Gaia-X MAGAZINE

gaia-X

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HIGHLIGHT

Gaia-X Goes Global: Bridging Europe and Asia Through Data Sovereignty

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FOREWORD – WELCOME

Dear readers,

Welcome to the fifth edition of Gaia-X Magazine. As we mark another year of innovation and progress, this edition celebrates the milestones for the Gaia-X's vision of data sovereignty, security, and interoperability to the global stage. The importance of these principles has never been more apparent in our interconnected world, and Gaia-X is at the forefront of shaping a resilient and collaborative digital ecosystem.

This issue highlights the journey of global expansion. From the deployment of the first Gaia-X Digital Clearing House testbed in Japan to the establishment of new hubs in Denmark, Norway, and Switzerland, we are formalizing strong international partnerships which showcase the adaptability of Gaia-X frameworks across regions. These milestones reflect our commitment to advancing global collaboration while preserving the unique values of transparency and trust that define Gaia-X.

We also put the spotlight on the transformative power of data spaces and the role they play in enabling innovation across sectors. With contributions from our growing network of partners, advocates, and experts, this magazine dwelves into the practical applications and future potential of Gaia-X standards, ensuring they are accessible and impactful for businesses of all sizes, particularly SMEs.

I invite you to explore the insights, updates, and events featured in this edition, as they encapsulate the vibrant community that powers Gaia-X. Together, we are not just responding to the digital challenges of today—we are shaping the future of a secure, federated, and sustainable digital economy for generations to come.

Thank you for your continued support and dedication. Let's keep building this future, together.

Warm regards,

Ulrich Ahle
CEO Gaia-X

As part of Gaia-X's globalisation strategy, we are proud to see data spaces expanding beyond Europe to countries like Japan and Korea based on their local legislation. This global reach demonstrates the universal relevance of Gaia-X's principles and highlights our commitment to fostering trusted, interoperable data ecosystems worldwide.

Ulrich Ahle

MAIN STORY
HIGHLIGHTED

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

02

Gaia-X Goes Global: Bridging Europe and Asia Through Data Sovereignty

Imagine a world where data sovereignty transcends borders, fostering innovation, trust, and collaboration on a global scale. This vision drove Gaia-X CEO **Ulrich Ahle** on a groundbreaking mission across Japan and Korea in October 2024. Over nine transformative days, Ahle championed Gaia-X's globalisation strategy, securing partnerships, driving innovation, and laying the groundwork for a future where federated data spaces connect continents and industries seamlessly.

The Beginning of the Journey in Tokyo: The 4th International Open Forum on Data Society (IOFDS)

The journey began with the **IOFDS meeting on 10 and 11 October**, co-hosted by the University of Tokyo and the Data Society Alliance. Approximately 60 global stakeholders, including delegates from Europe, India, Korea, and Taiwan, convened to discuss the future of interoperable data spaces.

Ahle delivered the opening keynote, emphasising Gaia-X's role in fostering trust and compliance in data spaces. A significant event highlight was the **announcement of the first Gaia-X Digital Clearing House (GXDCH) testbed outside Europe**, operated by **NTT DATA**. This milestone, achieved through collaboration with industry leaders such as Toshiba and Softbank, represents Gaia-X's first concrete milestone into the Asian market, addressing local compliance and interoperability needs while adhering to Gaia-X principles.

The forum also facilitated discussions in relation to the Gaia-X initiative in Europe and the Smart Cities initiative in Japan with Prof. Inder Gopal from the India Institute of Science in Bangalore. Ulrich connected with Prof. Gopal since his days at FIWARE back in 2019, when the India Urban Data Exchange organisation (IUDX) was created based on FIWARE. Currently, IUDX comprises 52 Smart Cities projects in India.

Discussions also continued with Keisuke Murakami from the Digital Agency, Japan. This is a significant discussion as it establishes a foundational ground for introducing a local trust anchor in Japan, similar to eIDAS and eIDAS2 in Europe.

Moreover, with the delegation of the **German platform Industrie 4.0**, led by Markus Heß, as well as the DSBA partners and Gaia-X Members, it has been agreed to work collaboratively on a demonstrator project for **Hannover Messe 2025**, showcasing interoperable data spaces connecting Japan, Korea, and Europe.

Finally, on the evening of 10 October, Ulrich participated to a reception at the German embassy on behalf of the visit of a German minister president together with a delegation from northern Germany.

Building Bridges in Korea: Korea-EU Forum for Global Data Collaboration

From 13 to 15 October, Gaia-X CEO Ulrich Ahle visited Korea to further develop collaborations initiated earlier in 2024 when a delegation from the Korean Ministry of Science and ICT (MSIT) visited Gaia-X's offices in Brussels. Recognising the potential of Gaia-X's frameworks, MSIT quickly embraced the opportunity for partnership. The visit began with an informal networking event featuring a traditional Korean barbecue, fostering relationships with key sponsors and stakeholders.

On 14 October, Ahle started the day with a visit to the **Korea Data Agency**, followed by a lunch meeting with the **Korea Expressway Corporation**, which expressed interest in developing a construction data space.

The afternoon featured the **1st KOR-GER Industrie 4.0 Forum**, organised **in cooperation with Korea's Ministry of Trade, Industry and Energy (MOTIE)**. During the forum, Markus Heß from Germany's BMWK ministry delivered a keynote address, emphasising the importance of interoperable data spaces in advancing Industrie 4.0 initiatives. Ahle later participated in a key meeting with German and Korean officials, including representatives from MSIT, further reinforcing the collaborative ties between the two nations.

"These collaborations demonstrate the potential of Gaia-X's frameworks to bridge continents, fostering trust and innovation across diverse ecosystems," Ahle remarked. These engagements laid the foundation for deeper collaboration, culminating in the **KOREA-EU FORUM for Data Collaboration** on 15 October.

