



# eco – Verband der Internetwirtschaft e.V.

Wir gestalten das Internet

# eco – Digitale Geschäftsmodelle



Pressemitteilungen

13.01.2021  
eco Verband: „GWB-Novelle schadet dem Digitalstandort Deutschland“

09.12.2020  
Service-Meister stellt Plattform-Architektur vor

02.12.2020  
eco zur Fortschreibung der KI-Strategie: „Wichtiges Signal für Innovation“

Themen

Service-Meister

Gaia-X

Online Marketing

E-Commerce

Blockchain

Künstliche Intelligenz

Akzeptanz

Online Arbeiten

Aktuelle Events

Online  
12.02.2021 - 21.05.2021  
E-Invoicing-Reihe Frühjahr 2021

25.02.2021  
Roundtable - Security by Design – Neuer Sicherheitsstandard...

Digital  
08.03.2021 - 09.03.2021  
Empolis Executive Forum 2021

Online  
22.03.2021 - 26.03.2021  
DIGITAL FUTUREcongress virtual powered by Hessen Week



Alles was Sie über GAIA-X wissen müssen

GAIA-X

GAIA-X Federation Services: eco übernimmt Projektmanagement

Der eco Verband übernimmt das Projektmanagement der GAIA-X Federation Services. Gemeinsam mit Partnern legt er so den Grundstein dafür, das Leistungsversprechen von GAIA-X einzulösen.

25.01.2021

GAIA-X

„Wir müssen gemeinsam das GAIA-X Leistungsversprechen einlösen“

Andreas Weiss erläutert im Interview, warum wir einen vertrauenswürdigen digitalen Raum brauchen, der sich konsequent an europäischen Standards und Werten orientiert.

22.01.2021

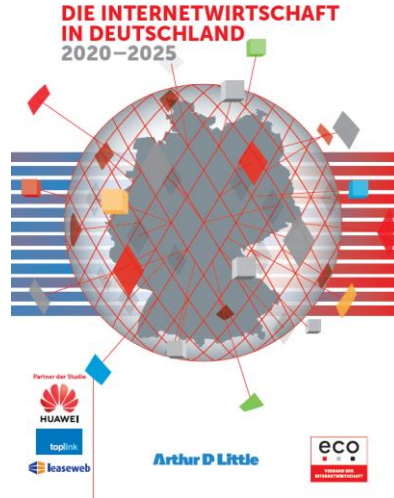
GAIA-X FAQ  
(engl.: via data-infrastructure.eu)

Nächste Events

Online  
25.02.2021  
Global DIGITAL FUTUREcongress virtual

Online  
22.03.2021 - 26.03.2021  
DIGITAL FUTUREcongress virtual powered by Hessen Week

<https://www.eco.de/themen/digitale-geschaeftsmodelle/>  
<https://www.eco.de/themen/digitale-geschaeftsmodelle/ueber-uns/>  
<https://www.eurocloud.de/gaia-x>



Die Internetwirtschaft startet in eine digitale Dekade der Superlative: Die Studie "Die Internetwirtschaft in Deutschland 2020-2025" erwartet Umsatzzuwächse um 75 Prozent für die Internetwirtschaft in Deutschland



Bei konsequenter Anwendung von KI Verfahren  
Potentiale in 2025:  
13 % Wachstum des Bruttoinlandsprodukts  
330 Mrd. Euro Kostenersparnis  
150 Mrd. Euro Umsatzpotential





A word cloud featuring various terms related to digital technology, innovation, and societal challenges. The words are arranged in a non-uniform, overlapping manner. The colors used are blue, yellow, and white. The terms include: datensouveränität, digitale souveränität, sicherheit, wissenschaft, innovation, grean deals, digitale transformation, hyperscaler, werte, industrie, nextgeneration, ethik, europa, home office, covid, home schooling, resilienz, data space, compliance, and datenverfügbarkeit.

