

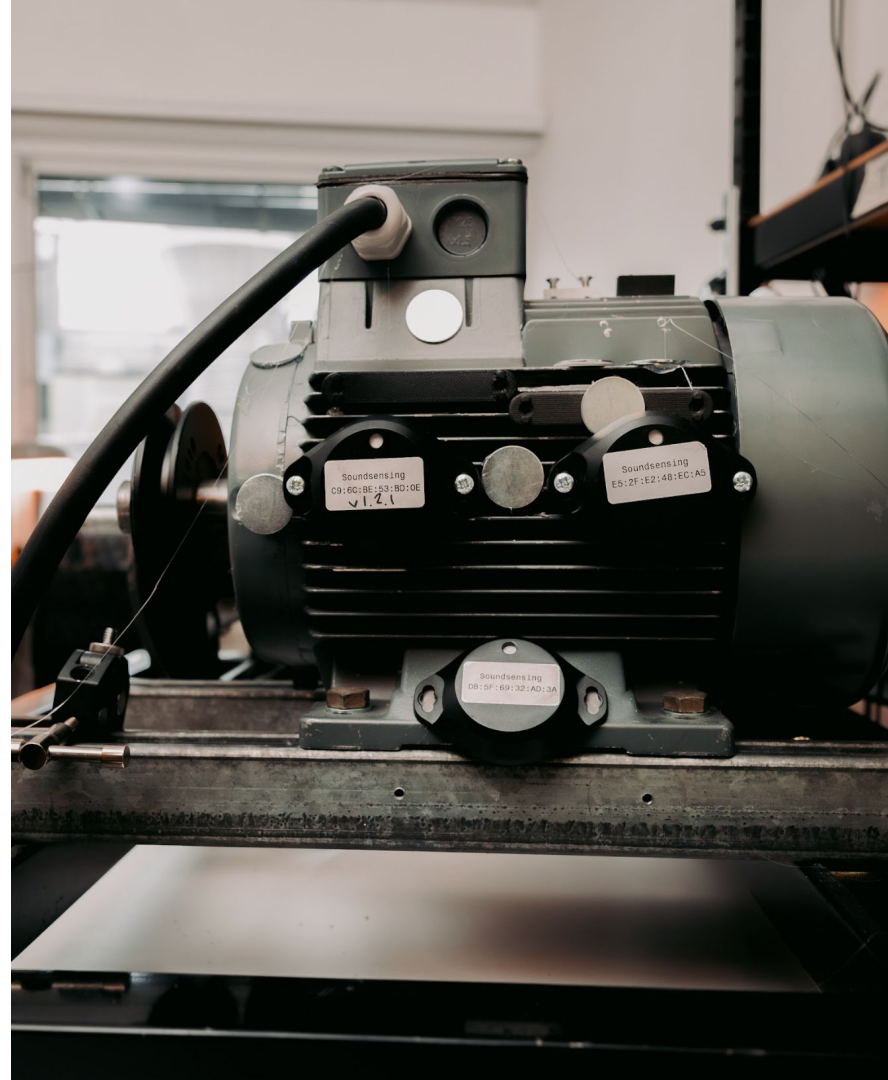
Vibration based predictive maintenance of HVAC-systems

 soundsensing



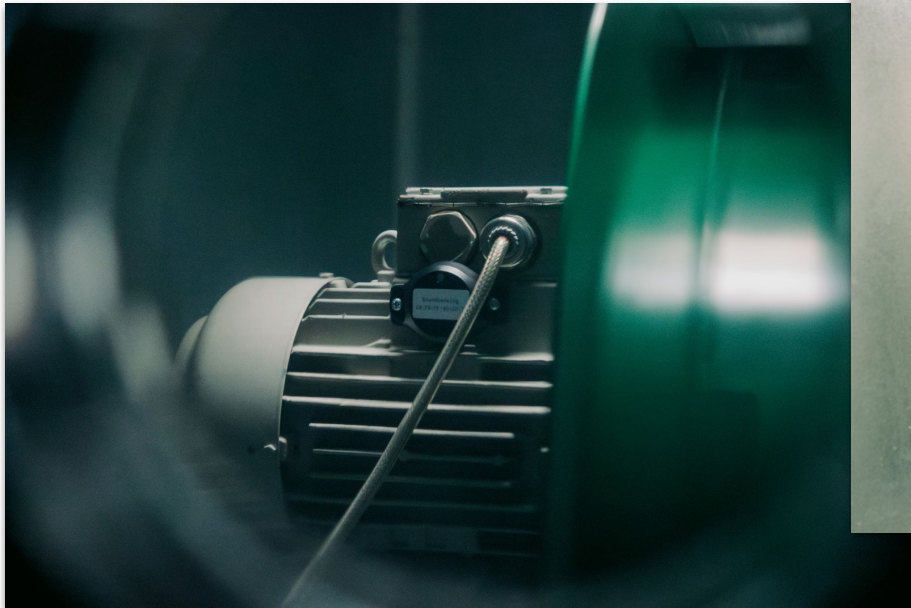
Agenda

- What is the CFT - Circular Fast Track?
- Where are we with the project now?
- What have we found so far?
- What is coming for the next year?



