



gaia-x

Market-X

MARKET EXHIBITION

13-14
MAY

2025 SPAIN
VALENCIA

Tech-X

HACKATHON #8

In partnership
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Hub Spain





gaia-x

How can we Accelerate the Onboarding of Organisations in Gaia-X and Data Spaces (demo)

10:00 – 10:30

In partnership
with



Enrique Areizaga, Digital Transformation Manager, TECNALIA Research & Innovation
Mario Petruzzella Malagón, Senior Developer – Project Management, Arsys
Manuel Escuin, Cloud and Orchestrator Leader, Aire Networks
Jordi Arjona Aroca, Distributed System research coordinator, ITI

The Role of Verifiable Credentials in Gaia-X

- > [About Arsys](#)
- > [The Gaia-X initiative](#)
- > [The Gaia-X pillars](#)
- > [The Trust Framework](#)
- > [Verifiable Credentials](#)
- > [Participant Credential](#)
- > [Service Offering Credential](#)
- > [GXDCH: Gaia-X Digital Clearing House](#)



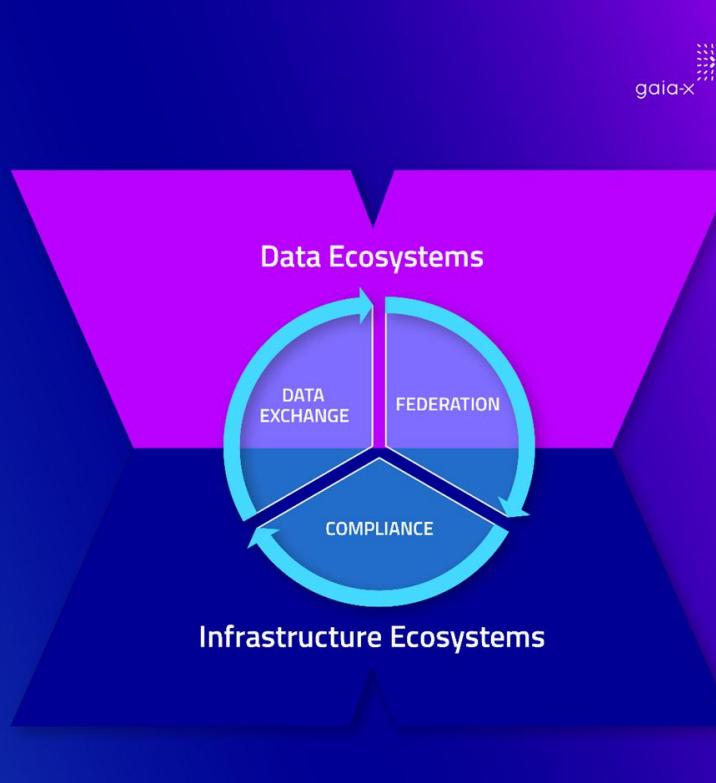
- Part of IONOS Group SE, Europe's leading digitalization partner and trusted cloud enabler, with more than 10 brands in the IT market.
- IONOS Group SE is a publicly traded group with more than 6 million customers, a global network of 29 datacenters worldwide and more than 1,560 million euros in sales (2024 FY).
- Arsys leads the Spanish professional market for Internet presence services, cloud computing and IT infrastructure solutions. It specializes in designing fully-customized cloud projects (public, private & hybrid cloud, DaaS, cloud backup, cloud storage, managed kubernetes and managed security) with maximum guarantees of availability, performance and security.
- It holds these certifications: Tier III, Conformity with the Spanish National Security Scheme (level: high), ISO 9001, ISO 14001, ISO 27001, ISO 27018, ISO 50001, AENOR good practices in e-commerce... Arsys belongs to the European Alliance for Industrial Data, Edge and Cloud, Gaia-X, IDSA, BDVA, among others.
- Experience in EU-funded projects.



Our X-Model

Connecting Data & Infrastructure Ecosystems

- Advanced Services**
New (Cross-) Sector Innovations / Applications build from service composition.
- Data Spaces / Federations**
Interoperable & portable (Cross-) Sector data-sets and services.
- Data Exchange**
Anchored contract rules for access and data usage.
- Gaia-X Compliance**
Decentralized services to enable objective and measurable trust.
- Label framework**
Gaia-X and ecosystem specific Labels to ease market adoption through autonomy and self-determination.



Source: <https://gaia-x.eu/gaia-x-framework/>

The Gaia-X initiative

Defining the guidelines to build a federated and secure data infrastructure, Gaia-X aims to boost the creation of data spaces that stimulate growth, innovation and competitiveness of the data economy.

Throughout the definition of three pillars (**Compliance**, **Federation and Data Exchange**), Gaia-X establishes common rules of behavior to generate a trusted environment where data can be shared, connecting different application and service providers with the owners of this data (**Ecosystems**) and facilitating secure, transparent sharing, reliable and interoperable information (**Infrastructure**).

Depending on its objectives, each Gaia-X pillar implements its own **functional** and **technical** specifications, which are translated into the development of different software components.



Compliance

Establishes and defines the necessary mechanisms to ensure compliance with common rules of behavior in data spaces, based on European values of trust.



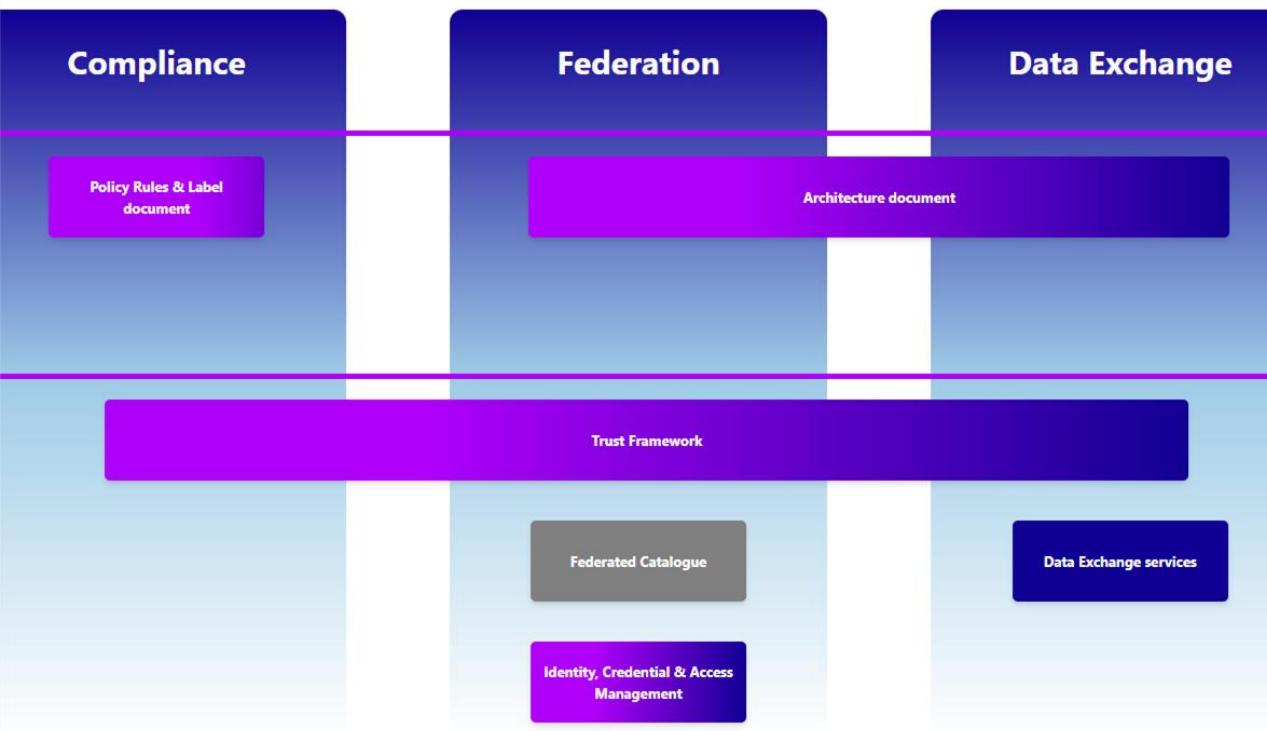
Federation

Facilitates the secure and reliable exchange of data and services, not only among the members of the data space themselves but also between different sectors or ecosystems.



Data exchange

Provides the means to carry out the data exchange itself and keep records of the negotiation of data and use contracts at the infrastructure layer.



Source: <https://gaia-x.eu/services-deliverables/deliverables/>

The Trust Framework

The Gaia-X Trust Framework collects the evolution in the development of the specifications documents and components defined in the three pillars of Gaia-X.

The **functional specifications** describe concepts at a high level. The technical architecture document describes what a federation is, while the policy rules document contains the common set of policies and rules which a federation has to comply with.

The **technical specification** documents describe the minimum set of attributes and rules that participants must provide to act according to the framework defined by Gaia-X, as well as how the software components within the different areas behaves.

