

# Public road automated vehicle testing in Finland

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WORKSHOP 16 DECEMBER 2016



# National strategy for transport automation

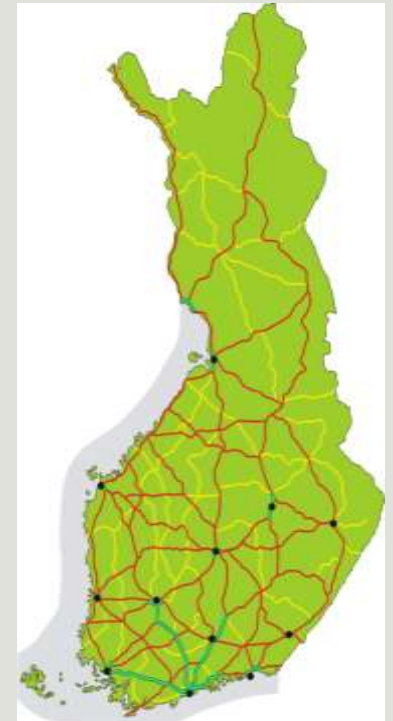
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- **All modes of transport**
  - Air
  - Maritime
  - Rail
  - Road
- **Robots on land, in water and in the air** – Promoting intelligent automation in transport services; Publications of the Ministry of Transport and Communications 7/2015
  - “If it works in Finland, it will work anywhere!”
  - Simpler, smarter regulation in focus
- **A governmental resolution on robotisation** in May 2016

# National strategy for road vehicle automation

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- Focus in road transport and actions required by public sector and in SAE levels 3-4-5
- **Action Plan 2016–2020**
  - Infrastructure
  - Road
  - Services
  - Vehicle
  - Driver
- Published in April 2016 (available [online](#))



# Testing automated vehicles

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- Testing of all automated vehicles (**SAE levels 0–5**) is possible **on public roads** in Finland using a **test plate certificate**
- Vehicle under testing **must have a driver** either inside or outside the vehicle
- Focus on **responsible behavior** of the testing organization



# How? Test plate certificates

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- Valid for one year at a time
- Eligible applicants: companies, agencies or other R&D organisations
- Entitles the bearer to drive test vehicles, to a limited extent and on a temporary basis, **both in road traffic and off-road**
- For testing in road traffic, T trafi will issue **test plates**



# Requirements for test permits

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- *Trade register extract* from the company's country of incorporation
- *Trial plan* including:
  - a general description of the trials
  - technical specifications of the test vehicles
  - information on the road area where the trials are intended to be conducted
  - proof of insurance cover for third party liability
  - **description of how road safety will be ensured.**

# Follow-up: reporting

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- The test plate certificate holder must *submit a report* to Trafi on the trial results.
- The report should describe:
  - how the trial plan was implemented
  - what kind of *deviations* from the plan were encountered.

# National AV activities in Finland

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## 1. Extreme weather testing in Northern Finland

- Aurora: public test section for AVs on highway E8

## 2. Urban testing facilities

- Tampere & Tuusula
- Developing testing tools & requirements for AVs

## 3. SOHJOA automated electric buses

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





# Aurora Arctic Challenge 2017-2018

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- Road vehicle automation and intelligent infrastructure solutions and their performance and impacts in arctic conditions
  - The technical performance of solutions is to be verified with field trials using automated vehicles in the Aurora corridor.
- Funding: ~€1-2M
- January 2017: publishing of procurement notice
- Result by end of December 2018

# SOHJOA automated electric buses

- 2 EasyMile buses (SAE Level 4)
- Public streets
- Traffic lights, street markings
- Signs indicating AV testing

