"mobility for all". While this is easily justifiable (e.g. for environmental reasons), the perspective of the "right to mobility" complicates the matter of transport poverty.

9 **Virtual mobility needs to be analysed together with corporeal mobility.** A person's mobility patterns cannot be understood without understanding one's use of communication tools. The use of communication tools may replace, supplement or create new needs of mobility or conditions of immobility respectively. The interaction between virtual and physical mobility may differ from person to person, with very different outcomes. Furthermore, whether mobility is a choice or compulsion is increasingly difficult to tell.

Fieldwork results

The fieldwork presented in the previous chapter constitutes a pioneering approach towards a better understanding of transport poverty and mobility poverty. Conducting a series of interviews and focus group sessions in six different countries within a large range of social groups and geographical diversity (urban, peri-urban and rural) has improved our ability to recognise and understand mobility-related disadvantages. Since the fieldwork also targeted stakeholders, a more comprehensive outline of the situation in the areas investigated can be offered.

As mentioned, the fieldwork has been developed addressing both end users and stakeholders, considering different social and geographical layers. In the following paragraphs, we will first outline the stakeholders' outcomes, then we will devote our attention to summarising the end users' inputs, and finally we turn towards the opportunities and challenges to alleviating mobility poverty in the study regions.

Stakeholders' voices

The consultation of the stakeholders in the study regions offered some remarkable outcomes. The starting point is a **diversity of understanding of mobility-related disadvantages in the different regions**. On the positive side, advocates of marginalised groups as well as the managers of bottom-up transport initiatives are sensitive to the problems. But, on the other hand, there is a sort of vague and unfocused awareness on the part of more 'classic' public transport suppliers.

There is growing attention of the needs of more vulnerable groups and the necessity to offer more differentiated transport services. 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 anyone with physical impediments or to offering discounted fees for the use of public transport. However, despite the initiatives in the past decades to make public transport accessible to everyone – which do not exist everywhere and are 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 their 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. Furthermore, users' needs are too often portrayed as limited to home-work or home-school commuting, without further investigating any possible additional requirements. Now, considering that public transport is often used by captives, we can understand that this can indeed be a big issue, which leads to a mismatch of demand and supply.

So, overall, while transport managers have some awareness of mobility poverty experienced by many social groups, they still use the binary categories of:

- Users depicted as "normal" and "exceptional"; and
- Services 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 public transport suppliers do not always target all the end users' needs, it is remarkable to report that they face budget constraints, which hamper the quality of their service. The budget available varies according to areas and countries, but is based on a rather traditional depiction of users more or less everywhere. Trapped in a still predominantly 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 on transport markets and the peculiar difficulties of some social groups we face a dilemma:

On one hand, 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) address the needs of **"strong" users, those with digital skills, great cognitive abilities and, last but not least, a credit card**.

End users' voices

Among the most interesting outcomes of the focus group sessions with the end users, we should first mention **that those engaged in the discussion were**

very 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 great interest by users to discuss the topic.

The second element to mention here is the **wide range of options presented in order to combat mobility-related disadvantages**. This goes from very basic requests, such as better footpaths and safe cycle 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) **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 users' own high expectations. It is also important to notice that this is often accompanied by a sort of fatalism, which impedes any action and leaves users waiting for top-down actions.

Many users are trapped by a total dependence on cars, which are depicted as a mixed blessing. On one hand, for those who can drive a car (or travel in it as a passenger), private motor vehicles are the only reliable modes of transport at the end of the day. In personal situations of low income, this car dependency, without realistic alternatives, makes low-income groups highly vulnerable to policies that seek to limit car use (pricing, taxation or a ban on highly polluting old vehicles).

On the other hand, in the focus group sessions, it became clear that men usually have priority in the use of automobiles, which leaves **women with fewer opportunities**, those being very challenging and time-consuming. Worse than this, a still dominant and aggressive use of cars is also reported. Besides the related risks, this limits any opportunity to share roads and ultimately this hampers the development of other forms of transport, such as cycling.