According to these specifications, the Gaia-X development teams themselves, with the help of the community, implement software artifacts that, executed at the infrastructure layer, offer the necessary functionalities to work in a Gaia-X compliant data space.

Verifiable credentials

- The **Trust Framework** is based on the use of **verifiable credentials** as a mechanism to achieve the objectives proposed by the initiative regarding the secure, transparent, trustworthy, and interoperable sharing of information.
- Its use is defined by the **World Wide Web Consortium** (W3C), which develops internationally accepted standards and guidelines for building an Internet based on the same values of security and transparency pursued by Gaia-X.
- Verifiable credentials are a **set of claims or assertions** about something, signed by the entity providing the information using **digital certificates** and validated by a **trusted entity** accepted by all participants in the data-sharing ecosystem.
- Once generated, the credentials are used to provide security and trust in the exchanges of information and processes that occur within the data space. According to the Trust Framework, we can distinguish between **Participant** credentials and **Service Offering** credentials.
- The software components (also known as **Compliance Services**, and operated in the so-called **Gaia-X Digital Clearing Houses**) developed in each work area are responsible for validating the correctness of these credentials and ensuring they comply with the specifications described in the areas of Compliance, Federation, and Data Exchange that make up the Gaia-X framework.

Participant Verifiable Credential

Participants in a data exchange process need to be identified by providing their participant verifiable credential. In this process, we can define two main actors:

Provider: manages resources within the ecosystem, which can be combined to create a service offering. These services are offered and made accessible to other participants.

Consumer: a participant who seeks out service offerings in the ecosystem and consumes them according to their needs.

Participant credentials must contain basic information about the company, as a legal identifier, as well as the acceptance of certain terms and conditions.



Service Offering Credential

A **service offering** is made up of a set of resources that a provider manages and publishes in a service catalogue so that it can be consumed by the rest of the participants in the data ecosystem.

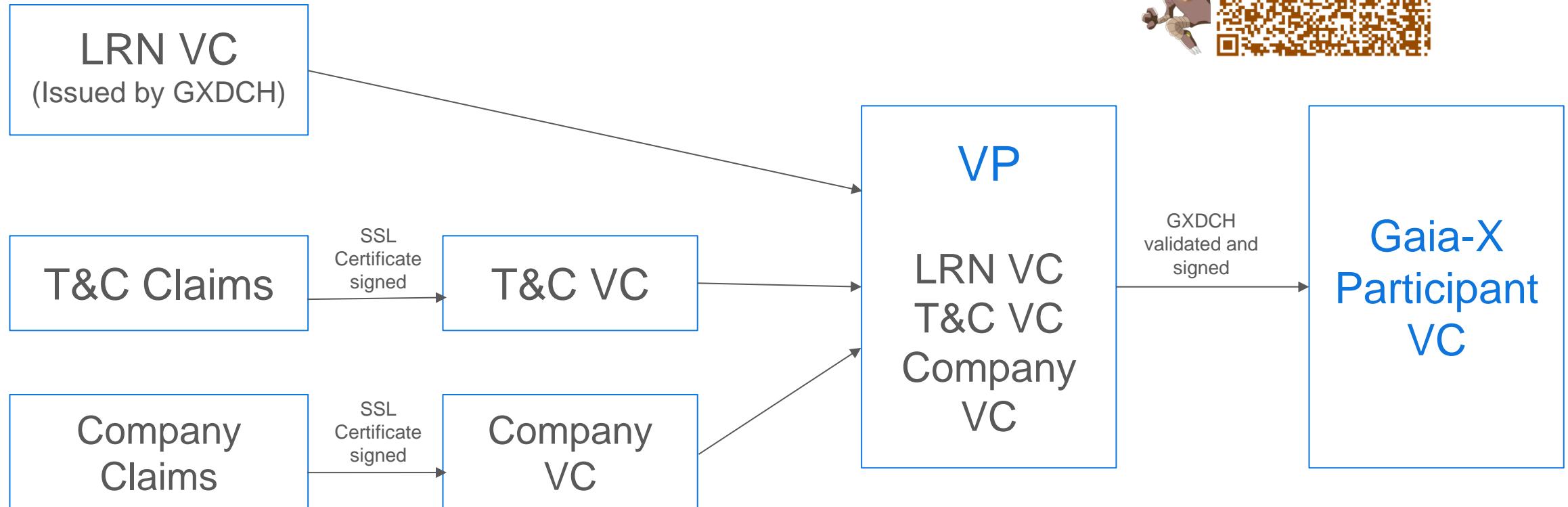
Each service offered **must have** an associated verifiable credential, which contains both the statements describing the service itself and the terms and conditions of use, as well as information about access rules and policies.

Compliance criteria:

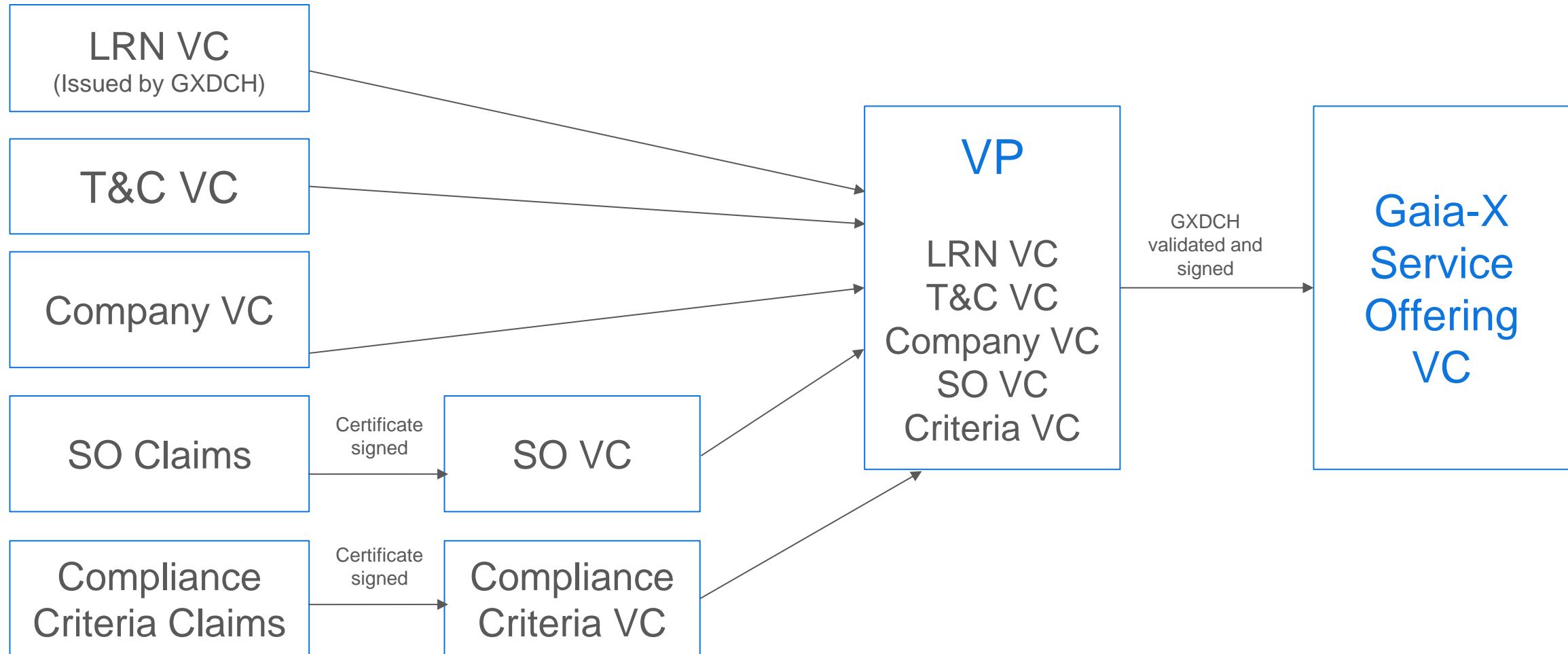
- Contractual framework
- Data protection
- Cybersecurity
- Portability
- European control
- Sustainability



Participant VC



Service Offering VC



GXDCH: Gaia-X Digital Clearing House

- They are nodes where **software components** developed by the working groups - according to the specification documents and rules formulated within the framework of the Trust Framework - are run, enabling the generation and verification of the validity of verifiable credentials that identify both participants in the data space and the service offerings that are part of it.
- Each node is operated by a **service provider** according to rules defined by the Gaia-X AISBL Association, which delegates its governance to the different providers. This decentralized, open, and transparent operational approach allows for the creation of data spaces that ensure the sovereign, secure, and trustworthy sharing of information.
- The software components running on the nodes that make up the GXDCH network are the result of the work carried out in Gaia-X, and they evolve as development phases are completed, offering **new functionalities and services** to the participants in the ecosystem.
- In the version called "Tagus" (completed in the fourth quarter of 2023), there are three mandatory components (**Gaia-X Compliance, Gaia-X Registry, and Gaia-X Notarisation Service**) responsible for providing the minimum necessary functionality to generate and verify the validity of participant and service descriptions, as well as the information contained within them.
- In addition to the three aforementioned services, the GXDCH can also offer additional functionalities and tools, such as the Wizard Service, a catalog for making our service offerings available in the ecosystem, or a Wallet to store our verifiable credentials.