datensouveränität

sicherheit

digitale souveränität

wissenschaft

innovation grean deals

hyperscaler werte industrie digitale transformation

ethik europa nextgeneration

home schooling home office covid

resilienz data space

compliance

datenverfügbarkeit

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

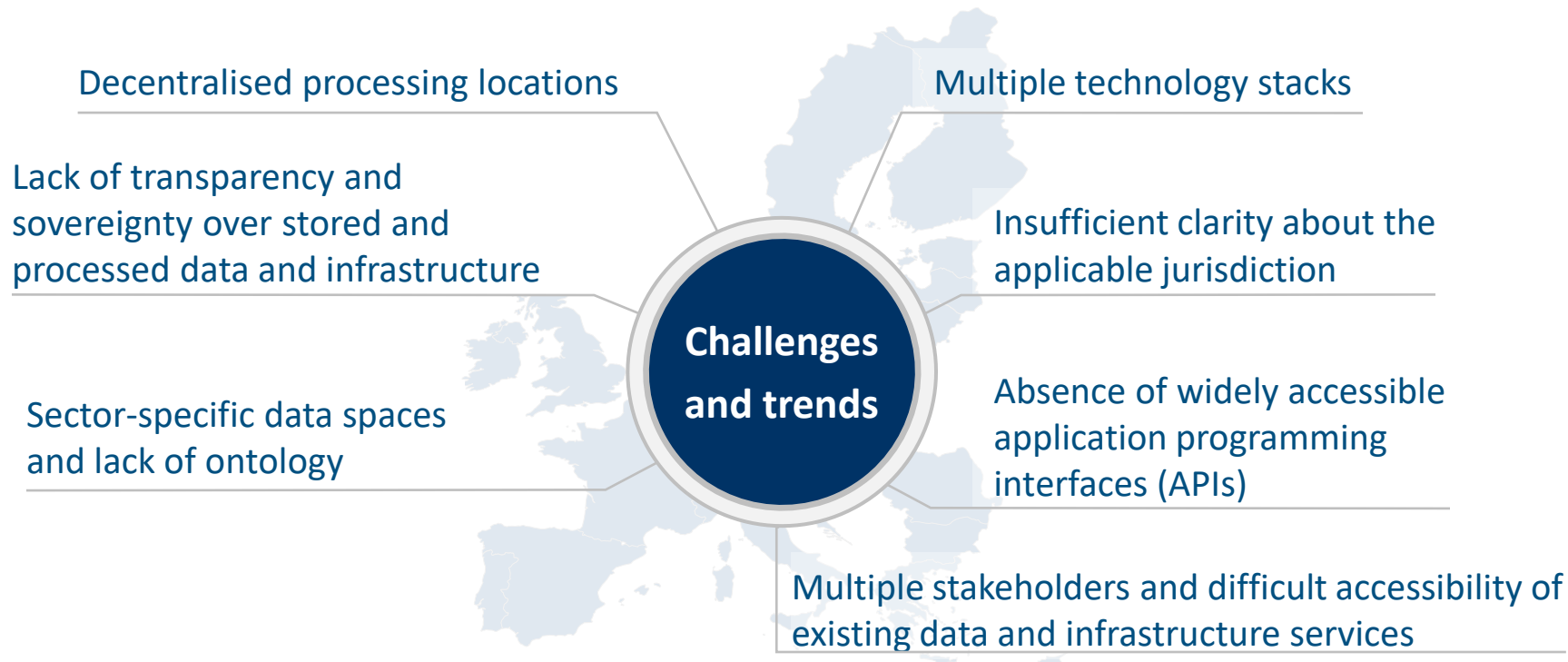
Maximise data sovereignty for business, customers and governments through services that ensure interoperability and privacy by design.



