inspiring grassroots initiatives (as informal car-pooling and peer-to-peer car sharing) at our disposal,

we encounter also lack of trust towards public authorities and a very poor reputation of existing PT services.

The lack of trust toward local authorities is evident, and it triggers a self-fulfilling prophecy: the service is perceived as poor and only for “captives”, so the suppliers have no incentives to improve the service, which causes them to become even less appealing, and so on. A better understanding of user needs and improved actions by policy makers to address transport and transport poverty are necessary.

Moving back to distrust, this is an important point in launching a new service, which should rely on the support of local service providers, but also avoid a negative labelling regardless of its quality.

On the other hand there is, a general affirmative understanding and use of “alternative” transport systems, and such a positive attitude should be capitalized on by new initiatives. This can be said also for shared transport systems, especially in rural regions.

These elements should indeed shape **the selection of the options available to develop innovative solutions**, as it is a task for the project.

Table 5-1: Chances for and limits to innovative solutions in the HiReach study regions

COUNTRY	AREA	CHANCE			LIMIT			
		Bottom-up	Positive view of biking and other “poor” systems	Openness to shared transport systems	Weak knowledge by suppliers and planners	Top-down dominant approach	Weak trust in PT and authorities	Car as dominant
Germany	Counties of Esslingen and Göppingen	✓						✓
Greece	Naxos and Small Cyclades	✓	✓	✓	✓		✓	✓
Italy	Inner Area Southern Salento				✓		✓	✓
Luxembourg	North and south-east Luxembourg			✓				✓
Portugal	Guarda			✓	✓	✓	✓	✓
Romania	Buzău		✓	✓	✓	✓	✓	✓

Source: Own elaboration

5.4 What is next?

HiReach's Work Package 2 had, among its goals, also the objective to contribute to the following steps of the project. Deliverables D2.1 and D2.2 as such are the reference points for the work to follow, and here we would like to suggest some possible lines of action.

Some outcomes can include (but are not limited to):

1. **The significance of a customer-driven service and of bottom-up approaches and how this can foster new innovative transport solutions.**

Many of the final users' suggestions that came up during the focus group discussions have to do with very basic transport and infrastructural requirements or archetypal social concerns. The need of a safe place to lock bikes or alternative ways of managing (apparently trivial) tasks can be addressed in innovative ways.

For instance, the development of apps for walking buses for children (<https://www.petitbus.com/>) or an app currently under development for managing security and peer-to-peer solidarity on public transport (as for Do-Not-Fear-App <https://www.technik.tu-berlin.de/menue/forschung/projekte/donotfear/>) could be interesting for future development in HiReach.

Similarly, in order to respond to basic needs and to engage citizens (those who usually do not voice their opinion) we have examples of new easy-to-use information channels (see among others www.piazza.eu/).

2. **The expectations and the capabilities of final users, transport suppliers and the impact of local regulations.**

Final users' capabilities must be addressed, to empower them and increase their chances to reduce transport poverty. HiReach could - and should - address trainings for using transport means, ranging from biking courses for migrants to tutorials how to use a bus! Also the digital divide that has been encountered in the fieldwork needs to be addressed. On the other hand, we witness the need to train transport supplier's management as well, to enhance their capacity to understand and address users' needs.

An important element is the users' lack of trust towards transport suppliers and public policy-makers; on the other hand, suppliers too often adopt a product-driven approach. In both cases, this may lead to fatalism and paralyze any successful strategy fighting transport poverty.

In this regard, in the next stages, HiReach should mobilize both users and traditional transport suppliers, reducing confrontational behaviours, establishing fruitful cooperation, or at least minimize the conflict. Aiming for a change in current mind-sets is crucial.

3. **The final user's attitudes toward traditional and new transport suppliers (including peer-to-peer solutions).**

The final users who attended the focus group sessions are indeed committed to look for solutions and, to some extent, they show also a favourable attitude toward innovative transport options. The goal should thus be to both enhance the perceived

and actual quality of traditional transport service, as much as to implement innovative mobility offers.

