



## I.5 SATO end-user interaction tools

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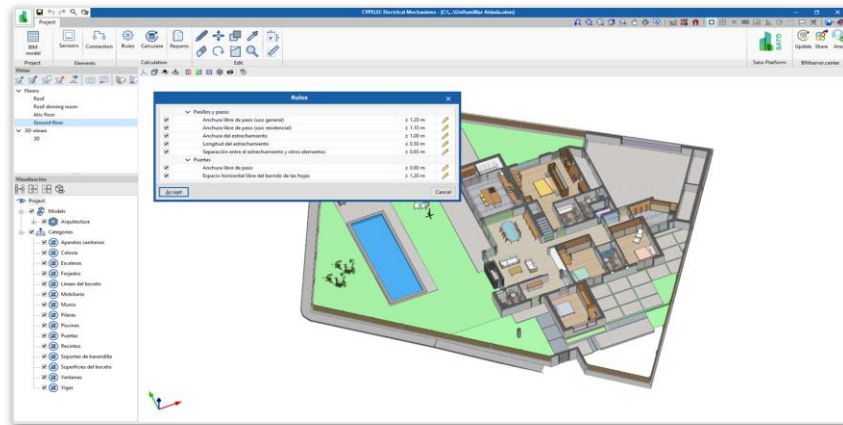


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# I.5 SATO end-user interaction tools

SATO WebApp and Open BIM SATO has a **user centered approach and iterative design**.

## Open BIM SATO



### Task 5.1 and 5.3

Open BIM SATO will allow users to **display sensors in a BIM model** of an existing building and **retrieve information of the real sensors** installed in the building, it also will allow users to **create different assessment rules** and apply them to the 3D model and data.

## SATO WebApp

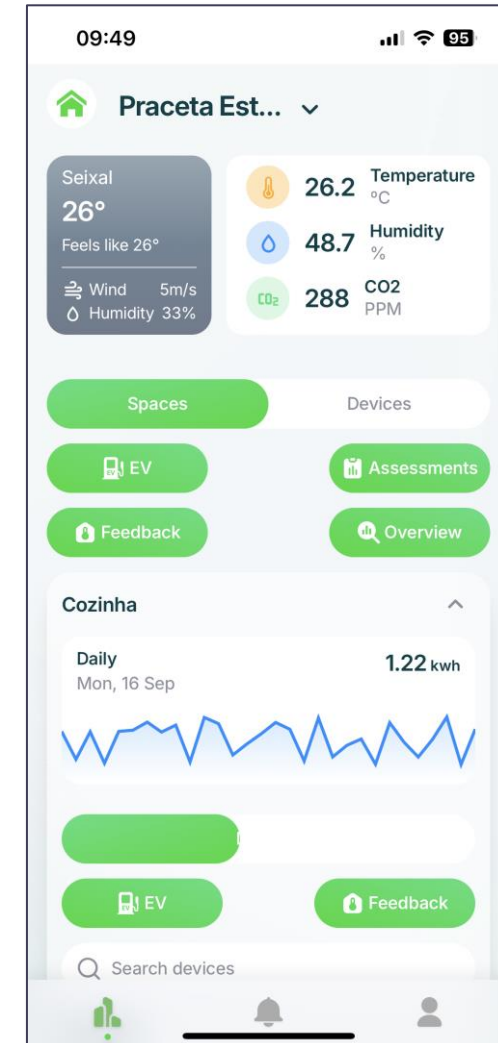
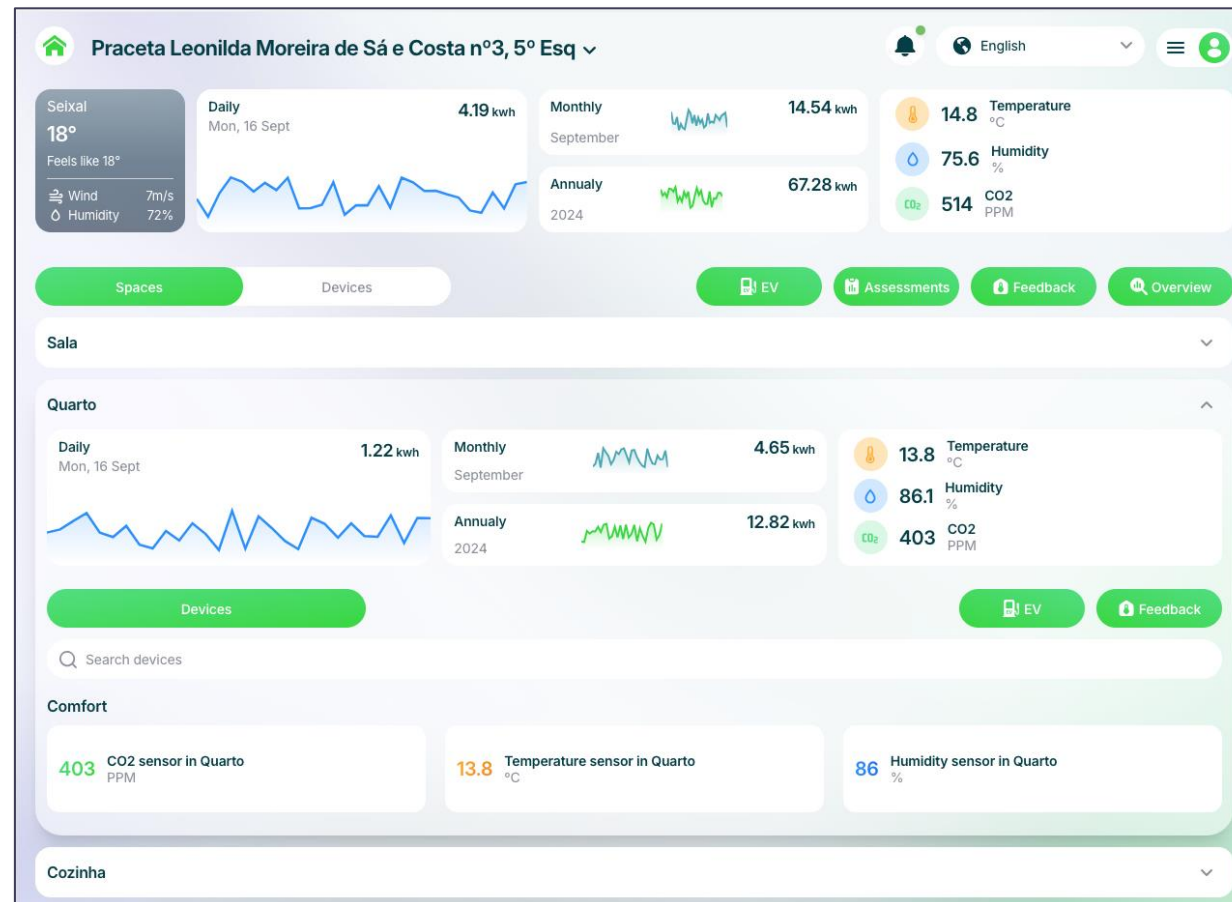


### Task 5.2 and 5.4

The SATO Platform is an **interactive application** for the different users so that they can **interact with their homes and service buildings, control existing devices**, as well as specify their preferences in terms of **comfort**, and consult the **energy consumption** of facilities, rooms, and appliances.

