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As our world faces pressing societal and environmental challenges…
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…it’s more important than ever to base decisions on accurate and reliable data.

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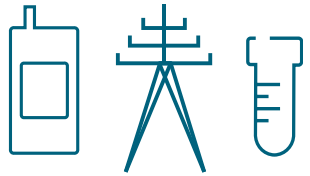
Take action, find answers and remove doubts with our measurement solutions

Weather and Environment

Serves selected environmental and weather-dependent markets where accurate, real-time, uninterrupted, and reliable information is essential to run efficient operations and make informed decisions.



Industrial Measurements

Provides accurate and reliable measurement instruments and systems to optimize processes, improve efficiency and productivity, minimize energy consumption, and ensure product quality.

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Vaisala in numbers

Net sales
in 2022
514.2 MEUR

12%
of net sales
invested into R&D

2,200+
employees
worldwide

25+ offices in
17 countries

300+
product families

Business in over
150
countries

Employee
engagement index
4.2/5

100%
renewable
electricity

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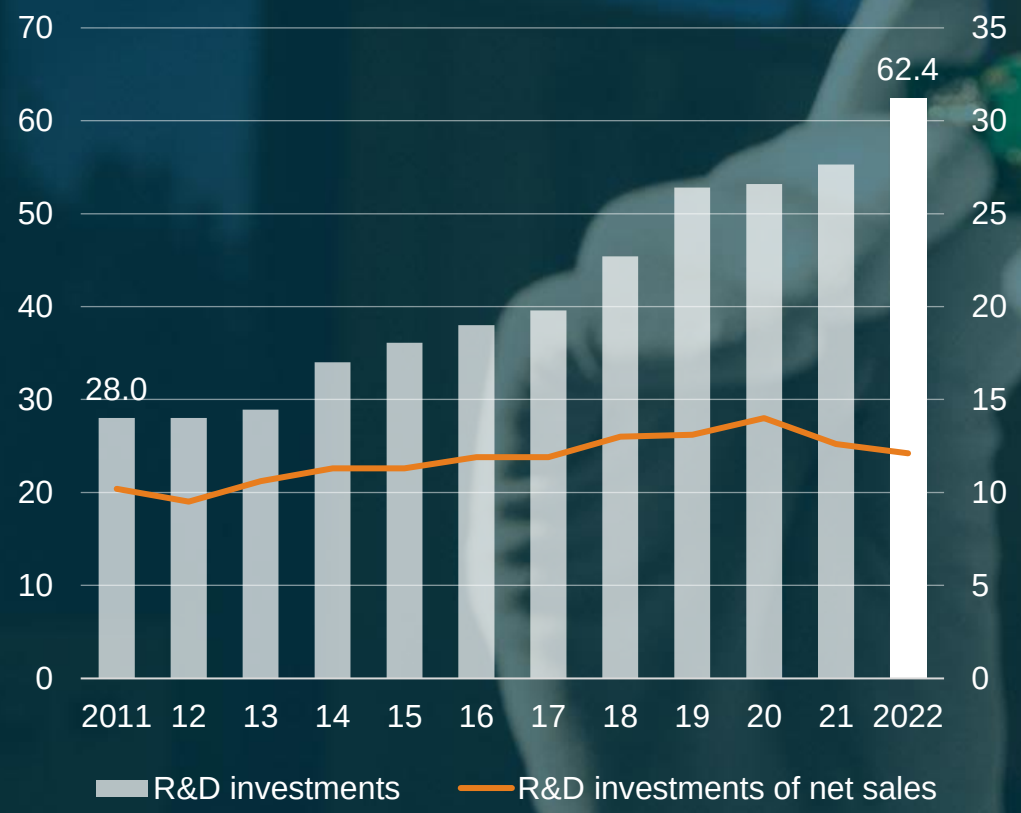
Systematic technology and product development investments

