Gaia-X

MAGAZINE

Get familiar with the latest
Project Updates p.12

Meet our **Tech-X** and **Summit 23** Partners p.18

Read the latest **Community Updates** p.34

Learn about Upcomming **Gaia-X Events** p.48

gaia-x

"I will contribute my experience in transferring innovative solutions into market adoption and building a sustainable global ecosystem to the Gaia-X organization together with the whole Gaia-X team."

Ulrich Ahle

HIGHLIGHT

Steering Towards the Future:
Meet Ulrich Ahle, Gaia-X's New CEO

Read our main story on p. 8

TABLE OF CONTENTS

FOREWORD – WELCOME OPENING

"

Based on the growing power of artificial intelligence and digital business models, data is becoming an even more strategic asset for sustainability and competitive advantage in several business domains.

Ulrich Ahle

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Dear readers,

I am delighted to address you as the new CEO of Gaia-X and extend my warmest greetings. It is with great pleasure that I present to you the latest edition of our magazine, filled with insightful articles and captivating stories. With each edition, we strive to bring you content that is both informative and engaging, catering to your interests and needs as part of the Gaia-X community.

In this edition, you will find a wide range of topics, covering the latest industry trends, community updates, and upcoming events. As we embark on this new chapter together, I invite you to share your feedback, suggestions, and ideas. Your input is invaluable in shaping the future of Gaia-X.

I hope you thoroughly enjoy reading this latest edition of our magazine and find it both informative and engaging.

Warm regards,

Ulrich Ahle

MAIN STORY
HIGHLIGHTED

In every edition of our magazine, we are thrilled to present you a highlighted story, offering a comprehensive and captivating exploration of a significant and notable topic. Within this section, you can expect to find engaging interviews with key figures, expert analysis, and latest updates.

In this highlighted story we would like to introduce you to Ulrich Ahle, Gaia-X's New CEO. Ulrich sheds a light on the future strategy and challenges and opportunities that lay ahead.

02

MEET ULRICH AHLE, Gaia-X's NEW CEO

Communications Team, Gaia-X

On 1 November 2023, Ulrich Ahle assumed the role of Chief Executive Officer (CEO) of the Gaia-X European Association for Data and Cloud AISBL, succeeding Francesco Bonfiglio, who had successfully steered the non-profit association for nearly three years.

This transition marks the beginning of an exciting new chapter for Gaia-X, an organisation committed to advancing European data sovereignty. With Ulrich Ahle at the helm, the association is set to chart a course toward even greater achievements and push the boundaries of what's possible in the realms of data and cloud technology.

Ulrich Ahle brings to Gaia-X a wealth of experience spanning over 30 years in the IT and Digital Industry. As the CEO of the FIWARE Foundation since 2017, he played a pivotal role in advancing open-source solutions for smart cities, industry, energy, and more. Prior to this, Ahle served as the Vice President and leader of the Manufacturing and Industrie 4.0 System Integration business at Atos in Germany. Additionally, he is a founder and member of the Board of the International Data Spaces Association in Germany and has dedicated 16 years to the Board of the prostep IVIP organisation.

Speaking about his new role, Ulrich Ahle emphasised the growing importance of data in the age of artificial intelligence and digital business models: "Data is becoming an even more strategic asset for sustainability and competitive advantage in several business domains. In addition, there is an increasing demand for global and inter-organisational collaboration based on shared data. Based on European values, Gaia-X has designed a high-performance, competitive, secure, and trustworthy federated data infrastructure."

Ahle expressed his commitment to leveraging his experience to bring innovative solutions to market adoption and to build a sustainable global ecosystem around Gaia-X technology, working closely with the entire team: "I will contribute my experience in transferring innovative solutions into market adoption and build a sustainable global ecosystem around the Gaia-X technology together with the whole team."

He also emphasised the need for a stronger harmonisation of public funding at both the EU and member state levels to accelerate the market adoption of Gaia-X-based solutions: "An even stronger harmonisation of the public funding at EU and member state level will further push the market adoption of Gaia-X based solutions. This will be based on a clear vision and strategy of the deliverables the Gaia-X ecosystem provides, creating value for its members."

In addition to his role at Gaia-X, Ulrich Ahle will continue his work on the success of the Data Spaces Business Alliance, further strengthening collaboration between BDVA, FIWARE, Gaia-X, and IDSA.

Strategy

The primary short-term goal involves defining Gaia-X's core objectives more precisely, outlining what the members and the broader data community can expect from the initiative while ensuring commitment to delivering on these promises. Focusing on this will help Gaia-X better align with its partners in the domain of interoperable cloud systems, federated cloud infrastructure and interoperable data spaces. Collaboration with DSBA and FOSS communities, strengthening partnerships, and showcasing Data Spaces based on a federated Cloud infrastructure are key elements to ensure the market readiness of Gaia-X technology.

At the same time, Gaia-X aims to boost end-user adoption by increasing reference stories, garnering support from policymakers, collaborating with Cloud Service Providers, and expanding its presence in inactive European countries. The collaboration with global cloud

service providers, particularly the major players or "hyper scalers" mainly headquartered outside Europe, becomes pivotal. Even though they may not be based in Europe, these providers are crucial partners for various vertical domains.

Additionally, Gaia-X-based solutions need broader acceptance and adoption on a global scale, especially within specific industry verticals. Sectors characterised by extensive global interactions, like tourism and the manufacturing industry, notably automotive, need universally embraced data spaces. While these solutions are rooted in European values, their adaptability to global standards is essential for seamless implementation and acceptance worldwide.

Challenges and Opportunities

One significant challenge is clarifying the value of Gaia-X membership to current and prospective members. In an environment emphasising open source and open standards, it's crucial to highlight to current and potential members the perks of influencing technical development and overall strategy, as well as leveraging business opportunities stemming from Gaia-X technology—privileges exclusive to members.

Gaia-X's most significant opportunities come from advancing market-ready functionalities, exemplified by the recent successful launch of Catena-X in October. This Gaia-X-compliant

data space offers substantial business value to organisations utilising it, presenting our best chance to generate benefits for end users of Gaia-X-based solutions. Increasing market adoption of Gaia-X applications remains a long-term goal, essential for the organisation's sustainability.

Outside Gaia-X Office

Ulrich Ahle still resides in the same small village near Paderborn where he was born, he is married and has two kids.

Ahle first trained as an apprenticeship toolmaker at Hella KG and later studied Mechanical Engineering at the University of Paderborn.

Beginning his professional career as a development engineer at Nixdorf Computer, a German computer company, he then spent 20 years at Siemens, turning his focus to the topic of digitalisation. For Siemens IT Solutions & Services, Ahle supervised the introduction of SAP and Industry 4.0 technology in the manufacturing industry and, after that, was the Vice President and leader of the Manufacturing and Industry 4.0 System Integration business at Atos in Germany. From January 2017 to December 2023, Ulrich Ahle was Chief Executive Officer of the FIWARE Foundation headquartered in Berlin, Germany.

Beyond work, he pursued table tennis as a lifelong hobby. Growing up in a village where soccer and table tennis were the only options, he chose the latter. Additionally, he's been involved in local politics for over 20 years, serving in the city parliament of the community where he resides. In Etteln, he plays a role akin to a hobby mayor, striving to transform the village into Germany's digitalised host village. A digitalisation strategy, approved by the city parliament a year and a half ago, is well underway for implementation.

As Ulrich Ahle takes the helm as CEO, Gaia-X embarks on a journey of innovation, collaboration, and growth, ensuring that it remains at the forefront of the digital and data revolution in Europe and beyond. His wealth of experience, strategic vision, and commitment to shared European values position him well to lead Gaia-X into a promising future.

Gaia-X
PROJECT DEVELOPMENTS

This dedicated section about project developments aims to bring you closer to the forefront of the progress made on the Gaia-X project. It discusses the latest advancements, initiatives, and achievements both from a technical and operational perspective. Whether you are part of the Gaia-X community, an industry professional seeking information or simply an avid reader with a curiosity, this section is for you.

Technology

03

3.1.1

TRUST AND DATA ECONOMY

CTO Team, Gaia-X

Introduction

At Gaia-X we focus on building the trust needed to achieve data economy at scale. Without a robust foundation of trust, the vast potential of the data economy remains untapped, hindered by questions like "what happens to my data once it's shared?". This is a legitimate question, and behind it lies the lack of trust that arose from past privacy breaches, ethical concerns over data ownership, and possible data misuse.

