Solutions for data-driven buildings

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NorthQ



## Who is NorthQ?



Based in Copenhagen



18 employees8 nationalitiesPassionate about IoT



In-house development of IoT sensors



Big data analysis platform



Energy and Building Services



## Data. Directly to your IoT-platform.

- One platform for data collection and control of electricity/gas/water/heat consumption, PV production and indoor climate
- Real-time data
- Reliable & stable data collection
- Full API for 3<sup>rd</sup> party integration





## Swiss Army Knife for Metering







#### Q- Reader



Interchangeable wireless modules

Long battery lifetime – up to 10 years

Flexible data recording interval - from 10 seconds to 24 hours

Adjustable alarms & notifications

Interchangeable sensor heads



## LoRa CO2 sensor

- Data collected
  - CO2
  - Humidity
  - Temperature
- Flexible data collection interval
- 5 years battery lifetime



# Cases







Monitoring of heat stations (8.000 apartments)

Water & district heating meters

BBR-register data



Data import from third-party systems (Kamstrup

READy, FTP Server)



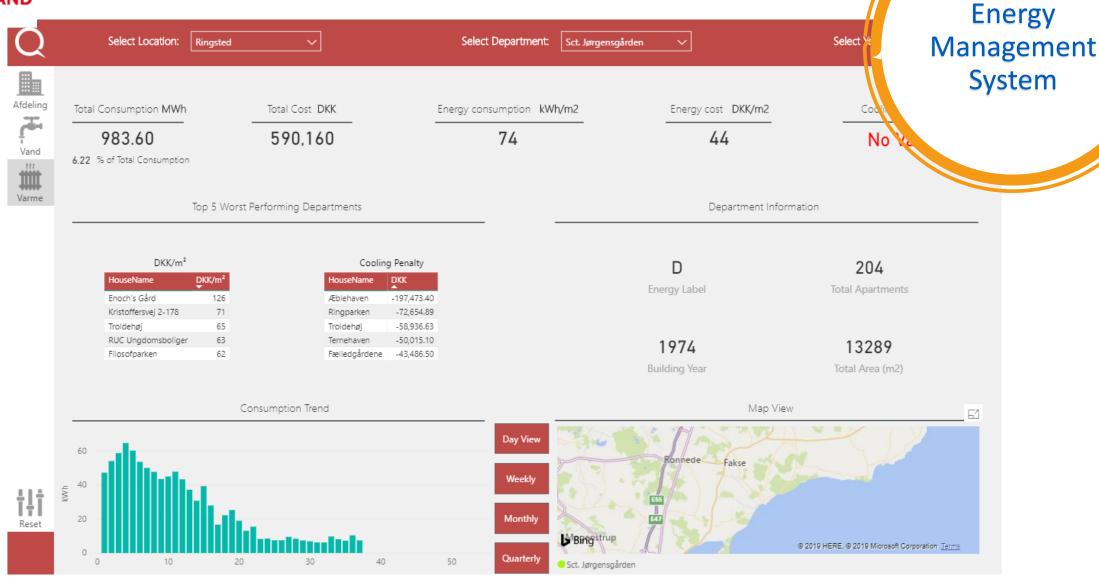
Benchmarking of heat stations in 100+ buildings

Energy optimisation of buildings









**Energy Dashboard** 



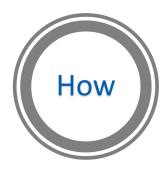




Electricity (heat pumps)

Heat & gas

PV



Q-Reader (modbus/mbus/optical)



Comparing heat pump efficiency vs manufacturing spec (COP-value) Enhancing performance of hybrid heating system (HP vs gas) Heat pump Management System



