

TAKE CONTROL OF PAVEMENT ASSESSMENT: Using better data for optimal road maintenance decision-making

The challenges

Conventional road pavement condition surveys are traditionally performed manually. In general, these inventories are expensive, error-prone, slow, resource-intensive, and therefore, infrequent. Other key challenges include:



Maintenance funding **is typically insufficient** for long-term sustainable road asset management with the existing decision-making tools currently in use.¹



No visual validation data exists to support programming and making data-driven decisions.



Data is critical for capital improvement plans and maintenance budgeting, yet accurate and up-to-date data is hard to obtain.



Road users may report pavement deterioration, but the **overall consumer experience remains poor** and more extreme remediation efforts are required.

The solution? Pavement condition analysis requires high-quality data and a reliable methodology to support decision-making.

Vaisala RoadAI: Effortless data collection

Unlike traditional pavement condition assessment, RoadAI is a user-friendly tool that enables the operator to collect data using a smartphone without the need for the presence of a second person in the vehicle.



Provides comprehensive, accurate, and **granular data**



4X faster than other methods



1/2 the price of traditional pavement analysis



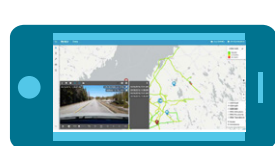
Objective and consistent in analyzing pavement conditions



Tested and proven; **over 100,000 road miles** inspected globally

Data analysis with artificial intelligence

RoadAI combines effortless mobile data collection with artificial intelligence analysis.



1 phone



A fleet vehicle



Artificial intelligence analysis



The right data for the right decision

- Visual data is scanned for defects using artificial intelligence and assessment can be verified by the user from the accompanied visual data.
- Automation and machine analysis remove human error and subjective assessment.
- The system detects multiple different defects including both severe and moderate defect types.

Data-driven decisions

With better pavement condition data comes better decision-making. RoadAI empowers users to:

- **Prioritize road maintenance projects**
- **Optimize maintenance budgeting**
- **Reduce the cost of pavement surveys**
- **Improve road user experience**

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