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Defining and implementing a sufficient level of accessibility: What's stopping us?

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ABSTRACT

Recent transport equity literature has proposed a sufficientarian approach to transport planning, according to which all individuals would be entitled to a minimum level of accessibility deemed adequate or sufficient. The implementation of this approach would require the adoption of an accessibility standard as a key performance indicator guiding transport investments, land use planning and service provision. While accessibility measures are increasingly operationalised in professional practice, the adoption of actual accessibility standards is rare. In this paper, we explore the barriers for adopting explicit accessibility standards and identify conditions within which such standards could be acceptable to practitioners and policymakers. The paper draws on interviews with professionals in three city-regions in Sweden, complemented with interviews with practitioners from the Flanders region in Belgium and from the UK. We find that authorities are hesitant to define and measure accessibility and that where definitions and performance indicators exist, there is a lack of agreement within and across authorities. The prospect of introducing a standard across the board without attaching any conditions comprises a further reason for shying away from standard-setting. The (dis)integration of transport and land use and complicated administrative and governance structures are described as a further barrier, while demand responsive transport is in some cases considered a panacea to all accessibility problems, making it possible to avoid setting standards. Our findings suggest that standards for minimum accessibility could gain political support if their reach is clearly circumscribed, and their benefits are clearly understood.

1. Introduction

In recent years, the shift from *mobility* to *accessibility* has been gaining momentum, both in research and in practice (Levine et al. 2012; Geurs and Östh 2016; van Wee 2016; cf. Banister 2008). Mobility refers here to a (policy) focus on realised movement in the form of travel patterns, habits and behaviours, while 'accessibility' refers to the potential for interactions, encompassing the potential for people to reach and participate in activities, even if they do not make use of this potential (see van Wee 2016). Alongside this shift has come a sharpened focus on how transport policies and projects affect different groups (Martens and Di Ciommo 2017), a previously largely neglected aspect of policymaking (Geurs et al. 2009; Bocarejo and Oviedo 2012). Compelling links between a lack of

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accessibility, transport disadvantage and transport-related social exclusion have been established (Lucas 2012), resulting in the transport justice policy agenda gaining traction, in transport research as well as in policy discourses (Martens and Di Ciommo 2017).

From a transport justice perspective, several authors have argued that accessibility and not mobility should be the focus of analysis (e.g. Martens 2017; Pereira et al. 2017; cf. Jones and Lucas 2012), thus reinforcing the shift from the latter to the former. Justice in transport is essentially concerned with the provision (and thus distribution and redistribution) of accessibility; the 'good' with social meaning (Martens 2012). In line with this understanding, several authors have argued that justice in transport requires ensuring a sufficient level of accessibility to all people in society, also referred to as a sufficientarian stance (Martens 2017: Chapter 6; Lucas et al. 2016). A sufficient level of accessibility is closely linked to the notion of freedom; that people should have the freedom to reach and engage in the activities they find meaningful (see Martens (2017) for an elaboration). However, even if there is growing consensus surrounding an increased focus on accessibility and increased attention on the ways in which transport policies work out for different groups, there is hardly any debate, let alone consensus, on *whether* standards for accessibility should be set, and if so, *how* these standards should be defined and *how* the delivery of basic accessibility should be monitored.

Basic accessibility as a policy concept has begun to be introduced in different contexts. In the UK, an influential report published by the Social Exclusion Unit (SEU) led to the development of accessibility planning and corresponding accessibility standards at the local level (SEU 2003; Halden, 2014). In Flanders, the Law on Mobility Policy, adopted in 2001 and again in 2009, formalises five objectives among which the goal 'to provide everyone with the opportunity to be mobile (…) with the aim of full participation of everyone in society', with the latter part implicitly underscoring the importance of accessibility. Likewise, the EU-endorsed guidelines for Sustainable Urban Mobility Plans formulated six objectives, among which ensuring that 'all citizens are offered transport options that enable access to key destinations and services' (European Commission, 2013; the objective no longer features in the most recent guidelines).

In this paper, we analyse the developments in Sweden. Here, terms such as 'basic accessibility for all' (The Swedish Government 2009) have begun to permeate policymaking from national to local level. At the national level, the goal of providing a 'basic level of accessibility of good quality and usability' for all has been formally adopted (The Swedish Government 2009). The concept is also of increasing importance at the regional level (see Västra Götaland 2021; Region Skåne 2020), although aside from setting out public transport provision standards related to service frequency in different kinds of areas, there are no accessibility standards yet, nor is there guidance as to how accessibility-related policy goals could be realised.

Hence, in this study we analyse if and how the three large city-regions in Sweden are grappling with and developing the basic accessibility concept. We enrich our analysis with experiences from the Flanders region in Belgium, where basic accessibility has been employed as a policy concept (see Vanoutrive and Cooper 2019), and earlier experiences with accessibility planning in the UK.

2. Literature review

The shift in focus towards transport justice and the fair distribution of accessibility has been slow with many barriers along the way. Accessibility was proposed as an indicator to be used in transport planning as early as the beginning of the 1970 s (Wachs and Kumagai, 1973). This perspective has been echoed and emphasised more recently in the transport-related social exclusion literature. The most commonly-used definition of transport-related social exclusion places accessibility at the centre of the problem, by defining it as '*the process by which people are socially excluded due to reduced accessibility to opportunities owing to a lack or inexistence of means to travel*' (Kenyon et al. 2002).

More recent research has again highlighted the importance of accessibility as an indicator of social inclusion, and a corresponding lack thereof as an indicator of social *exclusion* (e.g. Bocarejo and Oviedo 2012; Lucas 2012). However, the integration of this perspective into practice has been lagging. This is in part the result of an innate focus on the facilitation of travel by private motorised vehicles (see van der Meulen and Mukhtar-Landgren (2021) for a discussion), and in part the result of a reluctance to depart from traditional appraisal methods that are firmly based on travel time savings (cf. Flyvbjerg and Bester 2021; Metz 2021).

More recently, the operationalisation of accessibility as a performance indicator has begun to take hold in policy appraisal and infrastructure planning (Handy 2020; see e.g. Grisé et al. (2021) for a suggested approach), but it is rather rare for clear accessibility standards to be introduced. Instead, to the extent that there is attention on accessibility differences, a disparity approach is usually adopted, in which differences in accessibility between broad population groups are analysed without addressing whether different accessibility levels actually allow people to engage in daily activities (Martens and Golub 2021; Martens et al. 2022; cf. Mattioli 2016).

While disparity-based and provision-focused analyses are becoming more common in both research and practice, a specific focus on standard-setting is absent. Within research, several attempts have been made to catalogue a range of activities or services that, if they were to lie within reach, could correspond to a sufficient level of accessibility. For instance, Marozzi and Bolzan (2018) analyse regional disparities in basic service accessibility. They focus on accessibility to a pharmacy; an emergency room; post office; police station; town hall offices; grocery market; and a supermarket. The main policy implication of their research is that more equitable access to basic services must form a central reform objective in Italy, emphasising that monitoring and evaluating the status of the objective is required.

Standards are commonly introduced as a means of setting policy priorities in almost all policy areas, from housing to transport. In the transport domain, they take the form of standards for road and street design and for highway levels-of-service, among others. However, the gradual shift towards accessibility has not yet translated into standard setting in a meaningful sense. Some of the first experiences with setting basic accessibility standards took place in the UK, after the establishment of the Social Exclusion Unit (SEU) (SEU 2003; Halden, 2014). The introduction of accessibility planning standards was, however, the subject of critique. This was largely due to the failure of governments to develop a cross-departmental approach to public services accessibility and the fragmentation of

public funding (Halden, 2014). Moreover, accessibility planning standards hardly shaped transport investment priorities in the UK.