So, let's explore how we can achieve the trust so desperately needed to create an open, transparent, and secure federated digital ecosystem.

Trust in the digital world

You might have heard Pierre, the Gaia-X CTO, saying "data does not flow on rainbows". Though data can be – and often is – stored in the cloud. Having a trustworthy source of data that is stored in an untrusted cloud platform does not give a great deal of confidence to a user. The same is true for having untrusted data stored in a trusted cloud platform. So, we have to take a look at what trust means for each layer in the technology stack.

This is why sometimes misconceptions like "Gaia-X is the new European Cloud" or "Gaia-X is a Data Federation" come to be. **Gaia-X is first and foremost about trust in the different layers of technology that are used for data exchange.** How do we do that?

Trust in the real world

Let's start by first looking at how trust works in the real world. Let's assume I want to buy sprinklers for my garden. I go to my favourite gardening website, and I find ten offers of sprinklers that catch my eye. Some of these offers tell me what the size of the sprinklers is using the metric system, others do it in the imperial system and others don't do it at all. It's not so easy to compare the offers, but I can do it. Some of the manufacturers are new to me, some I recognise from my neighbour's sprinklers. Some vendors have good reviews online, and some I could not find much about. At the end of my research, I can probably navigate these offers and choose my sprinklers, from a specific manufacturer, distributed by a specific vendor. Somehow, I get the information I need to make an informed opinion. In the end, I choose who I trust with my money and purchase my sprinklers.

Now let's replace the word "sprinklers" with "farming data", "garden" with "marketing research project", and "manufacturer" with "data owner", ... you get where I am going here. In the digital world, things are quite similar, with the added complexity that the "manufacturer" (data owner) cares about how I use the "sprinklers" (farming data) and would not sell it to me if I don't use it the way they intend it. In Gaia-X we call that "data usage policies", but let's not get ahead of ourselves. Let's get back to how I acquire enough trust to push that "Add to cart" button.

Transparency

The easier it is for me to understand and compare different products, the faster I make my purchase. In Gaia-X we call that "a common vocabulary", or "ontology", where words like "headquartersAddress.countryCode" and only those words can be used to describe in which country a company has its headquarters. We use it to describe the things that we consider relevant in the data economy, and it makes it simpler to write software that implements transparency.

For me to make a decision about the sprinkles, I need some information about the vendor, like where are they based (just in case I need to return the products). In Gaia-X we call that a "Legal Person". Then, I look into how many sprinklers are in a package (a.k.a. "Service Offering") and how I can connect the sprinklers to my water faucet (a.k.a. "Resource"). At every step, I expect to find some information about the different aspects of my purchase.

In Gaia-X we require everyone to provide that minimum amount of information so that a certain level of transparency is achieved. However, we encourage service providers to describe more than what is required. In the end, the more information I have, the more trust I have that I am buying the right thing. This is true both for physical and digital products.

Veracity

When I browse through the different vendors of sprinklers, how do I know they are selling the products they claim, and not some counterfeit ones? Actually, I don't know that. But if I detect an issue with their products, I can report it to the relevant authorities. The vendor is legally liable for the claims they make.

In Gaia-X we require the Legal Person to have a digital certificate issued by a Trust Anchor. That Trust Anchor (e.g., eIDAS) will only issue that digital certificate if they can validate the identity of the Legal Person. It's the digital equivalent of getting a passport, where you have to prove you truly are who you claim you are.

Signing a digital file with this certificate is the equivalent of signing a document with a pen after you show your passport to prove your identity. It makes you liable for what is said in the document you signed. This signature is what gives a consumer the way to hold the service providers accountable for their claims.

Semantic Match

Let's assume I buy my sprinklers, but instead of using them for my garden, I create an improvised fire sprinkler system. In this case, I am not using the product as intended by the manufacturer. If anything goes wrong and I incur damages to the manufacturer or vendor in the process, I may be liable for it. But the vendor or the manufacturer of the sprinklers can't really prevent me from misusing the product.

In the digital world, however, there is a way to enforce how data is used, through "data usage policies". For example, a data owner can decide

their farming data can only be used for research purposes, by specific research institutes, and only for a limited amount of time. These rules can be put in a contract that creates liability, but they cannot be completely enforced (e.g., the data owner cannot enforce the research institute to delete the data after the time of usage expired; the data owner can only hold them accountable if it turns out the data wasn't deleted). Alternatively, what exists now as clauses in a contract expressed through natural language can be translated into ODLR rules by using language models and semantic matches. The rules can be then interpreted both by humans and by computers and can be enforced by the technology before the data is shared.

So, if the transparency and veracity give more trust to the service consumer, the semantic match gives more trust to the data service provider, by giving them control over how the data is going to be used.

It all comes down to the Verifiable Credentials

At this point, the consumer has all the information they need regarding the service they are about to purchase, and who's accountable for it. The service provider also knows that their service can only be used as they intended it. How is it all pieced together though?

All the information is put in files that follow a certain format (JSON-LD or JWT), using our vocabulary (the Gaia-X Ontology). This content is called *Verifiable Credentials* (VC), and the rules around what they need to contain are specified by W3C. The reason why this type of file is used – instead of PDFs for example – is that they are

easy to understand and process both by humans and computers. When multiple VCs are in the same file, this becomes a *Verifiable Presentation* (VP).

Such a file contains the description of the service/data, the rules of using the service/data and the signature of who is accountable for it. This file is then submitted to one of the Gaia-X Clearing Houses, which runs the checks required by Gaia-X. When the verification is successful, the user will receive back a *Gaia-X Verifiable Credential*, containing links to the input and the signature of the clearing house. This signature is the proof that all the minimum required information was provided in the input.

The Gaia-X VCs can be used to identify service providers and consumers (e.g., a Legal Person VC can be used to login into a dataspace), to advertise services (e.g., a Service Offering VC can be pushed in different catalogues so that consumers can discover them), and to ensure data usage (e.g., a Data Resource VC can state how and by whom the data can be used).

Conclusions

One could argue that you don't need all this to exchange data. And that is true, one can manually verify the identity of the companies with which they're doing business, one can discover service offerings via email exchanges, and data usage can be safeguarded by contracts. However, this doesn't scale. In order to do data economy at scale, one needs a simpler, cheaper, and faster way to determine who and what to trust. And Gaia-X provides just that.

Gaia-X
PARTNERS

This partner section serves as a platform to recognize and express our gratitude to the individuals and organizations who have chosen to join forces with us. It is through their unwavering support, shared vision, and commitment to excellence that we have been able to overcome challenges, seize opportunities, and achieve remarkable milestones. It is therefore with great pleasure that we dedicate this section to showcase their stories and expertise.

Tech-X Partners

Summit 2023 Partners

04

BUILDING A VALUES-BASED TRUST FRAMEWORK TO PROTECT OUR DIGITAL IDENTITY

David Vallejo, Director of Innovation and Projects at **Arsys**

In our pockets we carry our ID card, driving licence, credit card and many other credentials that make up our physical identity. And it is exactly the same for our digital identity on the Internet. We constantly use something akin to a wallet full of data when interacting with the bank, accessing cloud storage or shopping online. This is even more pronounced when it comes to a business or a professional. As individuals in the physical world, we are more or less clear about where all this information is. But what about our digital data? Do we know what happens to the data that makes up our digital identity?

This is one of the major concerns of the European Union, which is transferring to the digital world all the governance, organisational, and technical mechanisms that reflect the principles and values on which it was founded many years ago, and which all Europeans share. These mechanisms will make it possible to consolidate a single digital market, based on principles inherent to European identity and values, which are decisive in sensitive matters such as privacy and data protection, interoperability, connectivity, portability, equity and even energy efficiency.

The dizzying technological pace in which we live cannot be exempt from these values. This is one of the main premises underlying the European Gaia-X project and many other EU initiatives that are today defining the technological ecosystem that will ensure Europe's future competitiveness, strengthening our rights and preventing, for example, our data from being used without our permission. This is being done by underlining those identifying features that distinguish us from the fundamental principles of other international markets, such as the United States and China, two countries that are world leaders in innovation, but whose values do not always coincide with those of Europe.