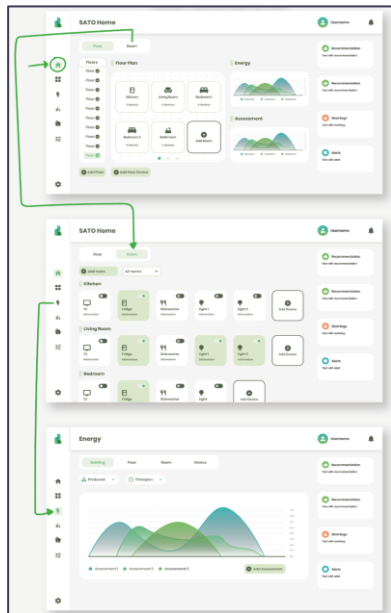
# SATO WebApp

- One of the User interfaces of the SATO platform
- Web and Mobile Application

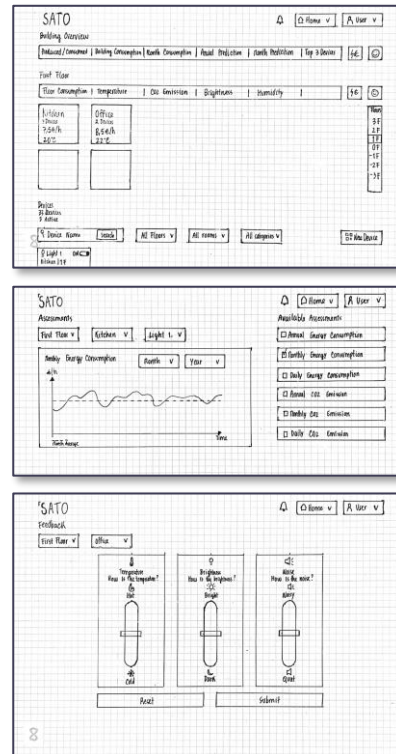


# User-Centered Methodology

1<sup>st</sup> Mock-up



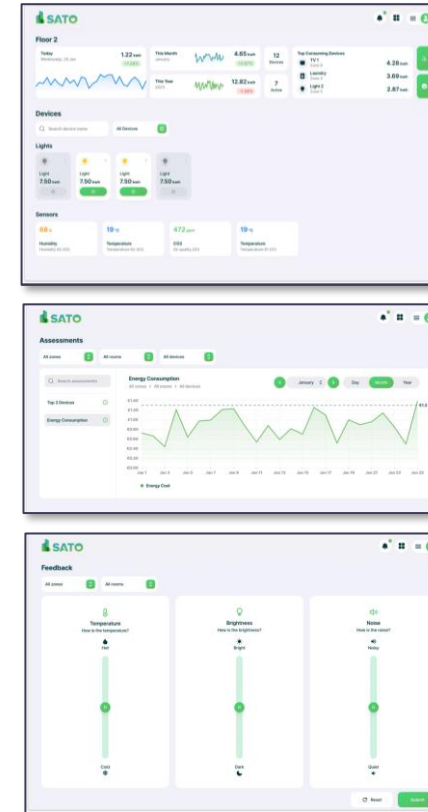
2<sup>nd</sup> Mock-up



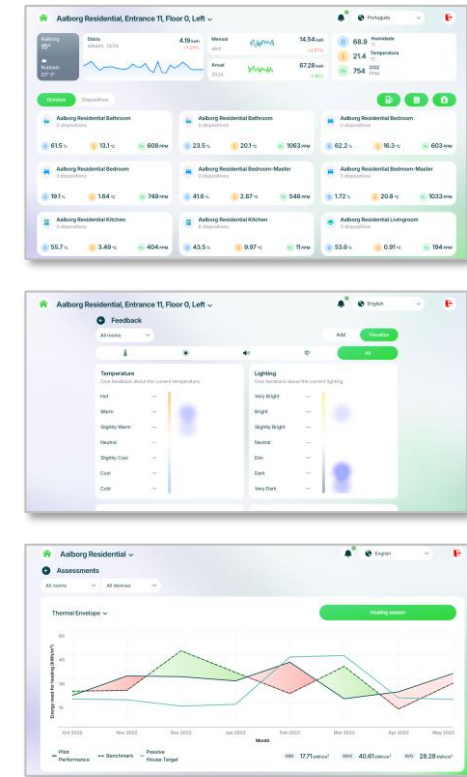
1<sup>st</sup> Functional



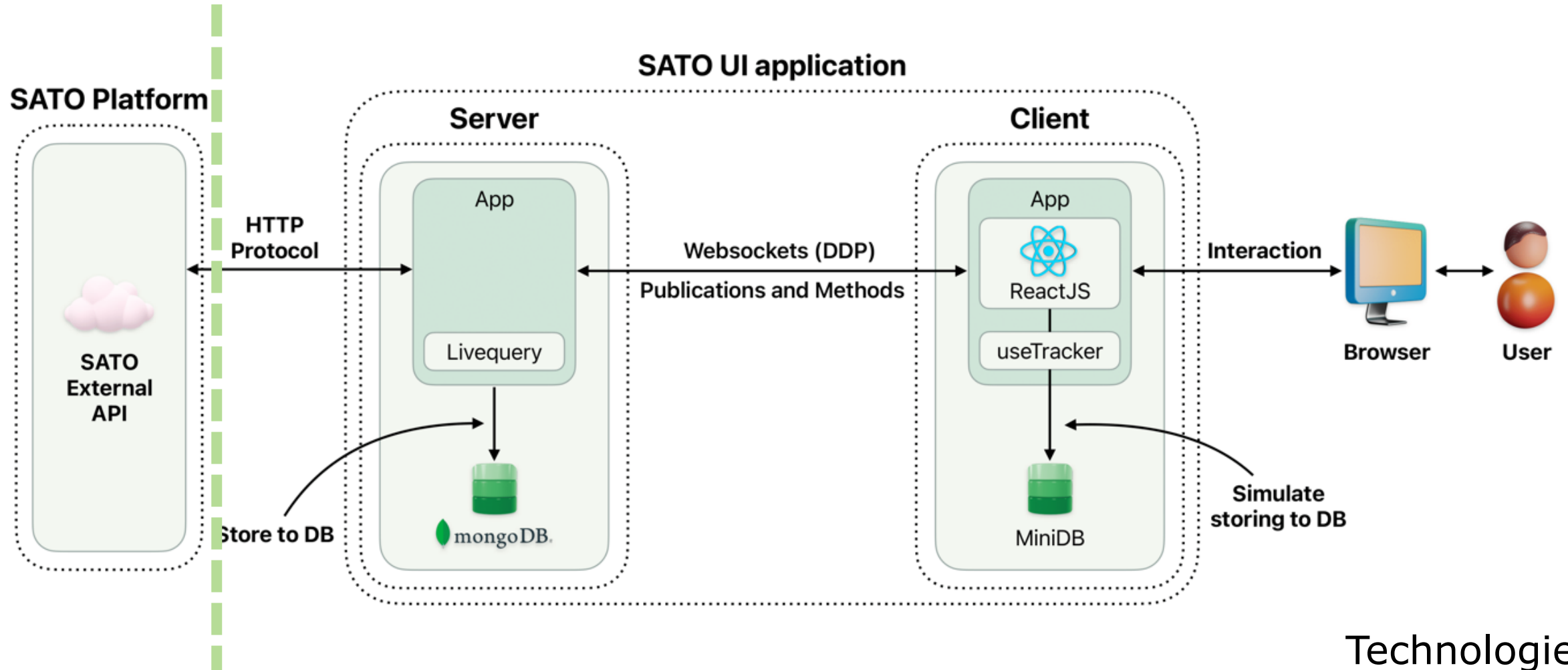
2<sup>nd</sup> Functional



Final App



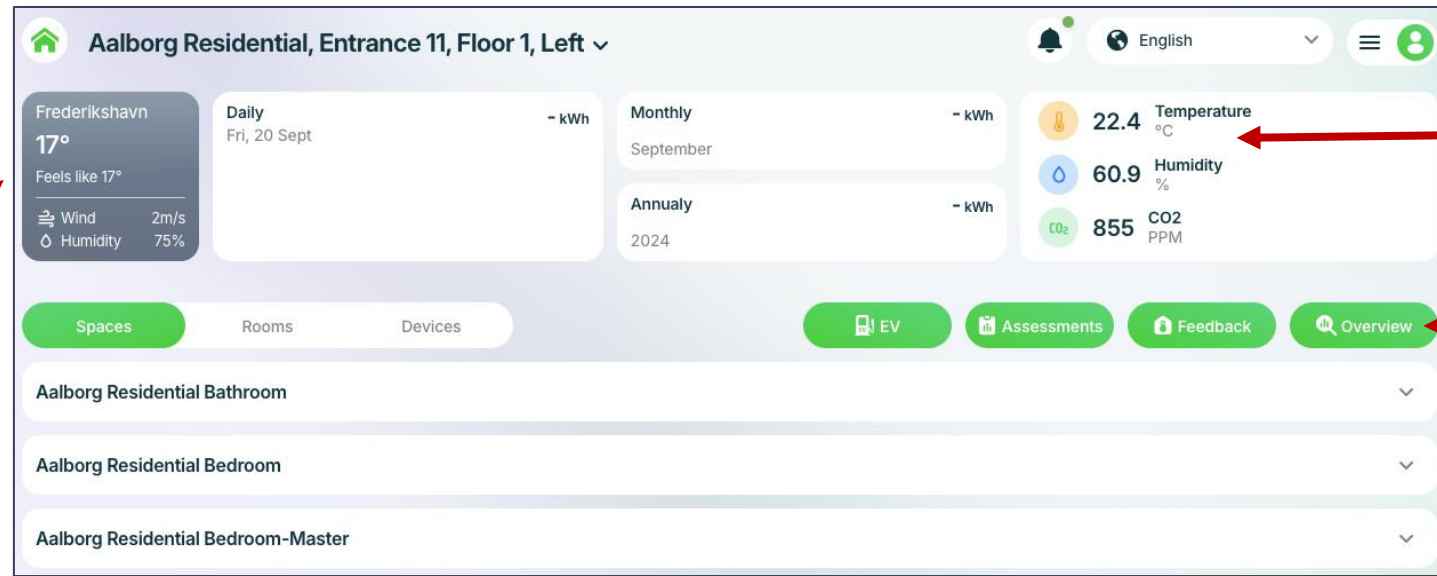
# Architecture



## Technologies

- MeteorJS
- ReactJS
- TailwindCSS

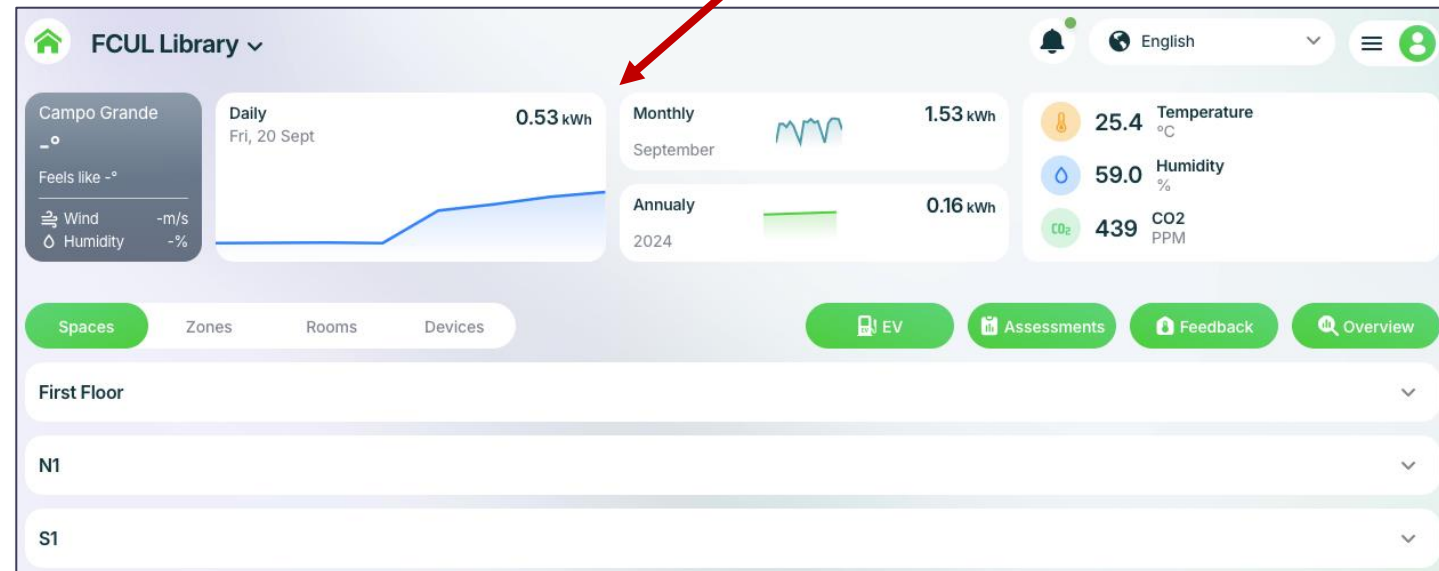
# Overview: Weather, Comfort, Assessments, and Consumption



Comfort

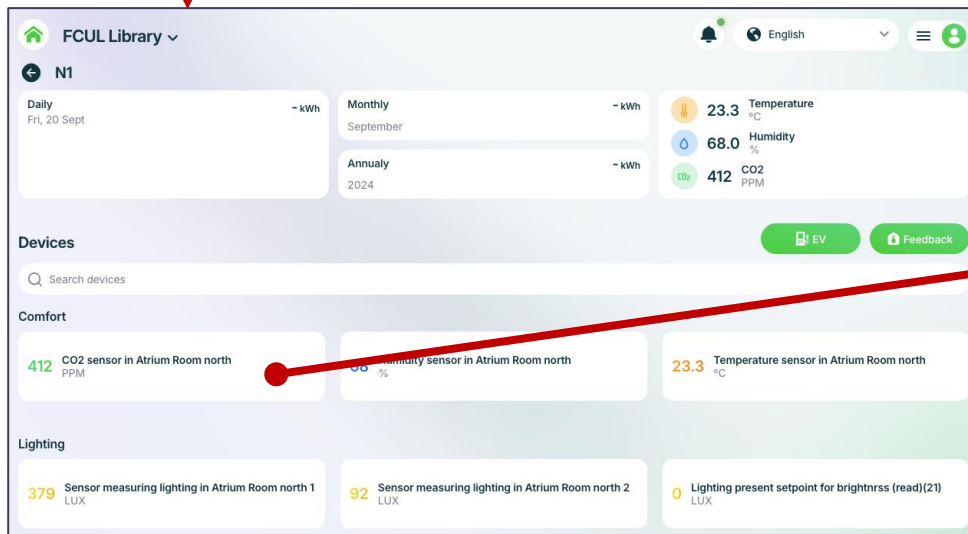