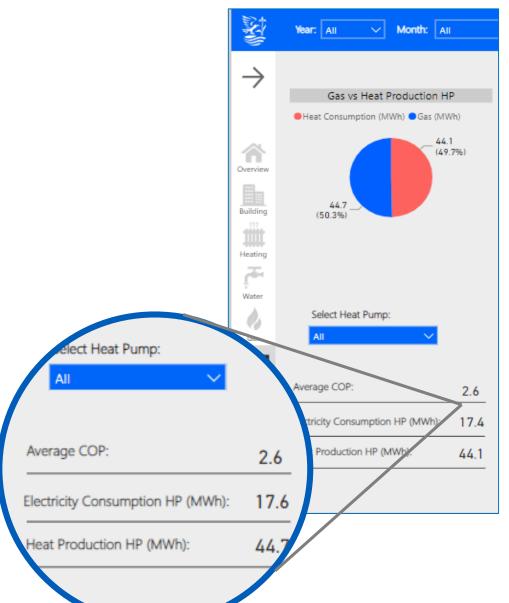
**Heat Meter** 

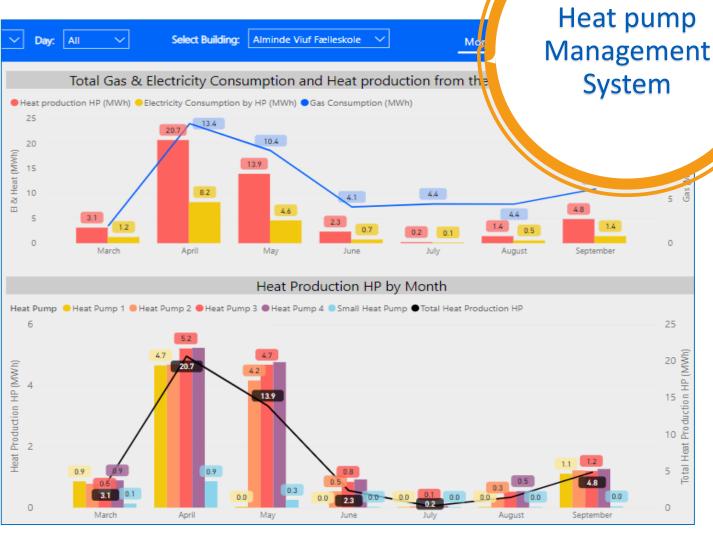


**Gas Meter** 









Heat pump dashboard











61 apartments:

Heat

Water (hot/cold)

Water pressure



WMBus gateway

Q-Reader



Yearly billing for heat/hot/cold water

Control of the Danfoss ECL

Alarms for water pressure on 5th floor

Alarms if an apartment has bad cooling



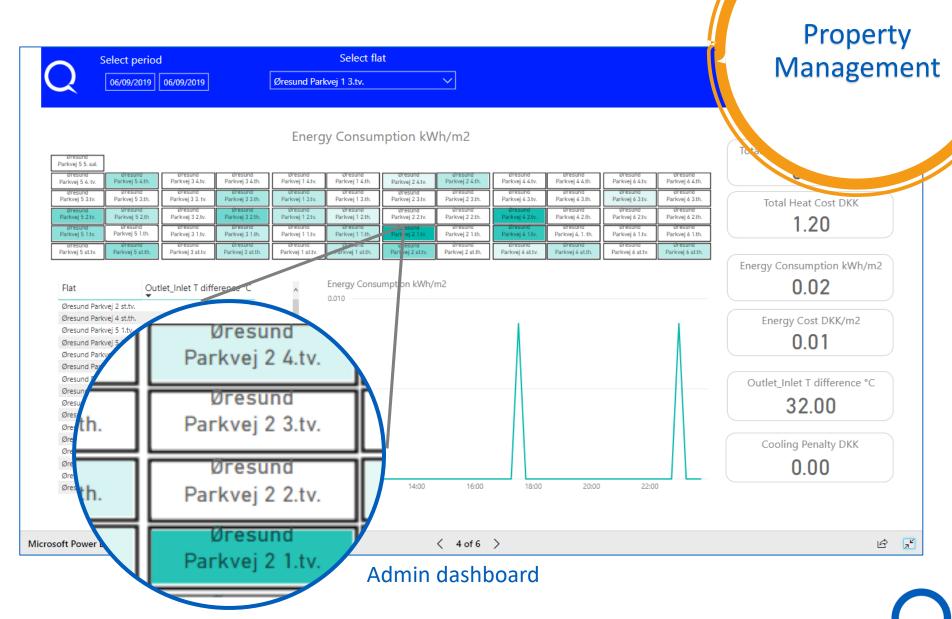


Øresund Strandpark





Tenant app



## Solutions for the future?

- Better data exchange (API)
- More integration needed
- Close collaborations



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