



**Accessibility in public transport
for persons with disabilities -
measurements 2013-2015**

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Transport Analysis

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Summary

The accessibility of regional and long-distance public transport for people with various types of disabilities has been studied using a new measurement method. The method is primarily intended for monitoring accessibility over time, but some comparisons between different trip elements, modes of transport, cities/regions, and disabilities are also possible if due attention is paid to the conditions for such comparisons.

Accessibility is defined here as the degree of fulfilment of various criteria, chosen jointly with organizations for the disabled, applying to the various parts of a journey (i.e., trip elements). The maximum accessibility index value is 100. Nine groups of disabilities or diagnoses are represented: hearing impairment/deafness, stomach/intestinal disease, asthma/allergy, movement impairment, impaired vision/blindness, developmental disability, anxiety, dyslexia, and ADHD.

The overall accessibility index for public transport 2013–2015 was around 45. Values so far below 100 suggest that there is still much to do before public transport is fully accessible. In 2015, the index for regional public transport was 48 and for long-distance public transport 69.

In a few cases there are differences between the measurement years, though the reasons for them are not fully understood. It cannot be excluded that they are the result of measurement errors rather than of changes in actual traffic conditions.

No differences were observed between the regional transport modes metro, bus, tram, rail, and ferry. However, there are some differences between different cities/regions, trip elements, and disabilities. Looking at the cities/regions, Stockholm was the place with the highest public transport accessibility, with an accessibility index value of 58 in 2015. However, in a statistical sense this value is not significantly different from those for Gothenburg, Malmö, or City 1 (a medium-sized rural city). However, the public transport accessibility in City 2 (a smaller rural city) was significantly lower than that in the other studied cities, with an index value of 26.

Of the various trip elements, the maximum accessibility was obtained for trip planning, which in 2015 had an accessibility index value of 92 – significantly higher than the values for any other trip elements. The least accessible trip element was egress, which had an index value of only 15 and was also significantly lower, in a statistical sense, than the values for purchase of ticket/travel centre and boarding. The other trip elements assessed were interchange, station/stop, and on board.

For the various disabilities, regional public transport was most accessible for those with stomach/intestinal disease, with an accessibility index value of 66 (2015). This was also the most common disability. Accessibility for those with hearing impairment/deafness – also a quite common disability – was around the weighted average for regional traffic, while accessibility for those with movement impairment and impaired vision/blindness was below the average. These differences, however, are not statistically significant.

The accessibility of long-distance public transport varied between 2013 and 2015, the value being notably lower in 2013 than in later years. This difference is probably an effect of measurement errors by the observers, or because the observations in 2013 were affected by traffic disruptions.

The results suggest that there may be some differences in public transport accessibility between disabilities, transport modes, cities/regions, and trip elements. However, the method for measuring accessibility needs to be thoroughly evaluated and validated, and further developed and expanded with more observations in order to reduce measurement errors.



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.