Assessments

Consumption





# Real Data from Sensors



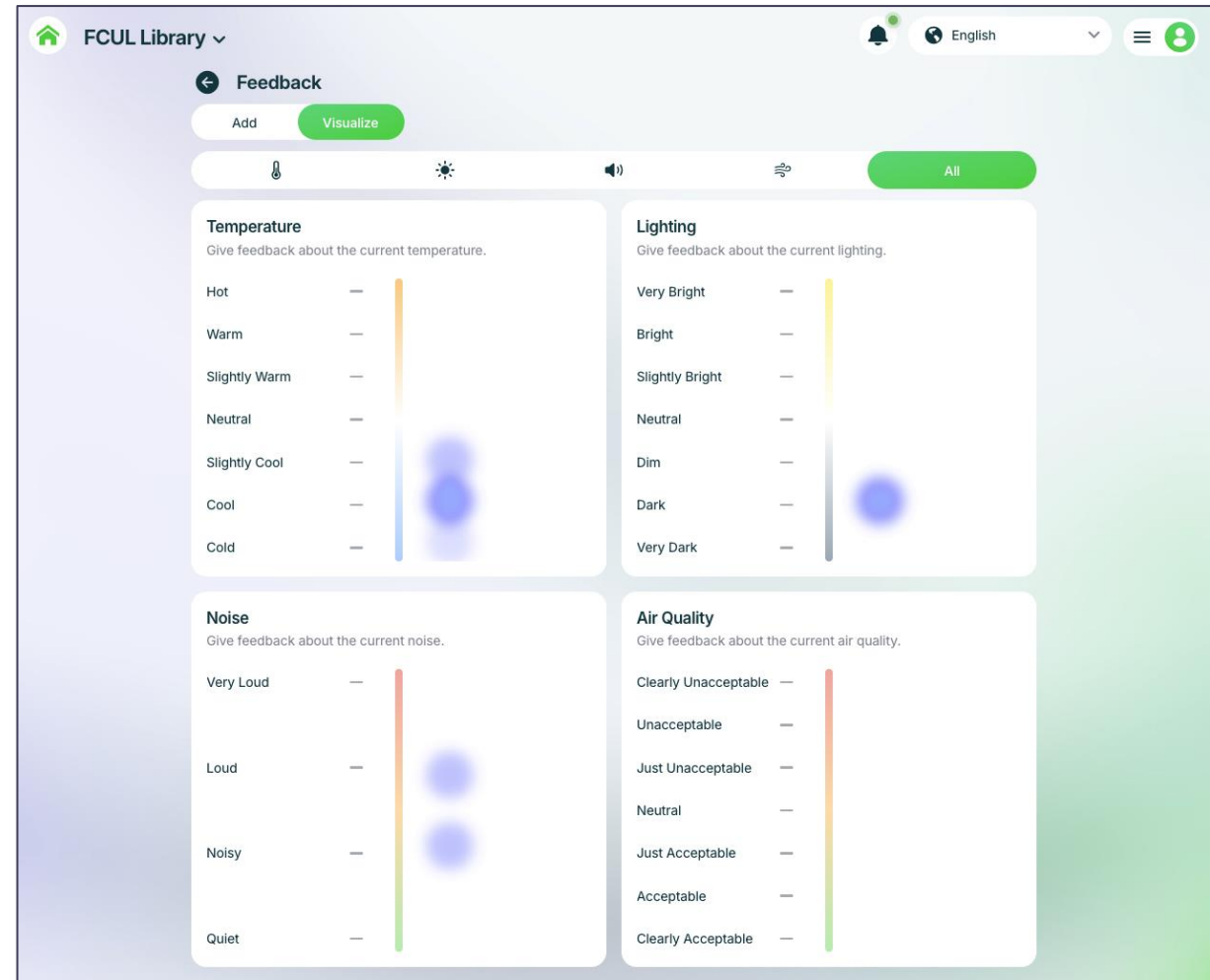
# Feedback

## Giving

The screenshot shows the 'FCUL Library' feedback interface in the 'Add' mode. The top navigation bar includes a home icon, 'FCUL Library', a notification bell, 'English', and a user profile icon. Below the navigation bar, the 'Feedback' section has two tabs: 'Add' (active) and 'Visualize'. A category bar at the top of the content area contains icons for Temperature, Lighting, Noise, and Air Quality, along with an 'All' button. The main content area is divided into four panels, each with a title, a subtitle, a vertical color scale, and a green 'Add' button with a white arrow icon.

