InterConnect Project

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Project goals

interconnect envisages to →

Contribute for the democratization of efficient energy management

through a flexible and interoperable ecosystem

where demand flexibility can be integrated with effective benefits

to end-users

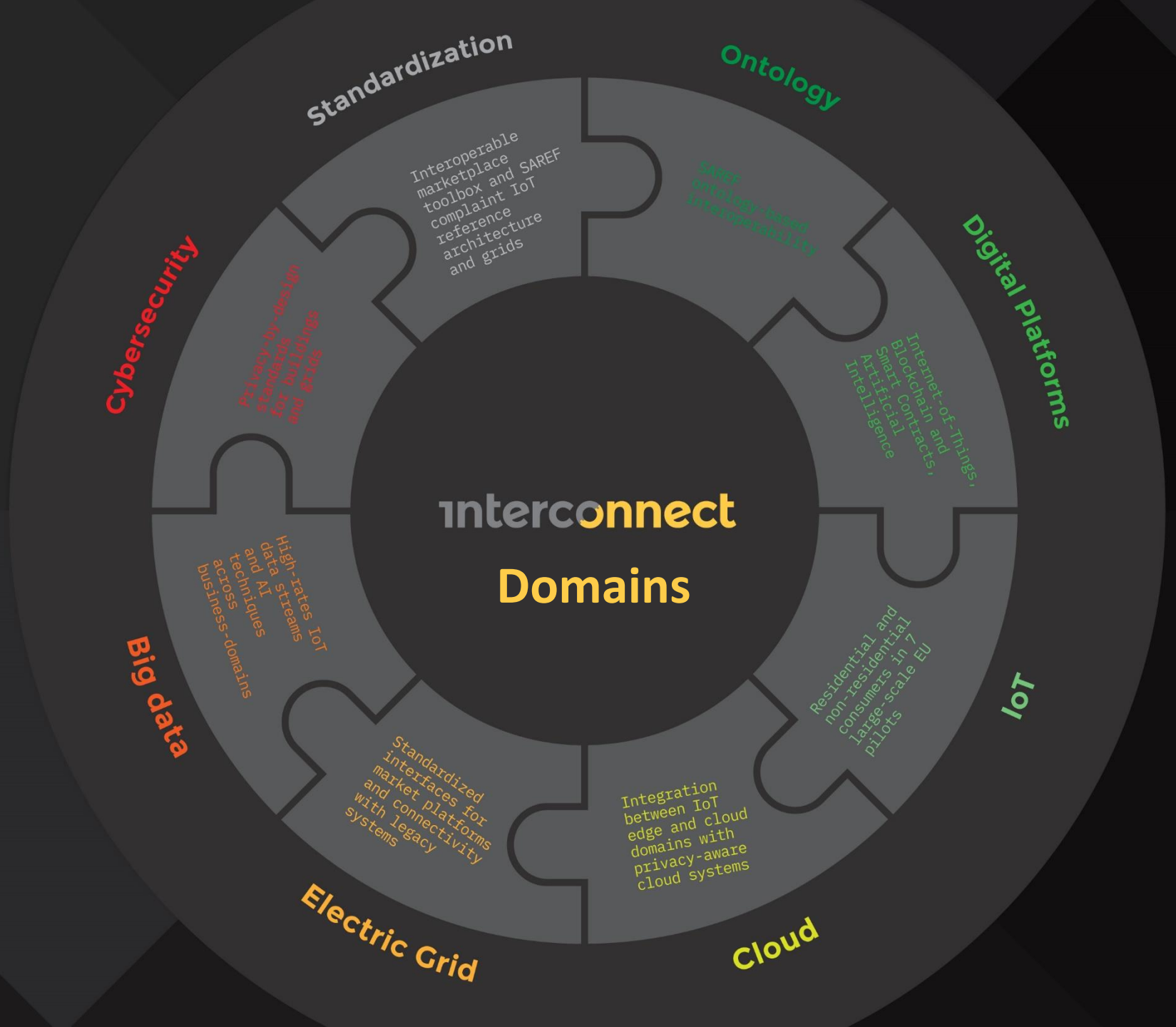
Deployment and adoption of IoT standards and platforms