MEUR



Science-based innovations are the core of Vaisala

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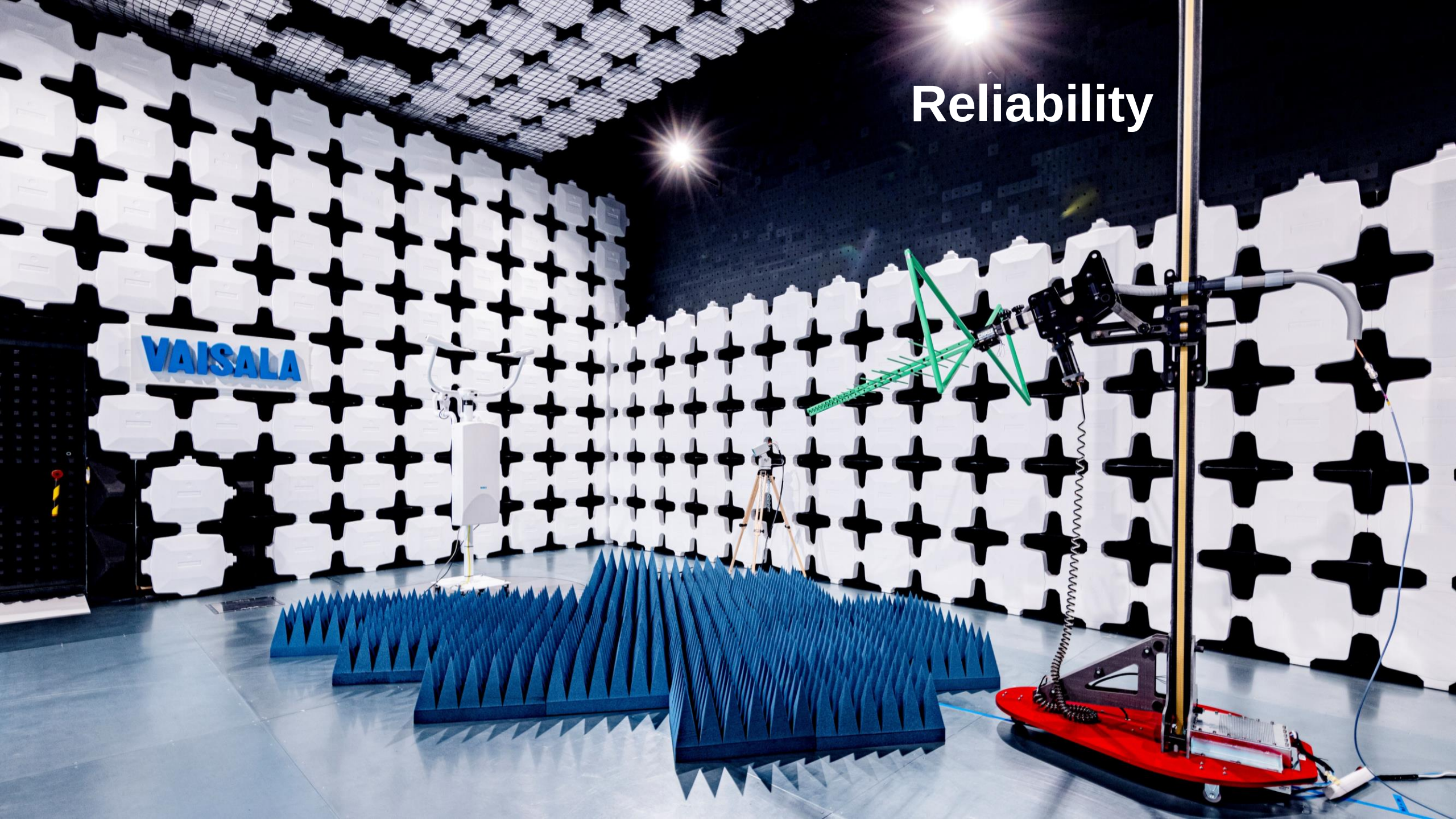
New R&D Building

- Home of over 300 Vaisala R&D specialists
- Space: 7,900 m2
- 37 custom-made laboratories
  - EMC lab
  - Rain tower & IP lab
  - Vibration laboratory
  - Environmental chambers
  - System testing laboratories

Restricted

Reliability



Collaboration spaces

Maximizing our positive handprint through strong commitment to sustainability

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Maximizing our positive handprint through strong commitment to sustainability

Sustainable solutions

- Reliable decisions
- Productivity
- Quality
- Better-informed societies
- Resource efficiency
- Safety

Sustainable business practices

- Sustainable product design and long product life cycles
- Resource efficiency and use of renewable energy in our facitilies
- Occupational health and safety
- Diversity and inclusiveness
- Managing human rights risks
- Zero tolerance towards corruption

