

Kvarken Fixed Connection Feasibility Study

Stakeholder webinar

- Tuesday June 10, 12 pm to 13 pm
- Language: English
- Program of the webinar
 - Background and introduction, Tapio Ojanen FTIA
 - Results of the Study, Risto Jounila WSP
 - FTIA's conclusions, Aimo Huhdanmäki FTIA
 - Trafikverket's comments, Maria Öberg Trafikverket
 - Questions and discussion
- A press release and all the reports are published today June 10.

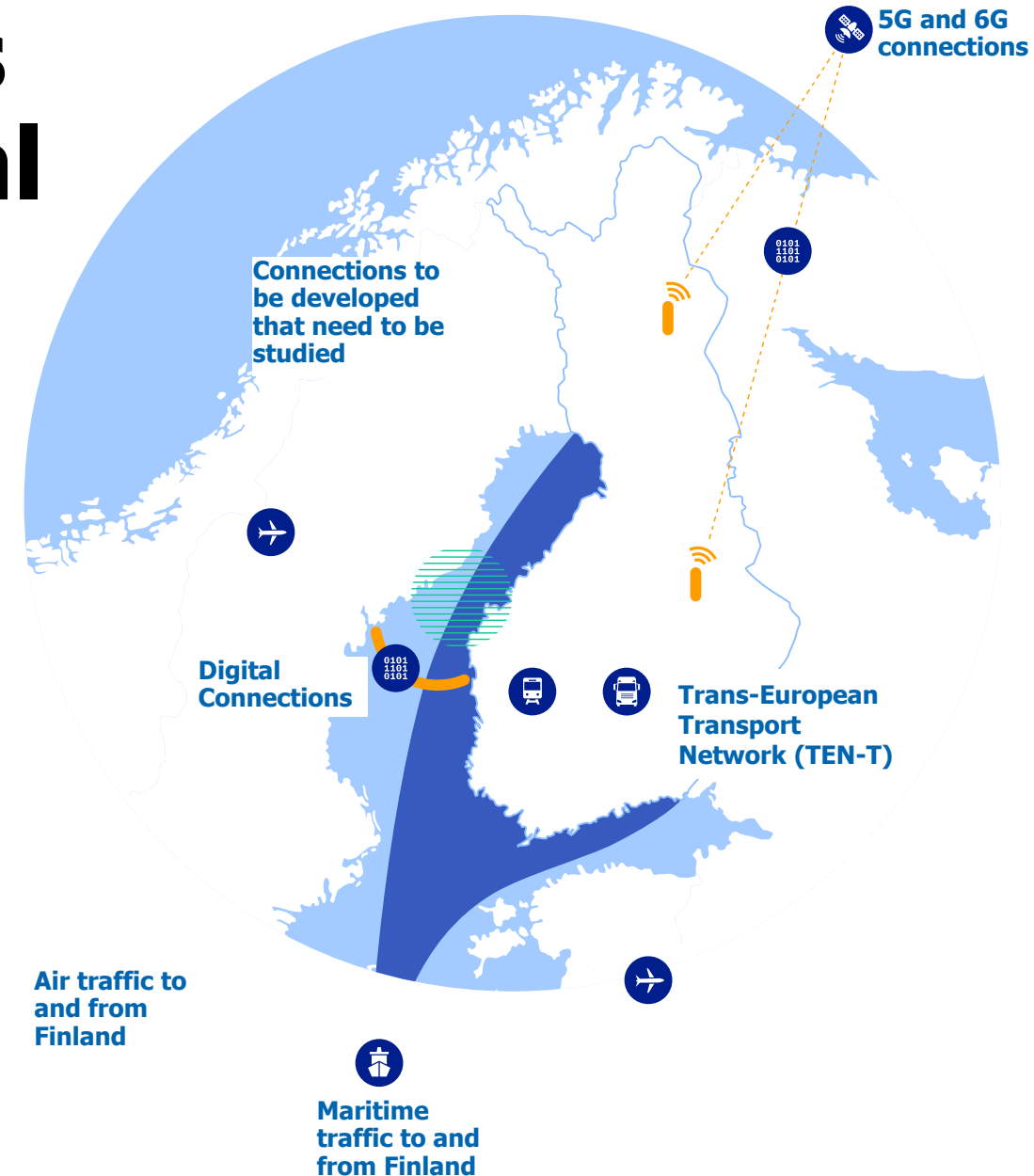
An aerial photograph of a vast body of water, likely a lake or bay, with numerous small, forested islands and peninsulas. The water is a deep blue, and the sky is filled with soft, white clouds. The foreground shows a rocky shoreline with some small islands and patches of green vegetation.

