

e-GOTHAM

Building a smarter energy distribution system



27 Maggio , RESEEties, Potenza, Italia

Advanced Research & Technology for Embedded Intelligence and Systems

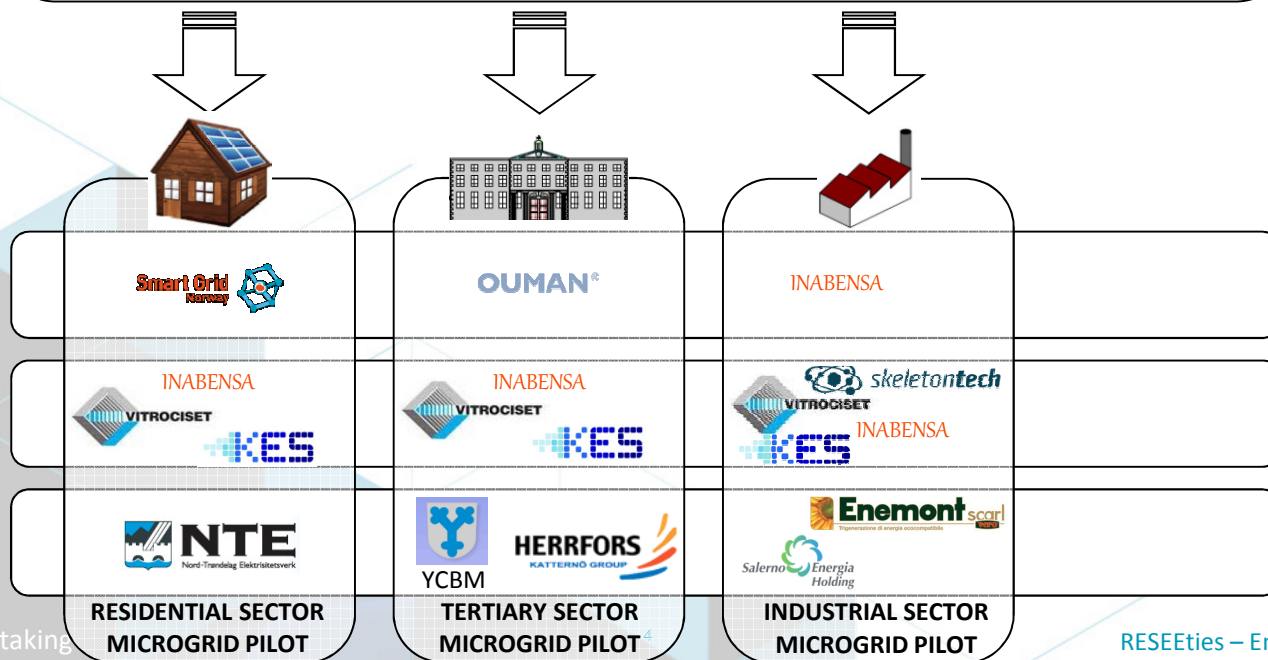
ARTEMIS Joint Undertaking
The public private partnership for R&D actors in embedded systems

► Sustainable - Smart **G**rid **O**pen
System for **T**He **A**ggregated
Control, **M**onitoring and
Management of **E**nergy

Overall details

- ▶ Coordinator: Inabensa
- ▶ Start: April 2012
- ▶ Duration: 36 months
- ▶ Total investment: 6,84 M€
- ▶ Participating organizations: 17
- ▶ Number of countries: 5

► The project includes the RTD and industrial organizations



Who we are



- Multi-utility company in natural gas distribution & selling, water, energy services, other public services.
- 100% owned by the Municipality of Salerno

Our Contribute to the project

► Pilot case:

Industrial sector microgrid + natural gas:

- ▷ Definition of requirements
- ▷ Business model

Today's energy distribution systems

▶ Rigid and Closed due to:

- ▶ Physical constraints
- ▶ Incompatibility

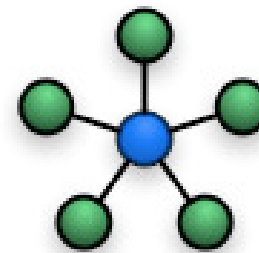


2012

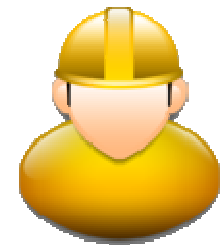


Future energy distribution systems

- ▶ Flexible and Open for:
 - ▷ Consumption awareness and control
 - ▷ Infrastructure management efficiency
 - ▷ New markets for energy-efficient technologies



2015

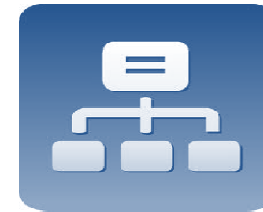


The energy distribution shift



Approach

Clustering
Microgrid



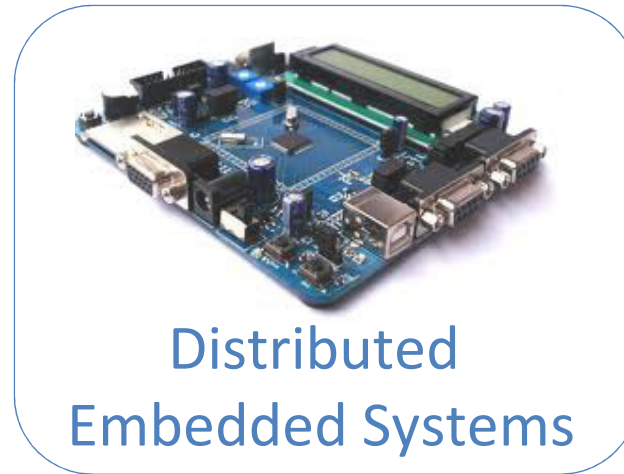
Communicating
Middleware
Distributed embedded devices