Certificates

Validate the chain of certificates used to sign the credential.



Proof

Verify that the claims have not been altered after the credential was generated.



Structure

The information of the credential must be structured according to the definitions of the Trust Framework.



Rules

Other validations: terms and conditions, legal registration number...

arsys

La tecnología cercana





gaia-x

How can we Accelerate the Onboarding of Organisations in Gaia-X and Data Spaces

Jordi Arjona
Distributed Systems
research group coordinator



ICT TECHNOLOGY CENTRE

In partnership
with

gaia-x
 Hub Spain



ICT TECHNOLOGY CENTER

Onboarding an organisation in Gaia-X

- Express Interest and Initial Contact: The organisation needs to signal its interest in joining Gaia-X. This is usually done by contacting the Gaia-X Association (AISBL) directly, often through a contact form or a dedicated membership email address.
- Application Submission: Following the initial contact, Gaia-X will provide the necessary application documents. The organisation must complete these documents, providing required information about their entity.
- Review and Decision by the Board of Directors: The completed application documents are submitted to Gaia-X. The application undergoes a review process, and the decision on acceptance is made by the Gaia-X Board of Directors.
- Onboarding and Credentialing: Upon approval, the organisation is guided through the technical and procedural onboarding. This crucial step involves setting up the necessary infrastructure to interact with the Gaia-X ecosystem, which includes obtaining and managing verifiable credentials that confirm the organisation's identity and compliance with Gaia-X's Trust Framework. This often involves working with components like the Credential Manager and potentially setting up agents (like Simpl-Agent in some data spaces) to enable secure interaction and data sharing within the ecosystem.
- Participation and Engagement: Once successfully onboarded and credentialled, the organisation becomes a Gaia-X participant. They can then explore and offer services within Gaia-X compliant data spaces, collaborate with other participants, contribute to working groups, and actively engage in the Gaia-X community.

Thanks for the info
GEMINI!

What do we REALLY need?



Show me the money

#GaiaX #MarketX25 #TechX25

Your data is safe! And monetisable!

- Data access policies
- Use control policies
- Security & Trust framework
- No confidential info leaks
- Access to lots of potential data consumers
- Access to lots of resources

A wide-angle photograph of a sunny day. The upper half of the image shows a bright blue sky with scattered white and grey cumulus clouds. A large, intense sun is positioned in the upper left, emitting a radial lens flare. The lower half shows a vibrant green grassy field in the foreground, leading to a dense line of dark green trees that form a horizon. The overall scene is bright and clear.

Sunny Day Scenario



Don't make others SUFFER your data

Ensure it is good quality data



Oh please... Help me!



WISEPHERE



datamite

CONFIA

(Trust in English)

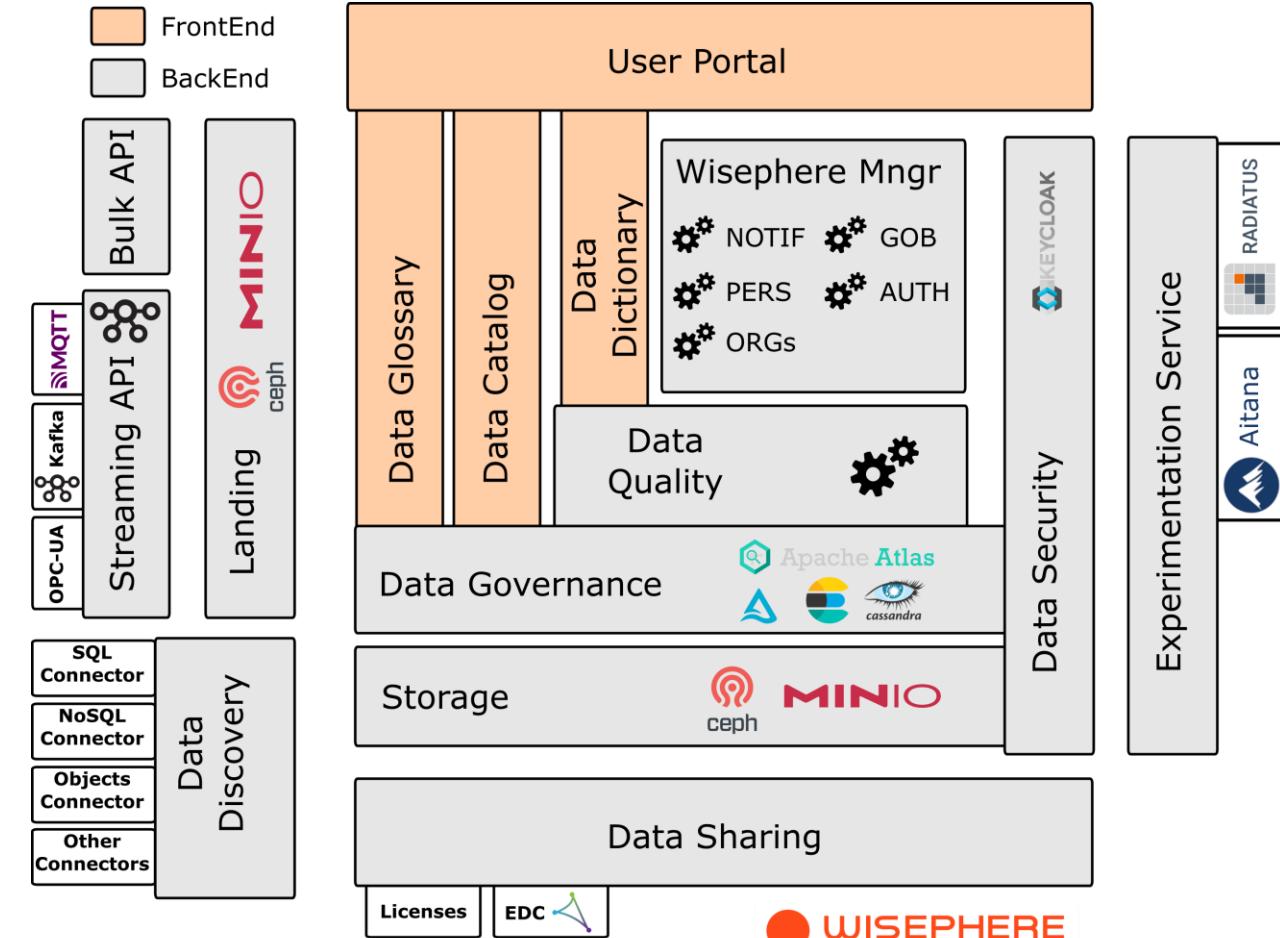
#GaiaX #MarketX25 #TechX25



WISEPHERE



- Goals
 - Improve organisations maturity
 - Quality Awareness
 - Data Awareness
 - Enhance Data Monetisation
 - Facilitate Data Exchange



