Market Conference & Expo
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In partnership with gaia-x
Hub Austria

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Successfully building common European data spaces, a matter of compliance with the DGA and the principles of Gaia-X.

Dr. Frédéric Bellaiche

VP Technology & Research
Dawex

Dawex at a glance: a European scale-up recognized worldwide for its expertise and achievements in data exchange

Company profile

Founded in 2015

Offices: Paris, Lyon, Montreal, Tokyo (2023)

Global reach

- France & Europe
- Japan (2nd largest market)
- North America
- Middle East

Recognized as a pioneer and innovator

9 awards
US, EU, ME

Tech Pioneer at the World Economic Forum

Speaker in **Davos**

Speaker at G7 Summit and other global events

Leads Gaia-X Data Exchange Working Group

Customer references

in more than **15 strategic sectors**

- Retail
- Airports
- Infrastructure
- Geospatial
- Automotive
- Mobility
- Real Estate
- Trading
- Culture
- Energy
- Agriculture
- Food
- Tourism
- Manufacturing
- Smart cities
- Banking

Data Exchange Platform

A custom-branded platform to distribute, source, commercialize data and orchestrate data ecosystems

Incorporating a **Data Exchange Governance model**: Control & Security, Traceability, Licensing and Regulatory Compliance

Configurable with multiple settings based on business and technology requirements

Supporting **various data exchange business models** (subscription, transactional, free)
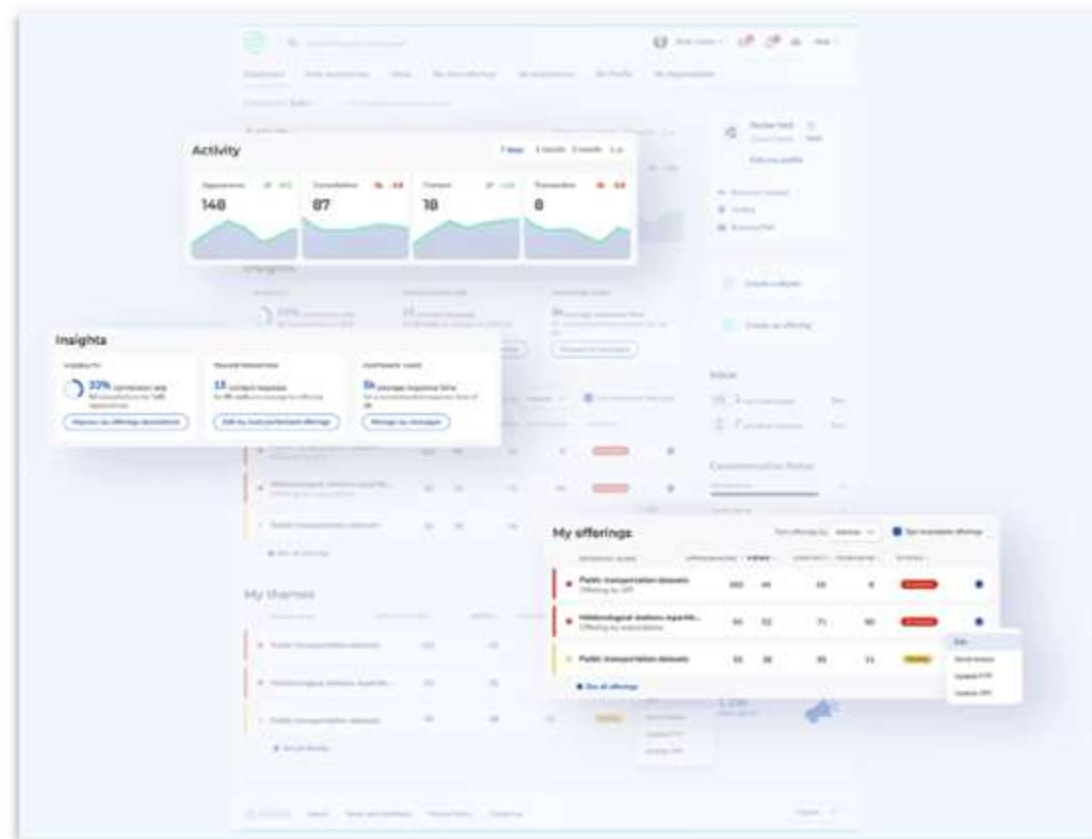
Data Exchange, a key pillar in Gaia-X initiative

Dawex involvement in Gaia-X

- Gaia-X Day-1 member
- Member of European project **GXFS** (Gaia-X Federated Services)
- **Leads Gaia-X Data Exchange Services Working Group**
- Contributes to the Technical Working Group of the **Data Space Business Committee (DSBC)** covering data spaces such as **Energy, Aeronautical and Smart Manufacturing**

