

**Barriers to public transport – Summary
A government investigation into Report 2019:3
public transport accessibility for
people with functional impairments**

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Summary

Functional impairments and travel behaviour

Approximately one third of the Swedish population has at least one functional impairment that affects their daily lives. This can include people with impaired mobility, impaired vision or hearing, impaired cognitive ability (e.g., dyslexia, ADHD, or dementia), as well as those with permanently degraded physical or mental health (e.g., chronic pain, gastrointestinal problems, allergies, hypersensitivities, stress, and worry or anxiety).

The ability of people to travel independently using public transport assumes numerous abilities, such as to understand and make oneself understood, to plan, orient oneself, move and move about, and to cope with various environments. All of these abilities are dependent on interaction between the travellers and the environments they encounter, i.e., informational, physical, and social environments. A functional impairment makes it harder for a traveller to overcome obstacles of various types. From this perspective, the obstacles depend on both the individual and the environment.

For people with functional impairment, daily life often poses challenges that others seldom think about. The physical and social environment in public transport present numerous obstacles that may not be noticed by others, such as distances to and between stops, height differences and gaps between platforms and vehicles, inadequate announcements, unclear or illegible travel information and maps, confusing ticketing systems, a hectic pace, crowding, inconvenient waiting times, noise, air pollution, allergens, new and unfamiliar environments, as well as inadequate or sometimes even total lack of social support, personal assistance, customer service, and more.

People with functional impairment are known to travel less than the average person in the population. An individual with impaired mobility makes an average of 0.9 journeys per day, compared with 1.6 for those without a functional impairment. Travel is even less prevalent (0.7 journeys per day) among those who have a permit for special transport (community service). Functional impairments also have a relatively large impact on the use of public transport. An individual with impaired mobility makes an average of 0.1 journeys per day on public transport, versus 0.2 for those without a functional impairment; the corresponding figure for those with permits for special transport is 0.03.

Less travel by those with functional impairment correlates to some extent with age and occupation. Compared with the rest of the population, more elderly and financially disadvantaged people have functional impairment. Those with functional impairment are also less likely to be employed than are others. People who are neither working nor going to school do not commute to and from schools or workplaces, which affects travel by public transport in particular. However, other differences in travel patterns between people with functional impairment and the rest of the population cannot be explained by anything other than the fact that real barriers and obstacles do exist in our public transport system.

Fragmented regulations and responsibilities

The regulations and responsibilities for public transport accessibility depend on the mode of transport in question, and concern mainly individual physical and technical measures undertaken in the infrastructure and the vehicles, for example, in the physical design of stops and stations, wheelchair spaces, and audiovisual information. Service providers, information services, and personal assistance are also subject to certain requirements, which again consist mainly uncoordinated and separate measures. Services and information are subject to no requirements from a whole-trip perspective, i.e., the traveller's perspective on the entire trip.

The requirements of coordination and co-planning are sporadic and vague in nature. Nor do current regulations delineate any overall responsibility for monitoring accessibility issues. The requirements pertain mainly to measures for specific groups with regard to their particular needs, and are specific to type of infrastructure, mode of transport, type of vehicle, transport organisation, and/or enterprise. They include no general requirements concerning coordinated management by objectives (MBO) among stakeholders, nor any requirements calling for evaluations from a whole-trip perspective. Also the regulatory inspection at the national level is limited to legal requirements for policy documents, not quality issues.

In practice, the accessibility requirements target the particular needs of individual groups, particularly those with notable and discernible functional impairments, such as wheelchair users and those with impaired vision or hearing. Special measures are necessary to make public transport accessible to these groups. Some of these measures also help other passenger groups, affording benefits such as spaces for prams and digital technology to provide travel information at stops and while on board. Other initiatives, such as personal assistance, are more specific but essential if the travel plans of the functionally impaired are to be fulfilled. Such special measures are undoubtedly necessary, but far from sufficient.