Gaia-X, for example, seeks to establish a trust framework that connects different cloud and edge providers with data owners, facilitates secure and reliable sharing of data, and fosters the creation of data spaces that stimulate growth, innovation, and competitiveness. It is important to think in terms of data spaces because it makes it easier to understand the enormous possibilities offered by technologies such as artificial intelligence or blockchain when it comes to exploiting data for industry, health, tourism, etc.

Continuing with the initial example, if we have contracts for electricity and gas supply, mobile lines, cloud storage space for photos and our banks etc., all providers who give or host these services (cloud providers, telephone operators, etc.) must manage them respecting the privacy and ownership of the data, ensuring that all actors (those who host the data, process it, own it, share it and use it) can interoperate and obtain maximum performance and efficiency for customers.

We have a lot of work ahead of us until the whole chain of products and services where data is hosted and exploited (that which we call the cloud-edge continuum - from big datacenters to tiny sensors that collect the data) translates into such a trust framework. This approach will allow us to develop the data economy, always guaranteeing those values that differentiate the European Union and which, at least until now, have positioned us as the citizens with the most legal guarantees on the planet.

Private initiatives cannot bypass our guarantees in order to increase profits, nor can a state put its interests above individual rights. Gaia-X and many other European initiatives, in which Arsys participates as a cloud infrastructure provider committed to data governance, are key to ensuring respect for data and the success of technologies such as autonomous vehicles, smart cities, assistive robots, and many other innovations that will shape a future we have only just begun to explore.

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David Vallejo - Director of Innovation and Projects at Arsys

As Director of Innovation and Projects at Arsys, David Vallejo defines and coordinates the company's various R&D&I initiatives aimed at facilitating the development of innovative technological solutions in the IT services market.

A telecommunications engineer with an extensive background in project management and innovation methodologies, David Vallejo joined Arsys in 2007 as systems director. Four years later, he became head of the company's projects area and, from 2021, head of innovation as well. Previously, he had developed his professional career in various positions of responsibility in different IT and telecommunications companies, such as the Swiss operator Swisscom.

Arsys

With more than 25 years in the IT services market, Arsys is a provider specialised in flexible and customised cloud infrastructure solutions (public, private or hybrid, virtual desktops, storage, backup, etc.), which assists companies in their digital transformation with the best guarantees of availability, performance, and security.

With offices in Logroño, Madrid, Barcelona, Seville, Bilbao, and Valencia, Arsys is part of the listed company IONOS Group SE (ISIN DE000A3E00M1), which has a global network of datacenters (Spain, USA, France, UK, and Germany) to provide the latest cloud technology to international projects. More information at arsys.es.

DATA DECARBONIZATION

José Antonio Chica Paez, Head of Digital Transformation for Energy, Climate and Urban Transition**, Enrique Areizaga**, High Performance Architectures: Digital Transformation Manager at **Tecnalia** and **Jesús María Santamaria Yugueros,** CTO of Tecnalia Digital

Data Carbonization is a strategic approach that addresses the environmental impact of data management and computational processes in the context of rapidly growing data production. As highlighted in the European Industrial technology roadmap for the Next-Generation cloud-Edge [1], it's projected that by 2025, the world will generate a staggering 175 zettabytes of data[2]. Data platforms for cloud and edge computing need to ensure seamless access to both data and computational capabilities. However, the current challenge lies in the insufficient resources and lack of proper management strategies to mitigate the environmental impact of cloud infrastructure.

To tackle this issue, organizations are exploring the concept of Data Decarbonization, which involves securely federating data across different industries within cross-industry decarbonization Data Spaces. This approach enables the implementation of advanced emissions reduction strategies, both within cloud-edge infrastructures and beyond. One important aspect is adhering to standards like the Product Carbon Footprint (PCF) European standardization activities to promote data interoperability across all value chains.

A trust framework, such as the one developed by Gaia-X[3], plays a vital role in fostering collaboration among stakeholders and potentially establishing an emissions data economy. Looking towards the long term, the objective is to develop a standard data model and a comprehensive set of metrics for the decarbonization of industrial data, edge computing, and cloud infrastructure. These standardized Data Spaces will make decarbonization a tangible and achievable reality.

It is important to address the Data Decarbonisation challenge as the European Commission states, as "Twin Transition: Green and Digital" [4]. There is no doubt about the exponential effect of Artificial Intelligence (AI) to achieve the goals of a green transition however, these approaches based on IT technologies have increased considerably the energy and resource consumption[5]. For that is key to consider methodologies to develop "Green Artificial Intelligence" able to lower the computational costs, the energy consumption and to reduce carbon emissions. Regarding the so called "Green AI", the EU has launched the following strategies and policies: the European Green Deal and the European data strategy with its plans for a specific 'Common Europe Green Deal Data Space'[6] and the initiative 'GreenData4All'[7].

Regarding the CPDs and IT infrastructures, Tecnalia's decarbonization strategy focuses on R&D activities aimed to provide efficient infrastructures and services to allow the sustainable execution of AI models that encourage energy consumption from Renewable Energy Sources (RES):

- First, optimizing the energy efficiency of data centres by reducing the energy consumption of the infrastructure from the design stage and, on the operation phase, through the intelligent energy management of active systems.[8]

- Secondly, increasing the mix of renewable energies from local or integrated RES in the infrastructure or from Distributed Energy Resources from the Smart Grid.

- Finally, additional measures related to the balance between the generation potential of RES and the CPD energy demand patterns can be defined to implement energy storage options enhancing overall energy efficiency.

Tecnalia's strategy also entails the development of Thermal Energy Systems (TES) for the production, generation, storage, transmission or distribution of heat, hot water and/or cooling from the CPDs thermal energy sources aimed to increase energy efficiency, reduce greenhouse gas emissions, and enhance the overall performance of the infrastructure.

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7. [https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13170-GreenData4All-updated-rules-on-geospatial-environmental-data-and-access-to-environmental-information_en](#)

8. On the other hand, the energy efficiency of data centres has steadily improved over the last decade. This results mainly from the substitution of small data centres by 'hyperscale' data centres, which have better energy efficiency. Such large-scale data centres can be optimised for processor efficiency and idle power consumption reduction (Masanet, et al, 2020). Between 2016 and 2019, the global investment in hyperscale data centres more than doubled from €13 billion to over €29 billion in the fourth quarter of 2019. This trend is not expected to slow down anytime soon, with Amazon, Google, Microsoft, Facebook, and Apple spending the most on hyperscale
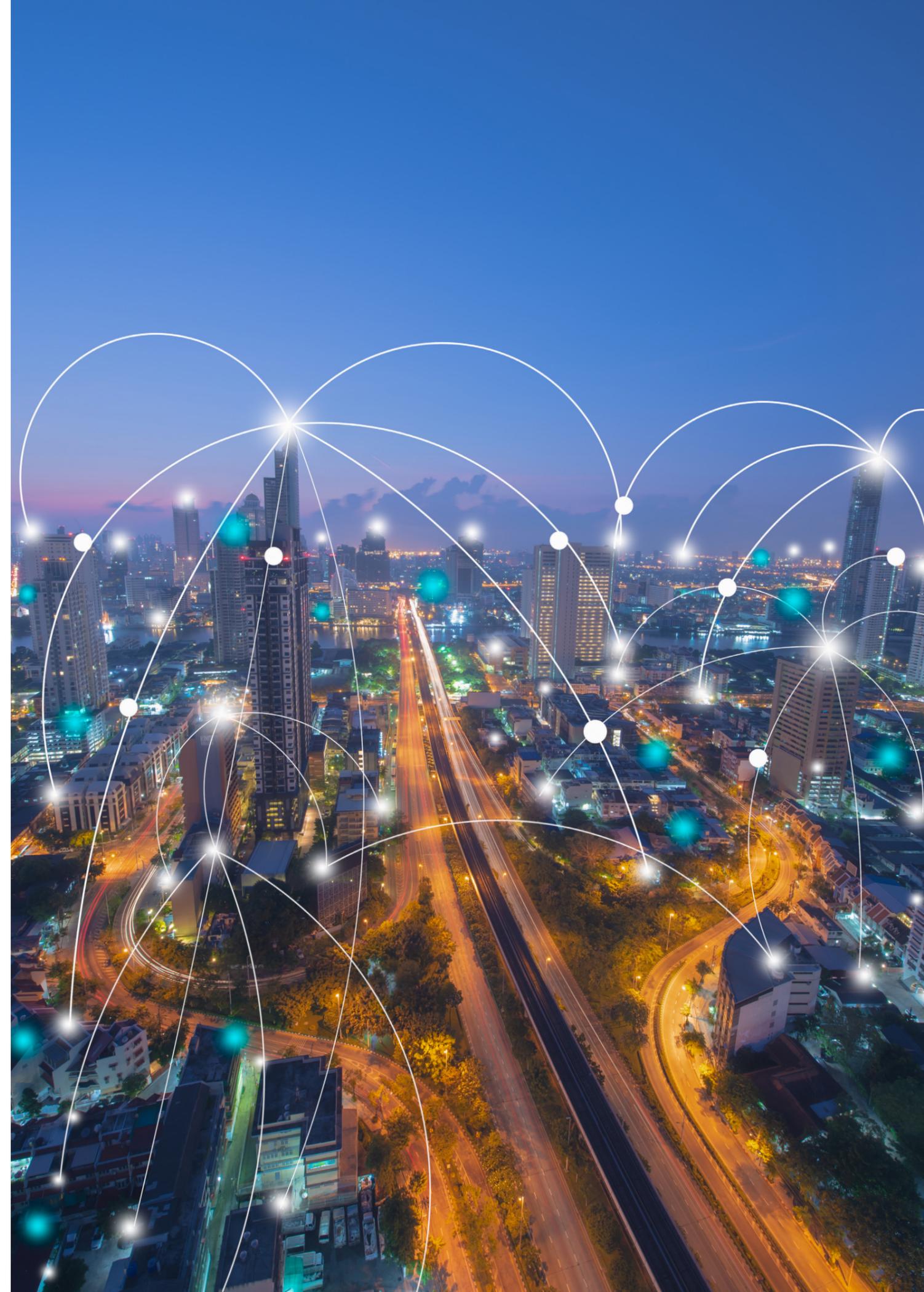
BAIDATA'S VOUCHER PROGRAM: ACCELERATING THE ADOPTION OF DATA SHARING ECONOMY