- Temperature:** Give feedback about the current temperature. The scale ranges from Hot (red) to Cold (blue). The 'Add' button is positioned to the right of the scale.
- Lighting:** Give feedback about the current lighting. The scale ranges from Very Bright (yellow) to Very Dark (dark blue). The 'Add' button is positioned to the right of the scale.
- Noise:** Give feedback about the current noise. The scale ranges from Very Loud (red) to Quiet (green). The 'Add' button is positioned to the right of the scale.
- Air Quality:** Give feedback about the current air quality. The scale ranges from Clearly Unacceptable (red) to Clearly Acceptable (green). The 'Add' button is positioned to the right of the scale.

## Visualizing

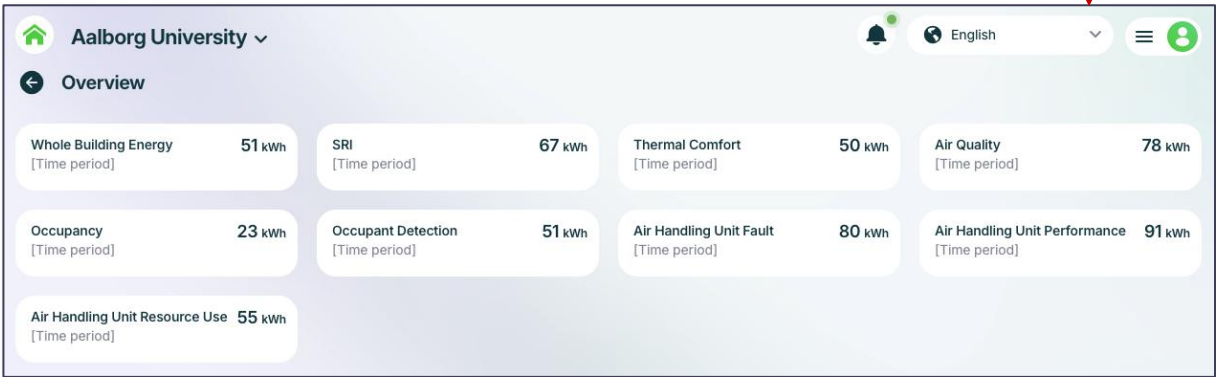
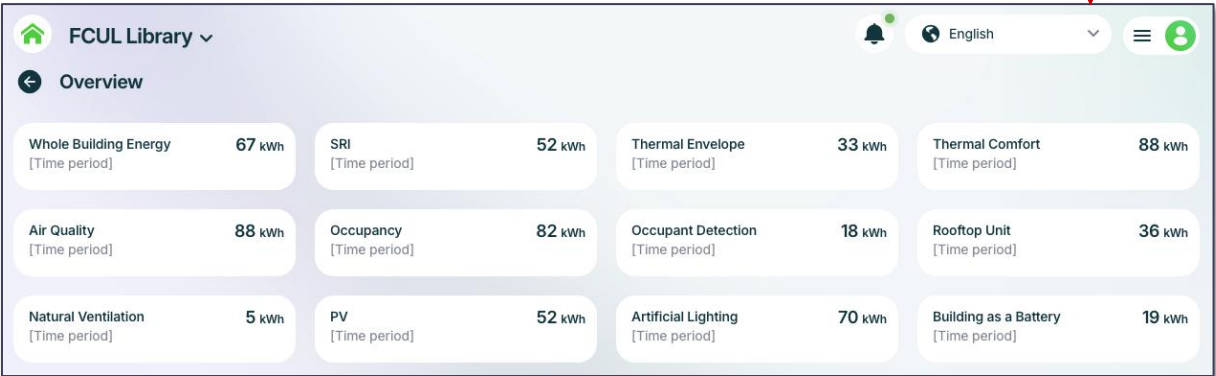
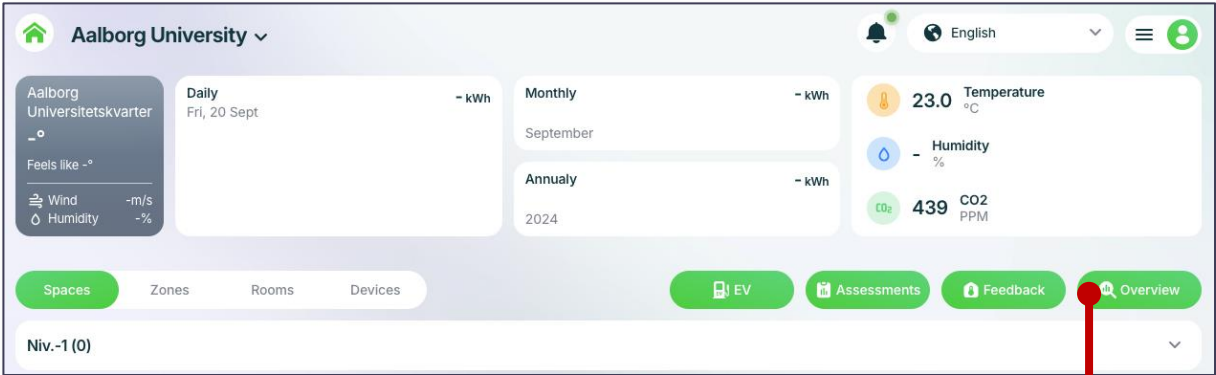
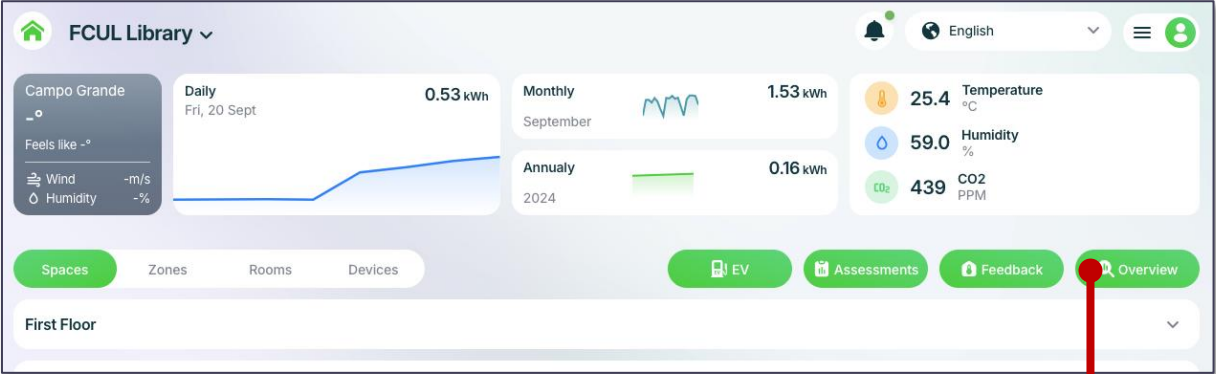




