

How Vaisala uses computer vision?

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VAISALA



VIONICE

Founded in 2014

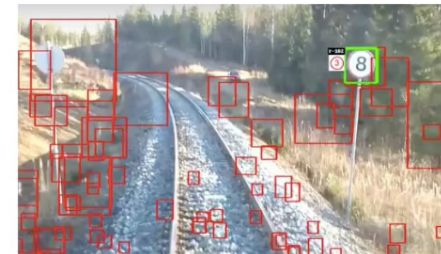
Liik
enne
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KUVANTUNNISTUS

eng. Image Recognition

“Konenäön siirtyminen
tehtaista ihmisten arkeen”



"We were absolutely sure that every organisation wants to automate manual inventories"

Manual inspection and surveys



1. Cost benefits
2. Up-to-date
3. Quality

Low cost data collection, defect detection and automated inventorying



VIONICE

ROADAI - SIMPLIFY VISUAL MATERIAL MANAGEMENT

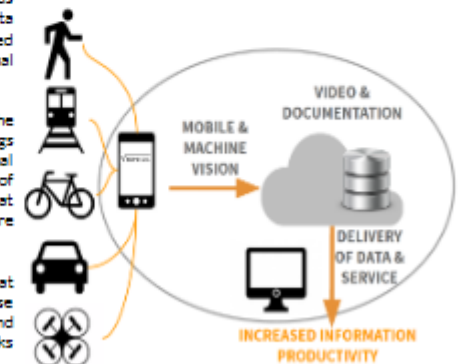


RECORD AND SHARE UP TO DATE STREET VIEWS
AND BENEFIT FROM AUTOMATED ANALYSIS

The RoadAI service is a data production tool that utilizes smartphone produced video and various measurements. The app retrieves the raw data which collects the information from the captured image using a variety of machine vision and signal processing methods.

Forget about additional hardware, the smartphone application is always at hand. Savings are accomplished through the seasonal inventories located by continuous monitoring of the status of your assets. Automation ensures that you acquire the information you require effortlessly.

Benefit from an overall view of the network that can be inspected in further detail through precise location and video recording. Conditions and observations can be acquired from the networks through frequently updated video material.