Oscar Lazaro, General Secretary, and **Jesús Alonso**, Director of Technical Secretariat at **BAIDATA**

This program opens the door for Spanish and Portuguese organizations, especially SMEs to develop, certify, experiment and operate with data spaces.

Headquartered in Bilbao (Spain), BAIDATA is the association for the development of the data economy in Spain and Portugal created in May 2022. Currently, with almost 50 organizations and clusters associated, BAIDATA has consolidated itself as a reference in the acceleration of companies and their business models based on data, providing guidance and service on four main axes: data-based business and technological innovation, talent development and training, knowledge sharing and ecosystem development and support.

In the European Data Strategy, published in February 2020 the European Commission initially announced the creation of several sectoral data spaces to support the Common Data Market and to boost the competitiveness of the European Data Economy. Last October two of these European sectoral initiatives were launched: the TEMS project, for the audiovisual sector and the SM4RTENANCE project for the manufacturing data space. BAIDATA will have a significant role in growing these ecosystems in the Iberian Peninsula.

In addition to these large-scale projects, there is also a need for initiatives to reach SMEs and help them to embrace the Data Economy through data spaces, adapting the current technology to their specific needs and requirements and generating and growing regional data ecosystems. This is where BAIDATA's voucher program comes in, as an element for the implementation and alignment of trust and data sovereignty standards such as Gaia-X and IDSA for secure and reliable data transactions.

BAIDATA voucher program has a twofold objective: accelerate the development and certification of data spaces components and services that are adapted to the specific needs of the regional ecosystem, on one hand, and, on the other, enable SMEs and other organisations to get in touch with the data-spaces technology through a proof-of-concept project to test the feasibility of a new data-based idea or approach, that could lead to new data-centric business models and services.

Since its launch in January 2023, BAIDATA's voucher program has been well-received. In the first round, a significant number of applications were received, of which 10 projects were selected to receive a voucher. The selected projects are diverse and cover a wide range of sectors, from industry to transportation or skills

In conclusion, this program is aligned with the European data strategy and the European Commission's initiatives to support data spaces. BAIDATA's voucher program is helping to make Europe a leader in the data-driven economy by enabling SMEs to benefit from the power of data sharing, while putting in place standards that enable efficient and effective operation of data spaces.

SUMMIT 2023 PARTNERS
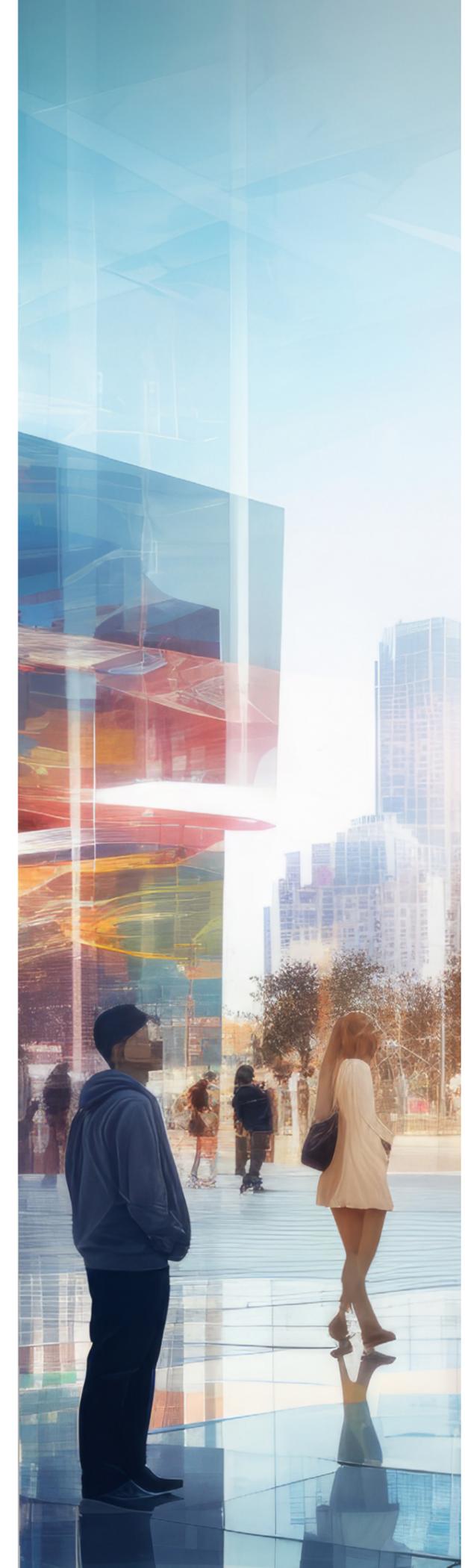
Dawex

CATALYZING THE DATA ECONOMY THROUGH DE FACTO STANDARDS AND DEMONSTRATIONS

Frederic Bellaiche, PhD and Vice President Technology & Research at **Dawex**

The Gaia-X Summit 2023 Edition proved to be an exceptional and landmark event, steering the course for a future defined by data sovereignty and technological innovation. The Summit reaffirmed the Gaia-X initiative's commitment to promoting data trustworthiness, emphasizing the need for all participants of data ecosystems to keep control over their data.

The event underscored the significance of collaboration in building a thriving data ecosystem. From establishing a robust framework, based on standards like the W3C, to ensuring interoperability to break down silos & enhance efficiency, this year's edition is laying the foundation for a new era for data exchange, relying on industrial & battle-proven de facto standards, ultimately driving widespread adoption of Gaia-X principles.

Focus was made on Gaia-X Digital Clearing Houses (GXDCH) that are pivotal components designed to facilitate secure and trusted data transactions, as they are the keys to defining what means to be Gaia-X compliance for participants, services, data products. Additionally, playing a crucial role in the seamless interoperability across platforms and industries, was the significant progress in the development of Federated Catalogs, within the Gaia-X framework, through Credential Event Services (CES) that will be part of the "Loire" release of the GXDCH.

