ACCEPT

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Project overview

ACCEPT (Assistant for Quality Check during Construction Execution Processes for Energy-efficienT buildings) is a project through the Horizon 2020 Programme. This project aims at achieving the followings key objectives on site: knowledge transfer, project coordination, quality assurance of construction process.

The ACCEPT System is envisioned as a distributed system with three type of end user contact points as well as a contact point for sensors. Figure 1 depicts the high-level architecture of the whole ACCEPT System. The corners of the architecture are the four interaction points. The interaction with the end users will be done via the *SiMaApp* (mobile device), *CoOpApp* (smart glasses) and *Dashboard* (web/desktop application).
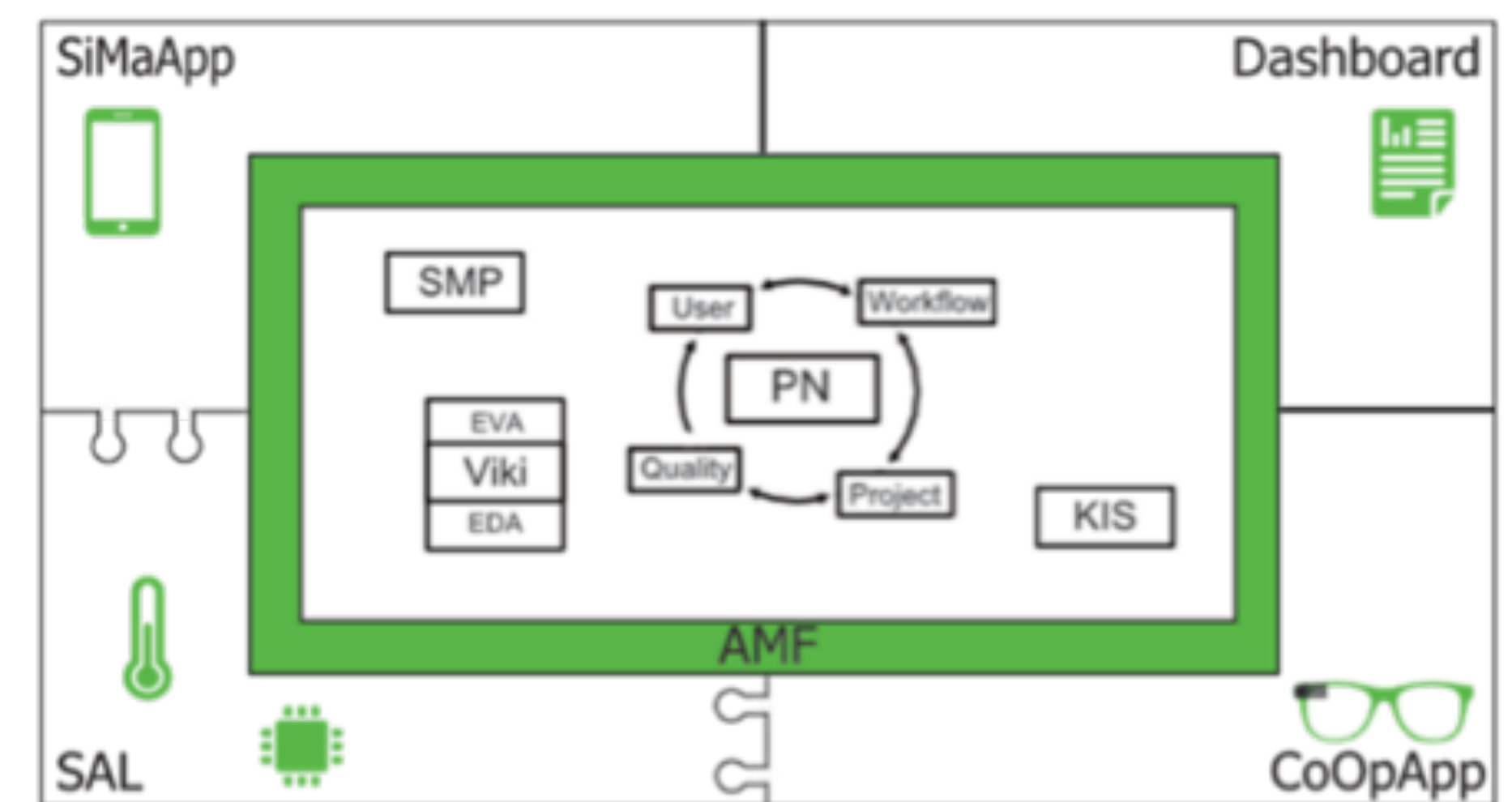

Ffig 1. ACCEPT system architecture

Methods

LUCID-ULg is developing the web client application called Dashboard.

