

The **GAIA-X PROJECT** was initiated to enable a **SECURE, OPEN** and **SOVEREIGN** use of data.

In this way, **SELF-DETERMINED DECISIONS** can be made on **HOW** and **WHERE DATA** is **STORED, PROCESSED** and **USED** within the **DATA INFRASTRUCTURE**.

# What is GAIA-X?



## Our vision

Access and share data through a federated data infrastructure to ensure innovation for our future thanks to the next generation of Information Technology.



## European cooperation

Ensure the efficiency of European data infrastructure, based on European values and supported by the European Commission.



## Transparency

Secure open interfaces and standards to allow the aggregation of data while driving innovation and efficiencies within a transparent environment.



## Our objectives

Foster the creation, formation, roll out and growth of digital ecosystems that can be used commercially in and across data spaces.



## Maximum security

Maximise data sovereignty for business, customers and governments through services that ensure interoperability and privacy by design.



## Rights protection

Guarantee citizens' privacy as a human right and respect the sovereignty of other nations.

# Motivated by challenges to the European digital economy



# A strong alliance of companies and organisations has joined



**500+** participants from  
ca. **350** companies and organisations



**3 out of 4** organisations are private  
companies, **about half** of which are SMEs\*



Organisations from different industries, such as  
Mobility, Energy, Manufacturing, Finance etc.



