



SYNERGY

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SYNERGY: Big Data Value Creation within SYNERgetic energy-as-a-service Applications through trusted multi-party data sharing over an AI Big Data Analytics Marketplace

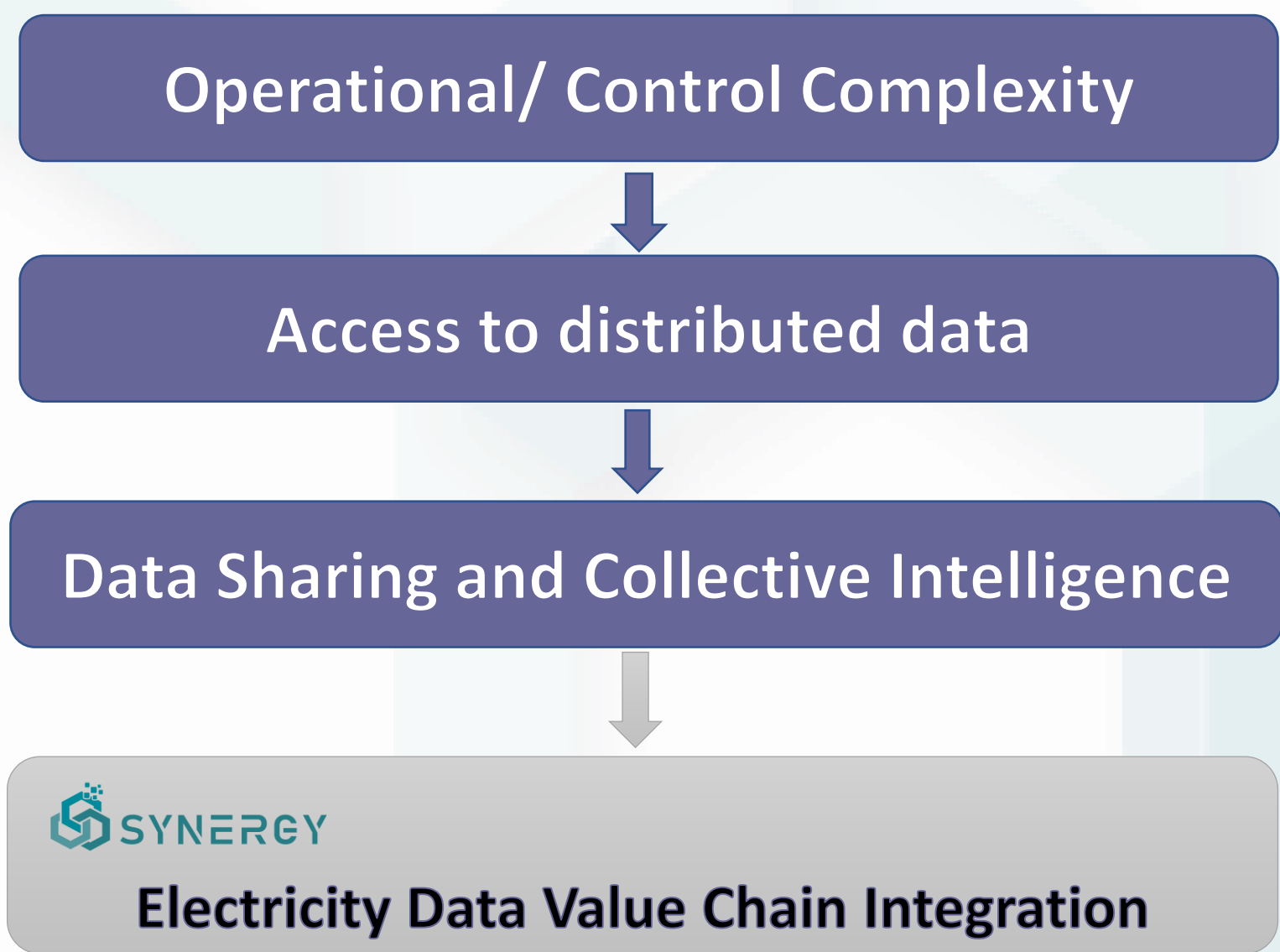
SYNERGY introduces a **novel framework and reference big data architecture** that leverages data related to the electricity domain, coming from diverse sources (data APIs, historical data, statistics, sensor / IoT data, weather data, energy market data and various other open data sources) to help the electricity value chain stakeholders to simultaneously **enhance their data reach, improve their internal intelligence on electricity-related optimization functions**, while getting involved in novel sharing / trading models of data sources and intelligence, in order to gain better insights and shift individual decision-making at a collective intelligence level. SYNERGY will attempt to unleash the **data-driven innovation and collaboration potential across electricity actors**, acting as multiplier of the “combined” data value that can be shared and traded, and re-conceiving real-time data sharing against traditionally bilateral contracting applied in the electricity sector, to enable optimization of the operation of electricity networks and components (RES, buildings, etc).