It uses the 'responsive design' guidelines, which allows web interfaces to adapt to the screen size of its devices.

It collects information from multiple sources (sensors, checklists and workflow), synthesizes and visualizes quality-related metrics and issues.

Based on studies made by Fraunhofer Institute for Building Physics IBP, two major sources of problems appear during construction site: humidity and human errors. Therefore, as a response to these problems, the dashboard offers two solutions:
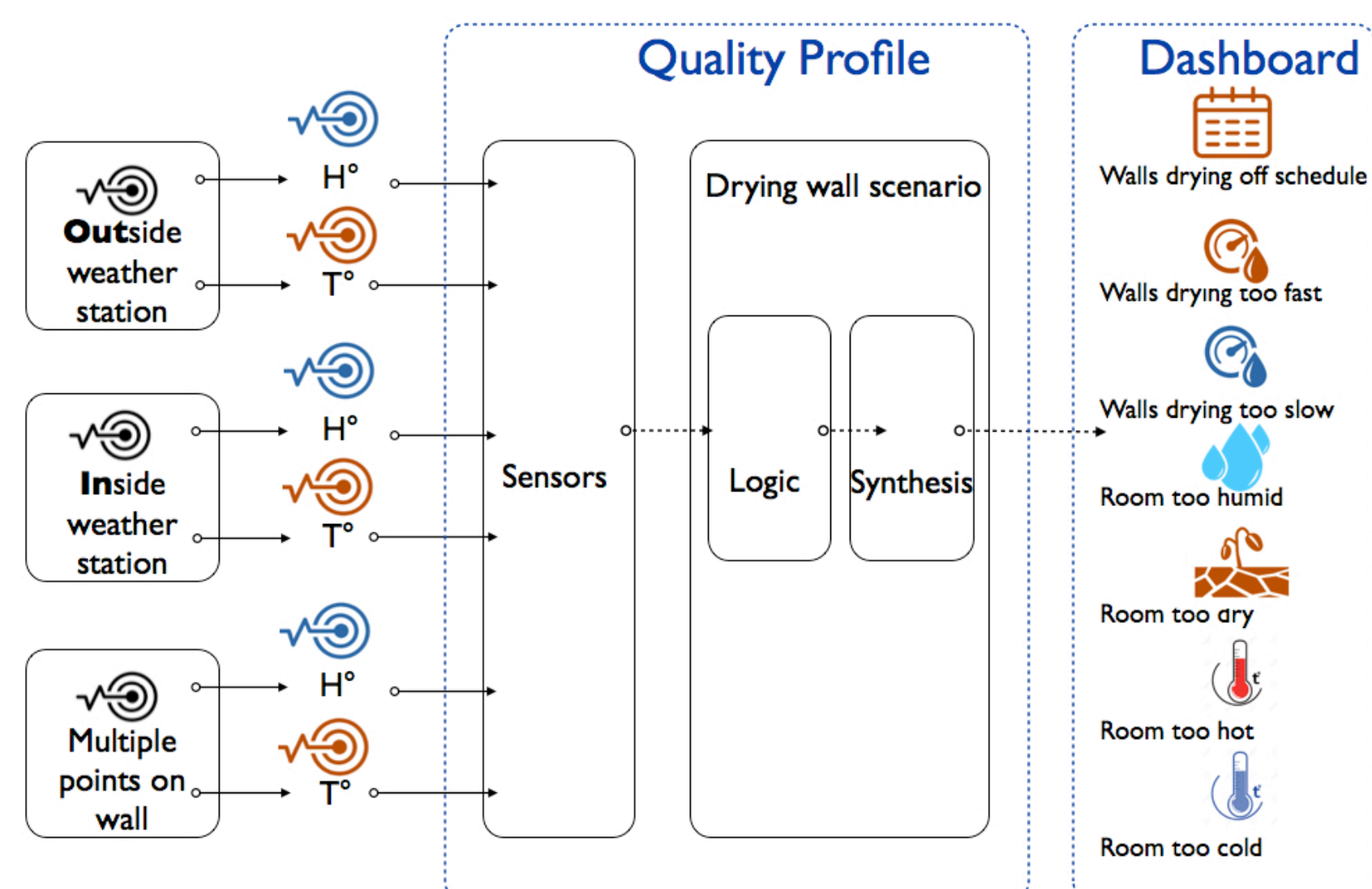