Dawex powered Gaia-X Lighthouse Projects

- **Agdatahub**, the leading agricultural data ecosystem, selected by Gaia-X is **one of the lighthouse projects**

Data Ecosystems

DATA EXCHANGE — FEDERATION — COMPLIANCE
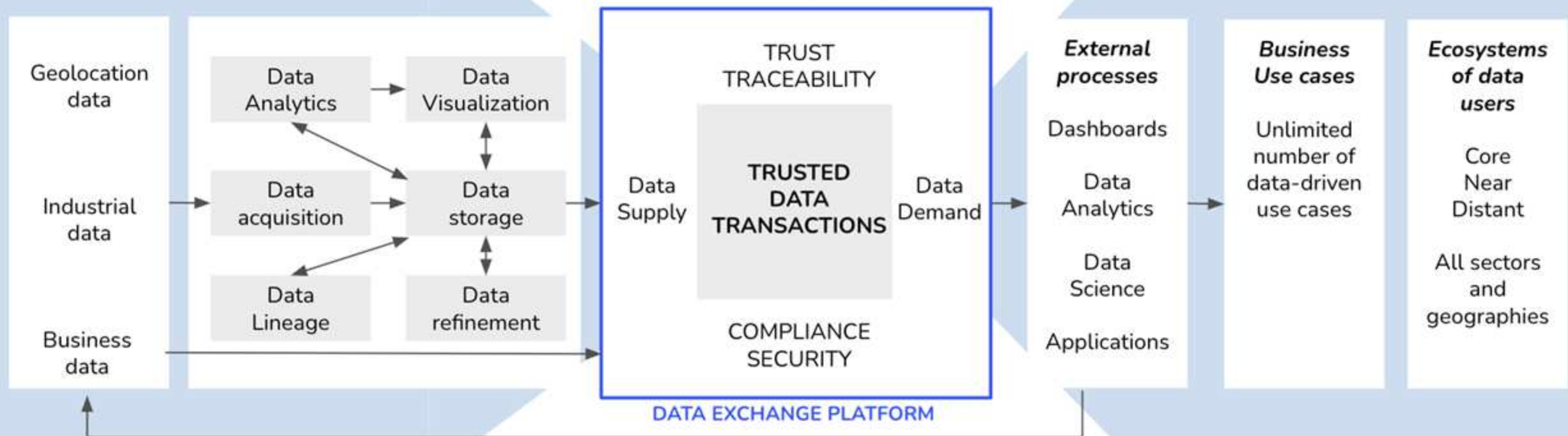
Infrastructure Ecosystems
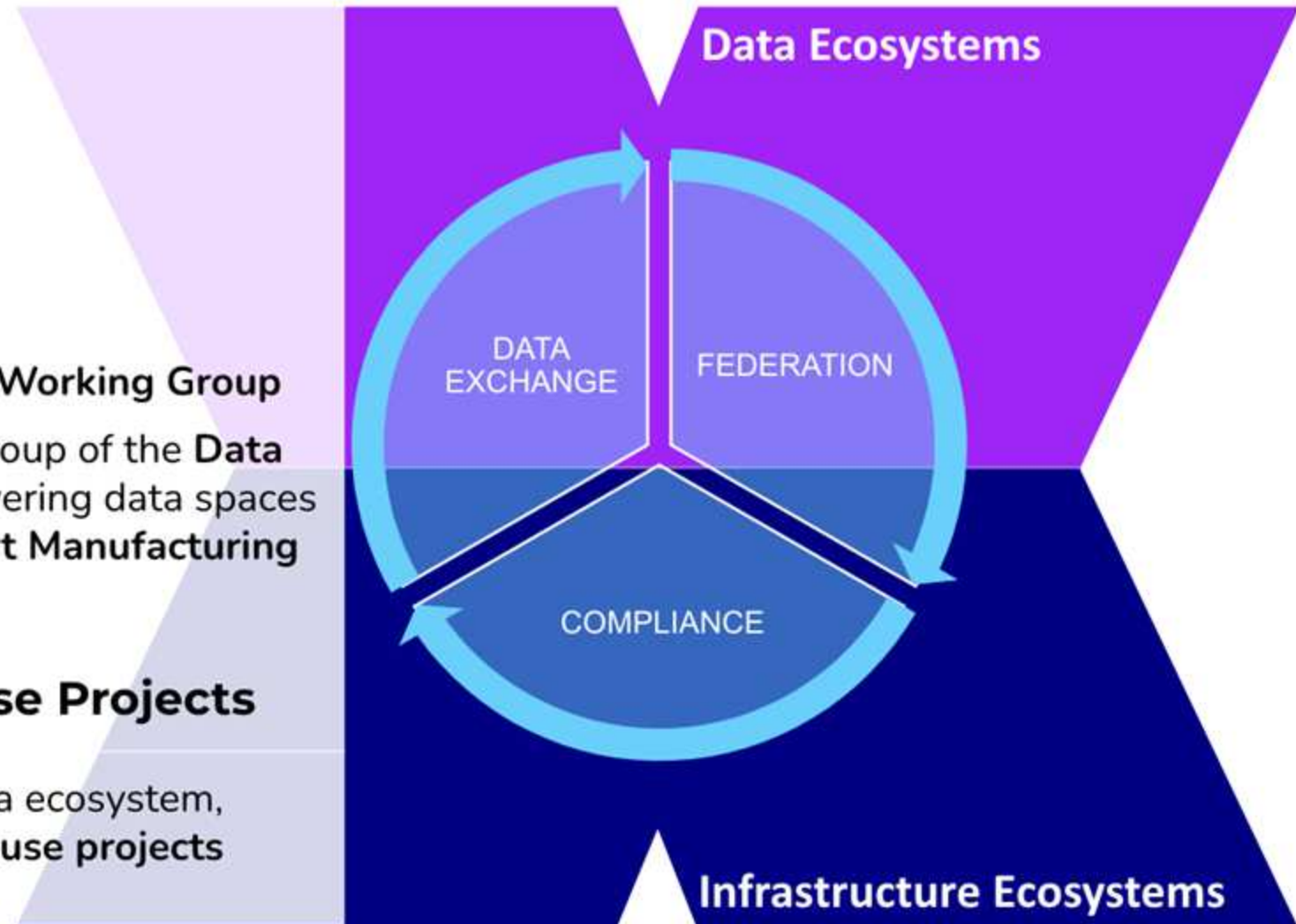
Trusted data transaction is a key component of the data value chain

