Interconnect Project and OPEN DEI TF3
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Architecture Approach

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

Energy
Solution1 Solution2
Vertical domain platform

Agriculture
Solution1 Solution2
Vertical domain platform

Manufacturing
Solution1 Solution2
Vertical domain platform

Healthcare
Solution1 Solution2
Vertical domain platform

Federation

Technology domain platform - Digital twin
Technology domain platform - AI

Unified building blocks

Construction
Architecture approach – Energy example

- Digital platform
  Solution architecture

- Domain
  Patterns

- Technology blocks

- Energy digital platform
  solution architecture

- Energy domain pattern (e.g. SGAM)

- IoT

- Data space

- Digital twins

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

Interoperability points

Interoperability case

Interoperability profile

Justification and agreement on Interoperability facet A

Justification and agreement on Interoperability facet B

Virtual twin entity

Physical twin entity

Data / Knowledge

Example: Digital twin

Construction

Processing / Reasoning

Interoperability facet A

Interoperability facet B

Interoperability profile
Conclusion: Construction convergence supported by standards

Cross domain convergence

- Architecture
  - Domain building block
  - Technology building block
  - Unified building blocks
- Cross domain convergence
  - Interoperability profiles
  - Interoperability cases
  - Integration Interoperability points
- Interoperability cases

Data space

- Standardisation needs
  - Digital twin + AI integration
  - Interoperability
  - Trust
  - Trustworthiness support
  - Resource management
  - Data value
  - Governance
  - Interoperability cases

Alignment in 4 domains

- Energy
- Agriculture
- Manufacturing
- Healthcare
Thank you!

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