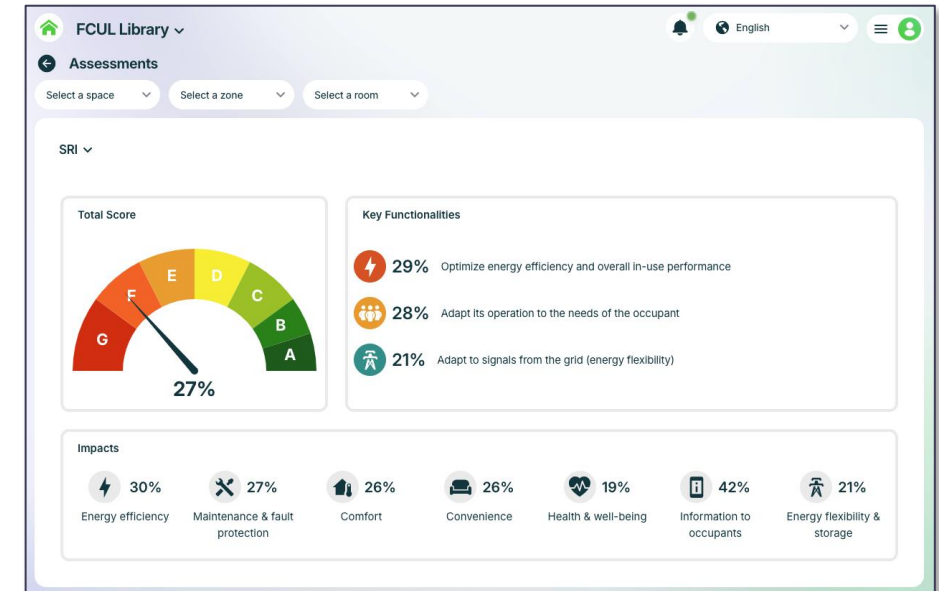
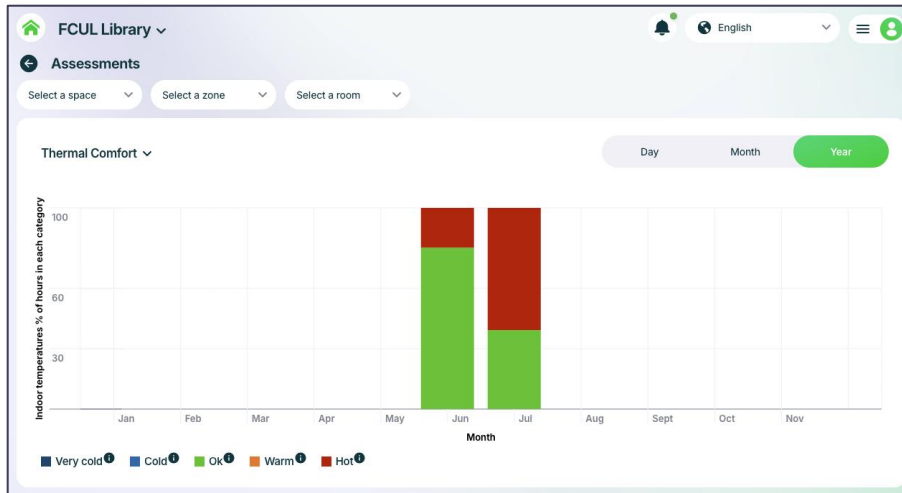
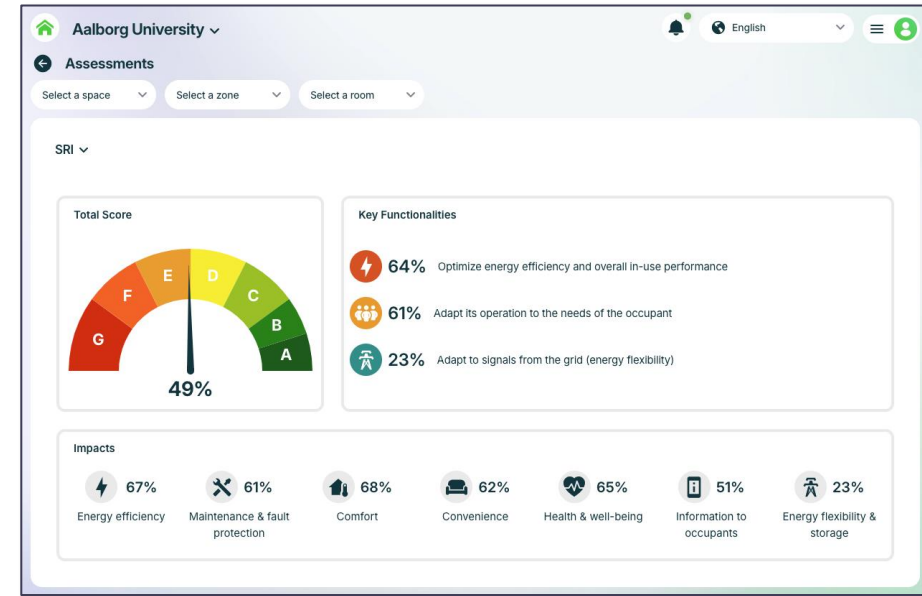
# Assessments Overall

- 20+ Assessments available
- Computed in real-time
- Overview of assessments per building
- Detailed information for each assessment

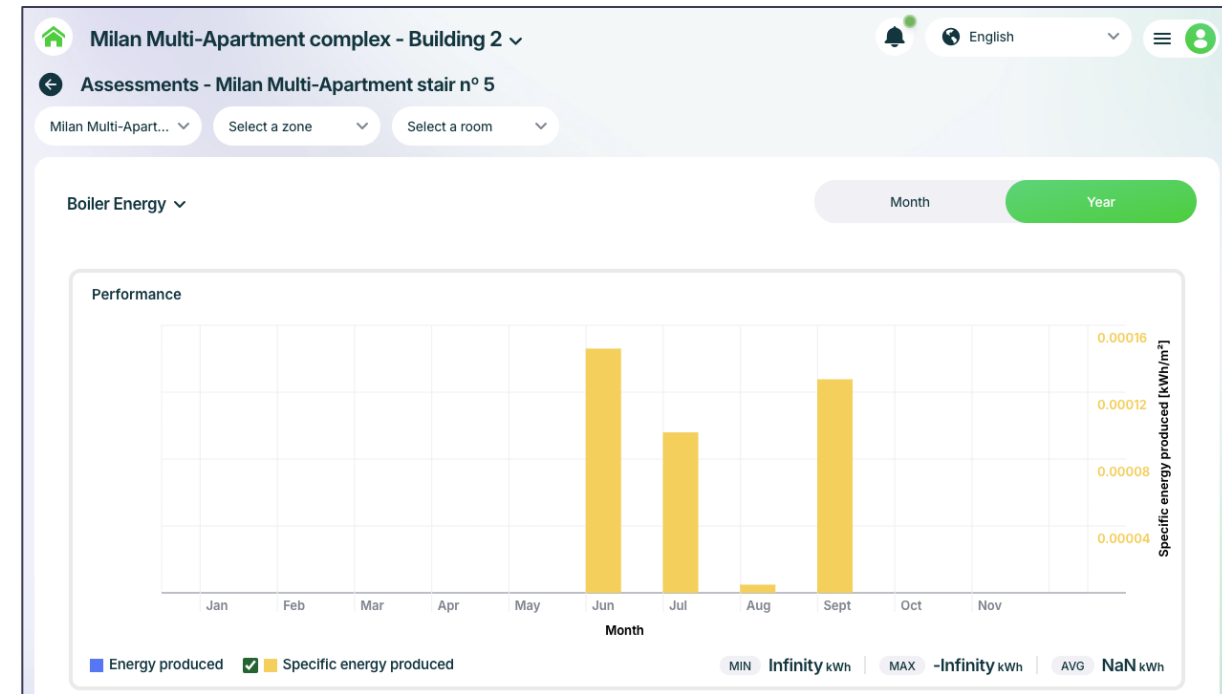
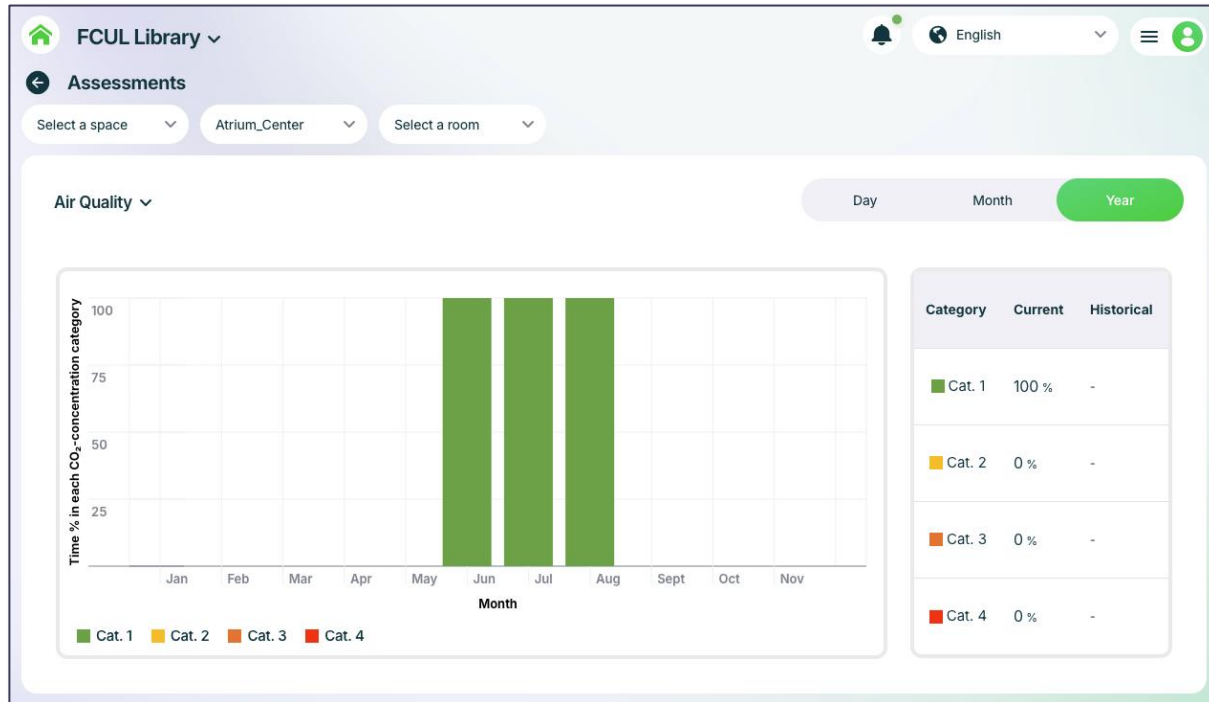
# Assessments Overview