User acceptance and demonstration of concepts

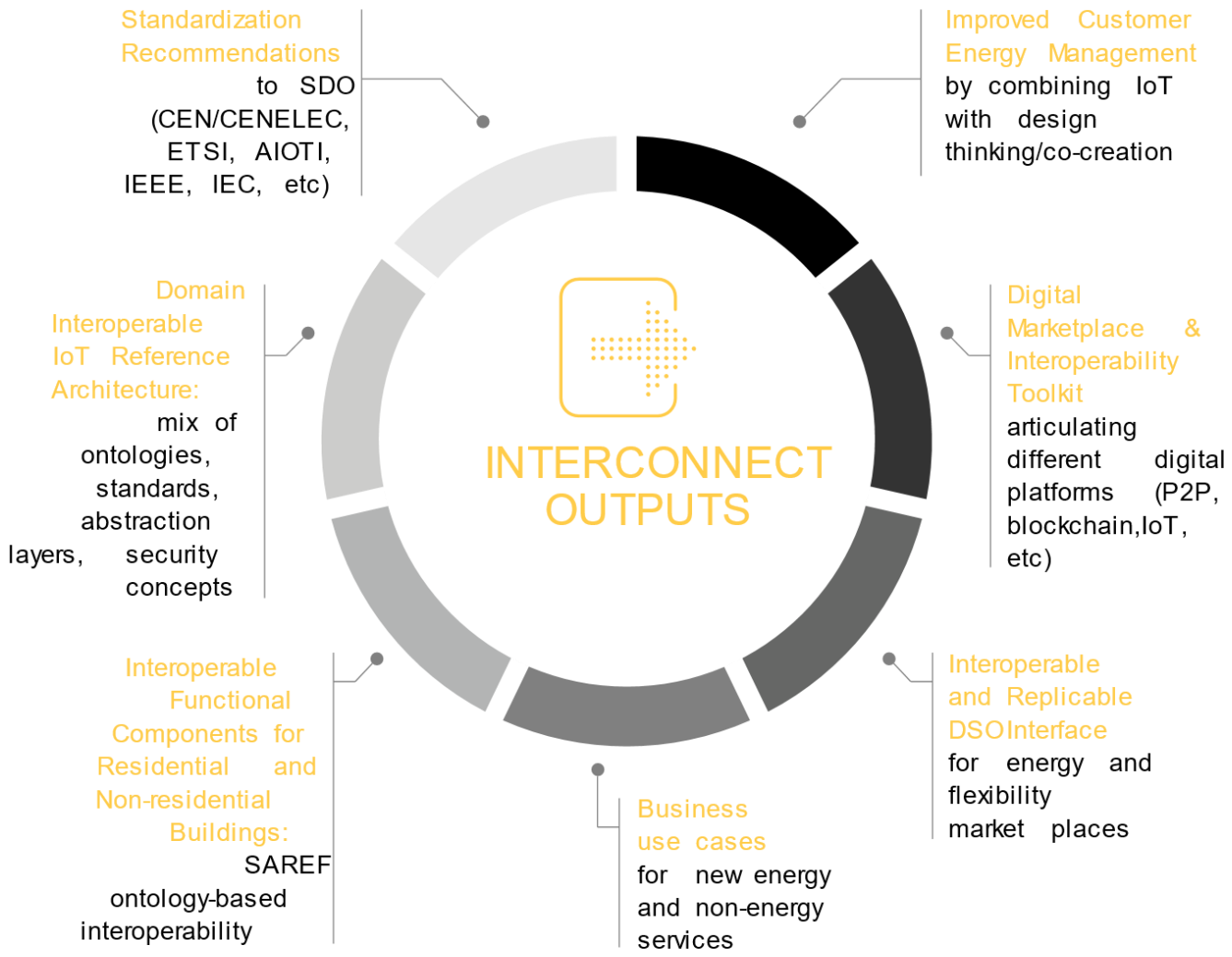
Marketplace for news services in EU

Increase the use of renewables & energy efficiency

Energy apps, services and connected devices and appliances

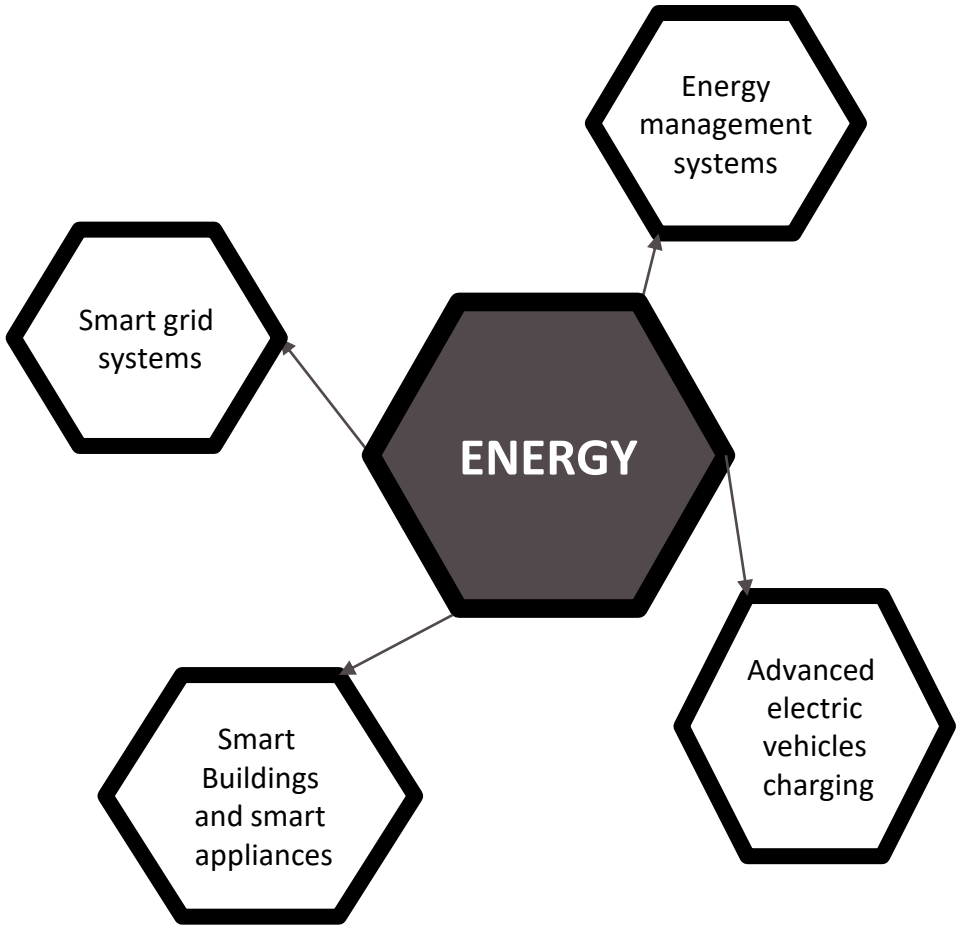

interconnect
Domains
Standardization
Interoperable marketplace toolbox and SAREF complaint IoT reference architecture and grids
Ontology
SAREF ontology-based interoperability
Digital Platforms
Internet-of-Things, Blockchain and Smart Contracts, Artificial Intelligence
IoT
Residential and non-residential consumers in 7 large-scale EU pilots
Cloud
Integration between IoT edge and cloud domains with privacy-aware cloud systems
Electric Grid
Standardized interfaces for market platforms and connectivity with legacy systems
Big data
High-rates IoT data streams and AI techniques across business-domains
Cybersecurity
Privacy-by-design standards for buildings and grids