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Observations for
a better world
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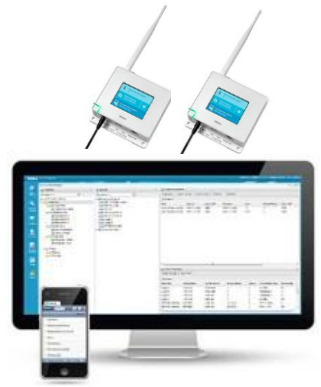
Industrial Measurements Products

Parameters

Humidity
Dewpoint
Temperature
Pressure

Carbon dioxide
Methane
Hydrogen peroxide

Dissolved gases in oil
Liquid concentration



Sensors Probes

Measurement instruments

Loggers Handhelds

Liquid process instruments

Monitoring systems

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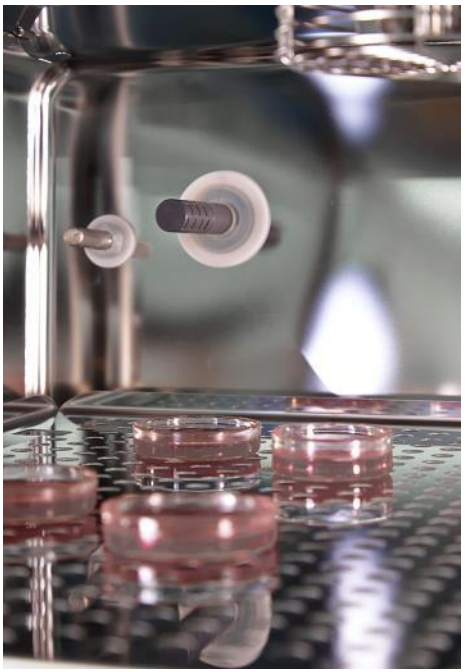

Serving a variety of industries and applications

For example:

- Agriculture
- Automotive
- Battery manufacturing
- Biogas
- Building automation & indoor air quality
- Cleanrooms
- Compressed air
- Food & beverage
- Industrial drying e.g. paper
- Pharmaceutical
- Power
- Pulp & Paper
- Semiconductors

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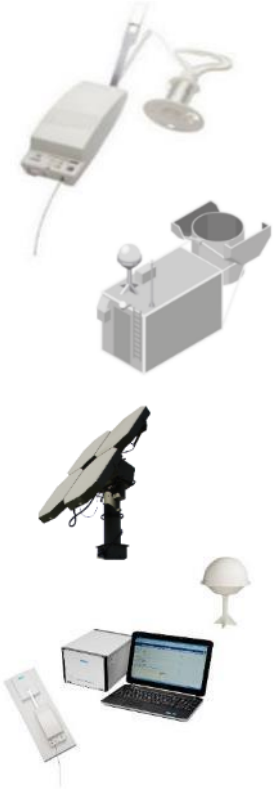
Weather and Environment
- Leadership with a broad product portfolio

