



PRIORITY AXIS
Low Carbon Technologies

 **SPECIFIC OBJECTIVE**
Low Carbon Technologies

SOLARISE aims to raise solar awareness and to reduce carbon footprint in the 2 Seas Region.

SOLARISE will potentially provide 184.000 tCO2 reduction over 25 years.



SOLARISE Consortium

12 partenaires - 14 observers

Project budget

4 302 023



ERDF amount

2 581 214



ERDF rate 60%

Start date: 08/02/2018

End date: 30/06/2021





SOLARISE Partners



University of Picardie Jules
Verne

Lead partner



KU Leuven – Technology
campus Gent



Kamp C



Flux 50



Municipality Zoersel



Fourmies City



City of Heerhugowaard



Brighton & Hove City Council



Enercoop Nord-Pas de Calais
- Picardie



University of Portsmouth
Higher Education
Corporation



City of Middelkerke



Municipality Middelburg



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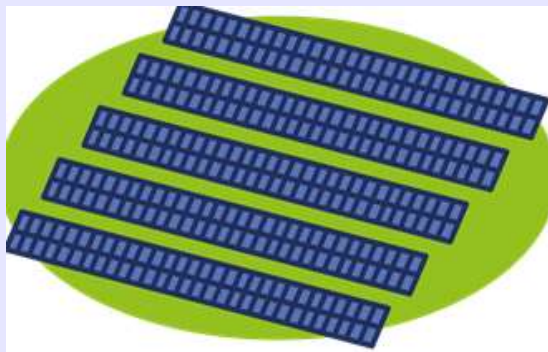
Municipality Middelburg



Main outputs

- Toolkit: Guide package on legislation, market and Innovative technologies
- Feasibility of Potential solar projects (schools, buildings, houses, cinema, swimming pool, solar farm, heritage mill, commercial centre...)
- Solar installations in
 - historical/heritage buildings
 - public infrastructure
 - housing sites.
 - Living Labs
- Campaign for solar power adoption
- Roadmap for Solar power





