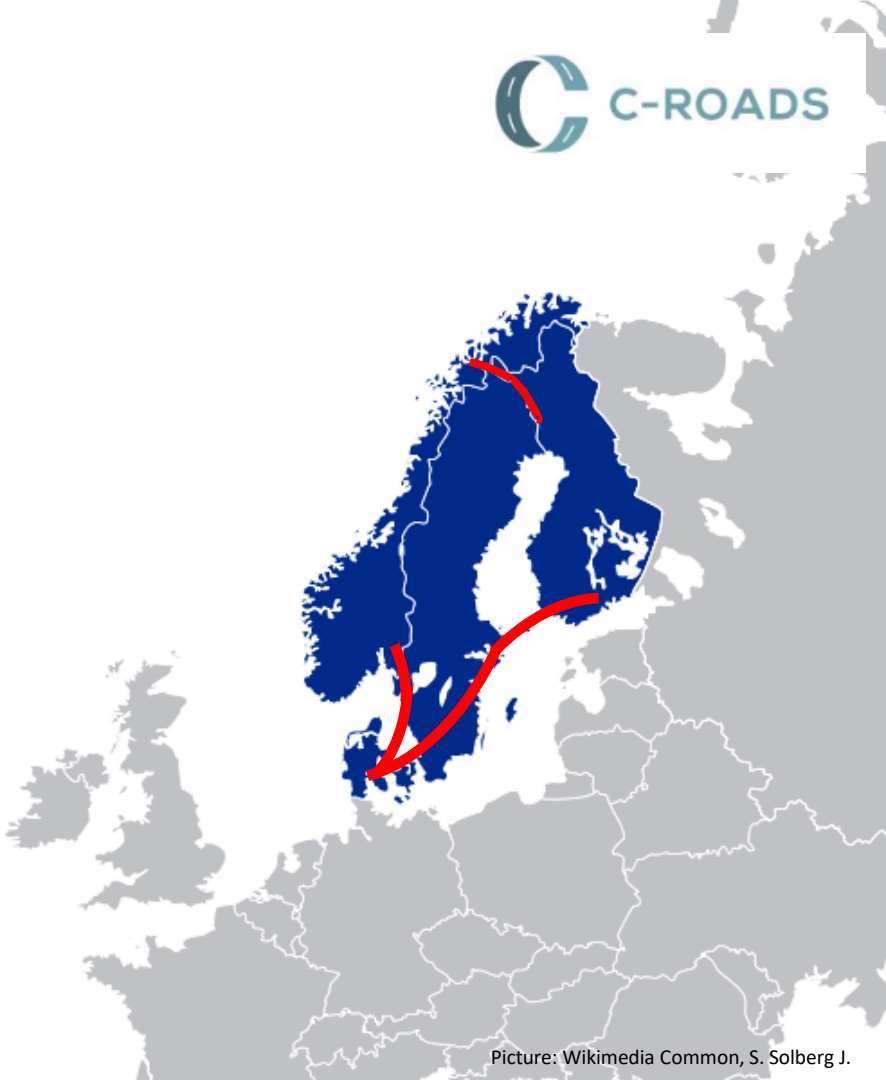
Nordic WAY



Picture: Wikimedia Common, S. Solberg J.

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Focus: C-ITS Services for the Nordic conditions

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What is NordicWay ?

A collaboration between more than 60 public and private partners in Sweden, Norway, Finland and Denmark

What is NordicWay doing ?

Developing and deploying harmonized C-ITS systems and services

Why ?

To enhance traffic safety and fluency and reduce CO_2 emissions

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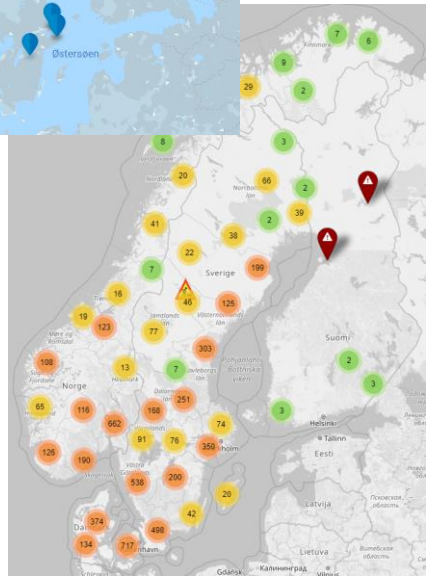
How is it done ?