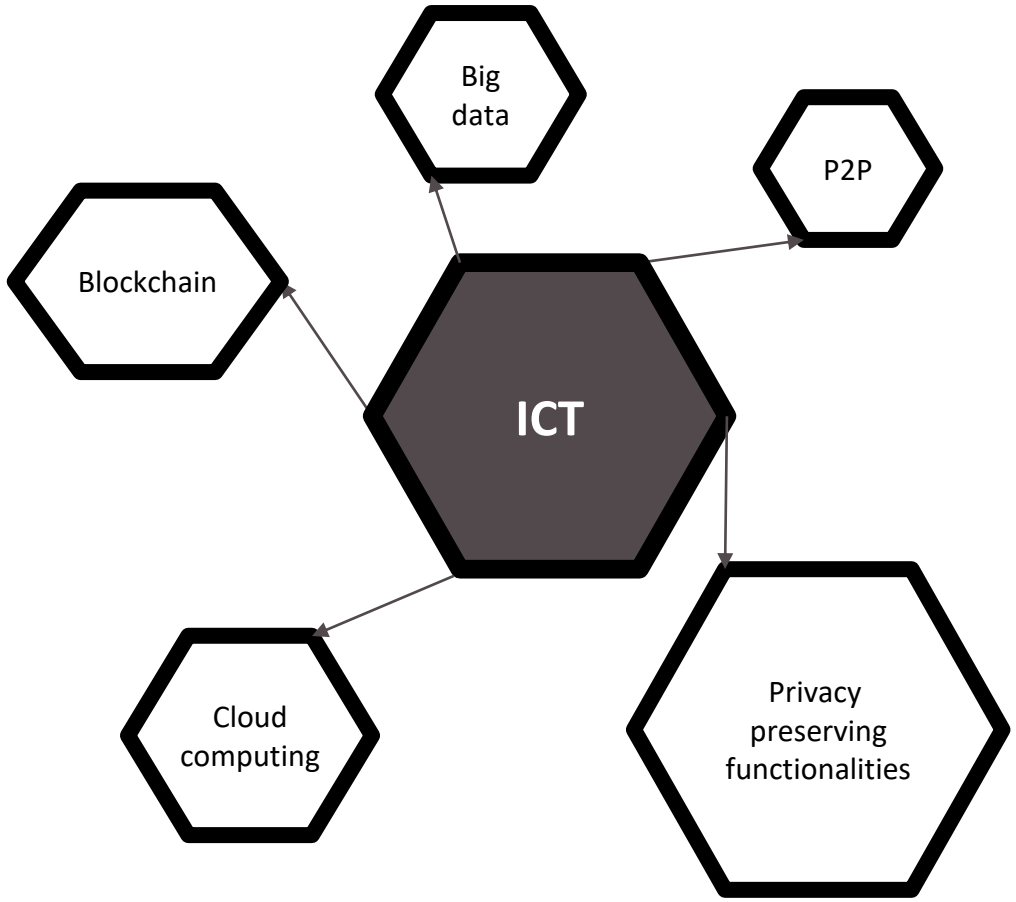
Expected Output



Energy and ICT domain articulation

By developing technologies in two main areas:





What impacts do we expect achieve?

Deployment and adoption of IoT standards and platforms

Accelerate a wider deployment and adoption of IoT standards and platforms in smart homes and buildings in Europe and development of secure, cost-effective and sustainable IoT ecosystems and related business models.

Energy apps, services and connected devices and appliances

Increasing number of energy apps, services – energy (ex: building energy efficiency, electrical mobility, renewable integration) and non-energy (comfort, convenience, security, privacy) - and connected devices and appliances.

User acceptance and demonstration of concepts

Validation of end user acceptance, as well as demonstration of viable concepts that ensure privacy, liability and trust in connected data spaces.

Marketplace for news services in EU

Demonstrate that IoT platforms lead to a marketplace for new services in EU homes and buildings with opportunities for SMEs and start-ups.

Increase the use of renewables & energy efficiency

Contribute to increase the use of renewables and energy efficiency, offering access to cheaper and sustainable energy for consumers and maximising social welfare.

