



**FOLKETINGET  
STATSREVISORERNE**



**FOLKETINGET  
RIGSREVISIONEN**

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# **Passenger benefits resulting from railway investments**

# 1. Introduction and conclusion

## 1.1. Purpose and conclusion

1. This report concerns passenger benefits resulting from investments in the Danish railway system in the form of faster journeys, higher train frequency and fewer delays. The study is based on the fact that since 2009 significant investments have been made in the Danish railway system and the Danish parliament (the Folketinget) has insisted that the investments should lead to improvements for the train passengers.

Beyond the investment made in a new national signalling system, DKK 57 billion was invested in renewals, new construction projects and maintenance of the railway system between 2009 and 2020. Maintenance investments are not covered in this study, as they generally are not intended to bring passenger benefits. On the other hand, it is often stated in funding applications, construction acts, or finance acts that investments in renewals and new construction projects aim to save time for the passengers. Political agreements on issues concerning the transport sector also highlight that improvements made to the railway system must contribute to making journeys by train so attractive that more people will choose rail over car.

In 2021, 130 million people travelled by train in Denmark, and it follows that travel time, train frequency and train delays matter. Even minor improvements in travel time following investments in the railway infrastructure can be of great significance because they benefit many passengers. Benefits to passengers should, however, be balanced against the considerable expenditure that is sometimes involved in obtaining them.

The Ministry of Transport is not in charge of the practical implementation of the investments in railway infrastructure but has a responsibility to contribute to the realisation of planned passenger benefits. The ministry can exert its influence through Banedanmark's performance plan and its contract with the Danish railway company (the DSB) on the delivery of public transport.

Investments in railway infrastructure are often decided several years before the actual construction work starts. It follows that the estimated passenger benefits are inherently uncertain because framework conditions may change due to interaction with other projects. The delayed roll-out of the signalling system and the procurement of the IC4 trains are examples of projects that might hamper the delivery of projected passenger benefits. It is, therefore, essential that the Ministry of Transport provides information about significant conditions for delivering passenger benefits.

### Types of investments

- **Renewals** include activities that help reduce maintenance costs significantly or extend the life of fixed plants like tracks, sleepers and ballast.
- **Construction projects** include activities such as laying new tracks, establishing new routes, straighten curves and building new stations.
- **Maintenance** includes on-going repairing of wear and tear on the railway and replacement of elements to maintain their function such as, for instance, cleaning the crushed stones (ballast) underneath and alongside the tracks.

### Travel-time benefits

Travel-time benefits are estimated at the basis of the total sum of travel time, waiting time and delays.

### Banedanmark

A governmental body under the Danish Ministry of Transport with responsibility for maintaining the Danish railway system

The focus of this study is eight completed projects and six ongoing projects that all operate with targets for passenger benefits. The 14 projects represent investments of just under DKK 17 billion out of the DKK 57 billion invested in railway infrastructure from 2009 to 2020. Some targets are clear and specify how much faster a journey will become, whereas others indicate that the investment will improve the journey time without stating by how much. The targets set for passenger benefits in the eight completed projects are shown in table 2 and appendix 2 to the report.

The purpose of the study is to assess whether the Ministry of Transport has set clear targets for passenger benefits and has determined whether the projects met their targets.

The Ministry of Transport has informed Rigsrevisionen that Denmark's railway system appears worn-out, outdated and challenged because no investments have been made to modernize the infrastructure for decades. The many investments made in the railway now will change this, but until these investment projects are completed, the train traffic will continue to be affected by extensive work on the tracks. In addition, passenger benefits are affected by the unsuccessful procurement of IC4 diesel trains. The ministry does not concur with the method used by Rigsrevisionen for analysing whether the passenger benefits of the 14 selected projects have been obtained. According to the ministry, Rigsrevisionen should have assessed the socioeconomic impact of the projects, comparing the benefits obtained to a scenario in which the projects were not implemented. According to the ministry, Rigsrevisionen should have incorporated specific and general causal explanations for the development in passenger benefits.

The purpose of Rigsrevisionen's study is not to carry out socioeconomic analyses since that would require analyses of long-term effects as well as indirect and derived effects, such as behavioural effects and distortion. Carrying out socioeconomic impact assessments is appropriate at the time, when a decision to launch a project is made because an impact assessment involves a comparison with a situation in which the project is not launched. As the decisions to make the specific investments have already been made, Rigsrevisionen has instead examined whether the passenger benefits promised to the Folketing have been realised.

Rigsrevisionen agrees that a follow-up analysis on whether the promised passenger benefits have been fully or partially obtained must address the underlying causes. However, this was not the purpose of this study. The Ministry of Transport has provided causal explanations of the development of some of the passenger benefits, and examples of these are provided in the report.

Rigsrevisionen initiated the study in September 2021.



## Main conclusion

**The Ministry of Transport has not set adequately clear targets for passenger benefits and has not determined whether the targets have been achieved. Rigsrevisionen finds this unsatisfactory. The consequence is that the Ministry of Transport is unaware whether the targets set for passenger benefits have been met, and the ministry is, therefore, unable to apply this knowledge in the planning of future projects.**

**The targets set for passenger benefits by the Ministry of Transport in funding applications, construction acts or finance acts for 14 selected projects are not sufficiently clear**

The study shows that several targets set for passenger benefits by the Ministry of Transport are unclear. Firstly, the ministry has failed to define quantifiable targets for approx. two-thirds of the benefits. Secondly, the ministry has failed to indicate time limits for the realisation of the benefits for several of the targets. Thirdly, the ministry has not involved DSB in the quality assurance of the underlying assumptions to make them as realistic as possible.

The Ministry of Transport has informed Rigsrevisionen that it is consistently working to strengthen its basis for decisions and information provided to the Folketinget on the implementation of individual projects and the performance of the overall railway system. However, the description of passenger benefits is not a management tool but reflects the ministry's best estimate of the potential benefits at the time, when it was decided to launch the project.

**The Ministry of Transport has not measured achievement of the targets set for passenger benefits in eight completed projects**

The study shows that the Ministry of Transport has not established whether the passenger benefit targets were achieved in eight completed projects nor has it clarified why the targets were not achieved. Moreover, the ministry has not adequately ensured that the DSB was informed of passenger benefit targets that should be considered when the DSB developed timetables.

The Ministry of Transport has informed Rigsrevisionen that going forward, the ministry will - in addition to its general monitoring activities - develop a fixed, consistent reporting routine to follow up and describe developments in passenger benefits, functionality, schedules and investment budgets.

**The passenger benefit targets set by the Ministry of Transport for eight completed projects have not been fully achieved**

The study shows that seven out of eight completed projects failed to achieve all the targets set for passenger benefits. The eight projects include 24 passenger benefit targets; eleven out of 24 targets in funding applications, construction acts, or finance acts were not achieved.