





OMEGA-X Energy Data Space

GAIA-X Lighthouse Project

Orchestrating an interoperable sovereign federated Multi-vector Energy data space built on open standards and ready for GAia-X





In a nutshell





START 05/2022



END 04/2025

Establish the grounds for a common European Energy Data Space (HEU-CL5-2021-D3-01-01)



LEADPARTNER Atos

> PARTNERS 30

Service Marketplace

Data Marketplace

Fede rated Infr.

4 Business Use case families

4 Diplot sites. 7 countries

25+ services (10+ new)

18 Service providers

17 Data providers

40+ datasets, 50GB average

Quantifyiable improvements in all 4 UC families (decarbonization, efficiency, Renewable penetration, engagment)

Full Interoperability, new governance models, new services, new business models, industry and cross-industry alliances.

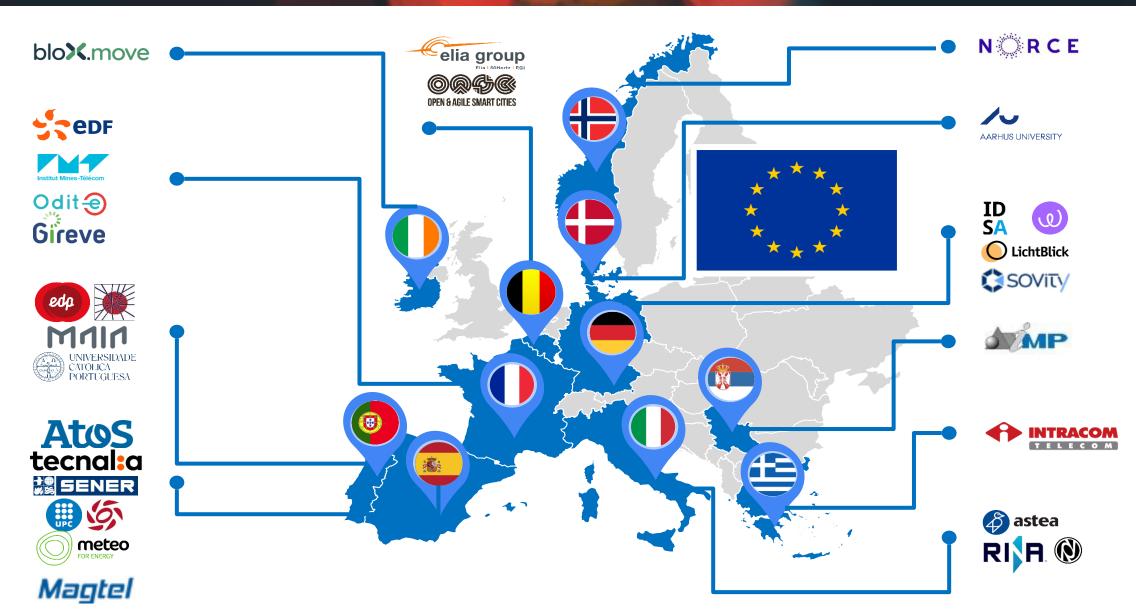
Safe data trading, break data siloes, lower costs of data usage, increase data availability





