

Finnish Road Vehicle Automation Testing – Arctic Challenge

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1. Winter testing in Northern Finland

- Arctic Challenge pilots
- Aurora E8-highway: intelligent infrastructure testing environment

2. Urban testing facilities

- Tampere
- Developing testing tools & requirements for AVs

3. Automated electric buses/shuttles

- Helsinki, Espoo, Tampere
- Automated last-mile solutions & innovation platform

4. All open roads

- National legislation allows for automated vehicles
- Trafif can grant test plate certificates (valid 1 year at a time)

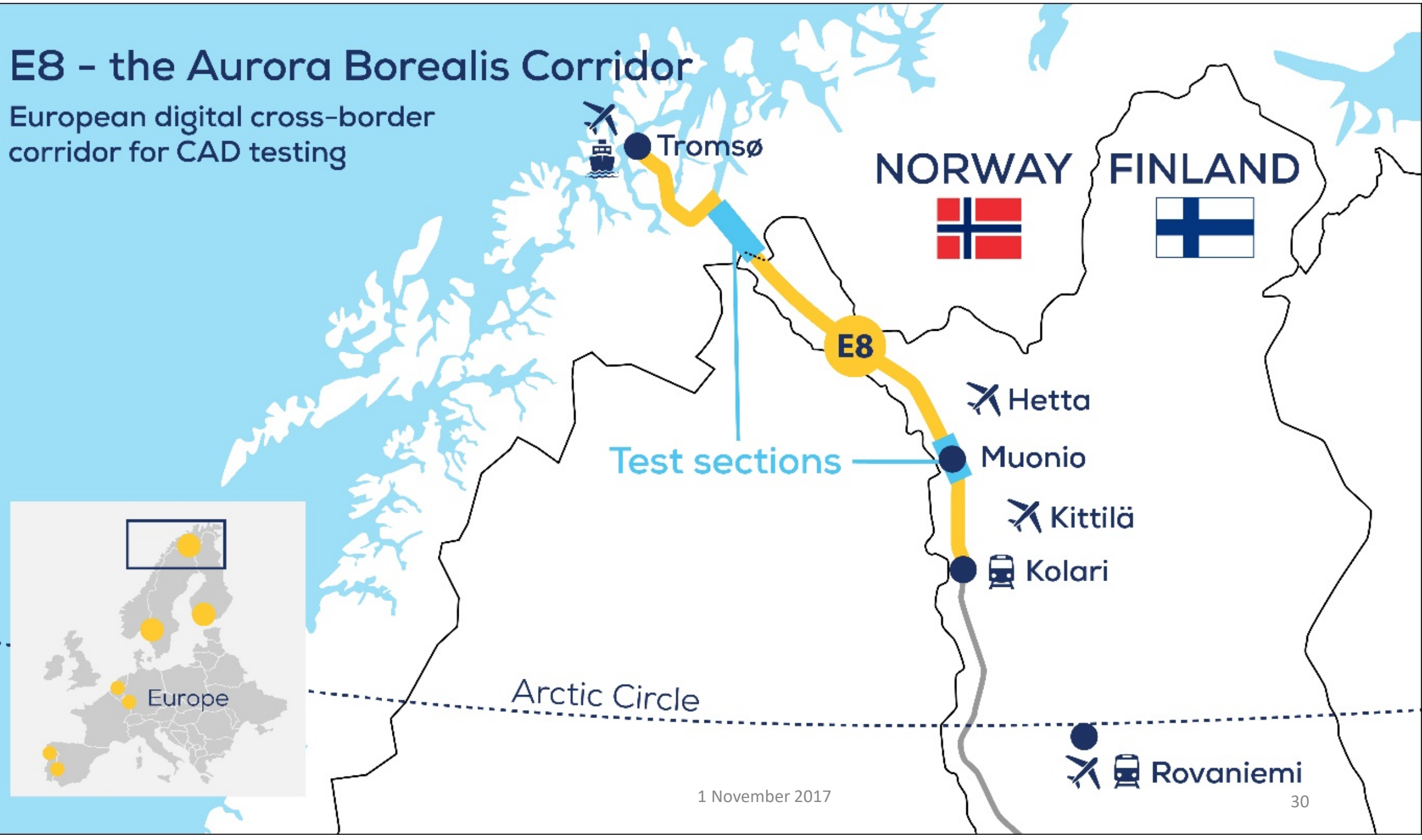


- Project examining opportunities in road transport automation and intelligent infrastructure and their performance in snowy and icy conditions
- Based on the Road Transport Automation Road Map and Action Plan 2016–2020
http://www2.liikennevirasto.fi/julkaisut/pdf8/lts_2016-19eng_road_transport_web.pdf
- Public sector funding from FTA and Trafi
- Location: main road 21 (E8) in Fell Lapland
- 10 km test section: Electricity and fibre optics with connection access every 300 m, equipment cabinets every 900 m, 4G – pre-5G, 3 GNSS land stations, HD map, control room facilities, 1-2 road weather stations, 1 traffic monitoring station, etc.



E8 - the Aurora Borealis Corridor

European digital cross-border corridor for CAD testing





Trafic Arctic Challenge AV R&D topics



- the type, location and characteristics of the landmarks, such as delineators and posts + sensor reflectors, or snow poles and plot access marks that could support automated driving
- accurate positioning of vehicles in arctic latitudes and on roads covered with snow and/or ice;
- remote control of vehicles using cellular communications in good and adverse road weather conditions
- back-office systems and related interfaces to provide extended electronic horizon to automated vehicles via cellular communications



AURORA

Thank-You!

Arctic Challenge:
Part of Nordic cooperation in
NordicWay 2



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