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Project Presentation

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

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Agenda

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the European Union

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START
05/2022

FUNDING
8M€

END
04/2025

LEADPARTNER
Atos

PARTNERS
30

OMEGA-X

- Service Marketplace
- Data Marketplace
- Fede | rated | Infr.

IDSA

4 Business Use case families

- 10 pilot 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

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Partnership

29 Partners - 11 EU Countries

Objectives

#	Name	KPI #1	KPI #2	KPI #3
1	Standard Architecture	4 EU Initiatives	Liaise >3 projects	
2	Data Marketplace	3-5 Data Providers / UCF	Collaboration with sister projects	
3	Service Marketplace	4-5 Service Providers / UCF	Collaboration with sister projects	25 services with 10 new
4	Data Governance Models	2 Models	Tested in at least 1 UCF	E2E data security and governance in all UCs
5	Demonstration	7 stakeholders in different locations / UCF	Guarantee of data availability/quality	Demonstrated value of data sharing
6	Data Space Interperability	Vertical interoperability (semantic)	Horizontal interoperability (other DS/Projects)	Open Source, standard protocols and APIs
7	Multi-vector Approach	5 different Energy Vectors	Electricity and Mobility	
8	Iteration and Cooperation	Three cycles	Continuous feedback loop	
9	User Centricity	Alignment with BRIDGE	Pilot level handbook	

IDSA as partner and editor of Open-DEI Design Principles for Data Spaces paper

ENGIE chairs BDVA Energy Working Group

EDF is Gaia-X' Board of Directors and leader working group "Energy"

Atos is Vice-Secretary General BDVA and Platinum Member FIWARE

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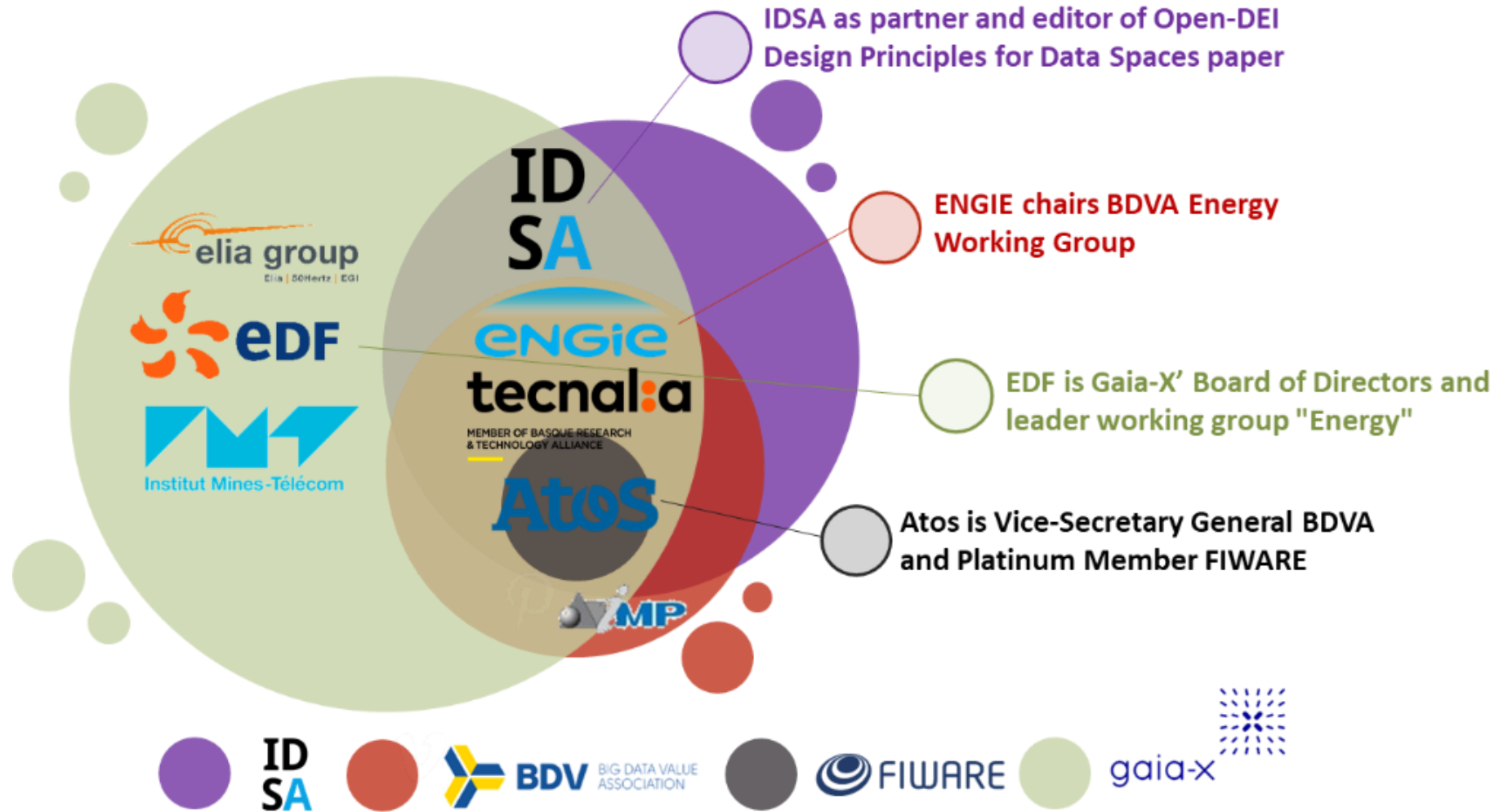
RENEWABLES

