Plug-N-Harvest

TASK 4.1: PLUG-N-HARVEST INTEGRATED PROTOTYPE AND PILOT ADAPTATION

ORGANIZATION: CERTH, ODINS, ETRA I+D, SIEMENS
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MEETING: 7TH PLENARY MEETING 26-27 FEBRUARY 2020, BRUSSELS, BELGIUM

Plug-N-Harvest: Task 4.1 Description

❑In T.4.1 all the software components and systems produced will be integrated together in order to build the PLUG-N-HARVEST Prototype.

❑Activities:

❑Development of the integration between the finalized components;

❑Run unit tests for each finished component;

❑Deployment in the core integration platform of the component.

❑Validate that the delivered integrated PLUG-N-HARVEST Integrated Prototype complies to the requirements set in WP1 and can be deployed at Use Cases for pilot demonstration and adaptation of the envisioned scenarios.

Plug-N-Harvest: Task 4.1 Progress

❑Connection with BMS Server

❑Send current data to BMS Server

❑Send historical data from smart house to BMS server.

❑Get Historical data from BMS server

❑Send load data to BMS server

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Plug-N-Harvest: Deliverables D4.1and 4.2 description and progress

❑ D.4.1 "Verified Integrated PnH Prototype". The deliverable details the integration and development status of all Plug-n- Harvest architectural entities for the seamless interoperation process among each other. All the necessary efforts for integrating the components are.

❑ D.4.2 "Pilot specific adaptation". The deliverable describes the smart house pre-pilot and the PnH pilots. The installation points of the smart house are presented as a guide for an indicative installation for any other pilot. Furthermore, the indicative installation points for all pilots are presented.

❑ Progress: All partners inputs are merged.

