# Innovative Solutions



# **SUNHORIZON TECHNOLOGIES**

The project will analyze heat pumps and building integrated solar solution. Such integration aims to cover the whole H&C demand of the building. The technologies that will be installed are:



Hybrid PV/T panels



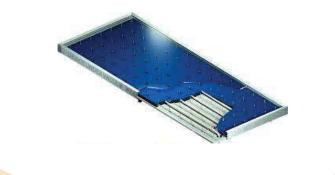
Hybrid adsorption Compressor cascade chiller



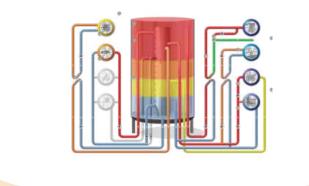
Hybridation of HP, solar, thermal and PV



#### **Thermal Compression HP**



## Vacuum solar thermal panels



### Stratified thermal storage tank

SUNHORIZON TP		SOLAR/HP INTEGRATION CONCEPT
TP1	TVP+BH	Parallel Integration
<b>TP2</b>	DS+BH	Mixed Solar/assisted - Parallel Integration
TP3	TVP+FAHR	Solar-Driven HP for Cooling
TP4	DS+BDR	Parallel Integration
TP5	TVP+BH+FAHR	Mixed Solar-Driven - Parallel Integration





SunHorizon Demo activities will be held in different EU contexts to evaluate different climatic and energy market solutions.

SunHorizon innovative technologies will be deployed in small and large scale residential (single house and apartment blocks) and tertiary buildings (public buildings, sport centers).



# THE MONITORING PLATFORM

SunHorizon consortium will develop also a cloud based functional monitoring platform that will act as the "performance data mine" for the development of Data Driven/KPI oriented optimized algorithms and tools for predictive maintenance. In this way, it will be possible to optimize the management towards maximisation of solar exploitation and give to the manufacturer inputs for enhancing the design of their components.