All the evidence suggests that accessibility is increasingly embraced as a key performance indicator for transport systems. Yet a reluctance to set explicit minimum standards for accessibility still prevails. Several researchers have argued that such standards are needed, but what is it that stops them being introduced in practice? With this study, we explore the barriers for adopting explicit accessibility standards and identify conditions within which setting such standards could be acceptable to practitioners and policymakers.

3. Material and methods

3.1. Case selection

For this study, we zoom in on the three large city-regions in Sweden where the policy concept of 'basic accessibility' is currently on the policy agenda. We examine the policy developments from the perspectives of policymakers in the city-regions of Stockholm, Västra Götaland (encompassing the city of Gothenburg) and Scania (encompassing the cities of Malmö and Lund, and connected to Copenhagen by a fixed link). We enrich our examination with insights on recent policy developments in the Flanders region in Belgium, where basic accessibility has been employed as a policy concept (see Vanoutrive and Cooper 2019) and earlier experiences with attempts at accessibility standard-setting in the UK (Halden, 2014).

The case of Sweden, and the three city-regions of Stockholm, Västra Götaland and Scania in particular, are of interest because of recent policy developments. Sweden's national transport-political goals include the goal of providing a 'basic level of accessibility of good quality and usability' for all (The Swedish Government 2009). Given that regional (public transport) authorities have the prime responsibility for (public) transport provision, we analyse if and how basic accessibility standards could be introduced.

In the case of the Flanders, the region has been moving from a policy of 'basic mobility' to 'basic accessibility'. This policy shift saw protests by different organisations and passenger groups (Vanoutrive and Cooper 2019). These protests were generated due to what was considered an erosion of standards for inhabitants. The former policy of 'basic mobility' (from 2001) implied a maximum distance to bus stops conveying minimum levels of service depending on the context (ibid.). In contrast, the new policy implies the removal of these supply standards and the introduction of a range of mobility solutions intended to jointly provide a level of 'basic accessibility', without explicit accessibility standards being defined.

In the UK, accessibility standard-setting was quite high on the policy agenda for a brief period in the early 2000–2010s, largely following the establishment of the SEU in 2003 (see Halden, 2014). Much of this work has involved developing indicators for and measuring local accessibility to different activities, but with no established, consistent approach applied throughout the UK. At present, accessibility planning is no longer as high up on the policy agenda in the UK, yet these early experiences provide a frame of reference for our Swedish cases.

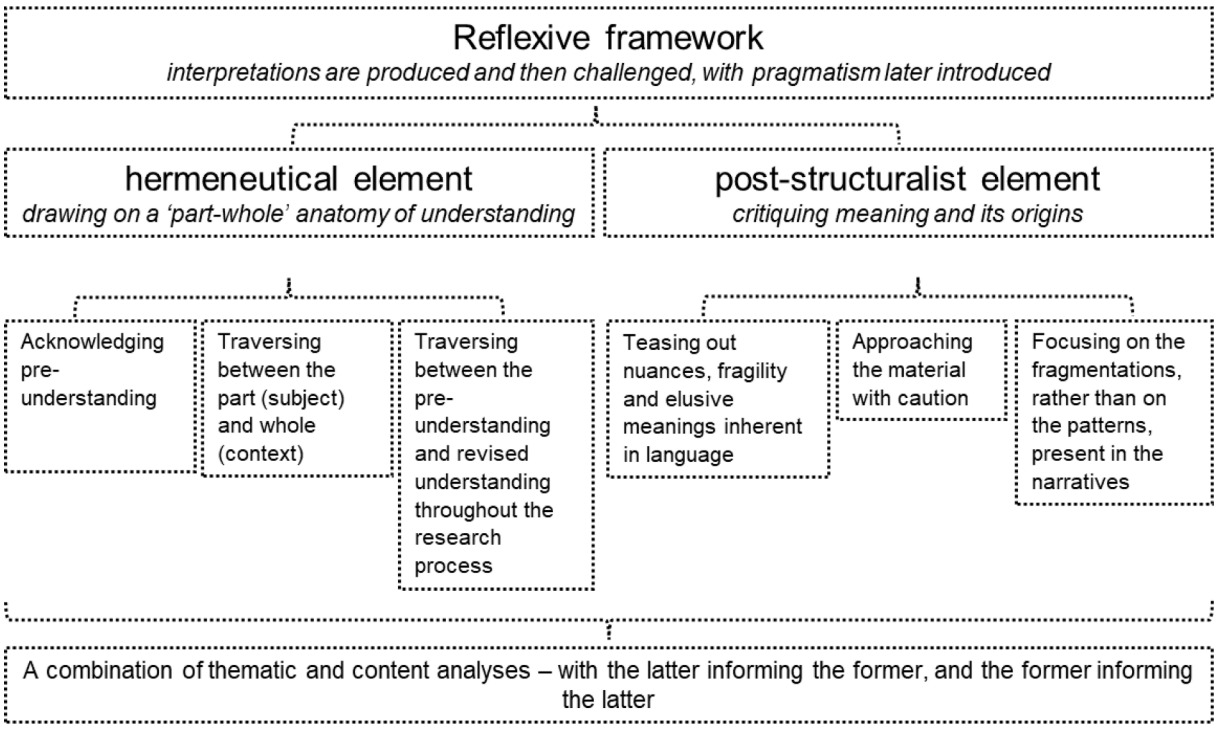

Fig. 1. Visualisation of the reflexive framework. See Alvesson and Sköldberg (2009); Alvesson (2011), authors' own elaboration.

3.2. Research framework

Two well-known risks inherent in the employment of qualitative methods are the pitfalls of (i) steering the data collection and analysis according to one's own agenda and (ii) believing that it is possible to engage in data collection with a certain neutrality or objectivity. The former involves seeking confirmation of what one already believes to be the case prior to the study's execution, while the latter involves an expectation that the data will 'speak for itself'. In order to avoid such pitfalls, a reflexive framework combining hermeneutics and post-structuralism is employed for the collection and analysis of empirical material in this study (see Alvesson and Sköldberg 2009; Alvesson 2011). Engaging a reflexive framework involves building the research and engaging with it on many levels through a combination of destruction and reconstruction (Alvesson 2011). One of the benefits of reflexivity is that interpretations are produced and then challenged by the researchers themselves, with pragmatism later introduced in order to end the process of reflexivity (Alvesson 2011). The hermeneutical element of our framework involves drawing on a 'part-whole' anatomy of understanding (Alvesson and Sköldberg, 2009: 92). The post-structuralist element of our framework involves a critique of meaning and its origins (see Alvesson and Sköldberg, 2009: 179-180). See Fig. 1 for an overview.

3.3. Conducting the interviews

The interview approach was semi-structured, based on a discussion guide infused with hypothetical and open questions and the presentation of scenarios (see Alvesson 2011). The discussion guide was formed with a focus on the potential challenges, barriers and opportunities for setting and employing a standard for basic accessibility in a broad sense, ultimately leading to whether or not and, if so, how 'a basic level of accessibility' as a policy concept could function in practice. The discussion guide was altered slightly for each interview, depending on the role of the informant and the context of the interview.

As this study was conducted during the course of the Covid-19 pandemic, all interviews were carried out virtually using video call technology during May-December 2021, with the recruitment of informants taking place during the same period. Potential informants were identified based on their experience, role and work with recent and ongoing policy developments, and accessibility in particular, in the respective cases. In total, 15 informants were interviewed during a total of 11 interviews (see Table 1). Of these 11 interviews, seven were conducted by the first author alone (in Swedish), with the remaining four conducted by both authors (in English/partly in Dutch/Flemish). The duration of the interviews spanned 41–90 min, with an average duration of 57:44 min. All interviews were video recorded and transcribed.

Table 1
List of informants and organisations represented.