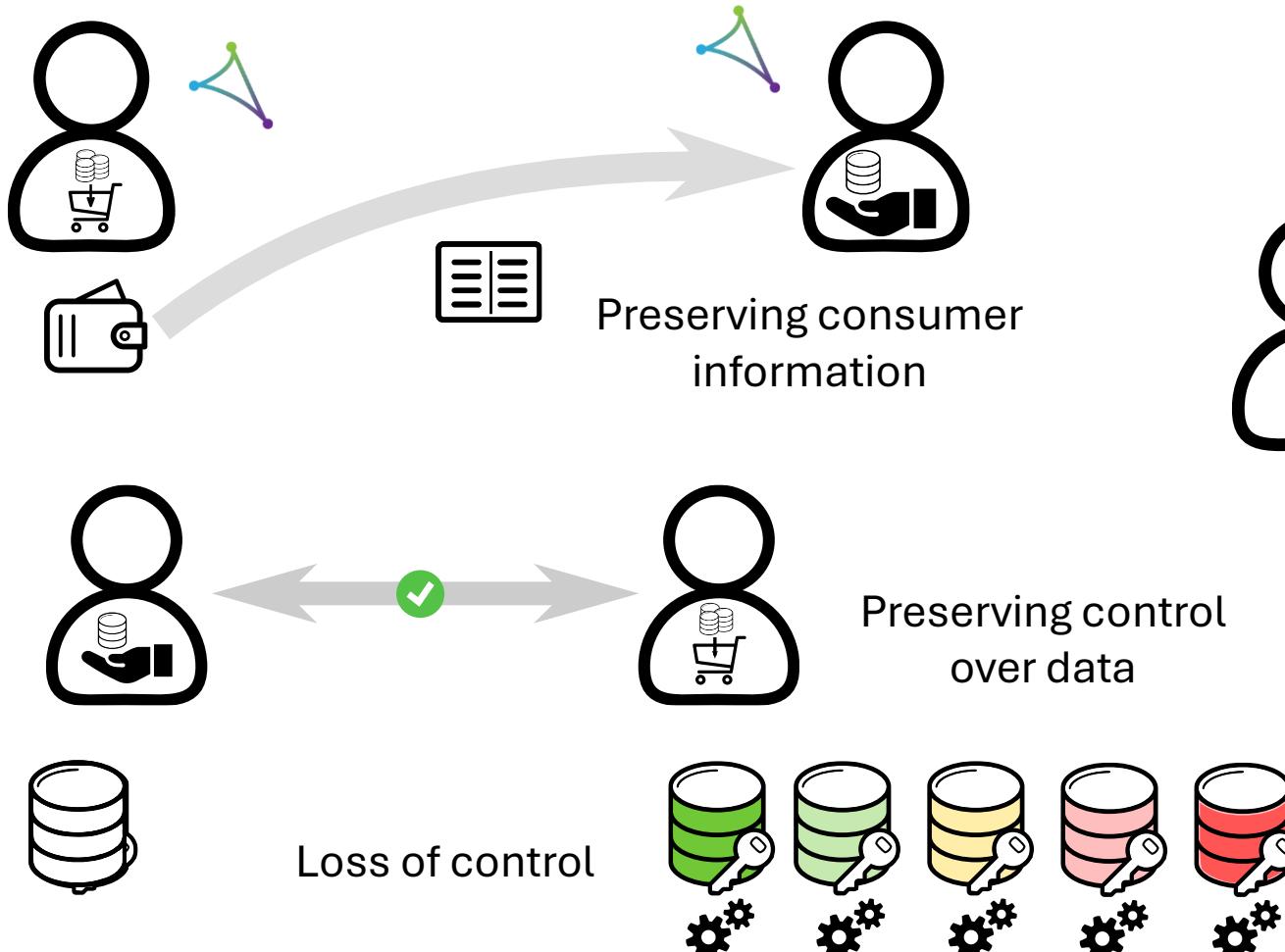
#GaiaX #MarketX25 #TechX25



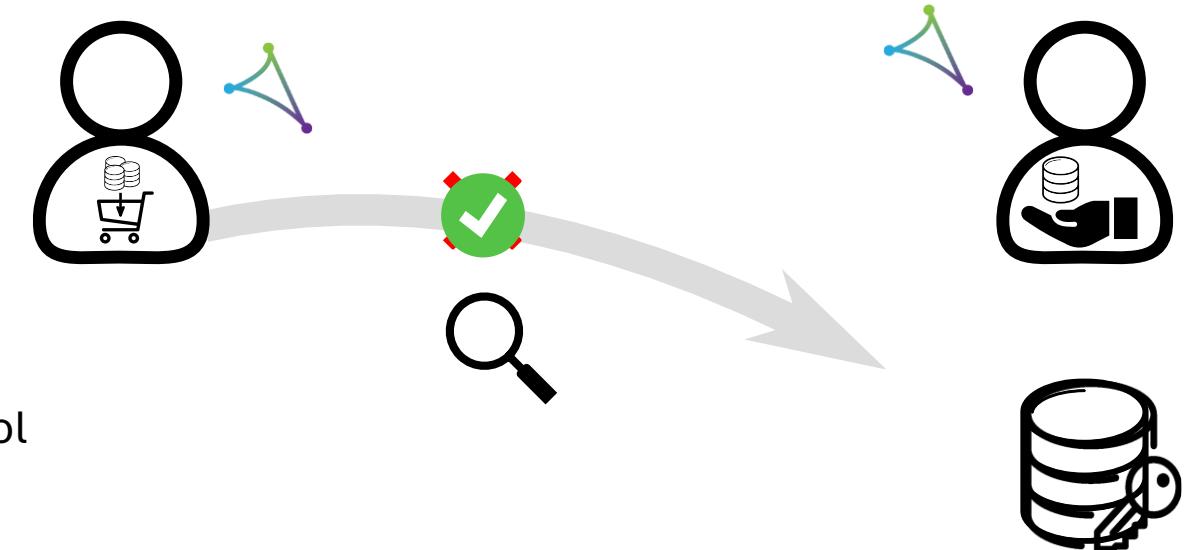
- Similar Goals
 - Improve organisations maturity
 - Quality & Data Awareness
 - Lighter and Open-Source
 - Facilitate definition and application of data sovereignty policies
 - Enhance Data Monetisation
 - Exchange in Gaia-X, Data Spaces and beyond

#GaiaX #MarketX25 #TechX25

CONFIA



Increasing guarantees for data consumer preserving data privacy



HOW: Self-Sovereign Identity,
Zero Knowledge Proofs,
Homomorphic Encryption,...

**IF YOU HAVE A (DATA) PROBLEM
IF NO ONE ELSE CAN HELP - AND IF YOU CAN FIND THEM
WE CAN HELP AND YOU CAN FIND US
~~MAYBE YOU CAN HIRE...~~**



THE -TEAM

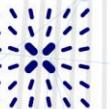


#GaiaX #MarketX25 #TechX25

Thank you!

Jordi Arjona | jarjona@iti.es

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Networking Coffee

10:30 – 11:30

Programme Tech-X Plenary

11:30 - FIWARE Data Space Connector

11:45 - Data Transfer Agent

12:15 - InferIA: Improving Discovery in Data Spaces through Artificial Intelligence

12:30 - Decoding Gaia-X: the Path to Compliance Labeling

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Top Business Priorities in Ecosystems

11:00 – 12:00



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ICT TECHNOLOGY CENTER

- Roland Fadrany, COO, Gaia-X

Gaia-X Member Benefits and What is Gaia-X (in Spanish)

12:00 – 12:30

- Iker Sanz, Member Relations Officer, Gaia-X

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Gaia-X AISBL

¿Qué es Gaia-X y cuáles son sus beneficios?

Manuel Gutiérrez
Iker Sanz Iglesias

Sr Digital Ecosystems Manager – Gaia-X AISBL
Members Relations Officer - Gaia-X AISBL



- **¿Qué es Gaia-X?**

- Gaia-X en resumen
- La demanda de ecosistemas digitales de confianza
- Visión y misión de Gaia-X
- Estructura de gobernanza del AISBL Gaia-X of the Gaia-X AISBL
- Gaia-X Hubs

- **Beneficios para los miembros de Gaia-X AISBL**

- ¿Por qué adherirse a Gaia-X AISBL?
- Participe en la comunidad de miembros de Gaia-X
- Maximizar la membresía —————→ PARTICIPACIÓN ACTIVA
- Beneficios para los miembros

- **¿Cómo unirse a Gaia-X?**



gaia-x

¿Qué es Gaia-X?

Gaia-X AISBL en resumen



gaia-x

Gaia-X European Association for Data and Cloud AISBL es una asociación privada sin ánimo de lucro de carácter industrial que lucha por la innovación a través de la soberanía digital.

- ▶ Nuestro **objetivo** es establecer un ecosistema en el que los datos se compartan y estén disponibles en un entorno de confianza.
- ▶ Nuestra **intención** es devolver el control a los usuarios conservando la soberanía sobre sus datos.
- ▶ Nuestro **outcome** no será una nube. Se trata de una norma para construir sistemas federados que conecten entre sí a diferentes proveedores de servicios en la nube y a los usuarios, en un entorno transparente que impulsará la economía europea (y mundial) de datos del mañana.

Gaia-X AISBL es...

- > Un único punto de definición de la arquitectura y las normas de Gaia-X
- > Puesta a disposición de una aplicación de referencia de código abierto
- > Una autoridad de cualificación para el cumplimiento de Gaia-X

Gaia-X AISBL NO es....

- > Una implementación comercial en tiempo de ejecución de cualquier servicio Gaia-X
- > Un organismo oficial de normalización
- > Un producto SW o HW o una plataforma en nube

¿QUÉ OFRECEMOS?

GAIA-X DIGITAL CLEARING HOUSE (GXDCH)

SPECIFICATIONS

Las especificaciones describen cómo funciona Gaia-X en términos de requisitos funcionales y técnicos

CODE

A continuación, nuestra comunidad traduce estas especificaciones en código fuente.