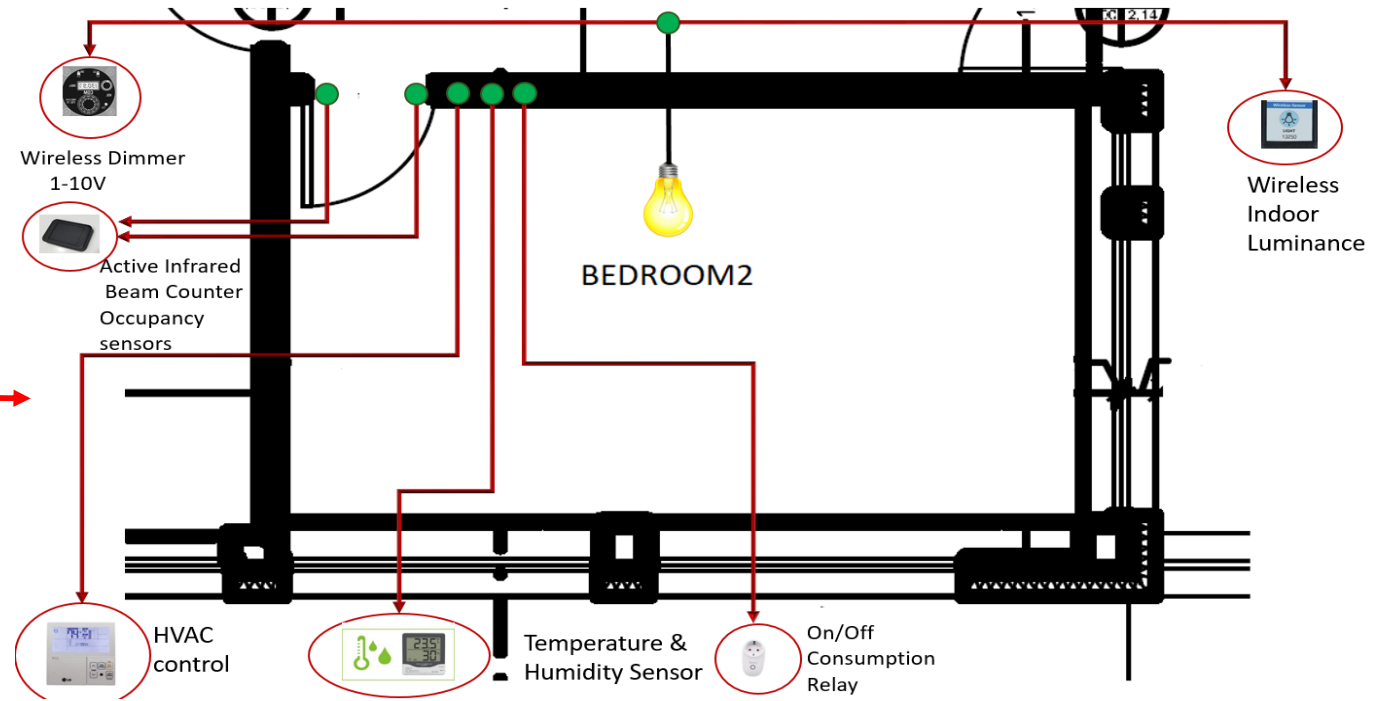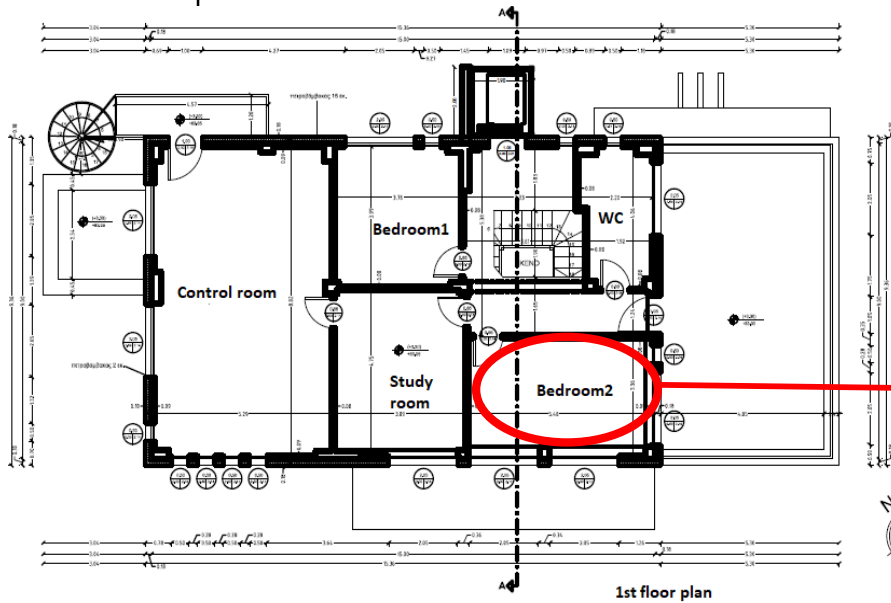❑ Next step: Final formatting and peer review.

Plug-N-Harvest: Pre-pilot CERTH/ITI smart house description

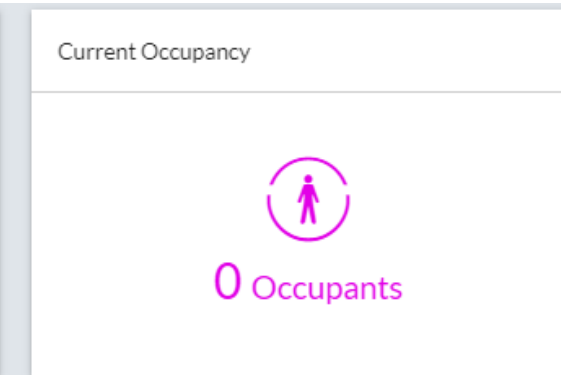The CERTH/ITI smart House is situated in Thessaloniki, Greece.