4 pillars of trusted data transactions:
Technical Exchange, Licensing, Business Model, Compliance

An **interoperable** platform through its **interfaces** with federated services for a **sovereign data value chain**

Gaia-X Data Exchange Services Working Group

Lead: Dawex - CoLead: IDSA

| Input	Key activities	Deliverables
Gaia-X **architecture document** Gaia-X **technical specifications**	• Data Exchange **vocabulary** • Data Exchange **requirements** for data value, trust and compliance • Data Exchange **Interoperability** • **Licencing and Policies** negotiation for personal and non-personal data transaction • Data Transactions **Traceability** • **Discoverability** as the means to search and find one or more datasets based on queries and filterings, including a common means to declare and specify data ontologies, data vocabularies, and data semantics.	**Data Exchange specifications document,** including high level architecture and key requirements for data value, trust and compliance

Gaia-X Data Exchange Services

- **Gaia-X Data Exchange Services**
  - Collective results of the Data Exchange Services Working Group, leaded by Dawex, co-leaded by IDSA
    - Definitions and vocabulary
    - Data Exchange Services
    - Conceptual model
    - Operating model
    - Control policies
    - of access and use
    - Ontologies

Conceptual Model

- **Conceptual Model**
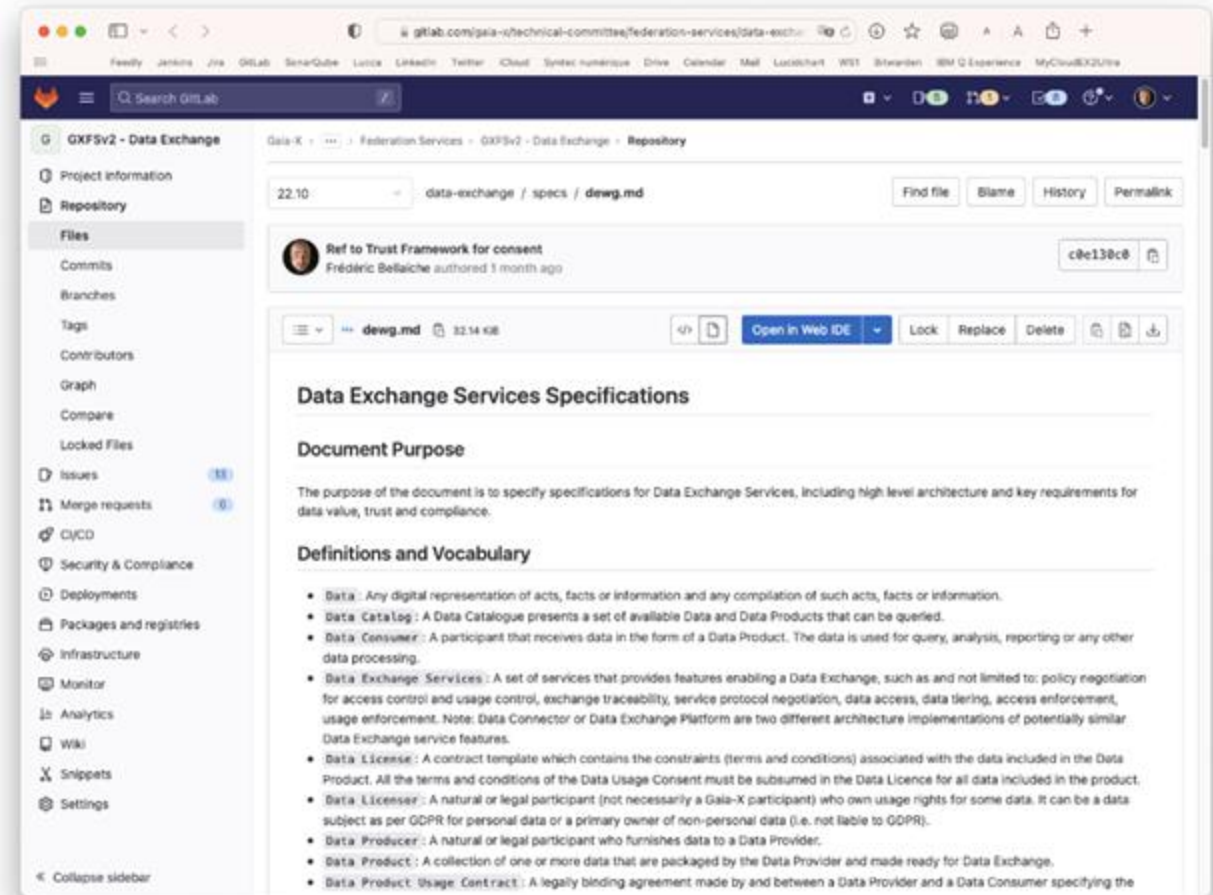
  - Stakeholders
  - Data catalog
  - Data Products
  - Licenses, Terms & Conditions
  - Contracting
  - Logging and traceability
  - Trusted transactions
  - Consent / authorisation Management
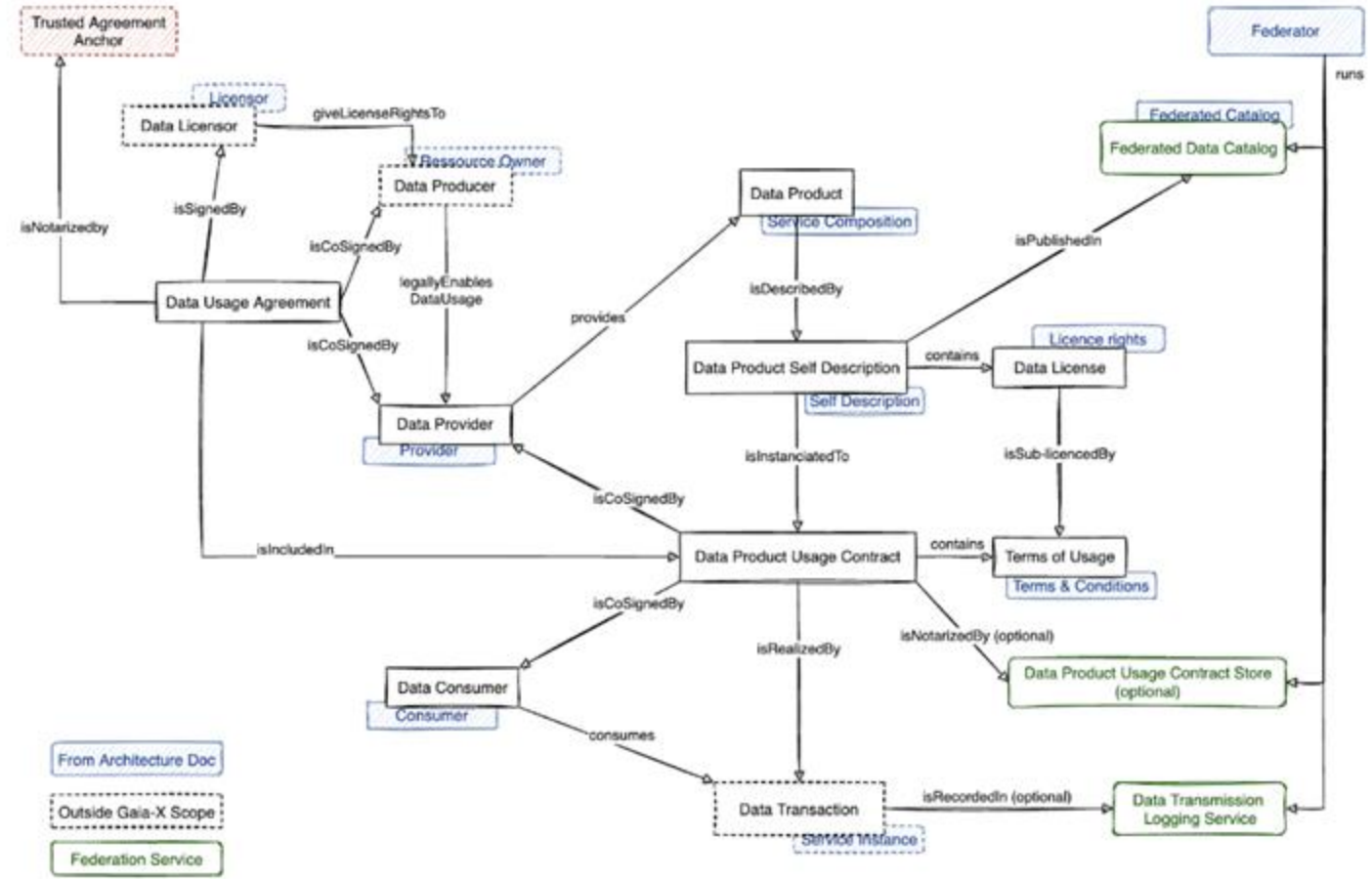
Operational Model