Main Data

- Coordinator: ETRA I+D
- 5 Spanish partners
- Consortium: 24 partners from 9 EU countries
- Demonstration: 5 demos in 5 EU Member states
- Budget / Funding: 12,8 M€ / 9,9 M€
- Start / End date: 01-01-2020 / 30-06-2023

Introduction

The European electricity sector is undergoing a major change with the increasing digitalisation, roll-out of smart meters and wide penetration of RES, IoT devices, distributed storage and EVs. Efficiency requires much automation, M2M technologies, AI, Analytics, etc. The need for “end-to-end” coordination among electricity stakeholders is becoming a necessity to increase electricity networks’ stability and resilience, while satisfying operational optimization objectives and business case targets. SYNERGY is introducing a novel framework and reference architecture for a Big Energy Data Platform and AI Analytics Marketplace, together with specific applications to help the stakeholders to enhance their data reach, improve their internal intelligence, while getting involved in new data sharing models.



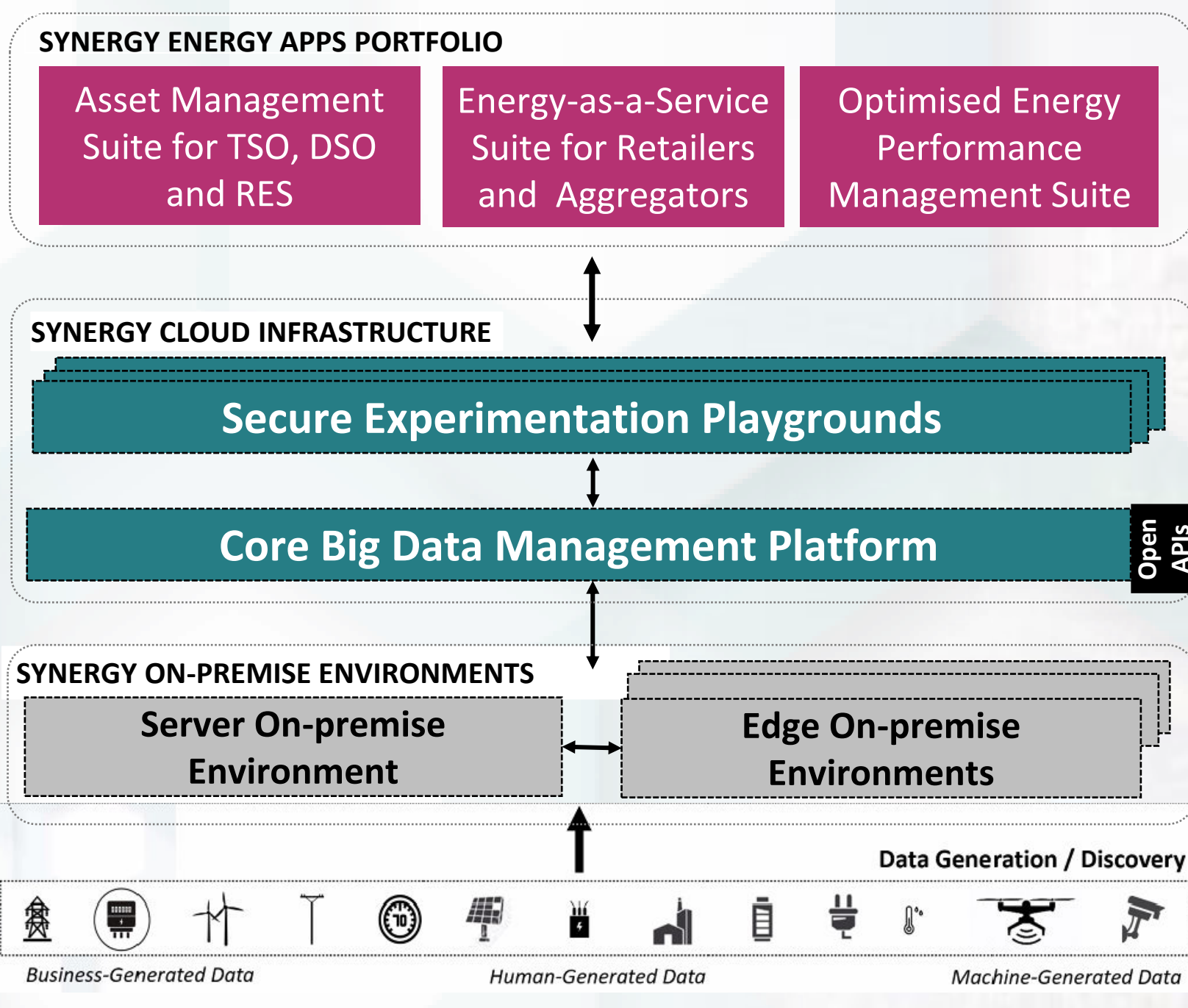
PROBLEM: Decentralized data production, Increasing complexity in the energy system