Large Companies



SMEs



Start-Ups



Universities



R&D



Associations



Public Sector

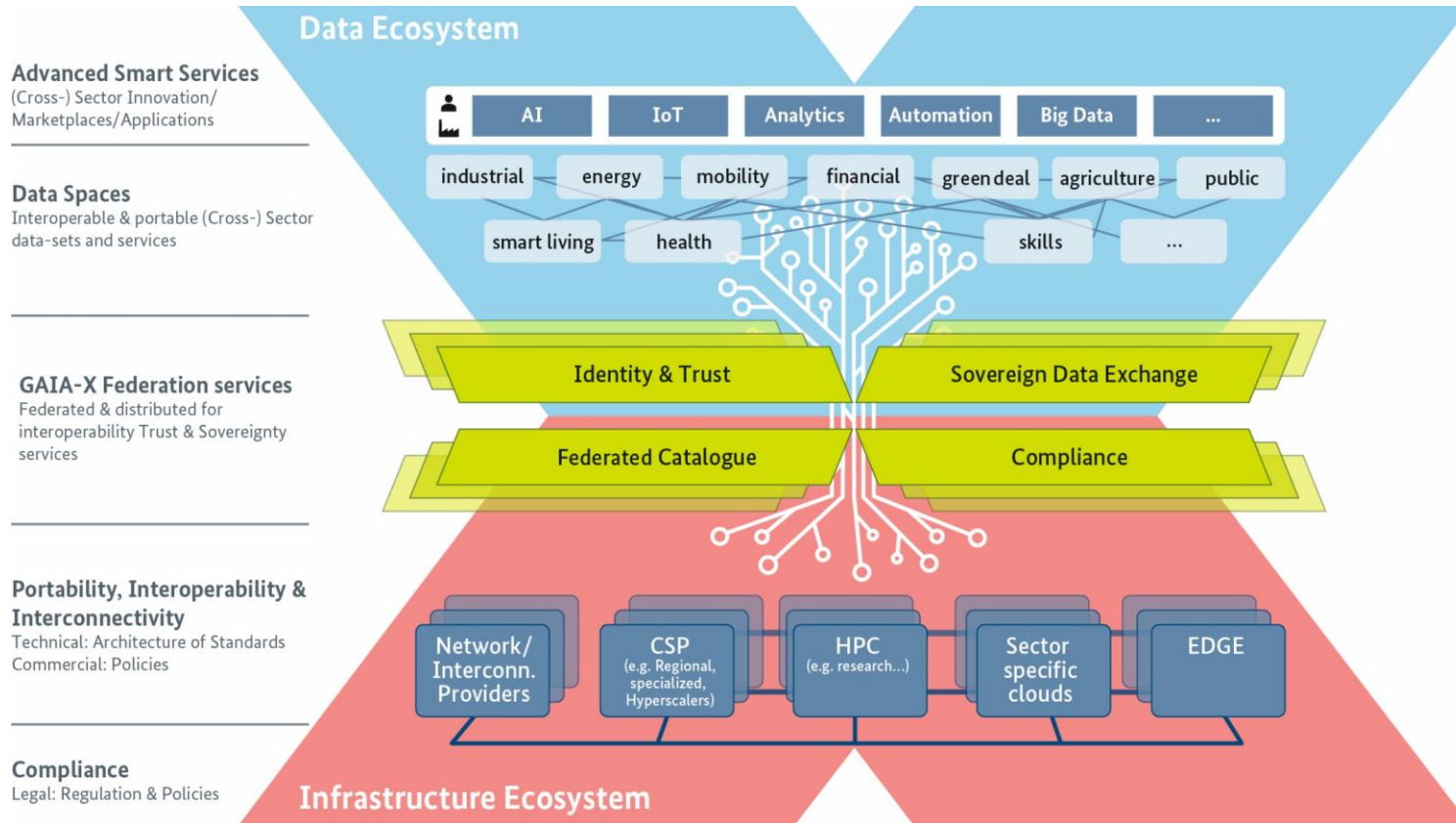


Mentioned explicitly in the **European Data Strategy** and proactively addressing key issues

Exchange between GAIA-X and the **European Commission** to identify synergies between GAIA-X and initiatives and programs such as the **European Cloud Federation, CEF 2** and **Digital Europe**.

\*SME <500 employees

# The GAIA-X ecosystem of services and data



# All domains share common requirements



Energy

Finance

Agriculture

Health

Industry 4.0/SME

Mobility

Public Sector

Smart Living

Common  
cross-domain  
requirements



**GAIA-X as enabler**

**Federated Identity Management**

**Algorithms for data monetisation**

**Trusted Relationship Management**

**Data Custodianship** as a business principle

**Open** to adapt of all market participants - and systems

**Authorisation and data usage control** by the data owner

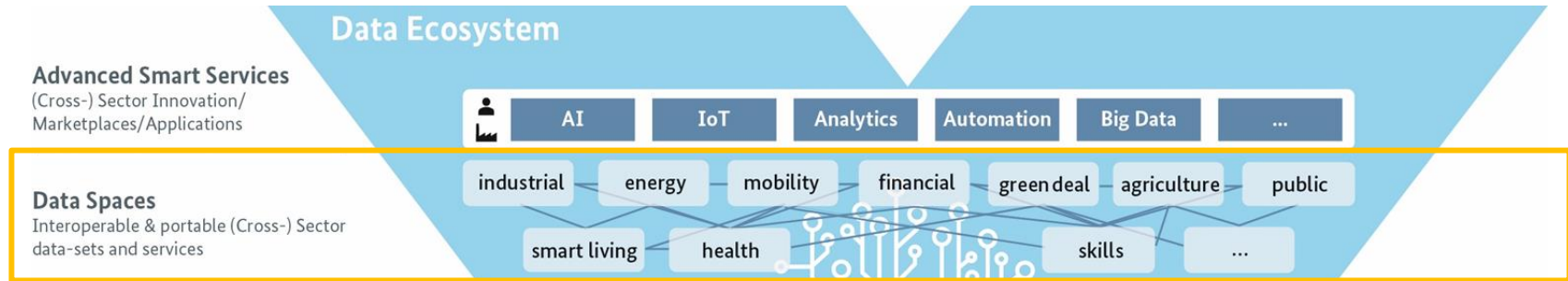
**Uniform definition of protection classes** for data and services for all participants

**Selectable Geography and Legislation** for data storage and service offering (locally/centrally)

**Hybrid Cloud Scenario** through distributed implementation (vertically and horizontally) across many vendors

**Additional domain-specific requirements**

# User requirements as core of the development of GAIA-X



- In order to facilitate value creation based on digital services and mechanisms, we need **an architecture in the form of an underlying framework common to all domains.**
- GAIA-X allows the emergence of **Advanced Smart Services** such as **AI, Analytics or Big Data** and fosters **innovation in the GAIA-X Ecosystem.**
- GAIA-X offers ontologies for interoperability and API within and across sector specific **data spaces** according to the EU data strategy.
- It promotes the opportunity to collaborate in **data-driven horizontal and vertical value chains.**
- As a result, it encourages the emergence of **sustainable business and innovation ecosystems** for the next generation of digital infrastructure.