Soundings



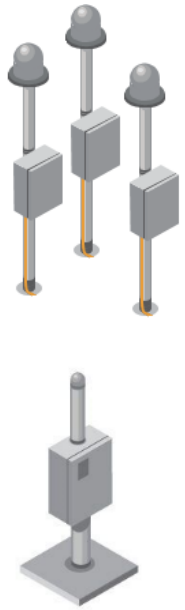
Pressure, wind, humidity, multiweather

Visibility, Present weather

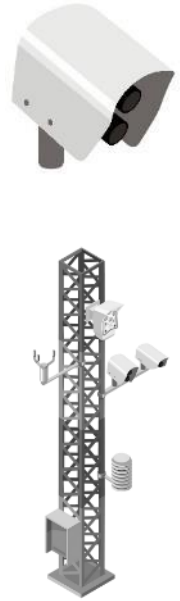
Ceilometers

Remote wind measurement

Lightning sensors



Road and aviation weather systems



Weather radars

Air quality sensors

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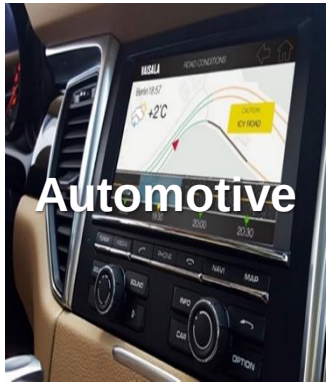
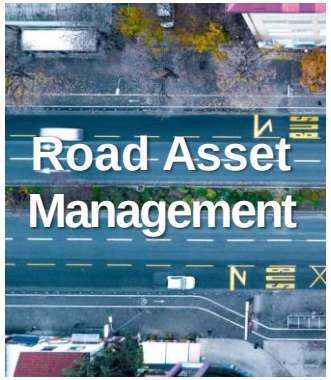
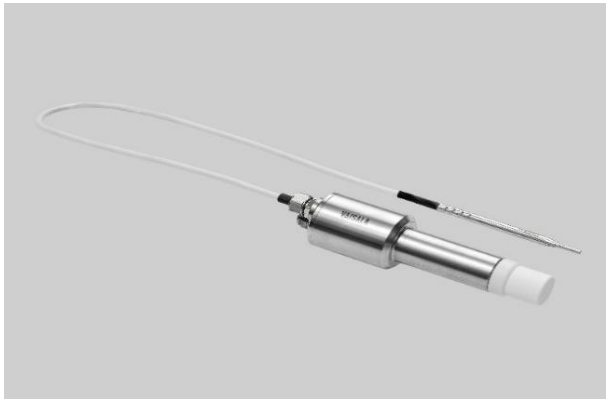
Weather and Environment business

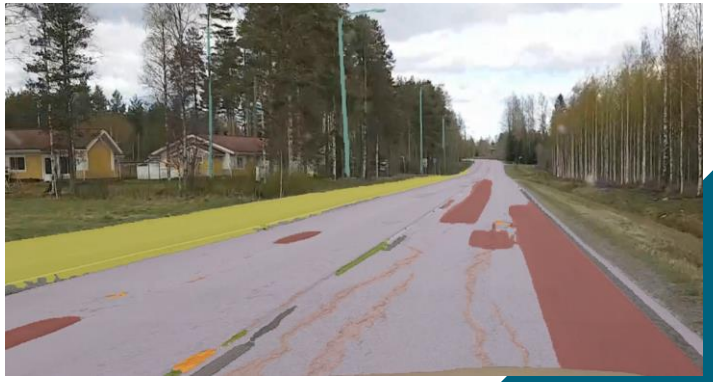




Developers, long tail

Product and technology examples





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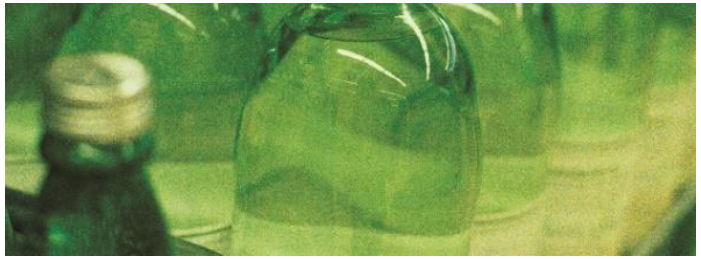
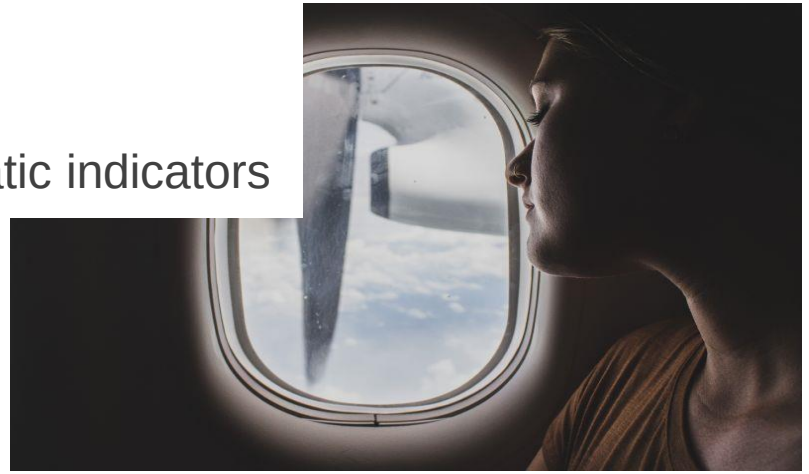
How and Why H_2O_2 is Used?