Inter-view	Informant	Organisation represented	Role	Engagement with accessibility
1	A	The Swedish Transport Administration	Senior official – accessibility	Conceptualisation of accessibility, measurement, policy development, etc.
2	B	Skånetrafiken (The Regional Public Transport Authority in Scania)	Public Transport Strategist	Relationship between public transport provision and accessibility.
3	C	Västra Götalands Region (The Regional Authority in Västra Götaland)	Regional Developer/ Regional Planner	Accessibility in regional planning and policy with a focus on public transport provision.
4	D	Västra Götalands Region (The Regional Authority in Västra Götaland)	Regional Developer/ Regional Planner	Accessibility in regional planning and policy development.
	E	Västra Götalands Region (The Regional Authority in Västra Götaland)	Regional Developer/ Regional Planner	Accessibility in regional planning and policy with a focus on infrastructure.
5	F	Region Stockholm	Senior official – Strategic Planning	Accessibility in regional planning and policy with a focus on public transport and regional structure.
6	G	Region Stockholm	Strategic Analyst	Accessibility in regional planning and policy development.
	H	Region Stockholm	Strategic Planner	Accessibility in regional planning and policy with a focus on cycling.
7	I	De Lijn, Flanders Region (Publicly run public transport company, bus and tram network)	Mobility Developer	Relationship between public transport provision and accessibility.
8	J	The Ministry of Mobility and Public Works (MOW), Flanders Region	Senior official – Basic Accessibility	Policy and strategy surrounding the introduction of basic accessibility policy concept.
9	K	Antwerp Transport Region	Coordinating role,, Antwerp Transport Region	Coordination/facilitator role in the introduction of basic accessibility.
	L	Antwerp Transport Region	Mobility Policy Officer	Coordination/facilitator role in the introduction of basic accessibility.
10	M	Consultant, UK	Accessibility Expert	Policy development, work with accessibility as a concept more broadly, shaping accessibility standards.
11	N	Region Skåne (The Regional Authority in Scania)	Regional Planner	Accessibility in regional planning and policy development.
	O	Region Skåne (The Regional Authority in Scania)	Regional Planner	Accessibility in regional policy and planning.

3.4. Analysis of the interview material

The transcribed empirical material was analysed using a combination of thematic and content analyses, with the latter informing the former, and the former informing the latter, consistent with the hermeneutics element of the reflexive framework detailed above. Recurring themes within the material were identified through the employment of the reflexive framework and through the analysis and re-analysis of the material within this framework. Within these themes, sub-themes could be further identified, with fragmentations emerging through the employment of the post-structuralist element of the framework (see Alvesson 2011). This material in turn produced some of the aforementioned themes and sub-themes, respectively.

3.5. Policy document and policy guidance analysis

We studied a range of policy documents and policy guidance documentation (approximately 40 documents) in order to gain a comprehensive background prior to conducting interviews, and in order to validate the empirical material gathered during the interview process. The documentation functioned as a basis for discussion during interviews and provided us with a further insight into the issues raised by informants. We did not carry out a stand-alone in-depth analysis of the documentation itself, as these documents provided little insight into the barriers for setting and employing standards for basic accessibility.

4. Results

Our analyses of empirical material produced four main themes: (1) Defining and measuring the good and setting the standard; (2) The individual and society; (3) Scope for action; and (4) Implementation in practice, with underlying sub-themes as outlined in Table 2. Each of the themes and their constituent sub-themes and associated empirical material are discussed below.

Theme 1: Defining and measuring the good and setting the standard.

The most dominant theme emerging from our empirical material was concerned with '*defining the good*'. Most informants agreed that 'accessibility' should be the focus of transport planning. However, there was less agreement on whether, and if so how, accessibility should be defined or measured. Bearing in mind our pre-conceptions (in line with hermeneutics), the lack of agreement on *whether* accessibility should be defined or measured at all was rather unexpected for us, while the lack of agreement regarding *how* it should be defined or measured was expected in light of the academic debate on the topic. The sub-themes are detailed below.

Sub-theme 1.1: Elusive accessibility

The part-whole anatomy of understanding inherent in our Reflexive Framework was crucial in facilitating the disentanglement of phenomena and ultimately allowing for the emergence of the sub-theme 'Elusive accessibility'. Here, it was important to understand the informants' perspectives in order to deepen our understanding of those of the respective organisations. At the same time, it was important to have an understanding of the context in which the informants find themselves (and their apparent stance in relation to this context), in order to gain a deeper and more nuanced understanding of the challenges and barriers they face. Having gathered and analysed the empirical material with this in mind, we found that 'accessibility' emerged as an elusive concept, both implicitly and explicitly, with respect to its definition, measurement and communication, both internally and externally. Informant A highlights the issue when stating that:

> *"[…] people would think that accessibility is an easy concept. I mean, that's really what the transport system is about. But it turns out that it's actually much harder to think about this than most people would understand at first glance […]." (Informant A)*

The narratives from the majority of informants centred around how it is very difficult to define or measure accessibility. In one case, it was argued that it is not even possible to do so, that simplifying accessibility and reducing it to a number or indicator would not be useful and, hence, that it is not useful to try to define or implement a basic level of accessibility:

> *"If an issue is complex then it should be complex and it should be handled in a complex way. We should not simplify it [the issue] just to be able to handle it." (Informant E)*

Table 2
Overview of dominant themes and sub-themes.

Theme 1: Defining and measuring the good and setting the standard
Sub-theme 1.1: Elusive accessibility
Sub-theme 1.2: One size fits all
Sub-theme 1.3: Setting the standard: the citizen's perspective
Theme 2: The individual and society
Sub-theme 2.1: How free is the freedom of choice?
Sub-theme 2.2: The market and the customer
Theme 3: Scope for action
Sub-theme 3.1: Coordination and collaboration challenges
Sub-theme 3.2: (Dis)integrated transport and land use planning
Theme 4: Implementation in practice
Sub-theme 4.1: Differentiating between basic provision and basic accessibility standards
Sub-theme 4.2: Provision standards as a given?
Sub-theme 4.3: Demand responsive transport (DRT) as a panacea

Most informants were rather modest regarding their organisation's work with accessibility, using words such as '*trying*' and '*struggling*' with the conceptualisation, definition and measurement of accessibility. One respondent described the authority's task of communicating how to define and measure accessibility, yet at the same time highlighted how the authority is still struggling with its definition and measurement internally. This represents a fragmentation in the interplay between the organisation's discourse and its work; the authority is tasked with communicating how to define and measure accessibility, yet is itself still struggling with the measurement of accessibility:

> *"But what we don't have, which I'm actually – I shouldn't say 'struggling' – but at least working to implement for real is an overall measure of accessibility in different parts of Sweden and for different socioeconomic groups which [then] can be used for reporting and evaluating over time." (Informant A)*

Several informants emphasised the confusion reflected in policy and planning documents and in approaches to accessibility at their respective organisations. An assumption on the political level that the building of infrastructure would bring about an improvement in accessibility for all was criticised by two informants (D and E).

There was almost full agreement among informants regarding a lack of consensus on an accessibility definition or metric at their respective organisations.

> *"And quite often we are probably quite imprecise, that we talk about accessibility in more general terms […]." (Informant N)*

In the case of one of the informants from the Flanders region as a comparison case, it became clear that there is not only a lack of agreement among actors regarding how (basic) accessibility should be defined or measured but instead a general confusion and lack of understanding surrounding the concept:

> *"…If I understand well the question you ask, if everybody understands well what it means basic accessibility (sic.). The answer is: nobody knows what it is!" (Informant K)*

Some informants from the Swedish cases emphasised that there are means of measuring accessibility at their organisations, but no consistent means of tracking improvements/changes over time. Here, we find a link to the interview with informant M on the perspectives from the UK, who emphasised that independent monitoring of accessibility is crucial. Informant A, drawing on the Swedish national level perspective, also emphasised how it is important to follow progress or lack thereof over time.