Near, city- connected Solar farm

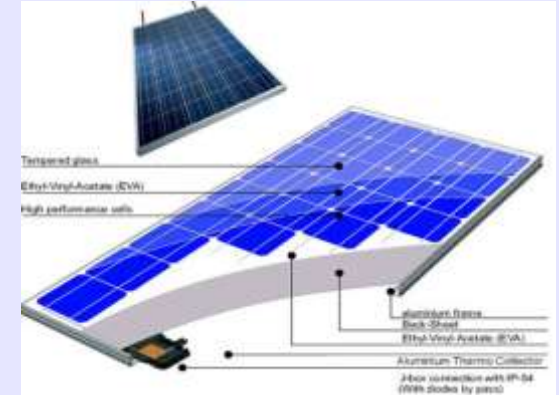
SOLARISE VARIETY of COMPONENTS & TOPICS



Solar Building integration



Multiple, connected houses



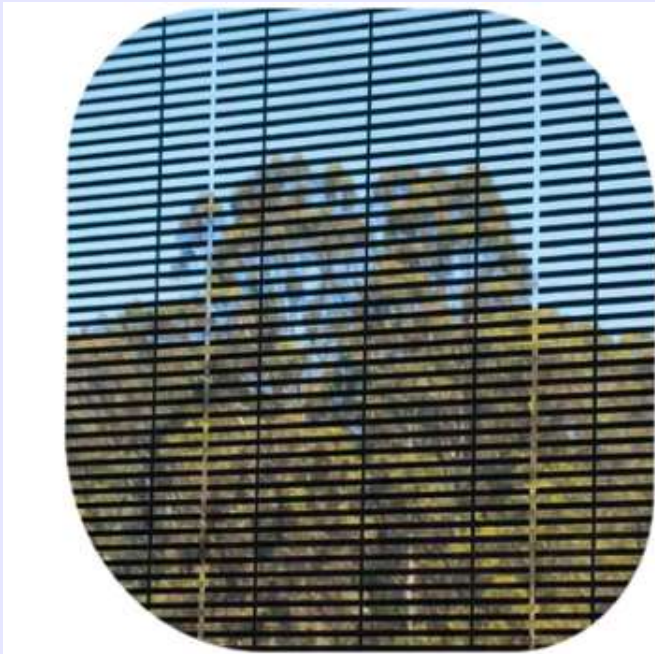
New panels Electricity & Heat



Battery
powered EV



BIPV: Building-integrated photovoltaics





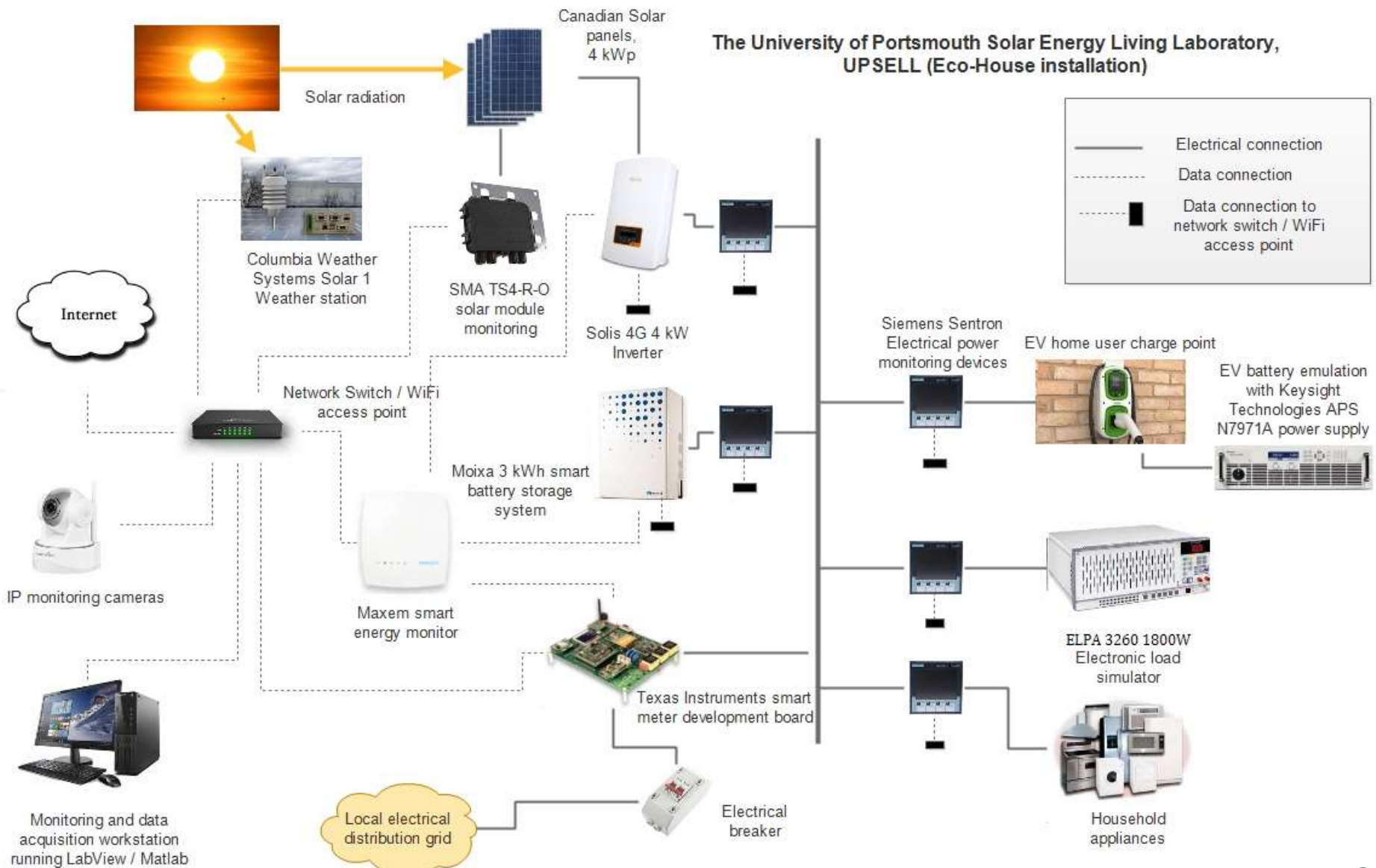