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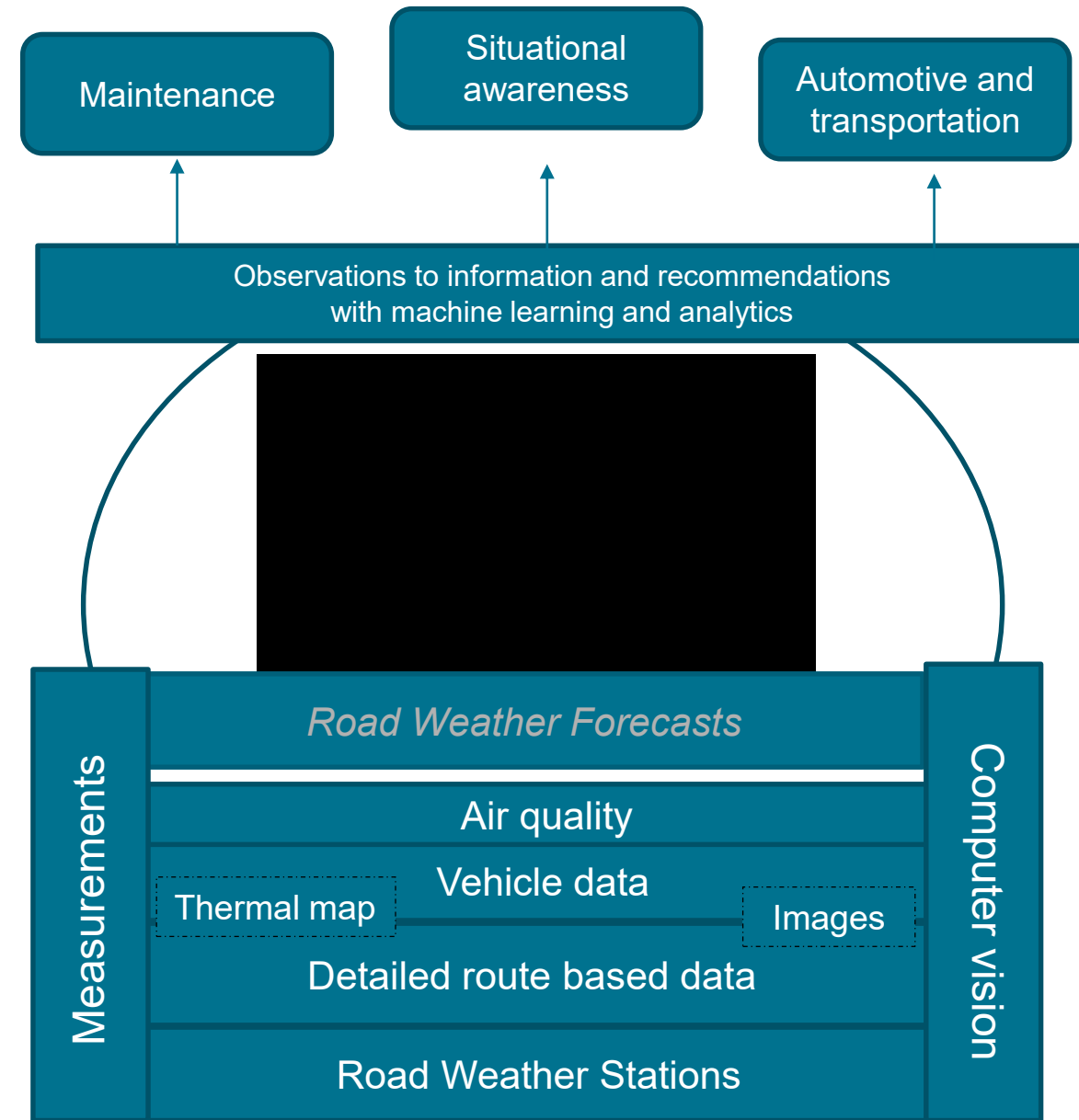


**Vaisala acquires
Vionice Oy after
three years of
runway**

26th October 2017

What is the Vaisala's vision?

"We provide the most detailed environmental data for decision support"





About computer vision...