1st Solution is *Sensors* to control climate conditions on construction site, with temperature and humidity sensors. many tasks can only be done on a dried surface, like covering or painting for example.
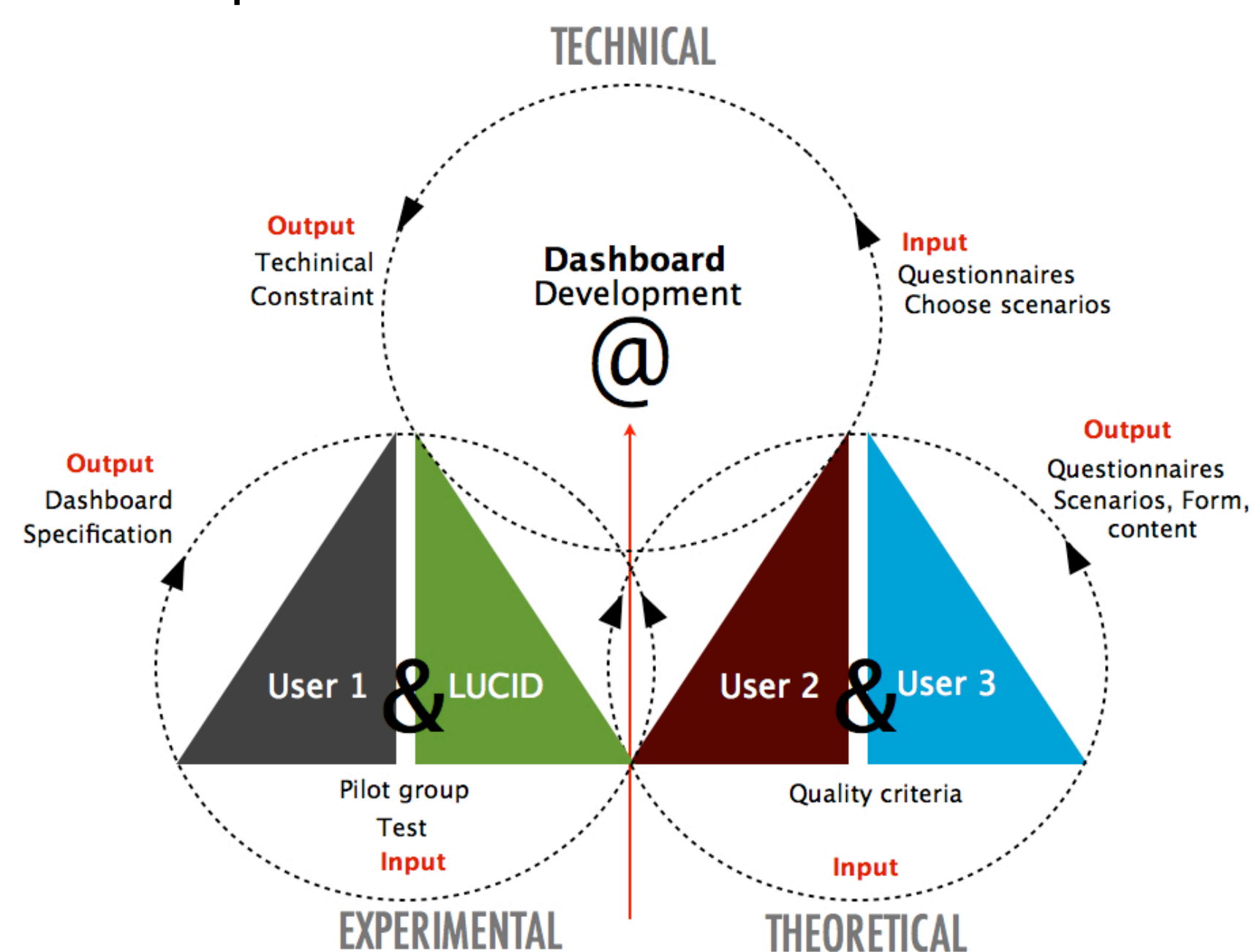
2nd Solution consist of *questionnaires* to check, to assist and to document users work and to control different tasks on construction site. They are useful before and after a task or when a quality control is needed.