ECO House



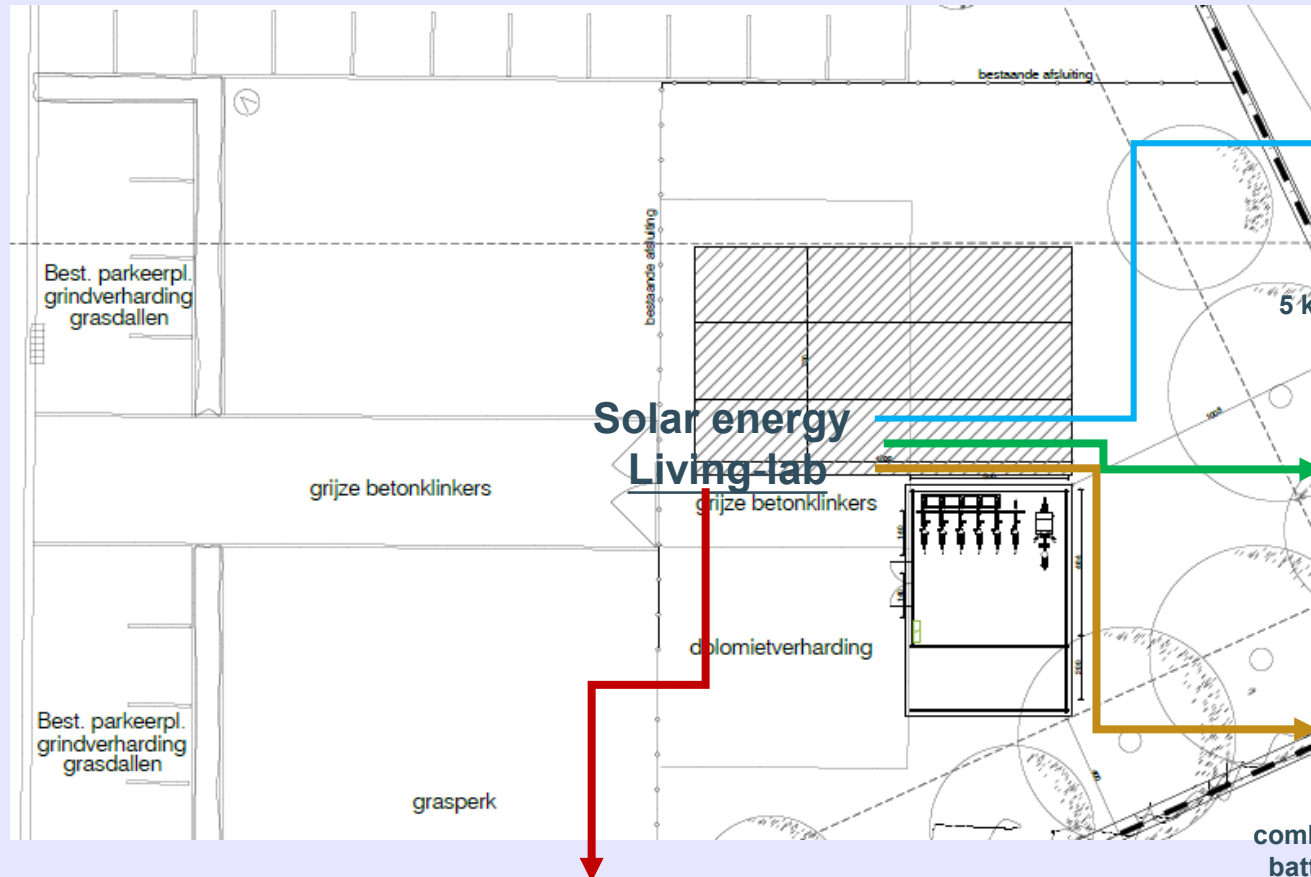
Future Technologies Centre



Schematic diagram of UoP (Eco-House installation)



Solar energy - Living Lab' at TC Ghent



5 kW installation (PV, PV/T, various types of solar energy harvesters)



hands-on and virtual learning tools



combination with CHP, heat pump, battery pack, rain-water install...

