CELTIC-NEXT
Project Proposal Pitch

5th of October 2023, Online

SafeRoute-6G

Road safety infrastructure and services evolution and enhancements towards 6G

Johan Scholliers, VTT Technical Research Centre of Finland
Johan.Scholliers@vtt.fi

SafeRoute-6G

Project Objective: Efficient road safety services using 5GA/6G communications

- Effectively operating and safe road network is **an essential requirement for any modern society**

- **Technological development plays a key role** in improving road safety and achieving the important visions and goals

- A secure, reliable wireless connectivity, computing and sensing infrastructure is **the backbone for enabling new services**, which help road users and road operators to **improve traffic efficiency and safety** in challenging situations and adverse road or weather conditions

- Connectivity solutions are also **speeding up the transition towards fully automated vehicles** in road traffic, which can further improve road safety

VTT – *beyond the obvious*

VTT Technical Research Centre of Finland Ltd is a visionary research, development and innovation partner and one of the leading research organisations in Europe.

Our role is to promote the utilisation and commercialisation of research and technology in business and society. Through science and technology, we turn global challenges into sustainable solutions for business and society in a responsible way.

254 M€
turnover and other operating income

2,093
employees

45%
of the net turnover from abroad

32%
a doctorate or a licentiate's degree

Established in
1942

Steered by Ministry of Economic Affairs and Employment

Research focus: road safety services using 5GA/6G

- **Intelligent connectivity for the vehicles and road infrastructure**, utilizing **different network technologies** (5GA/6G, satellite, V2X)

- **Wide-scale and seamless utilization of Multi-access Edge Computing (MEC)** for local computing and intelligence for vehicular services and sensor data

- **Novel sensor and sensing solutions** for road weather, infrastructure, and traffic monitoring **and innovative ways for processing and utilizing the collected data** for the benefit of multiple stakeholders

- **Novel road weather and safety services**, utilizing the infrastructure enhancements, **and digital twins**, modeling and monitoring the connected vehicle environment

- **Advanced positioning technologies**

- **Secure and ubiquitous connectivity**

Internet and remote cloud services

Dynamic 3D connectivity for vehicles and instruments

Local and wide-area instruments (fixed/mobile/aerial)

Local computing and intelligence in Roadside Edge and Access Network Edge

Expected outputs

- Improved road weather and road safety services making use of mobile infrastructure and operative weather radar networks

- Improved performance of remote driving and remote monitoring of automated vehicles through hybrid communications (5GA/6G, V2X, satellite)

- Improved positioning services

- Improved cybersecurity services

- New solutions, service concepts and business models for road safety service provision

Partners

- Existing consortium:
  - Luxembourg: HITEC, CFC SafeDrivingCenter Lux, Incert
  - Finland: VTT, FMI, Destia, Delta Cygni Labs, DNA, Goodmill Systems, Snower, Rel-palvelu
  - Canada: Wedge Networks, METI, Think RF
  - Turkiye: Ericsson, Turkcell, Actuate, GTech, Alisan
  - UK: Multiview Media
- Looking for:
  - Consortia from other countries
  - Industrial partners from the participating countries

Contact Info

SafeRoute-6G

For more information and for interest to participate please contact:

Johan Scholliers

VTT Technical Research of Finland

Johan.Scholliers@vtt.fi

+358 405370204

P.O.Box 1300, 33101 Tampere Finland

Presentation available via:

Harold Linke

Halitech GmbH

Harold.linke@halitech.de