Peer-to-peer systems can not only be a potential answer to current problems, but also enhance the self-confidence of the actors engaged, and thus trigger further development in the mid-term.

4. The relevance of budget and financial mechanisms when implementing new innovative solutions.

The relevance of budget is, naturally, a central point, even more so considering the shrinking budget and subsidies. This clashes not only with any plan to enhance the current transport systems, but even more if we envision innovative solutions.

Here the role of peer-to-peer business models can support our goals.

Annex 1: List of expert interviews conducted

#	ORGANIZATION	TYPE OF EXPERT	DATE
Germany: Counties of Esslingen and Göppingen (TUB)			
1	Municipality of Wendlingen and citizen bus umbrella organization "proBürgerbus" Baden-Württemberg	Elderly People, public authority	19.07.2018
2	Kreisseniorenrat Esslingen (County seniors' council) and volunteer ridesharing initiative "SuseMobil" Filderstadt	Elderly People	20.07.2018
3	Municipality of Aichwald and citizen bus initiative Aichwald	Elderly People, public authority	23.07.2018
4	Arbeiterwohlfahrt (Workers' Welfare Association) Esslingen, social service for refugees of Esslingen county	Refugees	17.08.2018
5	Voluntary mobility initiative for refugees "Fahrradfüchse" ("bicycle foxes") Donzdorf	Refugees	18.08.2018
6	Municipality of Donzdorf, delegate for refugees and integration manager	Public authority	18.08.2018
7	Ministry for Transport Baden-Württemberg, Division for digitization and mobility in rural areas	Public authority	23.08.2018
8	Transport Department, County of Esslingen	Public authority	28.08.2018
9	Transport Authority Metropolitan Region Stuttgart VVS	Public authority	10.10.2018
Greece: Naxos and Small Cyclades (INTRA)			
1	Gymnasium of Chalkeio	School-board	24.07.2018
2	Technical and Professional Lyceum, Filoti - Naxos	School-board	24.07.2018
3	1st Primary School of Naxos	School-board	24.07.2018
4	Taxi company owner / President of the Skadou Village Community	Private transport operator	24.07.2018
5	Local Bus Naxos (joint interview of 3 experts)	Private transport operator	24.07.2018
6	Municipality of Naxos and Small Cyclades, Rural and Surveying Engineer	Public infrastructure and road infrastructure development, public authority	24.07.2018
7	Taxi owner / Municipality of Naxos	Private transport operator / Employer in private sector / Public authority	24.07.2018
8	Municipality of Naxos (Vice-Mayor)	Public authority - decision maker / national / regional authorities	24.07.2018
9	Express Skopelitis ferry boat personnel - Small Cyclades Line	Private transport operator	25.07.2018

Deliverable D2.2 - Mobility in prioritised areas: inputs from the final-users

#	ORGANIZATION	TYPE OF EXPERT	DATE
10	Centre of Creative Work for People with Disabilities	Experts working with disabled people	25.07.2018
11	Sea taxi company owner	Private transport operator	24.07.2018
Italy: Southern Salento Inner Area (TRT)			
1	Coop Terrarossa	Local NGO - People with reduced mobility	16.07.2018
2	Fondazione Le Costantine	Employer in private sector	16.07.2018
3	Rete SanFra	Women / People with reduced mobility	17.07.2018
4	Comune di Patù	Public authority - decision maker	17.07.2018
5	Consigliera Nazionale di Parità	Women	17.07.2018
6	Calzaturificio Sud Salento	Employer in private sector	17.07.2018
7	Università di Lecce	People with reduced mobility	18.07.2018
8	Ferrovie Sud-Est SpA	Transport operator	18.07.2018
9	ASL Lecce - Comitato Unico di Garanzia	Public authority - decision maker	18.07.2018
Luxembourg: North and South-East areas (LUXM)			
1	Ministry of transport	Elderly	22.06.2018
2	Emile Weber/WebTaxi	Transport operator	05.07.2018
3	Kussbuss	Transport operator	29.08.2018
4	LISER	Mobility and housing	12.07.2018
5	Forum pour l'emploi	Rural and deprived areas	23.10.2018
6	Bummelbus (service of FPE)	Rural and deprived areas	23.10.2019
Portugal: Guarda and Torres Vedras (TIS)			
1	Municipality of Torres Vedras	Councilman	08.06.2018
2	Municipality of Torres Vedras	Mobility experts - civil servants	08.06.2018
3	Parish of Maxial and parish of Carmões	Parish presidents	15.06.2018
4	Associação de Socorros da freguesia de Dois Portos	ONG social charity	15.06.2018
5	Municipality of Guarda	Councilman	18.06.2018
6	Municipality of Guarda	Mobility experts - civil servants	18.06.2018
7	Parish of Jarmelo, of Valhelhas and Videmonte	Parish presidents	18.06.2018