Just as Catena-X announced the launch of its data space, Agdatahub, the data intermediation platform for agriculture and agrifood sectors operated since 2019, demonstrated the practical application of Gaia-X principles with the integration of GXDCH and Federated Catalogs. Powered by Dawex technology and Orange Business. Agdatahub exhibited how these data products can be shared with other data space catalogues such as Aster-X, built by the GXFS-FR initiative (IMT/Teralab, Atos, OVH, Dawex, Docaposte, 3DS Outscale). This demonstration showcased how farmers can securely share and access agricultural data products, exemplifying the transformative potential of Gaia-X in optimizing processes & fostering innovation within specific industries.

The Gaia-X Summit 2023 Edition marked a major turning point with the acknowledgement that Gaia-X is evolving into the de facto standard for data ecosystems. Technical strides in the Gaia-X Digital Clearing House and Federated Catalogs were demonstrated, along with tangible impacts through real-world data spaces. Trusted data spaces will be the infrastructure needed for data circulation so that advances in AI - particularly in the industrial field - integrate necessary traceability for the accountability of the outputs of AI algorithms. Industry leaders are now actively adopting Gaia-X principles, particularly at a time when new regulations such as the Data Governance Act, the Data Act and the future AI Act in Europe are requiring the standardization of data-space components to ensure trust and compliance.

ARUBA, THE EUROPEAN CLOUD AND TRUST SERVICES PROVIDER, ANNOUNCES THE DIGITAL CLEARING HOUSE SOLUTION TO ACCESS Gaia-X ECOSYSTEM

Enrico La Vela, Product Manager at **Aruba**

Aruba continues its commitment to the project created to establish a European standard for data management and access, based on security and respect for privacy, by presenting an end-to-end solution for certified onboarding in the Gaia-X ecosystem.

The Aruba Digital Clearing House Solution, presented in beta version, acts as the gateway to the Gaia-X ecosystem. This is thanks to the provision of access credentials through certificates and tools that comply with the European eIDAS standard and therefore the certification of services that will be part of the federated catalogue. The new solution has an extremely simplified customer onboarding user experience, with an interface that can be used to obtain and manage the verified credentials (Gaia-X Verifiable Credentials, VC) to certify one's own services. The solution also integrates and amplifies the components made available by Gaia-X by proposing additional functions, such as Verifiable Credentials as a Service, Catalogue as a Service, Data Space as a Service, Wallet as a Service and others. The aim is to offer a fully supported and managed onboarding process.

The solution takes care of all the complexities involved in managing the submission of Verifiable Credentials through an extremely simple and versatile process. It is an end-to-end solution offering advanced services that support every customer interested in joining Gaia-X. From publishing its own certified services in Gaia-X catalogues, to the consultation of services offered by other operators, and the creation and management of Gaia-X compliant services and data products, customers will have a single provider as a contact point through which it can also acquire the necessary certificates (eIDAS or SSL EV) to sign the VCs and complete the entire process. As additional features, Aruba's Digital Clearing House Solution offers components that include services interfaced with APIs and a tool which, through a wizard, makes further services available.

Moreover, among the LightHouse projects, Aruba plays an active role in the Structura-X thanks to Liqo, an open-source solution developed by ArubaKube (https://www.arubakube.cloud/) the new centre of excellence for research, development, and innovation in the cloud native sphere and spin-off of the Polytechnic University of Turin. The solution makes it possible to build and orchestrate multi-cloud services and thus create, in a transparent and dynamic manner, a virtual infrastructure capable of aggregating resources and services belonging to different infrastructures or cloud service providers. https://www.aruba.it/gxdch.aspx

COMMUNITY

The Gaia-X Community plays an instrumental role in shaping our organization. This section celebrates and highlights the invaluable contributions made by Gaia-X Hubs, Lighthouses and Members and showcases their stories, expertise, and the remarkable impact they have had on our journey. We will explore their innovative solutions, industry insights, and the collaborative projects that have propelled us forward. As we embark on this exciting journey of showcasing our community, we extend our heartfelt appreciation to every one of them. Their dedication, expertise, and unwavering belief in our shared goals have been instrumental in propelling us towards greater heights.

Members Stories

Hub Highlights

Lighthouse Updates

05

Orange Business

A POSITIVE IMPACT ON THE DATA ECONOMY IN A TRUSTED DIGITAL ENVIRONMENT

Nassima Auvray, Chief Trust Officer (CTrO) at **Orange Business**

At a time when businesses are accelerating their digitalisation, trust is key. As a major European network and digital services integrator, Orange's role is to ensure the protection of customers' data by identifying and controlling potential risks across the digital value chain. To this end, Orange is developing trustworthy digital services and has set up an entity dedicated to digital trust. Gaia-X, by enabling data collection and sharing based on European values of transparency, openness, privacy, and security is fully in line with our mission. This is why Orange was one of the 22 co-founders of the Gaia-X initiative and is currently a proud member of its Board of Directors.

The concept of digital trust, supported by the Gaia-X initiative and in line with our purpose - "As a trusted partner, Orange gives everyone the keys to a responsible digital world"-, translates into the autonomy and self-determination that users need to operate their technology choices. This is particularly achieved through Dataspaces in which Orange Business is heavily involved, such as Agdatahub lighthouse project, for

which we have developed in partnership with IN Group, Agritrust, a decentralised digital identity and consent system. The service is based on blockchain infrastructure and is hosted in the Orange Business public cloud, ensuring the secure and controlled use of data before it is exchanged. Thanks to Agritrust, farmers can link their identity (as a private identity) to that of their farm (as a legal entity). It guarantees the reliability and security of data exchanges related to their farming practices, environmental information, and technical data. Other sectoral use cases are currently being addressed, and we're convinced that developing cooperation around dataspaces is a unique opportunity to make a positive impact on the data economy in a trusted digital environment across Europe.

HUB HIGHLIGHTS

Hub Austria

DIGITAL SOVEREIGNTY LAB AT THE EUROPEAN FORUM ALPBACH

Helmut Leopold, Chair of the Gaia-X Hub Austria

The Gaia-X Hub Austria together with AIT Austrian Institute of Technology has organized a LAB over three days from 25 to 27 August 2023, dedicated to the crucial topic "Digital Sovereignty" as part of the renowned "European Forum Alpbach." An interdisciplinary group of experts, representing different scientific disciplines including information technology, data science, economics, jurisprudence and the humanities, were brought together to discuss one of the biggest civilizational challenges of our time. Among others, representatives of the Austrian Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology, the Austrian Ministry for European and International Affairs, the European Parliament, OSCE, OECD, UNESCO, GLOBSEC and of London School of Economics have taken part in the LAB discourse in Alpbach. Under the general topic of "digital sovereignty" they addressed specific issues like what data sovereignty is all about, what this means for society, which imperatives could be imagined as European and how our societies and economic sectors could adapt their infrastructures with emerging innovative concepts like the Digital Commons, data spaces and Gaia-X.

It is not only data; it is the protection of people

Given current digital developments and their impact on society, sovereignty is no longer restricted to territorial integrity but must consider the information sphere and the ownership and control of data, as well.

A fundamentally changed media landscape with oligarchic platforms dominating the public discourse and influencing which information is made available, the monetarization of news consumers, the commodification of personal data as tradeable goods - surveillance capitalism - and biometric mass profiling as a form of political abuse to influence elections in democratic states from outside all have given "data sovereignty" an important role in the defense of our values.

Even without a uniform definition of "data sovereignty" encompassing the different stakeholder perspectives in sight, we are urged to balance the existing power structures of the new data sphere. We consequently need to moderate and curate Social Media platforms and simultaneously enhance the digital literacy of citizens, especially of European youth.

And finally, "data sovereignty" means the rule of law. Only when state authority is enforced in the digital space in the same way as in the analogue world, when intentionally placed disinformation, hate speech and conspiracy theories and carried out cybercrime are prosecuted by law, but freedom of expression on the Internet is guaranteed at the same time, can efficient data sovereignty in our sense be achieved.

However, this does not contradict the fact that we can release some of our data in a self-determined manner - data donations - to participate in innovation processes.

Responsible Usage of Technologies and human dignity by design

The predominant topic of Artificial Intelligence clearly shows what responsibility we have in current technological developments. An effective AI strategy must equally address data provision, data use, data literacy, data culture and intellectual property. In the interest of explainability, AI needs clear documentation and trackable goals as well as ultimate responsibility from human actors.