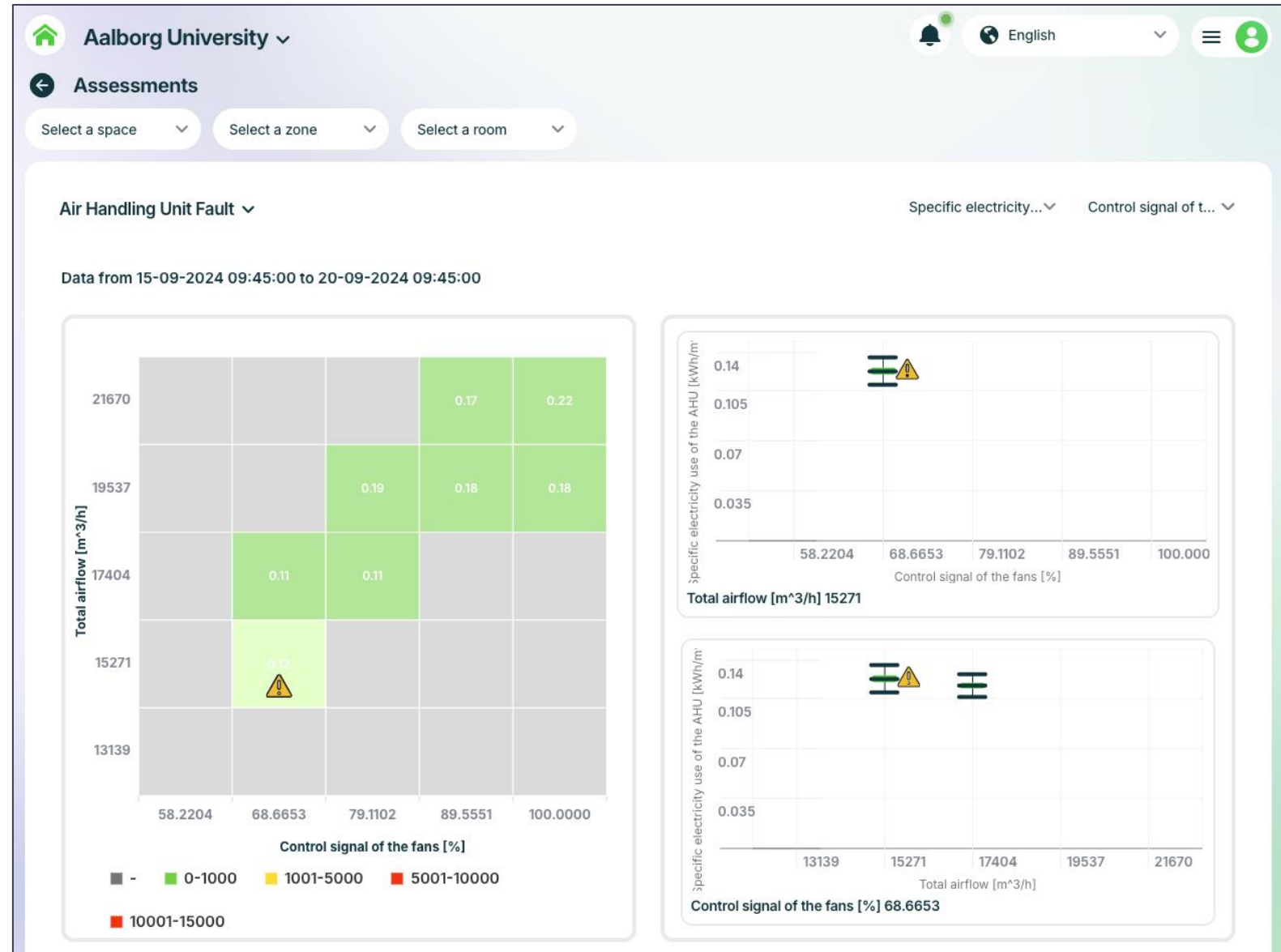
# Assessments Details



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# Assessments Details



# Conclusions

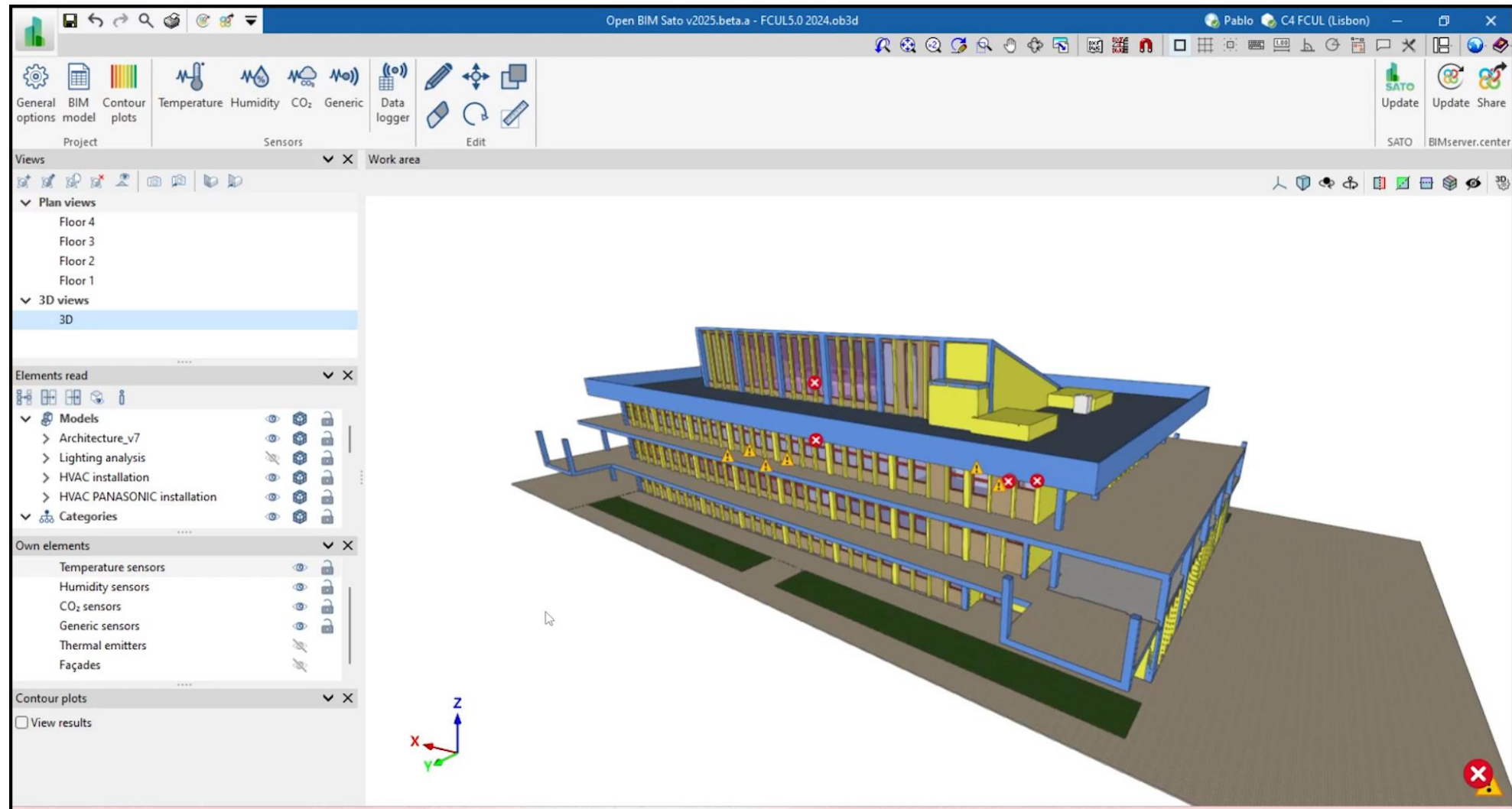
- The **SATO WebApp** enables real-time energy monitoring, management, and optimization across buildings
  - Offers customizable assessment tools and feedback mechanisms to optimize energy use and improve comfort
- **User-Centric Design:** Developed with a focus on user needs and usability
- **Iterative Improvement:** Continuous feedback and testing ensured a highly user-friendly interface



