ETSI IoT Week 2022

Large Scale Deployment of SAREF-Based Semantic Interoperability Solutions in InterConnect

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Objectives

- Cross sector use-cases in buildings and grid
- Large-scale piloting
- Ecosystem for semantic interoperability adoption
- Support Data Spaces

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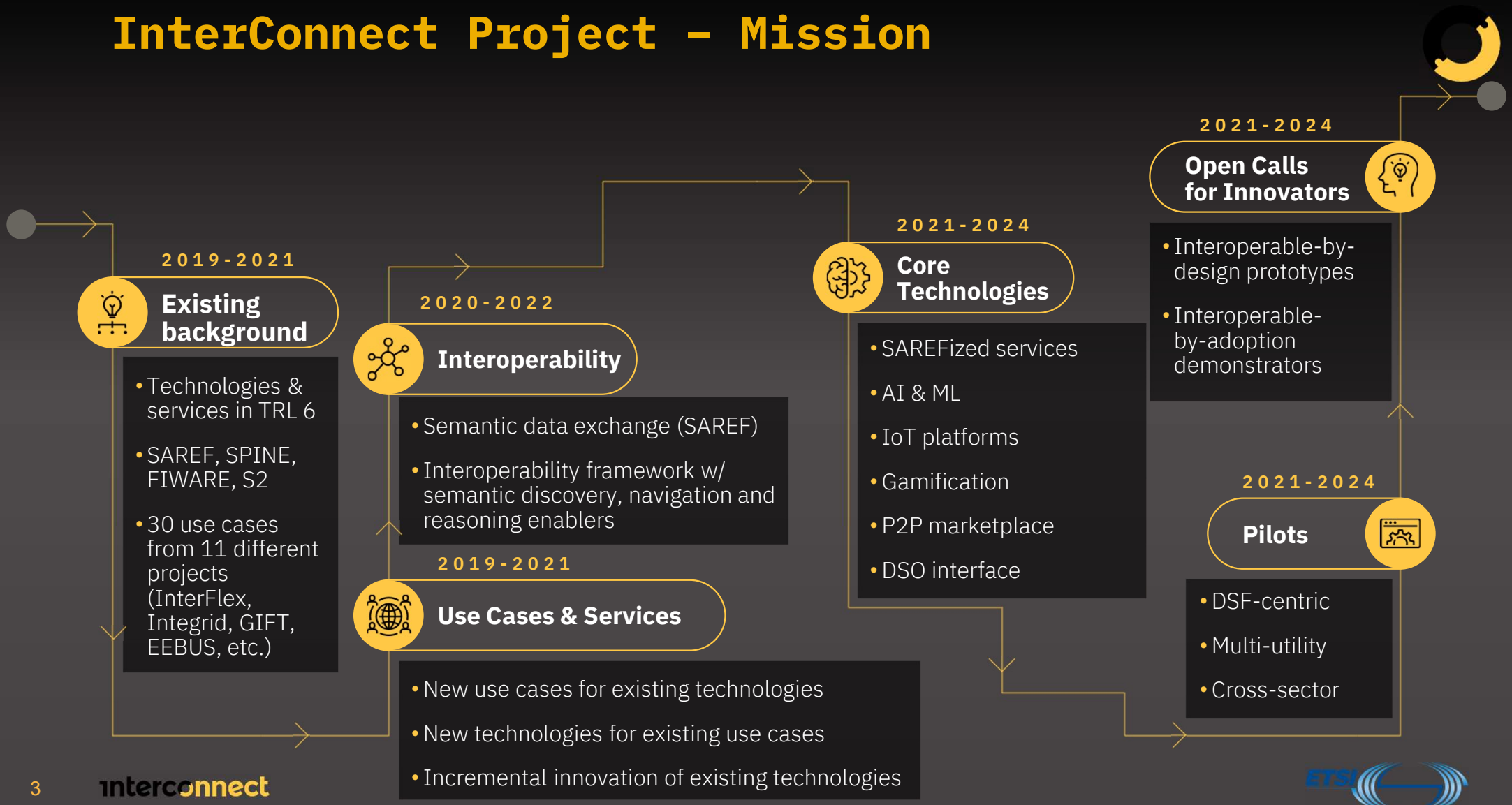
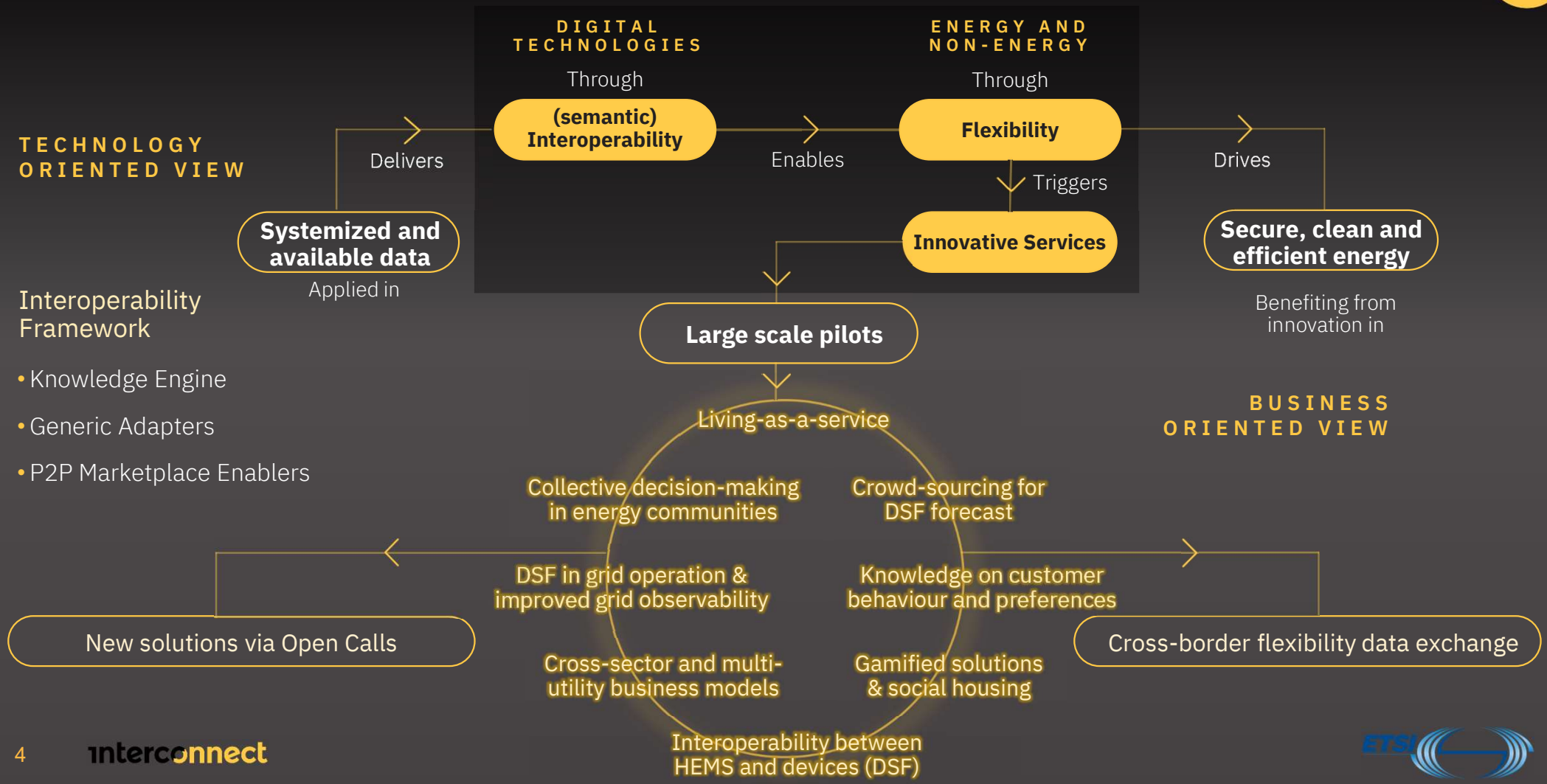
InterConnect Project – Mission