LABELS

Para hacer operativa una federación de servicios de infraestructura y construir espacios de datos interoperables, la Asociación Gaia-X elabora normas de gobernanza basadas en valores europeos

Visión y Misión de Gaia-X



**Gaia-X
vs
AISBL**

- > El proyecto Gaia-X está impulsado por la asociación
- > La arquitectura de Gaia-X está desarrollada por sus miembros
- > Los servicios de Gaia-X no serán explotados por la Asociación



VISIÓN: Habilitar ecosistemas digitales descentralizados de confianza

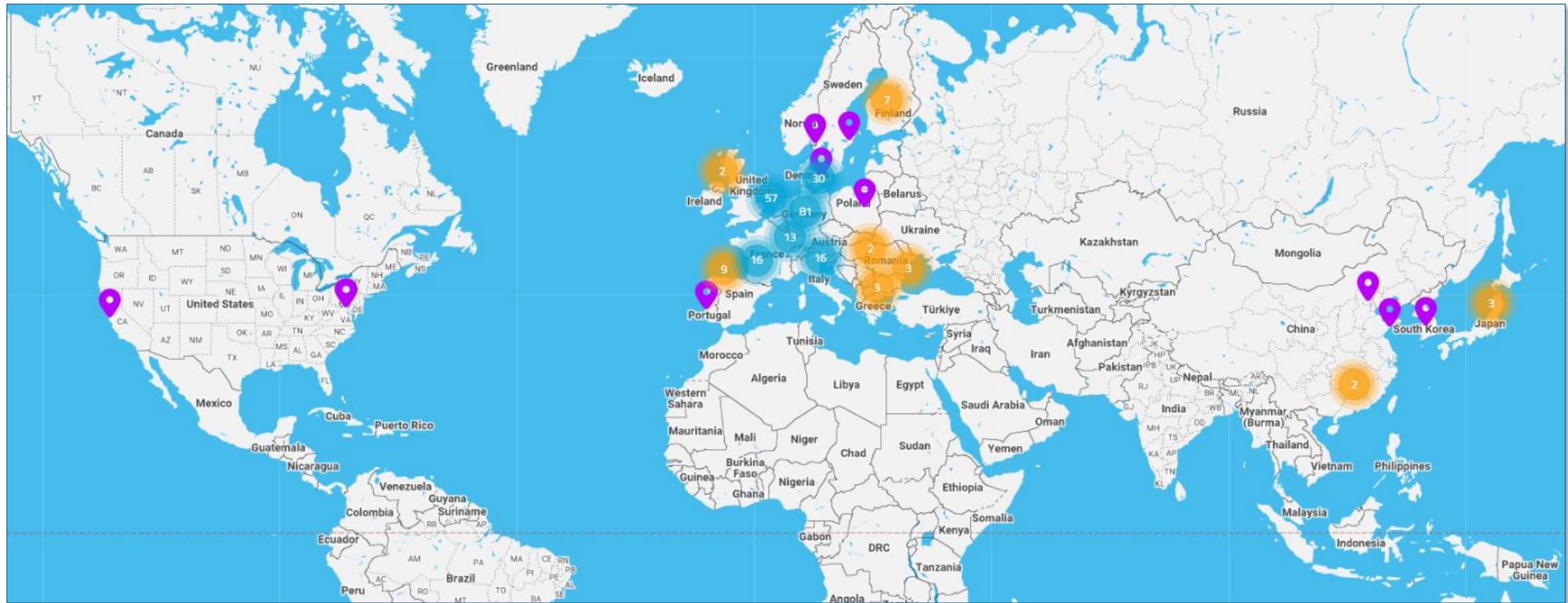


MISIÓN: Crear la norma *de facto* que permita una infraestructura y unos datos federados y de confianza, mediante el desarrollo de un conjunto de especificaciones, normas, políticas y un marco de verificación.

Gaia-X AISBL: La voz del mercado global



- Más de 250 miembros que representan la voz del mercado global: empresas (grandes & PYMEs), startups, asociaciones, proveedores de servicios, centros tecnológicos, y algunos gobiernos, ...



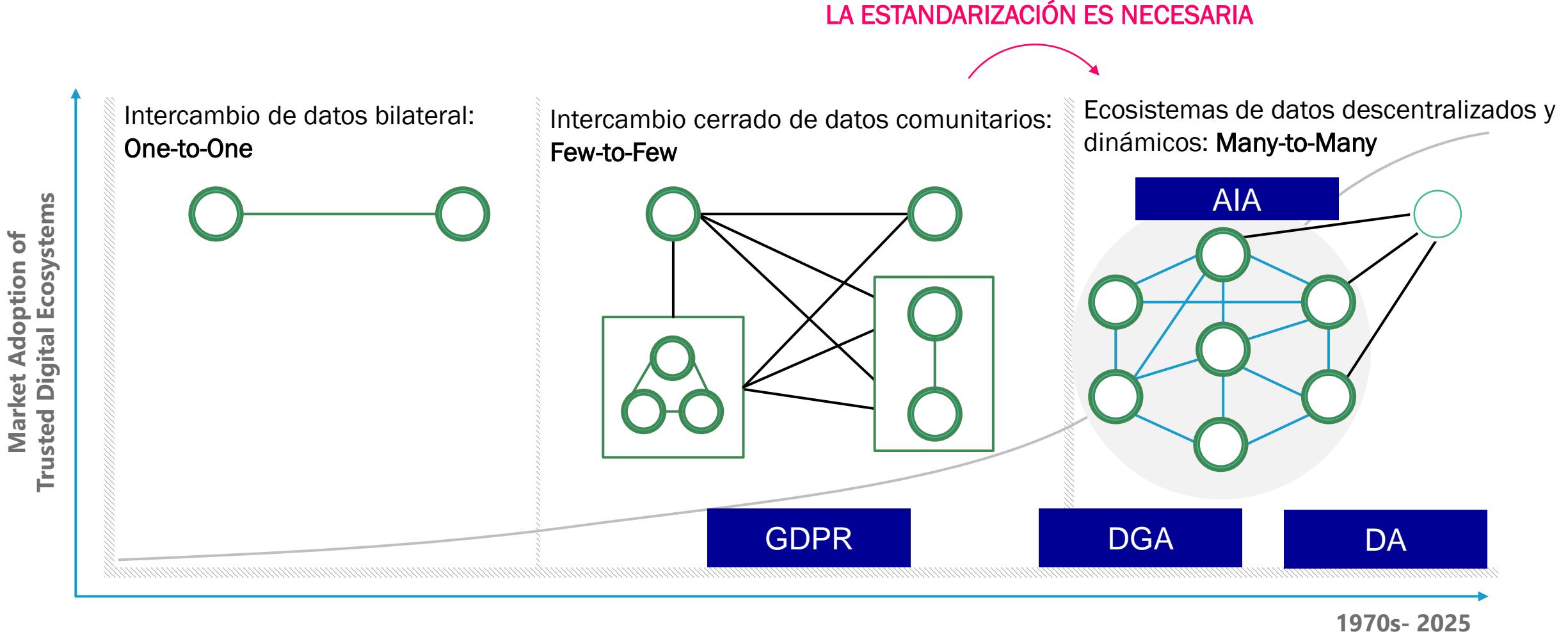
BENEFICIOS PARA USUARIOS

1. Crear y aplicar normas comunes para poder intercambiar datos y servicios de forma fiable, a gran escala.
2. Acelerar los ecosistemas soberanos digitales con **SW listo y una extensa red de proveedores**
3. Habilitar **cadenas de valor a escala mundial** mediante la federación y la interoperabilidad.