- **Operational Model**
  - Operational translations of the conceptual Model
  - Scenarios and workflows for data exchange
  - Access controls and Usage controls
 - Consent / authorisation management

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Gaia-X Publications
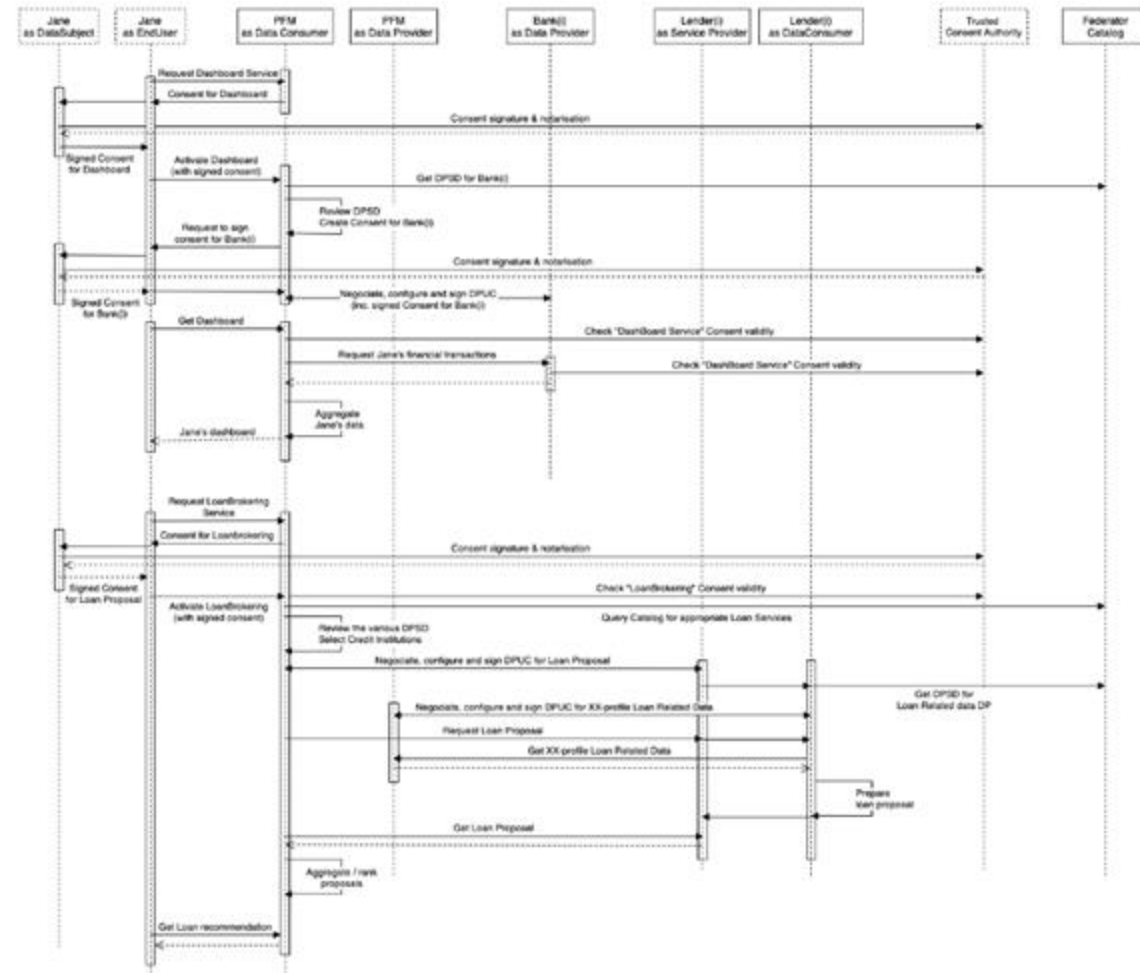
https://gaia-x.eu/mediatech/publications/