In a more theoretical stance, we should also note that mobility poverty is the product of concomitant elements. While in academic debate there tends to be a focus on singular aspects, such as language or physical barriers, the focus group sessions revealed that **we should rather consider mobility poverty as a multi-layered phenomenon**. Indeed, while the categorisation of social and spatial layers is important from an analytical perspective, the end users confirmed that everyone, in practice, belongs to more than one group.

This overlapping accentuates and increases the risk of mobility poverty. The focus groups also highlighted many of the assumptions that were made based on earlier studies. For instance, the cases of Naxos and Iraklia magnify the traditional mobility problem of remote areas, adding island isolation to the generally rural difficult accessibility. The case of Naxos and Iraklia also clearly showed that children and the elderly are those who pay the highest price: we have clear evidence of geographical isolation and poor

transport systems further triggering social exclusion. Also, the relation between mobility poverty and geographical scale is evident, again comparing Naxos (18,904 inhabitants) with Iraklia (141).

The **cognitive appropriation and understanding of mobility options** was also addressed in the focus groups. In Romania, children and young people are fully aware of the bicycle's socio-technical system, asking for it to be improved (bike lanes, facilities to park bikes securely) in order to be able to go to school by bike and thus reduce their dependency on other modes of transport. Conversely, in Germany, senior drivers, especially males, find it difficult to change from car use to buses, declaring they find it difficult to understand how public transport works.

This leads to another observation: not only in Germany, the "younger" elderly (also when retired) have very active lifestyles. It is an important outcome, which needs further analysis (and also to be leveraged for bottom-up initiatives) and to avoid stereotypical images of this social group.

Opportunities and challenges to alleviating mobility poverty in the study regions

Some user needs target the **very basics of the urban structure**: the request by school facilities for safe road crossings and cycle parking (e.g. for young Romanian people) and the need for well-maintained footpaths (for blind people) are indeed related to elementary infrastructure that can be realised 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 great potential.

However, we can also list **simple requests to public transport operators**, for example to provide more selling points where people can buy a ticket. Possibly, the operator is aiming to reduce distribution and retailing costs, but the scarcity of sales channels also becomes a burden for passengers, especially those who cannot afford monthly subscriptions. Digitisation of the information is also requested. Taking action to meet these requests, which are definitely low profile, can indeed increase the quality and accessibility of existing services, thus enhancing their appeal.

Once we aim to **define innovative transport regimes coping with mobility poverty, we face some challenges and some opportunities**. While we have an array of inspiring grassroots initiatives (such as informal car-pooling and peer-to-peer car-sharing) at our disposal, we also encounter a lack of trust towards public authorities and the very poor reputation of existing public transport services.

The lack of trust towards 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

Table 19.1 Opportunities and challenges to alleviating mobility poverty in the study regions

Country	*Area*	*Opportunity*			*Challenge*			
		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 mode*
Germany	District of Esslingen	✓						✓
Greece	Naxos and Small Cyclades	✓	✓	✓	✓		✓	✓
Italy	Inner Area Southern Salento				✓		✓	✓
Luxembourg	North and south-east Luxembourg			✓				✓
Portugal	Guarda			✓	✓	✓	✓	✓
Romania	Buzău		✓	✓	✓	✓	✓	✓

Source: Authors

user needs and improved actions by policy makers to address mobility and mobility 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 negative labelling regardless of its quality.

On the other hand, there is a general affirmative understanding and use of "alternative" mobility options and such a positive attitude should be capitalised by new initiatives. This can also be said for shared transport systems, especially in rural regions.

Conclusions

From the spatial and social analysis presented above, conclusions can be drawn for three main aspects that are crucial to alleviate mobility poverty:

1 Mobility poverty and the risk of social exclusion;
2 Approaches to alleviate mobility poverty; and
3 Fields of intervention.

