Innovative compact hybrid storage systems for low energy buildings

SUSTAINABLE .ACES June 5-7,2019 Cagliari, Italy

Hybrid Energy Storage for Buildings

Contacts : COMSA - Sergio Valentino Costa - sergio.valentino@comsa.com | University of Lleida - Luisa F. Cabeza - lcabeza@diei.udl.cat | R2M Solution - Régis Decorme - regis.decorme@r2msolution.com

INTRODUCTION

HYBUILD is a four-year project that started in October 2017, with an overall EU contribution of 5,995,840 € in the framework of the H2020 programme. The consortium consists of 21 partners form 9 European countries coordinated by

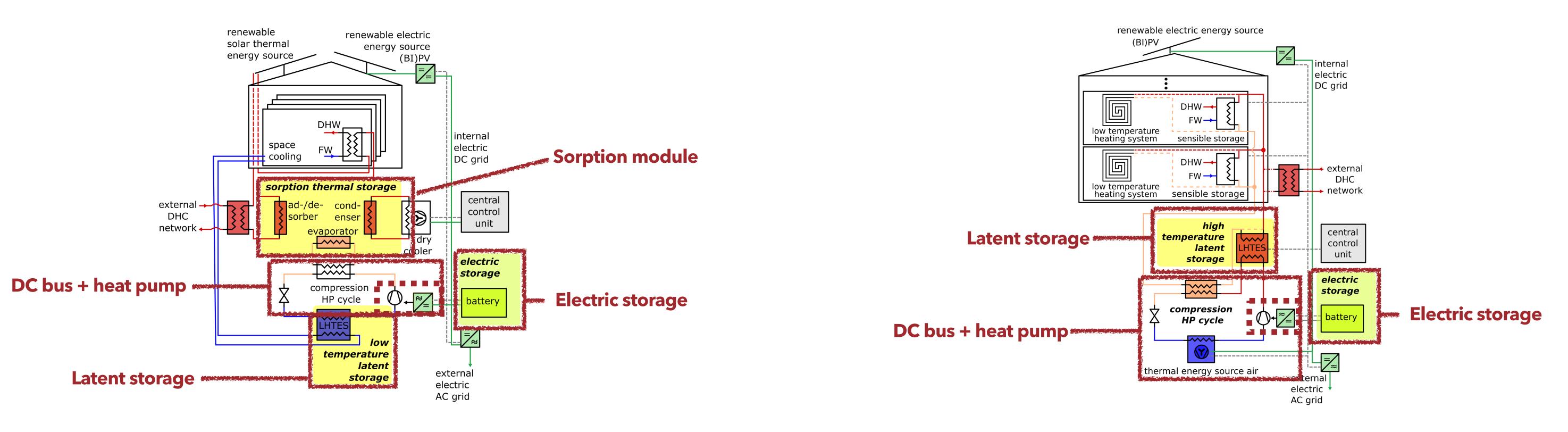
COMSA. HYBUILD will develop two innovative hybrid storage concepts: (1) For the Mediterranean climate primarily meant for cooling energy provision; (2) For the Continental climate primarily meant for heating and DHW production. The hybrid storage concepts are based on innovative components such as a compact sorption module, a high-density latent storage, reversible vapour compression heat pumps and a DC-bus interconnection. The whole systems will be properly managed by advanced controls and Building Energy Management Systems (BEMS). The developed solutions will be validated in three different demo-sites located in France, Spain, and Cyprus.

MEDITERRANEAN CONCEPT

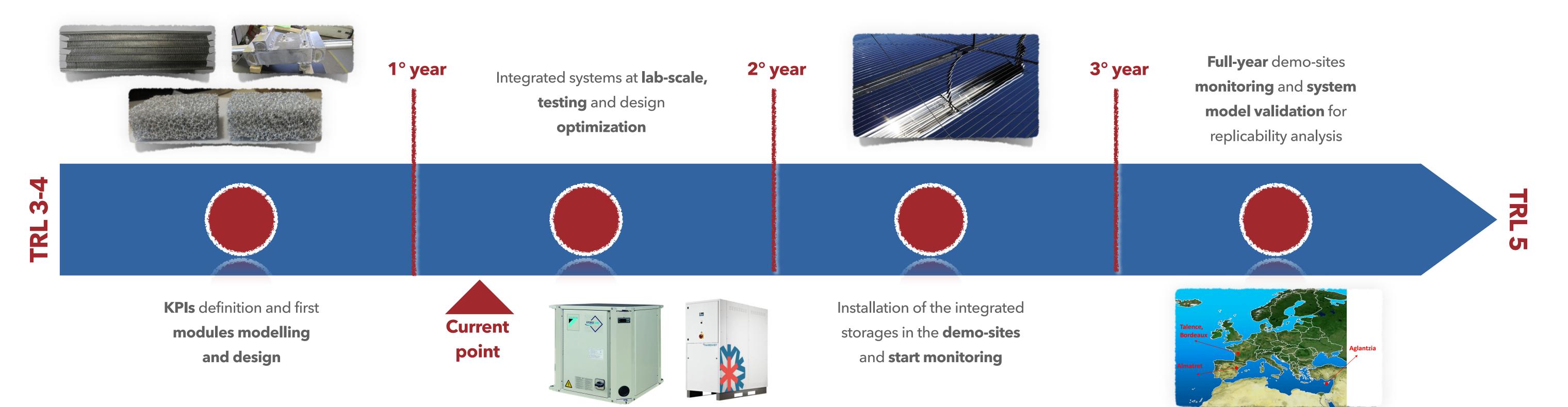
Implementation of Fresnel solar collectors and PV panels connected to an innovative DC-driven heat pump that integrates a sorption and a latent thermal energy storage, and an electric energy storage. Main objective is to provide cooling in Mediterranean climate residential buildings.

CONTINENTAL CONCEPT

Implementation of PV panels connected to an innovative DC-driven heat pump that integrates a latent thermal energy storage and an electric energy storage. Main objective is to provide heating and DHW in Continental climate residential buildings.



IMPLEMENTATION















Bordeaux France











The HYBUILD project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 768824.

