



VAISALA

An easier route:

**5 ways AI improves
road asset management**

Road maintenance is traditionally time- and resource-intensive. From potholes to road signs, the challenge for engineers is to manage a dynamic environment that covers hundreds or even thousands of miles.

Artificial intelligence (AI) is helping road maintenance organizations improve their planned and reactive road maintenance strategies. RoadAI provides a quick, complete, objective analysis of pavement conditions through an automated road survey methodology. The end result is a fast and cost-effective means of analyzing road conditions, which makes it possible to repair roads faster and keep them safer.

Here are five ways AI improves road asset management.

1. Inspection speed

Traditional human assessment

Drive slowly to detect and document

RoadAI

Full driving speed; inspector is free to carry out other tasks

Conducting inspections with two trained personnel per vehicle is a common method of assessing road conditions. This approach limits how much data inspectors can gather and record while they're driving the route. With RoadAI, only one person is required in the vehicle, traveling at normal speed. The driver is free to focus on driving.



2. Data availability

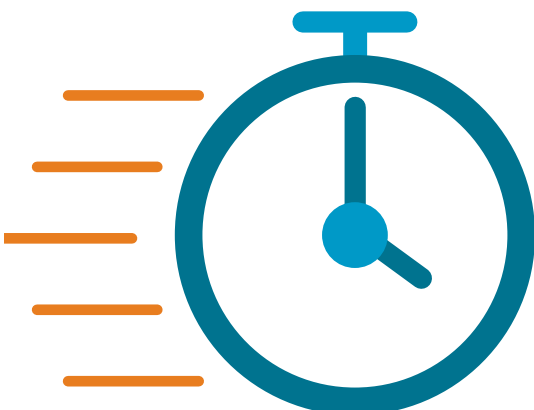
Traditional human assessment

Takes weeks to get data in usable format

RoadAI

Immediate; data gathered and shared in real time

After driving long distances to assess the roads and record conditions, it takes time to enter the data in a database and extract it in a usable format. RoadAI gathers data in real time during drives; the data can be uploaded and shared right away. Once data is gathered, it can be uploaded and analyzed automatically.



3. Analytics

Traditional human assessment

Broad and nonspecific

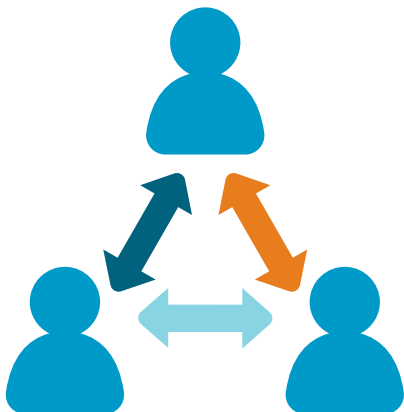
RoadAI

Comprehensive, automated, used in short- and long-term

Human recording processes tend to cluster defects into broader categories like structural edge or wearing course defects, so the end analysis is more general. Highly detailed video data collection, categorization and analysis are all performed automatically with RoadAI.



4. Personnel



Traditional human assessment

Trained inspectors are needed

RoadAI

Non-experts can complete inspections

Road condition assessment requires trained and experienced personnel who can spot defects in pavement, road signs and other assets. Collecting data is easy with RoadAI — place the phone in a vehicle and start driving. No specialized training is necessary.

5. Process

Traditional human assessment

Manual and seasonal

RoadAI

Automated and can be repurposed for other needs

Traditional road asset management processes — reactive and planned maintenance plus managing network assets — have relied on manual procedures at certain times of the year. But automated data collection makes it possible to collect data every time someone is simply driving from one place to another.

With a wealth of road data already available, you can free resources to focus on taking care of your roads in a proactive manner. This process leads to better resource management at significant cost savings.



Vaisala is here to help

From sensors to systems and digital services, Vaisala gives road stakeholders unrivaled road network visibility and decision support — so everyone can keep moving toward better, more insightful ways of operating. We are recognized experts in transportation, and we continue to channel our curiosity into new ways of making roadways safer and more efficient than ever — as reflected in our guiding principles:



Move ahead



Mobility and
beyond



The innovators



See, understand,
decide

Learn more about how to drive improvement in your road maintenance strategies.

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