Route51 – Smart Road

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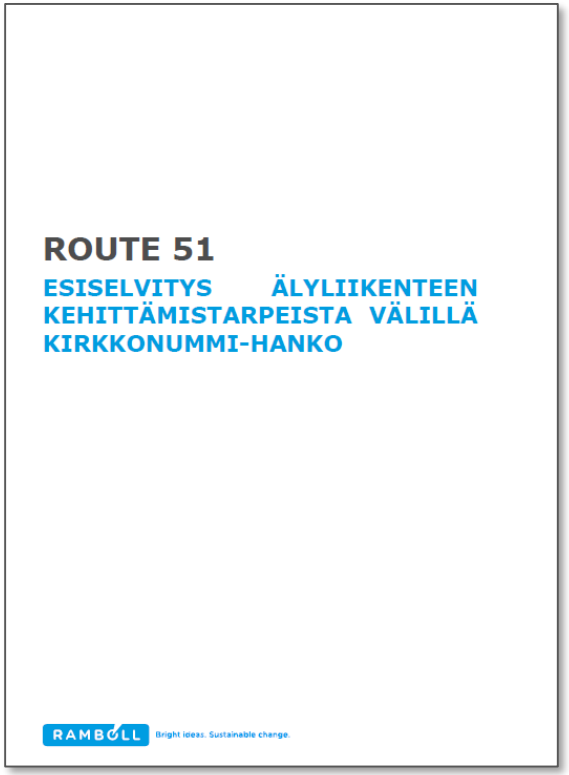
Background information

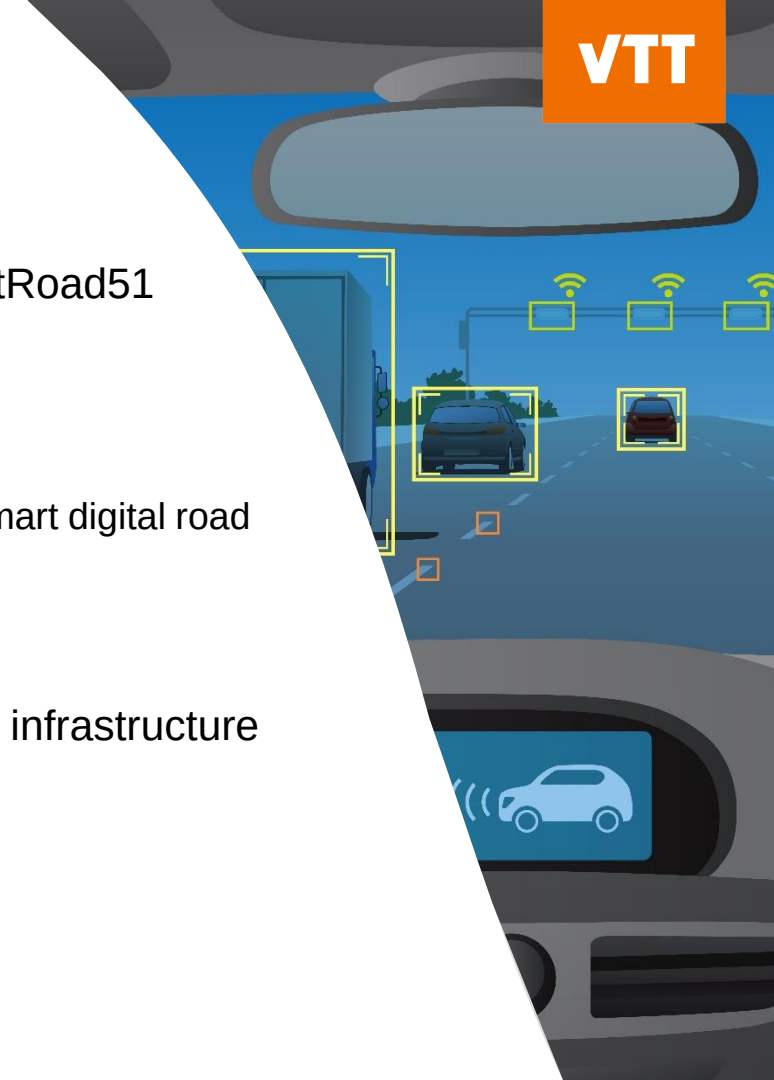
- Funded by Väylävirasto, performed by Ramboll
- Pre-study looked into the potential of digitalized smart road environment
- Pre-study ended 03/2020
- Due to the vast potential, joint research and infrastructure project preparation has started 09/2020



Current state

- Business Finland funded co-creation project SmartRoad51
  - 16 Participants
  - Creates a smart road ecosystem in Finland
  - Ecosystem consortium aims for the demonstration of smart digital road proof-of-concept on Route 51 / Inkoo

- Parallel infrastructure project, where smart lighting infrastructure with optical fiber connections is established