Results

One of the key guidelines for the design of the Dashboard is: when entering the Dashboard, the user must, in a glance, know where his attention is the most urgently required within the huge amount of data available about the construction site.
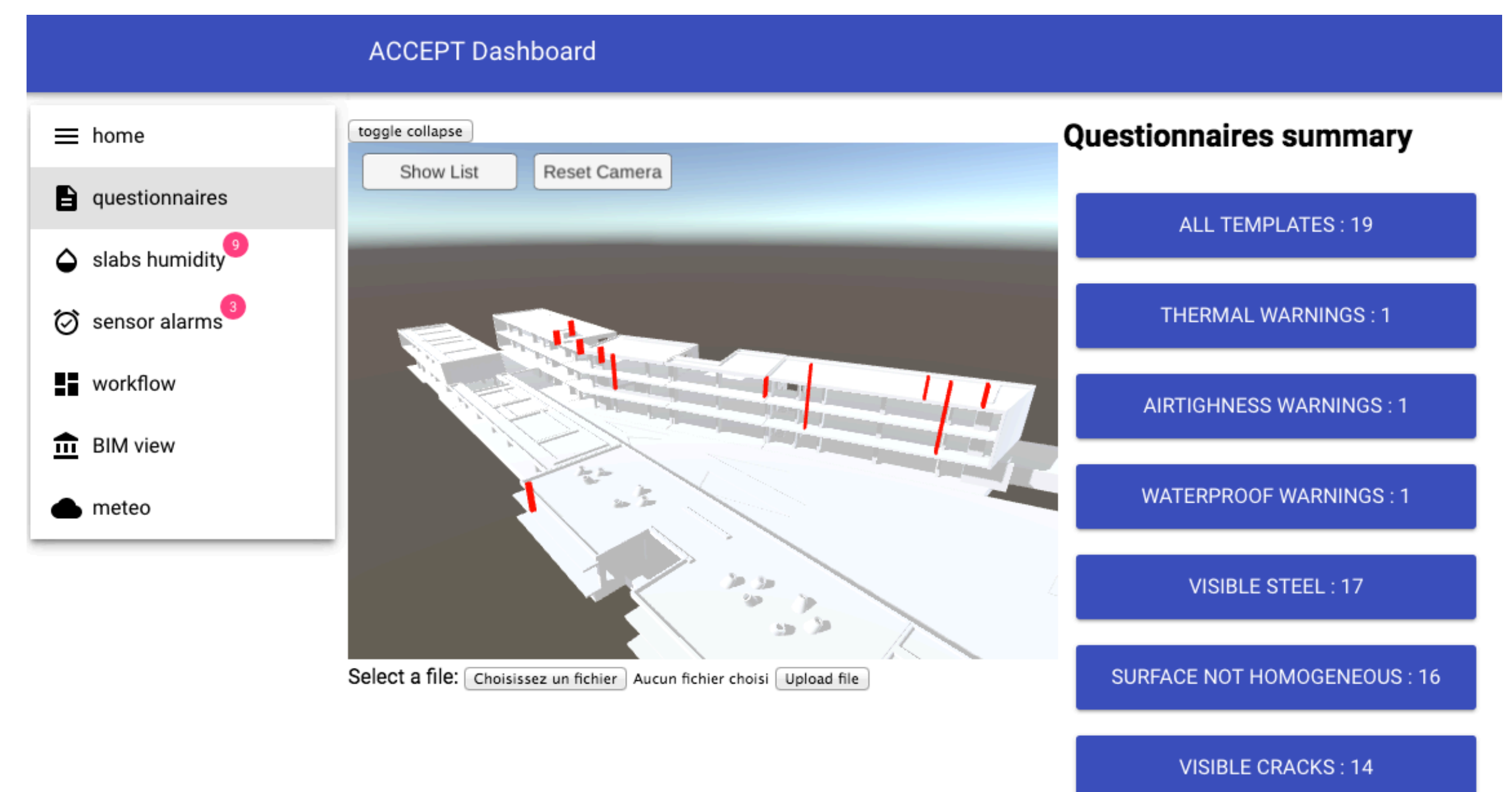

Dashboard 'BIM quality viewer'

The list of templates and answers of questionnaires can be visualized in the Dashboard, as well as groups of warnings generated from the 'analysis annotations' included in the questionnaire templates.

Perspectives

This project has started in January 2015 and it will last 36 months,. We are starting. The testing and validation phase is starting now (may 2017). The ACCEPT project is comprised of 11 partners around Europ.

The team:

www.lucid.ulg.ac.be
www.accept-project.com
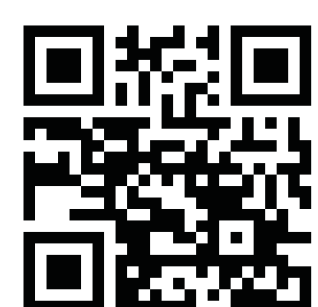
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