# Alignment of various providers in an infrastructure ecosystem

- GAIA-X creates an infrastructure ecosystem by establishing **portability** and **interoperability** between **network and interconnection providers**, **Cloud Solution Providers (CSP)**, **High Performance Computing (HPC)**, **sector-specific clouds** and **edge systems**.
- Mechanisms are developed to **find, combine and connect services** from participating providers in order to enable a **user-friendly infrastructure ecosystem**.
- GAIA-X **supports distributed use cases**, spanning from on-premise set-ups, cloud hosted infrastructure through to facility to edge cases.
- GAIA-X has to address the **complete technical stack**, including infrastructure and existing network/ interconnection requirements (Architecture of Standards) of distributed use cases.

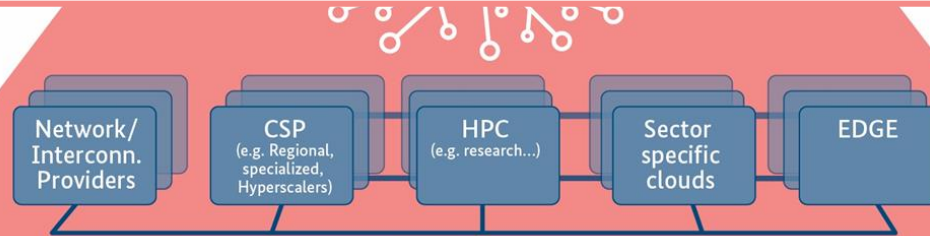
## Portability, Interoperability & Interconnectivity