3 pilot 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, 3 countries (Spain, Italy, Serbia)
9 partners involved (5 data owners, 5 service providers
Intra-pilot: multi-vector optimization/planning, engagement
Inter-pilot: Benchmarking

ELECTROMOBILITY

2 pilot sites, 2 countries (Germany, Belgium)
8 partners involved (4 data owners,
5 service providers
Intra-pilot: Roaming of booking and self-consumption
Inter-pilot: TSO-DSO collaboration

FLEXIBILITY

1 pilot site, 1 country (Portugal)
7 partners involved (5 data owners, 4 service providers
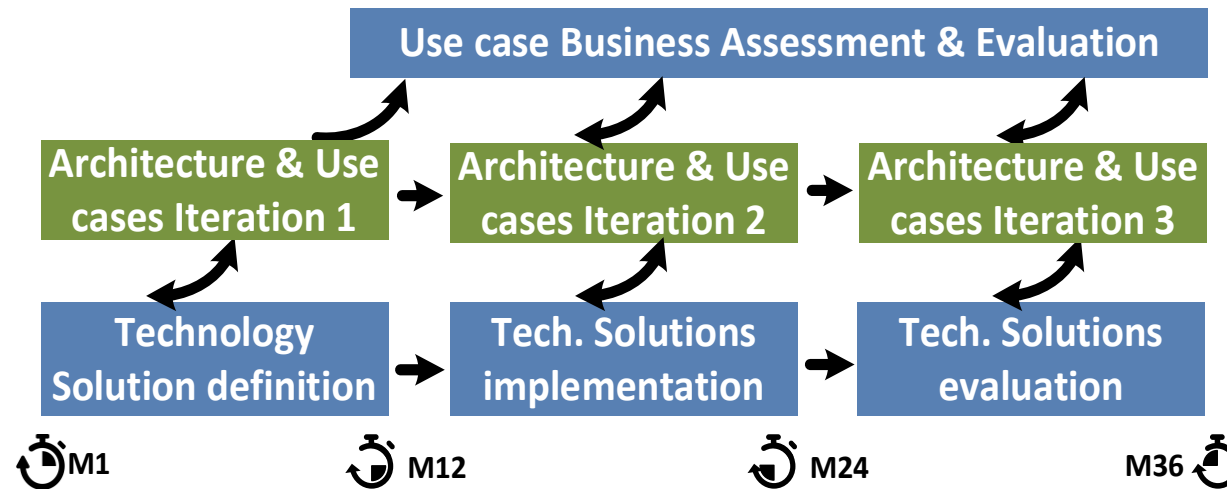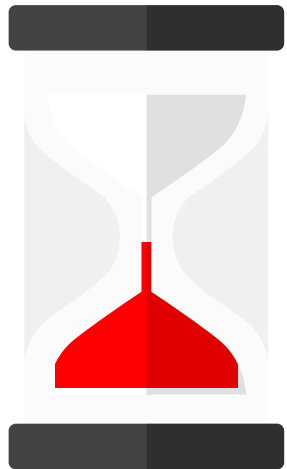Intra-pilot: Advanced data-driven flexibility