- A number of national demonstration sites focusing on different services under different conditions
- All partners and demonstration sites share and exchange information and messages through a common interchange system
- The solution is scalable throughout Europe and beyond



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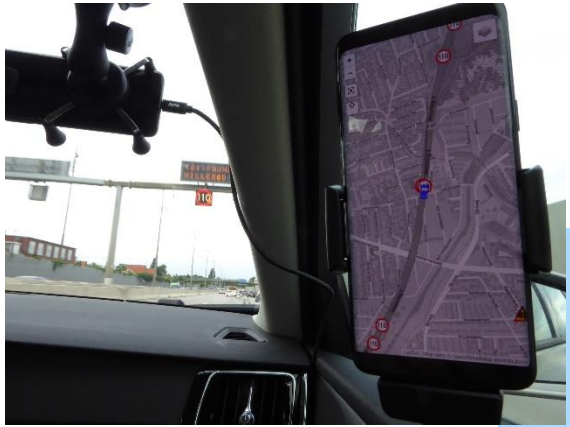
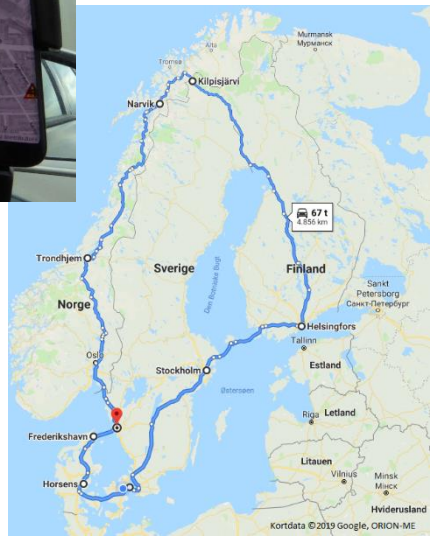
Does it work ?

- Yes - In fall 2019 the first NordicWay tour was carried out. A vehicle travelled 5000 km through all participating countries communicating with both public and private entities via the interchange system along the entire route.





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What is the vision ?

- **Enhanced traffic safety** and fluency as well as reduction of CO_2
- **Interoperable solutions and services suitable for Nordic conditions** (road conditions, cellular coverage, traffic problems/needs etc.)
- Services with potential to cover entire Nordic network and reach high penetration **without large infrastructure investments** (i.e. cellular communication)
- **Scale up C-ITS services** - by supporting cloud to cloud hybrid communication

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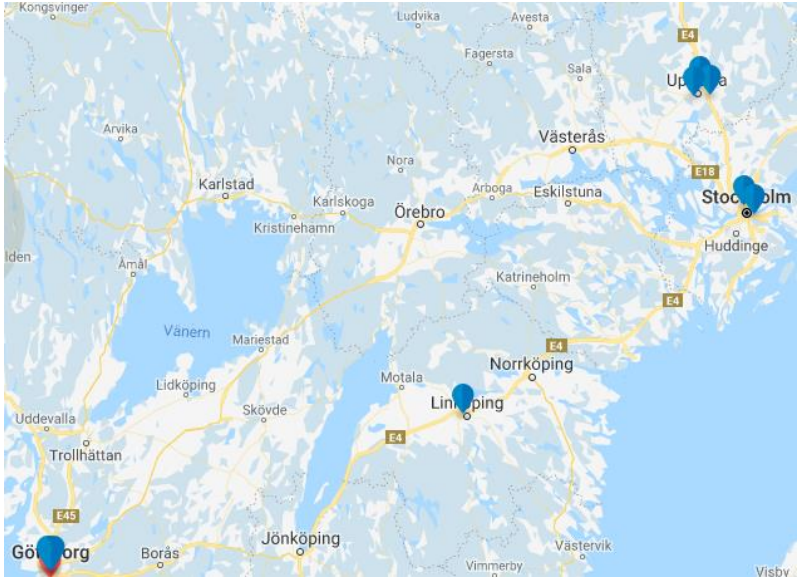
Swedish pilots



- **Location:** Multiple sites across Sweden
- **Testing:** May 2019 - December 2020

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C-ITS services tested in the Swedish pilots

Emergency Vehicle Approaching

With EVA vehicles are alerted when a Emergency vehicle approaching well in advance of seeing or hearing blue light or sirens. More warning time will lead to faster reaction and shortened travel time for Emergency Vehicles

Test site: Gothenburg
Partners: Carmenta, Volvo Car Corporation, Volvo Technology, Ericsson, VTI

Road Works Warning

The goal with RWW is to improve road safety, especially for car drivers. RWW also provides better travel planning opportunities. The aim is to produce a system ready for full scale deployment.

Test site: Gothenburg
Partners: Kapsch, Volvo Car Corporation, Volvo Technology, Ericsson, Swedish Transport Administration

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C-ITS services tested in the Swedish pilots

Dynamic access control for designated infrastructure

Develop and test a system for active traffic management that create possibility for more efficient use of existing infrastructure by navigating vehicles that fulfill preset requirements into lanes with free capacity.

Test site: Stockholm

Partners: Scania, Technolution, CLOSER, Ericsson, Swedish Transport Administration

Dynamic environmental zones

In the pilot hybrid cars automatically shift from hybrid mode to electric mode when accessing an environmental zone. If the trip through a low emission zone is known in advance the vehicle can itself charge the battery and be able to drive through the low emission using only electric drive.