Sterilization & bio-decontamination

- Guarantees that process works as planned
- Continuous measurement
- Decrease use of biological, chemical or enzymatic indicators





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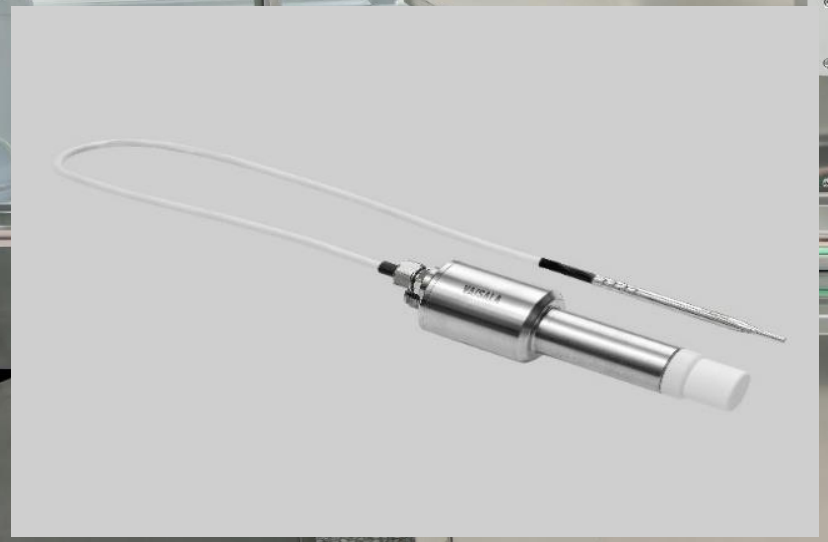
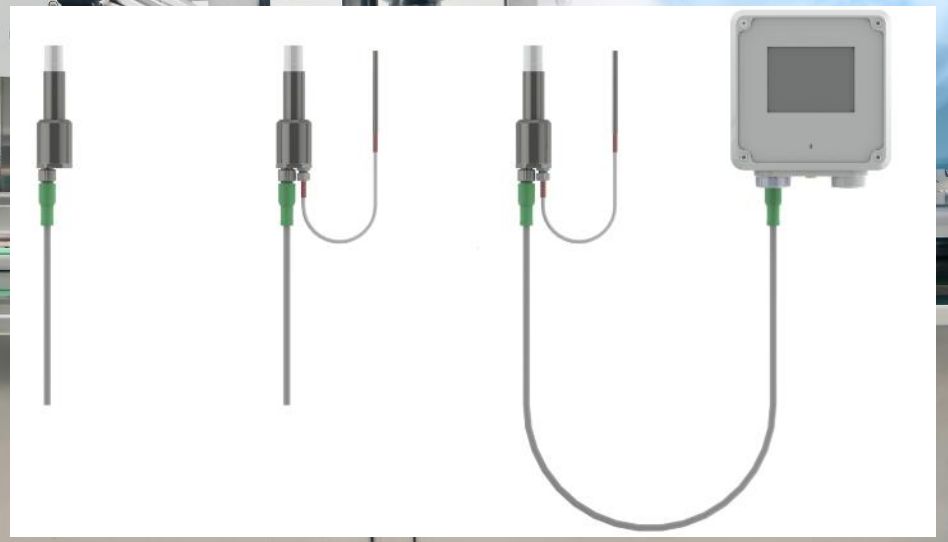
HPP270 series

