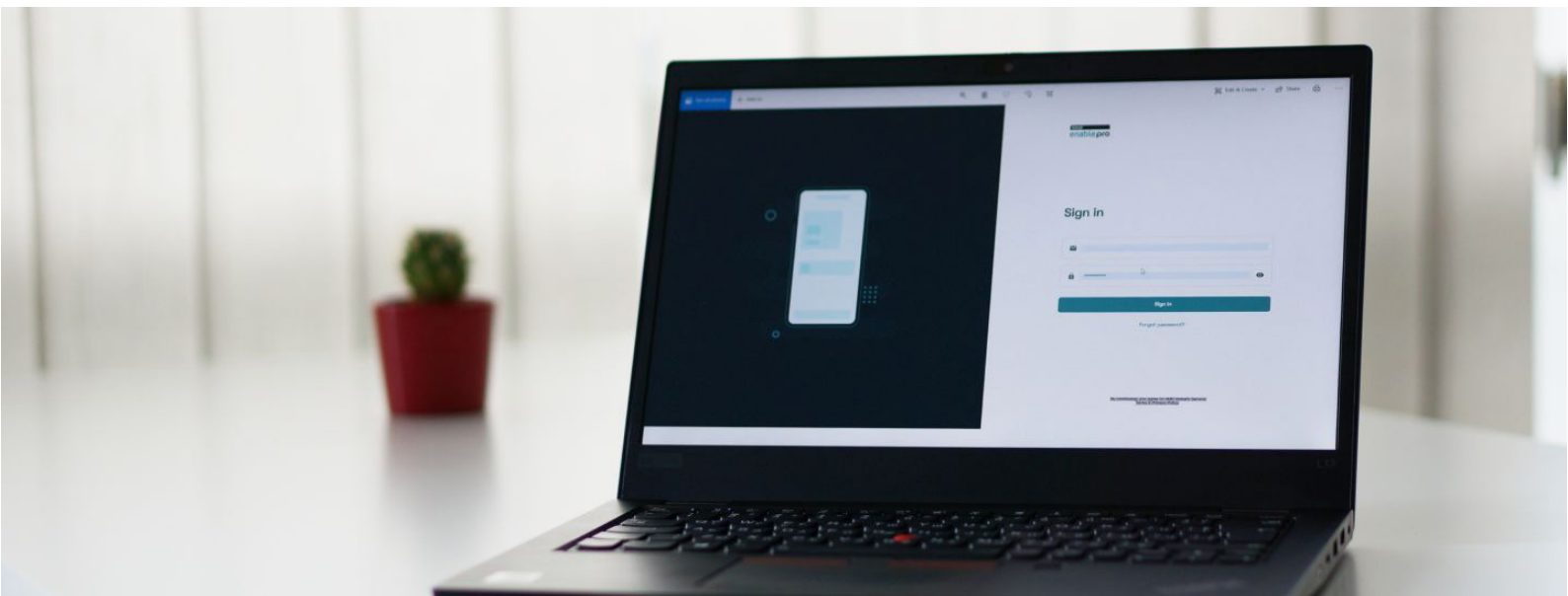


## LUOKKAHENKI CASE STUDY

# Improving classroom air quality in Finnish schools with the help of a comprehensive, intuitive EMM solution from HMD Global



**“We were offered the opportunity to trial HMD Enable Pro before choosing, and the benefits were plain to see. It gives us so much control over the devices which limits our risk and reduces the need for maintenance. And we are able to do all this remotely. Using Kiosk mode is perfect for us.”**

Jaakko Salminen, Founder & CEO, Luokkahenki Oy

Indoor air quality is a global issue and one which is particularly prevalent in the Nordic countries. Here, weather conditions demand heavily insulated and machine ventilated buildings, which – unless perfectly maintained - may cause non-optimal indoor air quality and even a health risk. This “sick building syndrome” is unfortunately not unknown to Nordic schools either. Different studies estimate as many as 15-40% of all schools suffering from it.