NEED: Interoperability, extract information from Big Data, etc;

SOLUTION: platform for sharing, trading and safeguarding data and gain added value from data from legacy infrastructures

Novel SYNERGY aspects

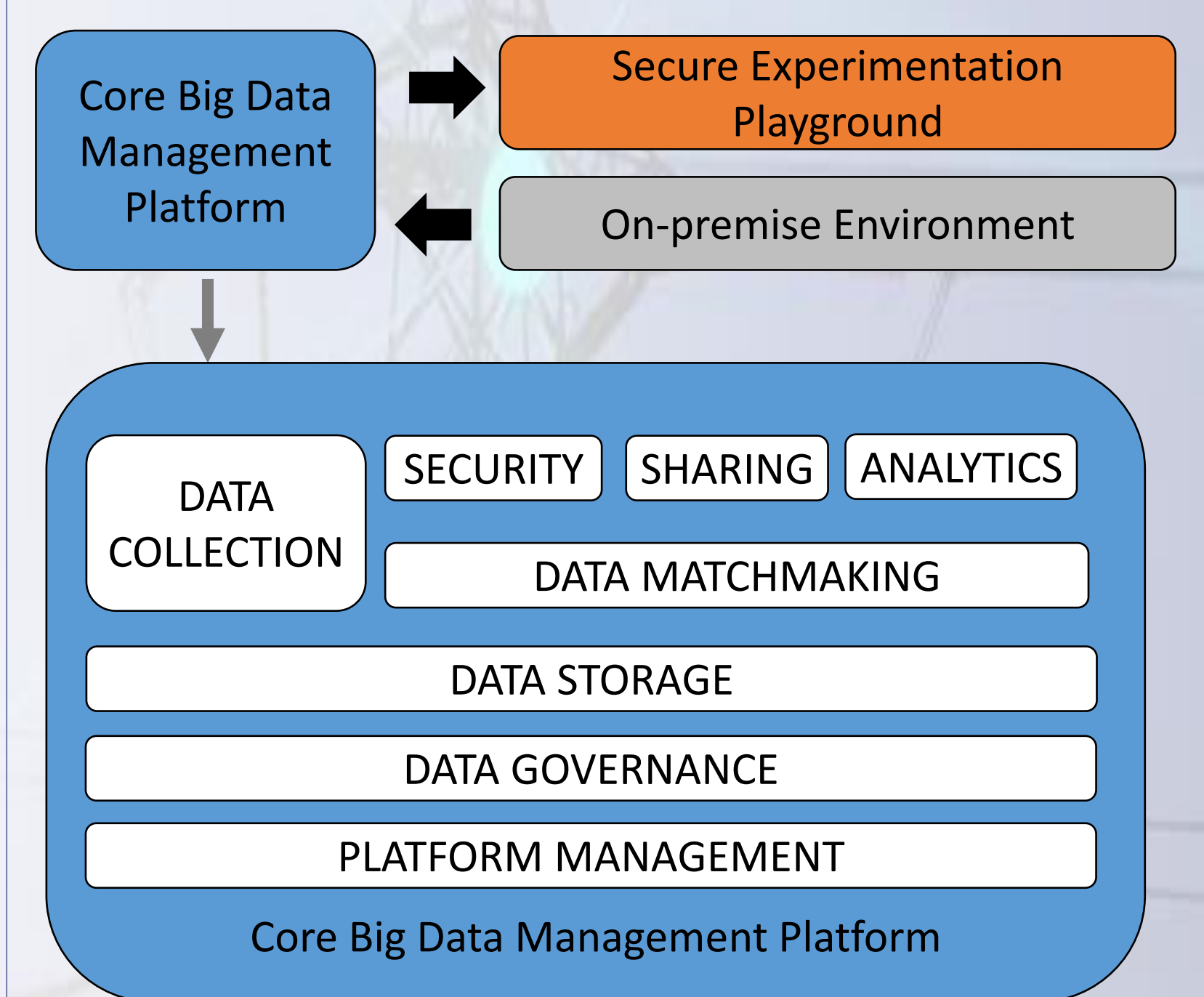
- ✓ **Trusted data asset sharing** for creating smart multi-party data contract
- ✓ **Novel knowledge extraction** by designing and executing analytics
- ✓ **A bundle of personal/ industrial/ edge baseline (pre-trained) analytics**
- ✓ **Effective data management and interoperability** aimed at linking data assets with external data based on CIM
- ✓ **End-to-end data security** allowing encryption and check-in data
- ✓ **Advanced access control** to regulate access to private data assets
- ✓ **Intuitive data exploration** to search and explore energy data for analytics
- ✓ **Configurable data asset retrieval on demand** depending on the asset’s license and the data consumer’s needs
- ✓ **12 Innovative AI services for:**
 - TSOs, DSOs and RES operators
 - Retailers, Aggregators and ESCOs
 - Building and facility managers



Ongoing Activities:

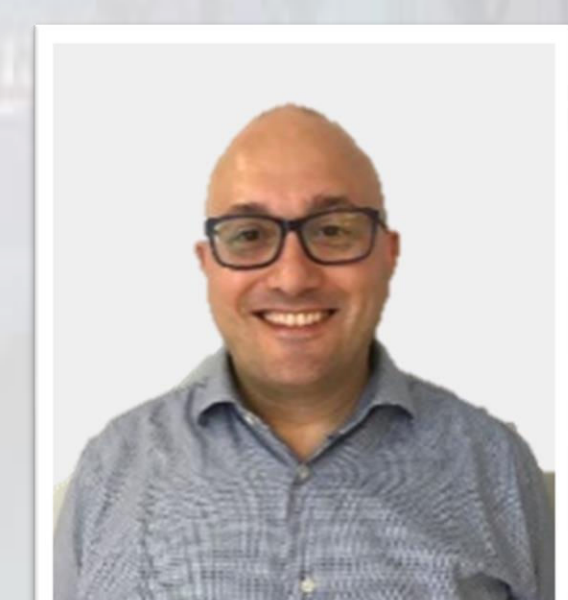
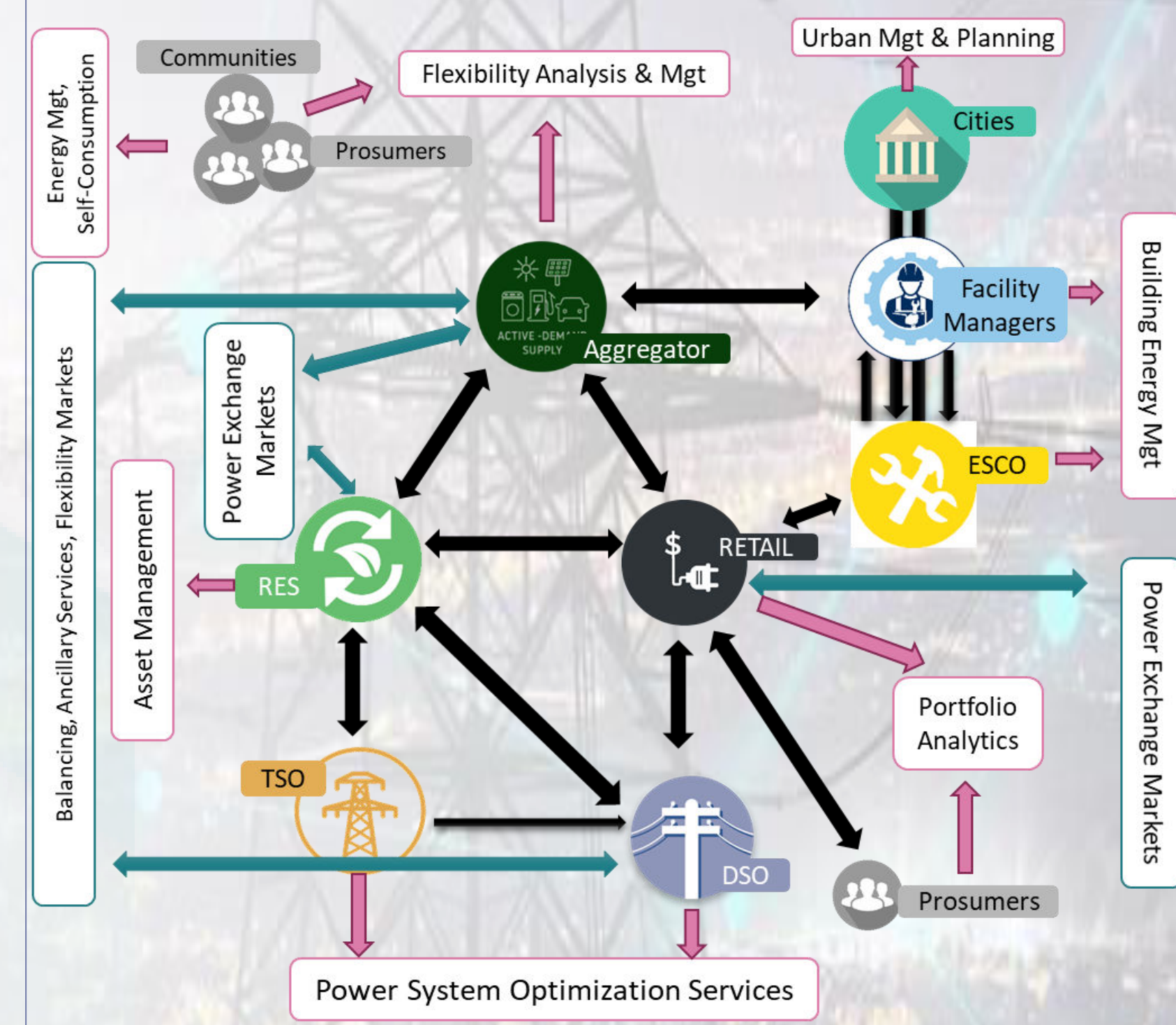
- ✓ Testing and validation in 5 large scale demo sites with:
 - Different actors and data sources
 - Various energy systems/assets
 - Heterogeneous climate, demography and social features
- ✓ Feedbacks and contributions from external stakeholders

More info and updates at: www.synergyh2020.eu



New Business Opportunities from:

- ✓ New data-driven Business Models
- ✓ New information and intelligence from data analytics;
- ✓ Interaction of different SHs;
- ✓ Unique point to store, share and analyze data.



Author’s contact



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