On 15 October, the spotlight turned to the **KOREA-EU FORUM for Data Collaboration**, an event organised by MSIT in just two weeks yet, drawing over 200 participants from government, academia, and industry. During the opening session, the **Deputy Minister of MSIT publicly announced that Korea would assume the hosting role for the Gaia-X Hub Korea**, a major milestone in Gaia-X's globalisation strategy. Ahle delivered the forum's first keynote, outlining how Gaia-X frameworks align with Korea's smart cities and digital transformation ambitions.

Throughout the forum, Ahle held multiple meetings with municipal leaders and organisations, including **K-Water**, which expressed interest in leveraging Gaia-X frameworks for smart city initiatives. "The **SmartCitySuperCluster** architecture of Korea, built on FIWARE, aligns seamlessly with Gaia-X's principles of interoperability and data sovereignty," Ahle remarked.

The visit to Korea underscored Gaia-X's ability to adapt its frameworks to meet the specific needs of regional ecosystems while fostering international collaboration. It also reaffirmed the importance of Korea as a key partner in Gaia-X's mission to create a global, federated digital infrastructure.

CEATEC: Recognition for Gaia-X at Japan's Leading Technology Exhibition

From **14 to 18 October**, Gaia-X made a significant impact in Japan, beginning with its participation in **CEATEC 2024**, the country's leading technology fair, which attracted over 100,000 visitors. Hosted at the **EU-Japan Centre for Industrial Collaboration Pavilion**, the Gaia-X booth became a focal point for discussions on federated data spaces and digital innovation. To support outreach efforts, the booth was augmented by Japanese-speaking colleagues from the Data Society Alliance, which manages the Gaia-X Hub in Japan. A Japanese version of the Gaia-X brochure, specially prepared for the event, sold out by the third day—a testament to the growing interest in Gaia-X's frameworks.

A highlight of CEATEC was Gaia-X being honoured with the prestigious **Global Award** in recognition of its contributions to fostering data sovereignty and interoperability. *"This award underscores the relevance of Gaia-X's principles in driving global digital innovation,"* noted Gaia-X COO **Roland Fadrany**, who represented the organisation at the reception. The award ceremony generated significant attention, further establishing Gaia-X as a key player in the global data economy.

Upon hearing the news that Gaia-X has received the **Global Award at CEATEC** for its contributions to the digital economy. Ahle noted: "This award is a testament to Gaia-X's ability to foster trust and innovation in data spaces globally. It reflects our shared vision of building interoperable ecosystems that benefit all participants."

Moreover, on **17 October**, Gaia-X CEO **Ulrich Ahle** participated in the **RRI Symposium**, moderated by Nakashima-san, a prominent figure in Japan's Industrie 4.0 landscape. The symposium featured presentations by members of the German delegation, including Thomas Hahn and Boris Otto, and facilitated bilateral meetings with major stakeholders such as Fujitsu and Prof. Nishioka of the Industrial Value Chain Initiative. These discussions reinforced Gaia-X's role in bridging European and Japanese initiatives, with historical ties like the **2018 MoU with Prof. Nishioka** laying a strong foundation for continued collaboration.

Ahle concluded his Japan visit on **18 October** with a breakfast meeting with Peter Fateling, a long-time collaborator and coordinator of the Future Internet PPP for the European Commission. Their discussions centred on upcoming initiatives,

including the **INPACE event** planned for Tokyo in 2025, which will further explore the role of interoperable data spaces in addressing global digital challenges.

Through its engagements at CEATEC and the RRI Symposium, Gaia-X not only demonstrated its global relevance but also strengthened partnerships critical to advancing its mission of creating trusted, federated digital ecosystems. These efforts reflect Gaia-X's commitment to fostering innovation and interoperability in a rapidly evolving digital landscape.

Highlighting Global Milestones at the Gaia-X Summit: Japan and the Gaia-X Digital Clearing House

In November, at the **Gaia-X Summit**, we had the pleasure of hosting a keynote speech from **Professor Noboru Koshizuka** from The University of Tokyo, who delivered a presentation unveiling the deployment of Japan's first **Gaia-X Digital Clearing House (GXDCH) testbed**.

This milestone reflects Gaia-X's dedication to its g**lobalisation strategy**, emphasising the importance of fostering **international collaboration** and expanding interoperable data spaces beyond Europe.

Driving Innovation at the Boao Forum for Asia in Hong Kong

Following the **Gaia-X Summit in Helsinki**, CEO **Ulrich Ahle** travelled to **Hong Kong in November** to participate in the **2024 Boao Forum for Asia Youth Summit**, showcasing Gaia-X's role in shaping global data spaces. During a panel

discussion, Ahle explored the transformative potential of data spaces in advancing **Generative AI**, emphasising how artificial intelligence will redefine the future of personal and business data use.

"This forum highlighted how data collaboration can fuel innovation, particularly in AI, and provided valuable connections for expanding Gaia-X's role in the region," Ahle shared. Earlier in the visit, Ahle toured the **Regional Digital Control Center of Hong Kong**, which was recently recognised with second place in the IEEE global Smart City Contest. The visit offered further opportunities to align Gaia-X's mission with emerging smart city initiatives across Asia.

These engagements reflect Gaia-X's continued drive to expand its global reach, fostering partnerships that champion interoperability, data sovereignty, and innovation in the digital economy.

And beyond Hong Kong

The Chinese government's ambition to establish over 100 trusted data spaces by 2028 presents a significant opportunity for Gaia-X to contribute its expertise in building secure, federated, and interoperable data ecosystems.