Mobility and the risk of social exclusion

It was shown in the analysis that social disadvantage in conjunction with mobility-related disadvantage leads to mobility poverty. However, as

already emphasised previously, mobility poverty does not necessarily lead to social exclusion.

The analysis revealed the circumstances under which a high risk of social exclusion due to mobility poverty may arise. When linking the conclusions from the social and spatial analysis together, it is revealed that experiences of mobility poverty are a combined outcome of social disadvantage, negative spatial conditions and unmet mobility needs.

This cross-sectional observation reveals that the **risk of social exclusion due to mobility poverty is highest when two or more of the following conditions interact** (see Figures 19.1 and 19.2):

- **Social aspects:**
- **Experience of multiple social disadvantages, especially when low income levels and unemployment are involved:** The conjunction of different social disadvantages and vulnerabilities increases the risk of social exclusion. Incidences that frequently appear are, for example, old age in conjunction with mobility impairment or old age and living in remote rural areas. Other examples that were shown are disabled young people and migrant women. In all cases, low income, unemployment and precarious working conditions substantially increase the risk of social exclusion due to mobility poverty (see Figure 19.1).
- **No car ownership or forced car ownership:** the risk of social exclusion is higher when vulnerable individuals do not have access to cars. Such a risk is particularly prevalent in rural areas, where public transport availability is lower, income levels are lower and distances to opportunities are higher than in urban and peri-urban areas. Car ownership is

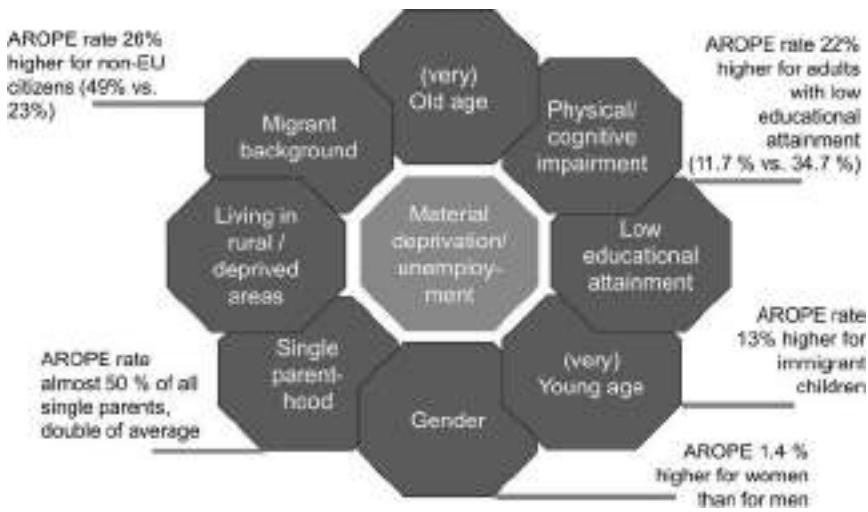

Figure 19.1 Impact of material deprivation on mobility poverty.
Source: Authors, with data from Eurostat

almost unavoidable in such areas, which poses a high cost burden on materially deprived individuals. The money that is spent for mobility is then missing in other essential areas of life.

- **Spatial aspects:**
  - **Low accessibility level**: the risk of social exclusion increases substantially for those individuals whose access to mobility options and access to opportunities is low. This is the case for remote rural areas throughout Europe, but particularly in eastern and southern Members States of the EU. Also, peripheral urban locations can have low accessibility levels. However, there is no determinism between urban peripherality and inaccessibility.
  - **Economically declining area:** economically declining regions can be found all over Europe and all three spatial levels (urban, peri-urban and rural) are affected. When economic decline leads to the

Figure 19.2 High risk of social exclusion due to mobility poverty.
Source: Authors.

outmigration of the young and skilled population, coupled with decaying infrastructure and diminishing service levels, experiences of mobility poverty in such areas substantially increase the risk of social exclusion.