- **Gaia-X Reference Architecture**
  - Main technical document of the Gaia-X ecosystem

- **Gaia-X Trust Framework**
  - The Trust Framework is of utmost importance for Gaia-X as it sets the rules that define the minimum baseline to be part of the Gaia-X Ecosystem

- **Gaia-X Data Exchange Services Specification**
  - Specifies Data Exchange Services within Gaia-X principles
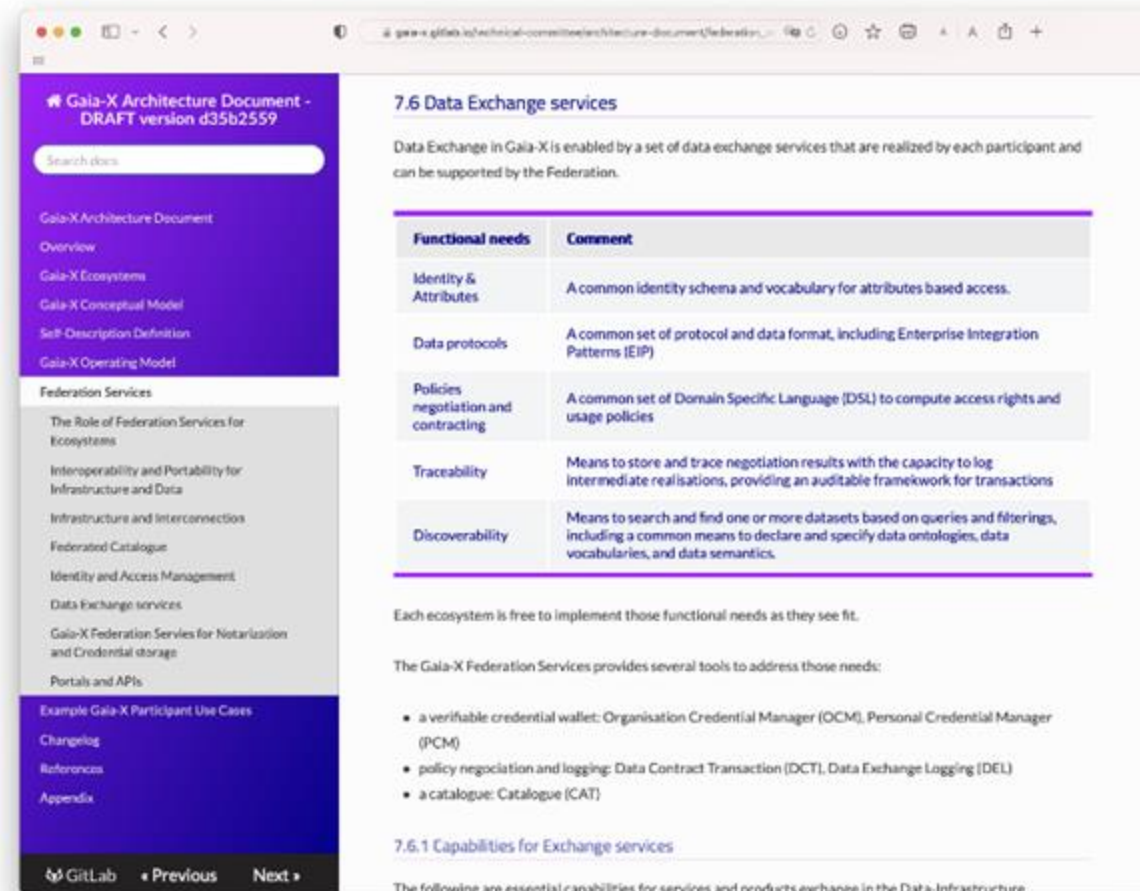
Gaia-X Data Exchange Services Working Group

Next Steps

- **New Data Exchange Services version, schedule to be 23.04**

- **Roadmap for specification 23.04**
  - **Topic 1**: Consent Management

  - **Topic 2**: Control Vocabulary

  - **Topic 3**: Data resources / Data Catalog

  - **Topic 4**: Contract Negotiation

  - **Topic 5**: Consistency with other WGs (TC, Architecture, ICAM, DSBC) and open standards / technologies (DCAT, ODRL, DID)

Dawex initiator of a collaborative normative process on Trusted Data Transactions

EU Regulations
- GDPR
- DGA
- DA

Reference Architectures
- Gaia-X

Norms & standards
- CEN-CENELEC AFNOR

CEN-CENELEC Workshop on Trusted Data Transactions

Co-proposers: DAWEX *data exchange technology* · Fraunhofer ISST · TNO

Participants: Microsoft · INTERNATIONAL DATA SPACES ASSOCIATION · agdatahub · Hub One *Une connexion d'avance* · BDV BIG DATA VALUE ASSOCIATION

Why?