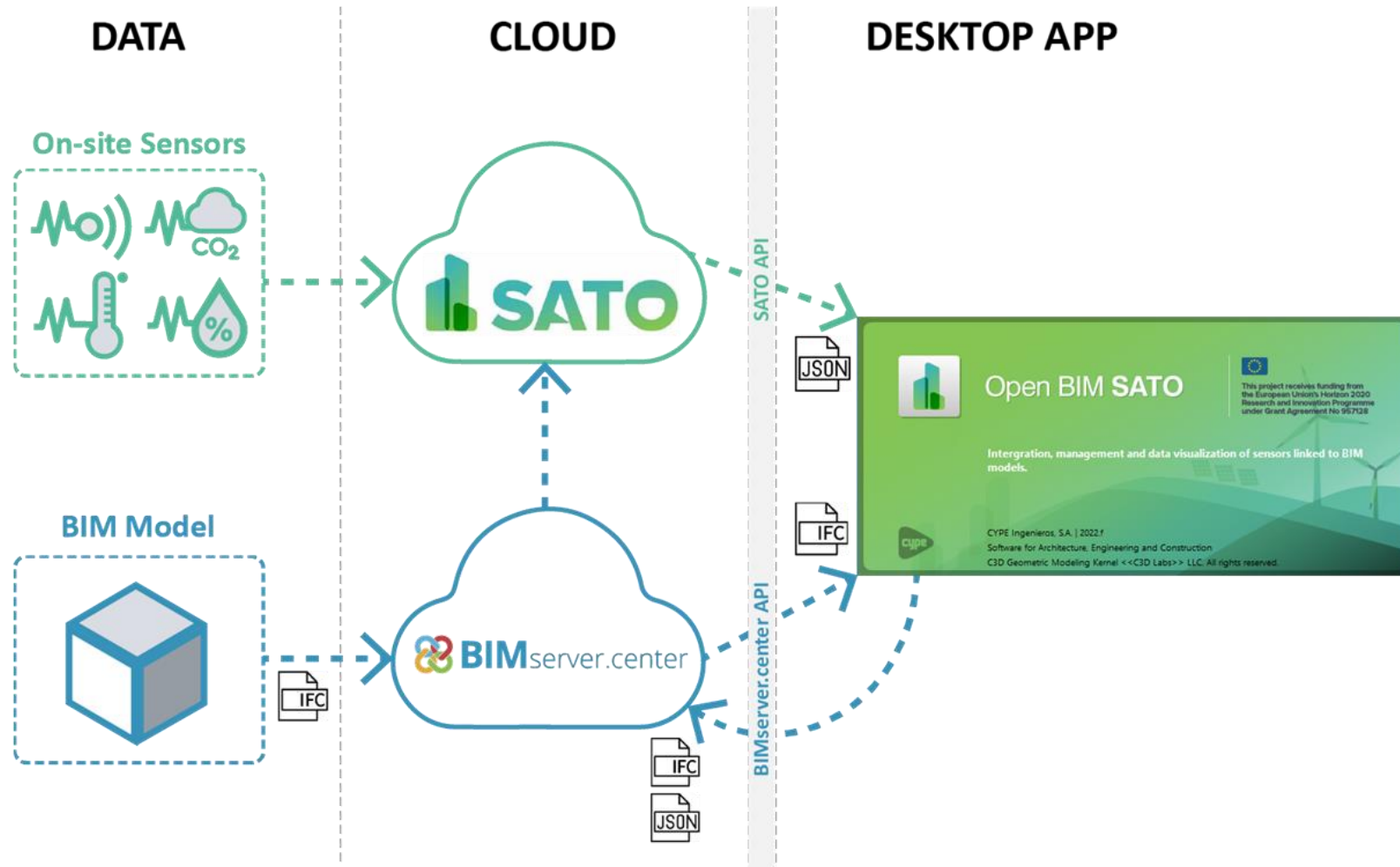
# Open BIM SATO



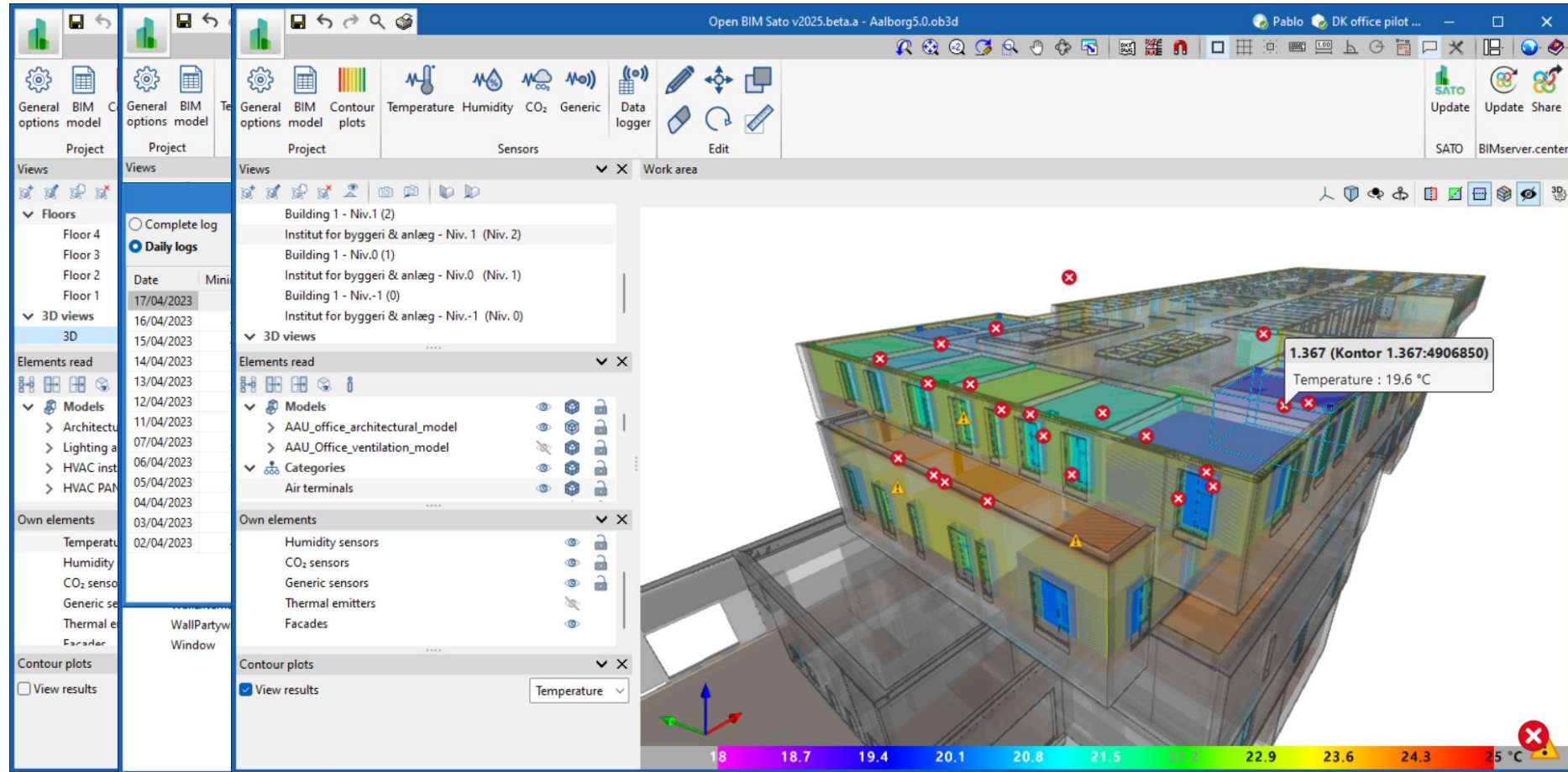
# Open BIM SATO in a nutshell



# Open BIM SATO: Data

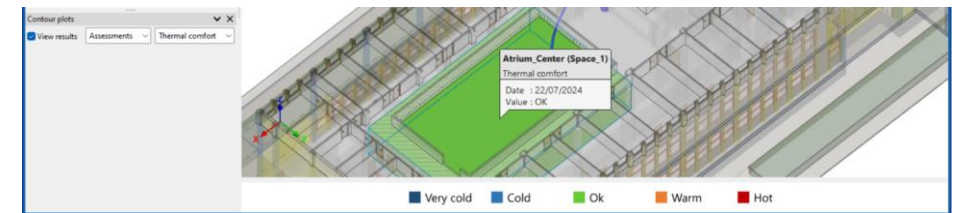
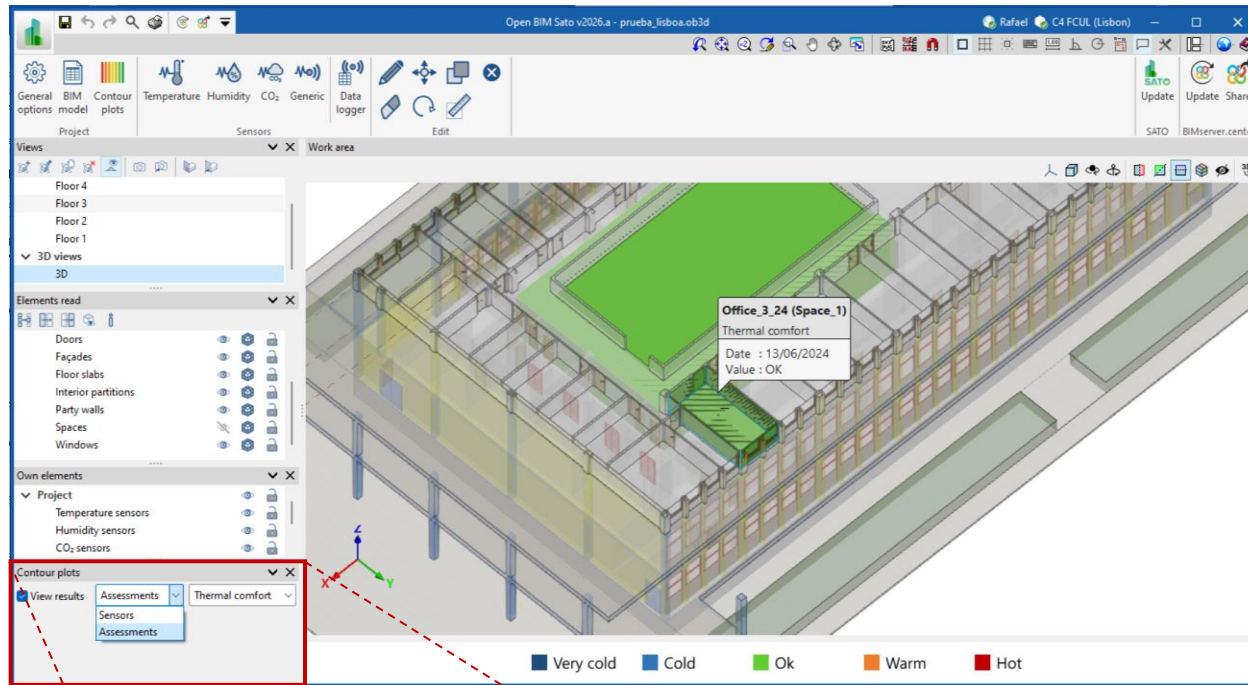


# Innovative visualization: Sensors location & results





# Innovative visualization: Assessments results



a) Thermal comfort assessment visualisation, with its legend and information label.