Optimizing
Algorithms and Applications



Technological Innovation



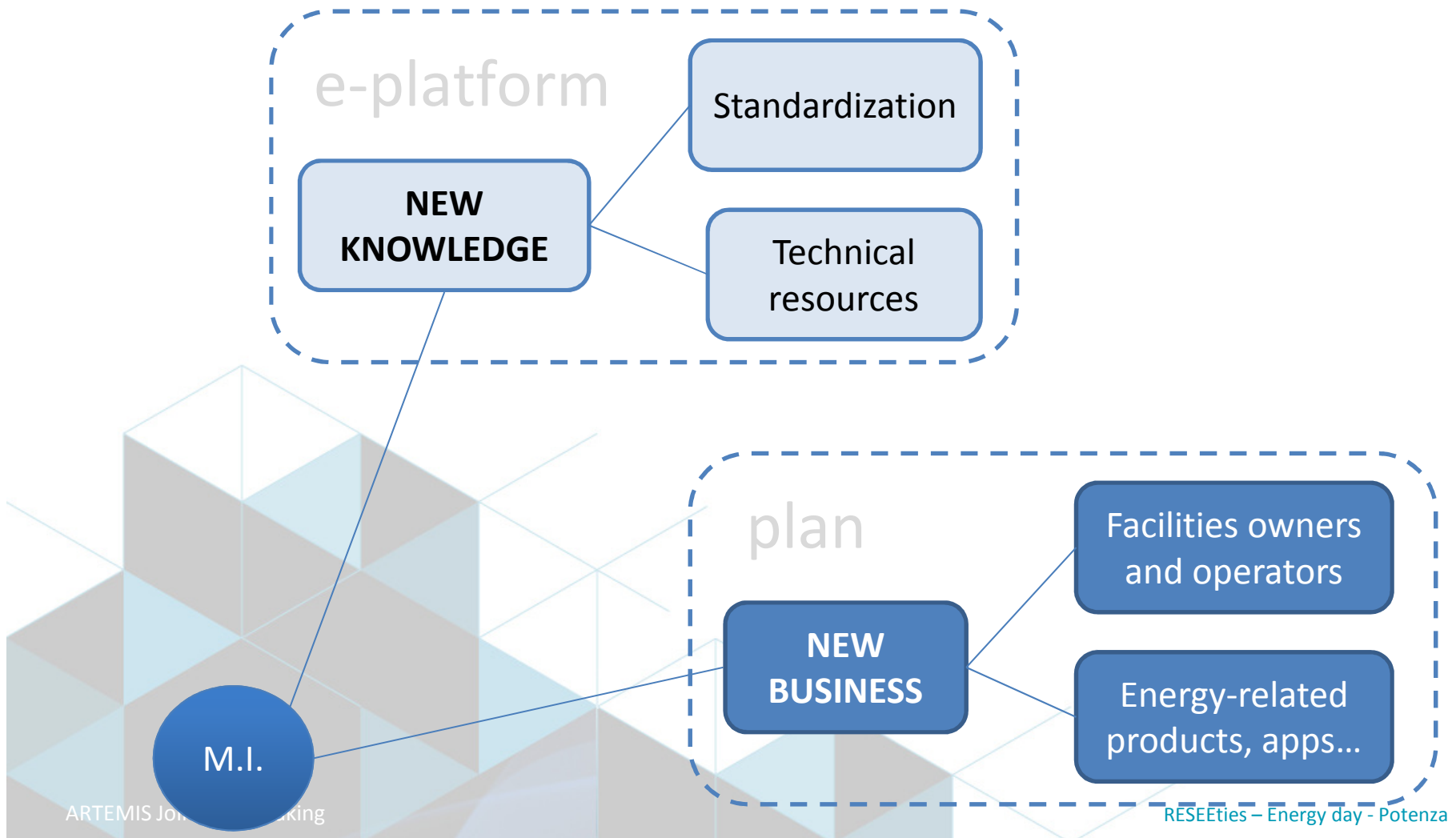
- ▶ Communications and topology
- ▶ Distributed energy resources connection
- ▶ Microgrid control mechanisms
- ▶ Semantic information integration

Technological Innovation

- ▶ The results will contribute to Artemis goals:
 - ▷ Optimize embedded systems
 - ▷ Create monitoring and control mechanisms
 - ▷ Foster eco-efficiency and eco-sufficiency

- ▶ e-GOTHAM also contributes to achieve the European triple goal of the 20-20-20 initiative

Market Innovation



Next steps



- ▶ Create the building blocs
- ▶ Test them in 3 real scenarios





Changing energy distribution!

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