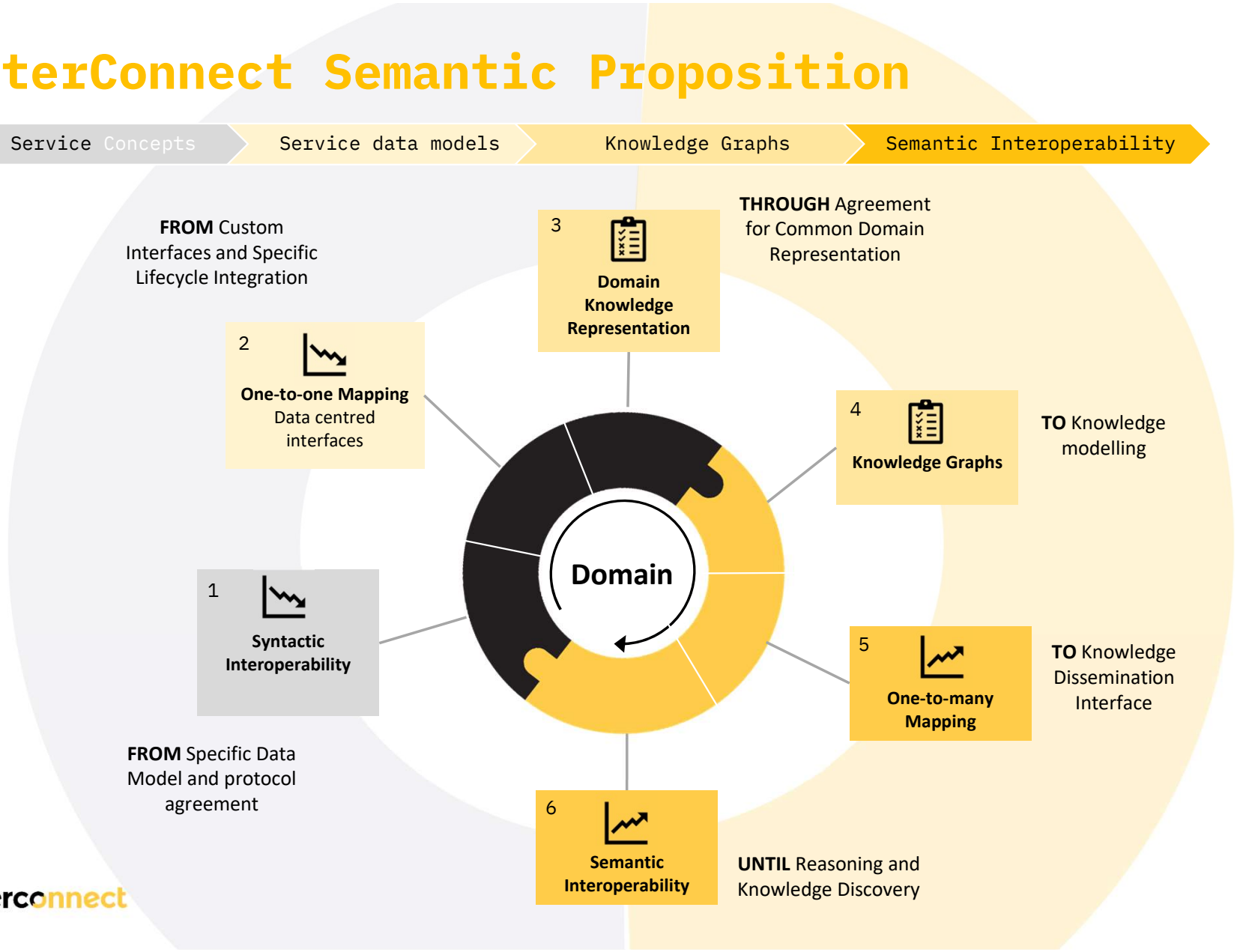


InterConnect Project – Mission



InterConnect Semantic Proposition

Service Concepts | Service data models | Knowledge Graphs | Semantic Interoperability