Deliverable D2.2 - Mobility in prioritised areas: inputs from the final-users

#	ORGANIZATION	TYPE OF EXPERT	DATE
8	Municipality of Guarda	Social experts - civil servants	19.06.2018
9	Social security	Regional social security president	19.06.2018
10	Parish of "Runa e Dois Portos"	Parish president assistant	09.07.2018
11	Barraqueiro	PT Operator responsables	09.07.2018
Romania: Municipality of Buzau (UPB)			
1	Municipality of Buzau	Public authority - mobility professional	11.07.2018
2	Trans Bus	Public authority - transport operator	11.07.2018
3	Social Democratic Party's Elderly Association	Local NGO: Elderly people	11.09.2018
4	Vox Civica Association	Local NGO: Minorities, low income, children and young	11.09.2018
5	Arts Highschool „Margareta Sterian"	Teacher	21.09.2018
6	Vision Impaired People Association from Romania	Local NGO: People with reduced mobility	22.09.2018

Annex 2: Interview guide

Introduction

The primary objective of the HiReach project is to eliminate transport poverty by creating new mobility solutions in order to improve accessibility of vulnerable social groups such as the elderly, the disabled and people living in remote or deprived regions.

We want to:

- 1) Identify the “symptoms” of transport poverty considering all possible areas of disparity (geography, quality of services, roles of politics and administration etc.);
- 2) Understand and define the needs for mobility and accessibility of different social groups and the potential impact of unfulfilled needs;
- 3) Come up with inclusive mobility options for citizens;
- 4) Develop effective, efficient and affordable mobility solutions in order to respond to the needs of vulnerable social groups;
- 5) Test and evaluate the solutions that we have developed

We start with the study of the needs of the possible user groups and the needs and interests of different stakeholders in novel tools for reducing transport poverty. We therefore interview in several countries experts on this issue.

We've selected you as an expert on this. We would like to have a short interview. This interview should take not more than 90 minutes.

General information

Name interviewee

Organisation interviewee

Date (MM / DD / YYYY)

Name Organisation/city Country E-mail Telephone

Stakeholder group of interviewee

- transport operators
- local authorities and administrators
- planners and practitioners
- representatives of interest groups, NGOs and advocacy groups (e.g. persons with disabilities, unemployed persons, children, elderly, migrants, other vulnerable to exclusion citizens).
- Other (please specify)

Interview

Context:

- Which groups are vulnerable to transport poverty in your area and which vulnerability is more evident in the local context (affordability, accessibility, etc)??
- Are these individuals/groups linked to each other by social networks?

- How do they raise their concerns (Individually/in group)?
- Can you estimate the role of social networks for tackling transport poverty in your region?
- Are there people that fall through social grids? Are there people that are considered unapproachable? What is the reason?
- Do social networks deal with transport issues?
- Can you identify mobility needs that are not met for certain groups/individuals?
- Are ICT solutions available? If so, are they used and accepted? Are there differences among different user groups?

What's your experience with transport poverty? (open question, try to code answer in suggested categories, multiple possible!)