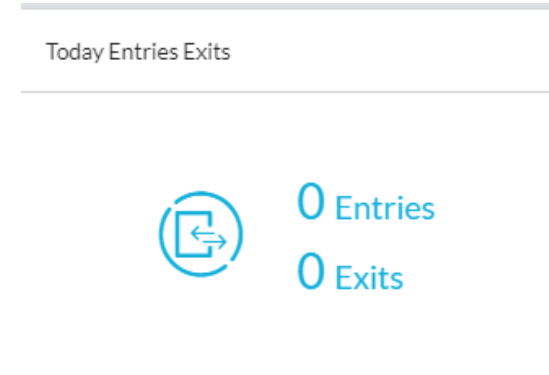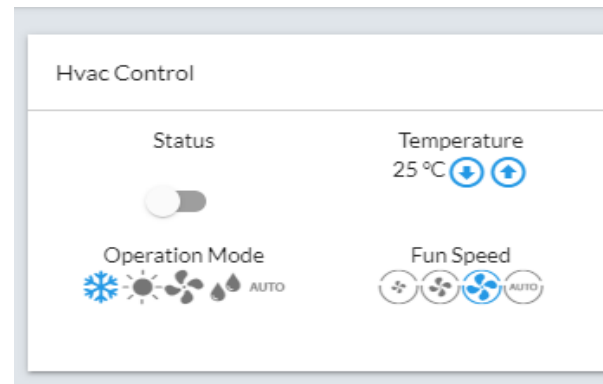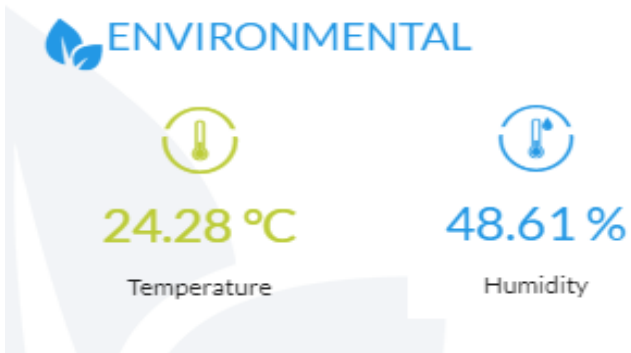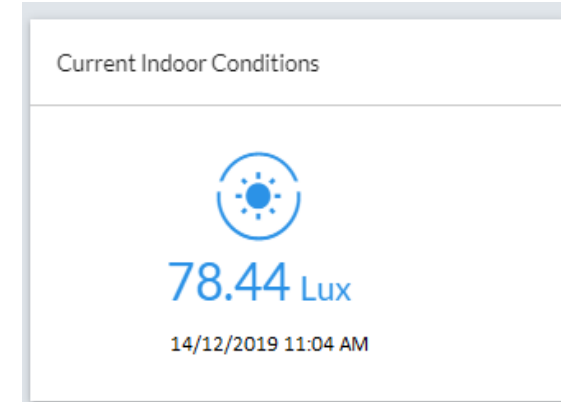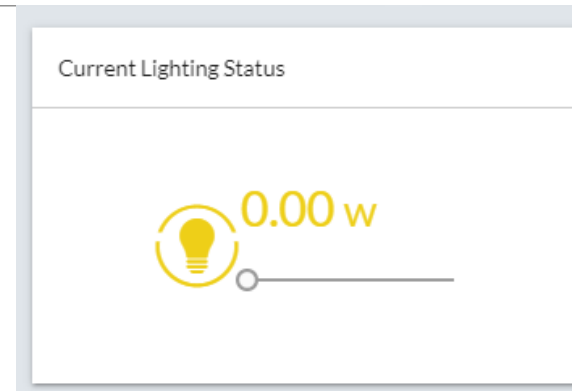❑ First n-ZEB smart house in Greece

❑ Rapid prototyping and novel technologies demonstration infrastructure resembling a real domestic building

❑ Combination of enhanced construction materials and intelligent ICT solutions creating a future-proof, sustainable and active testing validating and evaluating ecosystem