To address this issue, tech start-up, Luokkahenki, is now modernising the way in which schools in Finland are able to monitor indoor air quality. “Luokkahenki is Finnish for ‘class spirit’ explains Luokkahenki Founder & CEO, Jaakko Salminen. “Our mission is to safeguard the health of the school kids, leading to a better spirit within the school and the community”.

Luokkahenki wanted to streamline the way in which municipalities monitored schools’ indoor air quality and related pupil health. As Salminen explains: “The

good news is that the building management teams know how to handle those situations through renovations or with air purifiers. The challenge is to pinpoint exactly where the problems are. Our belief is that we should be proactively scanning all classrooms in all schools to identify problems in the early stages. Why wait till pupils get sick? Why not address this issue proactively?”

## Democratising Air Quality Monitoring in Nordic Schools

Until today, air quality monitoring and health surveys have been conducted only in buildings which



are suspected to having problems. In order to democratise air quality monitoring, Luokkahenki needed to design a service that could be used in every school and every classroom, constantly. This meant producing a low cost and intuitive solution.

“There are companies offering air quality measurements, and then there are separate companies that do surveys in classrooms,” explains Salminen. “These are typically done manually, using expensive equipment and workforce. We wanted to change this. We wanted to minimize the cost of equipment and the amount of effort to the level where the service could cover each and every classroom.”

Salminen explains: “We faced several challenges in the field such as traveling to see units in classrooms for maintenance etc. The business also needed to streamline their operations and collate data more efficiently. Manual processes can be costly

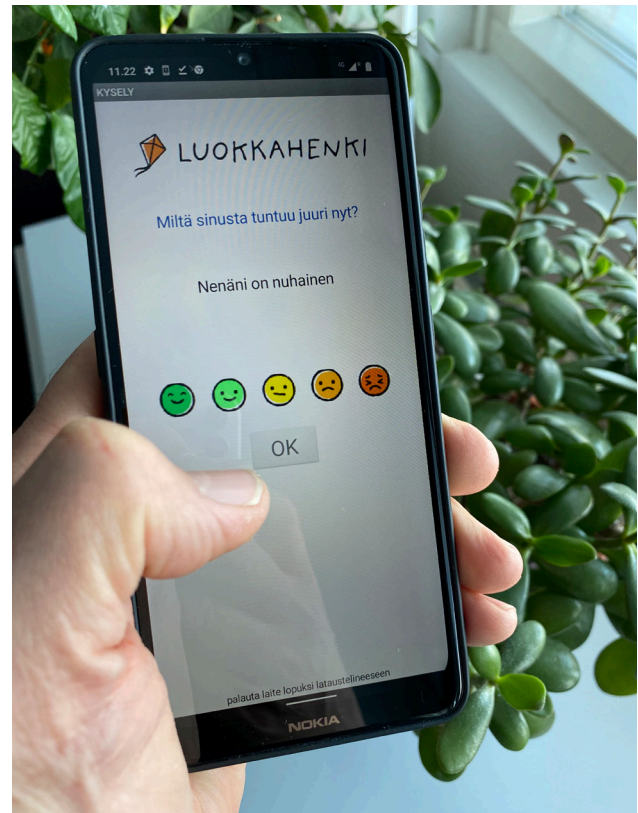
and are therefore unviable for us. We were already using smartphones for our solution, however when we discussed our devices further with the HMD team, they asked if we had considered using an EMM solution to manage the smartphones – this has turned out to be hugely beneficial.”

As Luokkahenki had not used an EMM solution before, finding a solution that was easy to use in combination with the smartphone was essential. After all, this is what teachers and pupils would be using on a weekly basis to submit results and Luokkahenki needed to rely on this technology to work in the field. “Thanks to HMD Global, deployment of the total solution has been very simple because the HMD Enable Pro EMM is so intuitive and easy to use,” says Salminen. “We needed some advice and the guys have been very helpful and supportive at HMD. Any time we have questions or requests, we always receive their guidance right away.”

