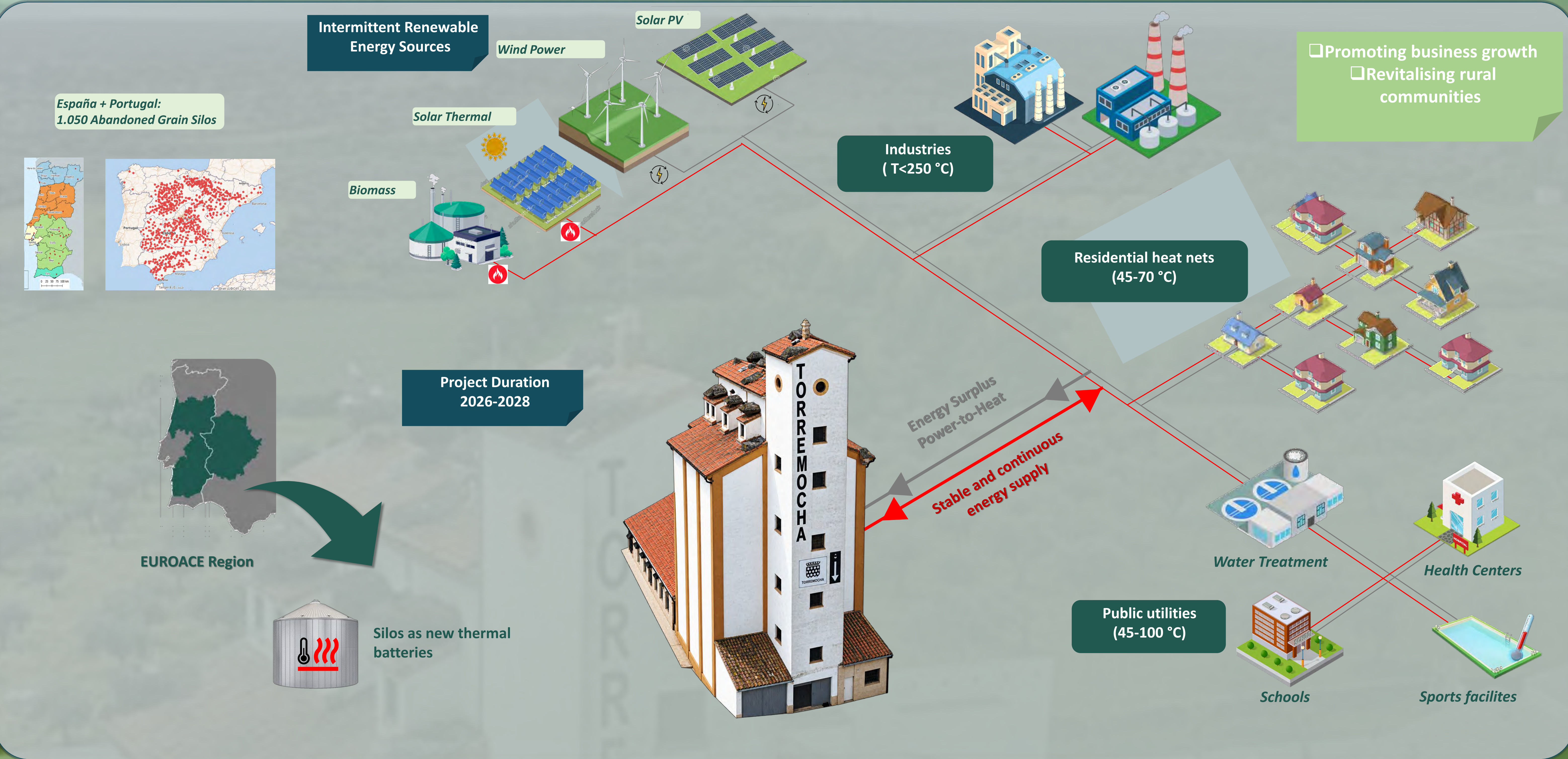


THESILO

Thermal Energy Storage in Silos

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Introduction



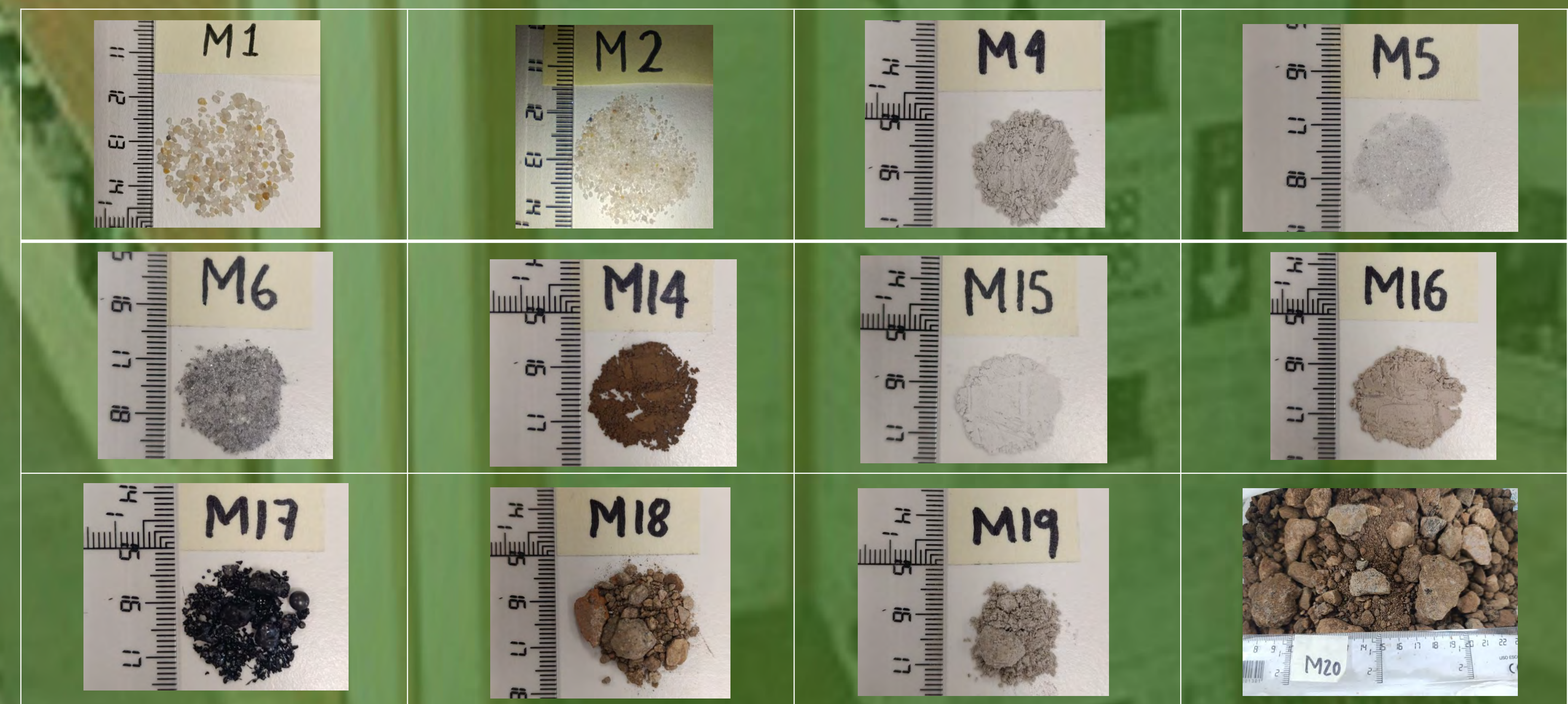
¿Why Silos?

- ✓ Robust and modular infrastructure
- ✓ Strategic location in rural areas
- ✓ Replacing cereal grains with granular materials as a storage medium
- ✓ High capacity (MW) and scalability

Scope

- Selection, structural assessment and adaptation
- Materials characterization and optimization
- Design and integration of P2H conversion systems
- Pilot implementation and validation
- Regulatory, environmental and techno-economic analysis

Getting Started



THERMAL STORAGE MATERIAL SELECTION

Recycled Materials
Availability in the region
Thermal and Chemical Stability
Heat Capacity and thermal conductivity

MINING AND CONSTRUCTION RESIDUES

- Quartz sand
- Granite dust
- Concrete
- Metals oxides and Slag
- Limestone
- C&D Waste
- Marble
- Asphalt

RECYCLED GLASS FROM PV PANELS

What's Next?

Characterization

- TGA
- DSC
- LFA
- XRD/XRF
- SEM-EDS

Materials Optimization:

- Granulometry
- Functionalization
- Additives
- Design

Final Material Selection

Acknowledgements

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Partners