BENEFICIOS PARA PROVEEDORES

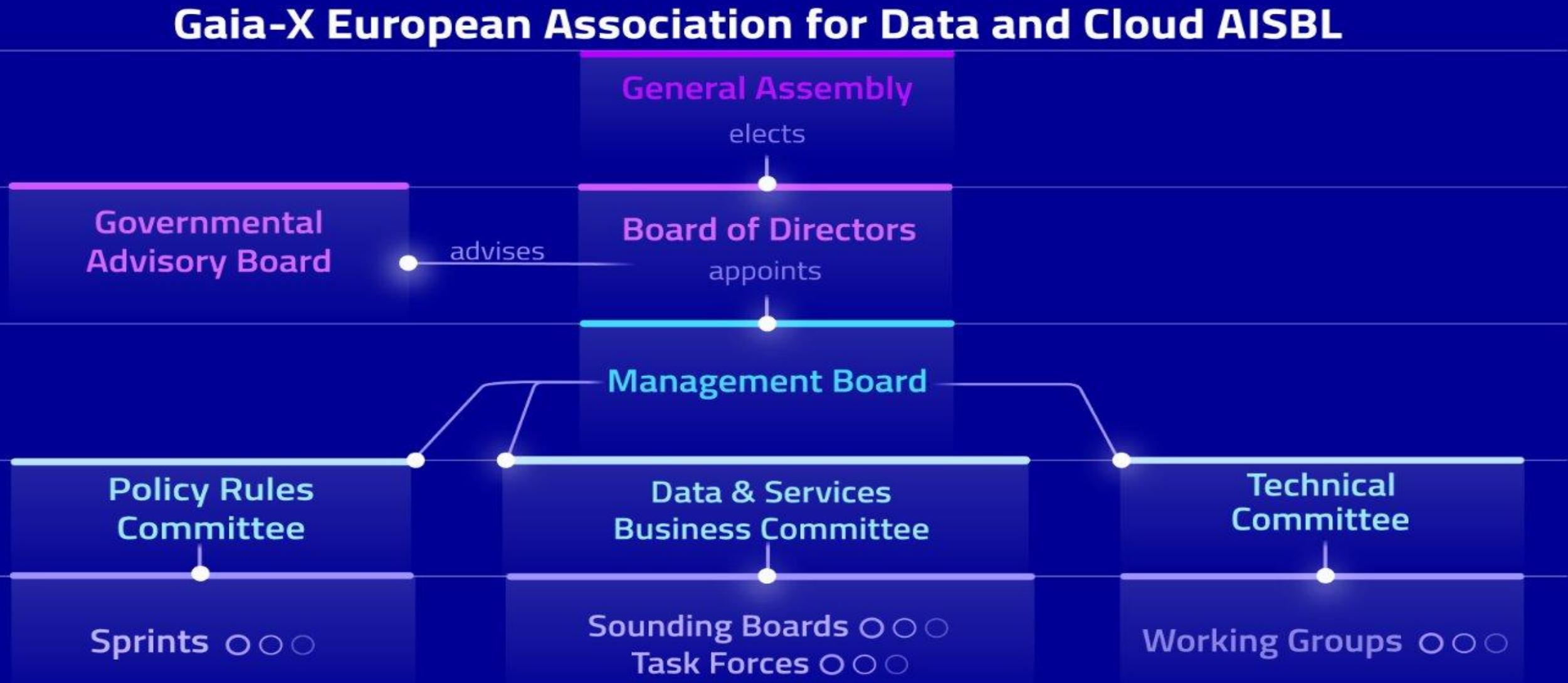
1. Ampliar el alcance, visibilidad y **cuota de mercado** prestando servicios certificados conformes a Gaia-X.
2. Convertirse en un **proveedor integral de GXDCH** para sus clientes actuales y nuevos que utilicen el ecosistema Gaia-X.
3. Ofrecer **Data-space-como-servicio** (DSaaS) para permitir aplicaciones empresariales rápidas, rentables, transparentes y fiables basadas en datos.

La demanda de ecosistemas digitales de confianza



Source: Data Spaces Business Alliance

Estructura de gobernanza de Gaia-X AISBL



Gaia-X AISBL Committees & Working Groups



Gaia-X Committees & Working Groups

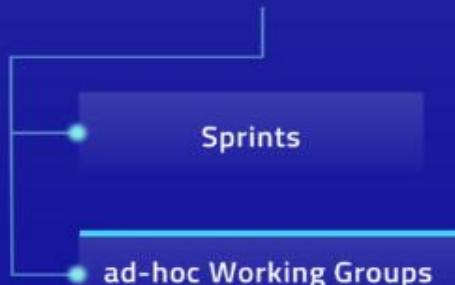
Data & Services Business Committee

Member Lead: Thomas Hahn (SIEMENS AG)
Management Co-Lead: Alberto Palomo (Gaia-X, CSO)



Policy Rules Committee

Member Lead: Alban Schmutz (CISPE)
Management Co-Lead: Roland Fadrany (Gaia-X, COO)



Technical Committee

Management Lead: Christoph Strnadl (Gaia-X, CTO)
Member Co-Lead: Klaus Ottradovetz (Eviden)



- Committee
- Working Group
- Sub-Working Group
- Sounding Board

Gaia-X OSS
Community

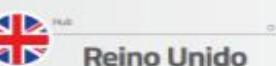
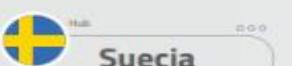
EUROPA 19



INTERNACIONAL 5



EN CURSO 6



Gaia-X Hubs

Los Gaia-X Hubs son los puntos de contacto centrales para las partes interesadas en cada país. Pueden considerarse como laboratorios de ideas (think tanks) y apoyos desde la base para el Gaia-X project.

La Association y los Gaia-X Hubs nacionales cooperan entre sí. Cualquier organización o empresa que trabaje en casos de uso, genere conocimientos y recursos, o esté interesada en convertirse en parte interesada y crear data spaces, es bienvenida a unirse al Gaia-X Hub.

Los Gaia-X Hubs tienen varios objetivos. Entre ellos se encuentran:

- ⦿ Actuar como embajador local de Gaia-X
- ⦿ Identificar las necesidades específicas del territorio y los data spaces de alta prioridad
- ⦿ Colaborar con otros hubs para desarrollar Data Spaces globalmente interoperables
- ⦿ Hacer que Gaia-X sea una realidad identificando proyectos y creando servicios Gaia-X en el mercado
- ⦿ Ayudar a los gobiernos locales a implementar la Recovery and Resilient Facility (RRF) de la manera más efectiva adoptando soluciones Gaia-X
- ⦿ Atraer la participación de nuevos miembros en la Association
- ⦿ Proporcionar retroalimentación sobre las necesidades y requisitos específicos que deben implementarse en el Gaia-X Framework



Los Ecosistemas de Gaia-X

Impulsando la colaboración en sectores estratégicos



- Comunidades globales que promueven los proyectos de ecosistemas digitales seguros y confiables, basados en el **estandar Gaia-X**
- La voz de los sectores: **requisitos de negocio y reglas del mercado**



Aeroespacial



Agricultura



Construcción



Educación



Energía



Finanzas



Salud



Localización



Logistica



Manufactura



Media



Movilidad



Sector Público



Smart Cities



Smart Living



Turismo

Los Proveedores de Servicios en Gaia-X

Haciendo posible la creación de valor en ecosistemas digitales



- Los proveedores de servicios hacen posible que los ecosistemas digitales se hagan realidad, aportando una pieza esencial
- Servicios de infraestructura (e.g. *cloud*), integración de software, plataforma como servicio, consultoría, compliance, y otros resultan críticos para **aprovechar las oportunidades de la Economía del Dato**

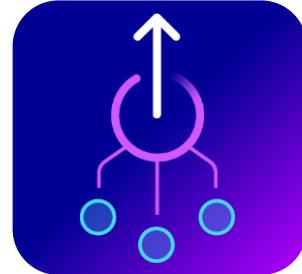


Beneficios para los miembros de Gaia-X AISBL

¿Por qué adherirse a Gaia-X AISBL?



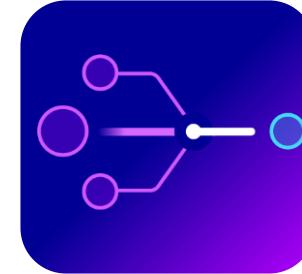
Dar forma al futuro de la infraestructura de datos



Influenciar y aumentar de la visibilidad

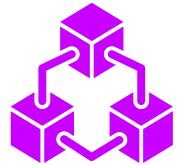


Colaborar y ampliar tu red



Obtener acceso exclusivo a recursos y asistencia técnica

Participa en la comunidad de miembros de Gaia-X



Members Platform es la ventanilla única para todas las actividades de los miembros. Participa en los WGs y los sprints, accede a la documentación y manténgase informado con antelación.



Member Webinars mensuales para miembros sobre temas de actualidad **y Tech Deep Dives** sobre los últimos avances



Aumentar el **alcance y la visibilidad** a través de diversos canales de comunicación, como testimonios de casos de uso, artículos en boletines/revistas y espacios para ponentes.



Eventos de **networking** durante todo el año en varios formatos, incluidos tres eventos de primer nivel: Market-X, Tech-X y el Summit.

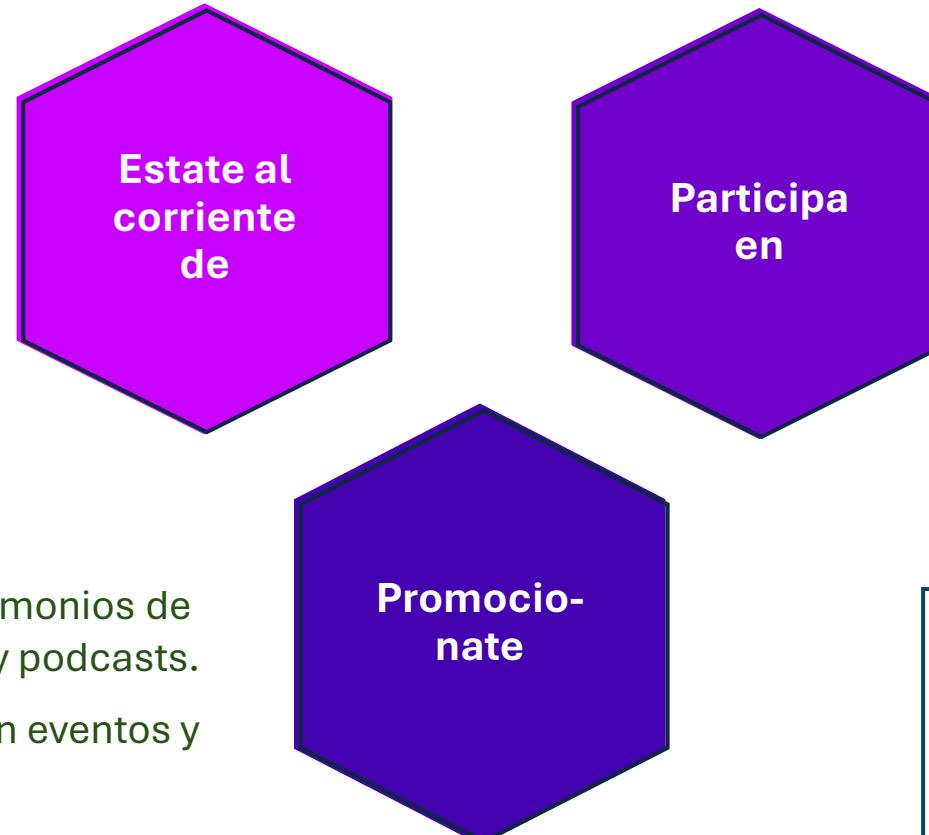


Desbloquea nuevas conexiones con el **matchmaking** de la Plataforma de Miembros.