Plug-N-Harvest: Pre-pilot sensors and devices information

1st floor plan

Wireless Dimmer 1-10V

Active Infrared Beam Counter Occupancy sensors

BEDROOM2

Wireless Indoor Luminance

HVAC control

Temperature & Humidity Sensor

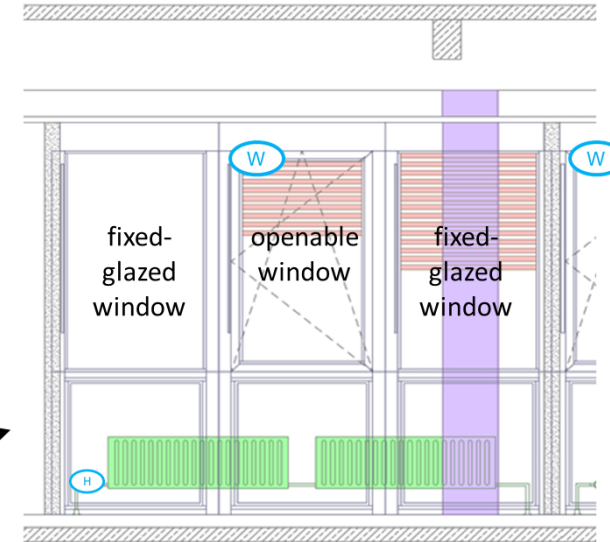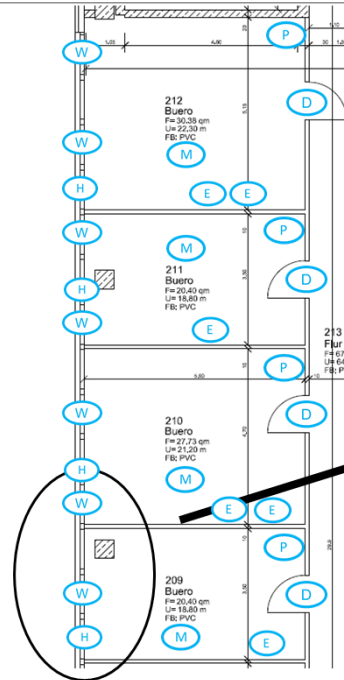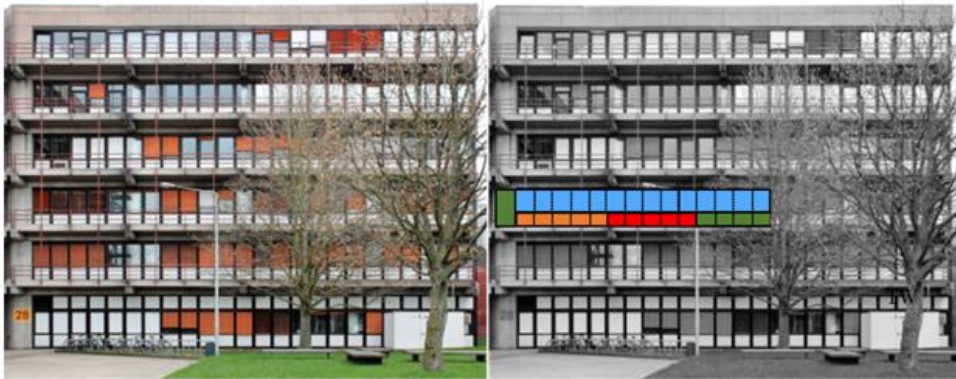On/Off Consumption Relay

Plug-N-Harvest: Pre-pilot monitoring

❑ Light Dimmer switch
❑ Occupancy sensor
❑ A Temperature- humidity sensor
❑ A luminance sensor
❑ Heating Ventilation Air Conditioning System

Current Lighting Status

0.00 w

Current Indoor Conditions

78.44 Lux

14/12/2019 11:04 AM

ENVIRONMENTAL

24.28 ℃
Temperature

48.61 %
Humidity

Hvac Control

Status

Temperature
25 ℃

Operation Mode   AUTO

Fun Speed   AUTO

Today Entries Exits

0 Entries
0 Exits

Current Occupancy

0 Occupants

Plug-N-Harvest: German Pilot

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Legend:

- **D** — Door Sensor
- **W** — Window Sensor
- **H** — Heating Consumption
- **E** — Electricity Consumption
- **M** — CO2, Humidity, Temperature
- **P** — Presence Detector

fixed-glazed window | openable window | fixed-glazed window

Plug-N-Harvest: German Pilot sensors and devices

- ❏ Sensors for the detection of CO_2, humidity, and temperature
- ❏ Presence detector
- ❏ Aeo-Tec Door and Window Sensors
- ❏ Heat flow meter: Spirit Z-WavePlus
- ❏ Electricity meter:

Irradiance presence

Door sensor

CO_2
Humidity
Temperature
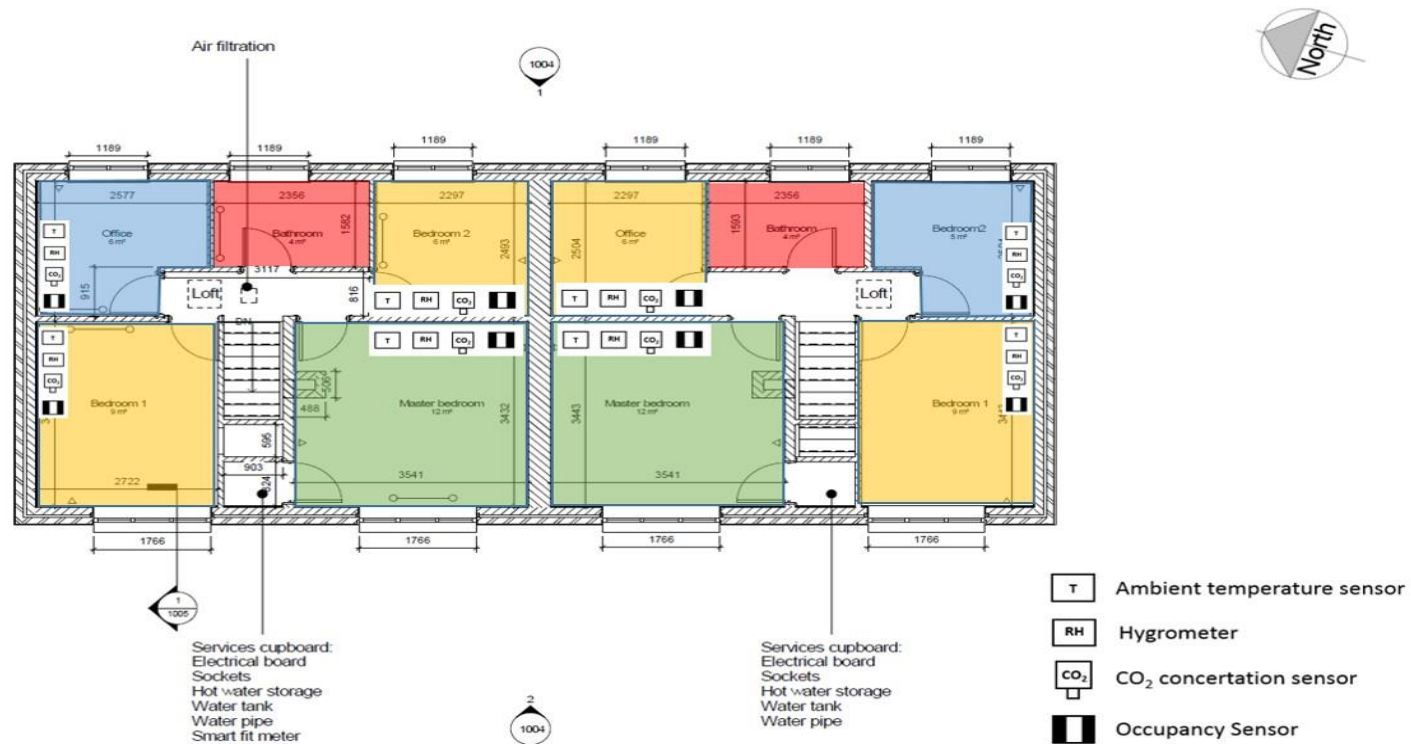
Electricity consumption

Heating consumption

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Plug-N-Harvest: British Pilot

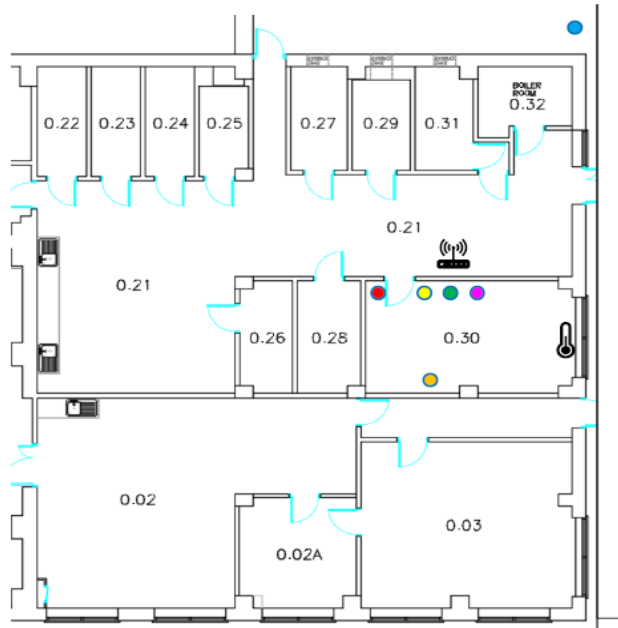# Plug-N-Harvest: British pilot Cardiff council