Test site: Gothenburg

Partners: City of Gothenburg, Volvo Car Corporation, Technolution, Ericsson, Swedish Transport Administration

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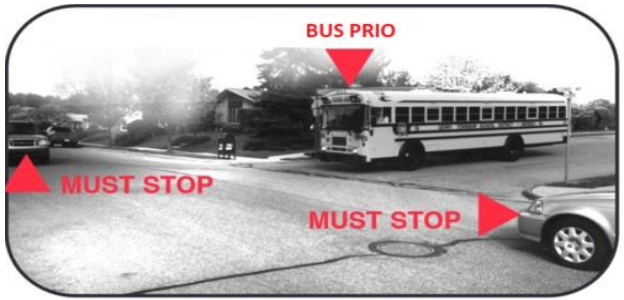
C-ITS services tested in the Swedish pilots

Signalized intersections (Connected Traffic Signals)



Connected Traffic Signals in Gothenburg, Stockholm and Uppsala. The use cases being tested are Time To Green (TTG), Green Light Optimal Speed Advisory (GLOSA) and Traffic Signal Priority for designated vehicles. The goal with connected traffic signals is to increase the capacity in the intersection.

Test site: Gothenburg, Stockholm and Uppsala

Partners: Scania, Technolution, Volvo Technology, Volvo Car Corporation, Swarco, Ericsson, Swedish Transport Administration, City of Gothenburg, City of Stockholm, Uppsala kommun, RISE

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Finnish C-ITS-deployment Pilot

- **Location:** Main road network in Finland (highways & motorways in Finland)
- **Testing:** September 2019 - May 2020

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Finnish C-ITS-deployment Pilot

Nordic competence is used to solve problems caused by northern and winter conditions to automated transport

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Finnish C-ITS-deployment Pilot

- The aim of the pilot is to share information that **enhance traffic safety and fluency** and to **create a new way to share C-ITS-messages between traffic information suppliers** so that the end user gets more information of better quality
- 3 suppliers with 15 subcontractors (service providers) in total
- 3 interchange nodes implemented (one for each ecosystem)
  - C-ITS-messages running between the nodes
- Several different ways to collect data (machine vision, automatic sensors, user activated)
- 6 apps displaying C-ITS-messages

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Norwegian C-ITS Pilot

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Norwegian C-ITS Pilot

E8, a piece of northern Norway

We can not live with such a situation on a major export route from Norway

Source: picture search - E8 HGV Accident

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Norwegian C-ITS Pilot
Main focus areas

- Feasibility of the services will be explored mainly on E8 in the Skibotn valley
- Use cases for the C-ITS services sometimes need to be adjusted in order to fit with the subarctic conditions
- Some services will be demonstrated on E6 Oslo to Svinesund: Queue spillbacks from ramps and cooperative collision risk warning

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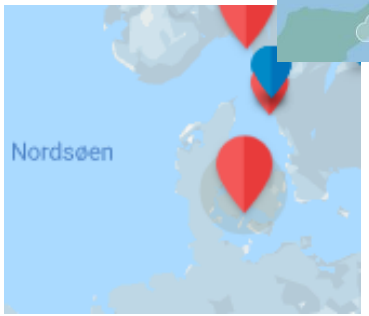
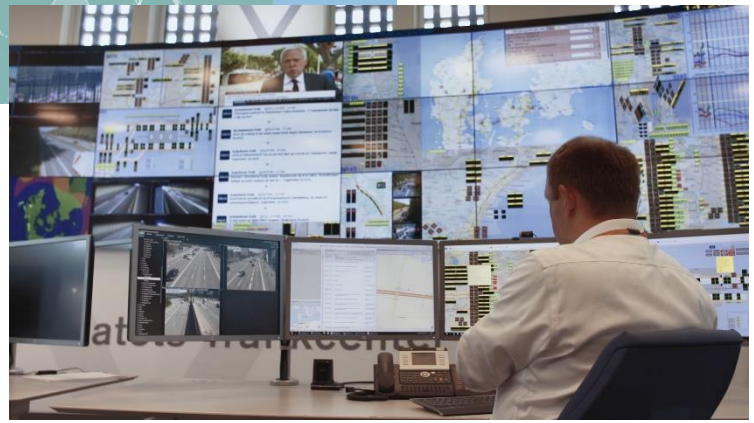
Connection to the national Danish TMC

- All real time traffic messages from the Danish National Traffic Managment Centre is continousley distributed to all partners through the Interchange system.





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Nordic WAY

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Danish Road Directorate

TRAFIKVERKET
SWEDISH TRANSPORT ADMINISTRATION

Statens vegvesen
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Trafi

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PSI

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Q-FREE

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