

# Base<sup>n</sup>



## CUSTOMER CASE ADJUTANTTI

BaseN transforms Adjutantti into a **smart apartment building**

**New algorithms** can be applied as the need arises

Real-time water usage data is used for **accurate billing**

Quick and **cost efficient** implementation

## First of its Kind Energy Efficient Apartment Building

### Residents Pay for their Actual Energy and Water Use, Monitored in Real-Time by BaseN

BaseN realizes an apartment-specific, real-time electricity, water and heating energy monitoring system for Adjutantti. BaseN also provides data insight for the building's own solar energy system, the eco-efficient elevators and the electric car charging stations in the building's garage. As BaseN can manage any kind of data from any connected sensor or device, the Adjutantti building and each individual apartment can become even more connected and smarter over time.

BaseN enables cutting back on the households' electricity, heating and hot water use by an average of 15%. Making cold water use data available in real-time leads to reducing individual water usage by around 30 percent. Billing for hot and cold water usage is created automatically through BaseN. Various device and service failures can be detected at an early stage, e.g. water leakages.

The building's solar energy system produces annually around 20,000 kWh of energy, which equates to approximately 20% of the building's electrical requirements for the common facilities. Surplus energy is used to supply the building's electrical vehicle charging stations or is supplied to Fortum's electricity network.

#### WHAT

- BaseN Platform collects, stores, visualizes and controls enormous amounts of real-time energy and water data from each individual household and the building's facilities
- Home/Away functionality increases security
- Consumption forecasts and goal setting powered by BaseN Platform

#### WHY

- Provide inhabitants insights to their energy economy, enabling them to reduce their carbon footprint
- Ensure through accurate measurements that inhabitants only pay for their actual electricity, heating and water consumption
- Notify of problems and malfunctions
- Guarantee equipment health

#### HOW

- ABB's KNX-based home automation system can be operated within the apartment and through BaseN Platform via smart phone, PC or tablet
- Collected data from different meters and sensors is managed and controlled by BaseN Platform
- BaseN stores the entire lifecycle of the individual apartments and the whole building
- More sensors can be added

## Residents track their energy and water consumption in real-time

### ONE IOT PLATFORM FOR ALL SENSORS

Heating water temperature and energy is monitored by M-bus capable ultrasonic meter: Sharky 773/775, Hydrometer GmbH

Tap water temperatures: Corona E/Flypper, Hydrometer GmbH

Main heating and lighting are controlled by KNX capable switches, and unit temperature is monitored with a KNX capable temperature sensor

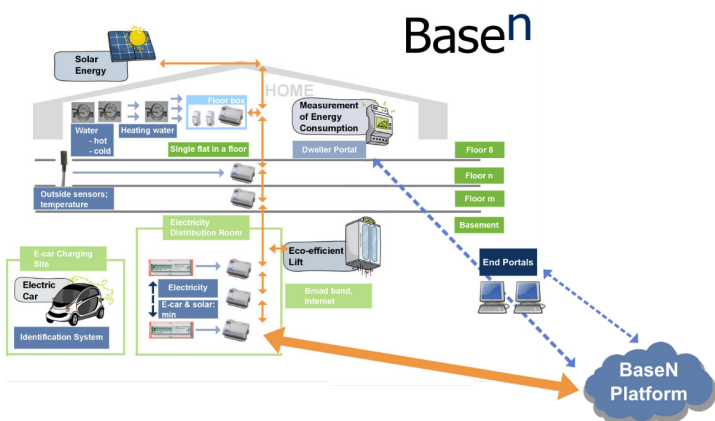
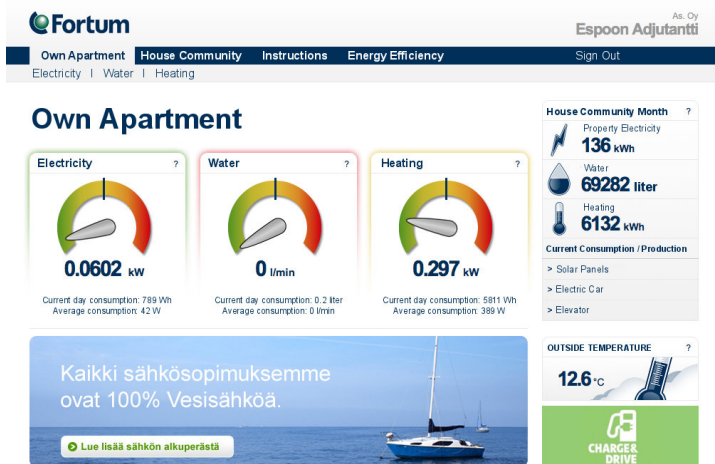
Heating energy meter: Saint-Cobain

Household electricity power meter: SchellCount

In the technical space, the automation and metering signals are connected to redundant Agent computers (Dell server), M-bus wiring by a Relay MasterFamily W60 M-bus/RS-232 adapter, KNX by an ABB IPS/S 2.1 IP interface

Electricity consumption is monitored at the switchboard in the technical space. The building level usage is connected to AMR capable meters (TELVENT Echelon 83332-31HA). MOXA E2210 A/D to IP gateways interface these devices with the Agents

The property's main water meter and main heating energy meter are connected to BaseN Platform



For more information visit [www.basen.net](http://www.basen.net)

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