Europe represents the bold vision of "Human dignity by design" because we know that the loss of data sovereignty and self-determination almost inevitably leads to the loss of democracy and the rule of law.

From Data Regulations to Data Spaces and Gaia-X

The expert discussion clearly highlighted the necessity of an interdisciplinary discourse and a cross-sectoral governance approach for data access and data use.

Gaia-X is strongly engaged in the development of technical open-source solutions as well as the establishment of open specifications in order to enable an open and standardized system architecture development for federated data-sharing platforms that will form effective "Data Spaces" in different market segments. Data sharing and data processing within and across data spaces are based on federated IT architectures which support by design seamless, sovereign, and trustworthy data exchange to enable new data-driven business cases.

Europe must define its own vision and approach to shape the future data-driven ecosystems based on its strengths, reducing dependencies where necessary and strengthening its resilience. Gaia-X enables the creation of new data-driven markets based on core European values such as fair, transparent, and sovereign data exchange. This will transform businesses as fundamentally as the Industrial Revolution and ensure a free, democratic society.

Hub Slovenia

REMARKABLE Gaia-X ROADSHOW NETWORKING EVENT IN LJUBLJANA, SLOVENIA

Gaia-X HUB ECOSYSTEM IN SLOVENIA RECEIVES A BOOST WITH WELL-ORGANIZED EVENT

Tomaž Čebela and **Flavio Fuart,** Hub coordinators for Gaia-X Hub Slovenia

On 7 September 2023 at the Gaia-X Roadshow, there was something to hear at the Chamber of Commerce and Industry of Slovenia (CCIS) HQ's in Ljubljana - a vision of the EU's new data economy. Participants from the Slovenian business community, university members, and government representatives, gathered to receive an inspiring day filled with knowledge about the world of data spaces in the field of manufacturing that is emerging in the EU.

Director of the ICT Association of Slovenia, Mr. Nenad Šutanovac, emphasised in its opening remarks that: *"Our mission is to foster innovation and promote collaboration within our vibrant tech community, and hosting events like this aligns perfectly with that goal."* After the opening remarks, Gaia-X CEO Mr. Francesco Bonfiglio, shared with gathered his invaluable insights into the core principles and global significance of the Gaia-X system, digital market needs and the future developments in the field of data economy. Then public heard from Mr Gernot Baumgartner, who presented the EUProGiant project, a shining example of European collaborative efforts in the field of manufacturing.

In the second part of the event, there was a panel discussion focusing on the "Gaia-X State of Play and Slovenian Eco-System," which featured heated discussion between panellists. Moderator of the panel Mr. Flavio Fuart, coordinator of Gaia-X hub Slovenia, opened the discussion with "Are we doing anything wrong?" after a quick survey of the public showed that only a few understand the data space concept. Mr Bonfiglio replied that: *"We are not doing anything wrong. We are doing something big. Technology will become a tool to provide trust."* Technical aspects of data spaces that support the digitalisation of the value chain were then discussed with Mr Pierre Gronlier, Gaia-X CTO, who explained that to assess what you need to do, you need to have at least: a certain amount of information, verification of the information that is valid/legitimate and the history of that information. On the moderators' question, what is the added value of using the Gaia-X framework answered Mr. Alexander Kinzer, research assistant at the TU Wien, who stated that every company decides by themselves, what is the added value of a certain framework for them. With this new framework, you can fix problems in production or in the supply chain and optimise your processes with just a simple subscription to a new service that fits your business environment. This approach can bring SME's into this new data spaces framework. Boštjan Gomilšek, director of the Enterprise Software Solutions at the Slovenian SME Result d.o.o. described two different projects that they are currently working on implementing data spaces and the Gaia-X framework offers important principles to guarantee trust.

Attendee Gregor Burger, a researcher at the University of Ljubljana, Faculty of Electrical Engineering, told us that the Gaia-X Roadshow event was an excellent opportunity to see new developments and meet the stakeholders working in the European digital ecosystem, from business to academia. It has become once again apparent that due to its complexity, the need for early adoption and mastery of the domain competencies is vital. As one of the most important summaries of the event, he would point out that the Gaia-X AISBL organisation offers federation services at the level of mature solutions for the market and not only for research/testing purposes.

Frontiers in the field of data spaces in Slovenia are moving with the hard work of the Gaia-X Hub Slovenia coordinated by the ICT Association of Slovenia at the Chamber of Commerce and Industry of Slovenia. Together with other European data solution frameworks, they are building a bridge between innovation, knowledge, and opportunities for Slovenian businesses.

You can find more information and activities about the Slovenian Gaia-X Hub HERE >>

https://gaia-x.gzs.si/

5.3.1 — Agdatahub

AGDATAHUB, READY FOR TOMORROW WITH Gaia-X

Christophe Gervais, Chief Technical Officer at **Agdatahub**

Arable crops, market gardening, livestock farming... are major sources of data. Yet farmers and other economic, academic, and institutional actors still make little use of this data to create value, steer public policies or prepare for the agriculture of the future. That's why Agdatahub was created to make this space for exchanging agricultural and agri-food data a reality, within a respectful framework that creates value for all. Today, European regulations tend to provide a more precise and more secure framework through the Data Act and more recently the Data Governance Act (DGA) in line with our vision.

Compliance with Gaia-X specifications, an essential prerequisite for ensuring Agdatahub's interoperability with the future agriculture data space

Agdatahub quickly became interested in Gaia-X. In fact, the technical specifications supported by Gaia-X are the most likely to develop the trust between all the partners involved: from the data 'suppliers' (farmers) to the last beneficiaries, the European consumers-citizens, via users of all types: start-ups, major groups, public authorities, research institutes, etc. Without the creation of a value chain linked by the trust of all in each other, no use will develop in the long term.

The technology partners working alongside us have always been aware of these challenges and of the contribution made by Gaia-X. In fact, the specifications supported by Gaia-X (ratified last October) address our data exchange issues, notably by standardizing the data transaction model.

Combine agricultural data with other data sources and platforms

Today, Agdatahub operates a data intermediation platform that makes it possible to publish data offers, search a catalogue, subscribe to a data product, and negotiate the purchase of a data product, all in a completely secure environment. [The issue of] Sharing this data on a larger scale quickly arose. If the platform designed by Agdatahub enables data providers (farmers for example) to provide data products, how can this series of data products be distributed more widely, within other data spaces? The interoperability of data spaces as well as digital identities represents a huge potential. Combining agricultural data with other data sources makes it possible to design a very large number of use cases.

Here too, the technical specifications supported by Gaia-X provide some answers and are working towards interoperability between platforms dedicated to the agricultural sector on a European scale, and even with data spaces in other sectors such as tourism or the Green Deal.

Further trust strengthening

Beyond Gaia-X specifications, Agdatahub has worked on [the key concept of] trust by developing functionalities around digital identity for a legal or natural person. Users can create a digital identity and manage permissions on the data they wish to share as provided in the DGA. For instance, for farmers, it is a way to regain control of their data, add value to it and improve their income.

Agdatahub currently has more than 2,000 users, mainly software publishers, designers of decision support solutions for farmers, companies which provide applications, research institutes, etc.