With Gaia-X's proven frameworks for data sovereignty, compliance, and trust, it is well-positioned to collaborate with Chinese stakeholders in aligning these trusted data spaces with global standards while respecting regional regulations. Such collaboration could enhance cross-border data interoperability and foster secure links between China's integrated

data market and other global data ecosystems, driving innovation and economic growth in a trustworthy and secure business environment.

A Vision for Global Data Sovereignty

The visits to Japan and Korea solidified Gaia-X's presence in Asia while highlighting its potential to drive global innovation through federated data spaces. By establishing new partnerships, enhancing media visibility, and securing high-level commitments, Gaia-X continues to make strides in advancing its globalisation strategy.

Reflecting on the journey, **Ulrich Ahle** stated: *"These milestones reflect Gaia-X's vision of a connected, trusted, and interoperable global data ecosystem. Through collaboration, we are creating opportunities for organisations worldwide to thrive in the digital economy."*

As Gaia-X prepares for its next chapter, its efforts in Asia exemplify the transformative potential of a global network of federated data spaces, driving digital sovereignty and innovation across borders.

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

Communications

03

TECHNOLOGY

Meet Christoph F. Strnadl, our new CTO

After a careful and extensive multi-stage selection process scrutinising over 30 applicants, on 1 October 2024, the Gaia-X European Association for Data and Cloud AISBL appointed Christoph F. Strnadl as new Chief Technical Officer (CTO). He succeeds Pierre Gronlier, who has successfully held this position since the formation of the Gaia-X association and recently assumed the role of Chief Innovation Officer. In this CTO role, Christoph is also one of the four official *Secretaries Generals* of the AISBL.

Christoph has been actively participating in the Gaia-X ecosystem since even before its official inception in the fourth quarter of 2019, which was, of course, also well before the foundation of the Gaia-X AISBL itself. As VP Innovation & Architecture and later Deputy CTO at Software AG, his then tasks centered around the identification, selection, and implementation of new technologies into Software AG enterprise integration and internet of things (IoT) products. At that time, the young Gaia-X initiative was

one such innovation candidate besides (in no particular order) blockchains, distributed ledger technologies (DLT), quantum computing, edge continuum, artificial intelligence (still without large language models), service meshes, and a few other technologies.

Based on these objectives, he actively participated in the Architecture Working Group, consulted to Gaia-X Lighthouse Projects in the manufacturing domain (EuProGigant) and the construction domain (iECO and BauPuls360) as chief architect, and personally did a lot of Gaia-X evangelisation all over Europe. His ample cross-domain experience as a technical consumer and implementer of Gaia-X concepts, architectures, and components will provide an excellent "outside in" perspective to his new role in defining, shaping, and executing Gaia-X's technical strategy.

Approach

We asked Christoph how he would approach his new role which, obviously, is embedded in an existing organisational structure with an effective (he actually told us: excellent and deeply committed) team and an enthusiastic and exquisitely knowledgeable former leader who is still around. His answer was two-fold: "I have a structured **process** in mind and also an initial idea of how to shape the role of the Gaia-X CTO in the current phase of the organisational lifecycle of the association."

With regards to the process of taking over the varied responsibilities of a CTO, he sees three stages:

- **Absorb** – understanding current goals and existing structure and continue to execute existing working processes and initiatives (for instance, bringing home the Loire release, continuing the Tech Theatre at the Gaia-X Summit in Helsinki). Time frame: 10-12/2024.

- **Adapt** – align, adjust, and optimise the CTO organisation and its interfaces to the strategy and roadmap. Time frame: 12/2024 – 06/2025.

- **Advance** – advance Gaia-X technologies beyond the 2025 roadmap timeline surpassing current state-of-the-art. Time frame: 03/2025 – 12/2025.

Especially with regards to the absorption and adaptation phases, he emphasises that trying to impose a pre-conceived strategy from the outside to any organisation has never worked anywhere. That doesn't mean, of course, that one cannot or that he will not change things – but that every change has to be motivated and grounded in facts communicable and understandable by all "targets" of such change. In this philosophy, change is not something a single person (the CTO) commands or orders his team or, even worse, our Gaia-X members, to execute, but a common agenda collectively identified and executed by the involved team under the responsibility of the respective team lead – which, for the technical strategy, is the CTO. No doubt about that. We refer the impatient reader to the next section to see the first actions on how to concretely approach this.

The second ingredient concerns the role of a CTO which comprises of three facets[1] :

- Business and strategy facet
- Marketing and sales facet
- Technology facet

Different stages of the life cycle of any organisation require different focus areas of their respective CTOs – this is also true for the Gaia-X AISBL. Initially, every technology-focused organisation profoundly needs a CTO deeply rooted in technology in order to get the first workable software out of the door and implemented (for Gaia-X: at the GXDCHs, for instance). Once this first hurdle is mastered, further adoption often requires a slightly different skill set more attuned to marketing and sales processes or a business and use-case driven approach to technology strategy development. The Gaia-X AISBL was extremely lucky to have Pierre as an extraordinary and visionary technology leader for this first phase. In his new role as Chief Innovation Officer, he will continue to provide his technology expertise to different departments of the Gaia-X association, including, of course, the CTO team, and also Gaia-X partners. Christoph will then put some focus on the strategic and outward facing (marketing, communications, evangelisation) facets targeting the wider global of **real-world adoption** of our Gaia-X standards and technology.