## 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



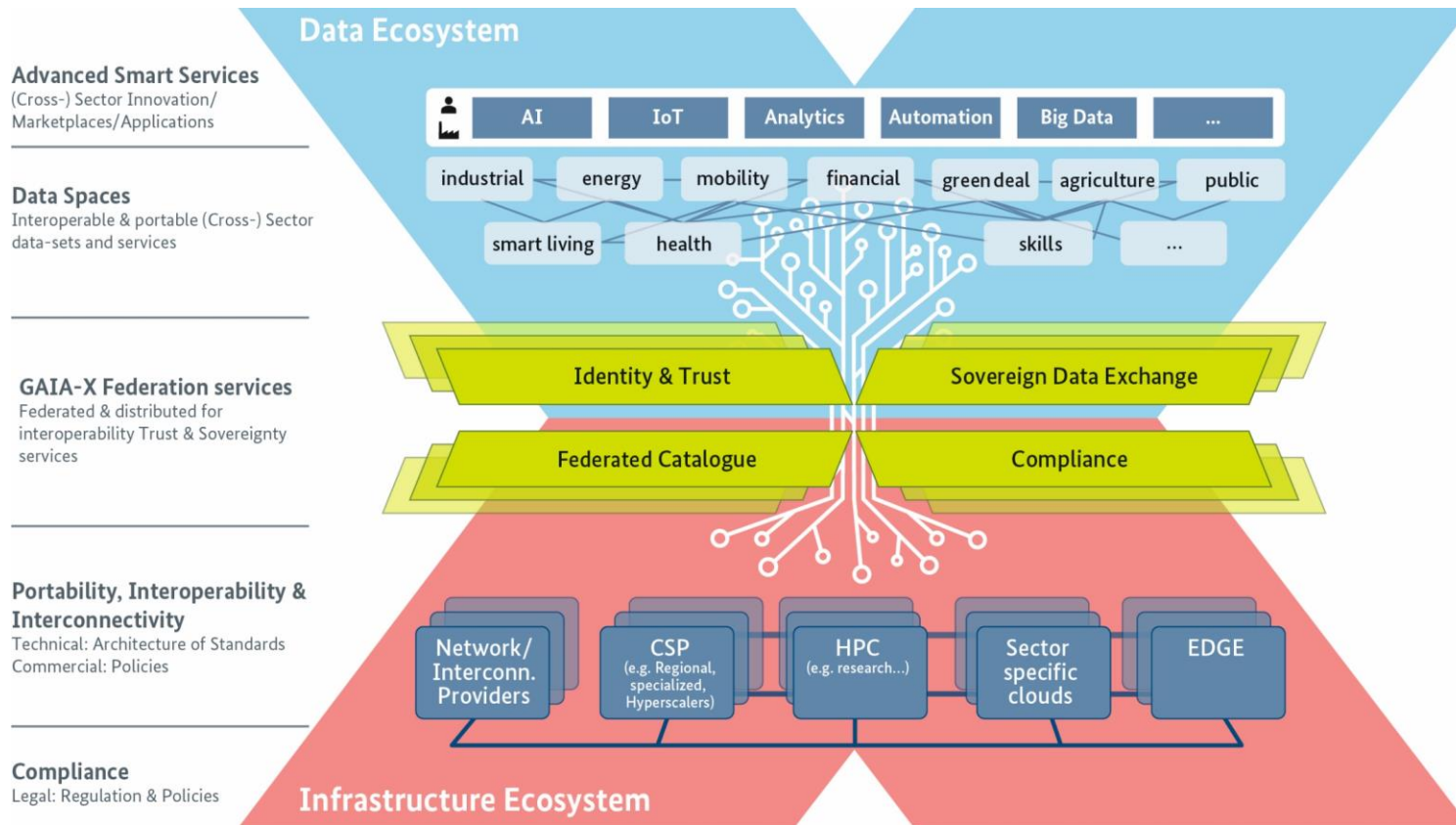
Mentioned explicitly in the **European Data Strategy** and proactively addressing key issues

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**.