Several informants reported the indiscriminate and thus confusing use in their respective organisations, or in their work in general, of the concepts of accessibility and modal shift, modal choice, public transport provision and headway. In some cases, informants criticised the adopted approaches to the monitoring of accessibility at their own organisations, pointing out that they are based on e.g. modal choice or efficiency instead of actual accessibility (in the case of the Flanders Region). In other cases, informants criticised how the terms were sometimes used almost interchangeably at their respective organisations and among the actors with which they collaborate, with informants critical of how there appears to be little insight into how and why the concepts differ (e.g. Informant F from the Stockholm Region).

Sub-theme 1.2: One size fits all

The sub-theme '*One size fits all*' emerged from the narratives of informants surrounding the ways in which accessibility is defined and measured. Some informants were critical of the ways in which their respective organisations seem to simplify accessibility by narrowing it down to a focus on accessibility for commuters, while others reasoned that improving accessibility for commuters should by default mean that accessibility is improved for all.

In our analysis of this sub-theme and engagement of reflexivity, we considered that the apparent simplification of the concept of accessibility (as well as the simplification of its definition and measurement) was perhaps a response to the complex and elusive nature of the concept of accessibility. This simplification was described by some informants as encompassing a focus on one type of traveller and one type of trip, i.e. the accessibility of commuters, often with higher incomes.

Some informants criticised approaches that focus exclusively on work trips and argued that additional aspects of accessibility need to be taken into account, and that a differentiation between groups needs to be made. One informant mentioned that accessibility to non-work-related destinations is raised in discussions at the regional authority in Scania but that this is not monitored in a systematic way:

> *"But we [at the regional authority] also talk about accessibility to other things […] to greens areas […], but [it is] never measured." (Informant O)*

Other informants reported relying on models with outputs representing 'accessibility' for the region as a whole, and not for particular areas or groups. In the case of the Stockholm region, this gave an overall indication of accessibility in the region but not differentiated by group or area, an approach obviously at odds with setting a basic accessibility standard.

However, also in the Stockholm region, another informant (Informant G) acknowledged and emphasised how (transport) justice has been somewhat missing from previous policy documents and approaches. The informant emphasised that these aspects are now a key focus of new staff currently working on such strategies and that their work involves finding ways to measure distributive justice, linked to the distribution of accessibility. This development presents an opportunity for the introduction of accessibility standards and reinforces the notion that policy directions can be very dependent on the civil servants who happen to be employed at the organisation in question (this issue was also emphasised by Informant M in the case of the UK).

One informant emphasised that it is very difficult, or even impossible, to operationalise accessibility as a policy concept through the use of just one metric. Several informants stressed that different kinds of accessibility are relevant in different locations and contexts (e.

g. rural/urban) and that the supply of public transport is thus tailored to meet different kinds of needs. While acknowledging these difficulties, informants were reluctant to draw clear implications regarding the setting of accessibility standards.

Sub-theme 1.3: Setting the standard: the citizen's perspective

Citizen engagement emerged as another sub-theme. Several informants mentioned that if a basic level of accessibility were to be implemented as a policy concept it would be imperative to engage groups of citizens/inhabitants in this process, and it would be important for these groups to be representative of different groups in society. Several informants emphasised that it would be necessary to gain a better understanding of people's (different) accessibility needs in order to provide for these:

> *"But I think it's about how we plan, it is easier for us to view [the situation] from our reality […]. We have difficulty taking others' perspectives into account. So if one should be able to define basic accessibility then we have to hear other voices that are not our own, and include them in the definition." (Informant D)*

Tensions between urban and rural settings, and spending on infrastructure and public transport per inhabitant in the respective contexts, were detailed by several informants (in particular, Informants A and C). These were also, in the case of Informant A, framed as arguments against providing a basic level of accessibility, drawing on the argument that spending per rural inhabitant would be much higher than per urban inhabitant, and in that sense, unjust.

It became apparent, as the interviewing process progressed, that policy decisions surrounding basic provision standards are currently not made in direct dialogue with inhabitants. They are instead politically steered and reliant on the political agenda in the region. One informant representing the regional public transport authority in Scania argued that, at present, basic provision standards are perceived as just a 'civil servant's product', with an apparent disconnect between this 'product' and citizens' needs (Informant B). This argument led us to question whether basic provision standards so defined can actually contribute to the accessibility of inhabitants. This led us to further consider whether a different or more explicit mechanism is required in order to develop a link between basic provision standards and accessibility sufficiency.

Theme 2: The individual and society

The theme *'The individual and society'* emerged as a key theme in a small number of interviews (e.g. with Informant A), but was implicitly touched upon by all informants. The concept of accessibility is inherently focused on the collective, on the transport and land use system within which people live their daily lives. Yet, individual choices for certain lives or levels of accessibility may also feed back into the system and into policy expectations. The theme '*The individual and society'* emerging from our material encompassed discussions surrounding the extent to which individuals are 'free' (or not free) to decide their fate; whether people should 'have to live with' the consequences of their decisions, e.g. the decision to live in a remote location, whether children should pay the price for their guardians' decisions, or whether society could or should compensate for the resulting lack of accessibility to opportunities.

Sub-theme 2.1: How free is the freedom of choice?

One informant (informant A) argued that if a basic level of accessibility were to be implemented, people would redistribute themselves to different, more remote residential locations according to market conditions. Links to individuals' and institutions' responsibilities were emphasised, and where the division of responsibility between the two lies arose as a further issue. Informant A emphasised that transport interventions have little scope for overcoming social issues such as segregation, drawing on the assumption that people redistribute themselves according to market conditions (or according to attractiveness of locations and corresponding property prices).

People's autonomy, preferences and trade-offs were stressed by Informant A, and how these factors are at odds with providing a basic level of accessibility. It was argued that people make trade-offs between, for instance, having more spacious accommodation on the one hand, and accessibility to different goods and services on the other:

> *"…But the more you think about it, I mean people voluntarily choose places to live and they trade space and money and accessibility towards each other (sic.). […]" (Informant A)*

Informant A reasoned that if people decide not to prioritise accessibility, it is not up to authorities or society in general to insist on compensating for any accessibility shortfalls. Informant A argued that doing so would be paternalistic.

Another major difficulty here is determining just how much choice people have or have had, and indeed who has made the choice. Informant C, from the region of Västra Götaland, emphasised that in some cases it is possible to ascertain that some people have certainly not had a say in deciding where they live, drawing on the example of children who are subject to the consequences of the decisions their parents have made in terms of residential location.

These two distinct perspectives have opposing implications for standards of basic accessibility, with the former suggesting that such standards interfere with and even distort market processes with detrimental results, while the latter implies that standards are warranted to protect people from an involuntary lack of accessibility.

Sub-theme 2.2: The market and the customer

Some informants highlighted that the market indicates which actions should be taken by authorities in terms of the provision of infrastructure and transport, partly by relying on what are referred to as quasi-market rules (Martens 2017). This was based on the premise that the market will point to what the most efficient solution will be. This argumentation was tightly linked to framing inhabitants and potential public transport users as customers. This narrative was also related to a strong focus on the market share of public transport as a key performance indicator, and not so much on the accessibility conveyed by the transport and land use system in general. One informant noted that accounting for disparities in accessibility for different groups is rather new, but that through striving to increase the market share of public transport the accessibility of people with lower incomes may be improved, without this being the explicit aim:

> *"Yes, transport justice and social sustainability and so on, that is quite new for us. We have not worked so much with that. However, it has often maybe automatically turned out that inhabitants with lower incomes – they live in more densely-populated areas and do not have cars to the same extent – they are automatically a larger customer group […]." (Informant B)*

This line of reasoning (implicitly) suggests that striving for a high market share of public transport will automatically address low levels of accessibility, making standards for basic accessibility not necessary.