Ecosystem Interoperable Services

- ENERGY
- NON-ENERGY
- CROSS-DOMAIN
- CROSS-PILOT

Interconnect Interoperability Framework

STANDARDS

ETSI · CEN CENELEC · W3C

IN LINE WITH

- FIWARE
- GAIA-X
- IDSA

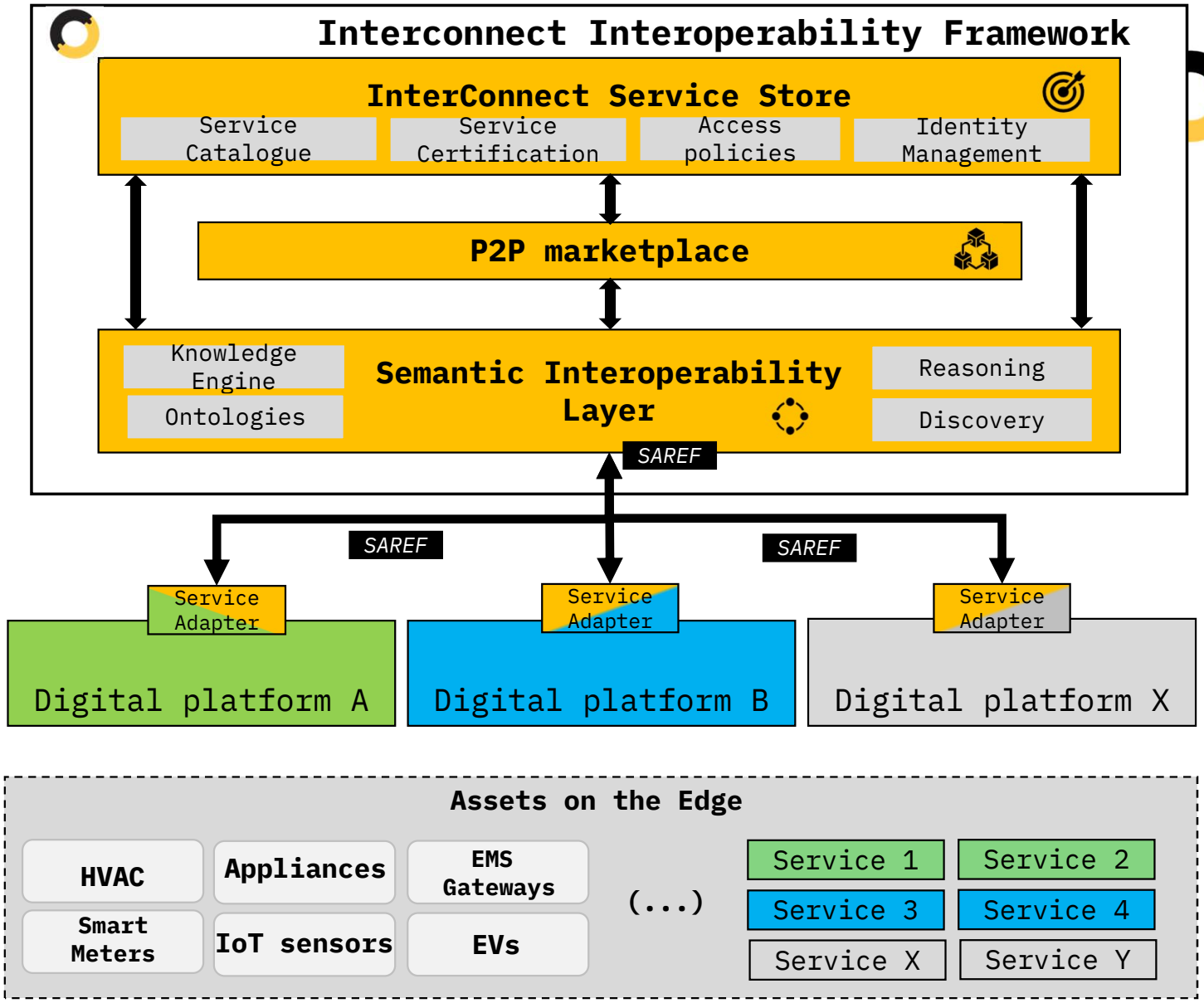
SEMANTIC INTEROPERABILITY BASED ON

- ONTOLOGIES
- GRAPH PATTERNS
- KNOWLEDGE FEDERATION

Interconnect Stakeholders

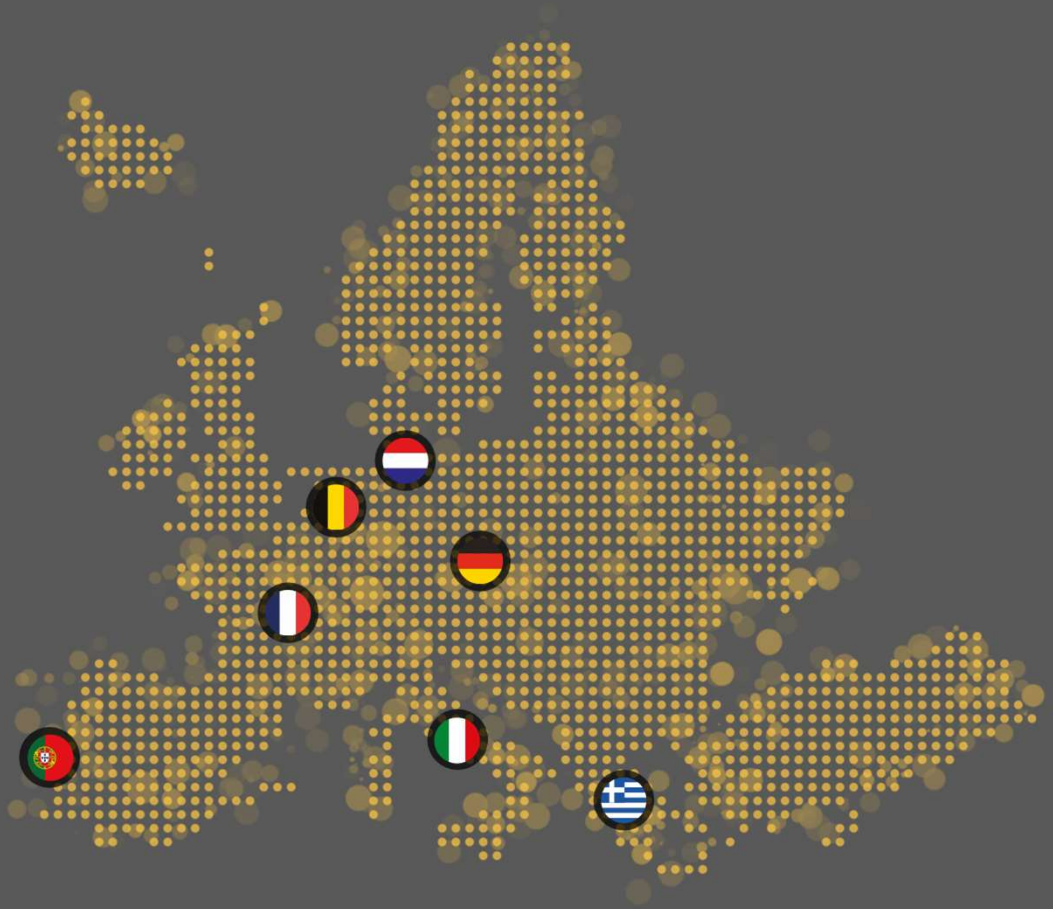
- R&D
- CONSULTANCY
- MANUFACTURERS
- ASSOCIATIONS
- DSOs
- RETAILERS
- END USER