Our objective is now to be labelled as a data intermediary within the meaning of the DGA and to continue our work complying with the principles of Gaia-X in 2024 to develop our offer on European markets while continuing to place trust at the heart of data enhancement.
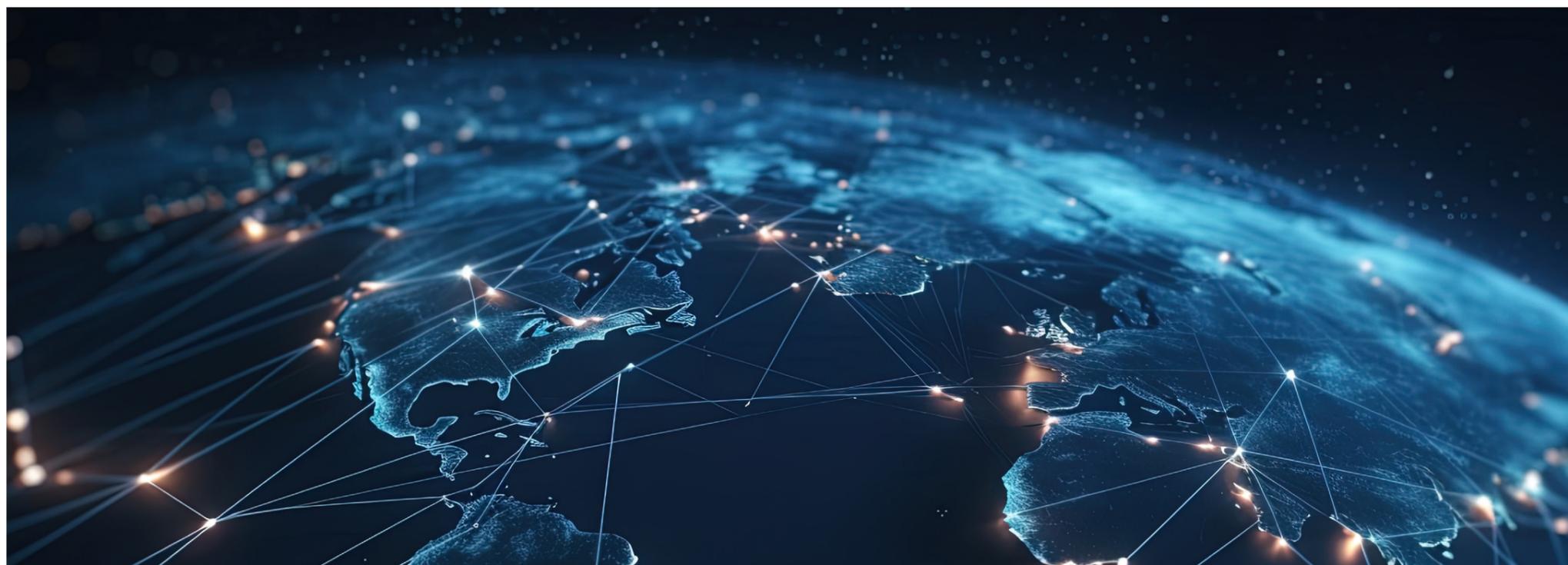
JOINING FORCES – DRIVING Gaia-X FOR THE MANUFACTURING INDUSTRY

Viktor Berchtenbreiter, TU Darmstadt

What started in 2021 as a single Gaia-X project for the manufacturing industry progressed rapidly in 2022, becoming a prominent lighthouse project. As of 2023, it has matured into a pioneering ecosystem encompassing five projects with a strong pan-European dimension.

Imagine if you could exchange and use data from production securely and sovereignly. That's exactly the vision of the pioneering European manufacturing data and service ecosystem, which has evolved around a single Austrian-German project for the manufacturing sector: EuProGigant.

Advocating for a European production giganet to compete with global players from 2021, it became a Gaia-X lighthouse project in 2022. Four further projects have followed suit and tackled related challenges.

Leveraging Europe

The result is a pioneering data and service ecosystem that comprises AMIDS, DIONE-X, ESCOM, EuProGigant and Flex4Res. Meanwhile, this ecosystem has taken on truly European

dimensions with around 100 project partners from six European countries, thereof 80% industry.

All projects are united by the same vision: working towards a resilient, data-driven, and sustainable data and service ecosystem that makes the European manufacturing industry resilient and has the potential to even bring back manufacturers to Europe.

Smart and secure

The goal of the ecosystem is to demonstrate how data can support value creation in manufacturing while describing the benefits of data-driven business models. Close collaboration with industry partners is key to making the project results relevant.

15 use cases address pressing challenges universal to the industry, such as reducing the CO2 footprint to achieve net zero or reconfiguring supply chains for increased resilience.
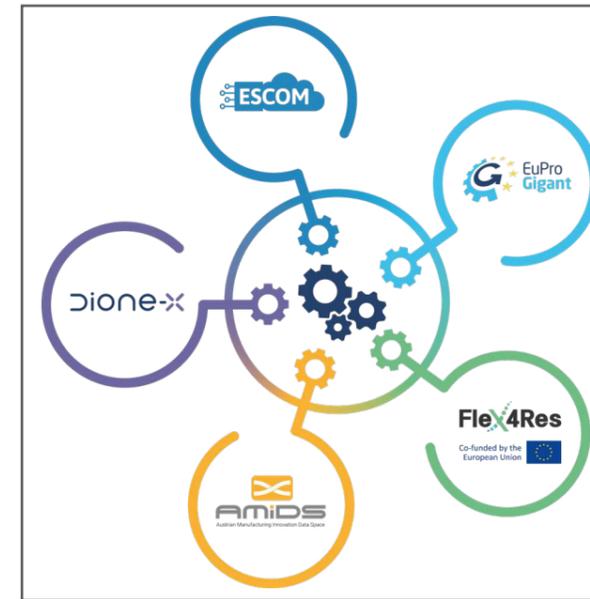
Gaia-X principles

All use cases require data to be shared along the supply and value chains. By implementing Gaia-X principles, the ecosystem enables production companies to make the best use of their data and share them with others via their data and service ecosystem – securely and sovereignly.

Founding member of Pontus-X – First step towards market

In 2022, EuProGigant joined as a founding member together with other Gaia-X members of the Pontus-X network, a decentralised and federated approach to digital service management and orchestration. The principle of this decentralised ecosystem is "owned by no one, open to everyone". Together, the EuProGigant ecosystem and the Pontus-X network give companies in the manufacturing domain technical control of their data while enabling them to monetise it in a decentralised manner.

Facts

- 5 projects from 6 participating European nations
- 100 project partners, thereof 80% industry
- > €30 million total grant from national and European sources

EuProGigant – Magazine for sovereign data usage

Would you like to learn more about the Gaia-X lighthouse project EuProGigant and the project ecosystem on data spaces and services? Read the EuProGigant magazine here:

MOBILITY DATA SPACE LEADS TO MORE SAFETY IN TRAFFIC AND MORE RELIABLE TRANSPORT

Julius Meyer, Community Manager of the **Mobility Data Space**

The Mobility Data Space (MDS) – one of Gaia-X' lighthouse projects – is a secure data marketplace where partners can exchange data on their own terms in order to enable innovative mobility concepts (see also Gaia-X magazine June 2022, page 136). Since its inception in 2022, the MDS has spawned some interesting use cases that have a positive impact on transportation and traffic. Two of them are introduced in this article.

Data for more road safety

In the use case "Data for Road Safety", an international consortium of more than 20 actors from the fields of public administration, automotive industry, sensor technology, mapping, and telecommunications has joined forces. Their approach is to share data to inform each other in real-time about dangerous spots, accidents, etc. so that road users can reach their destinations as safely as possible.

For data transfer, the powerful infrastructure of the Mobility Data Space has already been tested, which makes it possible to share data securely and easily with any number of selected partners. Telematics data on danger spots were transferred from an automobile manufacturer to a telecommunications company. This pilot test was successfully completed. The next step is to roll out the use case to the network of partners involved in the project, allowing them to distribute those data with collaboration partners efficiently.
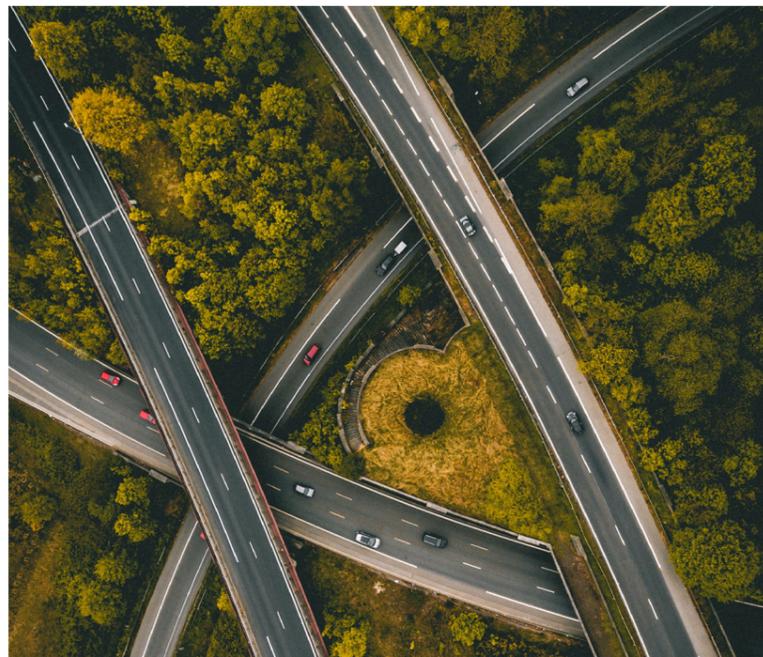
Source: egnerphotography.co.uk

Multimodal resilience in the Rhine corridor

In recent years, the occurrence of low water in the Rhine has led to such restrictions on inland navigation that some supply chains, especially for bulk goods, have been at risk of running out of stock. Currently, there is a serious lack of data sharing on all the factors that predict the water level in the Rhine, from Basel to Rotterdam, such as:

- precipitation that ends up in the Rhine and all rivers that feed the Rhine.