- What is the CFT - Circular Fast Track?

Circular Fast Track is a joint effort between Nordic cities to pilot new technology and share knowledge across the region. It gives homegrown technologies access to a larger combined market.



Circular Fast Track

3 Cities across Finland and Denmark
Espoo, Helsinki and Syddjurs

42 Air handling units split by set criteria

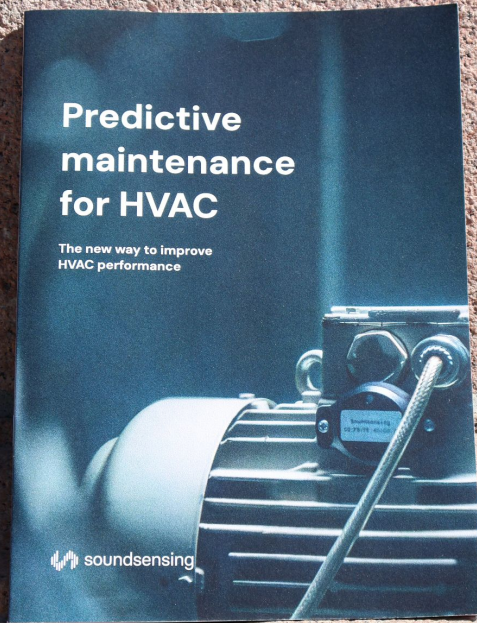
- Kindergartens
- Old/new buildings
- With and without BMS - building management system

Implemented and installed early march 2026

- 12-month monitoring window, collecting data and sharing findings

The project group and how it works:

- Monthly status meetings and on-site knowledge-sharing workshops.





"We reduced internal inspection rounds by 50%, saving €44,000"



Amine Dehmani
Advisor, City of Oslo

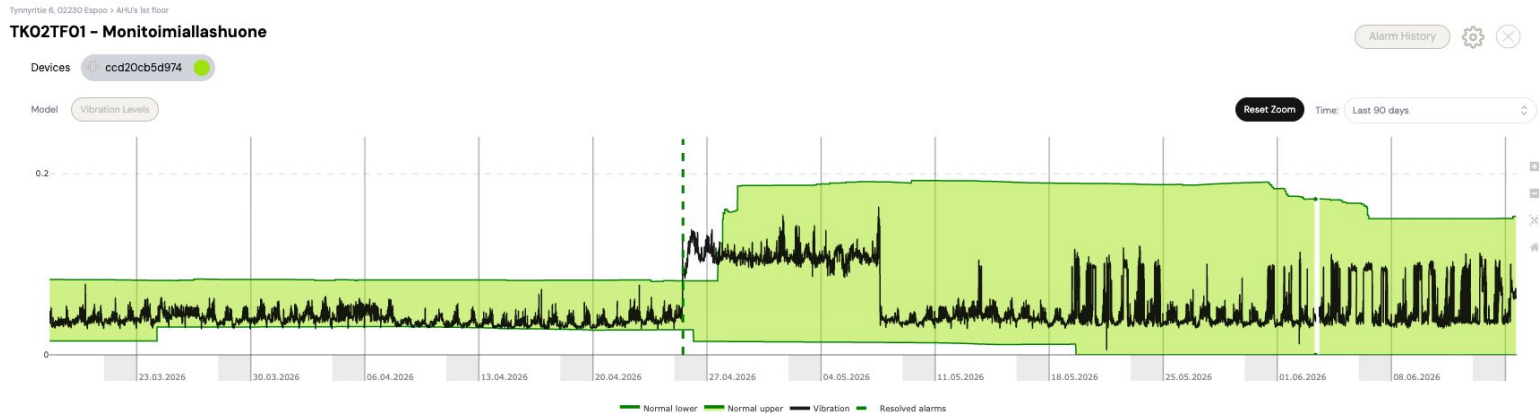
Project with Norway's largest city, Oslo

- Project group with operations technicians and operations managers
- €44.000 in savings on internal inspections alone
- €1.033 in net savings per kindergarten/year
- 52 kindergartens

- What have we found so far?