Security and privacy framework , Admin and Governance



Use cases, Interoperable Services, Standardization

Demonstrations



Greece:

1000 households (150 with PV)

France:

250 households

20 tertiary buildings

1 school

Portugal

250 households

12 non-residential buildings

Netherlands

200 apartments EV charging infrastructure

Germany

50 households

15 hotels

Belgium

636 households: 51 buildings and 60 EV charger stations

Science park + EV chargers

Italy

480 social apartments

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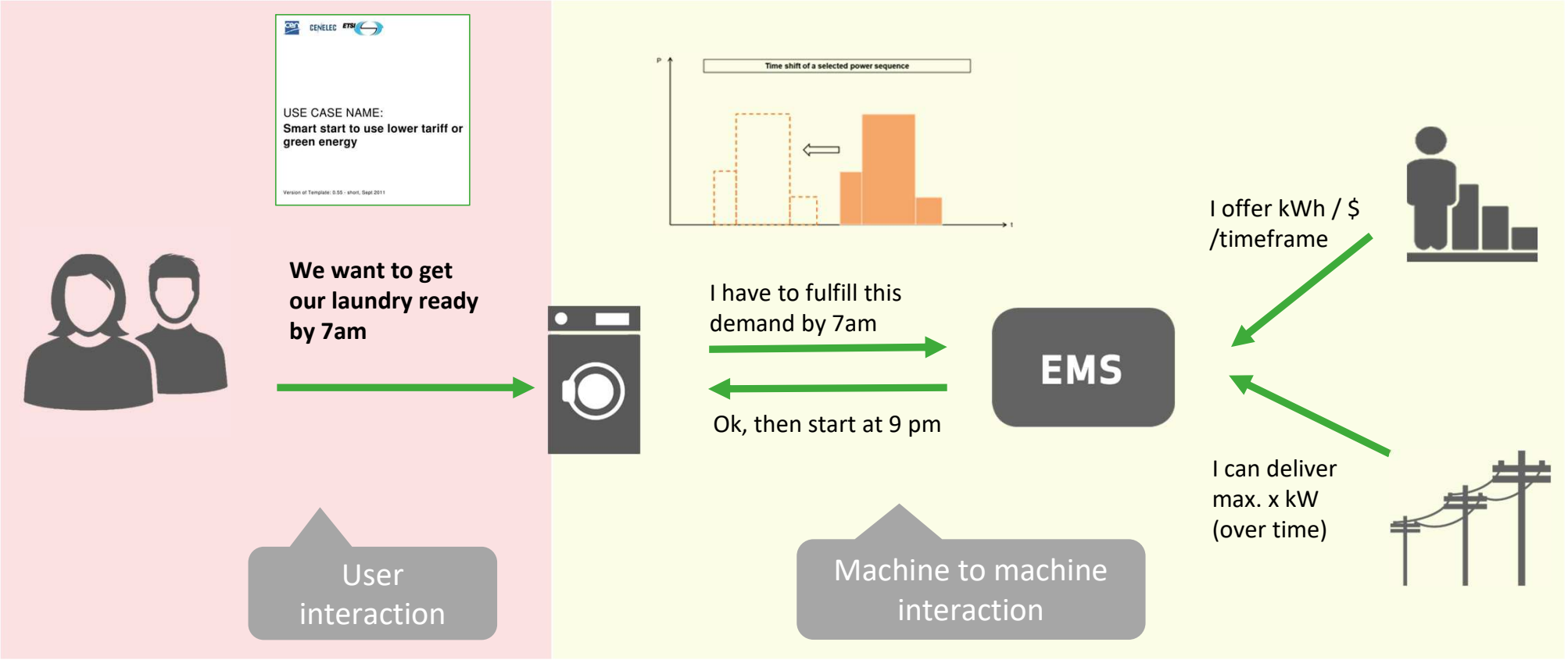
Interoperability in practice #1