Technology Strategy & Roadmapping Exercise

At our Gaia-X Summit 2024 in Helsinki, Ulrich Ahle, the Gaia-X CEO, and Klaus Ottradovetz, Lead of the Technical Committee, have announced a comprehensive **roadmapping exercise** to explore and define the future technology strategy for our association and its members. Christoph and Klaus are currently fleshing out the structure and project plan of this initiative which is scheduled to be conducted from January to March/April 2025. It will encompass two perspectives:

- **Outside in** – actively considering the wider data spaces and digital ecosystem landscape and the many projects, initiatives, standards, and associations. The objective here is to identify gaps, overlaps, and complementarities with the external environment

- **Inside out** – taking into account experiences, views, and opinions of the CTO team (obviously), but even more importantly, of our members as articulated and represented in the various committees, working groups, and sounding boards

The roadmapping exercise will capitalise on Gaia-X's core contribution to the Gaia-X Trust Framework including Gaia-X Digital Clearing Houses, and will, amongst others, concentrate on the topic of **fast and easy adoption** of our concepts of **automated trust and compliance** by service or data providers and service or data consumers alike.

For our members that means that Christoph, Klaus and the various working group committee leads will reach out to you for your input, contribution, remarks, suggestions, and feedback during this roadmapping exercise.

Outside the Gaia-X office and after 5

An Austrian citizen, Christoph holds a summa cum laude Ph.D. in theoretical (condensed matter) physics from the Technical University of Vienna and a post-graduate degree in management science from the University of Huddersfield, UK. Previous professional engagements include IT strategy consulting and business management functions at Atos and various technical leadership positions at Software AG in central and eastern Europe, and, finally, at the global level as Deputy CTO. There he was responsible for overall technology strategy development, cross-product innovation, and thought leadership.

He is a recognised public speaker with over 300 appearances, co-author of or contributor to six books, and author of several Gaia-X relevant articles on the cloud-to-edge (C2E) continuum and its monetarisation (German: Springer 2021, English: Springer 2023), or data and service platform concepts (Springer 2023) and implementations (Springer 2023). Besides his tech focus, he was also one of the first ones (if not even the first) publicly writing about formalised economic models on how to calculate the value of decentralised ecosystems (Arxiv 2023). These ideas have been picked up and extended by the Gaia-X Institute and researchers of the Université Paris-Dauphine resulting in the position paper "Economics of Data Sharing" discussed, inter alia, at this year's Gaia-X Summit 2024 in Helsinki.

He is a practicing Karate black belt and also interested in law (honestly: he was co-author of a book on IT outsourcing contracts; and don't ask him what he thinks of the Data Act), analytic philosophy (especially the Vienna Circle which, essentially, founded this branch of philosophy back in the 1920/30s) and recently in Category Theory as well (if you think algebra – calculating with letters – is abstract, you would be surprised how much more abstraction you can get) where he found a way to turn the set of (almost) arbitrary architectures into a full-blown «category»[2] . Christoph is married with two children, lives and works, if he isn't evangelising about Gaia-X somewhere abroad, in Vienna, Austria.

[1] Note to the potentially unaware reader: Using the term "facet" is alluding to the ISO/IEC 19941:2017 Information technology — Cloud computing — Interoperability and portability standard. Technically inclined and knowledgeable members may rightfully object that the Gaia-X Architecture Document uses the EIF (European Interoperability Framework) for that. And that is exactly one of the issues we have to constructively address: How to resolve competing or different standards for essentially the same objective ;-)

[2] This has some very nice properties. For instance, you can define the "product" of two architectures (think "client/server") or prove that architectural layers may be regarded a purely syntactic property. The framework also shows (via a so-called "no go" theorem) that the generic question of how to modularise a given system cannot be decided on syntactical grounds alone.

3.2.1

Gaia-X Evangelist Programme

Why a Gaia-X Evangelist Programme?

The Gaia-X Evangelist Programme aims to increase awareness of Gaia-X's deliverables, encourage widespread market adoption, and build an engaged community. This effort will be reflected in membership growth and active participation in Working Groups and Sprints as more individuals and organisations align with Gaia-X's vision and goals.

The programme seeks to create a network of advocates who promote Gaia-X and contribute to its development and influence within the industry.

What is the Gaia-X Evangelist programme?

The Gaia-X Evangelist Programme is designed to empower passionate individuals who are eager to share their knowledge and enthusiasm about Gaia-X's mission and vision with the broader community. Evangelists are enthusiastic supporters who spread the word, build community, and help drive engagement and growth. Evangelists play a crucial role in expanding the reach of our message, fostering innovation, and driving the adoption of our solutions.

What is the role of a Gaia-X Evangelist?

A Gaia-X Evangelist role can be summarised in four points:

- ➲ **Promote**: Spread the word about Gaia-X, the trust framework, and its implementation through social media, blogs, podcasts, and events.

- ➲ **Educate**: Host or participate in workshops, webinars, meetups, and conferences to teach others about Gaia-X, the Trust Framework, and its implementation.

- ➲ **Contribute**: Provide feedback and suggestions to improve the specifications and implementations and help guide the future direction of our community.

- ➲ **Collaborate:** Work with other evangelists, partners, and community members to create content, solve problems, and develop new ideas.

Why join the initiative now?

You are interested in becoming the voice of a global community dedicated to creating interoperable solutions and shaping the future of the data-driven economy.

You are passionate about technology and innovation, eager to share your knowledge, and enthusiastic about representing Gaia-X at events, meetups, and online forums.

You have strong communication skills and a collaborative spirit, and you are eager to shape the future of data economy and help the industry to move forward.

Then, do not wait one more second, and join the Gaia-X Evangelist programme.

You will be able to increase your network with like minded people, represent Gaia-X as a speaker at exclusive events, contribute to Gaia-X articles, magazines, podcasts, and videos, receive direct support from the Gaia-X team, including technical resources and marketing materials, or even receive an official Gaia-X Evangelist Certification to attest your expertise among other benefits.

How to become a Gaia-X Evangelist?

