

# #1 Market Smart Climate and House Management Solution

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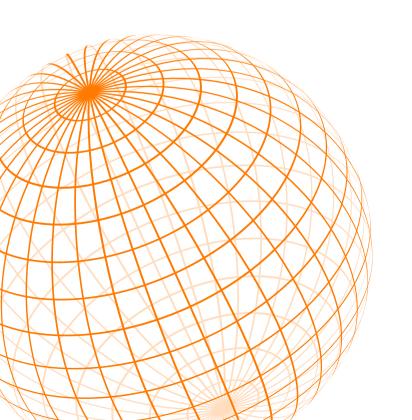
# Company Some Facts

#### virtoway.com

- IT, E-Commerce, Real Estate
- Founded in 2011
- More than 5000 clients worldwide
- Community of 125K+
- Implementations across Europe, Asia and Americas



# Think Scenarios not Gadgets





## Zero House Model for 150 sq. meters Technical Data



**Zero house.** We take the surface area (floor, walls, roof) as 450 sq.m. The heat loss is 0.49 W/sq.m./K.

Then our house loses approximately 220 watts at a temperature difference of 1 degree.

On an average year, we can consider the difference to be 10 degrees or less, in peaks 15-20. The annual average climate consumption of the house is 2.2 kW of thermal energy, or approximately 500 watts of electrical energy.

The heat loss of the house for the year is 19,272 kW of heat or 4,818 kWh of electricity. In a month, respectively, 1606 kW of heat or 401 kW of electricity.

401 must be multiplied by the cost of electricity, on average less than 100 euros.

The solar panels. To cover the climate costs of the house, you need to get 401/30= 13.4 kW. Our 5 kW solar panel produces about 20 kW per day. I.e., even taking into account DHW, the climate part of the house can be provided by one five-kilowatt solar panel.

**All calculations are made with a twofold reserve**, as the average annual temperature difference from the specified (23 degrees) will not exceed 5-6, 10 - is more likely to peak loads, heat loss can be reduced a couple of times easily (according to the engineer-builder), and the area at 450. We chose taking into account that the floor, ceilings and walls lose the same energy, but floor and ceiling: 15-20% of heat loss from the walls.

# Zero Home scenario Technical Data

### House with living area: 150 square meters Family: 3 persons

#### **Option 1**

Equipment's setup + Software + 5 kW/h solar panel + 10 kW/h Battery.

Generates 7300 kW/h per Year.

Monthly Climate Costs + Hot Water = **0 Euros** (4818 kWh of electricity yearly)

General Energy Consumption per family per year is 9000 kW/h x 0,20 = €1800 (x 0,35 = €3150)

#### Option 2

Equipment's setup + Software + 10 kW/h solar panel + 20 kW/h Battery.

Generates 14600 kW/h per Year. Monthly Climate Costs + Hot Water = **0 Euros** (4,818 kWh of electricity yearly).

Energy balance 14600 - 4818 (climate) - 9000 (electricity etc.) = +782 kWh excess electricity

# Users Easy to go

- Different levels
- You don't need to learn it.
   Just live it.
- Friendly for older people
- Friendly for kids



#### What's Inside

**Points of Interest** 

- Climate
- Energy
- Security
- Water Management
- Smart Light
- More Smart Scenarios



### Equipment

#### Set of Standard Equipment

Loxone

server + peripherals (sensors, ect.)

Heat Pump 5-6 kw/h

Mitsubishi Hydrobox

**Daikin ALTHERMA Monobloc** 

Vaillant aroTHERM Plus VWL

- Solar Panels 5 kw/h
- LG Battery 10 kw/h h
- Ventilation Vialant

Fan-coils 4x 3-2kw/h + 1x-5kw/h

**Vaillant aroVAIR** 

Daitsu FDLA AC TS 09

Saunier Duval SD 4-020

LG FENCV-EC 025

Aquatermic Conducto AQ LD 12

- Grundfoss Magna 3 250 watts
- Water Deposit 300 Litres DHW
- see details on the links

#### Climate

You never feel before

- Temperature, Humidity, PPM
- Ventilation
- Heat Floor
- Fan-coil Speed/ Noise
- Sun Protection with Rolls or Curtains
- Management/Scenarios
- Effective Cost by Room

#### Energy

Have you ever control it?

- Energy Monitor
- Consumption by Room/ Statistics
- Climate Cost by Room
- Consumption by Equipment
- Sun Light Protection
- Peak/Priority Management