Partnership



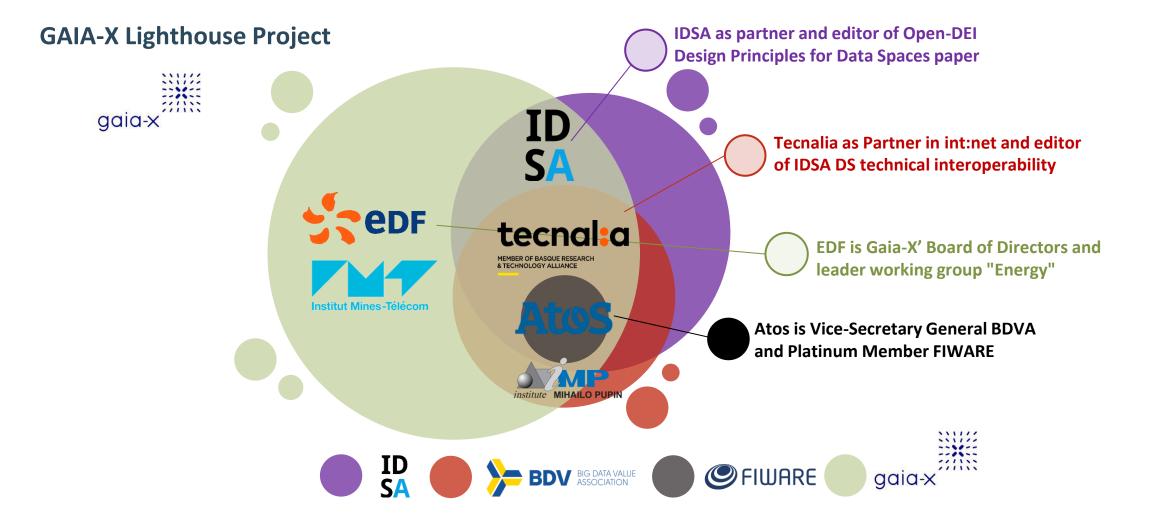






Relevance







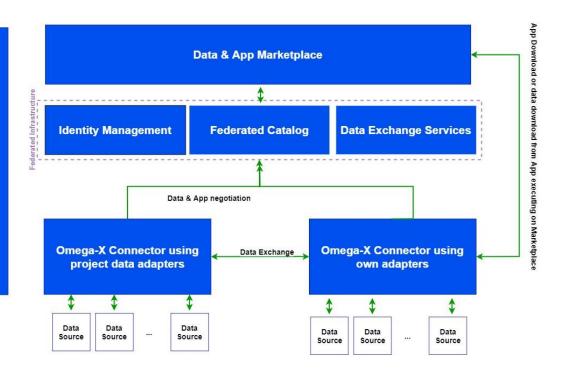


Architecture

Compliance Service



- Verifiable Credential Issuer based on OID4VC (TECNALIA)
- EDC Connector with Verifiable Presentation (SOVITY)
- GAIA-X Federated Catalogue & Clearing House (ATOS)
- Data & Services Marketplace integrated with the rest of components (INTRACOM)







Use cases



Renewables

3 pilots sites. 2 countries (Spain, France)

7 partners involved (3 data owners, 4 service providers)

Intra-pilot: O&M and smart grid data-driven services

Inter-pilot: Benchmarking and synthetic data generation



Local Energy Communities

4 pilot sites. 4 countries (Spain, Italy, Serbia, Portugal)

9 partners involved (5 data owners, 5 service providers)

Intra-pilot: multi-vector optimization/planning. Engagement

Inter-pilot: Benchmarking



Electromobility

1 pilot site. 2 countries (Belgium, France)

5 partners involved (3 data owners, 2 service providers)

Intra-pilot: Roaming of EV charge booking services

Inter-pilot: TSO-DSO collaboration



Flexibility

1 pilot site. 1 country (Portugal)

5 partners involved (3 data owners, 2 service providers)

Intra-pilot: Advanced data-driven flexibility







Services



Renewables

- Pilot in Cordoba (Spain)
- Partners: MAGTEL, SENER & TECNALIA
- PV Operation and Maintenance and Benchmarking

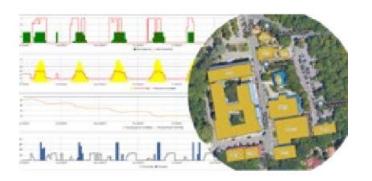
Local Energy Communities

- Pilot in Granollers (Spain)
- Partners: ESTABANELL, UPC & TECNALIA
- Battery management optimisation for self-consumption

Flexibility

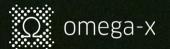
- Pilot in Maia (Portugal)
- Partners: MAIA Municipality, EDP & TECNALIA
- Al services and digital twins for optimising aggregated offers for local flexibility markets













Thank you!

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