Seven large scale pilots with multiple sets of buildings

The future of smart energy management solutions will start by testing seven connected large-scale pilots across Europe:

Greece

Large residential community with smart appliances and EV integration

France

Residential & non-residential, with tertiary buildings and apartments

Portugal

Residential & geographically widespread tertiary buildings

Netherlands

Residential & non-residential buildings

Germany

Groups of residential buildings and hotels

Belgium

Residential and tertiary buildings in communities of multi-energy vectors

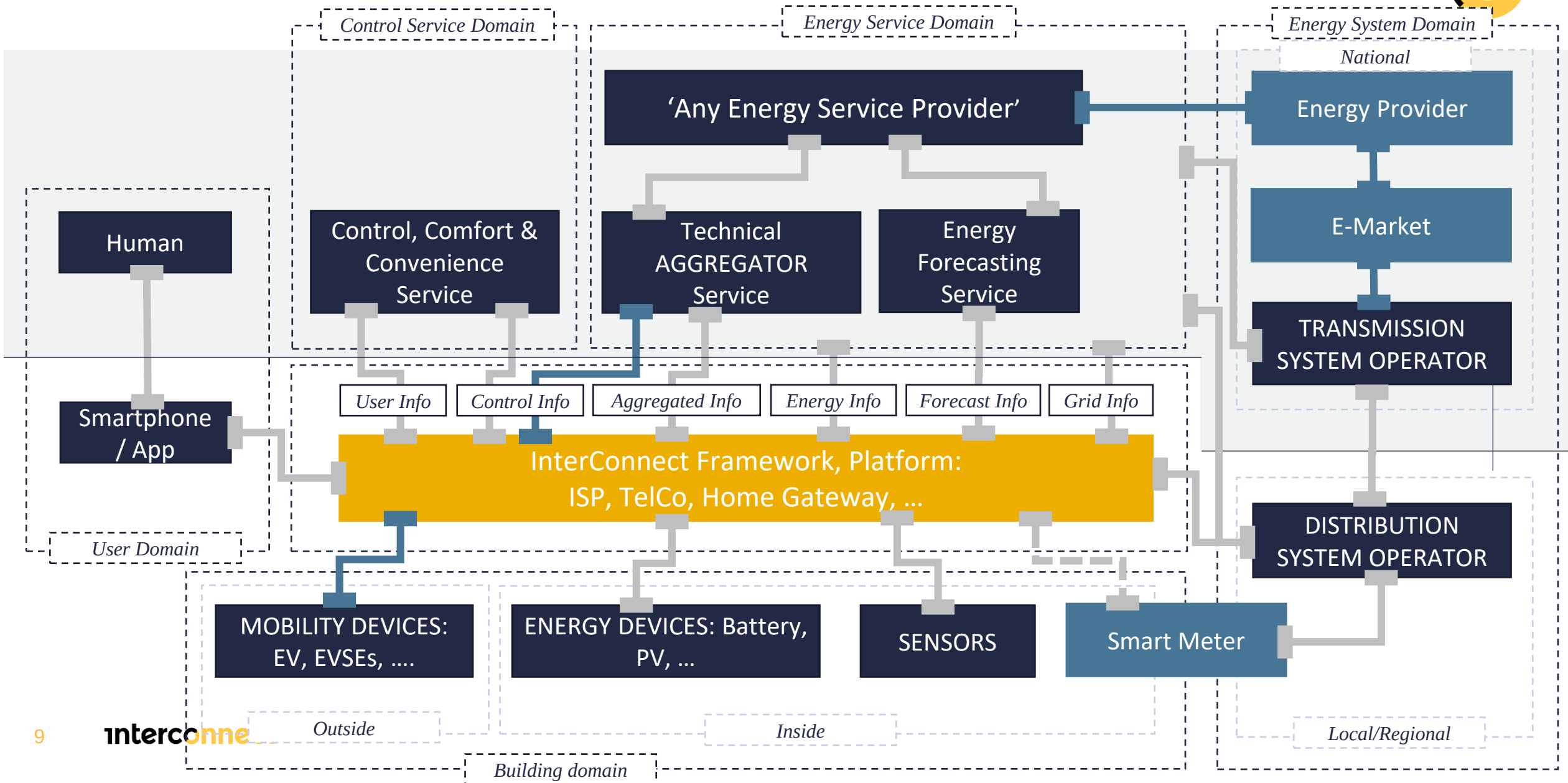
Italy

Residential social housing

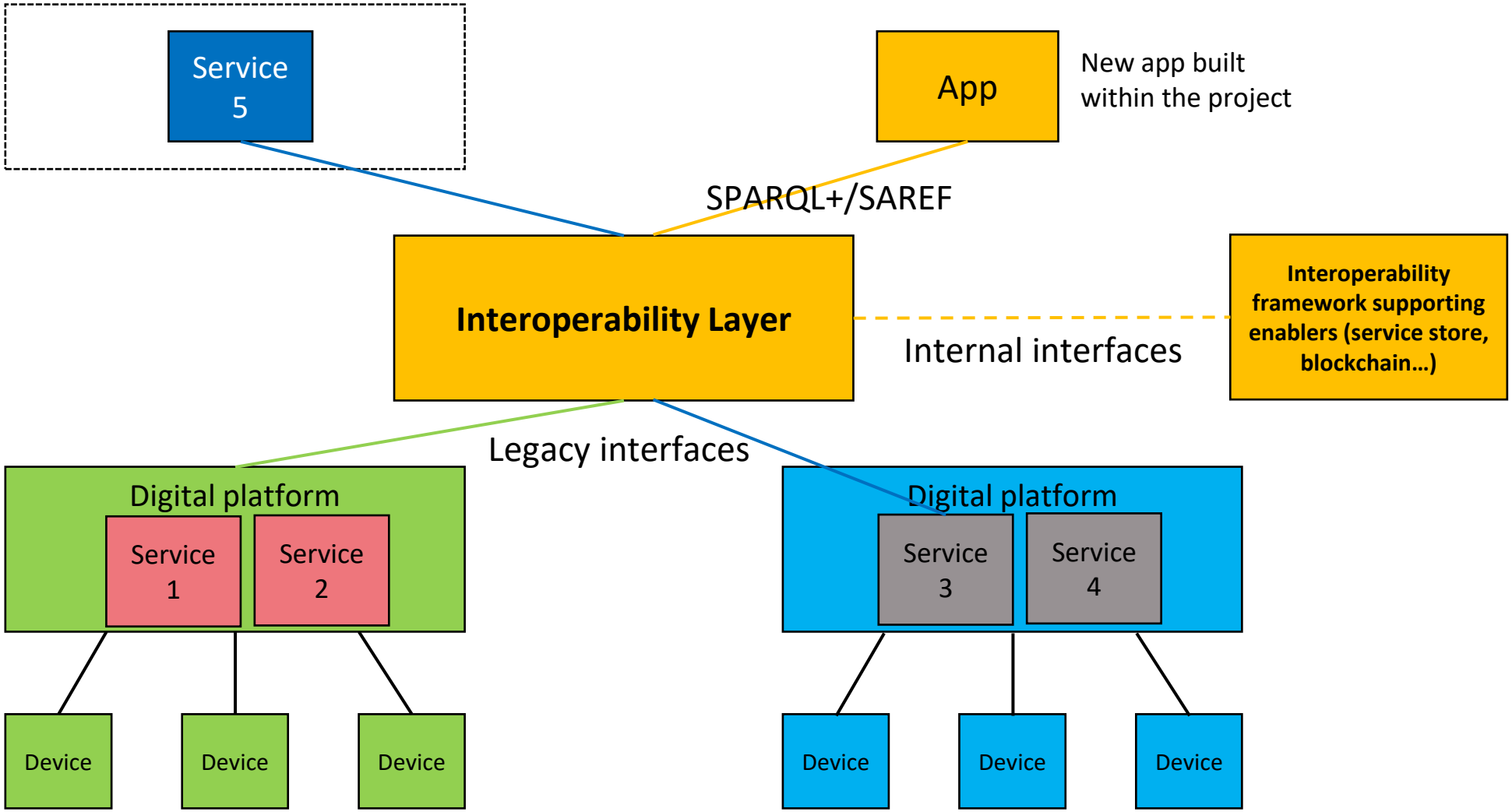
Building and service sets

- Buildings:
  - Residential
    - Houses
    - Apartments
      - Single/multiple dwelling
      - Common spaces
  - Non-residential
    - Supermarkets
    - Hotels
    - Schools
    - Offices
    - Sciences Park
- Services:
  - Energy
    - Optimal use
      - Cost reduction
      - CO2 footprint reduction
    - Integration of renewable sources
    - Flexibility for grid support
  - Non-energy
    - Comfort
    - Indoor air-quality
    - Heath and wellbeing