- Experience with consequences of transport poverty
- Experience with transport poverty reduction initiatives
- Experience with transport poverty management
- Experience with user/ concerned person view point

Local authorities:

Context:

- How would you estimate the overall quality of life in your region?
- How would you estimate the economic situation and economic outlook?
- How does the economic outlook affect life satisfaction in your area?
- What are the most relevant types of social disadvantages encountered in your area?
- How would you estimate the social situation in your region? Is there strong community/social cohesion? How has this developed over the past years? Can you differentiate between urban and rural areas?
- How many people are affected?
- Which sort of public policies are in motion or existed in the past targeting sustainable mobility and which, on the other hand, target social exclusion?
 - Have they been proven effective?

What kind of transport poverty do you experience? What are the main features?

What are the barriers preventing you from solving the transport poverty?

(if no clear answer probe in directions: budgetary problem? Organisational problem? Lack of human or technological Resources)

Besides the local PT Operator, which other stakeholders have responsibilities in the local mobility frame?

Who else could be mobilized to provide an answer to existing mobility needs?

Public Transport Companies:

Do you have and use vehicles that are equipped for special mobility needs?

If not, why?

Are there certain areas you do not serve?

If so, why?

What would be required to begin the services in those areas (money, safety, other resources)?

- In areas where you already provide service, what would be required to extend the service further (e.g. more frequency)?
- Do you normally conduct customer-satisfaction surveys? If no, why? If yes, what do you learn from it?
- Which kinds of agreement do you have with national and local entities for compensation of unprofitable services?
- Which information supports do you use to communicate with the users? Was there any recent innovation to this respect?

From your experience as provider, what are the main social challenges in transport in your region? Which social groups are most affected?

NGOs and other organisations:

Context:

- How would you estimate the overall quality of life in your region?
- How would you estimate the economic situation and economic outlook?
- How does the economic outlook affect life satisfaction in your area?
- What are the most relevant types of social disadvantages encountered in your area?
- How many people are affected?

How close/aware are you of transport poverty problems?

What are your major difficulties?

Which of these problems you cannot address? What are the people's needs that you are not fulfilling?

Why can't you fulfil them? (No money, no resources, no technology, unknown.)

What do you need to overcome them? Resources, technology, legal framework, etc.

Annex 3: List of focus group sessions conducted

#	FOCUS GROUP	N. OF PARTICIPANTS	LOCATION/VENUE	DATE
Germany: Counties of Esslingen and Göppingen (TUB)				
1	Migrants (Refugees) Men	9	Esslingen (Neckar)	04.10.2018
2	Migrants (Refugees) Women	10	Esslingen (Neckar)	05.10.2018
3	Elderly People	7	Aichwald	10.10.2018
4	Elderly People	7	Filderstadt	22.10.2018
Greece: Naxos and Small Cyclades (INTRA)				
1	Children	6	Naxos - Municipality of Naxos	25.07.2018
2	People living in remote rural areas (Naxos)	6	Naxos - Municipality of Naxos	25.07.2018
3	Women living in remote rural areas, that also covered questions for children (Iraklia island)	7	Iraklia island - the Community premises	26.07.2018
4	Site visit and discussion with the people closely related to the people with disabilities	3 (+ 2 people with both mental and physical disabilities)	Naxos island - premises of the Centre of Creative Work for People with Disabilities	25.07.2018
Italy: Southern Salento Inner Area (TRT)				
1	Women	10	South Salento - Patù Municipality	25.09.2018
2	People with reduced mobility	11	South Salento - Patù Municipality	25.09.2018
3	Women	7	South Salento - Tricase Municipality	26.09.2018
4	People with reduced mobility	5	South Salento - Tricase Municipality	26.09.2018
Luxembourg: North and South-East areas (LUXM)				
1	Migrants	11	LuxMobility office	25.08.2018
2	Migrants	4	LuxMobility Office	01.09.2018
3	People in remote and deprived rural areas (Men only)	6	Kockelscheuer (Luxembourg)	23.10.2018
4	People in remote and deprived rural areas (Women only)	4	LuxMobility Office	25.10.18