For digital ecosystems, **trustworthiness is key** to enable data exchanges between stakeholders.

Objectives and scope

- Workshop open for external participations
- Open for Expressions of Interest
- Kicked-off in March 2023

- Establish **terminology**, describe **key concepts and mechanisms** in the field of data exchange to **form a foundational understanding** on which trusted data transactions can be based
- **Identify attribute-based criteria** for the decision-making grid that baselines how **to create trust in data transactions**.
- **Independent of any architectural choices** or technical implementation.
- **Can be used in all use cases** where stakeholders need **to establish trust** for the purpose of data exchange

European regulations create trust in data exchanges

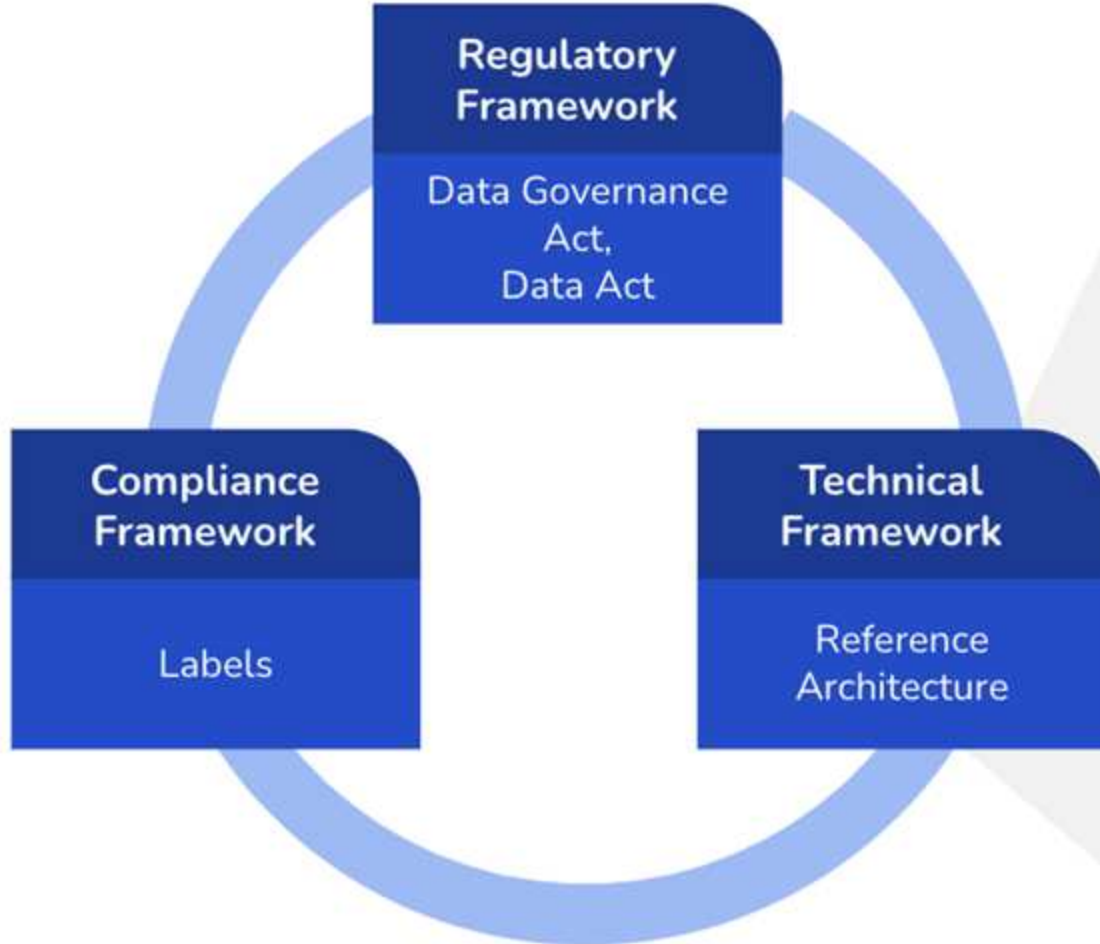Data exchange orchestrators' compliance has become a major imperative

1	**Data Governance Act**	**ADOPTED & PUBLISHED** **In application Sept 24, 2023**	Focuses on data intermediation services providers Extends the scope to non-personal data
2	**Data Act**	**PROPOSED by the Commission Feb 2022**	Focuses on data accessibility, especially IoT data, fairness in data exchanges, competition and innovation

