Enabling Data Exchange in AgriFood

22 June, 13:45 – 15:00

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This is a data space

A concept for connecting all kinds of data endpoints

A data space is the sum of all end points that are able to share data with each other.

- Federated data architecture: no physical data integration, leave data where it is
- Interoperability: no silos, no vendor-dependency
- Data Sovereignty and traceability
- Trusted participants
Data spaces enables data exchange

Challenges of the data economy

What exactly does “data economy” call for?

- Secure end2end data exchange
- Trusted parties
- Make FAIR principle work
- Monetize data and usage policies
- Data models
- Remote execution
- Usage control and enforcement

Source: Nagel, L. MyData Global Conference
The design principles propose

A level playing field for data sharing and exchange build on a distributed soft infrastructure

Design Principles for Data Spaces are the foundation for data spaces in Europe.

- Facilitate data sovereignty and interoperability
- Ensure mass adoption and scalability
- Sector-agnostic
- Coordinated development combining technological, functional, operational and legal process
- Agreements and standards aligned with building blocks
The infrastructure for European data spaces will not be a monolithic, centralised IT infrastructure.

Instead, it will be made of the totality of interoperable implementations of data spaces complying with a set of agreements in terms of functional, technical, operational and legal aspects.

Such a ‘soft infrastructure’ will be invisible to data space participants. It will entail functional and non-functional requirements regarding interoperability, portability, findability, security, privacy, and trustworthiness.
BB assessment

Creation of a building blocks catalogue on GitHub

Building Blocks catalogue:
- Data Models & Formats
- Data Exchange APIs
- Provenance and traceability
- Identity Management
- Access & usage control
- Trusted Exchange
- Metadata & discovery
- Data usage accounting
- Publications & Marketplace
- Overarching cooperation agreements
- Operational
- Continuity Model

Data Interoperability
- Data Models & Formats
  - JSON-LD (others too → RDF), Smart Data Models, Vocabulary Provider
- Data Exchange API
  - ETSI NOSI-LD, Context Broker, IDS-Handshake, OpenAPI, EDC, Ocean Protocol
- Provenance & Traceability
  - DLT, Data Provenance Tracking

Data Sovereignty and Trust
- Identity Management
  - Level 1: JSON-LD, YDDA, VC/VP, OAuth2, XACML, Path, SHARE, Satellite, Verifiable Registry
  - Level 2: SAML, DAP/DAT, VC/V, DDBL, IDS Connector
  - Level 3: User/password, VC/VP, OpenID, OAuth2, XACML
- Trusted Exchange
  - IDS Certification, Remote Attestation, VC/V, XSHARE Satellite, EDDI, TRUE Connector, Keytrust
- Access & Usage Control
  - XACML, Scheme, DDBL Policies, distributed PID

Data Value Creation
- Metadata & Discovery
  - IDS Infomodel, Gaia X Ontology, NXS-LD, DCAT
- Publication & Marketplace
  - TMForum APIs, FIWARE Business API Ecosystem, IDS Meta Data Broker, IDS Clashing House, Federated Catalog, Data Sovereignty Services, OGC, Portal
- Data Usage Accounting
  - TMForum APIs, FIWARE Business API Ecosystem, IDS Clashing House, Data Contracting Service, Contract negotiation sequence

Data Governance
- Cooperation agreements
  - SITRA rulebook
  - IDSA rulebook
- Operational agreements
  - SITRA rulebook
  - IDSA rulebook
- Continuity model
  - IDSA rulebook
PARTICIPATE IN THE OPEN DEI BUILDING BLOCKS SURVEY
Contribute to the success of OPEN DEI in designing the future of data spaces

Objective
To evaluate building blocks of data spaces and work on the harmonization of data spaces.

How to participate?
Fill out a form to share your thoughts and experiences with us.
This information will be shared and commented within experts in three workshops.

Workshops
- Kickoff meeting: 30th June, 14:00 - 15:00 (GMT+2)
- BB assessment
  - 1st meeting: 21st July 14:00 - 15:30 (GMT+2)
  - 2nd meeting: 1st September 14:00 - 15:30 (GMT+2)
- OPEN DEI TF1-IT2 Webinar: 16th September

The final results extracted from the meetings will be published under the IDSA’s Github page.
Thank you!

Find more:

www.internationaldataspaces.org

M13 IoT Week exhibition

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