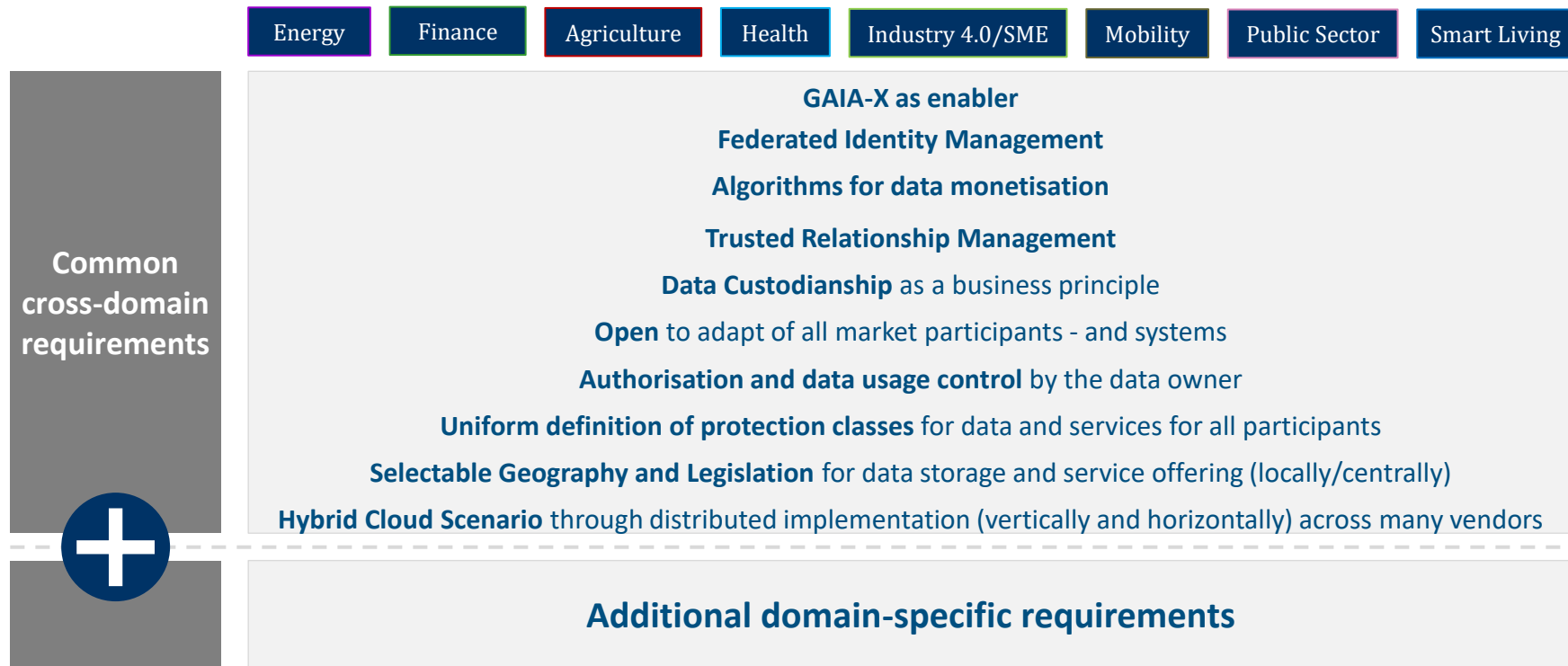
\*SME <500 employees



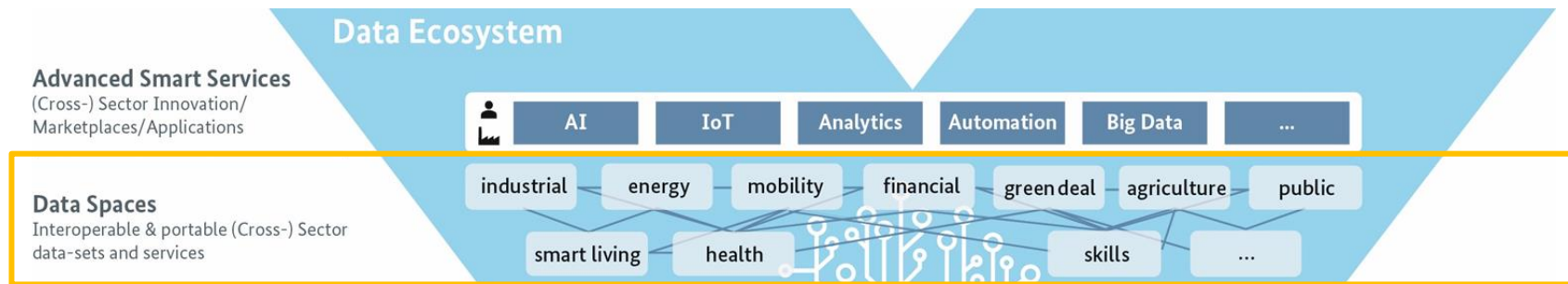
# The GAIA-X ecosystem of services and data



# All domains share common requirements



# 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

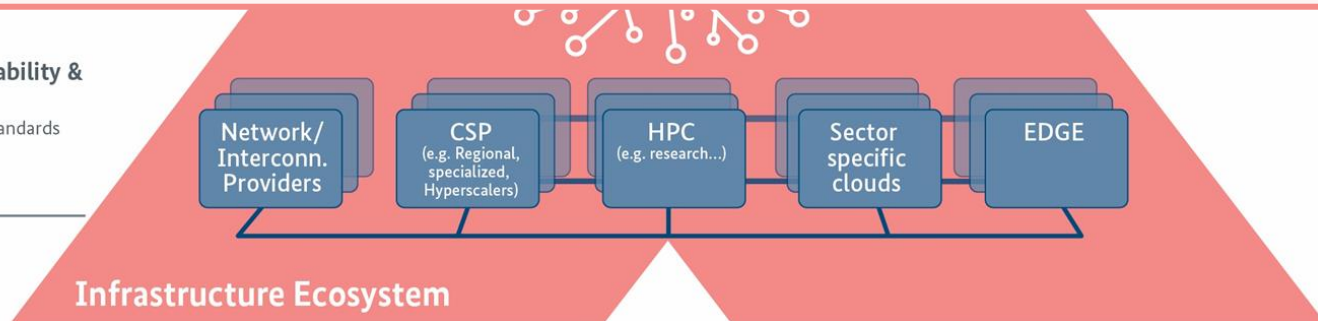
- GAIA-X creates an infrastructure ecosystem by establishing **portability** and **interoperability** between **network and interconnection providers**, **Cloud Solution Providers (CSP)**, **High Performance Computing (HPC)**, **sector-specific clouds** and **edge systems**.
- Mechanisms are developed 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

