

# DEMO 2 – PORTUGAL

Reinventing Palácio do Gelo as a Smart Energy Hub



DEMO  
LEADER:  
BUILTRIX



Palácio do Gelo, Viseu  
Portugal



Domain  
Electricity, Gas



Partners involved

MOVIDA  
R&D Nester

*“Using data-driven optimisation and the ice storage system, we can reduce peak demand while keeping comfort and visitor experience as our first priority.”*



[weforming.eu  
demo-2-portugal/](https://weforming.eu/demo-2-portugal/)

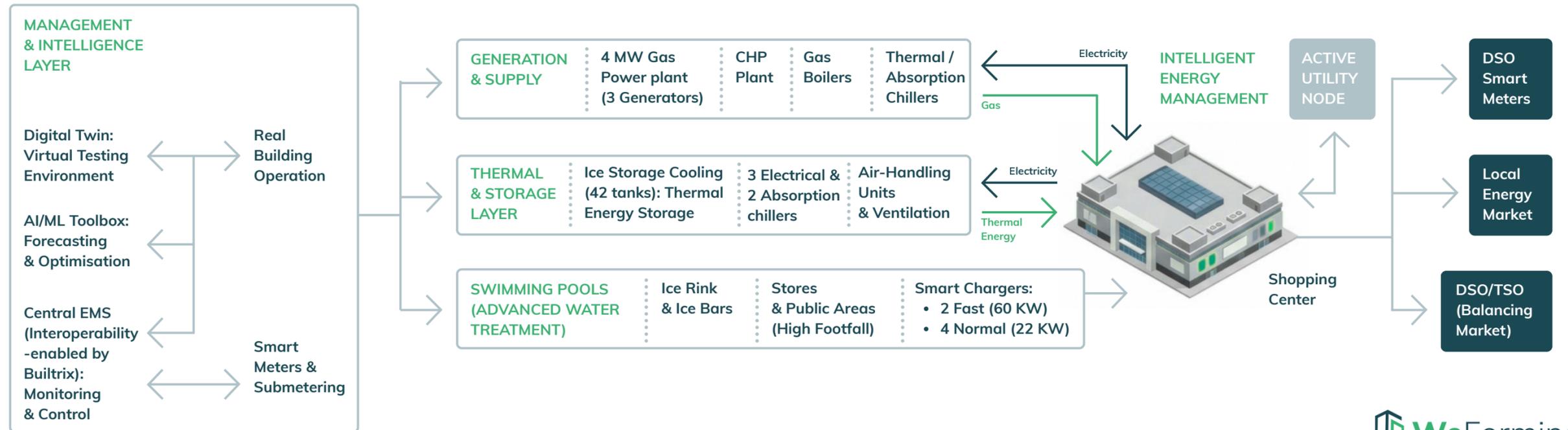


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## KEY TECHNOLOGIES

Electrical chillers operate in ice mode and store cooling energy as ice in storage system. In peak hours of summer the chillers go standby and ice does the cooling job to cut the power demand while keeping the building in desired comfort range.



## TECHNICAL CHARACTERISTICS



Data Acquisition and distribution tools



Central EMS : Linked to Schneider Electric monitoring tools and DSO smart meters.



Smart EV Charging: Includes 2 fast chargers (60 kW) and 4 normal chargers (22 kW) .



Integration and implementation of Building Management Systems (BMSs)



Digital Twin: to test "what-if" scenarios before real-world execution.



Developing AI-based optimization and forecasting tools to optimize energy systems.



Ice Storage Cooling System: stores cold when electricity demand is low and discharges it during peak hours

## IMPACT

- New revenue streams and cost saving
- Flexibility Service Provider (FSP)
- Risk reduction by the Digital Twin
- User comfort