Maximice los beneficios de la membresía mediante la participación activa



- Newsletters, Gaia-X magazine, redes sociales
- Eventos, webinars, tech deep dives
- Últimas noticias en nuestra *Members Platform*
- Cursos en *Gaia-X Academy*



- Contribuir a testimonios de casos prácticos y podcasts.
- Intervenciones en eventos y seminarios
- Convertirte en Gaia-X evangelist
- Convertirte en *certified GXDCH, Advisor, o Orchestrator*

- WGs, sprints y comités
- Eventos, webinars, tech deep dives....
- Definición de las especificaciones de Gaia-X mediante la entrega de requisitos

La participación activa crea oportunidades de crecimiento, como nuevas colaboraciones, mayor visibilidad y acceso a valiosos recursos.

Beneficios para los Miembros

Proveedores de servicios en la nube y TI, Instituciones de investigación, Start-ups, Usuarios finales, Asociaciones y Miembro con logo¹ pueden beneficiarse de Gaia-X de muchas maneras. Aquí encontrarás una visión general de los beneficios que se aplican a tí

Negocios y Organización

- 1 Invitación a la reunión de la Junta Directiva para definir la estrategia anual²
- 2 Invitación a las cenas de networking VIP de la Junta Directiva
- 3 Llamadas trimestrales de CxO basadas en tus necesidades
- 4 Hacer uso de las cartas de endoso para obtener financiación de la UE, aumentando la probabilidad de recibirla con éxito
- 5 Convertirse en un proyecto endosado por Gaia-X para una mayor visibilidad y posibilidades de colaboración cruzada
- 6 Participar en los grupos de trabajo/sprints de Gaia-X y contribuir al desarrollo del estándar
- 7 Oportunidades de networking para colaborar en licitaciones y fomentar asociaciones
- 8 Reputación positiva en el mercado
- 9 Nuevas oportunidades de negocio para proporcionar soporte informático
- 10 Nuevas oportunidades para proporcionar soporte en gobernanza
- 11 Distribuir RfIs/RfPs entre los miembros
- 12 Perspectivas políticas a través del Gobierno Advisory Board
- 13 Aprovechar el valor de los datos

Tecnológico

- 1 Contribuir a las especificaciones técnicas a través de los WGs
- 2 Contribuir a las especificaciones técnicas a través de los WGs
- 3 Oportunidades para convertirse en un experto certificado de Gaia-X
- 4 Acceso a todos los cursos de la Gaia-X Academy, junto con los certificados
- 5 Proporcionar requisitos e información para los cursos y el currículo de la Gaia-X Academy
- 6 Logos en el código fuente del repositorio
- 7 Línea de ayuda técnica
- 8 Oportunidades para convertirse en un GXDCH
- 9 Proporcionar requisitos tecnológicos a la comunidad Gaia-X
- 10 Ventaja inicial en todos los lanzamientos (documentación y software)

Marketing y Comunicaciones

- 1 Comunicado de prensa anunciando la membresía (sitio web, boletín informativo para miembros, redes sociales)
- 2 Perfil de la organización añadido al Directorio de Miembros en el sitio web de Gaia-X
- 3 Reuniones exclusivas individuales con los directores ejecutivos de Gaia-X, disponibles bajo petición, en la Cumbre Anual de Gaia-X y en los eventos insignia (Market-X y Tech-X).
- 4 Oportunidad de hablar en la Cumbre anual de Gaia-X y en los eventos insignia (todas las solicitudes deben ser evaluadas y aprobadas por el equipo directivo)
- 5 Como ponente en la Cumbre Anual de Gaia-X, es posible que se le invite a la conferencia de prensa en función de su experiencia y sus contribuciones a Gaia-X.
- 6 Destaque su participación en el evento a través de declaraciones y citas destacadas en nuestros comunicados de prensa y en nuestros canales de redes sociales.
- 7 Uso Testimonios que aparecen en el sitio web, en el boletín de noticias para socios y en las redes sociales en forma de folleto, diapositivas, podcasts o videos.
- 8 Contribuya semestralmente con un artículo destacado en la revista Gaia-X.
- 9 Comparta sus actividades, noticias, eventos y videos con la comunidad Gaia-X a través de nuestros boletines y redes sociales. Simplemente envíenos un correo electrónico para una difusión fluida.
- 10 Basado en su experiencia y contribuciones a Gaia-X, invitación a una entrevista en podcast. También propuesta de temas para su difusión.
- 11 Acceso gratuito a la cumbre Gaia-X y a los eventos más destacados
- 12 Descuentos en eventos Paquetes de colaboraciones
- 13 Seminarios web para miembros, boletines informativos
- 14 Curación de contenidos y documentación en una única plataforma de miembros
- 15 Participe en una comunidad de práctica, experiencia y transferencia de conocimientos, aprenda e intercambie
- 16 Reciba mensualmente información sobre oportunidades de financiación relevantes a nivel europeo y nacional, desde los requisitos básicos hasta los criterios de evaluación.
- 17 Utilice el logotipo Gaia-X Accredited
- 18 Utilice el logotipo Gaia-X Powered
- 19 Utilice el logotipo Gaia-X Member

1. Beneficios limitados al uso del logotipo de miembro de Gaia-X

2. Limitado a Miembros europeos

¿Cómo unirse a Gaia-X?



1.
Visite nuestra web

Entra en www.gaia-x.eu y haz click en
"Join Gaia-X"

Lee las ventajas de afiliarse y rellena
el formulario

2.
Nuestro equipo de
afiliación se pondrá
en contacto con
usted

Una vez cumplimentado el formulario,
recibirás un correo electrónico automático

El Membership Team de Gaia-X se
pondrá en contacto contigo para
facilitarte toda la información

3.
Rellena Nuestro
Membership
Agreement Form

A través del enlace que enviaremos por
correo electrónico, rellena nuestro
formulario de adhesión.

Una vez cumplimentado y firmado,
nuestros abogados llevarán a cabo el
control jurídico.

4.
Hazte miembro de
Gaia-X

La solicitud de incorporación se
examinará en la próxima reunión
mensual de nuestra Junta Directiva

Si se aprueba, el Equipo de
Miembros le dará oficialmente la
bienvenida a Gaia-X.



gaia-x

Muchas gracias

-

iker.sanz@gaiax.eu

Gaia-X European Association for Data and Cloud AISBL

Business Data Space Trajectories

12:30 – 13:00

• Alberto Curatolo, CFO, Gaia-X

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Understanding the Data Spaces Trajectories

—
Alberto Curatolo
Chief Financial Officer

Gaia-X Market-X/Tech-X
Valencia, 13-14 May 2025



DATA SPACES

Introduction and Context

- Data-sharing ecosystems are integral to the EU's digital strategy, enabling secure and structured collaboration across industries.
- They function beyond simple marketplaces, fostering cooperation among stakeholders to solve sector-specific challenges or co-develop services.
- Participants agree on governance rules to share industrial and enterprise data, ensuring mutual trust and benefit.
- This workshop aims to explore ecosystem formation, orchestration models, value generation mechanisms, and understand the ecosystem trajectories.

What is a Data-Sharing Ecosystem?

- A data-sharing ecosystem is a selective network ('data club') where trusted members exchange valuable data for collective insights.
- By restricting access to contributors only, these ecosystems prevent free-riding and promote active participation.
- A central orchestrator - either a company or neutral entity - provides infrastructure, governance, and ensures data sharing runs smoothly.
- Participants contribute not only data but also governance input, resources, or technology to sustain ecosystem functionality.

Ecosystem Dynamics and Incentives

- Most ecosystems start from concrete use cases that deliver measurable returns, such as reduced costs or streamlined operations.
- Initial participation hinges on trust and tangible early benefits; without these, companies are unlikely to engage.
- As more participants join and contribute data, the ecosystem gains in analytical power and usefulness, creating a network effect.
- Once foundational benefits are realized, stakeholders can explore more complex collaborations, such as co-developing new data-driven products.

