



**ELEC  
TRI BIG  
DATA  
CITY**

**25 PARTNERS**

**EU FUNDED**

**HORIZON 2020**

**SYNERGYH2020.EU**

**START JAN. 20 | DURATION 42M | BUDGET 14,1 M€**



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## REVOLUTION

SYNERGY will revolutionize the network management and improve the electricity value chain. Players in the market will get service applications based on big data, multi-party data sharing, artificial intelligence in an analytical cloud solution, plus a new prosperous marketplace for RES

## REALITY CHECK

SYNERGY will test in 5 different pilot sites and 21 demo cases and assess the project impact from a technological, socio-economic, environmental and business viability point of view while focusing on the cost-benefit analysis of the deployed solutions. Consequently, the need for “end-to-end” coordination between the electricity sector stakeholders, not only in business terms but also in information terms, is becoming a necessity for increasing the stabilization and optimization of the business case targets in the sector.

## CONTEXT

The European electricity sector is undergoing a huge shift away from the traditional monitoring and controlling approaches that have been applied exclusively over the transmission and distribution networks. Since the smart electricity grid era is pushing sensing, control, and data collection, at the edge of electricity networks, this needs to be further re-defined. The reasoning behind this is a wide penetration of Distributed Energy Resources (DERs), such as renewable energy sources (RES), smart home devices and appliances (IoT-enabled), distributed storage, smart meters, and electric vehicles (EVs).

## SCOPE

SYNERGY will introduce a highly effective, innovative, and scalable reference architecture and implementation for a Big Energy Data Platform and Analytics Marketplace. Accompanied by big data-enabled domain-specific applications, this will help the electricity value chain stakeholders enhance their data reach, improve their internal intelligence, and optimize operations and benefits. The stakeholders will be introduced to novel business ecosystems, based on data (intelligence) sharing/trading, for further intelligence and benefit enhancement, and generation of new revenue streams out of the data and the intelligence they produce. Ultimately, the real value of the SYNERGY framework stems from the benefits it will generate for all actors involved, in the electricity sector, through the provision of innovative applications and services.

## TECHNICAL

SYNERGY bears 5 Core Data Services Bundles:

- (i) Data Collection Services Bundle (Data Ingestion, Curation, Mapping, Linking and Update);
- (ii) Data Security Services Bundle, that is responsible for safeguarding, and securing any data asset (and app);
- (iii) Data Sharing Services Bundle handling the adopted sharing/trading mechanisms, the effective remuneration approach and the multi-party data contracting lifecycle;
- (iv) Data Matchmaking Services Bundle (a demand-driven mentality as opposed to the typical supply-driven operation of the data marketplaces);
- (v) Data Analytics Services Bundle that essentially allows for exploratory data analysis, designing and executing analytics workflows, and running pre-trained analytics to generate new insights and knowledge.

# IMPACT

**Replicability:** 5 large-scale demonstrators in Greece, Spain, Austria, Finland and Croatia.

**Socio-economics:** Improvement of energy performance and costs savings.

**Environment:** Increased penetration of RES. Booming VC investments in green tech.

**Market Transformation:** Enhanced operational stability and creation of new revenue.

**Policy:** Increased compliance of EU and national regulatory authorities.



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