If you're interested in becoming a Gaia-X Evangelist, this is very easy!

You only have to send us an email at info@gaia-x.eu with information about your background, experience, and why you're interested in the programme (do not hesitate to also share some examples of your previous work demonstrating your passion and expertise - e.g., blog posts, videos, community contributions), keeping in mind that you have to be a Gaia-X member, Hub, Lighthouse Project, Ecosystem, Working Group or OSS Community contributor, and involved in at least one of the Gaia-X Committees, or participate in the Gaia-X flagship events, or engage in 5 speaker engagements per year with mention of Gaia-X.

The Gaia-X Management Team will review your application and provide you with an answer.

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.

Summit 2024

04

Defining & measuring trust in data transactions

Frédéric Bellaiche, PhD, Vice President Technology & Research, Dawex

The European Commission and leading global organisations are currently defining what a Trusted Data Transaction is, to ultimately establish a standard from the European Committee for Standardisation (CEN).

The **CEN workshop on Trusted Data Transaction** is a pre-standardisation contribution-based initiative co-proposed in 2023 by **Dawex, Fraunhofer ISST** and **TNO**, gathering active representatives from the **European Commission, Gaia-X, IDSA, BDVA, Fiware Foundation, Microsoft, Agdatahub, Hub One, SQS, Connekt**, and recently joined by **Airbus** and **EDF** for part two of the workshop.

During a 15 month process, workshop participants, coming from the associative, corporate and institutional world, **collectively created, agreed upon** and **signed the first CWA** on **Trusted Data Transaction** (CEN Workshop Agreement- Part 1). Published in the summer 2024, the Agreement defines the objectives, scope and deliverables of the workshop, provides **terminology**, key **concepts** and **mechanisms** around the **notion of trusted data transaction**. This is a crucial step as it sets the foundation for defining the characteristics of trust in a data transaction and the criteria to measure it.

Why is this initiative on Trusted Data Transaction important?

- It directly contributes to the building of the **European Trusted Data Framework**, one of the top three policy priorities, out of 72 actions listed, in the 2024 annual Union work programme for European standardisation. The EU Trusted Data Framework encompasses a comprehensive set of standards, practices, and rules to ensure trusted, legally compliant data sharing across parties, including Data Intermediaries and altruism organisations.

- It provides a concrete response to the recommendation made by the High-Level Forum on European standardisation, a multi-stakeholder group chaired by former Commissioner Thierry Breton, to initiate the development of a harmonised European standard for trusted data transactions.

- It aligns with key provisions of the Data Act, which stipulates that the European Commission shall request one or more European standardisation organisations to
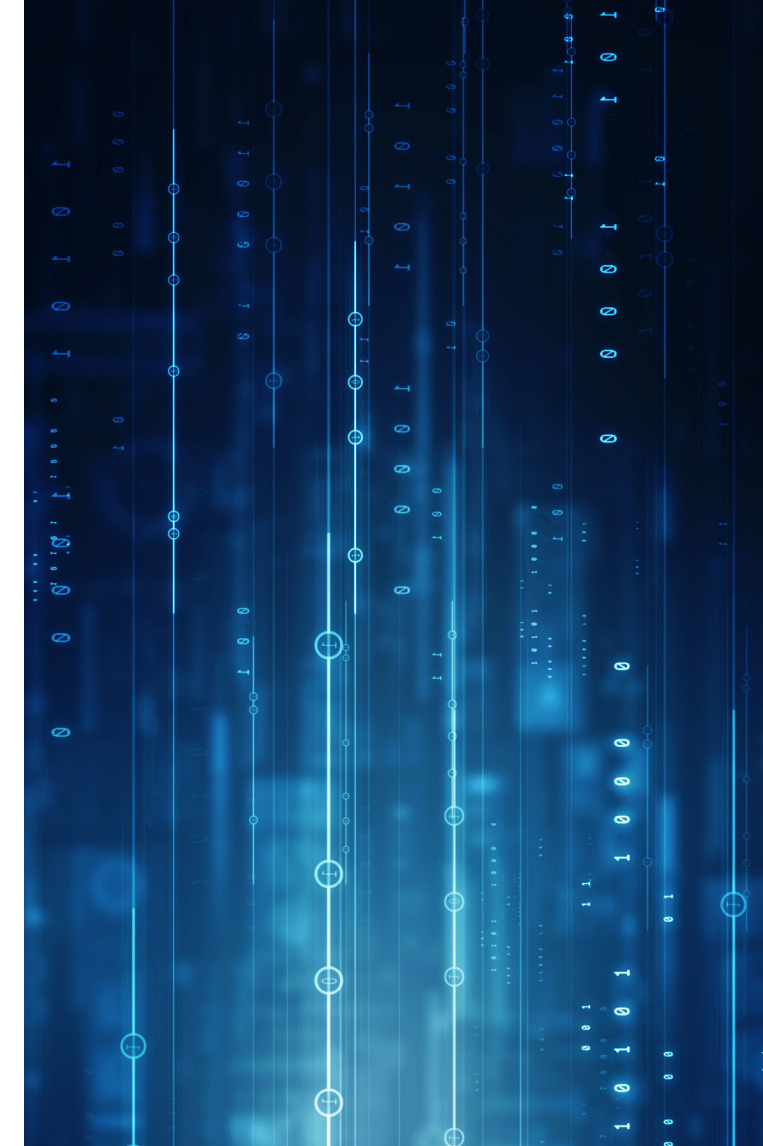
Standardisation request
European Trusted Data Framework

Includes the following 5 standards / standardisation deliverables:

"Scorecard" for Common European Data Spaces (maturity model)	• Drive convergence and increase transparency • Leverage the work of DSSC, in particular the data spaces blueprint and the data spaces maturity model
Trusted ontologies and data models (implementation framework)	• Quality criteria on the management and maintenance of ontologies and vocabularies • Leverage the work of SEMIC, OP and DSSC
Data catalogue (implementation framework)	• Managing the core profile and domain-specific extensions (DCAT standard) • Leverage the work of SEMIC and OP (data.europa.eu)
Data governance (quality assessment standard)	• Addresses the internal data governance processes of individual organisations (data management, data quality, ...) • Approach to be discussed in CEN/CENELEC focus group
Trusted Data Transaction (harmonised standard)	• Addresses the essential interoperability requirements on in Data Act article 33. • CEN pre-standardisation workshop ongoing

European Commission

draft harmonised standards that satisfy the essential requirements laid down in Article 33 of the Data Act. These requirements address the interoperability of data, data sharing mechanisms and services, as well as of common European data spaces. Participants in data spaces offering data or data services, such as data intermediaries, that meet these harmonised standards shall be presumed to be in conformity with these essential requirements.

The CEN Workshop on Trusted Data Transaction will accelerate and prepare for such standards and facilitate compliance of data space participants. The CWA on Trusted Data Transaction will be used as the main input to support the **Standardisation Request on Trusted Data Transaction**, issued by the European Commission, currently in the drafting phase, that will lead to a **harmonised European Standard**.

This marks an **important milestone** in the ongoing efforts towards **standardisation in Data Exchange, creating trust and observability** for Data Transactions.

Discussions for part 2 of the Workshop focused on the definition of the characteristics of trust in a data transaction and the criteria to measure it, have already well-progressed, with more organisations joining, demonstrating the importance of the topics being discussed. Results are expected at the end of 2024.

Standardisation is crucial. Without standards, no business can operate, and no products or services can be sold or used at scale. In a highly digitised and connected world, standardising trusted data transactions has become a necessity.

Access the CEN Workshop Agreement on Trusted Data Transaction Part 1

https://www.cencenelec.eu/news-and-events/news/2024/eninthespotlight/2024-07-26-trusted-data-transaction

Frédéric Bellaiche,
PhD, Vice President
Technology & Research,
Dawex

05

COMMUNITY

The Gaia-X Community plays an instrumental role in shaping our organisation. 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

MEMBERS STORIES

Member Story: EIT Manufacturing

Johannes Hunschofsky, Managing Director, **Wolfgang Kniejski**, Senior Project Manager & **Lukas Schwab**, Project and Communication Associate at EIT Manufacturing East

Introduction

EIT Manufacturing is a private-public partnership which was established in 2019 to enhance the competitiveness of the European manufacturing industry. Co-funded by the European Union, it connects industry, academia, and startups to drive positive change within its manufacturing ecosystem.

Involvement in Gaia-X

EIT Manufacturing is heavily involved in the topic of data spaces and data sharing to prepare the industry for looming challenges. Specifically, it is involved in different research projects such as the EuProGigant lighthouse project and the associated ecosystem including AMIDS, DIONE-X, ESCOM and Flex4Res.

Federator development

An ecosystem of manufacturing companies can consist of a variety of shared functions and value-added services, as well as enable a data value chain between data owners, data providers and data users. If data is made accessible in a granular and selective manner in accordance with data protection and security regulations and other applicable laws and regulations, additional value can be created by orchestrating data exchange. This opens the potential for synergies and shared benefits for the different stakeholders in manufacturing ecosystems. The effective exchange of data can have a positive impact on the innovation capacity, competitiveness, and long-term development, especially for SMEs in the manufacturing sector. Consequently, EIT Manufacturing is working on the development of a EuProGigant federator to orchestrate data cooperation.

Next steps & future outlook

We developed the concept for a so-called multi-sided business model, and we defined the necessary elements of the data sharing processes. We are now aiming for deploying several concrete and valuable use cases. By implementing those business concepts, a common, federated European Manufacturing Data Ecosystem will foster better exchange and provide access to different types of manufacturing data.
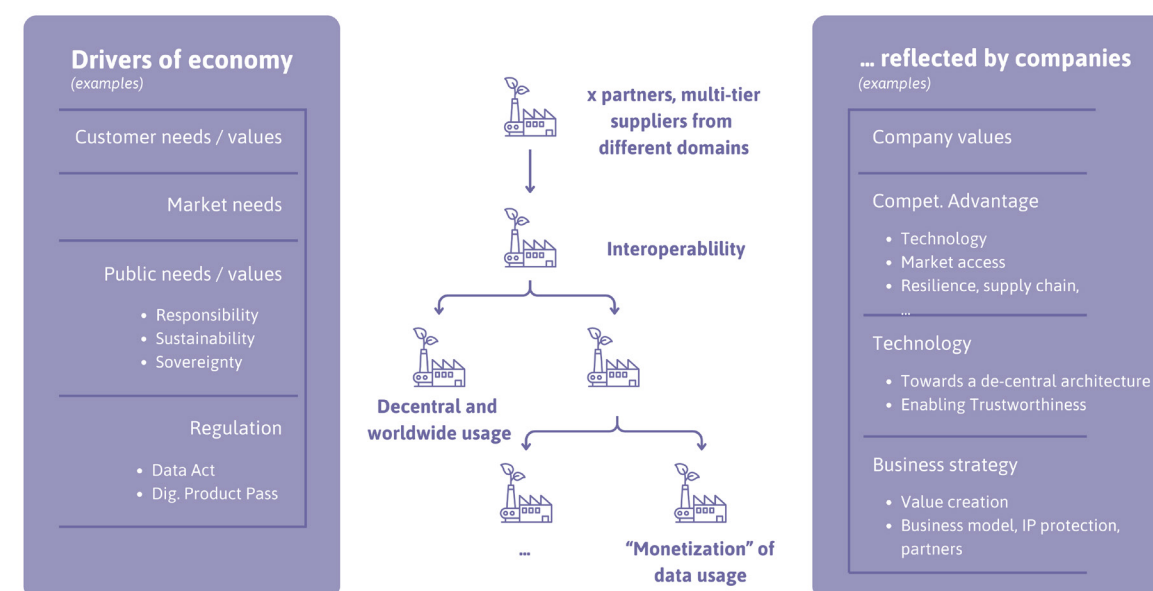