Capacitive thin-film polymer sensor

PEROXCAP® measurement technology





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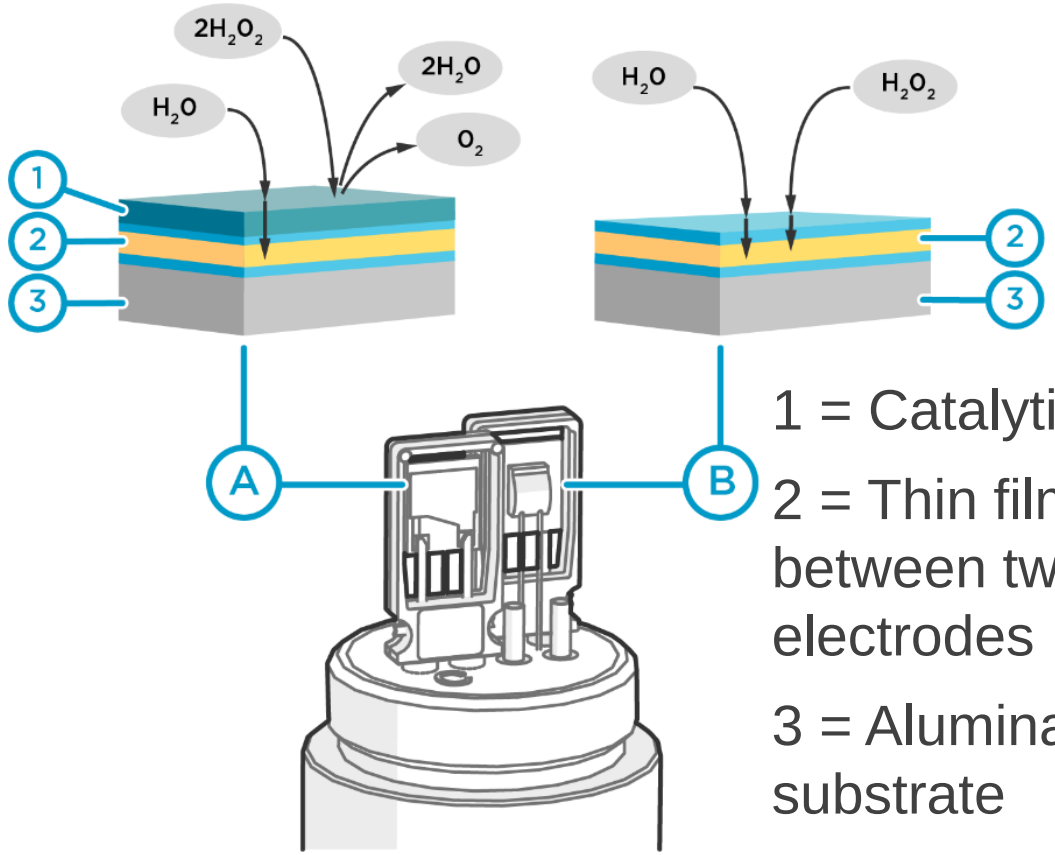
PEROXCAP®
- Unique measurement principle

- Based on measuring two humidity HUMICAP® sensors
  - With (A) and
  - without (B) a catalytic layer



1 = Catalytic layer

2 = Thin film polymer between two electrodes

3 = Alumina substrate

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WindCube®
Wind lidar for vertical profiles

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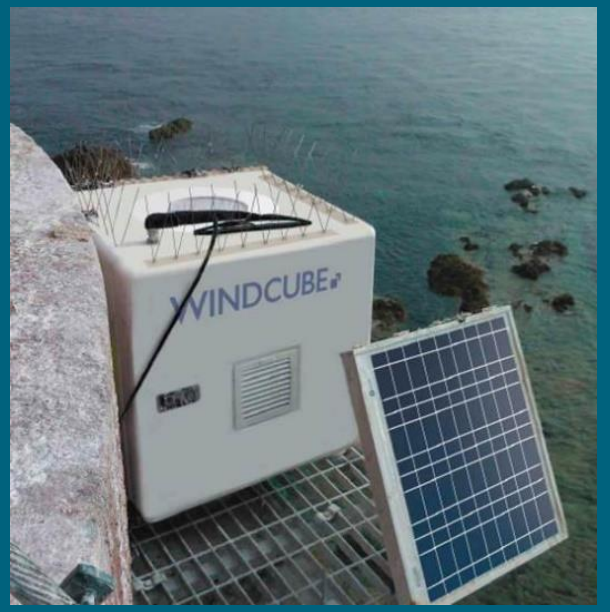
WINDCUBE

