THE ROAD TO INTEROPERABILITY
INTERCONNECT
TEAM PROFILE

50+ institutions from 11 EU countries engaged in this interoperability mission

14 R&D Institutions
10 Manufacturers and Integrators
09 IoT/ICT Providers
05 Consultancy
04 Sets of end-users
03 DSO
03 Retailers
03 Associations
Interconnect Pathway to Innovation

**Existing background**
- Technologies & services in TRL 6
- SAREF, SPINE, FIWARE, S2
- 30 use cases from 11 different projects (InterFlex, Integrid, GIFT, EEBUS, etc.)

**Use Cases & Services**
- New use cases for existing technologies
- New technologies for existing use cases
- Incremental innovation of existing technologies

**Interoperability**
- Semantic data exchange (SAREF)
- Interoperability framework w/ semantic discovery, navigation and reasoning enablers

**Core Technologies**
- SAREFized services
- AI & ML
- IoT platforms
- Gamification
- P2P marketplace
- DSO interface

**Pilots**
- DSF-centric
- Multi-utility
- Cross-sector

**Open Calls for Innovators**
- Interoperable-by-design prototypes
- Interoperable-by-adoption demonstrators

2019 - 2021
2021 - 2023
Interoperable-by-design Prototypes Open Call!

FOR EUROPEAN ICT/ENERGY SMEs AND STARTUPS

INTERESTED IN DEVELOPING NOVEL INTEROPERABLE APPLICATIONS FOR SMARTHOMES AND SMARTGRIDS

14 Bottom-up projects will get benefits such as:

• Financial support: up to 150.000 € per project!
• 7 months Customized Support Programme

Deadline: 26/07/2022

www.interconnect-1-oc.fundingbox.com
AIOTI-BDVA-European Projects
Position papers

H2020 and Horizon Europe

Industry Initiatives

Building blocks from research

Building blocks from industry

Industry solutions

Associations

Position papers 2021-2022

- AIOTI
  - Guidance for the integration of IoT and Edge computing in data spaces
  - Published

- BDV
  - Data sharing spaces and interoperability
  - Draft May 10

- OPENDEI
  - Reference architectures and interoperability in digital platforms
  - Draft June 24

Support actions

Digital platforms
- Data spaces
- Draft June 23
- Digital twins standards 2022-2025

Draft June 23

Guidance for the integration of IoT and Edge computing in data spaces

Draft May 10

Data sharing spaces and interoperability

Draft June 24

Reference architectures and interoperability in digital platforms
OPEN DEI TF3
REFERENCE ARCHITECTURES AND INTEROPERABILITY IN DIGITAL PLATFORMS

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Architecture Approach

Federation

Vertical domain platform

Solution1

Solution2

Energy

Agriculture

Manufacturing

Healthcare

Construction

Technology domain platform - Digital twin

Technology domain platform - AI

Unified building blocks

Follows Reference Architecture Standards
ISO/IEC/IEEE 42010 - Architecture description
JTC 1/AG 8 - Meta Reference Architecture
Architecture approach – Energy example

Digital platform Solution architecture

Domain Patterns

Technology blocks

Energy digital platform solution architecture

Energy domain pattern (e.g. SGAM)

IoT

Digital twins

Data space

Unified blocks
Interoperability Approach – Data space (digital twin) example

Interoperability points

- Processing / Reasoning
  - Virtual twin entity
  - Physical twin entity
  - Data / Knowledge
  - Example: Digital twin

Interoperability case

- Justification and agreement on Interoperability facet A
- Justification and agreement on Interoperability facet B

Interoperability profile

- Interoperability facet A
- Interoperability facet B

Construction
Conclusion: Construction convergence supported by standards

Cross domain convergence

- Architecture
  - Domain building block
  - Technology building block
  - Unified building blocks

Interoperability

- Interoperability profiles
- Interoperability cases
- Integration
  - Interoperability points

Data space

Standardisation needs

- Interoperability
- Trust
- Data value
- Governance

Trustworthiness support

- Digital twin + AI integration
- Semiotic
- Semantic
- Resource management

Alignment in 4 domains

- Energy
- Agriculture
- Manufacturing
- Healthcare
Thank you!

Find more:
https://www.opendei.eu/