The need for a holistic perspective on accessibility

From a traveller's whole-trip perspective, the regulations are highly limited. The accessibility needs and obstacles experienced by people with functional impairment are far more varied and extensive than those addressed, in particular requirements of accessibility services and information; for example, customised information regarding the travel environment in its entirety. In follow-ups and statistics, the accessibility requirements of infrastructure, vehicles, services, and information are handled as isolated measures, even though, from a quality perspective, they are interdependent and situational. For example, an accessible vehicle may become inaccessible if the infrastructure is not adapted. A lift intended to assist wheelchair users when exiting a train is of no help if no one is responsible for its operation.

Accessibility indicators developed in the EU's MEDIANE project address the need to work on accessibility issues and initiatives that are integrated into operations management and follow-up. Accessibility is then to be treated as a quality issue, an objective-based operation predicated on needs analyses and efficient resource planning. Obstacles to accessibility may thus also be organisational in nature, for example, deficiencies in terms of coordination and quality controls to ensure that services, technology, and equipment are working. Operations management and follow-up can also be viewed as organisational barriers.

National indicators

National MBO and follow-ups of public transport accessibility also leave much to be desired. Two key indicators are generally and consistently applied, i.e., the accessibility of public transport vehicles, on the one hand, and of bus stops and railway stations in the so called “national priority network”, on the other hand. During the government investigation, it became clear that both indicators suffer from quality problems, pertaining primarily to inadequate systematisation of national compilations of regional documentation.

National statistics on the accessibility of vehicles is based on a vehicle database (FRIDA) with information on transport contracts among the regional public transport agencies and companies. The latter have their own routines for monitoring contracts and use the database in different ways. As a result, the database covers neither all transport contracts, nor all vehicles used. This, combined with flaws in system functions, results in erroneous national statistics. In addition, FRIDA includes only a few parameters to represent the accessibility of public transport vehicles, i.e., the presence of a ramp/lift, audiovisual announcements, and wheelchair areas. This is a rather limited way of representing accessibility, not covering any service or quality issues.

The statistical basis for the second indicator, accessibility of bus stops and railway stations in the national priority network, has notable shortcomings as well. The Swedish Transport Administration annually compiles regional data on the number of adapted bus stops and railway stations. The Administration’s regional offices report data without applying any common definitions, guidelines, systems, routines, or quality controls. The documentation is also limited to measures within the Administration’s area of responsibility, i.e., mainly physical measures at ground level. This results in unclear, unreliable and even contradictory statistics concerning the accessibility in question, for example, what and how many measures have been undertaken by whom, when, where, and how. Similarly, there is no monitoring system in place that registers what measures are left, and who is to implement them and when. The goals are vague and have been deferred multiple times with no in-depth justification or analysis.

Despite a lack of reliable national indicators, the current investigation supported by a number of sources overall suggests that the physical accessibility of vehicles and transfer points has improved over time. In other respects, the investigation does not support a gradual improvement, but rather a decline, not least regarding the coordination of accessibility information and services. It is symptomatic of the current state of affairs that a non-profit organisation, Resenärsforum (Passengers’ Forum), has a more thorough and systematic knowledge of Sweden’s railway stations than do government agencies or the industry.

Accessibility of regional public transport

Public transport is dominated by government-subsidised regional public transport. The regional public transport authorities (regionala kollektivtrafikmyndigheterna, RKM) are responsible for managing public transport accessibility and information while taking the needs of people with functional impairment into consideration. In their oversight, the Swedish Transport Agency and the Swedish Consumer Agency have found formal deficiencies. Quality deficiencies and major regional variations have also been found in the present government assignment.

The target groups of accessibility measures at the regional level are consistent with those at the national level, i.e., primarily groups with impaired mobility, vision, or hearing. Other

functional impairments are seldom addressed, although steering documents often express an awareness of functional variation and the importance of reducing informational obstacles for all groups.

The MBO at the regional level is characterised by regulatory compliance, with goals targeting the degree to which requirements are objectively fulfilled, rather than accessibility as a quality issue, taking the perception of passengers into account. Some regions have taken steps towards a more strategic management and monitoring of accessibility measures, integrating such measures from both operational and passenger perspectives. This applies especially to urban regions, in particular Region Stockholm.