Theme 3: Scope for action

Sub-theme 3.1: Coordination and collaboration challenges

Multiple informants emphasised that delivering accessibility requires collaboration between and coordination among a large number of actors with different mandates and objectives. Several informants perceived this as a serious barrier for the implementation of accessibility standards, even informants who found that setting such standards was desired. Some informants highlighted that it was often unclear which authority has the 'responsibility' for different kinds of trips, with a distinction made between local trips (within municipalities) and regional trips (within regions but across municipalities). The former were often seen as representing basic accessibility needs and the latter pertaining to needs – or indeed 'wants' – beyond that. A second coordination issue raised by several informants relates to a regional authority's ability of ensuring an entire trip from door to door. Several informants mentioned that the responsibility for accessibility on a micro level, such as wheelchair accessible pavements, lies within the remit of the municipality, and in some cases even with the Swedish Transport Administration.

All informants working on a regional level emphasised the difficulties of working with multiple municipalities with different circumstances, and the coordination of their requirements and requests. Some informants highlighted that coordination improved when, in Sweden, the regions took over the responsibility for public transport from the municipality in 2012 (Informant C in particular). The region of Västra Götaland took a coordinated approach to the provision of public transport, so that the opportunities would be the same in areas with similar circumstances:

> *"It's good that we have a basic level [of provision]. I think it is in some way kind of society to say 'we have this responsibility'. But we cannot have the exact same public transport [provision] everywhere, we cannot have the same [level of] accessibility everywhere in Västra Götaland. […] not as it is today anyway." (Informant C)*

Both the coordination issues and the variety in circumstances across municipalities could go some way towards explaining the existence of standards of public transport provision rather than those of basic accessibility. Where the latter appear to create unclarity about responsibilities, with the former the responsibility for their delivery is clearly defined. Moreover, one informant indicated that provision standards – and knowing they 'will not be touched' – guarantee clarity for local authorities. Another informant reasoned that, for the regional authority, they are used as a means of ensuring a (perceptibly) fair distribution of public transport provision. At the same time, one informant acknowledged that these provision standards are somewhat disconnected from the function of delivering accessibility to inhabitants. The latter is in line with the perception that provision standards are a 'civil servant's product' (Informant B).

One of the Stockholm Region informants pointed to another coordination issue that could make setting basic accessibility standards risky: the dependence of the regional transport authority on multiple stakeholders for key public transport infrastructures, such as terminals. This coordination issue potentially constitutes a barrier for increasing the frequency of public transport and thus living up to (provision) standards:

> *"Then you need land, then you need money, you have to have collaboration with those who run the lines. We usually own our depots; it is one of the few things we own. Terminals, bus stops and so on, that is [not our responsibility] as you know, which is also often a problem." (Informant F)*

In the Flanders region, implementing the new policy of 'basic accessibility' – without the appropriate organisational and political framework – was deemed extremely difficult by virtually all informants. In this case, the rather recently established transport regions were considered to have very little scope for action:

> *"…we are nothing more than a table where we bring people together. We are no entity, we have no obligations or duties to be part of the realisation on the terrain, so we are only facilitating discussion and making sure that there is some kind of policy planning." (Informant K)*

Budget restrictions were highlighted as a major issue by most informants but were particularly tangible among informants in the case of the introduction of the 'basic accessibility' policy in the Flanders region. Difficulties with organisational structures and adhering to various administrative boundaries on different levels were also emphasised by informants in relation to this case.

The coordination of multiple societal services on a regional level was mentioned by Informants N and O in the case of Scania. These informants suggested that the region can take on the role of coordinator between industry, healthcare and transport provision, that is, areas in which the regional authority has a defined mandate. As a comparison, examples of successful coordination between healthcare and transport were detailed in the case of the UK, cited by Informant M as a way forward in terms of bridging gaps in coordination between societal services (such as healthcare, education, etc.) and transport services.

Some or all of these multiple coordination and collaboration challenges were highlighted as barriers for setting standards for basic accessibility, as a single authority's ability to deliver on these standards was considered by informants to be restricted at best.

Sub-theme 3.2: (Dis)integrated transport and land use planning

Given that accessibility is shaped by the transport and land use system, a key issue of co-ordination and collaboration emerges

between authorities involved in transport and those in land use planning. For instance, careful location decisions for new developments and building at higher densities are often key to enabling and supporting public transport and other service provision. One informant (Informant A) considered that municipalities would be likely to permit development in a less dense fashion if accessibility standards were introduced. At the same time, permitting development close to public transport stations and hubs was cited as having been found to be the best means of improving accessibility by public transport in the region of Scania (Informant B). However, the goals in the regional public transport provision plan (for Scania) are focused on the provision and coverage of public transport, and have weak links to permitting development and land use planning in general.

A regional spatial planning function was recently introduced in Sweden, and was, when this study was conducted, being put into operation in only two regions, Stockholm and Scania (see The Swedish National Board of Housing, Building and Planning (2020) for more information on this function). The regional spatial planning function constitutes the formalisation of spatial planning on a regional level, in collaboration with municipalities. The introduction of the regional planning function was stressed by several informants as an opportunity for an increased focus on accessibility, particularly by those who had recently been working with this function. The regional planning function was, in the case of Scania, deemed to have actually raised issues such as accessibility to activities other than employment (e.g. to green areas, groceries, public services, etc.). The regional authority having a clearer mandate and a clearer role in the process of land use planning was considered, by the informants who mentioned the function, to be one of the main advantages of the regional spatial planning function.

The regional spatial planning function was considered by several informants to still be a work-in-progress. Challenges with the function were outlined by some informants. One of the main challenges cited was that the legislation does not seem to be tailored for the regional administrative level. Another challenge was that, with the regional planning function, the region provides guidance, but the municipalities execute the land use planning in the end. The fact that regional plans, where they exist, are not binding was lamented by the same informant:

> *"Yes, as you know, the regional plan is not binding, it is a kind of development plan for the region. As such, it is fragile in its governance function. […]" (Informant F)*

Several informants suggested that the introduction of the regional spatial planning function could open up the possibility of introducing accessibility standards. However, in our analysis of the material, we reasoned that the challenges associated with the function (that it is not tailored to the regional level, provides guidance and not stipulations, and has no binding powers) may also comprise a barrier for the introduction of accessibility standards and result in a function without any real means of affecting relevant accessibility policy areas. The 'transport region' administrative level in the Flanders case acts as a comparison in this sense. Its purpose is to manage the integration of the 'basic accessibility' policy, but the informants doubted whether the regions can have any form of real influence given the complicated administrative arrangements in the Flanders region.

These concerns of the informants point to the potential of regional governance in promoting standards for basic accessibility, but also highlight the risk that standards will remain a paper tiger in light of the distribution of responsibilities over multiple authorities.

Theme 4: Implementation in practice

The theme of *Implementation in practice* arose from discussions surrounding how authorities currently seek to provide for accessibility needs on the ground, encompassing three distinct sub-themes.

Sub-theme 4.1: Differentiating between basic provision and basic accessibility standards

In the Swedish policy documentation, providing 'basic' or 'good' accessibility has been framed as a goal. Two of the studied regions have adopted this goal but tend to translate it into basic supply standards. This holds for the regions of Västra Götaland and Scania. Both have set rather specific provision levels in the respective regional public transport provision programmes. In the case of Västra Götaland, in the former regional transport provision programme, the 'geographical accessibility goal' was formulated as aiming for more than 85% of inhabitants to be able to reach their closest commuter hub within 60 min. In the new programme, this proportion was reduced to 82%, but with a higher frequency of 10 available trips by public transport (Informant C, see Västra Götaland 2021). This means that accessibility should improve (although an 'improvement' does not imply that inhabitants receive an acceptable basic standard), but for a smaller percentage of people. The basic levels of provision were characterised as in some way ensuring a level of accessibility for inhabitants, even if the accessibility conveyed might still be insufficient, illustrated by the following quote from Informant D:

> *"[…] I think it has in any case helped to say that [laughs] 'it will not get worse than this'." (Informant D)*

In Stockholm, in contrast, it was decided not to define basic levels of provision in the regional transport provision programme, with such standards instead agreed upon with contractors in the procurement process. According to one informant, the decision to refrain from standards in the policy was linked to a fear of 'empty buses' driving around with no passengers. In our analysis of the material, this fear was considered to have resulted in a hesitancy and was used as a justification for not setting standards. Furthermore, difficulties with logistics, vehicle storage, securing sufficient land at an affordable price and procurement were emphasised as challenges for changing/increasing the frequency of services in Stockholm, while the same informants considered service increases a necessity if a basic provision standard were to be set. These concerns thus triggered the Stockholm region to refrain from setting basic supply standards, let alone basic standards for accessibility.