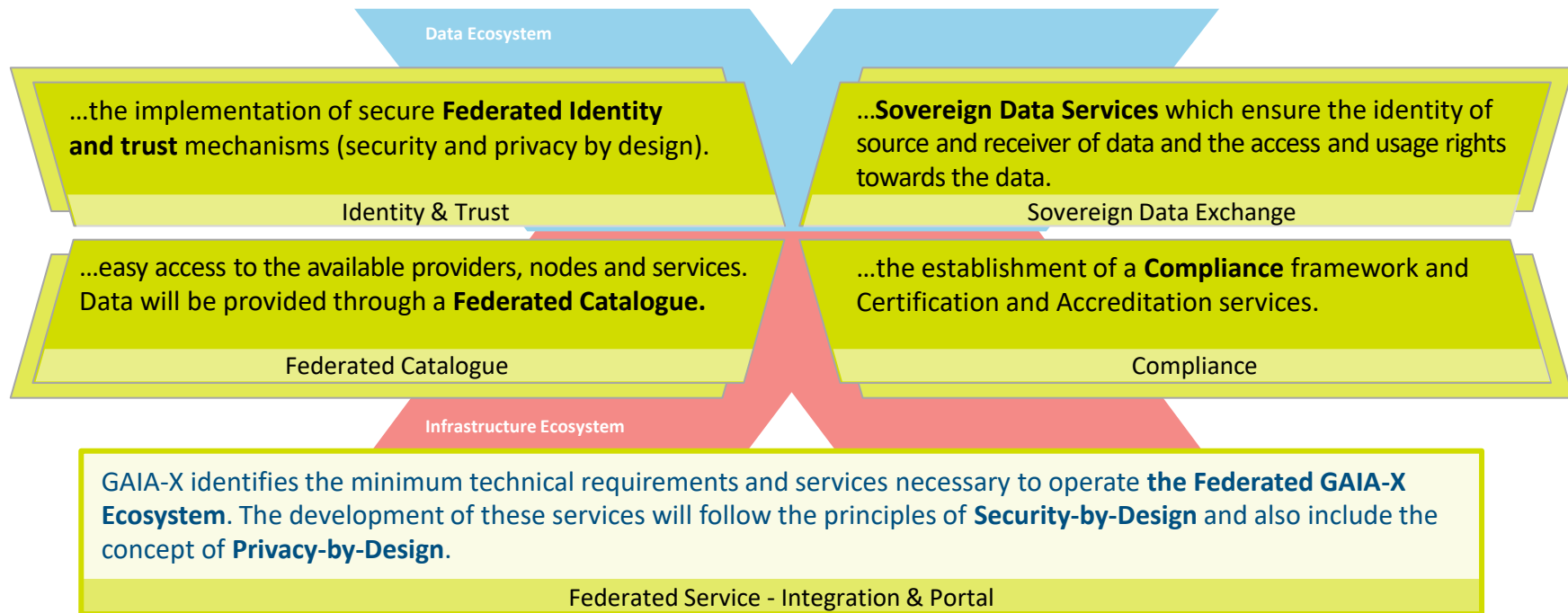
## Compliance

Legal: Regulation & Policies

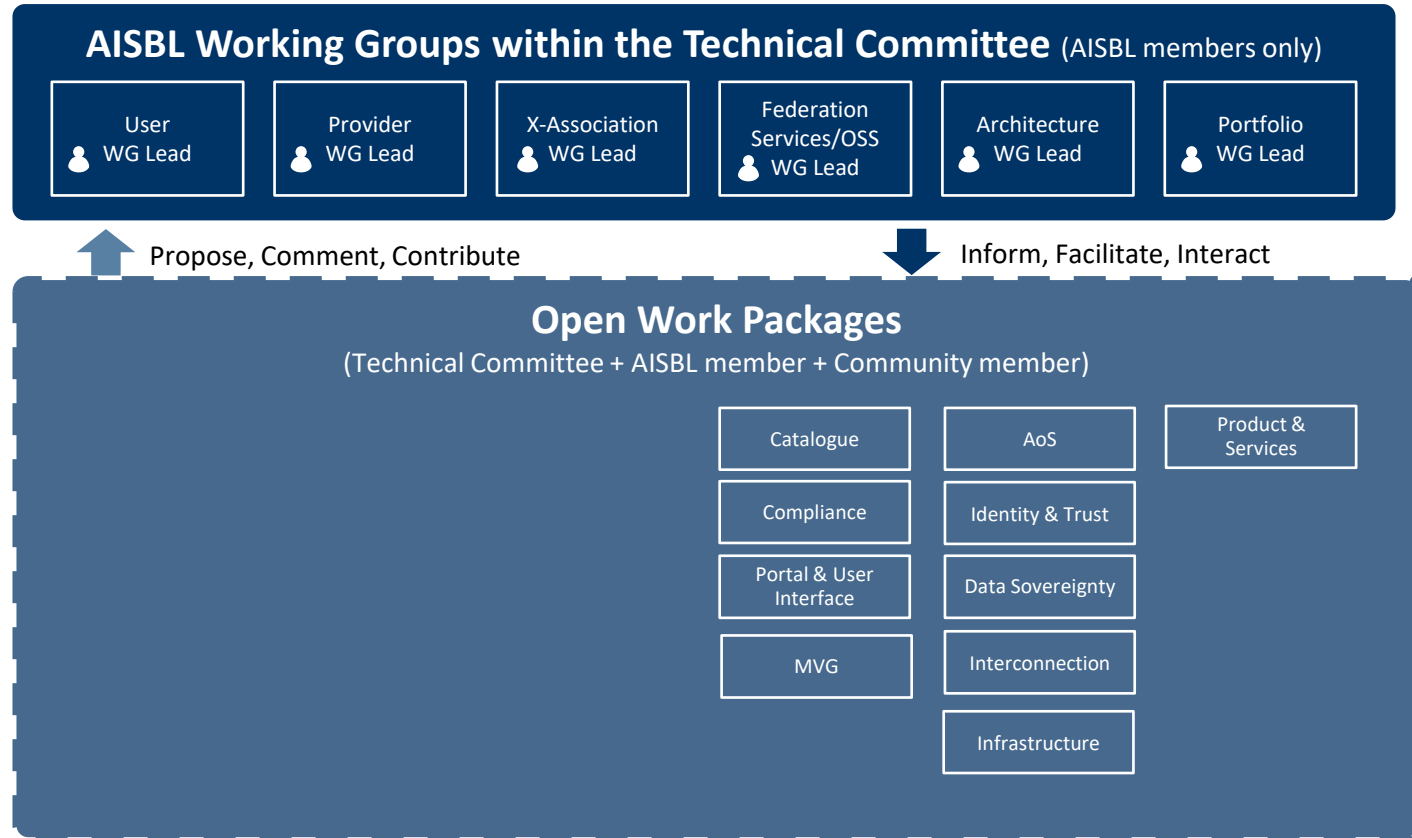


# Federation Services as core of the technical infrastructure

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



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





# Data Spaces as enablers of cross-domain business models



## Industry 4.0/SME

**Gerd Hoppe**

[g.hoppe@beckhoff.com](mailto:g.hoppe@beckhoff.com)

Germany



## Health

**Sergio Levi**

[serio.levi@Philips.com](mailto:serio.levi@Philips.com)

The Netherlands



## Energy

**Martine Gouriet**

[martine.gouriet@edf.fr](mailto:martine.gouriet@edf.fr)

France

## 4 characteristics

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

## Mobility



**Jean-Francois Cases**

[jean-francois.cases@amadeus.com](mailto:jean-francois.cases@amadeus.com)

France

## Finance & Insurance



**Patrick Lauren-Frings**

[Patrick.laurens-frings@caissedesdepots.fr](mailto:Patrick.laurens-frings@caissedesdepots.fr)

France

## Travel



**Claudio Cimelli**

[Claudio.cimelli@education.gouv.fr](mailto:Claudio.cimelli@education.gouv.fr)