The region has detailed guidelines for public transport procurement, including requirements of accessibility pertaining to infrastructure and vehicles, service and information, training, and passenger treatment. The region offers personal assistance on short notice at several of the transfer points for which it is responsible. Customer service and follow-up of accessibility issues clearly exhibit greater maturity than is the case in other regions. The region also has a highly developed and valued consultation procedure involving disability rights organisations.

However, in all regions, the MBO is limited to compliance, rather than defining objectives and setting goals of accessibility with respect to the whole trip from a passenger perspective, e.g., how accessibility information is to be designed to be usable from a whole-trip perspective. Nor are accessibility issues consistently integrated with operations management, partly because the MBO is limited to specific needs, requirements, and measures.

A more mature MBO process would consider the diversity of accessibility needs, and accessibility as a general quality issue. Specific physical and technical measures are naturally important, but without a holistic perspective on service and information, the uncertainty surrounding travel will persist for everyone, and for people with functional impairment in particular. Their trust and confidence in public transport as a means of travel assumes up-to-date, relevant, and accurate information and service from a whole-trip perspective, door to door, night and day, all year round.

A focus on specific measures for particular needs implies that accessibility issues continue to be interpreted mainly in terms of costs, rather than benefits, with the result that they are marginalised. This in turn explains the lack of both internal and external coordination in this area. Efforts to clearly define and bridge the gaps between areas of responsibility are very rare, as are efforts to develop service provision from a whole-trip perspective, such as e-services for up-to-date and accurate accessibility information regarding infrastructure, facilities, and vehicles.

Involving the disability movement

RKMs are required by law to consult with the disability movement when planning measures to ensure the accessibility of regional public transport. Such consultation normally occurs among less senior civil servants rather than managers, policymakers, and decision-makers. Region Stockholm is an exception, allowing for consultation with both policymakers and civil servants. Regional representatives of the disability movement also perceive that consultation works better in Region Stockholm than elsewhere in Sweden. In smaller regions such consultation can be reduced to a single agenda item in a meeting on special transportation service, which marginalises the issue and excludes broader groups of people with functional impairment.

A more general problem is that the consultation is perceived as an information forum rather than cooperation surrounding MBO or the follow-up of accessibility needs, obstacles, and

measures. The lack of forward planning and results is a consistent experience, as is the view that the consultation often depends on a single driving spirit, making it vulnerable and ending the process when the person leaves his or her position.

According to national and regional representatives of the disability movement, improvements are happening in terms of the physical accessibility of public transport, including with respect to technical aids. At the same time, they find that progress is slow, and that these issues are not being prioritised. Moreover, coordination is lacking, as are assigned responsibilities to provide coherent information and service. Automated information services offer improvements for some, while supplanting personal service that can be difficult to replace for others.

Uncertainty as a general barrier

People with functional impairment experience many different obstacles in public transport. Physical accessibility is important for some, and decisive in terms of the possibilities for travel. Informational support and technical equipment needed before and during a trip are essential for others. There are also those who have various problems with the travel environment, such as allergenic environments, crowding, or the hectic pace. Needs and obstacles vary depending on time and location as well.

Despite their differing needs and experiences, all people with functional impairment have one thing in common: a greater need for information and services to reduce the uncertainty and discomfort that public transport can entail. They are more dependent on planning and more sensitive to traffic changes and disturbances. Before and during journey, a number of questions may arise: How long will the transfer take? Have snowy areas been ploughed? Is the equipment working? Will I receive assistance? Is the lift working? Can someone show me the way?

Uncertainty as to whether it is possible to travel independently and seamlessly from door to door implies reduced trust and confidence in public transport as a means of travel, which in turn diminishes the inclination to travel by public transport. Uncertainty about coping on one's own is reason enough to refrain from travelling. Increasing trust and confidence will require relevant, up-to-date, complete, accurate, and reliable information regarding public transport as a physical and social environment, regardless of time or location, and regardless of whether or not any disruption has occurred. The public transport system currently falls far short of this standard.

In practice, there are major variations in the demand for and offerings of information and services for the functionally impaired. The development of new technical and digital aids is also advancing swiftly, including in the transport system. However, generational changes take place more rapidly in technology than among humans. There is a risk that digital exclusion will increase rather than decrease over time. Replacing personal service with digital services may entail new obstacles for people with functional impairment. It is clear from our contacts with the disability movement that having fewer points of human contact in public transport does not benefit this group.