Sub-theme 4.2: Provision standards as a given?

Where provision standards exist, they tend to be framed around supporting accessibility to jobs, and accessibility to regional commuter hubs or urban centres. The history behind the existence of these standards appeared to be unclear or unknown to most informants in the Swedish cases. Informants tended to frame these standards as a somewhat 'natural phenomenon', with their

existence seemingly taken for granted. In some cases, informants considered that if provision standards were to be removed, it would not make much of a difference. Other informants considered that if provision standards were removed this would mean even more resources would be directed towards those who already have most resources (i.e., higher levels of accessibility), owing largely to the innate focus on the provision of public transport accessibility to commuters with higher incomes, according to the informants.

In one instance (in Västra Götaland), the history of the existence of provision standards was rather clear. Public transport provision standards were originally introduced in Västra Götaland (see e.g. Västra Götaland (2021) for examples of standards) alongside the change to the public transport legislation in 2012, according to Informant C. This legislation was regarded as an opportunity for change, opening up for the possibility to ensure that the same levels of provision standards would be applied in areas of comparable size throughout the region, regardless of the municipality:

> *"So there was also a willingness to do it [provide public transport] in a more coordinated way, that there would be the same opportunities where the circumstances are similar." (Informant C)*

The geographical accessibility goal in Scania's transport provision plan is formulated as aiming for at least 92% of the population to have at least 10 trips available by public transport to one of the region's growth motors (urban centres) within a maximum travel time of 60 min (Region Skåne 2020). This goal was framed by Informant B as a counterweight or complement to the goal of increasing the share of public transport in the region, with the latter regarded as the most important goal in the regional transport provision programme (see Region Skåne (2020)). The basic provision standards outlined in the provision plan were framed as a tool to ensure the provision is perceived as fair by all municipalities (this was the case for informants from Västra Götaland and from Scania).

That the primary function of provision standards appears to be delivering perceived justice among authorities, instead of among people, could prove to be a barrier for the introduction of accessibility standards. In our analysis we reasoned that the need to manage inter-authority 'struggles' could come in the way of setting accessibility standards.

Sub-theme 4.3: Demand Responsive Transport (DRT) as a panacea

Demand responsive transport (DRT) was mentioned by several informants, and in much of the policy documentation is outlined as a solution for providing accessibility by public transport in sparsely populated areas. In the policy documentation, DRT is usually intended by authorities to function as a complement to provision standards (in areas with few inhabitants with no fixed public transport lines). DRT was in some cases treated as if it were *a panacea for the provision of basic accessibility*, according to some informants. However, its introduction encroaches on pre-existing provision standards in some cases. Having analysed the interview material and policy documentation, we reasoned that the apparent freedom and flexibility promised by such solutions may constitute a promise of everything in theory, yet of nothing in particular in practice, particularly if standards for DRT provision are not defined or upheld.

In one instance, in Scania, Informant B detailed ongoing discussions on how the accessibility DRT conveys should be measured and followed up. In the case of the Flanders region, DRT was mainly conceptualised as a lastmile solution and indeed a last resort, the fourth of the four public transport 'layers' outlined in the strategy.

There was a huge focus on the DRT layer in the Flanders, and hopes that it will fill all the gaps in accessibility left after the removal of the basic mobility policy (i.e. basic supply policy). However, informants expressed doubt surrounding the capacity of DRT to fill such gaps. This doubt reinforced the notion, also among informants, that DRT is being regarded as a panacea. Ensuring that the general public understands how DRT functions and how to use it was framed as major challenge by informants in Flanders, especially within the restriction of budget-neutrality.

Delivering the same level of accessibility as is delivered by the public transport system today was regarded as the big challenge with respect to the implementation of the new 'basic accessibility' policy in the Flanders region:

> *"And then where there's no buses anymore (sic.), and now everywhere in Flanders there are buses but in the new vision there won't be. So as of 2023, there will be areas without a fixed public transportation system. There we are looking and that is being procured right now to introduce DRT systems […] which are both focused on areas where there will be no […] general public transportation." (Informant K)*

Mentions of DRT in much of the policy and strategy documentation can be interpreted as a kind of means of avoiding standard-setting. DRT is highlighted as a kind of solution to all accessibility problems in remote areas with little specific information as to how it will deliver accessibility. At the same time, provision standards set in other geographical areas are presented as though they will deliver sufficient accessibility, again with little or no information regarding the link between public transport supply and actual accessibility levels.

5. Discussion and conclusions

5.1. Moving towards standards for basic accessibility

The aim of this study was to examine if and how a basic level of accessibility can be set out as a policy concept and standard. We analysed policy directions in the three large city-regions in Sweden, where the policy concept of 'basic accessibility' is currently on the policy agenda. This analysis was enriched with insights from the Flanders region in Belgium and the UK.

If we flip the question posed in the title of our paper 'what's stopping us?' to 'what would facilitate this?', we have identified a path towards the possible implementation of accessibility standards. We set out the specific institutional and policy settings and steps that would be ideal for the introduction and implementation of a basic level of accessibility as a policy concept in practice.

Step 1: Defining and measuring the good

From a sufficientarian perspective, should a society wish to agree upon introducing a minimum level of accessibility, determining exactly where that level should lie is crucial. In order to do so, it is first necessary to agree upon a fixed approach to defining and measuring accessibility. The absence of such an approach between and within organisations in our cases presents difficulties for the introduction of a sufficient level of accessibility as a policy concept. Accessibility as a concept was considered elusive by almost all informants, and a single approach to the conceptualisation of accessibility (e.g. a focus on accessibility to jobs) was considered not to suffice. The reluctance of some to embark on defining and measuring accessibility might lead to 'policy paralysis', a shying away from accessibility due to the sheer complexity of the concept.

This is one risk attached to the accessibility concept. Another risk lies in the encompassing nature of the accessibility concept (Miller 2018; Geurs and Östh 2016; van Wee 2016). That is, the fact that accessibility is by its very nature also shaped by land use and service provision patterns, may direct the attention and the responsibility away from transport interventions. Yet, transport policies have succeeded in delivering a (more than) sufficient level of accessibility to the vast majority of the car-owning population, even though land use patterns have consistently changed (see e.g. Wu et al. (2021)). Against this background, the call for a shift from mobility to accessibility is, first and foremost, a call on *transport* policies to deliver a basic level of accessibility *also* for people without access to a car. This requires the gradual improvement over time of the transport *networks* that facilitate mobility without a car: pedestrian, bicycle (or, more general, micro-mobility) and public transport networks. Jointly, these networks can provide freedom, just like the road system provides freedom to people with access to a car. This suggests that an accessibility measure should be adopted that enables the assessment of the contribution of these transport *networks* to accessibility and thus to freedom, rather than accessibility measures that provide insight into the ease with which people can reach single destinations (such as supermarkets, doctors and schools).

At the same time, as also acknowledged by all informants, there is no perfect all-encompassing accessibility measure, since people differ in their abilities to use different networks and have different needs and wants (see also Boisjoly and El-Geneidy (2017)). The search for more sophisticated accessibility measures in the academic literature will not solve this fundamental challenge (Silva et al. 2017; Papa et al. 2016). Hence, the tendency of some authorities to use a simple accessibility measure in response to the complexity and elusiveness of the concept is a practically useful approach, provided it delivers insight into the *range* of destinations people can access. Current policy goals, such as those that define a maximum travel time to an urban centre, do *not* provide such insight, as they ignore the fact that people need to access a much broader range of areas and activities on a daily basis. In contrast, measures of the number of addresses, jobs (as a proxy for the number of services; see El-Geneidy and Levinson (2021)), or a range of activity types that can be reached within a certain time (or money) threshold do provide some, albeit imperfect, estimate of people's freedom to engage in a range of activities. While theoretically flawed as a measure of accessibility, such measures do provide a suitable basis for redirecting transport policy away from transport investments for people with already high levels of accessibility towards investments that serve people below an agreed-upon standard of accessibility. It is this fundamental shift – typically from road building towards investments in pedestrian, cycling and public transport networks – that is essential to achieve a basic level of accessibility.