Kvarken Fixed Connection Preliminary Study

Background and introduction

FTIA's current activities concerning international connections

- Participation in Nordic transport system planning co-operation
- Rail Nordica: planning European track gauge in Northern Finland
- Kvarken Fixed Connection Feasibility Study
- A study of potential train ferry connections to the south via the Baltics



Transport 12: Finland's international accessibility

Background and method of the study

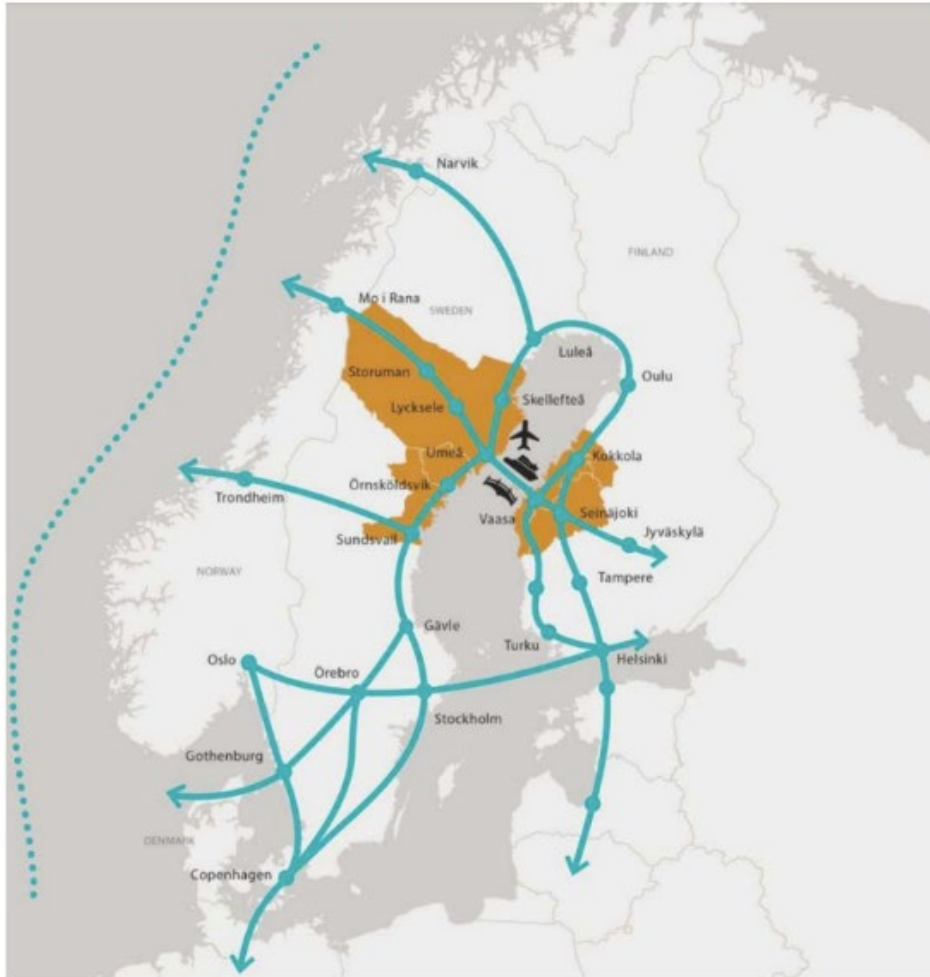
- In accordance with Petteri Orpo's Government Programme, the Finnish Transport Infrastructure Agency prepared this preliminary study on the fixed transport connection in the Kvarken region. Also, potential synergies between transport and energy transmission connections were investigated.
- Transport demand was estimated using the national transport forecast models Samgods (freight traffic) and Sampers (passenger traffic) developed by the Swedish Transport Administration. The results of the models were refined with expert assessments.
- International examples of longer road and rail tunnels and bridges were examined as a background for the fixed link options. The study focused on implementation options (rock tunnel, concrete tunnel, bridge, etc.), traffic volumes and the capacity of the connection.
- The impacts and risks were assessed using the framework of the impact assessment programme of Finland's National Transport System Plan, taking into account the preliminary nature of the study.
- The study had a Coordination Group which included: Finnish Transport Infrastructure Agency (FTIA), Trafikverket (Sweden), Finnish Transport and Communications Agency (Traficom), Finland's Ministry of the Environment, Regional Council of Ostrobothnia, Kvarkenrådet and Västerbotten Region. Other stakeholders were involved by interviews.

Scope of the Study



Väylävirasto
Trafikledsverket

- This preliminary study concerns the feasibility, implementation methods, costs and impacts of the Kvarken fixed Connection.
- In addition, the traffic needs of the connection have been assessed through model analysis in various scenarios based on the current transport network.
- New alternative transport corridors between Finland and Sweden or between Finland and Estonia could change Finland's logistics system. These kinds of larger systemic changes or synergies have not been investigated in this report.