Example use case provided by the Dutch pilot

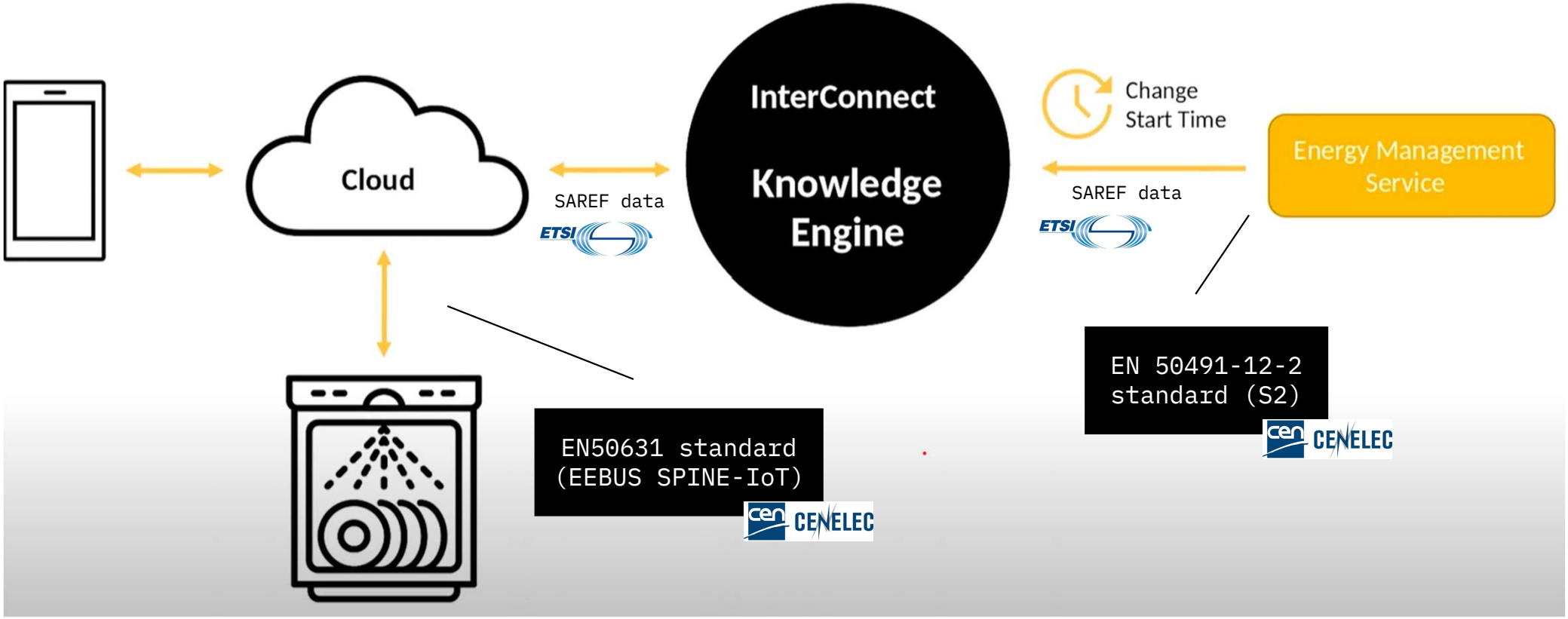
Residential buildings use case

- Example use case provided by the Dutch pilot in Eindhoven, NL
  - 22-storey building
  - 160 apartments
  - Equipped with smart appliances and smart sensors
- Video available by
  - Ronnie Groenewold (Volkerwessels iCity)
  - Jorrit Nutma (TNO)

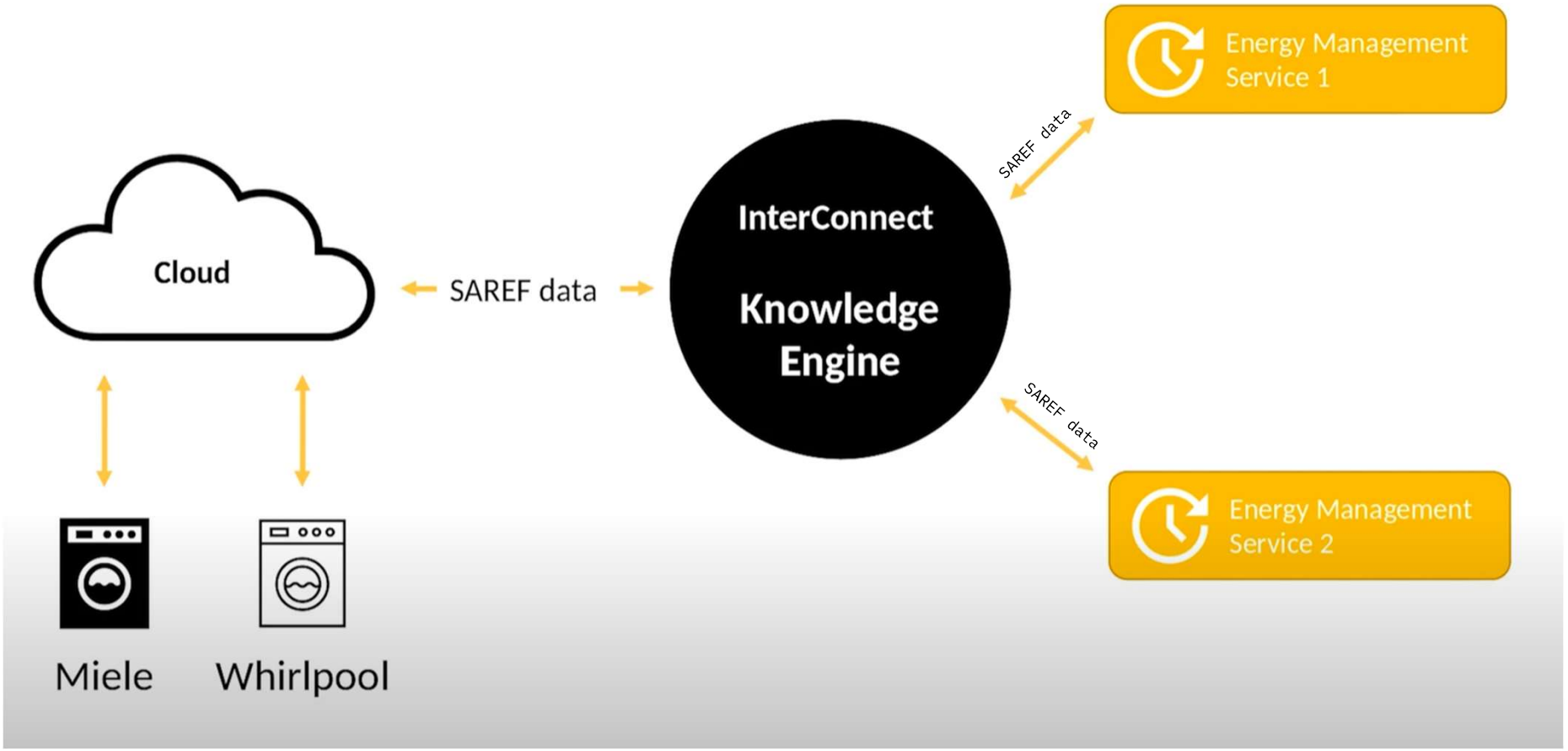
Use case: users allow smart appliances to offer flexibility managed by an Energy Management System