WINDCUBE


WINDCUBE

WINDCUBE

WINDCUBE V2

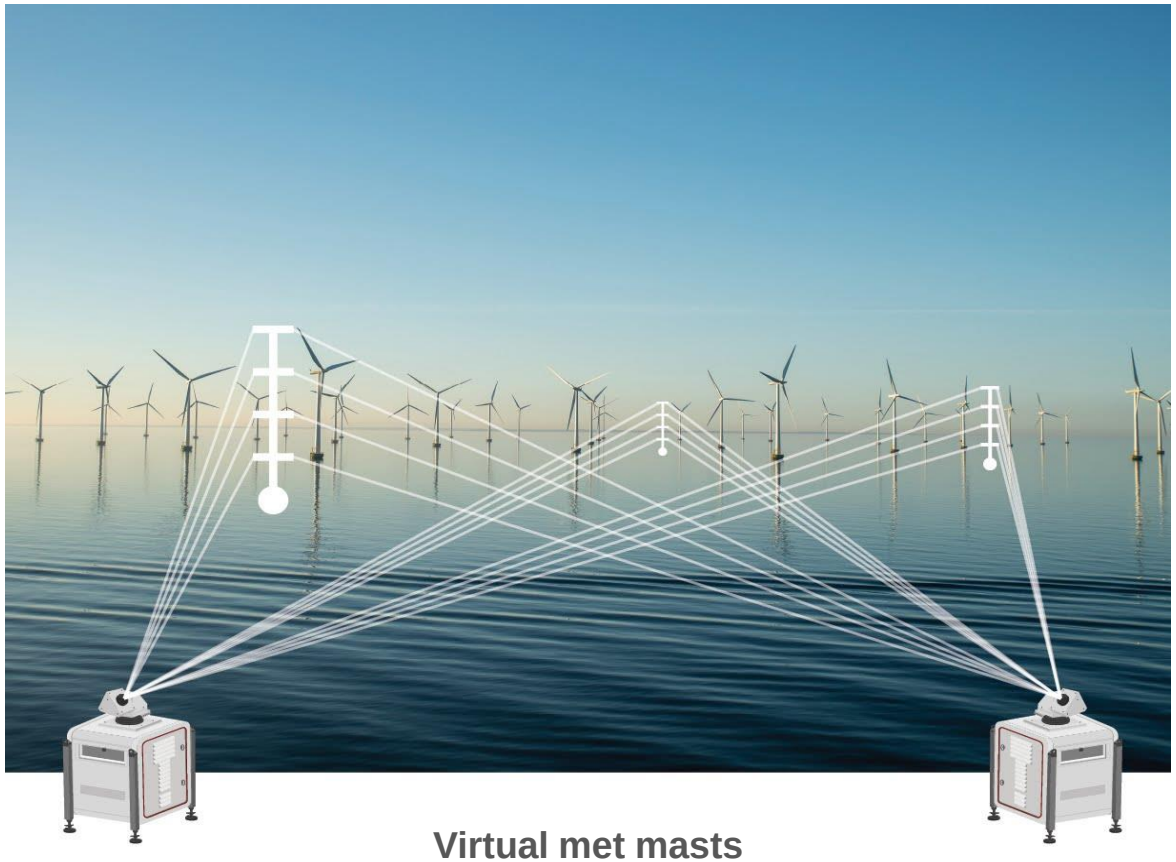
Dual Scanning lidar: increasing acceptance