Plug-N-Harvest: British pilot Cardiff council

- ❏ **Weather Station x 1**
- ❏ **Solar Radiation Sensor (Pyranometer)**
- ❏ **Electricity meter**
- ❏ **Gas Meter**
- ❏ **Indoor Temperature, Humidity, and Indoor Presence sensor**
- ❏ **Indoor CO2 sensor**
- ❏ **WI-Fi range extender**

Plug-N-Harvest: British pilot Cardiff university

- HOBO MX2301A Outdoor Temp/RH Data Logger
- HOBO MX1101 Indoor Temp/RH Data Logger
- Raspberry Pi 4 + Aeotec Z-Stick
- Fibaro FGDW001-ZW5 Motion Sensor
- Fibaro FGDW002 Door Opening Sensor
- Fibaro FGWPG111 Wall Plug
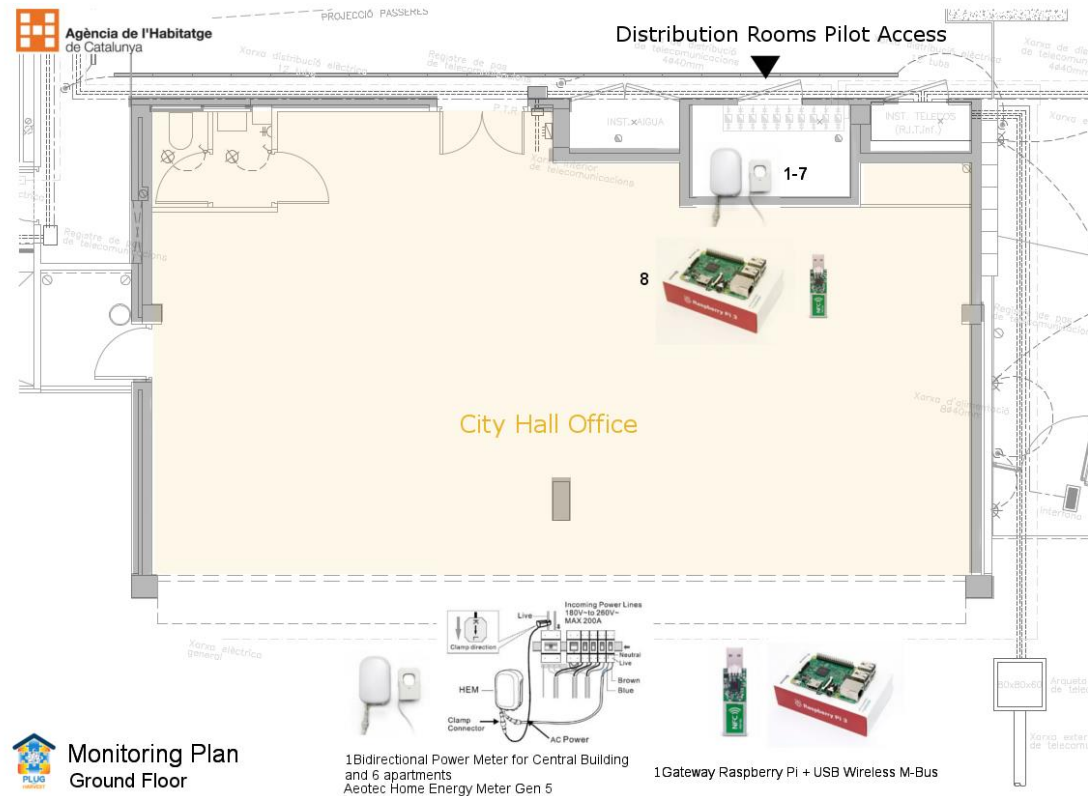- McoHome CO2 Sensor
- Eurotronic SPIRIT Thermostat
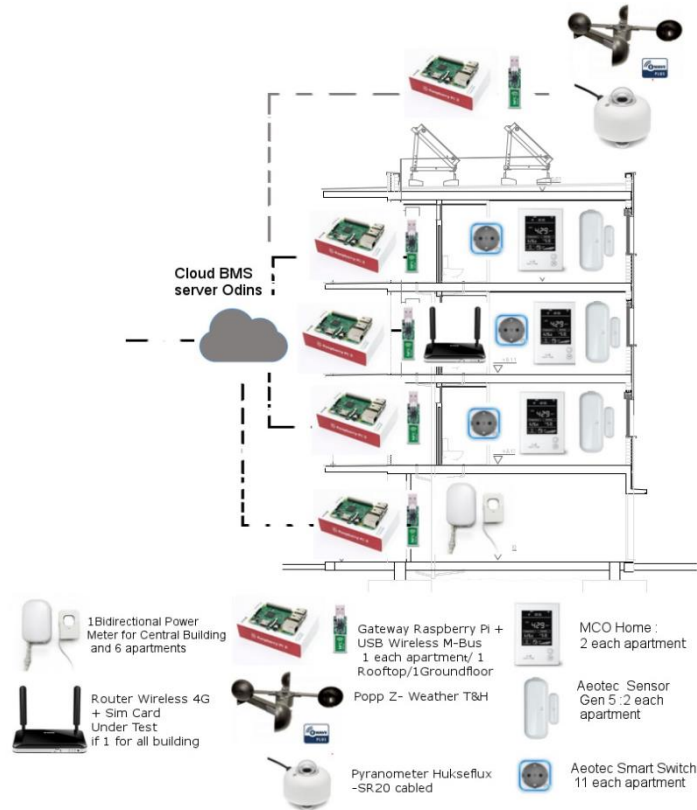
Plug-N-Harvest: British pilot Cardiff university
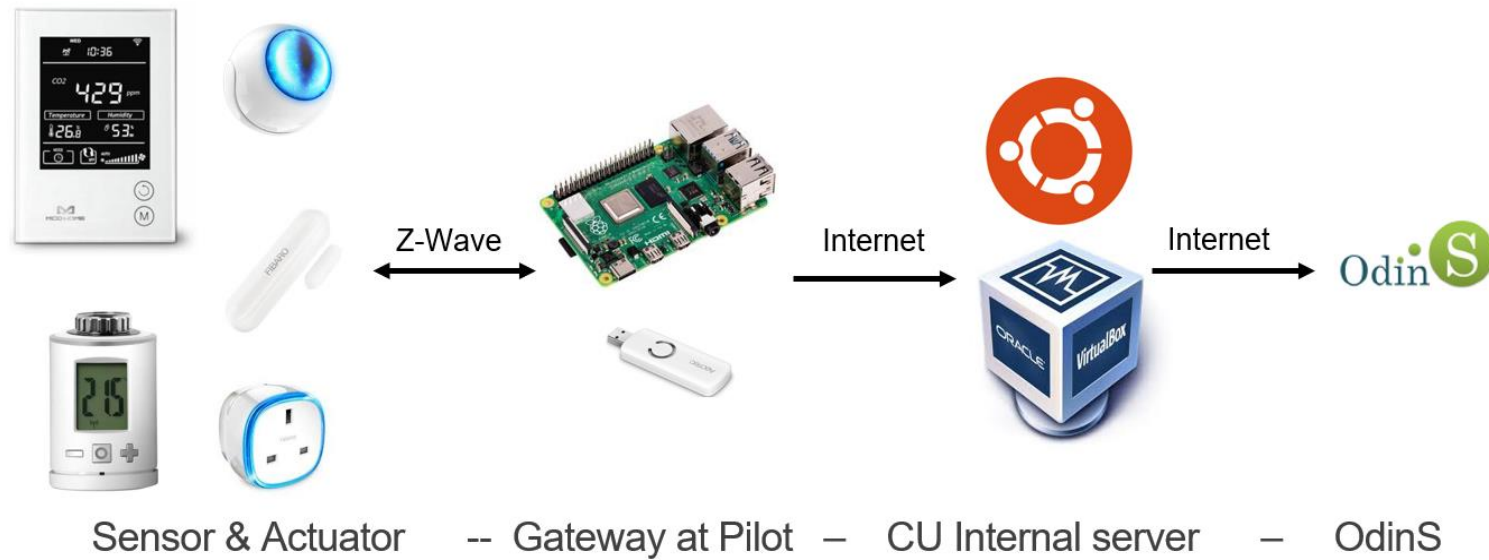
Sensor & Actuator -- Gateway at Pilot – CU Internal server – OdinS