Technical: Architecture of Standards  
Commercial: Policies

## Compliance

Legal: Regulation & Policies

## Infrastructure Ecosystem

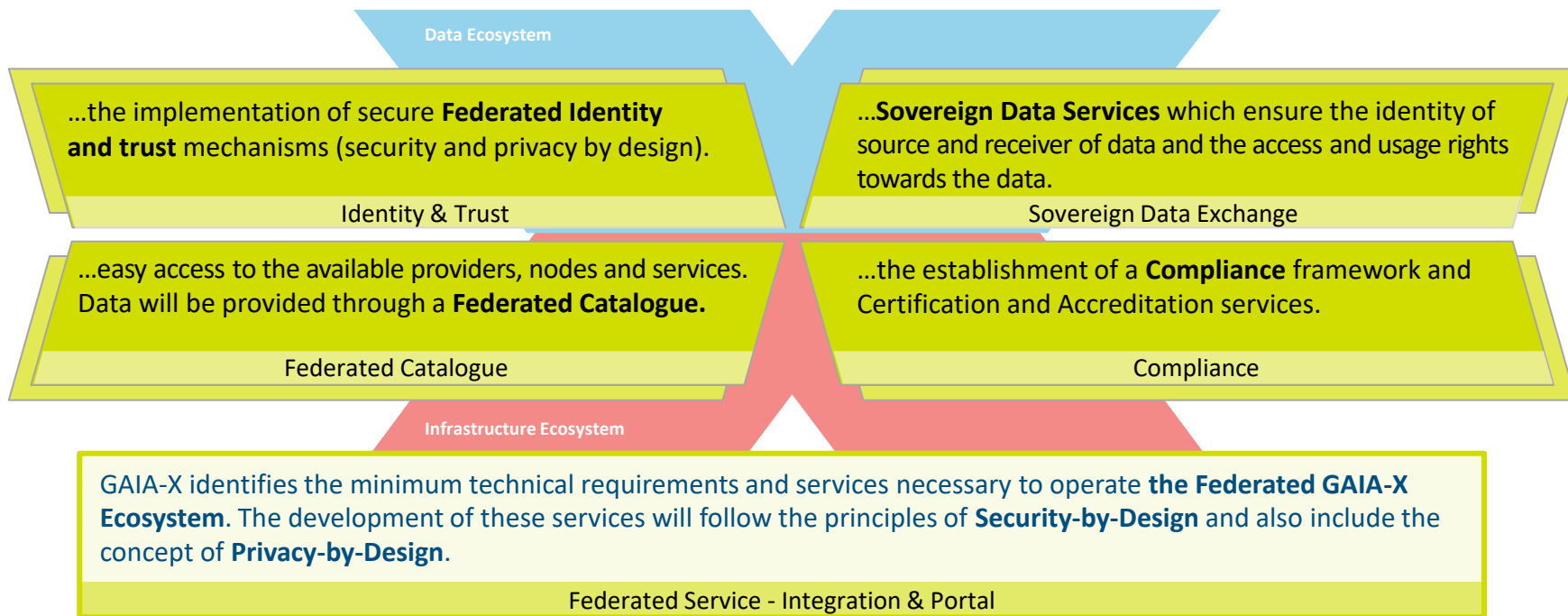




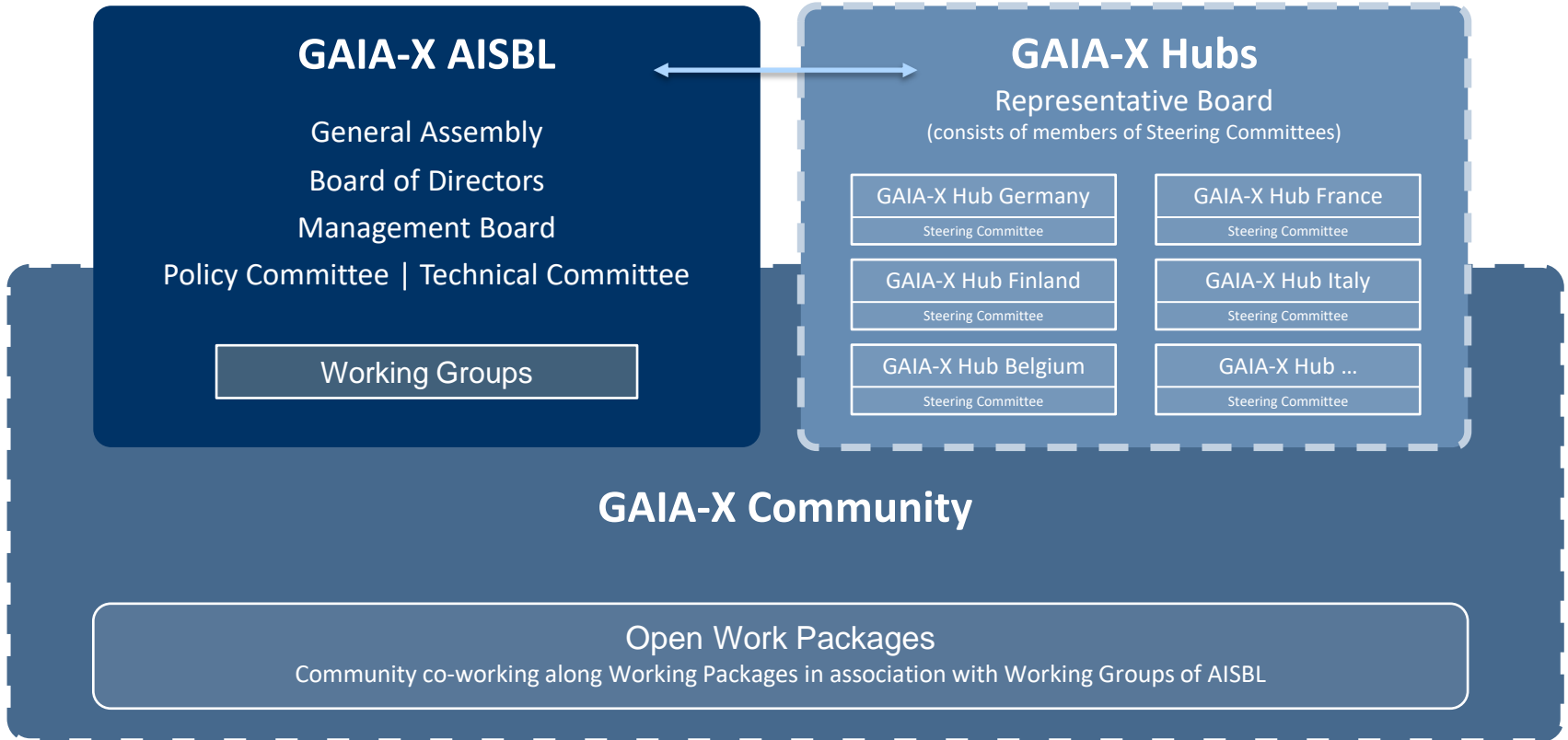
# Federation Services as core of the technical infrastructure