Figure 1: The industrial context in data economy and data spaces; Source: Gaia-X AISBL
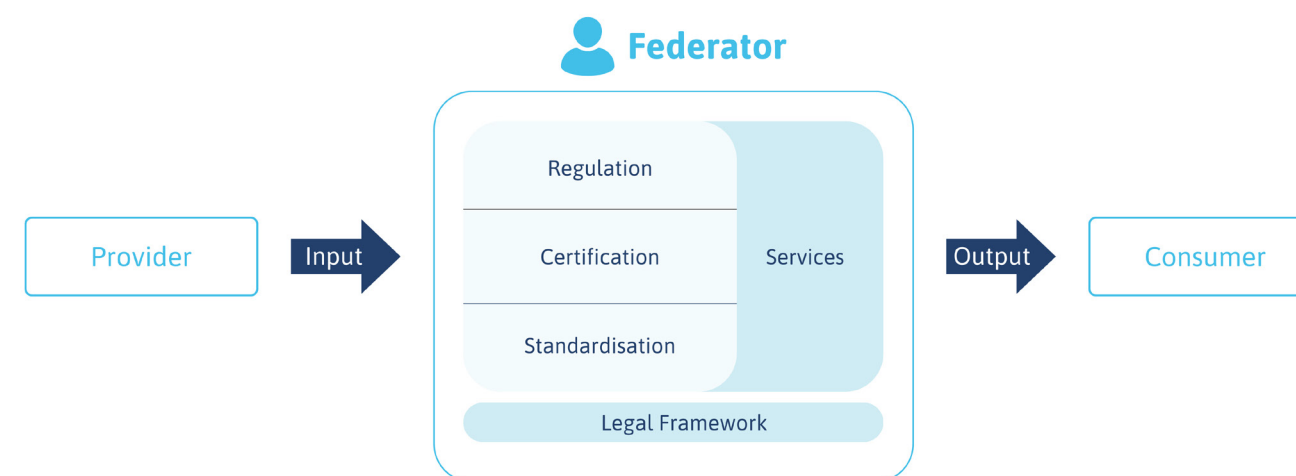

Figure 2: Schematic illustration of the data sharing value-chain, Source: Wolfgang Kniejski

Disclaimer: In the original project application, we used the term "Federator", and we are currently still using this description. However recently, we much prefer the term "Orchestrator", because it expresses that the data sharing activities in our data ecosystem are decentralised and therefore managed (orchestrated) by an independent entity.

Member Story: TU Wien

Claudia Schicklling, Head of TU Wien Pilotfabrik 4.0 & **Lukas Schwab,** Project and Communication Associate at EIT Manufacturing East

TU Wien (Technische Universität Wien), established in 1815 is one of the largest and most prestigious technical universities in Europe, particularly known for its cutting-edge research, innovation and academic programmes with impressive international graduates. It is involved in many initiatives to enhance digitalisation.

Engagement in Data Sharing Initiatives

TU Wien has been crucial in Austria for offering guidance in establishing functional data spaces and enabling successful data sharing. Specifically, it is one of the key institutions involved in the **Austrian Manufacturing Innovation Data Space (AMIDS)**, the **EuProGigant** and **Flex4Res** research projects and it is associated with **ESCOM** which constitute part of the ecosystem surrounding

EuProGigant. Furthermore, TU Wien is heavily engaged in illustrating new technologies and processes in manufacturing with its pilot factories.

AMIDS – Driving innovation with Data Spaces

AMIDS consists of two research projects namely PilotLin-X and ResearchLin-X and involves three different pilot factories: TU Wien Pilotfabrik Industrie 4.0, smartfactory@tugraz and LIT Factory. Overall, it focuses on the creation of demonstrators for co-design and co-production by encouraging collaboration within an established data space following the Gaia-X de-facto standard.

Future outlook

TU Wien will continue supporting efforts to drive innovation and developments in data sharing. Within the AMIDS project it will proceed in assisting digitalisation efforts alongside the other project partners and pilot factories. Claudia Schickling, Head of Pilotfabrik Industrie 4.0 added

"Data sharing is at the heart of many of our ongoing projects. We will keep supporting these endeavours and driving digital collaboration forward."

Digital Innovation in the manufacturing domain by cooperation and standardisation

Agnes Jodkowski, Research Engineer at AIT, Hub Austria

Given the increasing competition in global markets, the success of companies no longer depends solely on the performance of individual organisations, but increasingly on the performance of the ecosystems related to them. This requires greater cooperation between companies and thus an increase and simplification of the exchange of information within these ecosystems.

At the invitation of the Platform Industry 4.0 Austria and the Gaia-X Hub Austria, representatives of the European Manufacturing-X initiative met in Vienna on 13 September 2024 as part of the Technology Talks Austria 2024, to discuss the necessary approaches of the manufacturing industry to master the ongoing global digitalisation and data transformation of the industry. Five key drivers have been clearly identified during the workshop:

1. The EU's new Ecodesign Regulation and the EU Digital Product Passport are important business drivers, which have to be understood by all stakeholders.

