

RHC Solutions for Buildings and Industry - 3rd Edition

Wednesday, September 7th, 2022 | 8:30h - 11:45h | Workshop | Hybrid



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RHC for Buildings and Industry

“Renewable Heating and Cooling Solutions for Buildings and Industry – 3rd Edition”

SEP. 6TH – SEP 9TH, 2022 NICE, FRANCE



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PLURAL: Plug-and-use Renovation with adaptable lightweight Systems



Speaker Maria Founti, Coordinator
Organisation National Technical University of Athens
Start date 01 October 2020, 48 months
Funding H2020 - LC-EEB-04-2020:- Industrialisation of building envelope kits
Project website <https://www.plural-renovation.eu/>



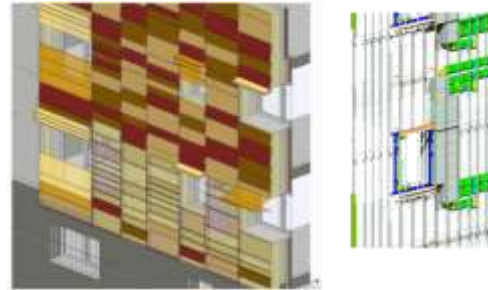
PLURAL Innovations-1

Three versatile hybrid Plug and Use
- PnU - kits

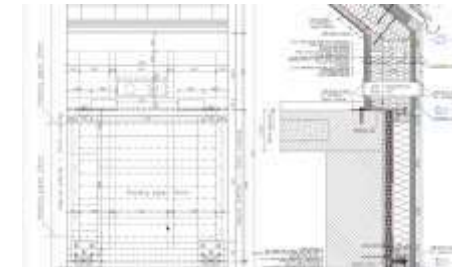
The SmartWall PnU



The HybridWall PnU



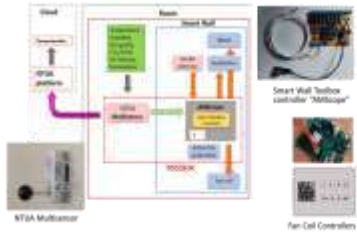
The eWHC PnU



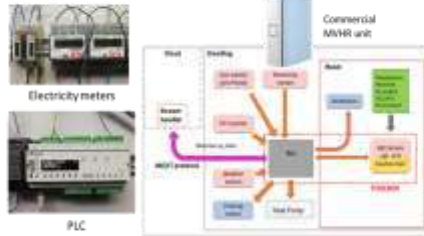
PLURAL Innovations-2



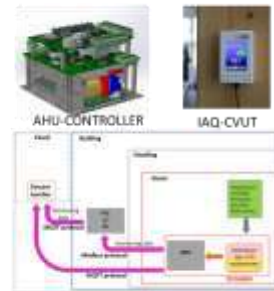
The smart windows



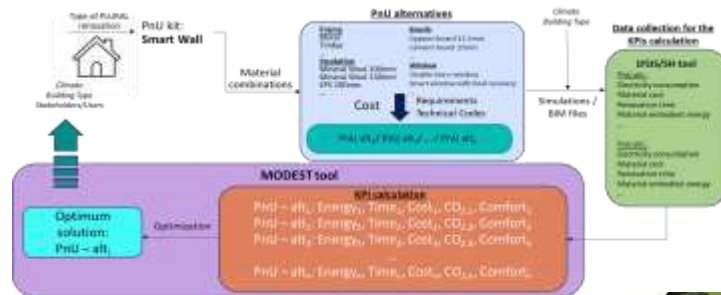
The SmartWall toolbox for Voula



The Kasava toolbox for the eWHC PnU



The toolboxes
/supervisory
control strategies



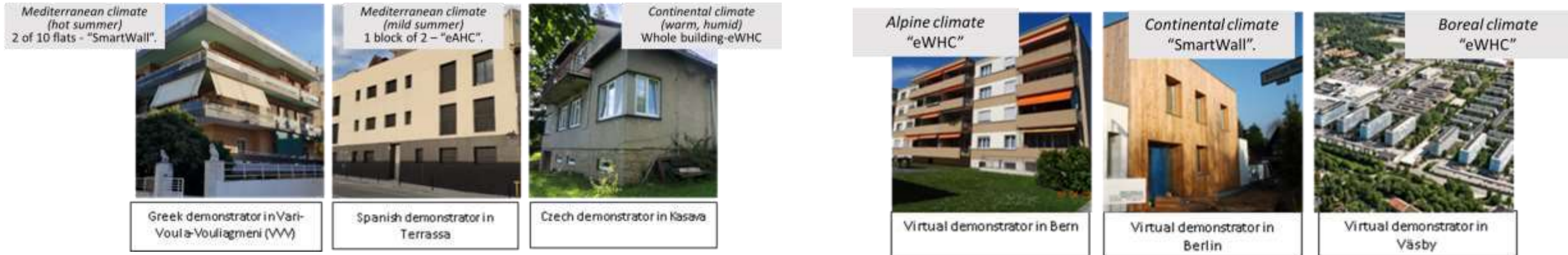
The IT and decision
support tools: LYSIS
and MODEST



PLURAL Innovations-3

Pilot validation and demonstration

- Three real demo cases/ Monitoring- **pre** and post retrofitting; modelling
- Three virtual demo cases; modelling
- Technical, **environmental**, and financial viability; Ensure NZEB status; Validate cost and renovation time



PLURAL bottlenecks - criticisms

- Continuous increase of energy and diesel prices might affect production capacities and eventually production costs of PnU kits.
- Shortages on raw materials, high tech components, chemical compounds, etc., are already noticeable. At the moment, handled by PLURAL manufacturers
- Worldwide and/or European possible future lockdowns might affect businesses, infrastructures, organizations, commercial companies etc. and affect production of PnU kits.

