

Posti and Vaisala process data to improve road conditions and traffic safety using artificial intelligence

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Posti and Vaisala have concluded an agreement to commercialize Vaisala's RoadAI (Artificial Intelligence Assisted Road Infrastructure Management) up-to-date situational picture service in Finland. With the agreement, Posti will produce a service providing situational pictures of the road network and environment in Finland in connection with mail delivery work. Data will be collected from motorways and light transport routes, as well as sites located along these. Data is collected from Posti routes with Vaisala sensors and softwares.

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The data collected includes, among other things, surface damage to streets and roads, road conditions and road weather analyses, as well as mapping and monitoring of road markings. In the future, data can be collected about many other sites along the delivery route, such as the conditions of traffic signs and electricity poles, as well as the external conditions of electricity and telecommunications boxes.

"An up-to-date situational picture increases the efficiency of road maintenance, which, in turn, promotes the flow and safety of traffic and helps to reduce personal injuries and property damage. In addition, the data collected in connection with delivery work

makes it possible to develop smart solutions in which the data is also sent to residents and people on the road," says Tommi Pekkala, responsible for Posti's Street Data Services.

The current state of Finland's road network requires wide-ranging repair work, and the Street Data Service provides significant help in optimizing maintenance. In the long term, the cooperation between Posti and Vaisala will also support smart traffic development projects in Finland.

The data is collected using cameras connected to Posti's delivery vehicles as well as Vaisala's sensors. The system collects data from three sources: computer vision that analyses video images, Vaisala's precision sensors and, in the future, also observations reported by Posti employees. The purpose is to enable crowdsourced data collection based on observations from people on the road. All analysis data are collected and processed anonymously, taking into account data security standards.

"The comprehensiveness and timeliness of the situational picture is based on Posti's nationwide delivery network. Our delivery and transport vehicles travel on the roads of Finland every day, often many times a day, so we can produce data very efficiently and on a

broad scale. Because the data is collected in connection with normal delivery, the work does not increase the need to drive. In fact, it reduces the environmental load. The service can replace inspection rounds and visits currently carried out by customers,” Pekkala continues.

“The operating model and its development into a service are an excellent way to produce up-to-date traffic condition and road network data for use by cities, for example. Nationwide data is valuable when connected to infrastructure asset management, situational awareness and winter maintenance processes. The data obtained from the service are also useful for traffic management. Our goal is that the situational

picture service will be able to accelerate the digitalization development of cities,” says Markus Melander, Head of Business Development, Computer Vision Solutions, responsible for developing the RoadAI service at Vaisala.

We have already gained experience in Espoo, for example, where data for road network maintenance and traffic safety development have been collected as part of a smart city project that started last November.

In May, Posti and Vaisala also began road network condition mapping in Imatra. The goal is to expand the operations to several Finnish cities this year.

Source: [Posti](#)