## A Streamlined and Cost Effective Solution

By providing an all-important EMM solution with HMD Enable Pro, Nokia smartphones and a reliable network with HMD Connect Pro, HMD has been able to massively streamline Luokkahenki's operation. The data only SIM management solution, proved an affordable solution to Luokkahenki's data challenge, meaning they do not have to rely on school Wi-Fi networks. HMD Connect Pro is for enterprises, keeping IoT and M2M devices connected.

Nokia smartphones enrolled to HMD Enable Pro were deployed in the Dedicated Device (Kiosk) mode. This allowed the handsets to be set up with specific apps so they can only be used for one purpose – collating data to monitor air quality. “Kiosk mode is essential for us,” Salminen says. “We can be sure that each our phone is only used for its intended purpose: as an interface for our service. No one is able to surf the web or play games with our phones. This



acts as a safety feature for us – it is useless if anyone steals it and you can't use it as a mobile phone. Knowing it remains locked for our use is very important.”

To further assist Luokkahenki, the 'Devices' function provides a detailed overview of each enrolled device, and its current state. The 'Home' function meanwhile, acts as a central dashboard and features an overview of the device fleet within the organisation. This in turn helps to reduce maintenance callout costs.

When asked about the complete service, Salminen explained: “We were offered the opportunity to trial HMD Enable Pro before choosing, and the benefits were plain to see. It gives us so much control over the smartphones which limits our risk and reduces the need for maintenance. And we are able to do all this remotely. Using Kiosk mode is perfect for us - it makes the phones less prone to being snatched in the field as it’s locked for our use and application. It’s a really strong proposition.”

## **A Beneficial Partnership Based on a Simple Solution**

Luokkahenki needed a trusted partner who understood their needs and who could help them achieve their goal of democratising indoor air quality monitoring in Finnish schools. “The HMD offering is a big part of our total solution,” says Salminen. “The mobile handset is the most tangible and visible part of the partnership, but HMD Enable Pro and HMD Connect Pro are equally important.”

There have been additional benefits from the partnership – Salminen explains: “HMD Global is a reliable company, respected in our markets and great to be associated with. I felt confident not only on the technical aspects of our partnership, but having a well-known, well reputable brand engaging with us suits us very well.”

To add to the benefits, Salminen continues: “We are a small team. We don’t want to chase the mobile operator, and device supplier, and EMM supplier separately to ask who a problem or issue sits with. We always get the answer from the same dedicated team and we have a great working relationship. They are very responsive and supportive whenever we need them. This is absolutely the biggest benefit for us that we have this one-stop-shop for our all our needs.”

The results are plain to see for Salminen. “To date, we have collected and analysed approximately 10,000 symptom observations and 1 million air quality observations,” he says.

“Our analyses have given our first customers a much clearer picture of which buildings and classrooms are free from health risks, and which parts of the building need inspection. They appreciate

that the previously unpleasant and ambiguous topic of “sick building syndrome” can be now be structured and quantified in an easy and cost-effective way.”

## About HMD Global

Headquartered in Espoo, Finland, HMD Global Oy (“HMD”) is the home of Nokia phones and HMD Services. HMD designs and markets a range of smartphones and feature phones and an expanding portfolio of innovative service offerings. With an ongoing commitment to security, durability, reliability, and quality across its range, HMD is the proud exclusive licensee of the Nokia brand for phones, tablets and accessories. Nokia is a registered trademark of Nokia Corporation.

For further information, see [www.hmdglobal.com](http://www.hmdglobal.com)

## About Luokkahenki Oy

Luokkahenki Oy is a Finnish startup company, committed to safeguarding the health and well-being of school kids. Our innovative Luokkahenki service reveals any indoor air related health risks in the school buildings, by regularly surveying the well-being of the kids and by measuring the quality of classroom air. We help the building management team to reliably identify problematic rooms and take corrective action before anyone’s health is at risk.

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