#	FOCUS GROUP	N. OF PARTICIPANTS	LOCATION/VENUE	DATE
Portugal: Guarda (TIS)				
1	Low-income and unemployed	9	Municipality of Guarda offices	18.07.2018
2	Elderly people	10	Municipality of Guarda offices	19.07.2018
Romania: Municipality of Buzau (UPB)				
1	Elderly people	7	Municipality of Buzau	21.09.2018
2	Children and young people	8	Municipality of Buzau	21.09.2018
3	Blind people	11	Blind People Association from Romania, office	22.09.2018
4	People living in deprived areas	6	Iosif Calin's Residence, Buzau	27.09.2018
5	Low-income and unemployed	5	Iosif Calin's Residence, Buzau	27.09.2018

Annex 4: Study regions assessment tool

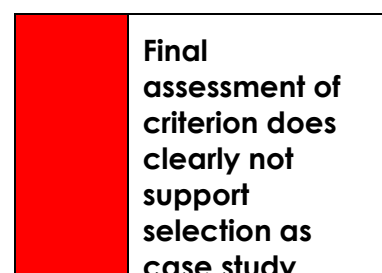
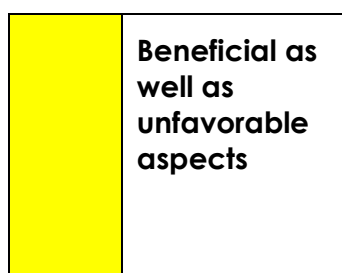
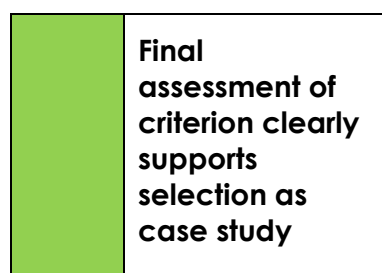
[Study Region]			
Criteria	A) Beneficial for a case study	B) Unfavorable for a case study	Assessment
1. Targeted social groups: socio-economic layer			
2. Assessment of negative factors: socio-demographics			
3. Targeted Geo layer			
4. Assessment of negative factors: geographical			
5. Transportation characteristics			
6. On-going initiatives to be scaled-up/connected to HiReach			
7. Stakeholders			
8. Other aspects			

Manual:

1. Targeted social Groups: socio-economic layer	<p>Please provide details on vulnerable groups to be targeted (column A) and those that cannot be targeted (column B). Please note that each study area should combine more than one target groups (ideally 3 or 4). These are</p> <ul style="list-style-type: none"> • Children and young people • Elderly people • People with reduced mobility • Women • Migrants and ethnic minorities • Low income and unemployed
2. Assessment of negative factors: Socio-Demographics	<p>Please provide additional details on negative socio-demographic factors. This includes, but is not limited to:</p> <ul style="list-style-type: none"> • poverty indicators (absolute/relative), GDP per capita, purchasing power, unemployment rate, ageing ration, education levels, access to health services, access to goods and services, housing, gender imbalances
3. Targeted Geo layer	<p>Please provide information on the target areas urban, peri-urban or rural</p>
4. Assessment of negative factors:	<p>Please provide more details on negative geographical factors, e.g.:</p> <ul style="list-style-type: none"> • remote areas, dispersed/scattered settlement structure, topography, etc.

geographical	
5. Transportation characteristics	Please provide information on the transportation characteristics, e.g.: <ul style="list-style-type: none"> modal split, motorization, road network, public transport coverage, service levels of public transport, accessibility and barrier-free design of public transport, etc.
6. On-going initiatives to be scaled-up/connected to HiReach	Please provide information on on-going initiatives in innovative/alternative mobility service provision, e.g.: <ul style="list-style-type: none"> Volunteer services, sharing/peer-to-peer models, integrated mobility platforms, private/public DRT etc.
7. Stakeholders	These includes groups, associations, NGOs, local experts or public/private transport operators etc.
8. Other aspects	Please provide some additional information on beneficial or unfavorable aspects that are related to the case study, e.g.: <ul style="list-style-type: none"> Beneficial: start-ups being active in the field, and social innovation initiatives (e.g.in general on social inclusion)

Assessment: Please provide a final assessment for every category in the colors green, yellow and red



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