

Working group

Bridges



Photo: Knut Opeide, Statens vegvesen

Bridges

A working group will be established to exchange experience in construction and operation of bridges and to plan an annual bridge seminar.

The topics for the seminars are to be determined by the group, however, the topics 'climate', 'digitisation' and 'asset management' must be considered during the period 2020-2024.

The group should address the following:

a) Climate

Bridge construction and maintenance face still greater demands for climate and environmental management. The group should therefore look at the experience obtained in the use of climate and environmental models, including models for CO2 footprint, from bridges (both construction and maintenance). A key topic in this connection will be statement of reductions and models for preparing baselines. The Nordic road sector is facing requirements to reduce its climate footprint, compared to a selected baseline year, and therefore needs to consider what the CO2 footprint was for a similar bridge built in the selected baseline year (e.g. 1990), i.e. to define a 'baseline'. The group should therefore obtain and exchange knowledge about best practices for defining baselines. In this connection, the group may look at how CO2 is calculated in the various models, and how choice of materials and optimisation of design may help reduce the CO2 footprint of structures.

b) Digitisation

The potential of digitisation in bridge construction and maintenance should be exploited to the fullest. The group may therefore benefit from sharing knowledge about the potentials of digitisation and the specific experience of the sector regarding digitisation of the construction and maintenance of bridges. A key topic is the experience in using sensor technology and artificial intelligence. This particularly concerns artificial intelligence used for condition assessments and riskbased maintenance. The group may therefore also choose to deal with new inspection and monitoring methods and share knowledge within this topic. Finally, the group should look at the digitisation within bridge maintenance and exchange experience in online condition assessments.

c) Asset management

A substantial part of road management assets are bridges. Asset management is an important discipline for the stakeholders in the bridge sector. The group should therefore look at the experience in asset management of 'bridge' assets with focus on how best to maintain the value and functionality of bridges. In this connection, it is important to share knowledge about processes.

Other seminar topics could be timber bridges and structural codes for existing bridges.

Period

July 2020-June 2024

Relevant competence profiles

Employees working with construction and maintenance of bridges

Knowledge sharing and communication of best practices

Fire workshops or seminars

Relevant sustainable development goals

Goal 9: Industry, innovation and infrastructure

Goal 12: Responsible consumption and production

Follow-up on sustainable development goals

The group will make proposals for follow-up on the sustainable development goals in autumn 2020.

In this connection, the group can also discuss whether the activities mentioned in the terms of reference align with other sustainable development goals which the group would like to follow-up on.