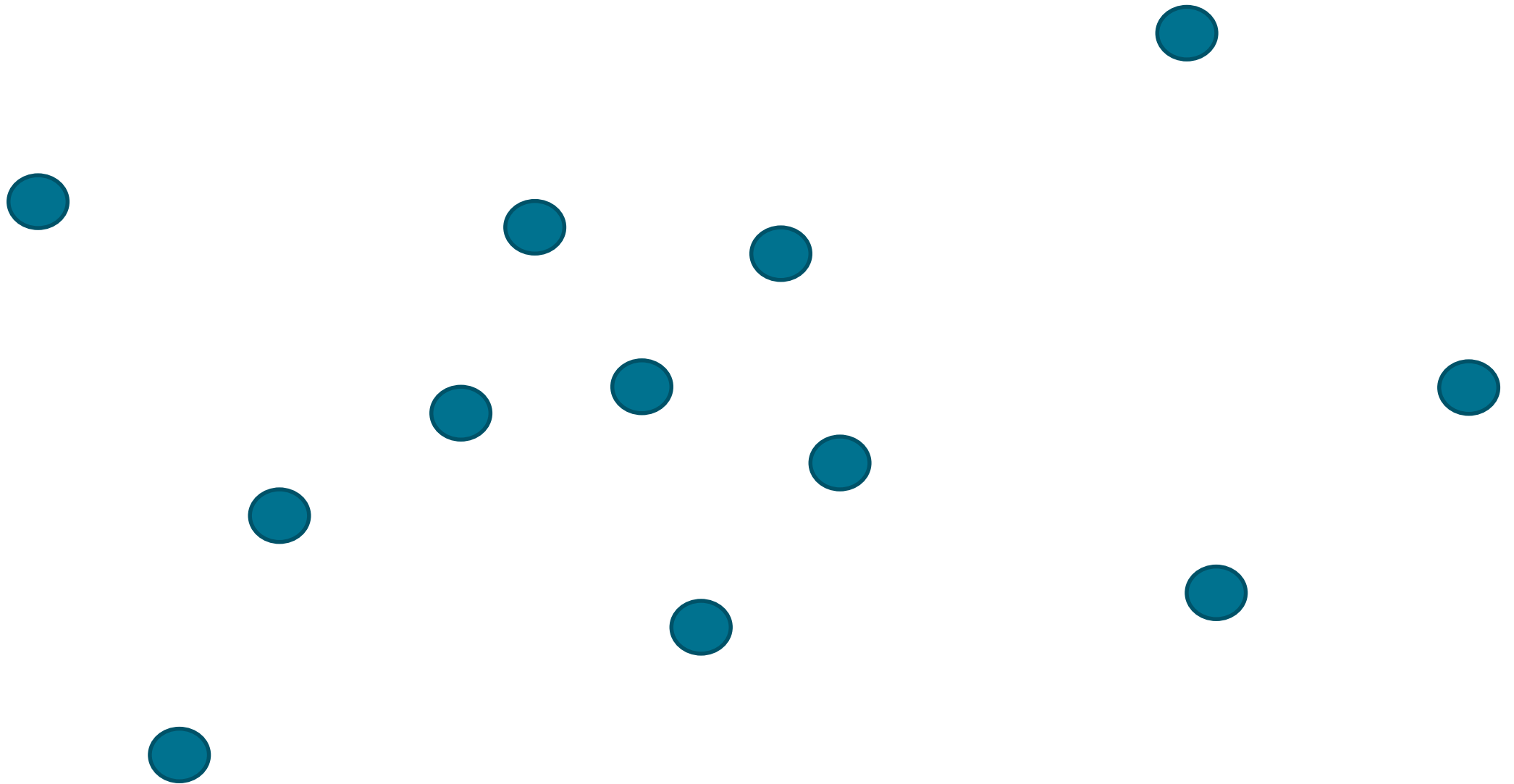
VAISALA

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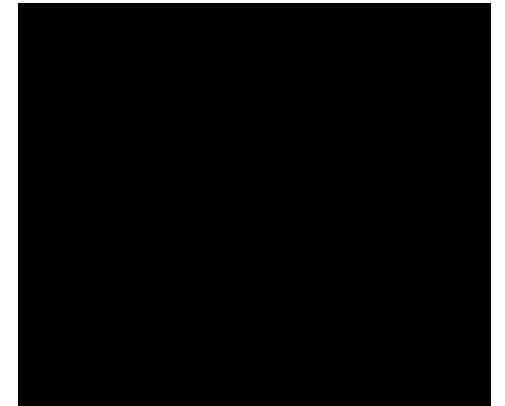
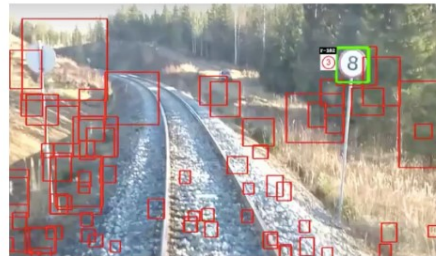


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Three challenges in computer vision



1. How and what to see?

2. Describe, label, classify

3. How to use data

Teaching the system is essential



Harder problem = more material needed

Problem:

How to plan pavement budget and manage road defect rehabilitation

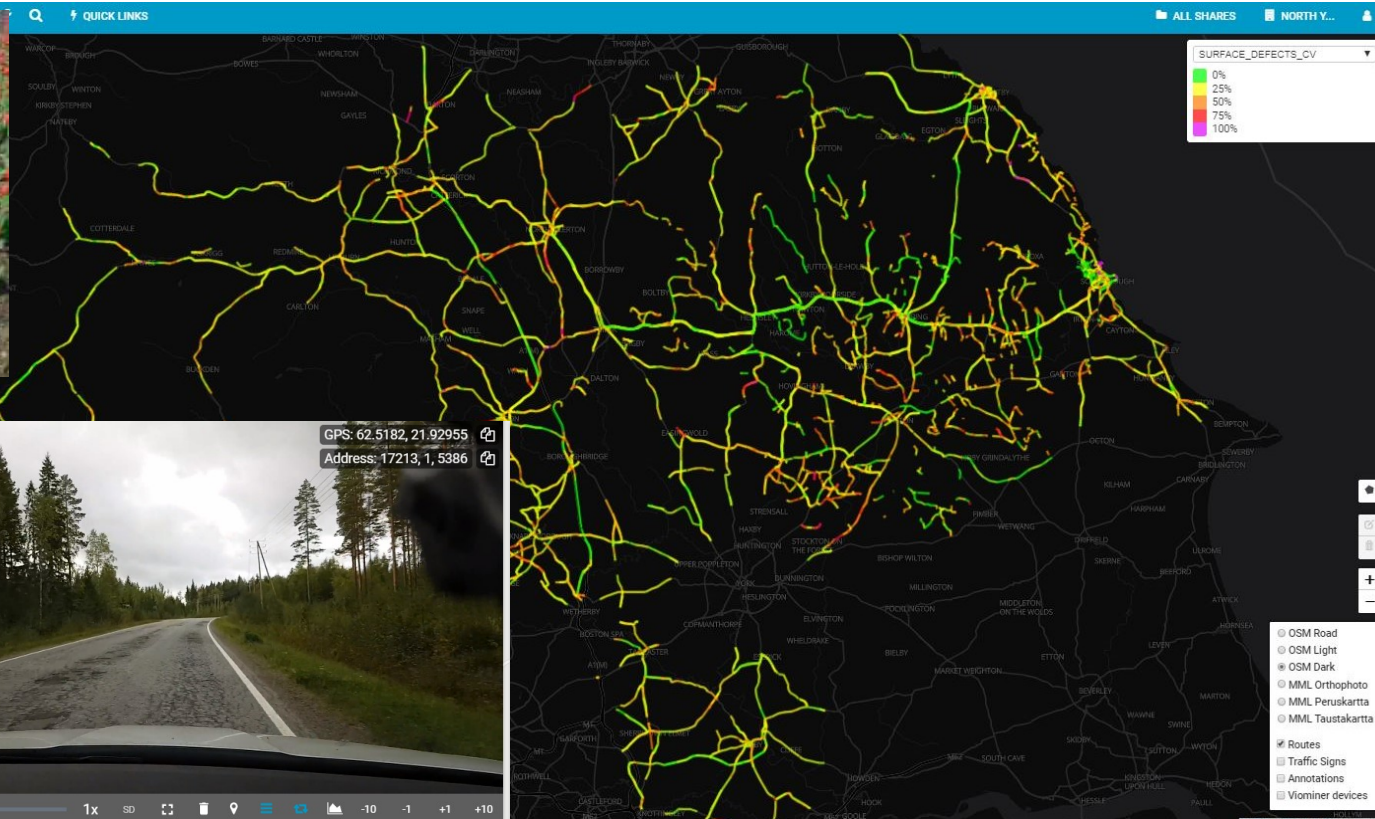
Surface deterioration



Wearing course deterioration



Wheel track cracking



- Average budget allocation for pavement rehabilitation is typically 3000€ per km.
- Road defect inventories costs are 40-50€ per km

Who are the customers?

”Persona who is responsible for budget allocation and plans the network rehabilitation”

- City, County, State organisations
- Private road operator



”Engineers on the field need good tools that work”

- City, County, State organisations
- Consultants working for asset owners



Solution:

The best way to manage road data collection

From two person manual survey...



...to computer vision and video based data collection.







1:41 / 5:00



Anonymisation



GDPR

Reference cases





The 2018 Postal and Parcel Technology International Awards winners

| Postal and Parcel Technology International Awards 2018 winners announced!



Questions and discussion

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