Benefits vs Costs: Stages of Data Sharing

- 1. Digitalization
Replace manual tools with APIs → efficiency boost
- 2. Automation
Real-time data exchange → faster decisions
- 3. Optimization
Align operations across partners → strategic gains
- 4. Innovation
Create new services → high value, high effort

→ **Key Takeaways:**

Start small with cost savings - innovation comes later

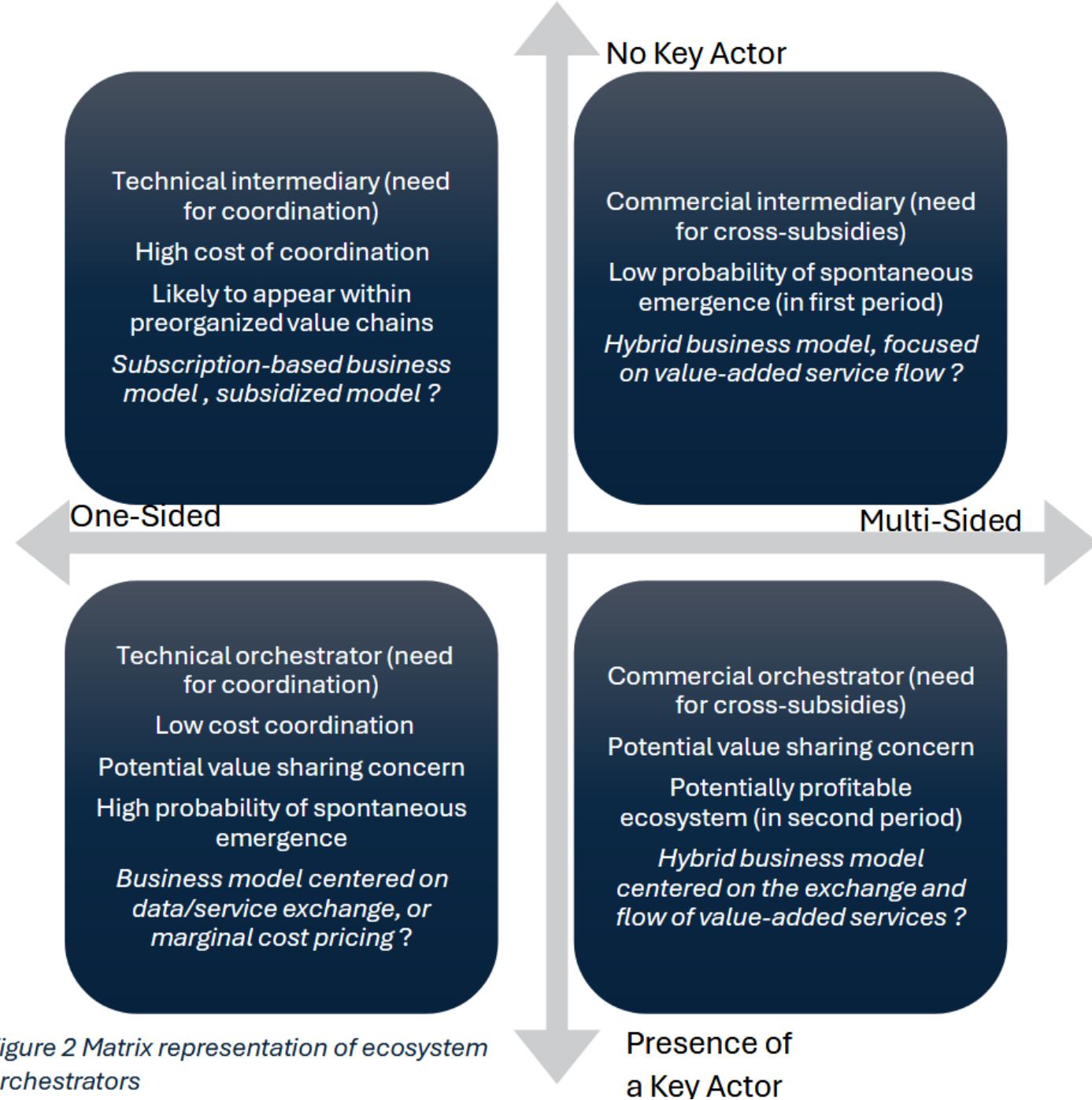
The Ecosystem Orchestrator

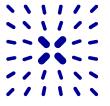
- Builds and runs the data-sharing infrastructure
- Can be a dominant firm or a neutral intermediary
- Provides tech (APIs, access control, etc.) - and often more
- **Strategic Role:**
 - Enables value creation, sets rules, ensures fairness
- **Early Challenge:**
 - Must often subsidize participation to reach scale
- **Fairness Matters:**
 - Balance value for all - or risk losing participants

Types of Data Ecosystem Orchestrators

- Orchestrators vary based on whether ecosystems are one-sided (homogeneous members) or multi-sided (diverse roles).
- In ecosystems with no dominant actor, orchestration relies on consensus and often needs public or consortium support.
- When a key player exists, they can drive adoption but must avoid perceptions of exploiting smaller partners.
- The structure - visualized as a 2x2 matrix - guides ecosystem strategy, governance complexity, and required incentives.

Ecosystem Orchestrators' Matrix





Case Study: Airbus Skywise



- Airbus used its industry position to launch Skywise, a platform offering predictive maintenance and benchmarking tools.
- Airlines were offered free access, incentivizing broad participation and increasing the platform's value.
- As data from more airlines fed the system, analytics became more accurate, creating mutual value and trust.
- Airbus benefited indirectly by strengthening customer ties and positioning itself as a service innovator.

Challenges in Building Data Ecosystems



- Trust remains the top concern - organizations are hesitant to share sensitive or competitive data without strong safeguards.
- Ensuring fair distribution of value is essential to avoid imbalances that can discourage participation.
- High upfront coordination, legal complexity, and technical integration costs can deter ecosystem formation.
- Maturity and internal readiness vary among organizations, requiring capacity building and cultural adaptation.

Understanding the Data Spaces Trajectories



- Data-sharing ecosystems evolve through three phases:
 - Emergence: setup of pilot use cases and governance
 - Diffusion: scaling participation and use cases
 - Expansion: cross-sector integration and innovation
- Gaia-X and Paris Dauphine University: Empirical research (interviews, case studies) reveals success factors and barriers.
- Critical influences on trajectories include:
 - Value chain concentration
 - Competitive pressure among participants
 - Nature and sensitivity of the shared data
 - Role of public authorities in coordination or funding
- These insights support more effective policy, governance, and sustainability strategies.

Case Example: Agdatahub Bankruptcy (2024)



- Delayed adoption due to costly integration for agricultural stakeholders
 - Failure to scale during diffusion phase, despite €7.3M in funding
 - Additional public support failed to materialize
 - Broader economic downturn accelerated insolvency
 - Acquired in 2025 by digital firm Netframe
- Highlights importance of assessing data space trajectories:
- Adoption risks
 - Transition from emergence to maturity
 - Role of public support & financial resilience

Policy Implications

- Policymakers must treat data-sharing ecosystems as digital infrastructure with collective value and spillover benefits.
- Laws like the Data Governance Act and Data Act lay foundations, but implementation support is now key.
- To prevent data monopolies, inclusivity and fair access should be built into ecosystem governance.
- Public institutions can play a catalytic role through open data, procurement standards, and regulatory clarity.

QUESTION TIME



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Thank you!

Alberto Curatolo
Chief Financial Officer

Preliminary Recommendations – *Draft*



- Encourage neutral intermediaries to foster trust and simplify legal and operational barriers.
- Provide seed funding and incentives to de-risk early ecosystem development for smaller participants.
- Support interoperable standards and reference architectures to reduce friction in data exchange.
- Monitor ecosystem evolution and adapt regulatory frameworks iteratively to support dynamic growth.

Networking Lunch

13:00 – 14:00

Programme Tech-X Plenary

14:00 - Converting Existing Data Ecosystems
into Gaia-X-Compatible Data Spaces – Things
to Consider Based on the X-Road Journey

14:15 - Sovereign AI: Fine-Tuning LLMs
Through Trusted Data Exchange

14:45 - Hackathon Winner Announcement

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ICT TECHNOLOGY CENTER

gaia-x

Exploring Spanish Projects

14:00 – 15:00

In partnership
with



- **CAREwell (Social) | Guillermo Garcilopez**, Head of Marketing & Comunication, ATENZIA
- **Inkolan (Industry) | Enrique Areizaga**, Principal Researcher, TECNALIA
- **Indatur (Tourism) | María Tomás**, R&D Project Manager, Forwardkeys
- **HELEADE (environment) | Jose Norberto Mazón**, University of Alicante Professor and CEO, InferIA
- **Navarra & Data Space (Health) | Esther Delgado**, DataHub Navarra Project Manager, Tracasa Instrumental