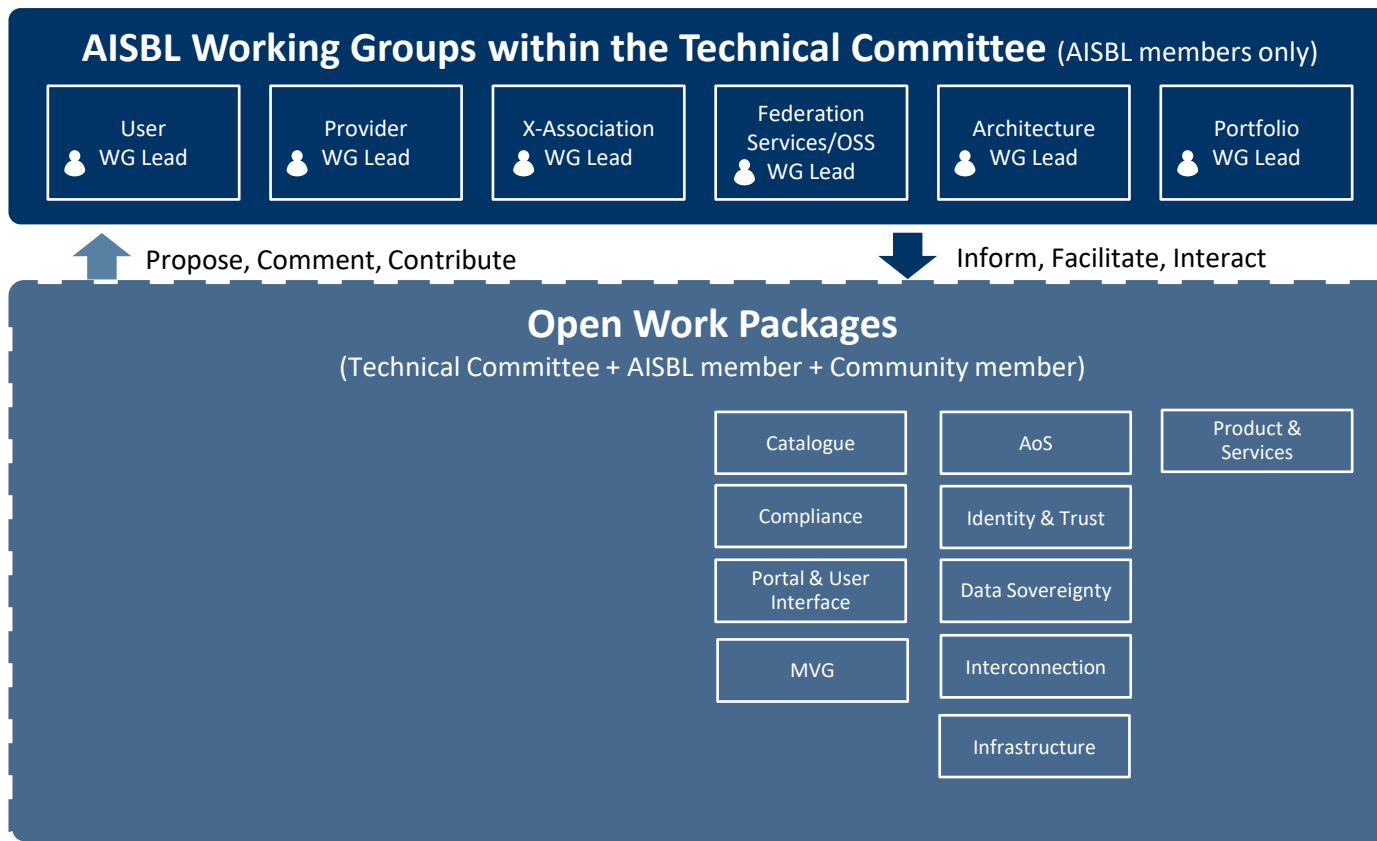
The technical implementation of these Federation Services focuses on...



