

*An English translation of the foreword and summary of the report "Åtgärdsvalsstudie - Förbättrad tillgänglighet inom stråket Stockholm-Oslo, TRV 2017/14854":*

## Foreword

The transport system in the corridor between Stockholm and Oslo is important for many who live and work in cities and regions in this corridor, but also for these expanding capital cities and for connections to international travel and freight.

There are shortcomings in the current infrastructure for both passenger and goods transport and for this reason, this corridor is named specifically in Sweden's national transport plan for 2014–2025. For this reason, the Swedish Transport Administration (*Trafikverket*) conducted a comprehensive choice of measures study (*åtgärdsvalsstudie*) with the affected parties including Sweden's Regions, Norway's counties, municipalities, operators, the Norwegian Railway Directorate (*Jernbanedirektoratet*) and Norwegian Public Roads Administration (*Statens Vegvesen*). This has resulted in the corridor having been named as an 'identified shortcoming' (*utpektad brist*) in Sweden's draft national plan for the transport system 2018–2029.

An interim report has previously been presented with a focus on shortcomings, needs, goals and preliminary proposals for measures. Subsequent work has now resulted in recommended proposals for measures, which can serve as a common basis for future planning. In terms of timing, this work has been limited to two target years, 2030 and 2040. These years are indicative of what could be implemented by a particular point in time provided that the planning process is complete and funding for implementation has been secured. The target years are therefore not intended as fixed dates for completion.

This work has been carried out through an excellent dialogue in which the affected actors have participated actively and constructively. A concluding seminar, which will include the signing of a declaration of intent, will be held in spring 2018.

Continued development in this corridor requires that the various actors continue in-depth investigations and implement measures based on these, separately or together in various constellations. In order to coordinate and monitor this development, among other things the Swedish Transport Administration will establish a forum in the form of periodic conferences with the aim that these will be held annually. The purpose of these conferences is to provide all actors with the opportunity to discuss the development of the Stockholm–Oslo corridor.

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# Summary

The Stockholm–Oslo corridor is transport-intensive and there are plenty of indications that both passenger and goods traffic will continue to grow relatively rapidly. But this growth brings with it traffic safety and accessibility challenges. In the railways system, there are capacity problems, problems with punctuality, and significant shortcomings in accessibility evidenced by, among other things, long travel times between the endpoints Stockholm and Oslo, and between several of the regional sub-markets.

The continued growth of goods and passenger traffic within the existing infrastructure is not considered to be compatible with Sweden's transport policy objectives and the targets of significantly reduced emissions of greenhouse gases laid down in the Climate Act (*Klimatlagen*). Consequently, coping with future development requires measures aimed at strengthening the transport system's capacity and accessibility, and limiting its impact on the environment and the climate.

With the support of the Region Värmland and the Region Örebro county, the Swedish Transport Administration has initiated this choice of measures study. The Swedish Transport Administration has a coordinating role for the form, content and focus of the study. The study has been carried out with the assistance of engineering consultancy firm Sweco.

Work on the choice of measures study has sought to find the most cost-effective solutions for remedying identified shortcomings and achieving identified goals. This work has been carried out in close cooperation with municipalities, region confederations, government agencies, operators and stakeholder organisations in both Sweden and Norway. The aim of working in this way was to involve the actors in describing the problem situation, developing corridor-specific goals for the growth of the transport system, and formulating proposals for measures.

Right from the early stages of the study, it was apparent that the shortcomings in today's transport systems are deemed to be the greatest in the railways system. The potential for growth in the corridor's transport systems in line with the overall long-term goals is also deemed to be the greatest in the railways system. Consequently, the emphasis of the choice of measures study has been on studying shortcomings, goals and proposals for measures for the railways. The roads system has been dealt with at a higher level.

Sweden's national transport policy objectives have guided this work. Together, the corridor's operators have developed corridor-specific goals. For the railways, these long-term goals can be summarised as follows:

- Strengthened competitiveness.
- Travel time of no more than three hours between Stockholm and Oslo.
- A transport system conducive to daily commuting between identified node cities.