- flows and water levels (dynamic, time series) along the Rhine and all rivers that feed the Rhine.

The project "Multimodal Resilience in Rhine Corridor" has three objectives, which are to solve these problems:

1. Improvement in data sharing and prediction models to get early predictions would be the first goal.

2. Collection of information which would lead to prediction models of shortages of inland shipping for critical cargo streams. This information includes the carrying capacity of the actual inland shipping fleet, dependent on water levels, as well as the expected demand of carrying capacity, based on supply chains and locations in the hinterland.

3. Development of mitigation strategies on various organisational levels which take into account the visibility of the actual usage patterns per modality and institutional arrangements for collecting and combining this commercially sensitive data.

Political and private stakeholders from the Netherlands and Germany have been gathered to work together in this use case, using and contributing valuable data via the MDS that helps to cope better with the described logistical issues.
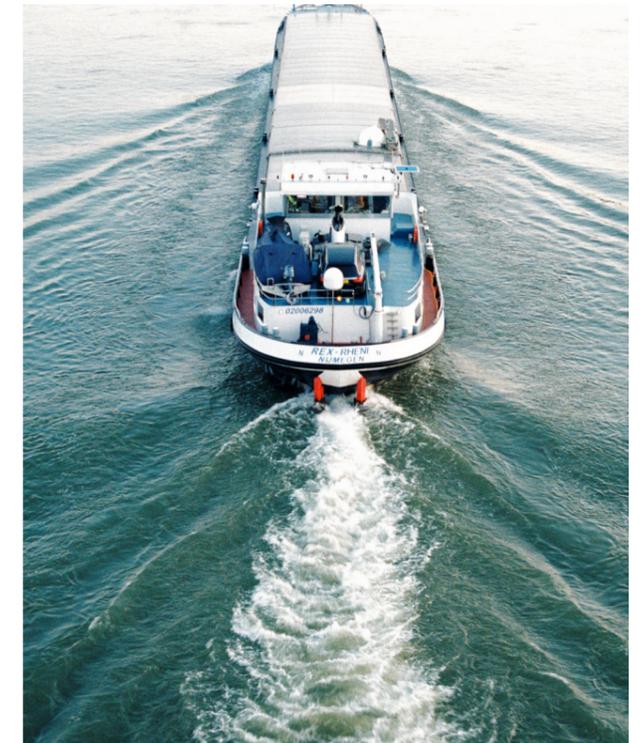
Source: Chris Weiher-Unsplash

Source: william william

06

EVENTS

In this era of rapid digital transformation, Gaia-X has emerged as a driving force, aiming to shape the future of data infrastructure and cloud services in Europe and beyond. With our focus on data sovereignty, interoperability, and trustworthiness, Gaia-X has garnered attention from industry leaders, policymakers, and technology enthusiasts alike. Through this dedicated section, we aim to provide you with comprehensive insights into Gaia-X events, keeping you informed about the latest developments, key announcements, and upcoming events.

06

PAST EVENTS

Gaia-X Summit 2023

13 November 2023, Brussels, Belgium: The Gaia-X 4th Summit, Gaia-Xcelerate, took place under the auspices of the Spanish Presidency of the Council of the European Union and in partnership with Gaia-X Hub Spain, on 9 and 10 November in Alicante, Spain. It witnessed an unmatched gathering of visionaries, industry leaders, and pioneers, providing groundbreaking insights into the evolution of the Gaia-X initiative and its significant contributions to the trusted digital ecosystems.

Catherine Jestin, Gaia-X Board of Directors Chairwoman and Executive Vice President Digital and Information Management, Airbus, and Ulrich Ahle, Gaia-X, CEO, shared the incredible Gaia-X Journey from Inception to Market Adoption, emphasising the initiative's vision to enable trusted decentralised digital ecosystems. The mission is to establish Gaia-X as the de facto standard by developing policies, rules, specifications, and a verification framework aligned with EU values.

2 Days
36 Speakers
400 Participants
From **26 Countries**
in **Europe, Asia & North America**

MAIN FOCUS

- Strategic plan to drive innovation, collaboration, and globalisation
- Gaia-X Digital Clearing House: Your Gateway to Compliance

2023 **2024** **2025**

	QUARTER 1		QUARTER 2		QUARTER 3		QUARTER 4	

SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JULA	UG	SEP	OCT	NOV	DEC

EVENTS
◆ Internal ◆ External

Summit 2023
9-10 NOV
Alicante
Spain

European Parliament Event
Week of 22 JAN
Brussels
Belgium

Market-X & Data Spaces Symposium (DSS)
12-14 MAR
Frankfurt
Germany

Hannover Messe
22-26 APR
Hannover
Germany

Tech-X
Date & Location
TBC

Cloud Expo Europe
22-23 MAY
Frankfurt
Germany

Summit 2024
Date & Location
TBC

UPCOMING EVENTS

Tech-X Conference and Hackathon

May 2024

Connect with people, hack on real-life end-to-end scenarios, actively contribute to addressing current technological challenges, and acquire practical knowledge in utilising existing technologies at the Tech-X Conference & Hackathon!

Cloud Expo Europe

22-23 May 2024, Frankfurt, Germany

Join the Gaia-X Arena and Theater for the latest updates in the Gaia-X Ecosystem! Gain insights, explore advancements, and connect with experts shaping the future of cloud technology.

https://www.cloudexpoeurope.de/

European Parliament Reception

23 January 2024, Brussels, Belgium

Hosted by MEP Miapetra Kumpula-Natri of Finland, this event will highlight Gaia-X's pivotal role in shaping Europe's data-sharing future while ensuring compliance with EU data privacy laws. Emphasising a long-term vision, the discourse aligns with key EU projects like SIMPL and DSSC, fostering connections among policymakers, stakeholders, and the public for future collaborations in the evolving European data governance landscape.

Market-X Conference & Expo

12 March 2024, Frankfurt, Germany

Explore market-ready use cases and advanced technology solutions at the Market-X Conference & Expo on 12 March 2024, part of the Data Spaces Symposium (DSS), taking place from 12-14 March 2024. The event, centred around the Expo Area, offers a dynamic showcase of innovations designed for existing and future data spaces. Don't miss this opportunity to witness cutting-edge applications shaping the future of data.

Gaia-X Summit 2024

Q1 2024

Get ready for the much-anticipated 5th edition of the Gaia-X Summit in 2024!

Stay tuned for exciting announcements and updates on this transformative summit!

Data Spaces Symposium (DSS)

12-14 March 2024, Frankfurt, Germany

The world's largest event on data spaces is coming back for a second edition - gathering industry leaders, experts, and policymakers to showcase endless market-ready use cases and explore new frontiers in the Data Spaces journey!

DSS will showcase the pivotal work done by the Data Spaces Support Centre in providing a solid blueprint for common European data spaces, acting as a cornerstone of the European Data Strategy.

https://dssc.eu/

Hannover Messe

22 - 26 April 2024, Hannover, Germany

Visit Gaia-X at the world's leading industrial trade fair at the Industrie 4.0. booth, in Hall 8!

Address all your questions at our stand and learn more about our Market Adoption Strategy and the Gaia-X Digital Clearing House.

https://www.hannovermesse.de/en/hannover-messe-2024/

gaia-x

For more information on
Gaia-X events,
visit our website:

www. gaia-x.eu/events

Stay tuned.

Gaia-X is up and running.

Gaia-X ^MAGAZINE

gaia-x