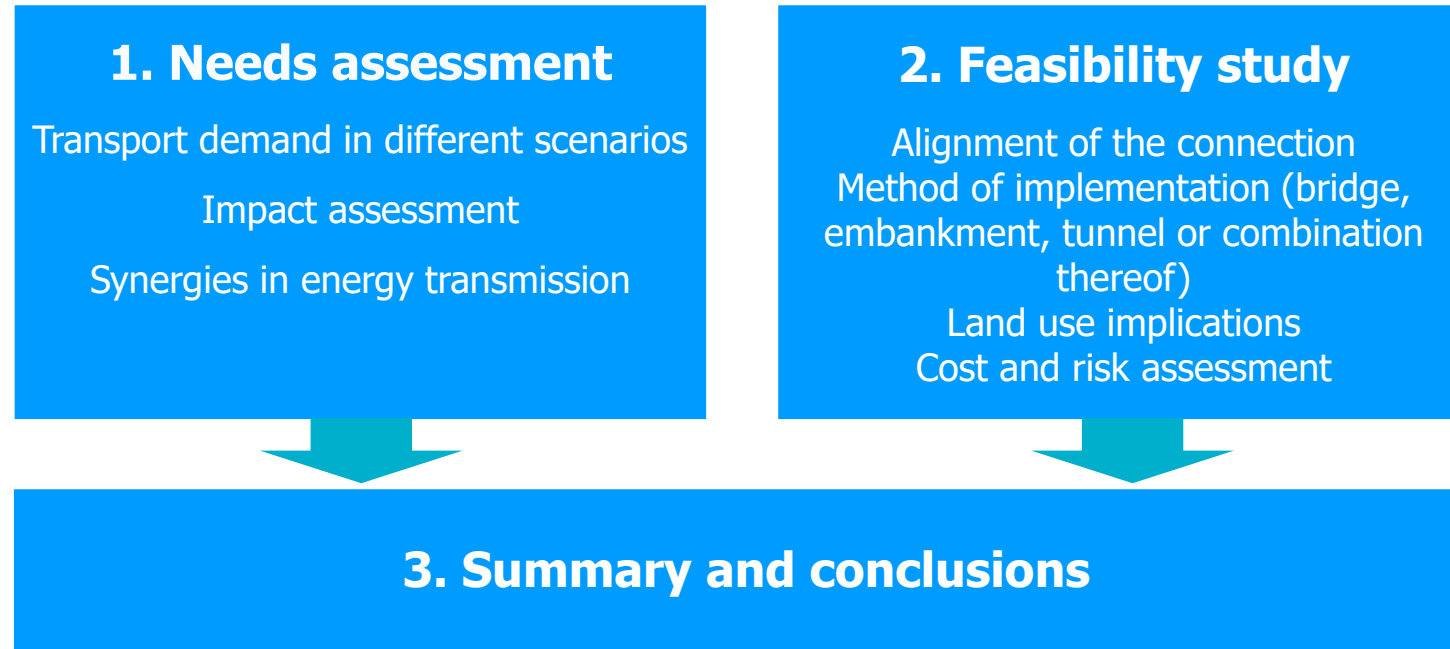
Kuva: Patrik Sällström, Region Västerbotten

Vaasa-Umeå connection from the Atlantic viewpoint



Process of the preliminary study

Finnish Transport Infrastructure Agency:



Kvarken Council:



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Kvarken Fixed Connection Preliminary Study

Energy network synergies and conclusions

Energy transmission synergies

- The feasibility study examined synergies in energy transmission (gas, electricity)
- The construction and maintenance of transmission connections would apparently be more cost-effective if the transmission network were built with a fixed transport connection
- The location of the new connection in Kvarken is not particularly good from the perspective of the Nordic electricity market or the Finnish electricity network
 - Electricity production is already concentrated in western Finland and the Gulf of Bothnia coast, and the new connection would bring more electricity to be transmitted further.
 - The connection would be good if Finland exported electricity to Sweden.

Summary

1. The connection is technically feasible

- Road, rail and energy transmission connections are possible.
- The cost estimate is approximately EUR 5–29 billion, plus significant maintenance costs.

2. According to the forecast model used, traffic demand seems to remain moderate

- Travel time between Vaasa and Umeå would be significantly reduced in road transport and passenger traffic.
- Benefits are mainly generated at the regional level. In passenger traffic, the catchment area is larger than in freight traffic.
- According to the study, there will be no significant shift in freight traffic. The current maritime transport system is very efficient.
- Socio-economic effectiveness would remain low.
- The connection would provide a backup route for international transport, as well as opportunities for energy transmission connections using a fixed connection across the Kvarken Strait.
- There are uncertainties related to demand modelling.

3. This is a major project that is likely to cause significant environmental impacts

- The connection cannot be made without creating a risk to the status of a UNESCO World Heritage Site.
- The impacts on winter navigation and the marine ecosystem are considerable.

Conclusions

- This study includes a technical feasibility study and a needs study based on traffic models.
- The connection would create a new alternative land transport route
- The new connection would provide benefits for the security of supply and military mobility of the Nordic countries
- A large, fixed infrastructure in an open sea area would also involve risks
- The impacts of a new transport corridor might potentially be larger and more multidimensional than it was possible to determine through traffic-related analyses. However, possible wider economic impacts of transport investments are always linked to direct transport user and producer benefits.
- It is good to assess the impacts of new international connections in a uniform manner to facilitate their comparison. For example, wider impacts should be assessed using the wider economic impact assessment framework prepared by Finland's Ministry of Transport and Communications.