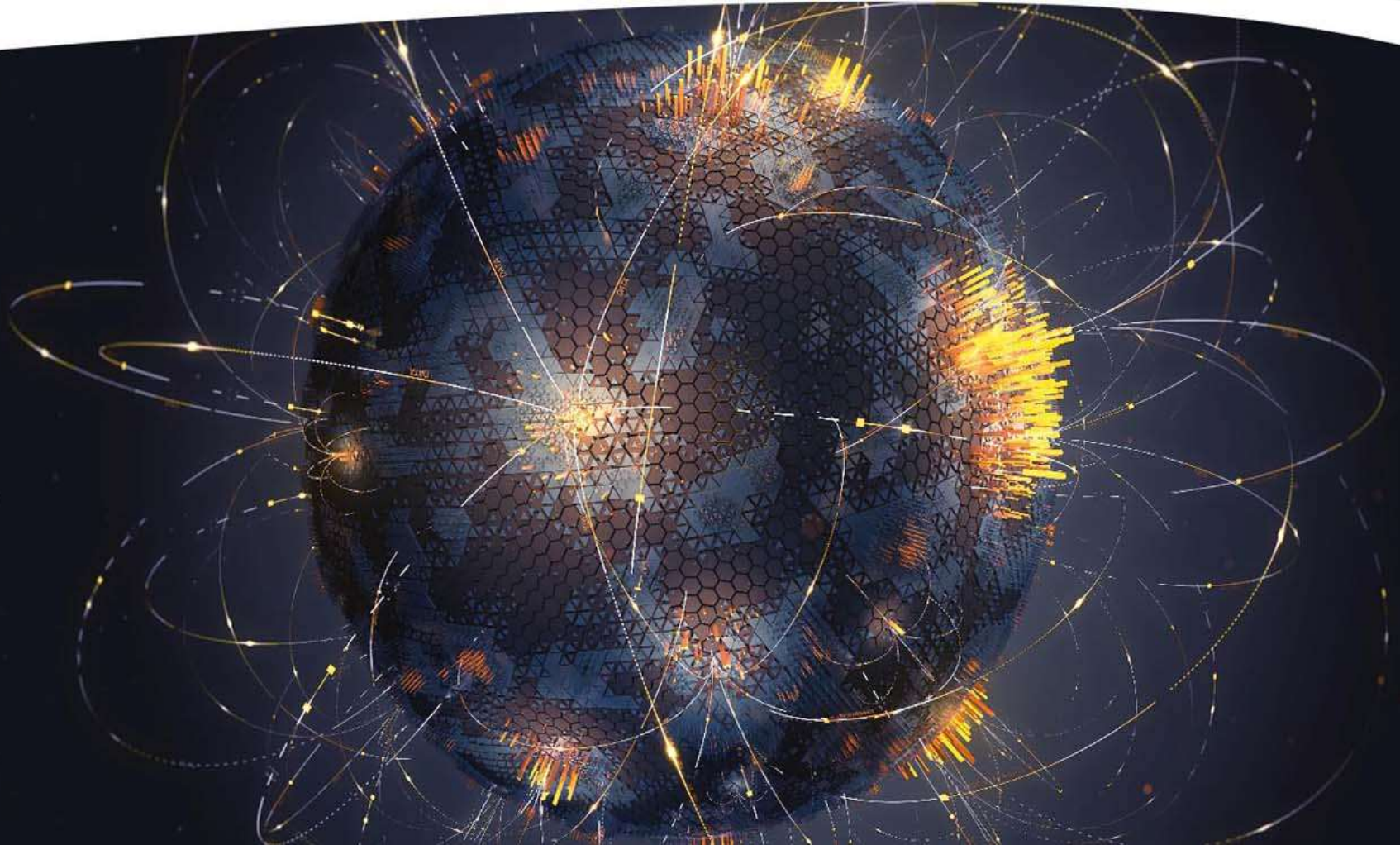


# Challenges & lessons learned

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- Close and interactive cooperation between authorities and stakeholders carrying out the testing is crucial already in the planning phase.
  - In urban settings, city transport planners should be involved as early as possible.
  - Including police officials in the discussions from the start
- Real urban environments are always more complicated to test in than expected.
  - Illegal parking issues, lots of pedestrians and cyclists
- For automated electric buses, conditions are still a limiting factor.

Next: cross-border testing & mutual recognition of approvals



# More information

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Read more on AV trials in Finland:

[http://www.trafi.fi/en/road/automated\\_vehicle\\_trials](http://www.trafi.fi/en/road/automated_vehicle_trials)

Future information:

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