Alarm sent after visible change in vibration over a short period of time.

- The device settings were changed manually. A great alarm to see that changes made are detected by the Soundsensing system.



Vibration levels in the unit was higher than expected. The alarm led to a manual inspection of the system. A slight chirping sound was heard from the unit.

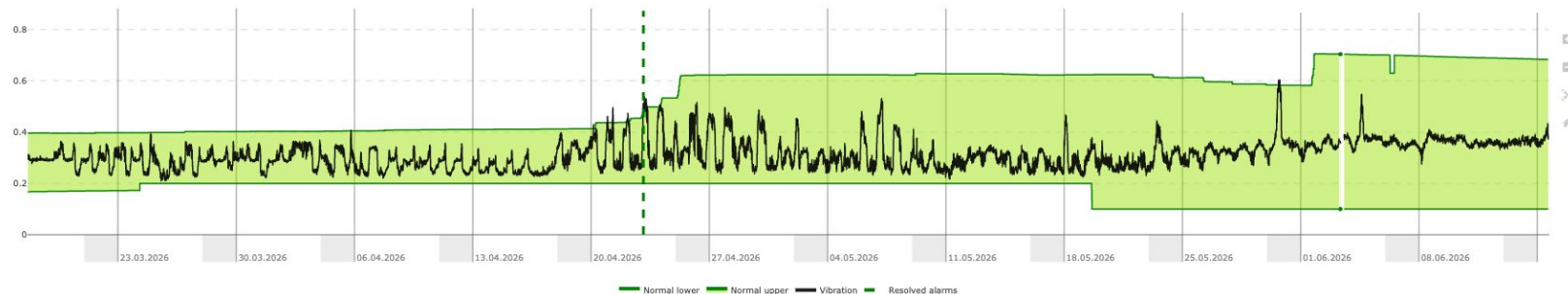
- An exciting case to follow as we also see a new peak in vibration afterwards.

Tynnyttie 6, 02230 Espoo > AHU's 1st floor

TK08TFO1 - Keittiö

Devices **fabcb0bdf4c1**

Model **Vibration Levels**



Yes

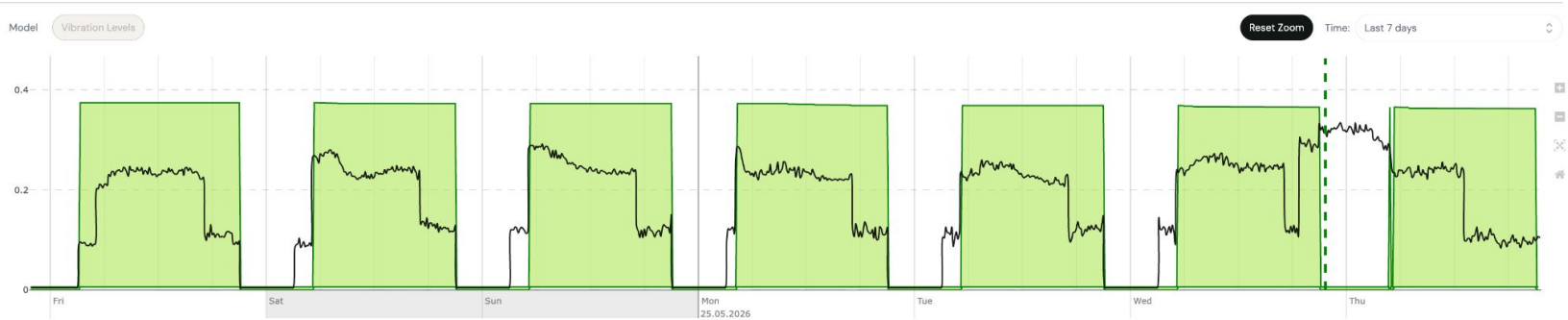
15.6.2026, 16:36:43

Kiinteistönhoitajan tarkastuksen perusteella TK08TFO1 pitää hieman sirttävää ääntä. Muuten ei poikkeavaa toimintaa. Tilannetta seurataan. // Based on the property manager's inspection, TK08TFO1 is making a slight chirping sound. Otherwise, there is no abnormal activity. The situation is being monitored.

Alarm was sent when the unit did not turn off at night, as it was doing normally.

- Soundsensing makes it easy to spot when units does not turn on/off as planned. This provides major savings related to energy costs and wear and tear.