Universal design as MBO

Regional differences in the commitment to accessibility issues are attributable to several factors, with resources being one of them. Region Stockholm has two people working full-time on the accessibility of public transport. The corresponding figures for smaller regions amount to 20–50 % of a full-time position. This naturally implies highly varying conditions for planning

and working systematically on accessibility issues. However, from a broader quality perspective, also the resources in Region Stockholm must be considered modest, given the scope of accessibility issues in the public transport system.

The principle of universal design entails addressing the diversity of accessibility needs and obstacles when developing products and services. This implies requirements on our knowledge as well, regarding both current and future conditions of transport services affecting passengers. Awareness of the diversity of needs and obstacles, supporting a wider scope of MBO, needs analyses, and resource planning, is a first step.

Transport Analysis has conducted a population survey to clarify the accessibility obstacles facing various groups of people with functional impairment and the Swedish population as a whole. The results point to a shared perceptions of accessibility problems.

The most prevalent obstacles concern limited options in terms of flexible and spontaneous service and information, including the ability to cope with traffic changes and disruptions. This applies to all passenger groups, including individuals with a medical, physical, mental, or cognitive impairments. All passenger groups perceive obstacles in a similar way, although they are especially onerous for people with functional impairment. The survey also shows that obstacles to accessibility affect everyone's inclination to use public transport, regardless of the presence or type of any functional impairment.

This necessitates a new way of looking at accessibility issues that includes both general needs, such as needs for real time information and spontaneous service, and special needs, such as sufficient space for a wheelchair. Both general and special needs have effects on the inclination of travellers to use public transport. From the passenger's point of view, they also interact. General accessibility information is as important as physical space.

All accessibility needs, problems, and barriers should be taken into account to achieve effective MBO. This can be achieved only if they are included in an integrated quality management system. Without an integrated system, it will be difficult, if not impossible, to determine which initiatives and measures are most relevant and effective. A broader and more integrated approach to MBO should precede any discussion of resource issues. Efficient resource planning presumes a more integrated MBO.

Transport Analysis considers deficient MBO resulting from an inadequate knowledge base to be the single most important barrier to improved public transport accessibility for people with functional impairments. Currently, initiatives are limited to individual measures to address special needs, rather than being viewed as a quality issue that improves public transport as a whole. As long as accessibility needs and barriers are viewed as affecting only marginal groups, initiatives will be viewed as pure cost issues, rather than as integrated parts of the MBO of public transport as a whole.

Key figures from a population survey of barriers to public transport

Target population: Swedish adults, 18 years and older

Simple random sampling was used to select the respondents for an initial set of screening questions, and quota sampling from the first sample for a second set of questions. The random sampling was based on a register that includes all persons registered as resident in Sweden (SPAR).

Gross sample	12,001
Net sample	11,072
Number of responses to screening questions	3441
Net sample after screening	10,294
Number of responses to full set of questions	2663

Estimated population statistics

Self-reported persistent reduced capability affecting daily life

Reduced physical health	17%
Reduced physical mobility, vision, or hearing	16%
Reduced mental health	13%
Reduced cognitive capabilities	7%
Any of the above	32%

Self-reported barriers to the use of public transport	Bus	Rail
No disability	28%	18%
Reduced physical health	41%	32%
Reduced physical mobility, vision, or hearing	40%	33%
Reduced mental health	42%	30%
Reduced cognitive capabilities	49%	39%

Self-reported experience of avoiding public transport due to the belief that one is unable to travel on one's own

No disability	13%
Reduced physical health	32%
Reduced physical mobility, vision, or hearing	33%
Reduced mental health	34%
Reduced cognitive capabilities	36%



Transport Analysis is a Swedish agency for transport policy analysis. We analyse and evaluate proposed and implemented measures within the sphere of transport policy. We are also responsible for official statistics in the transport and communication sectors. Transport Analysis was established in April 2010 with its head office in Stockholm and a branch office in Östersund.

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