- **Low mobility/motility level**: Mobility is the primary form of (social) capital in advanced societies and crucial for sustaining social networks. The necessity of being mobile can be a serious burden for vulnerable social groups. Thus, unmet mobility needs and low mobility levels can lead to relative disadvantages vis-à-vis those being highly mobile. However, as has been shown, even more important for freedom of choice is the ability to decide when, how and where to move or to stay put. In certain situations, the decision to remain immobile will benefit an individual more than the decision to be mobile.

Approaches to alleviate mobility poverty

The state-of-the-art definitions of transport poverty (Lucas 2012; Lucas et al. 2016) understand transport poverty as the combination of an experience of social disadvantage and transport-related disadvantage. Transport poverty can lead to social exclusion, which reinforces both transport disadvantages and social disadvantages. Whether an individual is transport poor or not is determined by (at least) five conditions: (i) availability and accessibility of transport, (ii) locations and opportunities; (iii) affordability of transport; (iv) available time budget; and (v) adequacy of travel options. The occurrence of one single condition can lead to an individual experiencing transport poverty.

Hence, the mobility needs for each vulnerable group need to be analysed and, accordingly, these basic transport conditions need to be improved to create inclusive mobility options for vulnerable individuals.

As shown, depending on the needs of different social groups, some conditions are more important than others. In terms of adequacy, for elderly people and women, safety in transport is a paramount precondition for using public transport options. Negative experiences can lead to the avoidance of public transport. In addition to safety, healthy travel conditions are crucial for children and young people. Availability (including reliability), accessibility and affordability are crucial for those on low income and with no access to cars.

The analysis of social and spatial disadvantages supports a focus on increasing accessibility for all vulnerable groups in order to increase the potential for participating in activities.

Following the rationale of this volume, the shift from transport poverty to mobility poverty requires recognising additional factors of mobility disadvantage. One of these factors is that low mobility individuals can experience relative disadvantages in highly mobile societies. As previously shown, individuals with low levels of mobility may have unmet or unrecognised

mobility needs that are out of reach for these individuals, due to lifelong experiences of disadvantage, habits and routines or gender roles.

Hence, increasing accessibility can secure basic needs, but life satisfaction and mental well-being may still be reduced due to the inability to "keep up" with others in society.

Thus, **in addition to accessibility, it is crucial to increase motility – the potential to move – for members of vulnerable social groups**. Here, it is important to remember Schwedes et al. (2018) who highlighted that mobility comprises also mental flexibility and agility. It is important for members of vulnerable social groups to increase their mental horizon and have the capacity to plan and shape their own lives. Only then will the spaces of opportunity for disadvantaged individuals become larger (Figure 19.3).

Due to the significance of early travel socialisation as well as the importance of travel for the accumulation of social and network capital at an early age, disadvantaged children and young people should have the opportunity to travel and experience a wide range of mobility solutions. Also, for elderly people, not only is access to basic services crucial, but also the ability to move is paramount to being part of social networks and maintaining a meaningful life in old age.

Hence, elderly and mobility-impaired people need to be informed and enabled to explore all the different mobility options available. While traditional gender roles and models that characterised women's mobility are steadily becoming less common, it is important to challenge mobility policy and planning by including gender perspectives more strongly in these domains.

A comprehensive approach to alleviating mobility poverty should therefore tackle the underlying, structural social disadvantages. This means that formulating policy and planning needs to intervene in policy sectors that are upstream of transport policy. With Sheller (2018) it can be argued that four different forms of justice need to be achieved before transport policy can be