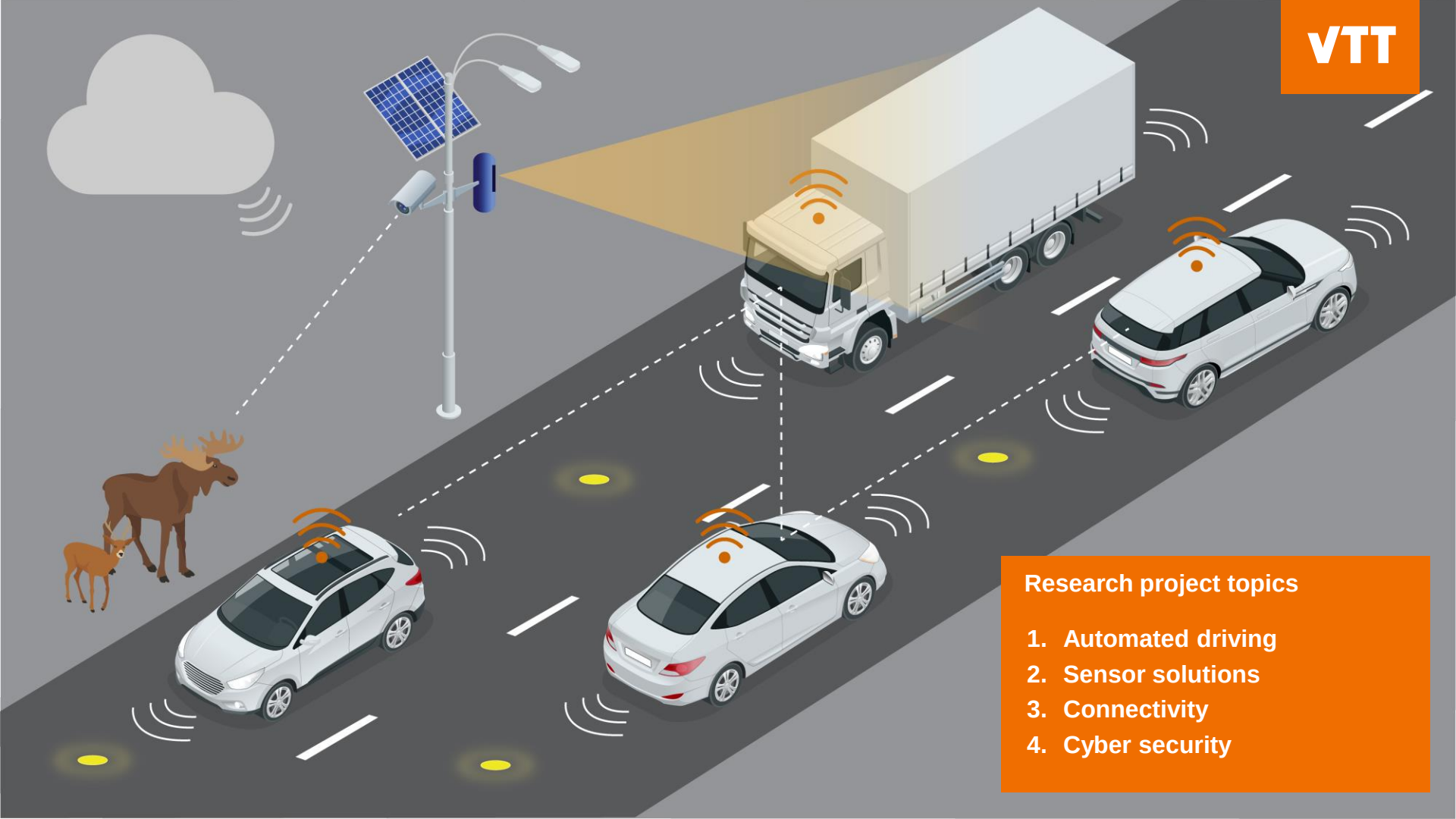
Current partners

1. **VTT Technical Research Centre of Finland** (Research institute)
2. **Nokia** (company)
3. **Vaisala** (company)
4. **Roboride** (company)
5. **Orbis** (company)
6. **Tehomet** (company)
7. **Destia** (company)
8. **Eltel Networks** (company)
9. **Senseway** (company)
10. **Nodeon** (company)
11. **Karjaan puhelin** (company)
12. **Raaseporin energia** (company)
13. **Traffic Management Finland**, (state-owned company)
14. **Traficom** (government agency)
15. **Väylävirasto** (government agency)
16. **Inkoo** (municipality)

Research and infrastructure development supporting each other

- **Research** on road digitalization and smart infrastructure needs sensors and communication equipment that cannot operate without **infrastructure**

- Smart **lighting infrastructure** that saves lives and reduces accidents needs new types of lighting poles with optical fiber connection and capability to support sensors and other **research** facilities


VTT
Research project topics
1. Automated driving
2. Sensor solutions
3. Connectivity
4. Cyber security

Infrastructure project topics

- Build smart lighting and connectivity infrastructure to save lives and reduce accidents.

- Build IoT nodes to lighting poles that enables installation of support sensors (weather, animals, road conditions) and communication technologies

- Smart road infrastructure with optical fiber support local broadband needs also outside the road environment and improve situation awareness of the automated vehicles via cloud services

Quick facts

RESEARCH PROJECT

- Funding: Business Finland co-innovation
- Duration: 2-3 years
- Volume: 5-10 M€
- Expected schedule: 05/2021 - 04/2023
- Outcome: intelligent and save highway with automated vehicle support, sensors, 5G connectivity and cyber-security

INFRASTRUCTURE PROJECT

- Funding: good options are government and local funding, or Covid-19 recovery fund
- Duration 2 years
- Volume: ~2 M€
- Outcome: smart lighting poles with fiber optics and support for local broadband