



# The Coastal Highway Route E39: Choice of technology for fjord crossings

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## The case in brief

Part of the program involves technology development to assess the possibilities for crossing fjords. This can be partly done using familiar technology and partly there is a need to develop new technology. Some of the solutions require the use of technology currently employed by the offshore sector.

## When will the technology be ready?

Fjord crossings are all different, and the need for technology must be assessed specifically for each individual project. The table shows which technical solutions are being considered for the various fjord crossings. It also lists the year when the NPRA expects the development of technology to have arrived at a point where at least one bridge type may be built across the fjord; as from that point in time, technology will not be a limiting factor for the implementation of the project.

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In order for the technology development to take place as fast as indicated in the table, the following prerequisites must be met:

The required funds must be made available. We estimate development costs to be around 3-5 % of construction costs for each project. A large part of these funds must be available at an earlier stage than for traditional road projects. It is not practical to plan all fjord crossings in parallel. It is therefore important to clarify the order in which the crossings should be built, so that priorities can be made.

Fjord Crossings	Potential solutions					Technology resolved
	Tunnel	Suspension	Tube	Floating	TLP	
Rogfast	X					Complete
Langenuen		X				Complete
Bjørnafjorden				X	X	Complete
Sognefjorden		X	X		X	2022
Nordfjorden		X				Complete
Vartdalsfjorden		X	X	X	X	2019
Sulafjorden		X	X		X	2020
Romsdalsfjorden	X					Complete
Julsundet		X				Complete
Halsafjorden		X	X	X	X	2019
Familiar technology		Familiar technology further developed			New technology required	

## Ambition

The ambition of the Storting is to link Western Norway together with an upgraded highway E39.

The linking of large business regions and housing, labour and service markets will provide a better basis for developing Norway's largest export region.