

The LowUP partners are working together to develop and demonstrate **one heating and one cooling system** for office buildings, and **one heat recovery system** for industrial processes.

## ABOUT THE LOWUP TECHNOLOGIES

### HEAT-LowUP

Produces and distributes heat for tertiary buildings like swimming pools, hotels, hospitals or malls from renewable energy sources and heat recovery systems.



Main application: new and refurbished buildings with enough space to install the PVT and the storage system with high heating demand and water consumption.

### COOL-LowUP

Offers cooling and ventilation to large and non-critical common areas of hospitals, offices, student residences, administrative buildings. The initial design includes a closed-circuit cooling tower, the ICEBAT cold storage system, active chilled beams system, and an advanced control system. A compression chiller will be also used as auxiliary system.



Main application: new or deep refurbished buildings with day-time occupancy, constant load schedule along the year and centralised heating, ventilation and air conditioning.

### HP-LowUP

The HP-LowUP provides heat for industrial process (55-80°C) with a heat recovery system and an electrically driven heat pump with an advanced control system.



How it works: the waste heat recovery system recovers heat efficiently from high density-viscosity fluids at 20-30°C and the water-to-water heat pump upgrades heat at higher temperature (over 70°C) for re-injection in the production line