France

## Space

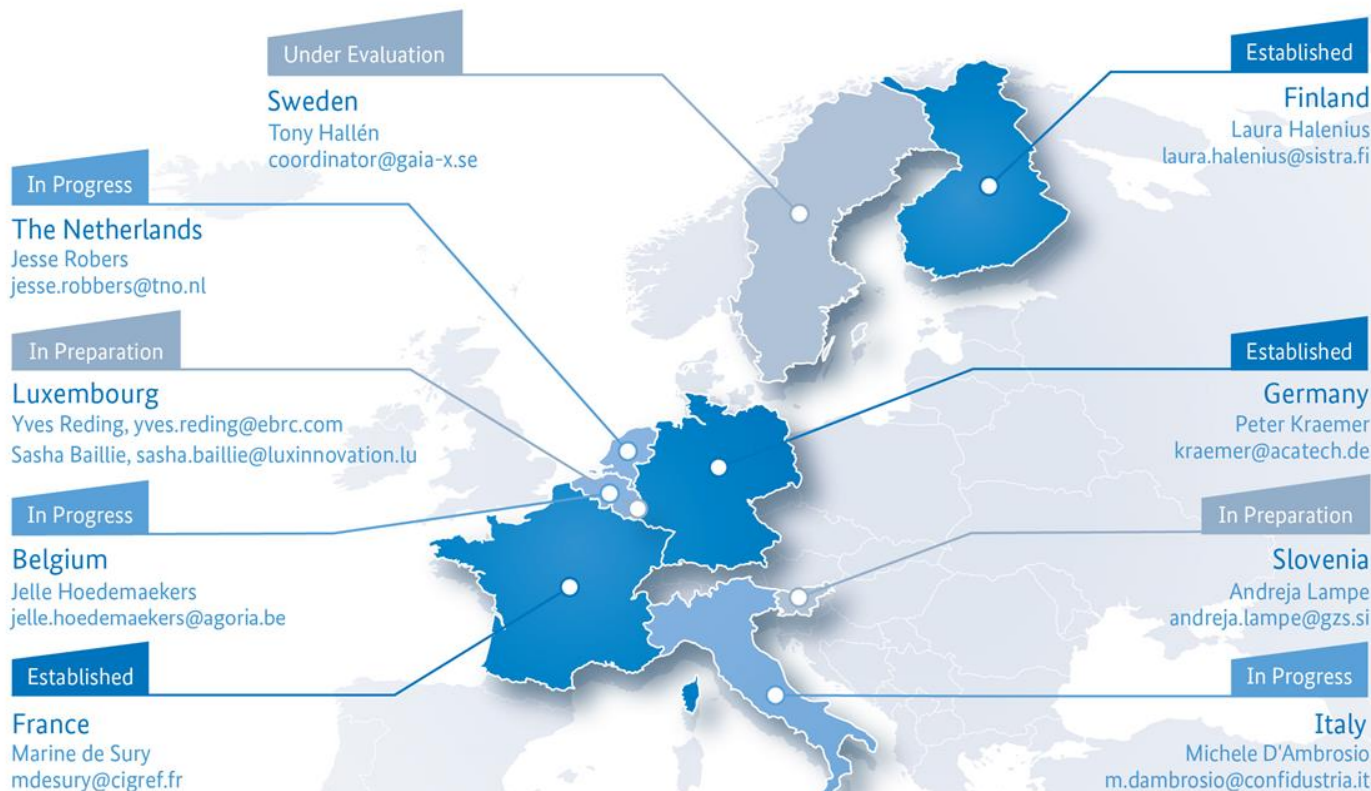


**Servane Augier**

[servane.augier@outscale.com](mailto:servane.augier@outscale.com)