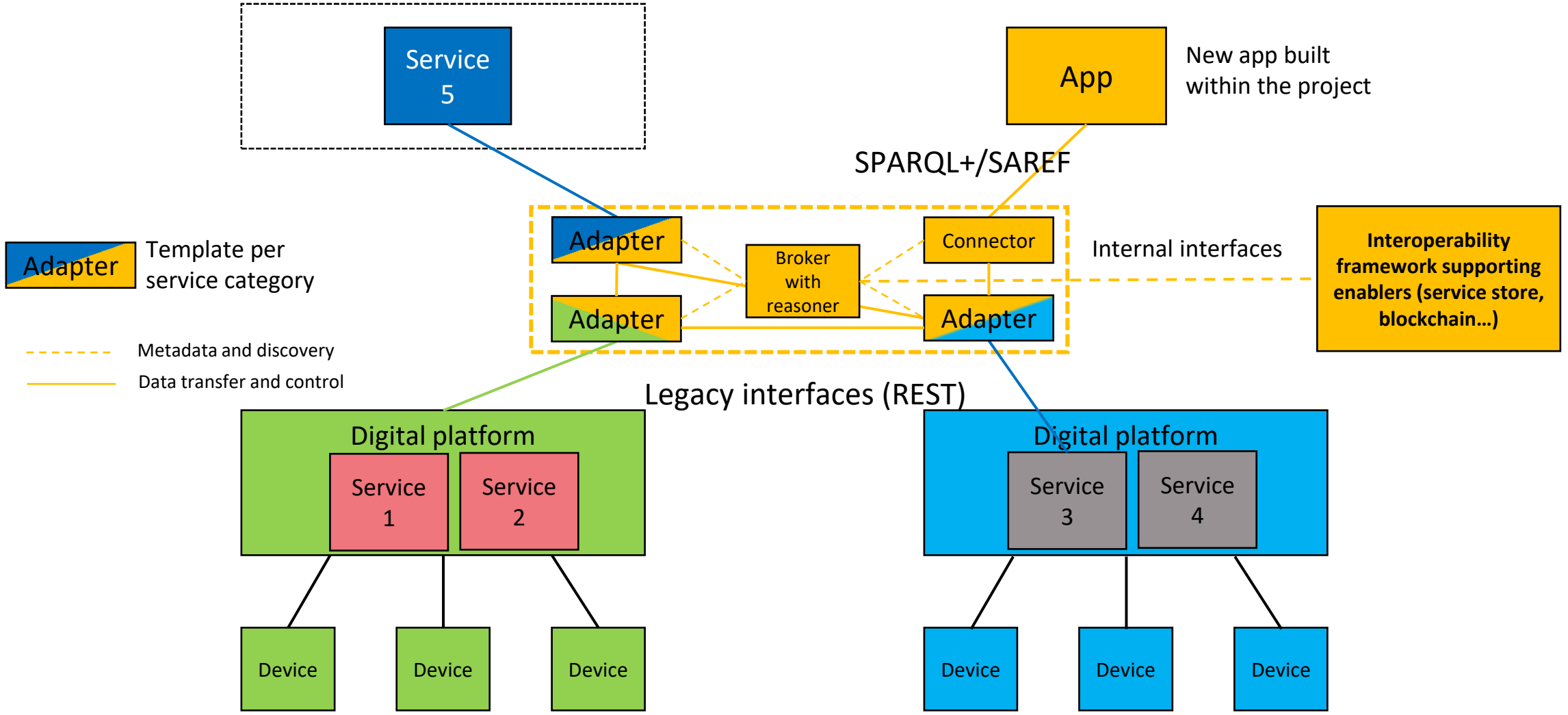
Multidomain – Multilevel



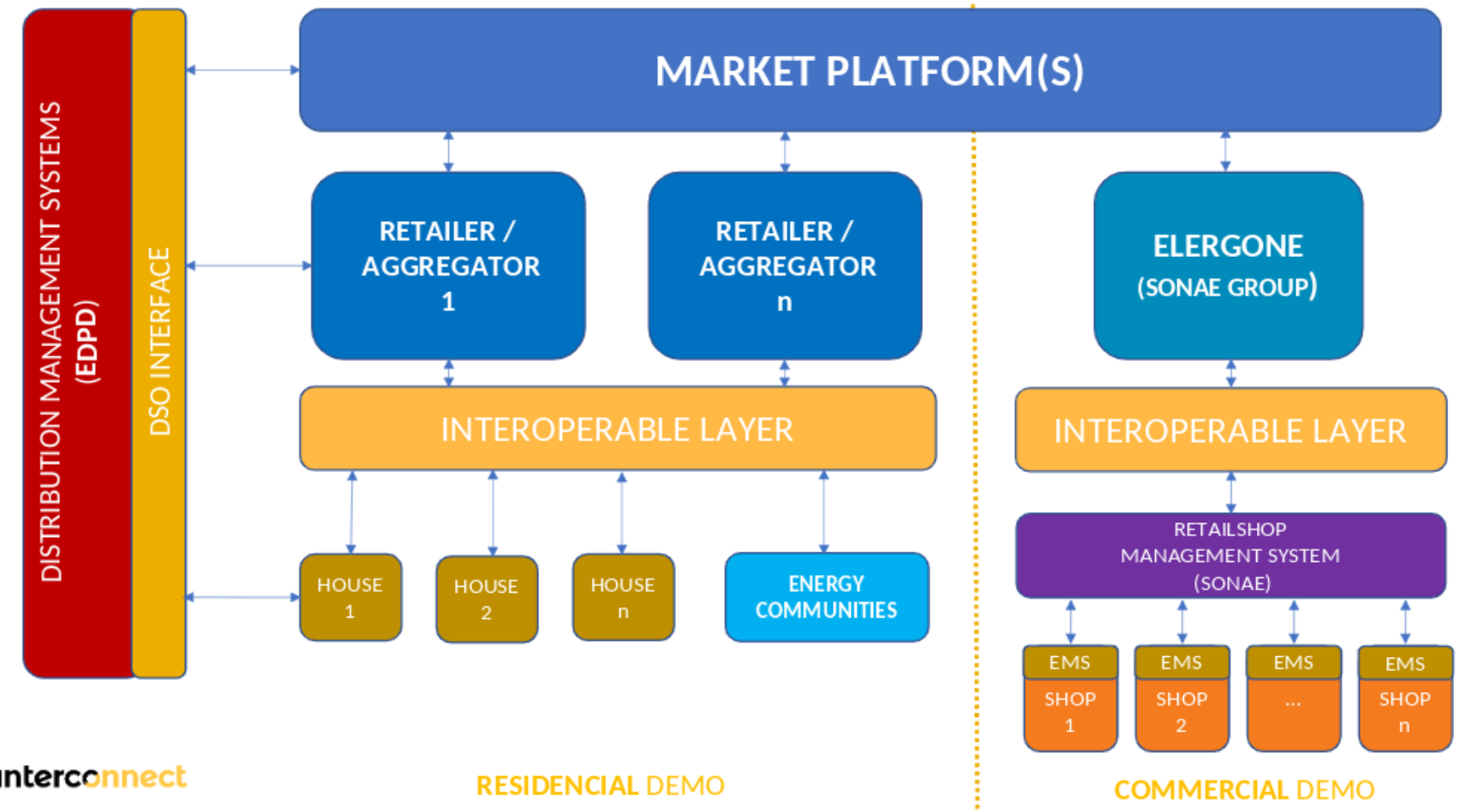
Interoperability Framework



Interoperability Framework



Building Interoperability Framework – Example



interconnect

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