b) Air quality assessment visualisation, with its legend and information label.



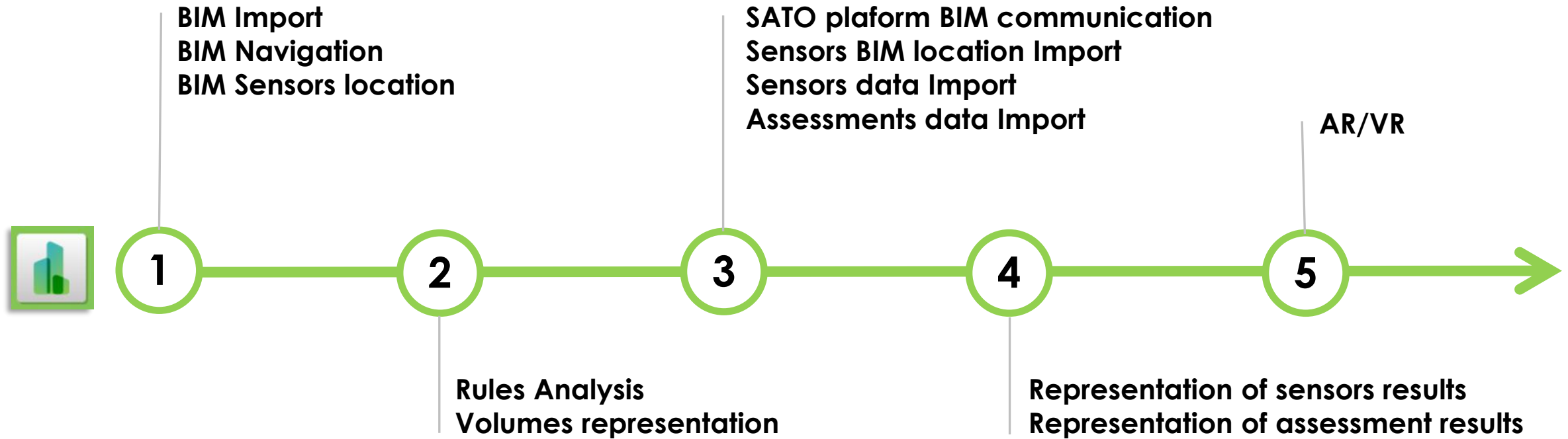
c) Occupancy level assessment visualisation, with its legend and information label.

# Innovative visualization: **AR**

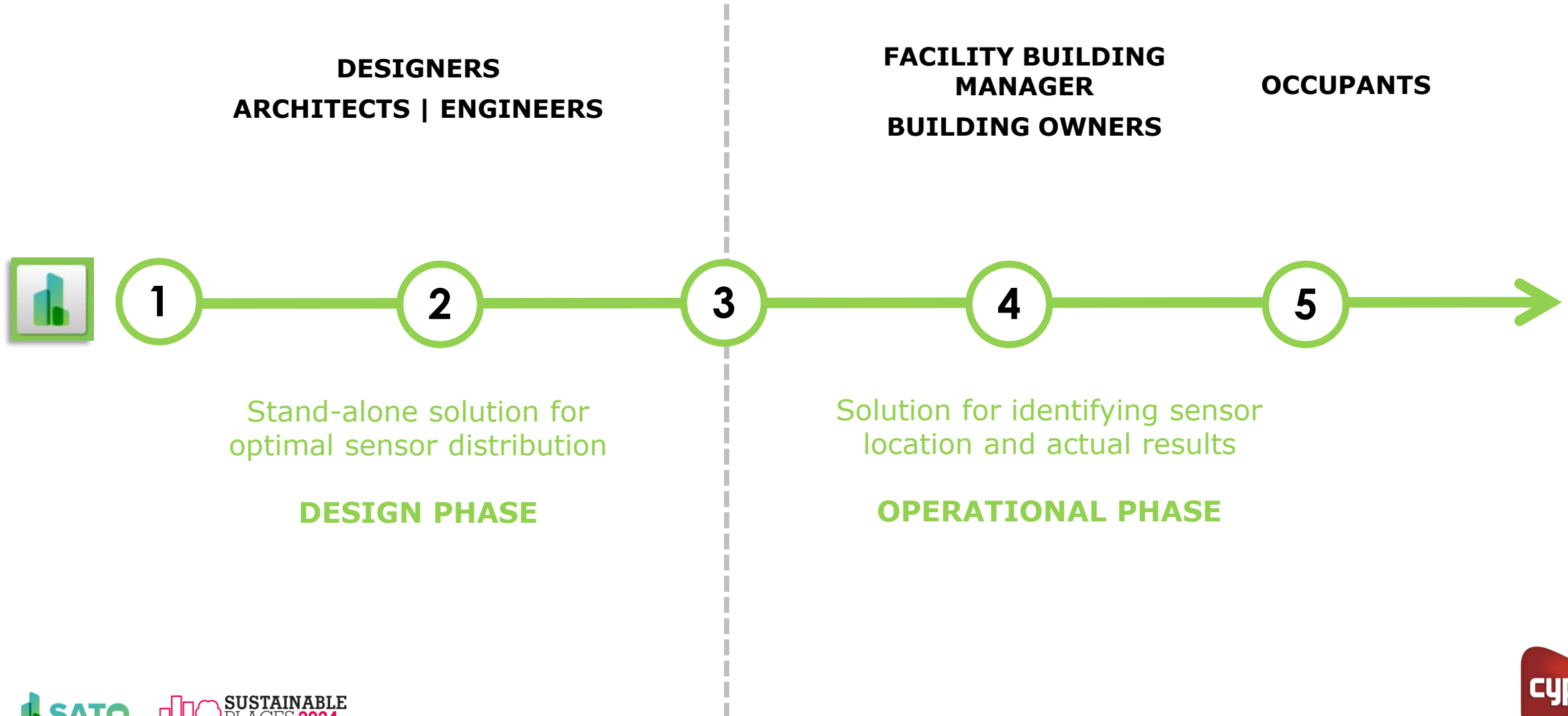




# Open BIM SATO: **Workflow**



# Open BIM SATO: Product & users





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# Thank you