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Time Plan

May	April	April	April
2022	**2023**	**2024**	**2025**
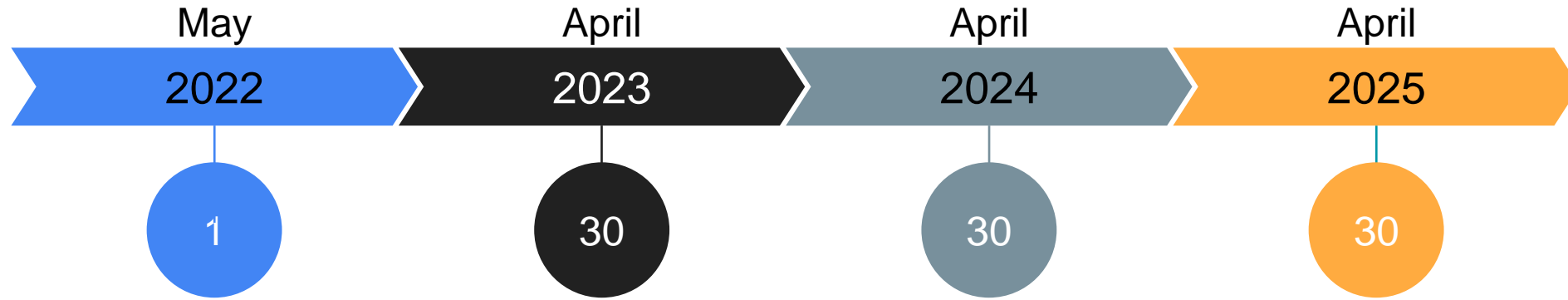
1 — OMEGA-X project Kick-off

30 — End of Design Cycle: Architecture and Use Cases

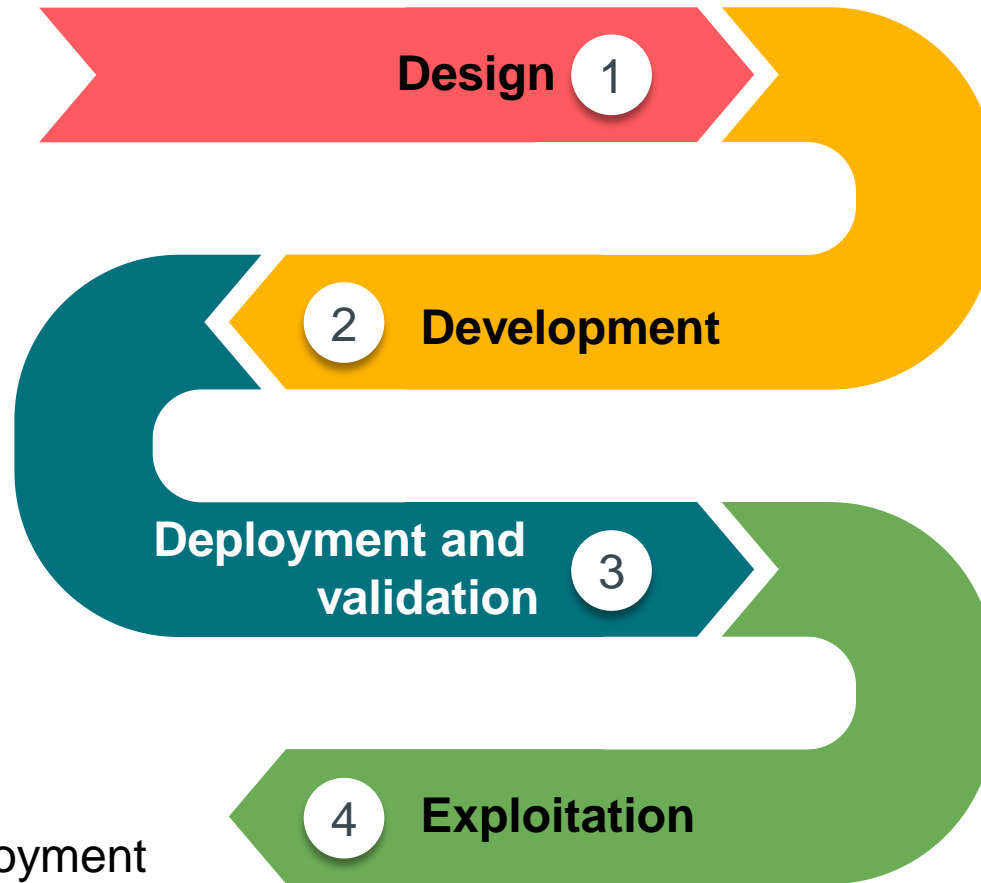**30** — End of development cycle: first release, pilot start