# Organisational structure and groups



# How do TC, Working Groups and Work Packages interact?



# Core deliverables of the GAIA-X AISBL



Create Standards

Provide Fundamentals

Foster Software Communities

Facilitate Data Spaces Creation

# Data Spaces as enablers of cross-domain business models



## Industry 4.0/SME

**Gerd Hoppe**  
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Germany



## Health

**Sergio Levi**  
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The Netherlands



## Energy

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## 4 characteristics

- Data sovereignty and transparency
- Interoperability on a semantic level
- More than one single source of truth
- Can be nested and overlapping

## Mobility



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France

## Finance & Insurance



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France

## Travel



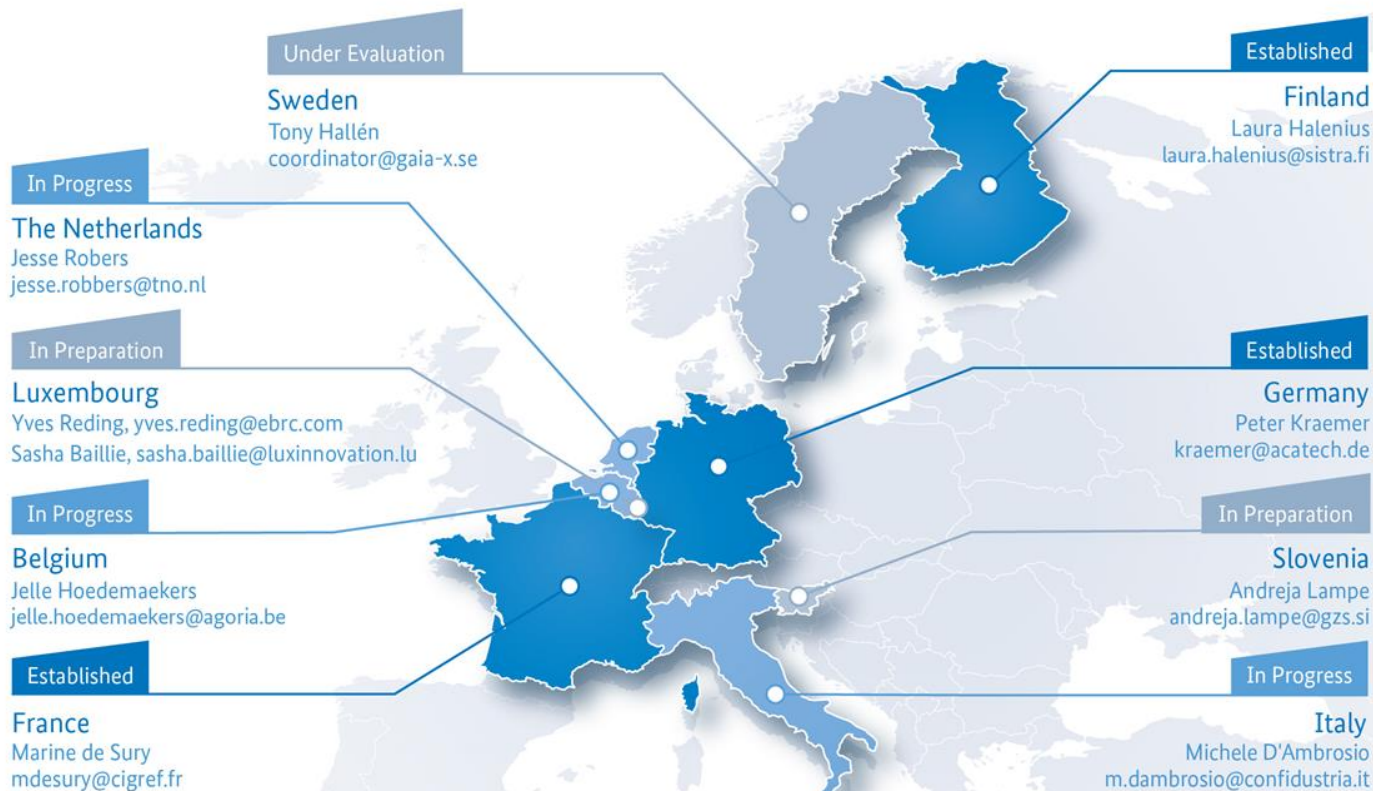
**Claudio Cimelli**  
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France