Applied research on PV/T and thermoelectric materials (heat to electricity conversion)
application on solar energy harvesting

Metallic construction/structure - Living Lab

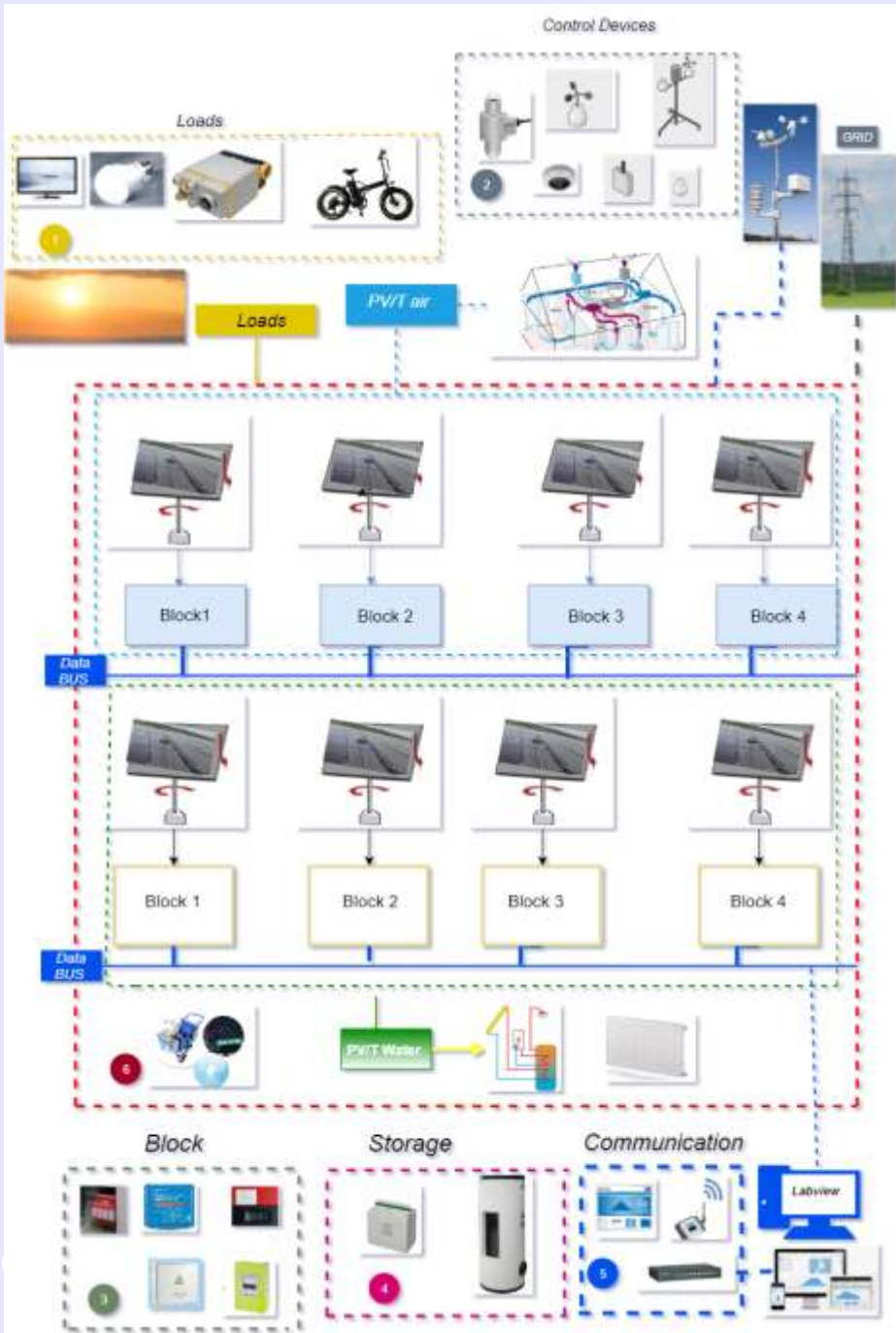


- Solar panels: PV, PV/T; BIPV, CPVT, ...
- Power converters: DC-DC and DC-AC converters with MPPT trackers (+ controller)
- Battery pack (batteries)

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- Hydraulic components: water pump + directional valves (+ controller)
- Sensors
- Home appliances as end-users



111 kWp - 122 062 kWh/year



SOLAR ELECTRIC PENDULUM

THE ELECTRIC PENDULUM TRICYCLE is part of a global research project on innovative solutions for urban electric mobility developed at the Laboratory of Innovative Technologies, University of Picardie Jules Verne in Amiens (France). The pendulum device allows overcoming centrifugal forces and a safe higher speed in curves.