Interoperability plug & play: different standards



Plug & play Energy Management Service



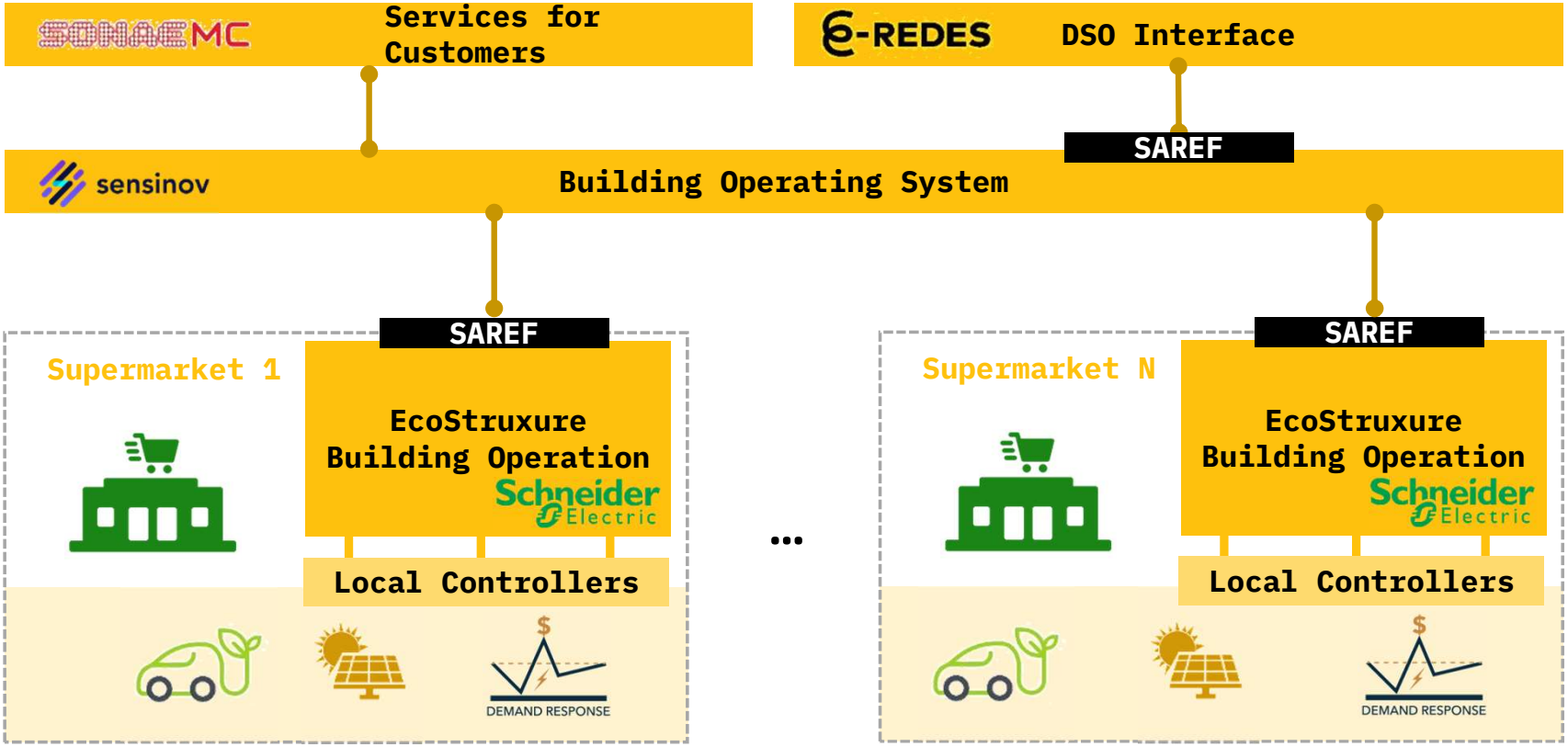
Interoperability in practice #2

Example use case provided by the Portuguese pilot

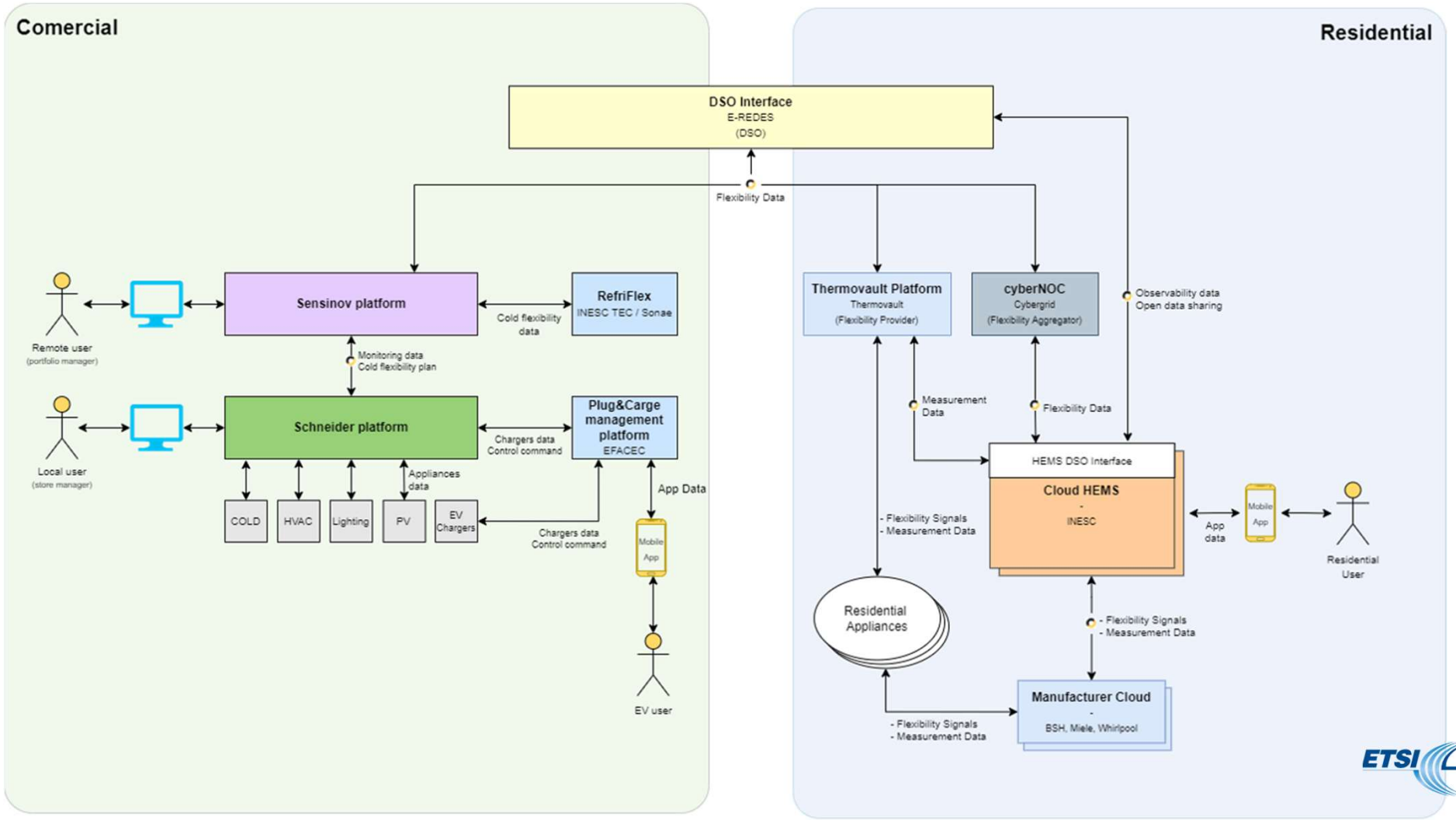
Commercial buildings use case
Green supermarkets (PT): motivation

- Exploit demand side flexibility from supermarkets
- Meet energy sustainability goals: 100% on-site renewable energy
- Supply flexibility in the framework of Directive (EU) 2019/944
- Boost interoperability and data-driven energy optimization
- Monitoring and control of consumption remains limited
- Design a cost-effective IoT platform for food retail

Commercial buildings use case
Green supermarkets (PT): architecture for semantic practice



Commercial buildings use case
Green supermarkets (PT): the bigger picture



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interoperable solutions connecting smart homes, buildings and grids

FINANCING

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PROJECT CONTACT

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DURATION

01.10.2019 / 30.09.2023