

## Area of action and objectives

### LEIRIA **Santo André Hospital.** | Water | Energy | Indoor air quality |

**Objectives**

Knowing the amount of water and energy consumed, the efficiency and potential for improvement of consumption.

Analysing the air quality of the building in terms of healthiness and comfort and compare it with the recommended reference parameters.

### BADAJOS **Perpetuo Socorro Hospital.** | Envelope |

**Objectives**

Studying the state of the building envelope, the efficiency of the insulation and the potential for improvement of the envelope.

### BAYONA **Ramsay Sante. Belharra Clinic.** | Self-generation | Energy |

**Objectives**

Evaluating the state of the self-consumption installations, the amount of energy generated and the efficiency of generation.

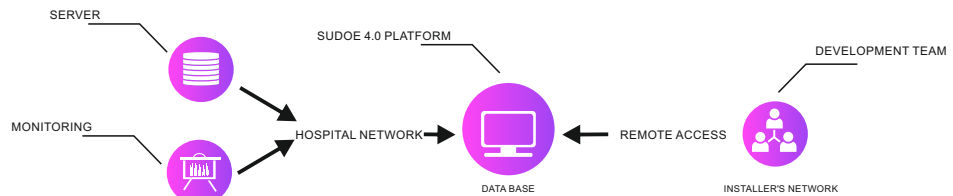
Measuring the amount of energy consumed and the efficiency and improvement potentials of energy consumption.

## 5 pillars



## Architecture Monitoring

The ultimate goal of monitoring is to supervise and evaluate in real time the state of the building in terms of its efficiency in each of the five established pillars, as well as to warn of any changes that may affect the performance or well-being of the occupants.



The Hospital Sudoe 4.0 platform and the database from which it is fed, will be hosted on a dedicated hospital computer, monitoring requires communication between the measure-

ment equipment and this PC, communication will be carried out through the hospital network.

## Elements and parameters to monitor

The parameters have been grouped according to the 5 pillars and in turn, each pillar will be broken down into sections according to the type of parameters to be monitored, these parameters have been characterised through the identification of the following fields:

### 5 PILLARS:

**Energy:**

General consumption and main consuming equipment.

**Water:**

Identify irregularities and low efficiencies in consumption.

**Envelope:**

Thermal transmittance of walls, windows and thermal bridges.

**Self-generation**

Photovoltaic installation and other renewable energy sources.

**Air quality:**

Areas requiring specific air quality, high occupancy areas and air conditioning installations.

### DEFINED PARAMETERS

- Units.
- Magnitudes.
- Measuring equipment.
- Measuring point.
- Specifications of the measurement.

## Case studies and real data capture

- Perpetuo Socorro Hospital (Junta de Extremadura)
- Ramsay Sante Belharra Clinic (NOBATEK)
- Santo André Hospital (IST & ADENE)

