ENABLING VEHICLES TO COMMUNICATE SAFETY HAZARDS TO OTHERS ON THE ROAD

Delivery Partners:
Finnish Transportation Agency (FTA), Finnish Transport Safety Agency (Trafi), HERE Global B.V.

BACKGROUND
HERE was selected by Finnish traffic agencies to lead a two-year pilot project called NordicWay Coop to enable vehicles to communicate safety hazards to others on the road.

The public phase of pilot commenced in May 2016 and assesses the capability of current and emerging mobile network and location cloud technologies to support the timely communication of critical safety information.

Drivers can effectively warn others approaching the area and alert the authorities about obstructions on the road, unprotected accident areas or poor visibility with two taps on their smartphone.

FIRST USE
The pilot covers three major highways in southern Finland and is the world’s first C-ITS (Cooperative Intelligent Transport System) deployment based on LTE mobile networks. It utilises standard and commercial networks as well as location cloud and data analytics from HERE to connect vehicles and traffic management centres in an intelligent system.

The first phase of the pilot saw HERE and its partners successfully test the technical maturity of the system. Based on analysis performed by the independent Finnish Technology Research Centre (VTT) in that test, it takes on average a total of 1.42 seconds for end-to-end transfer of alerts via standard 3G. This includes a) message creation in a vehicle, b) transfer and processing and c) targeted delivery to only those road users that are impacted by the incident, as well as relevant traffic management centres.

The second, public, phase of the pilot began in May 2016 with hundreds of drivers recruited to try out the system on the road. This phase is expected to complete by the end of 2017.

APPLICATION
In this pilot, drivers voluntarily share notifications about safety hazards and road conditions initially using an app on their Android smartphone. Drivers can report road hazards and have an increased awareness of road conditions such as where there might be black ice or an animal on the road, traffic build-up or an accident.

HERE believes that smartphones and other handheld devices will not be required in the longer term for the communication of safety messages on the road. Rather, in the medium to long-term, the same technology architecture deployed in this pilot would harness data generated automatically by a vehicle’s on-board sensors.

BENEFITS
The Finnish Transport Agency explains: “This is an EU-funded project aiming for better traffic safety. Unlike other solutions which require expensive new roadside infrastructure, this project uses drivers’ own smartphones and current mobile phone networks. This makes it fast to implement and cost-effective.”

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