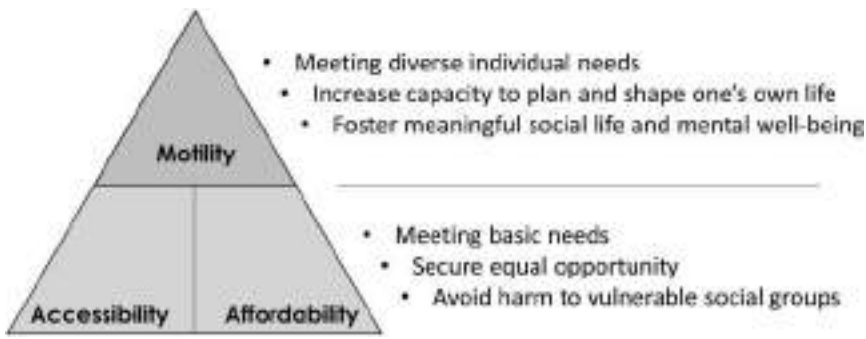

Figure 19.3 Approaches to alleviating mobility poverty.
Source: Authors.

Figure 19.4 Road map to alleviating mobility poverty.
Source: Authors, based on Sheller 2018 and Lucas et al. 2016.

made effective. Linking mobility justice and transport policy may result in a comprehensive and concrete road map to alleviate mobility poverty (see Figure 19.4).

Fields of intervention

This volume highlights incidences of mobility poverty that suggest certain fields of urgent intervention in order to prevent the social exclusion of vulnerable parts of the population:

- **Focus on people at risk of poverty:** the share of people at risk of poverty in Europe is substantial: in 2015, almost 119 million people, or 23.7% of the population, were at risk of poverty or social exclusion in the EU-28. As shown above, the experience of material poverty is often associated with material deprivation. It must be assumed that a large part of those at risk of poverty are also at risk of mobility poverty. The risk of social exclusion due to mobility-related disadvantage is particularly high when materially deprived individuals experience another social disadvantage related to age, gender, physical condition and migrant or minority status.
- **Focus on women:** in this volume, it has been acknowledged that women experience substantial disadvantages in their mobility due to a variety of factors such as lower incomes, gender roles and access to modes of

transport. Furthermore, they are more likely to be at risk of poverty and social exclusion. As the ageing of European societies continues, elderly women will represent a substantial part of the future population of the EU.

- **Focus on children:** children and young people suffer the most from inadequate mobility options. If inadequate transport services result in barriers to education, training and employment at a young age, they will experience substantial repercussions as they grow older.
- **Focus on deprived and peripheral urban areas as well as peri-urban areas:** more and more people are living in metropolitan areas due to the availability of jobs. However, many people are pushed out of cities – due to inadequate and expensive housing – into peripheral urban areas or peri-urban areas well beyond the city limits. Others remain in deprived inner-city areas. These types of areas may experience inadequate public transport coverage or car dependency that contributes to the marginalisation of vulnerable individuals.
- **Focus on economically declining regions and remote rural areas:** the population in such regions is ageing and becoming smaller. The attention of policy and planning is increasingly directed at metropolitan regions where the majority of the EU population lives. Hence, it is important to continue the strategic development of instruments for old industrial and remote rural areas that tackle the further decline of these regions. In order to secure adequate standards of living and potentially attract new economic activities, mobility-related interventions are among the many interventions needed in these areas.

References

Lucas, Karen. 2012. "Transport and social exclusion: Where are we now?" In *Transport Policy* 20: 105–113. https://doi.org/10.1016/j.tranpol.2012.01.013.

Lucas, Karen, Giulio Mattioli, Ersilia Verlinghieri, and Alvaro Guzman. 2016. "Transport poverty and its adverse social consequences." In *Proceedings of the Institution of Civil Engineers* 169 (TR6): 353–365. https://doi.org/10.1680/jtran.15.00073.

Schwedes, Oliver, Stephan Daubitz, Alexander Rammert, Benjamin Sternkopf, and Maximilian Hoor. 2018. *Kleiner Begriffskanon der Mobilitätsforschung.* 2nd edition. IVP-Discussion Paper. Berlin. https://www.econstor.eu/bitstream/10419/200083/1/ivp-dp-2018-1.pdf. Accessed 21 April 2020.

Sheller, Mimi. 2018. *Mobility Justice: The Politics of Movement in an Age of Extremes.* Brooklyn: Verso Books.

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