Ultimately, it is recommended that the introduction of *any* accessibility measure is better than not measuring accessibility. Defining accessibility in a non-perfect way is inevitable but crucial in order to set a standard and measure policy performance.

Step 2: Setting the standard and assessing progress

A proper process is required in the case of standard-setting. A combination of empirical research into the impacts of below-standard accessibility and a process of participation can function as a means of informing and setting an accessibility standard. People (and/or their representatives) need to be involved in informing what the sufficient level of accessibility should be, based on their own needs and on what is perceived as reasonable in general. Public engagement, early involvement and transparency are vital.

Accountability and monitoring performance indicators are essential here (see also Marozzi and Bolzan 2018). It is important that appropriate and dependable indicators are used, and that it is not possible to manipulate results in any way (see Halden 2011).

Standards cannot stand alone. Their implementation is dependent on the accountability of the actors involved. All actors need to agree upon an implementation trajectory and budgets in order to achieve this. In order to be able to follow up on progress over time, a technical assessment framework and accountability schedule needs to be in place. Standards for a sufficient level of accessibility must be accompanied by a technical assessment framework, ascribing of duties and responsibilities, an implementation trajectory, and budget-matching. Having any standard in place, again, however imperfect, is better than having none in place at all.

Step 3: Deciding on the limits of the standard

Concerns regarding 'overreach' and unwanted development implications of accessibility standards among some informants compel us to restrict the sphere of application of such standards. Indeed, our findings suggest that different contexts call for different standards. In light of informants' concerns, the application of a basic accessibility standard should be limited to built-up areas of a minimal density, of a minimal population size or located within a predefined distance of a major urban centre, or a combination of these. Built-up areas that do not meet these criteria can instead be served by some minimal level of (demand-responsive) public transport. While seemingly at odds with society's duty to provide sufficient accessibility to all, an unconditional standard would de facto equal no standard at all. Moreover, such a 'multi-tier' system is already common in current practices, which also accept that a certain minimum level of public transport provision – let alone accessibility – cannot be delivered across the board in the current political context.

In several of the informants' responses, there was an implicit assumption that sufficient accessibility was an inherently rural problem. This assumption conflicts with findings in the literature that show that even if the standards are set very low, accessibility insufficiency is not (just) a rural problem but a problem of large suburbs and *peri*-urban towns, which are home to a substantial population without (reliable and affordable) access to a car (see Martens 2017; Singer et al. (2021)). Where areas lie outside the conditions for a basic standard of accessibility, DRT standards (of a certain quality) must be introduced, alongside ways of measuring and monitoring the accessibility conveyed through DRT services. If standards are not introduced as part of DRT provision, authorities

run the risk of promising accessibility and flexible access to services, but delivering nothing in particular in practice. See Petersen (2016) for a discussion on how minimum service standards can form a stable basis for the provision of DRT services, drawing on the case of DRT provision in Switzerland.

As neither rights nor obligations are unconditional, it is legitimate to restrict the 'reach' of the standard for basic accessibility, across space, across settlement type and/or across time periods.

Step 4: Institutional conditions and coordination between actors

Our findings indicate that certain institutional conditions are required for the introduction of an accessibility standard. Establishing a forum for coordination and a formalised framework for the tighter integration of transport and land use would help to support the introduction of a sufficient accessibility standard. Here, it is important that there is clarity surrounding which actor has the main responsibility for upholding the standard, but that it is also possible to ensure that other actors keep their side of the deal. The simplification of the coordination of actors and the synchronisation of administrative boundaries with power distribution would also improve institutional conditions (see Caset et al. (2019) for a discussion in the case of the Flanders). Lastly, it is important that the introduction of standards is a formalised process, and that the standards are formulated as a contract rather than a goal, even if delivering on the contract will take time. A mechanism to tie the national, regional and local authorities' actions together could be established. Such a mechanism could emulate the setup for the urban environment agreements (see The Swedish Government 2015).

Our findings indicate that no overnight solution can be achieved via provision standards. Rather, the introduction of such standards could instead comprise a step towards a long-term strategy to provide basic accessibility.

5.2. Conclusions

Many actors are hesitant when probed about setting standards for basic accessibility, yet most also see their relevance and possibilities for their implementation. Our findings indicate that accessibility standards might be acceptable in current policy settings if (1) the definition and measure is agreed upon; (2) a standard and assessment framework is set; (3) the 'reach' of these standards is restricted; and (4) institutional conditions for implementation are improved. According to informants' accounts, and drawing on the information available in policy documentation, a systematic approach to standard-setting is currently not in operation in any of the cases we studied. If this approach is considered by authorities, effective standard-setting could be within reach. It is important to acknowledge and emphasise that this conclusion applies to these specific cases. It is not possible to determine with a high level of confidence whether a similar study conducted elsewhere would have produced similar findings, and whether these findings in turn would have allowed for us to draw similar conclusions. As such, we recommend exercising an element of caution in any generalisation of these findings and conclusions beyond these specific cases and contexts.

The implementation of basic accessibility is inevitably laden with goal conflicts: providing efficient public transport, securing travel time savings yet increasing coverage, meeting environmental sustainability targets, ensuring critical mass yet providing accessibility in sparsely populated areas – all within a certain budget. Transport planning moves (relatively) quickly, and land use planning moves (relatively) slowly. While bringing the latter up to speed, the former can somewhat compensate. In order to bring people above the accessibility sufficiency threshold, transport investments are inevitable. Reshuffling land use is supportive to that effort and can avoid future injustices, but can only marginally mitigate current injustices. Providing basic accessibility is a long long-term agenda and requires strategic thinking. Any step towards setting a standard is a step in the right direction.

CRediT authorship contribution statement

Jean Ryan: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Validation, Visualization, Writing – original draft, Writing – review & editing. **Karel Martens:** Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Validation, Writing – original draft, Writing – review & editing.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

The authors do not have permission to share data.

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References

Alvesson, M., 2011. Interpreting Interviews. Sage, London, UK.

Alvesson, M., Sköldberg, K., 2009. Reflexive Methodology. Sage, London, UK.

Banister, D., 2008. The sustainable mobility paradigm. Transp. Policy 15, 73–80.

The Swedish National Board of Housing, Building and Planning 2020. Regional fysisk planering enligt PBL. PBL Kunskapsbanken – en handbok om plan- och bygglagen. Regional fysisk planering enligt PBL - PBL kunskapsbanken - Boverket. (Regional physical planning according to the Planning and Building Law), last accessed 14 November 2022.

Bocarejo, S., Oviedo, H., 2012. Transport accessibility and social inequities: a tool for identification of mobility needs and evaluation of transport investments. J. Transp. Geogr. 24, 142–154. https://doi.org/10.1016/j.jtrangeo.2011.12.004.

Boisjoly, G., El-Geneidy, A.M., 2017. The insider: A planners' perspective on accessibility. J. Transp. Geogr. 64, 33–43. https://doi.org/10.1016/j.jtrangeo.2017.08.006.

Caset, F., Teixeira, F.M., Derudder, B., Boussaw, K., Witlox, F., 2019. Planning for nodes, places, and people in Flanders and Brussels: An empirical railway station assessment tool for strategic decision-making. J. Transp. Land Use 12, 811–837.

European Commission 2013. Guidelines – Developing and implementing a Sustainable Urban Mobility Plan (first edition).