For the roads network, these long-term goals can be summarised as follows:

- Assure today's traffic safety functionality.
- Construction to get rid of bottlenecks that are negatively impacting accessibility in the corridor.

The first part of the choice of measures study produced a rough list of measures. This list was then reviewed, and a number of measures were investigated further but a number of measures were also dismissed because they cannot or should not be dealt with in isolation in relation to a particular corridor, or because they are not in keeping with the goals set for the growth of the corridor's transport systems. However, these measures may be interesting to study in other contexts. A list of the dismissed measures can be found in the first part of the choice of measures study.

The final list of measures proposed can be found primarily in step 4 of the four-step principle (more extensive reconstruction and new construction works), but the list also includes steps 1–3 measures.

Most of these measures are in the railways system. The proposals for measures for the railways was produced with the aid of a set of cumulative objectives that build on each other compiled as an expansion strategy for the corridor. The purpose of this set of cumulative objectives is to clarify the progression and coherence in the development of the corridor's functions/goals, and the measures deemed necessary for achieving these. In terms of timing, this work has been limited to two target years, 2030 and 2040. These years are indicative of what could be implemented by a particular point in time provided that the planning process is complete and funding for implementation has been secured. The target years are therefore not intended as fixed dates for completion. On the other hand, expansions of the existing railway lines between Örebro and Västerås, and between Kil and Kristinehamn, are necessary to restore the functionality of the railways, and to measure up to market demand for increased traffic by 2030. By 2040, it is estimated that further expansions of existing rail lines will be needed; in addition, we will need two new rail links: the Nobel line (*Nobelbanan*) and the Cross border line (*Gränsbanan*). With these expansions, traffic can be increased while achieving significantly reduced travel times between Stockholm and Oslo, and between several of the regional sub-markets. The proposed measures for the railways will benefit both goods and passenger traffic. The new rail links will also bring relief to parts of the existing rail network. The value of this relief has not been studied in any detail.

For the roads system, there are proposals for expansions of the network to assure traffic safety and accessibility in the form of divided roads and transits in larger conurbations along the E18 in Sweden and the E16 in Norway. In addition to these purely road-based measures, there are also proposals for expanded straight-through bus services between Örebro and Karlstad along the E18, improved bus traffic from Karlstad to Gardermoen along the road 61, and more motorway bus stops along parts of the E18. Many of these measures are at the proposal stage and need to be described in more detail before their effects can be assessed.

Proposals for measures that are not dependent on traffic type include measures intended to function as facilitators or catalysts for benefits accruing from infrastructure investments in roads and railways, and to increase the efficiency of the system. In many cases, they are relatively unfixed in time, and in many instances can stand on their own. An example of this type of measure is the node function linking the various traffic types (for example a travel centre), common ticketing systems, and park-and-ride systems. A common model for forecasting cross-border social benefits is a further example. The choice of measures study reflects an early planning stage. In-depth analyses of the impact of proposed measures on future goods and passenger transport have not been carried out. This means for example that the socio-economic benefits have not been calculated. Instead, the overall impact assessment has been done in the form of a descriptive analysis where anticipated impacts are commented on based on the identified goals.

A cost estimate has been made of the expansions of the railways system. The cost is estimated on the basis of generalised assumptions and should be seen as indicative only. There are several alternative routes for the new Cross border line. An indicative cost has therefore been presented as a range between SEK 48.4 and 57.4 billion. These estimates have not fully taken account of the costs that will arise for speed-increasing (curve-straightening) measures within the existing rail network. Figures from previously implemented expansions in Norway indicate that the cost per kilometre on the Norwegian side may be higher.

The corridor boasts a large number of actors representing a variety of perspectives. In combination with the long time horizon for the proposed measures, this means that collaboration has been identified as a particularly important activity. After completion of the choice of measures study, the Swedish Transport Administration intends to take on the responsibility for coordinating and monitoring in-depth investigations during the coming planning and implementation process in collaboration with other actors.