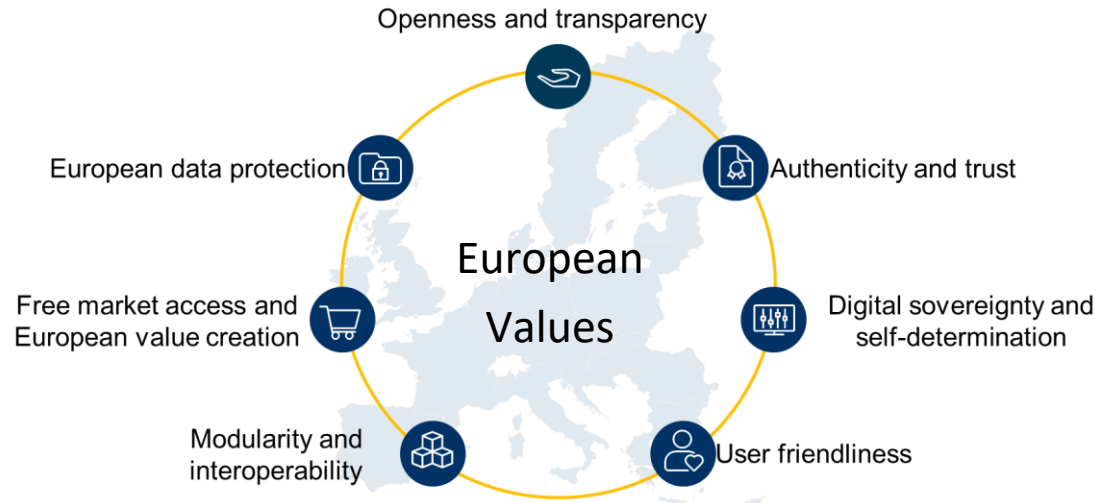
France

# Establishment of GAIA-X Hubs



# Potential IPCEI on Next Generation Cloud Infrastructure and Services Rooted in European Values

- Joint Member States' declaration on EU Cloud federation in October 2020
- Launch of European Alliance on Industrial Data and Cloud in December 2020
- Official launch of GAIA-X European cloud infrastructure initiative in June 2020



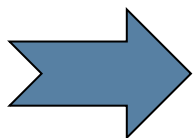
# Potential IPCEI on Next Generation Cloud Infrastructure and Services Objectives and Scope

Fostering the resilience and competitiveness of European industries by creating a multi Provider Cloud and Edge Continuum

Main objectives:

- Strengthen EU digital industry at both infrastructure and service level
- Support the development of highly scalable, federated, interoperable, trustworthy and energy-efficient cloud and infrastructure services across Europe
- Invoke Spill over effects in different sectors
- Boost Cyber-Security of cloud infrastructure

Scope:



- IPCEI addresses research, development and innovation (R&D&I) needs
- Supports a first industrial deployment (FID)



**Data Ecosystems**  
FID: Highly complex first industrial deployment

**GAIA-X Federation services**  
Digital Identities, Choice of compute location

**(F) Software Platform Stack**

(1) IaaS

(2) PaaS

(3) CI/CD pipe

(4) User Mesh-OS

(5) Models Repositories

**(E) Cloud Edge Continuum Providers**

**Distributed Multi provider Cloud Edge Continuum**

(1) Public Cloud

(2) Sovereign Cloud

(3) Data Center

(4) Far Edge

(5) Near Edge

(6) HPC

(7) Device Solutions

**(D) Automated, AI supported Compute & Network Mesh**

Latency Optimization  
Resource Optimization  
End-to-End Security

(1) Provider Mesh-OS

High Availability & Disaster Recovery  
Load Balancing  
Automated Operations

ORAN  
SDN  
Orchestration mobile edge

(2) Interconnect API

Dynamically adaptable bandwidth  
Route Selection  
Ultra low Latency

**(C) Appliance Manufacturing**

(1) Cloud Server

(2) Edge Devices

(3) Consumer Devices

(4) Customized

**(X) European Interconnection as a Service**

(5) Router

(6) Switches

(7) Fixed NW

(8) Mobile NW

(9) Campus NW

**(B) Embedded O/S**

(1) Firmware

(2) Mesh-API

**(A) Component Manufacturing**

(1) Quantum

(2) Processor

(3) FPGA

(4) HW Security Modules

(5) Optical Coupling

(6) Storage

General Purpose

Low Energy Mobile

Real Time Safety

Graphics Matrix processing

AI Inference

AI Training

Special Purpose

Cybersecurity  
Energy Efficiency & Sourcing

# Beispiel OpenAI – GPT-3

OpenAI (GPT-3): Eine Künstliche Intelligenz, die englischsprachige Texte selbstständig vervollständigen kann und deren Texte teilweise von Menschen geschriebenen Texten nicht unterschieden werden können.

The supercomputer developed for OpenAI is a single system with more than **285,000 CPU cores, 10,000 GPUs and 400 gigabits per second of network connectivity for each GPU server**. Compared with other machines listed on the TOP500 supercomputers in the world, it ranks in the top five, Microsoft says. Hosted in Azure, the supercomputer also benefits from all the capabilities of a robust modern cloud infrastructure, including rapid deployment, sustainable datacenters and access to Azure services.

<https://blogs.microsoft.com/ai/openai-azure-supercomputer/>



# Danke für Ihre Aufmerksamkeit!



## Andreas Weiss

Leiter Digitale Geschäftsmodelle eco Verband  
der Internetwirtschaft  
Direktor EuroCloud Deutschland\_eco e.V  
[andreas.weiss@eco.de](mailto:andreas.weiss@eco.de)  
<https://www.linkedin.com/in/andreas-weiss-eco/>

- [www.eco.de](http://www.eco.de)
- [www.dotmagazine.online](http://www.dotmagazine.online)

GAIA-X: <https://www.data-infrastructure.eu>

IPCEI Recording:

<https://attendee.gotowebinar.com/recording/9208799522831766786>