### Security

#### Do not worry anymore

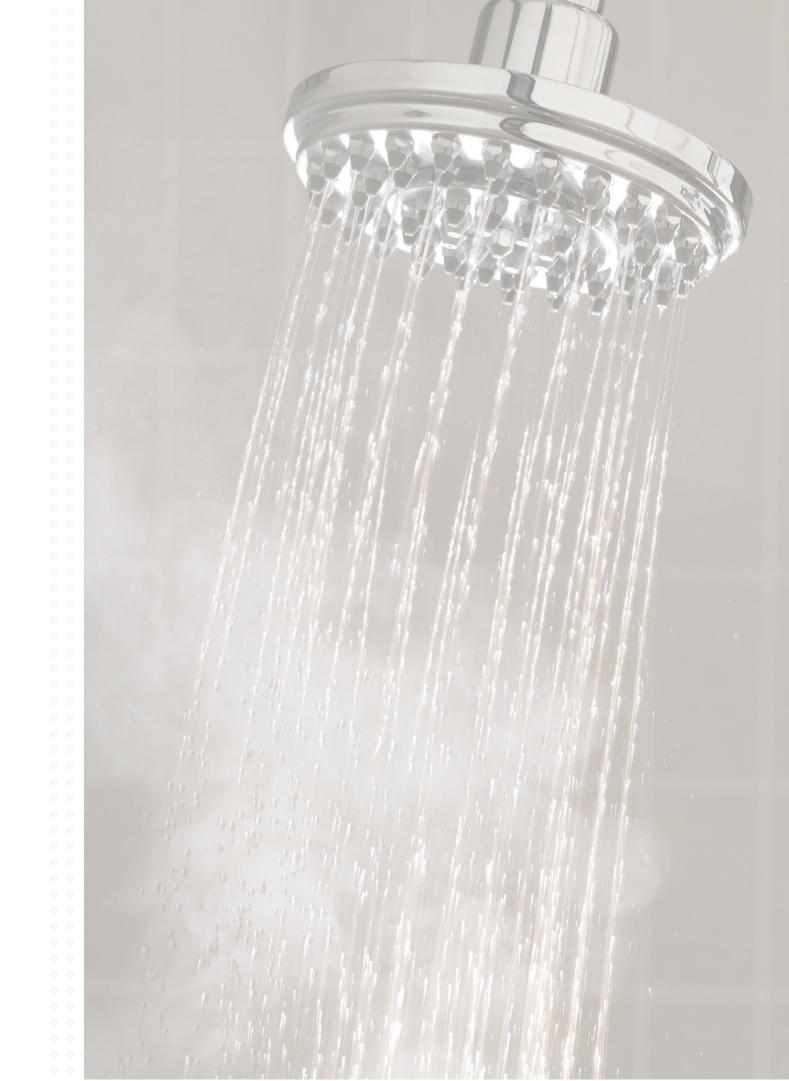
- Access Control / Log / Management
- Alarm/Smart Alarm
- Stable and clear air. Humidity and Temperature.
   Freeze/hot protection
- Automatic Light
- Presence Imitation
- Smoke Detection
- Energy Peaks Management.
   Automatic cut off in case of leak or fire
- Water Leaks Control
- Legionella protection
- Unusual Behaviour



#### Hot Water

Lets take a shower

- Timing
- Emergency Heating with Electricity
- Temperature graphs
- Cost
- Water Consumption
- Anti Legionella
- Security



# Smart Light Do not touch that thing

- Automatic Light Management
- Within Natural Light
- Night Light
- Users Scenarios
- Curtains
- Rolls
- Dimming Light

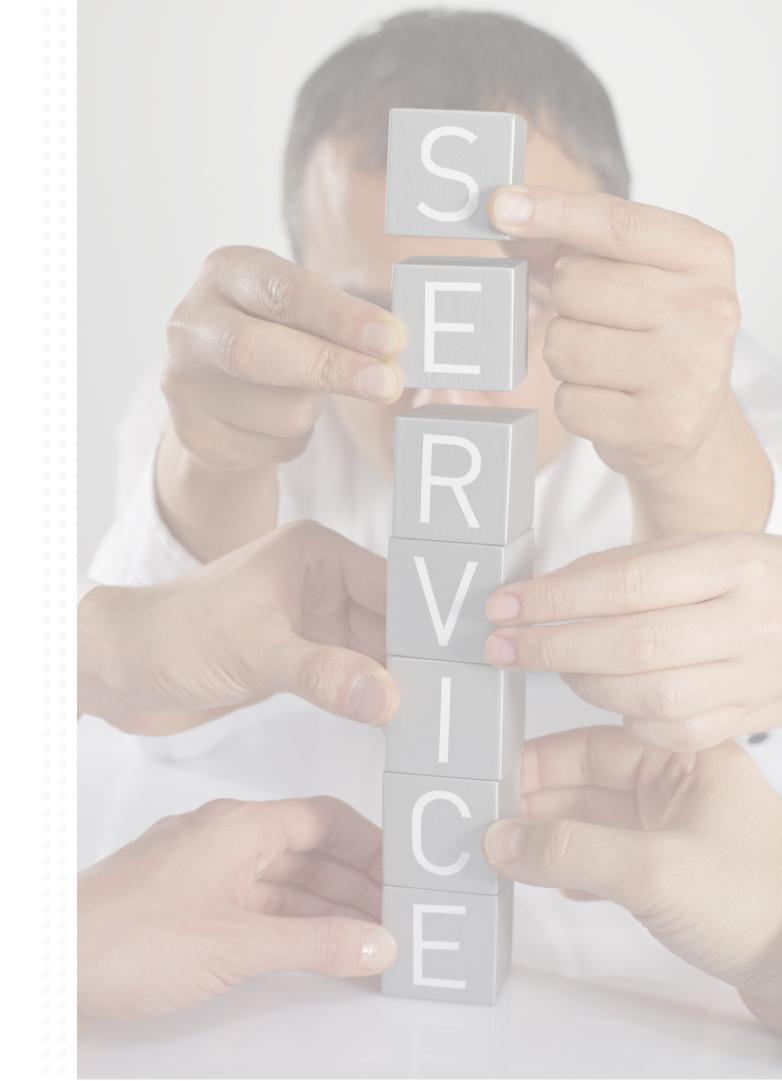


# Smart House is coming

- Audio Multiroom / Door Bell / Alarm / Voice Message
- Pool management and security
- Party Mode/Light Scenarios
- Video
- o Al
- Tesla Charger
- Garden Smart Watering/Light

#### Service Full covered

- Software compile with EU standards
- Machines compile with EU standards
- Installation compile with EU standards





# See now how Zero Home works

# View the Virto Smart Climate Solution in action here >>



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