El-Geneidy, A., Levinson, D., 2021. Making accessibility work in practice. Transp. Rev. 42, 129–133. https://doi.org/10.1080/01441647.2021.1975954.

Flyvbjerg, B., Bester, D.W., 2021. The Cost-Benefit Fallacy: Why Cost-Benefit Analysis Is Broken and How to Fix It. J. Benefit-Cost Anal. 3, 1–25. https://doi.org/10.1017/bca.2021.9.

Geurs, K.T., Boon, W., van Wee, B., 2009. Social impacts of transport: Literature review and the state of the practice of transport appraisal in The Netherlands and the United Kingdom. Transp. Rev. 29, 69–90.

Geurs, K.T., Östh, J., 2016. Advances in the measurement of transport impedance in accessibility modelling. Eur. J. Transp. Infrastruct. Res. 16, 294–299. https://doi.org/10.18757/ejtir.2016.16.2.3138.

Grisé, E., Stewart, A.F., El-Geneidy, A., 2021. Planning a high-frequency transfer-based bus network. J. Transp. Land Use 14, 863–884.

Halden, D., 2011. The use and abuse of accessibility measures in UK passenger transport planning. Res. Transp. Bus. Manag. 2, 12–19.

Halden, D., 2014. Shaping the Future: case studies in UK accessibility planning. Transportation Research Procedia 1, 284 – 292, 41st European Transport Conference 2013, 30 September – 2 October 2013, Frankfurt, Germany.

Handy, S., 2020. Is accessibility an idea whose time has finally come? Transp. Res. Part D Transp. Environ. 83, 102319 https://doi.org/10.1016/j.trd.2020.102319.

Jones, P., Lucas, K., 2012. The social consequences of transport decision-making: clarifying concepts, synthesising knowledge and assessing implications. J. Transp. Geogr. 21, 4–16. https://doi.org/10.1016/j.jtrangeo.2012.01.012.

Kenyon, S., Lyons, G., Rafferty, J., 2002. Transport and social exclusion: Investigating the possibility of promoting inclusion through virtual mobility. J. Transp. Geogr. 10, 207–219.

Levine, J., Grengs, J., Shen, Q., Shen, Q., 2012. Does accessibility require density or speed? A comparison of fast versus close in getting where you want to go in US metropolitan regions. J. Am. Plan. Assoc. 78, 157–172.

Lucas, K., 2012. Transport and social exclusion: where are we now? Transp. Pol. 20, 105–113.

Lucas, K., van Wee, B., Maat, K., 2016. A method to evaluate equitable accessibility: combining ethical theories and accessibility-based approaches. Transportation 43, 473–490.

Marozzi, M., Bolzan, M., 2018. An Index of Household Accessibility to Basic Services: A Study of Italian Regions. Soc Indic Res 136, 1237–1250. https://doi.org/10.1007/s11205-016-1440-0.

Martens, K., 2012. Justice in transport as justice in accessibility: applying Walzer's 'Spheres of Justice' to the transport sector. Transportation 39, 1035–1053.

Martens, K., 2017. Transport justice: Designing fair transportation systems. Routledge, Oxon.

Martens, K., Di Ciommo, F., 2017. Travel time savings, accessibility gains and equity effects in cost–benefit analysis. Transp. Rev. 37, 152–169.

Martens, K., Golub, A., 2021. A Fair Distribution of Accessibility: Interpreting Civil Rights Regulations for Regional Transportation Plans. J. Plan. Educ. Res. 41, 425–444. https://doi.org/10.1177/0739456X18791014.

Martens, K., Singer, M.E., Cohen-Zada, A.L., 2022. Equity in Accessibility: Moving From Disparity to Insufficiency Analyses. J. Am. Plann. Assoc. 88, 1–16. https://doi.org/10.1080/01944363.2021.2016476.

Mattioli, G., 2016. Transport needs in a climate-constrained world. A novel framework to reconcile social and environmental sustainability in transport. Energy Res. Soc. Sci. 18, 118–128.

Metz, D., 2021. Time constraints and travel behaviour. Transp. Plan. Technol. 44, 16–29. https://doi.org/10.1080/03081060.2020.1851445.

Miller, E.J., 2018. Accessibility: measurement and application in transportation planning. Transp. Rev. 38, 551–555. https://doi.org/10.1080/01441647.2018.1492778.

Papa, E., Silva, C., te Brömmelstroet, M., Hull, A., 2016. Accessibility instruments for planning practice: a review of European experiences. The J. Transp. Land Use 9, 57–75.

Pereira, R.H.M., Schwanen, T., Banister, D., 2017. Distributive justice and equity in transportation. Transp. Rev. 37, 170–191. https://doi.org/10.1080/01441647.2016.1257660.

Petersen, T., 2016. Watching the Swiss: A network approach to rural and exurban public transport. Transp. Pol. 52, 175–185.

Silva, C., Bertolini, L., te Brommelströet, M., Milakis, D., Papa, E., 2017. Accessibility instruments in planning practice: bridging the implementation gap. Transp. Pol. 53, 135–145. https://doi.org/10.1016/j.tranpol.2016.09.006.

Singer, M., Cohen-Zada, A.-L., Martens, K., 2021. Accessibility Sufficiency Dashboard. Accessibility Sufficiency Dashboard (arcgis.com), last accessed 15 November 2022.

Region Skåne 2020. Trafikförsörjningsprogram för Skåne 2020–2030 (Scanias regional transport provision plan 2020-2030).

The Swedish Government, 2009. Mål för framtidens resor och transporter, Prop. 2008/ 09:93, Regeringens proposition. (Prop. 2008/ 09:93 Goals for the travel and transport of the future).

The Swedish Government, 2015. Förordning (2015:579) om stöd för att främja hållbara stadsmiljöer (Regulation 2015:579 for support to promote sustainable city environments). Förordning (2015:579) om stöd för att främja hållbara stadsmiljöer Svensk författningssamling 2015:2015:579 t.o.m. SFS 2019:1110 - Riksdagen, last accessed 15 November 2022.

Social Exclusion Unit, 2003. Making the connections: transport and social exclusion final report.

Van der Meulen, J., Mukhtar-Landgren, D., 2021. Deconstructing accessibility–discursive barriers for increased cycling in Sweden. Mobilities 16, 493–508. https://doi.org/10.1080/17450101.2021.1902240.

Van Wee, B., 2016. Accessible accessibility research challenges. J. Transp. Geogr. 51, 9–16. https://doi.org/10.1016/j.jtrangeo.2015.10.018.

Vanoutrive, T., Cooper, E., 2019. How just is transportation justice theory? The issues of paternalism and production. Transp. Res. Part A: Policy and Practice 122, 112–119. https://doi.org/10.1016/j.tra.2019.02.009.

Västra Götaland 2021. Trafikförsörjningsprogram 2021 – 2025 Hållbara resor i Västra Götaland. (Regional Transport Provision Programme 2021-2025 Sustainable trips in Västra Götaland). https://mellanarkiv-offentlig.vgregion.se/alfresco/s/archive/stream/public/v1/source/available/SOFIA/KTN6620-212084054820/SURROGATE/H%c3%a5llbara%20resor%20i%20V%c3%a4stra%20G%c3%b6taland%20beslutad%2018%20maj.pdf, last accessed 15 November 2022.

Wachs, M., Kumagai, T., 1973. Physical accessibility as a social indicator. Socio. Econ. Plan. Sci. 7, 437–456.

Wu, H., Avner, P., Boisjoly, G., Braga, C. K. V., El-Geneidy, A., Huang, J., Kerzhner, T., Murphy, B., Niedzielski, M. A., Pereira, R. H. M., Pritchard, J. P., Stewart, A., Wang, J., Levinson, D., 2021. Urban access across the globe: an international comparison of different transport modes. Npj Urban Sustainability 1, https://doi.org/10.1038/s42949-021-00020-2.