Large coverage to reduce vertical and horizontal uncertainties

- 5-10 virtual tower locations
- 3-5 heights
- 10 min – 1 hr averages

Fine assessment of turbulence intensity for turbine suitability

- 1-2 locations
- 1-2 heights
- High measurement rate



Virtual met masts

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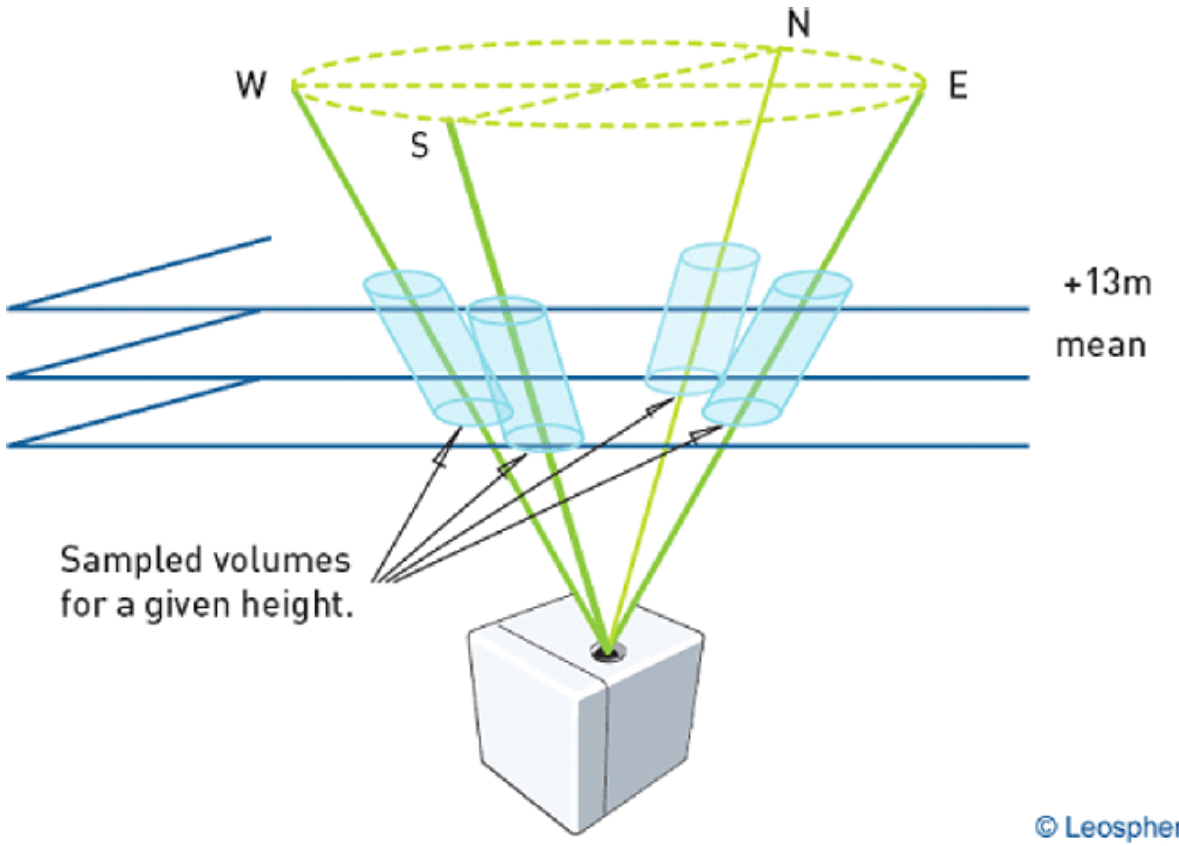
Doppler wind lidar principle

- Doppler shift is measured from aerosol laser light scattering
- Optical coherent heterodyne measurement with pulsed narrow line laser
- 1 m/s is ~0.7MHz shift @200THz (1.5 µm)



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RoadAI

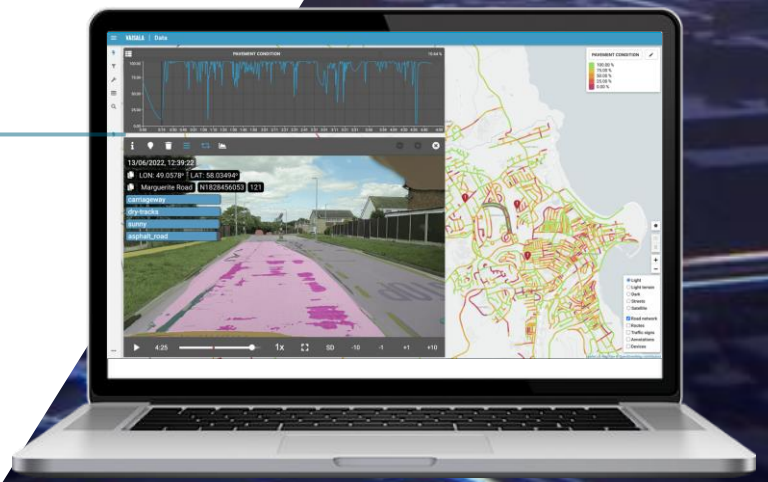
Pavement inspections and asset inventories

- RoadAI cloud software and API
- Computer vision-based pavement condition assessment platform for informed maintenance decisions using a smartphone
- Collect and maintain road asset inventories

AI Road Analysis

SMARTPHONE UI

Asset Management Tools



Road condition reports 4x faster half the cost

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Fully automated and objective pavement assessment

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Image:s NASA JPL-Caltec

Thank you!

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