30 — End of evaluation cycle: final results

Use case Business Assessment & Evaluation

Architecture & Use cases Iteration 1	Architecture & Use cases Iteration 2	Architecture & Use cases Iteration 3
Technology Solution definition	Tech. Solutions implementation	Tech. Solutions evaluation

M1   M12   M24   M36

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Design 1

Development 2

Deployment and validation 3

Exploitation 4

- ☐ Use Cases
- ☐ Architecture
- ☐ Specifications

- ☐ Pilot site deployment
- ☐ Validation

- ☐ Component development
- ☐ Integration

- ☐ Performance
- ☐ Impact asessment

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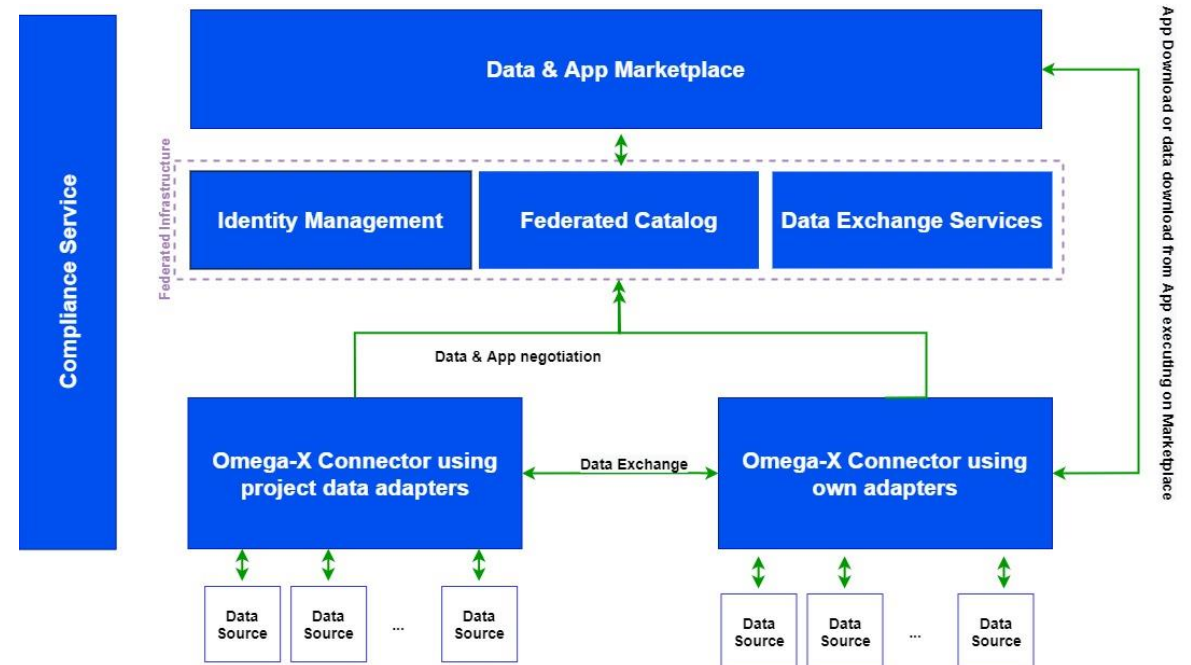
Vertical Interoperability:

- Open definition of protocols and standards
- Alignemt with IDSA/Gaia-X federation services (GXFS) and roles

Horizontal Interoperability

- Open Source Standardized protocols and APIs
- Information Models based on standards such as IEC CIM, IEC 61850 and IEC COSEM

Use case Interoperability

- Multiple stakeholders (both for data provision and service provision)
- Multiple locations (at least 2 per use case family)
- Interaction with sister projects

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Thank you!

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in Omega X

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