Alarm



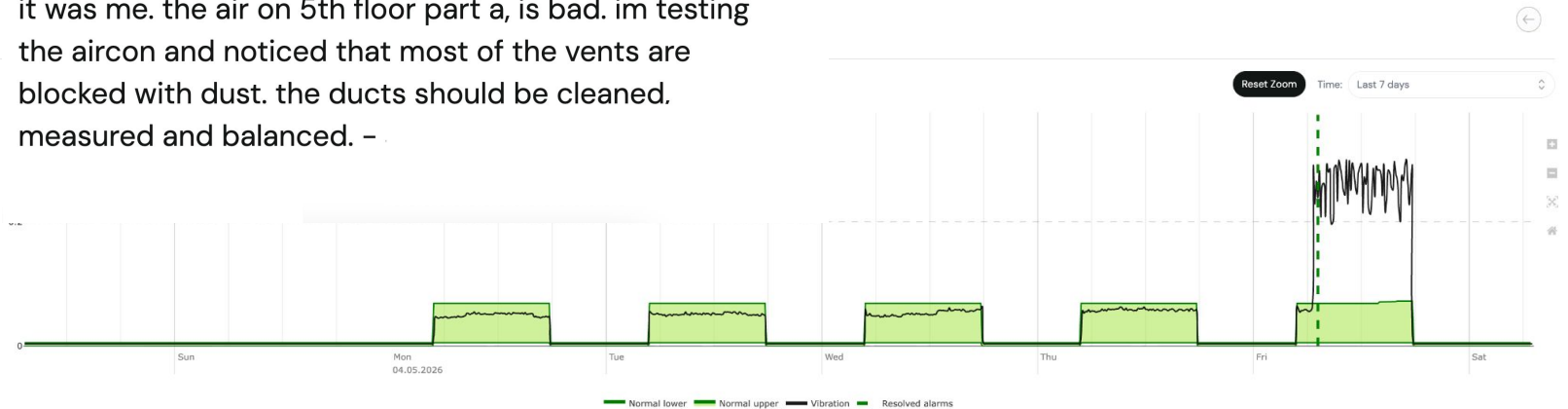
Estimated savings: €6,200 (through reduced energy consumption and lower equipment wear)

Rapid change in vibration.

Yes

8.5.2026, 13:08:51

it was me. the air on 5th floor part a, is bad. im testing the aircon and noticed that most of the vents are blocked with dust. the ducts should be cleaned, measured and balanced. -




Description

Vibration levels are higher than expected.

What happened here?

Vifte høyre

Devices  c576761278c0

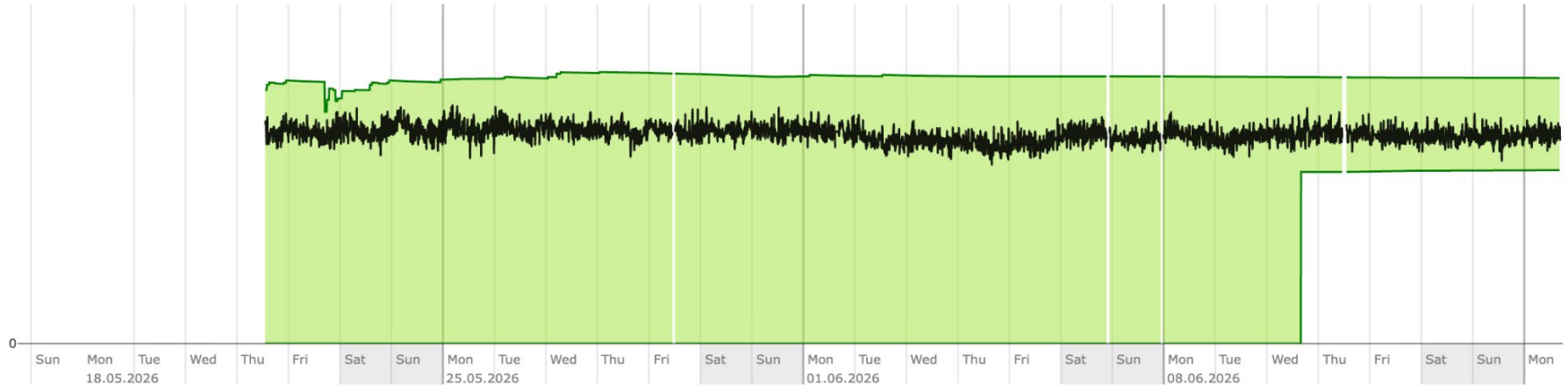
Model Vibration Levels

Alarm History



Reset Zoom

Time: Last 30 days



A common misconception is that the operating hours configured in the Building Management System (BMS) reflect the actual runtime of the equipment. In this case, the unit is scheduled to operate from 07:00 to 16:00. However, data from Soundsensing reveals that the unit is in fact running continuously, 24 hours a day, 7 days a week.