A European data economy that is rapidly becoming structured

Only the solutions that comply with these regulations will be able to operate

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A reference architecture for Data Exchange

Regulatory Framework

Data Governance Act,
Data Act

Compliance Framework

Labels

Technical Framework

Reference Architecture

- A reference technical architecture is an **essential** and **mandatory component** to structure, extend and secure the **data economy**

- **Aligned with the objectives of the new European regulations (DGA, DA)** which aim to improve data accessibility, strengthen trust in data intermediaries, guarantee fairness and promote the interoperability of data exchange

- **Will allow the definition of labels** for actors involved in data exchange between organizations, sectors and multiple geographies

Gaia-x Trust Framework integrated into Dawex Data Exchange Platform solution

The **Trust Framework** is Gaia-X cornerstone.

Verifiable Credentials (VC) are a standard for digital credentials, and form the **basis of the GAIA-X Trust Framework**.

VCs ensure **transparency**, **security** and **reliability** within the GAIA-X digital ecosystem.

Dawex Data Exchange Platform technology **implements** VCs (for participants and data products) **following the specifications of GAIA-X (22.10)**

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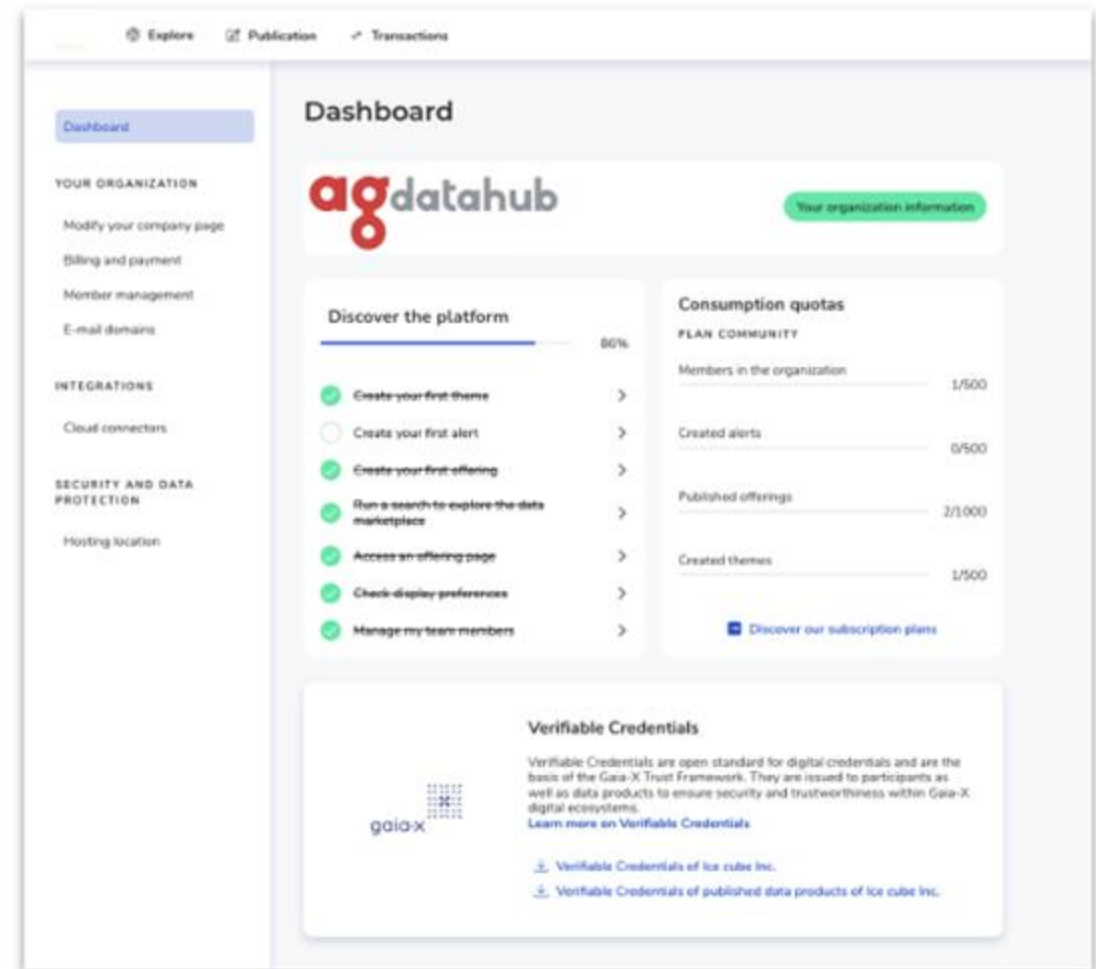
Thank you!

frederic.bellaiche@dawex.com

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