Current version



SOLAR PART

Within the SOLARISE project, a **mobile photovoltaic solar station prototype** with removable structures was designed. It includes **4 flexible solar panels**. The structure is retractable by circular translation of solar panels and can be mounted in a modular way on the electric tricycle.

TECHNICAL FEATURES

(CAN BE ADAPTED)

- **MOTOR** Brushless DC motor, 48V - 800W.
- **BATTERY** LIMCN 13515P 48V x 30 Ah
- **MAXIMUM SPEED** 45 Km/h
- **WEIGHT (WITHOUT DRIVER)** 58 Kg
- **DIMENSIONS (M)** 1.68 x 0.72 x 1.57
- **SOLAR PART** 4 x 65Wp, 560mm x 740 mm

RANGE MEAN VALUE

(CAN BE ADAPTED)

- **WITHOUT SOLAR PANELS** 30 km
- **WITH SOLAR PANELS** 60 km





ENERCOOP



MIDDELKERKE

FOURMIES



FLUX50

LOUIS ARAGON
RUE BOURET A FOURMIES



Stad van de Zon (2001-2008)

+3,000 homes.

25,000 PV panels.

3.75 MW, reduction CO₂ vs. normal: 2,500 tonnes p/yr.

3 wind turbines (2,3 MW).

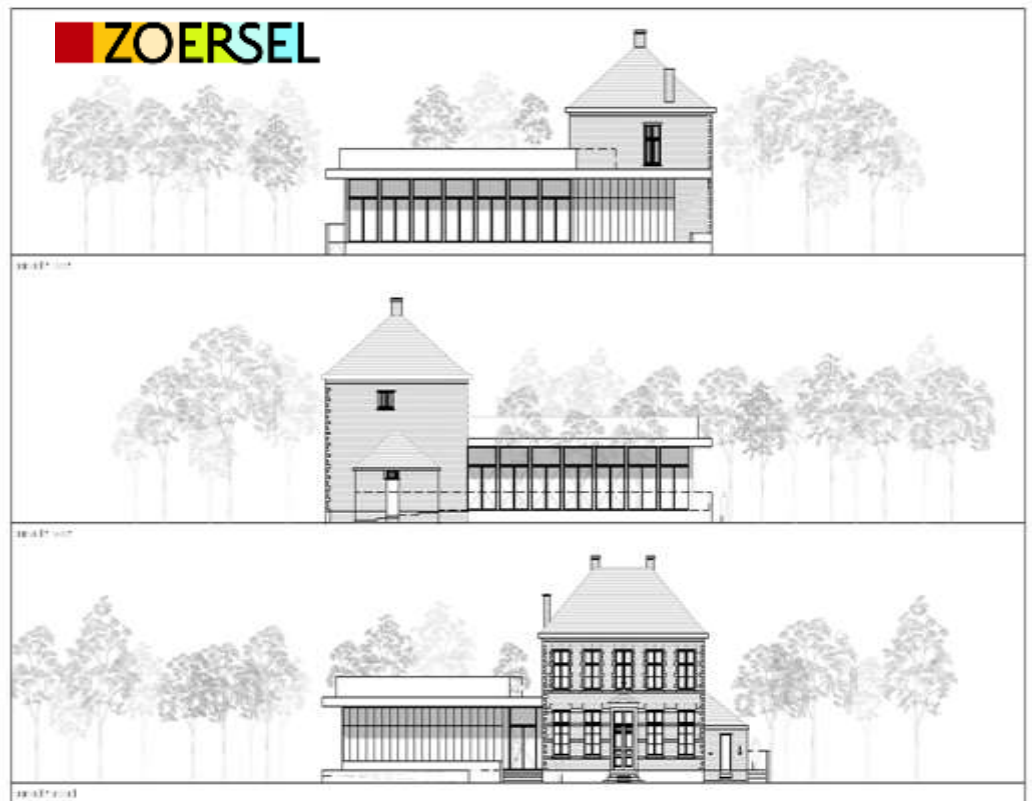


HEERHUGOWAARD



MIDDELBURG

ZOERSEL





***Thank you for
your attention***