## Summary:

## Enhanced accessibility in public transport: A before-and-after study

TØI Report 1235/2012 Author(s): Jørgen Aarhaug and Beate Elvebakk Oslo 2012, 44 pages Norwegian language

A before-and-after study has been done to assess certain measures for universal design in local public transport funded by the Norwegian government. The measures are favourably received by persons with disabilities as well as by other passengers and bus drivers. At the same time, the study reveals that the measures funded through the scheme do not cover the entire travel chain and do not remove all challenges encountered by people with disabilities.

Even where measures have been introduced according to plan, some challenges persist. Remaining challenges especially pertain to information about the measures, to maintenance, and to the drivers' familiarity with the needs of disabled passengers.

## Background

Universal design is a political priority in Norway and one of four key objectives in the National Plan for Transport. According to the Government's vision, Norway's public spaces should be universally designed by 2025. The funding scheme for improved accessibility in local public transport is part of this effort. Municipalities and counties are important actors in public transport, since most of public transport in Norway falls within the domain of the county authorities, while road owners are responsible for constructing and maintaining bus and tram stops.

This report is based on a before-and-after study of measures that received funding from the scheme for better accessibility in local public transport. The scheme includes a large variety of measures. Given, however, the timeframe of the project we have chosen to focus on accessibility at and around bus stops.

The study consisted of surveys, case studies, interviews and demographic modelling.

## Findings

The main finding is that universal design works. This goes for people with disabilities as well as for other passengers. The measures funded through the government scheme contribute to lowering the threshold for using public transport.

The case studies with individuals with disabilities clearly demonstrate that the measures contribute to making public transport more accessible for this group.

Several of the individuals with disabilities who took part in the study, expressed surprise that public transport was so easily accessible. This indicates that there is room for improvement when it comes to making the measures known to the public.

At the same time, the case studies show that the measures that received funding do not cover the entire travel chain, and that the measures are not yet ideal. As an example of this, the visually impaired often prefer bus shelters to tactile markers as indicators of bus stops; this is true for the blind, and all the more so for individuals with reduced vision. The case studies also revealed that continuous maintenance, and education of personnel, are important in order for the optimal functioning of universal design measures.

In the survey and on the basis of passenger statistics provided by the transport companies, we have also found that the measures contribute to increasing the number of passengers. However, the general trend is an increase in public transport ridership, and we have only observed a moderately higher increase than should be expected. Since these are also single case studies, caution should be exercised when drawing conclusions on the background of this finding. Explaining the observed increase in passengers numbers as a direct consequence of the measures will probably be exaggerating the effects of the measures, but they seem to contribute to a positive development. The interviews made with bus drivers support this observation.

While the measures are favourably received, we observe that passengers list other measures as more important for their choice of transport mode. Apparently, while the measures are able to attract few new passengers, they do serve to limit the attrition of public transport users.

The bus drivers reported that average time spent on embarkation is reduced where the bus stops have been improved. However, there are remaining problems related to the geometry of some of the improved bus stops, as drivers often report that their design makes it impossible to place the bus sufficiently close to the platform. In such cases, the heightened platform turns into a further impediment, rather than a reduced threshold. Passengers with disabilities, however, find that drivers' helpfulness and understanding of the challenges they face, vary considerably.