Vifte høyre

Devices c576761278c0

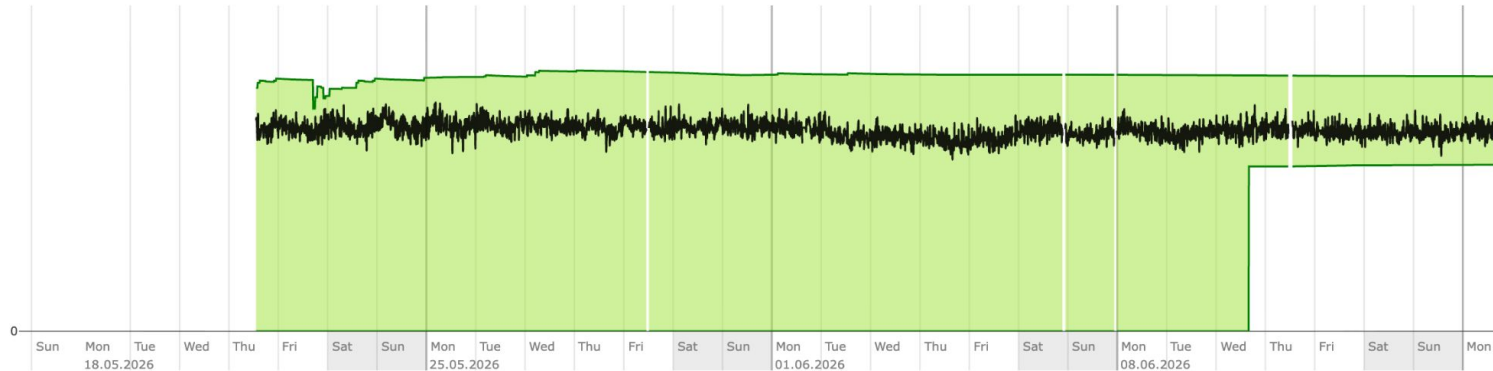
Model Vibration Levels

Alarm History



Reset Zoom

Time: Last 30 days



Findings

The unit is operating continuously, 24/7, despite being scheduled to run only during occupied hours. This results in unnecessary energy consumption and significantly increased wear and tear compared to a system operating 8 hours per day.

Recommended actions

Adjust the unit's operating schedule to align with actual occupancy requirements. Verify the changes and monitor performance through the Soundsensing dashboard to ensure the unit operates according to the new schedule.

Estimated Savings

Approximately **€10,300 per year** through reduced energy consumption and lower equipment wear

Vifte høyre

Devices c576761278c0

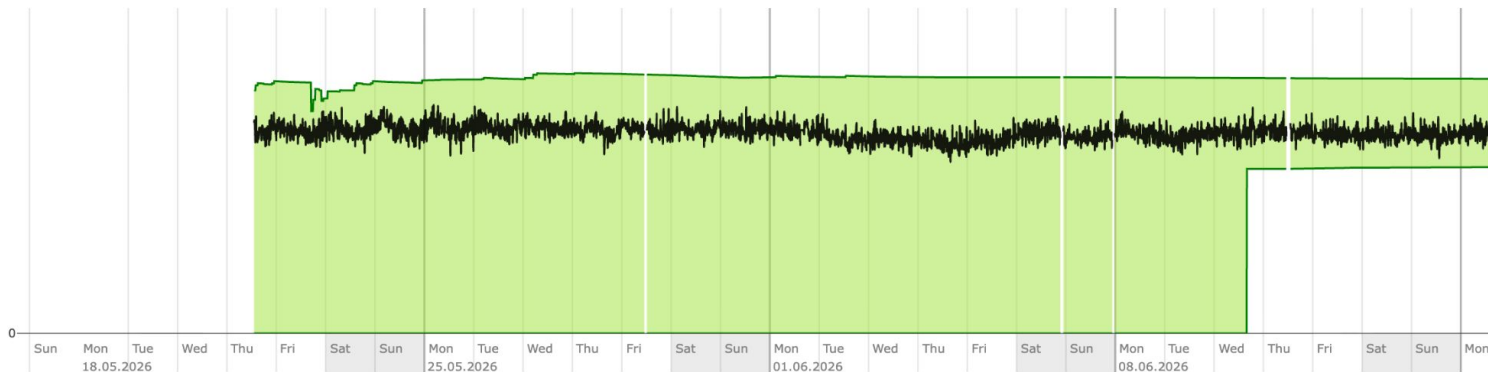
Model Vibration Levels

Alarm History



Reset Zoom

Time: Last 30 days



Want to make an impact
on your operations?

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