## Space

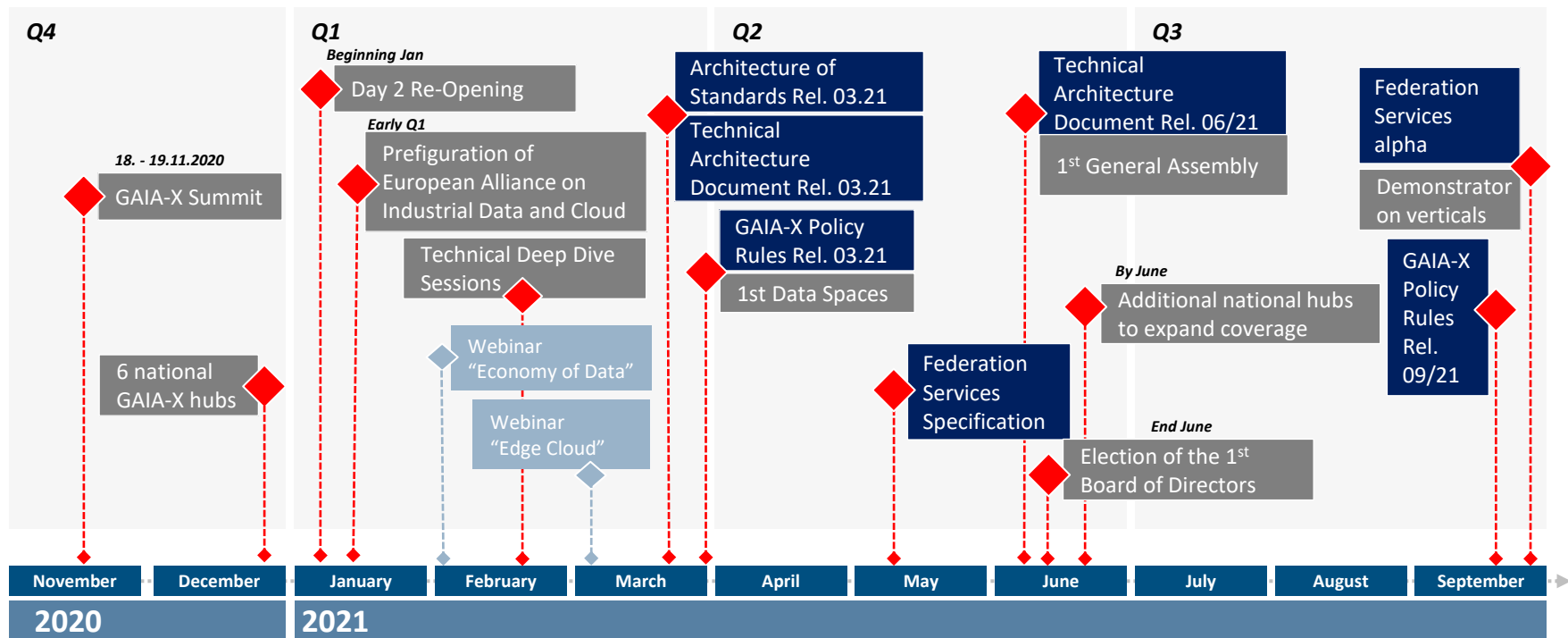


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France

# Establishment of GAIA-X Hubs



# Timeline





# Watch GAIA-X videos on demand

As an attendee of the GAIA-X Summit in November 2020 you still have full access to all recorded session. Just log in to your talque account: <https://www.talque.com>

If you missed the Summit, you can still register to the GAIA-X network on talque and get full access to all session videos: <https://tinyurl.com/GAIAxontalque>



# Find further information on [www.data-infrastructure.eu](http://www.data-infrastructure.eu)



## Information

- Descriptions of the mission, project structure and workstreams
- Overview and download of publications



## Blog

- Publication of blog posts on news, developments, discussions and comments on events and articles



## Use cases

- Overview of the current use cases
- Individual one pager with further descriptions and information on each use case



## Glossary

- The glossary is intended to list and explain important terms used in the GAIA X context



## FAQ

- The FAQ list offers a collection of frequently asked questions and answers about the project and GAIA- X