

We make buildings smart for people, businesses, and the environment.

At Nuuka, we believe all buildings should be healthy, intelligent, and automatically adapt their functions and processes to the premises' needs. This guarantees safe and healthy spaces while simultaneously minimizing unnecessary work, energy usage, and environmental impact.

Nuuka Optimize - AI optimized building processes 24/7/365 across your portfolio

Nuuka Optimize is an optimizing software for HVAC processes that can be connected to any building (new and old) in scale, and it provides big reductions of CO2 emissions and costs.

Nuuka Optimize has a set of AI applications for all different HVAC processes, that makes smarter control decisions using predictions and current situation in the building, avoiding excessive energy usage by adjusting consumption flexibly to building's usage. The benefits of optimizing all HVAC, instead of operating in silos, is that cross-functions of processes are enabled and help avoid issues like heating and cooling deployed at the same time.



Nuuka Optimize helped to save >30% on energy consumption in a Kindergarten for winter 2021

Our hardware-independent platform connects to any Building Management System or IoT solution. Analyzing and optimizing buildings using AI and machine learning. Our solutions have already connected over 3000 buildings in six countries.

All Nuuka products are offered as cloud-based SaaS solutions. They integrate directly with current systems in a building and are connected and deployed remotely. An integration can be done from one single building to whole portfolios to maximize results.

Nuuka Optimize – How does it work?

AI learns the building processes

Nuuka Optimize reads all available data from a buildings' BMS, meters and IoT sensors and during a learning period of a few weeks it understand the normal usage of the building. With its algorithms it will calculate vital KPI's and figures out how different processes and zone-specific equipment's are related. With this information available it is now possible to predict the standard use and thereby optimize heating, cooling, fan speeds etc. and always supply a healthy building with a great perceived air quality!

Writes back to the BMS

Nuuka Optimize gets deployed and are now writing new setpoints to existing control systems while it keeps track of air quality parameters such as CO2 and temperature. Readings from sensors can be done every minute and deviations from normal behavior is immediately taken in consideration to calculate new set points for the control system. New setpoints are given every 1-10 min, depending on the situation in the measured zone.

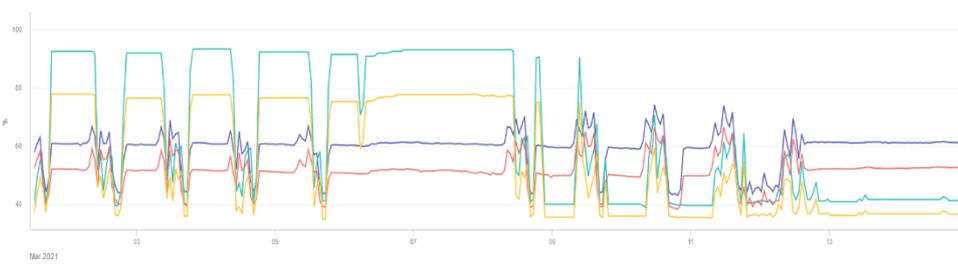
Results

Nuuka Optimize uses all data from BMS, sensors and meters from a building. A few data types, like temperature and CO2, are a starting point but adding other measurements like humidity and pressure difference gives the AI model better prerequisites to completely understand the building and secure the building will be as healthy as possible.

The following financial results have been achieved with Nuuka Optimize:

- 30% savings from air ventilations electricity consumption and costs
- 0.91€ / m2 per annum savings on energy
- 0.55 €/m2 and 0.36 €/m2 savings on electricity and heat

The picture below shows AI under training for a week and when deployed. Supply and exhaust fan speeds are drastically reduced resulting in lower energy costs and prolonged lifetime of the AHU itself and other expendables like filters. Quality parameters as CO2 level, temperature and pressure differential levels are kept within the pre-defined parameters. For instance, usually max 800ppm level and min -5 pascal levels are threshold levels among our customers.



Welcome to Nuuka and welcome to a world of energy optimized and healthy buildings!

Why Nuuka Optimize?

Tenant satisfaction
Guaranteed indoor climate for Tenants using AI



Big savings
- Reduces energy consumption from 15% to as much as up to 40%



Hassle free
Nuuka Optimize takes your operations to the next level. There is no need for manual data analytics and trials to reach improved operation results. AI is your new brain and predicts and optimizes the BMS before adjustment is needed