Plug-N-Harvest: Spanish pilot
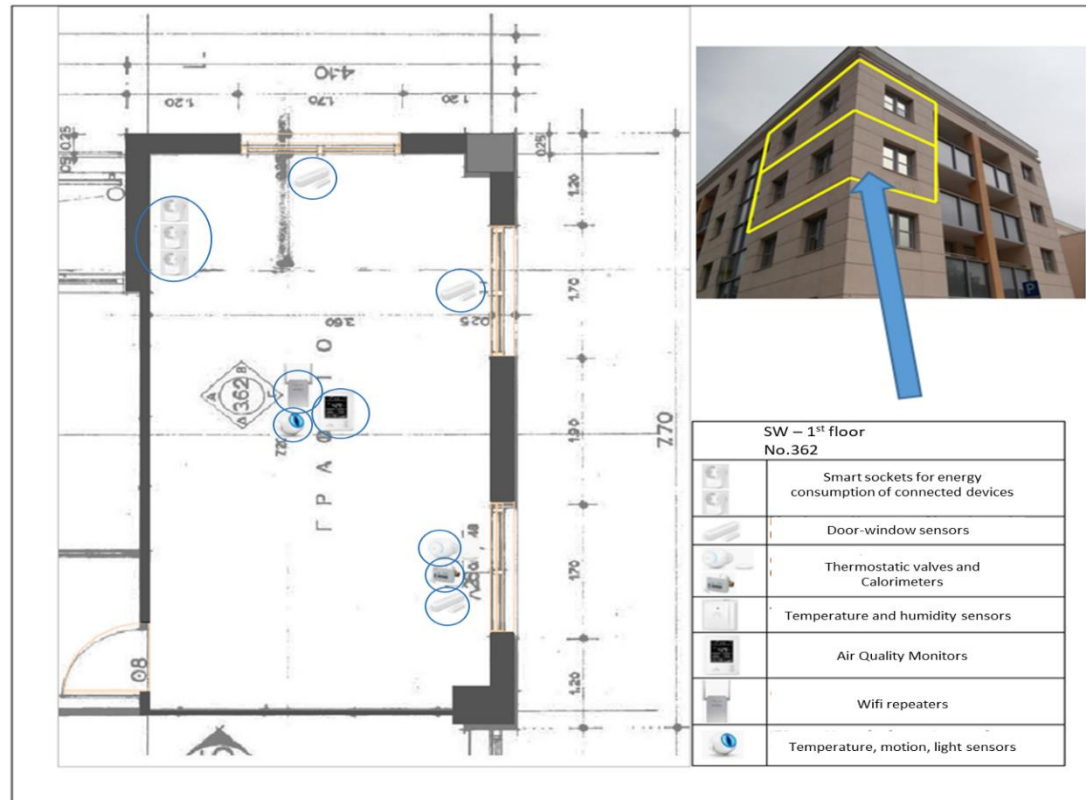
Plug-N-Harvest: Spanish pilot

Plug-N-Harvest: Spanish pilot

Plug-N-Harvest: Greek pilot

Plug-N-Harvest: Greek pilot

Plug-N-Harvest: Greek pilot

- ❑ Temperature and humidity sensors
- ❑ Temperature, motion, light sensors
- ❑ Door-window sensors
- ❑ Energy meters for sockets/lights with RPI
- ❑ Smart sockets for the energy consumption of connected devices
- ❑ Calorimeters for the energy consumption of thermal radiators
- ❑ Thermostatic valves
- ❑ CO2 sensors
- ❑ Wi-Fi repeaters
- ❑ LED dimmable lights
- ❑ Weather station

Thank you!