2. There is an essential need for global cross-company collaboration to be able to build upon the critical mass of expertise and resources. Cross-industry and cross-border data-sharing platforms are essential to foster collaboration without relying on single IT providers. Such initiatives help European industries stay competitive globally by enhancing resilience through decentralised, open-source-based IT systems.

3. Making the unused 80% of industrial data in various sectors available for innovation and business value creation.

4. Learning from best practice examples to derive business strategies and increasing the capabilities for implementing effective data driven business cases.

5. A clear standardisation strategy and a focused effort to shape the standardisation process is fundamentally important for sustainable business development.

Under the moderation of Helmut Leopold, Chair of the Gaia-X Hub Austria and Roland Sommer, Chair Platform Industry 4.0 Austria, key speakers discussed these points and presented pioneering data space projects in sectors like aerospace, automotive, and electronics, showcasing how these technologies can unlock the value of previously untapped industrial data: Michael Fälbl from Platform Industry 4.0 Austria, Pascal Riss, Schneider Electric (Data4Industry-X), Oscar Lazaro, Spanish research company Innovalia, Jens Gayko from the German Standardisation Council Industrie 4.0, John Blankendaal, Brainport Industries in the Netherlands, Anja Misselbeck, Catena-X, Sebastian Schneider, DMG MORI, Ingo Sawilla, TRUMPF, and Bernhard Peischl, AVL.

Austria is taking a proactive role in these discussions, showcased by its efforts by the Gaia-X Hub Austria, together with the Platform Industrie 4.0 Austria, supported by the Federal Ministry Republic of Austria Climate Action, Environment, Energy, Mobility, Innovation and Technology & State Secretary for Digitalisation, to strengthen the country's role as a bridge in Europe's data ecosystems.

Lifelong Learning with Dataspaces through Gaia-X

Rola Sayegh, Senior Innovation Project Manager **& Dr. Sabine Zander**, Director at Innovation Lab, imc Learning

(This article was first published by Gaia-X Hub Germany on 29/10/2024)

The MERLOT funding project has developed an education marketplace and AI-based assistant for job search, career planning and professional further training. Here's an expert discussion about the challenges of the dataspace project and the development of the business model.

With the Gaia-X funding project MERLOT*, you have developed an innovative educational dataspace based on a digital marketplace. What exactly is this project about?

Sabine Zander: With MERLOT, we want to create an ecosystem for educational data and services that enables companies and educational institutions to share and process their educational data securely and in compliance with data protection regulations. At its heart is the interoperable marketplace, which offers not only standard products but also customisable services that can be tailored to the specific needs of particular user groups. The marketplace is designed as a business-to-business solution and is not aimed at consumers, but rather at businesses and educational institutions.

What is the current state of the project?

Rola Sayegh: We have now developed the prototypes for our MERLOT marketplace and our AI-based educational assistants. We have also implemented a catalogue with standardised descriptions for the services offered. This ensures transparency. Digital contracts and precise rights management regulate how and for how long data can be processed. This adaptability enables products to be tailored precisely to the individual needs of customers.

We are also developing a concept for a Self-Sovereignty Manager. It will give consumers who use the services or smart services offered by the marketplace to have sovereign control over their personal data. This means that they will be able to share their data in a targeted way, monitor how their data is being used and, if necessary, withdraw their consent to data processing. We are also working to further develop and refine our AI assistants and to advance guidelines for AI tools in education, whether from a social, ethical or legal perspective.

What are the next steps?

Rola Sayegh: The challenge of the project is to transform the marketplace prototype into a fully functional digital business model that complies with strict European data protection regulations and at the same time provides efficient and scalable solutions for the (further) education sector.

In the coming months, we will continue to test and develop the marketplace. By the end of the year, the marketplace should be fully tested and all our services - especially the AI-based career and training assistants - should then be connected to the marketplace and tested together with other data-providing services. We are also working on two demonstrators: one showing how our MERLOT marketplace works and how companies and institutions can control the use of their data at any time. The second will present the concept of the cross-domain, user-centric self-sovereignty management system and show how users can gain full control over their personal data.

Sabine Zander: Until March 2025, our main focus will be on further developing our business model and adapting our services to the current market situation, especially in the areas of training, upskilling and transformation processes in companies. Other goals include attracting new partners for collaboration and thus creating networking opportunities with related dataspaces.

*MERLOT: (Marketplace for Lifelong Educational Dataspaces and Smart Services Provisioning)

The German education market is very complex. How can MERLOT support lifelong learning?

Rola Sayegh: The German education market includes education and training offerings from traditional institutions such as schools and universities to online courses and in-house training. With the Gaia-X framework, we bring significant benefits to public (educational) institutions - such as our high security standards for personal data and broad interoperability. However, there is still a lot of work to be done in this area to educate different stakeholders - from school principals to ministries. Another challenge is funding. The services will have to be paid for, which could be particularly problematic for government-funded institutions.

... and what about companies?

Sabine Zander: There are significantly better market and financing opportunities for companies at the moment. Our initial focus is therefore on SMEs and companies that need to invest in employee training to remain competitive. The idea is to ensure that employees have the right skills to meet the company's current and future needs. This is particularly important in fast-moving industries where constant innovation and technological advances are constantly changing the demands placed on employees. However, in order to offer a broader, high-quality range of products for effective skills management, we need many more partners and service providers in our marketplace.

How do you plan to do this?

Sabine Zander: Last year, we started discussions with several other dataspace projects on a European level. For example, we have already signed initial collaboration agreements with Prometheus-X, the consortium leader of the European dataspace project 'Education and Skills'. This cooperation will allow us to reach a much larger target group and to significantly expand our offerings and services. However, we will continue to operate as an independent MERLOT marketplace and maintain compatibility with Gaia-X concepts of compliance and trust.
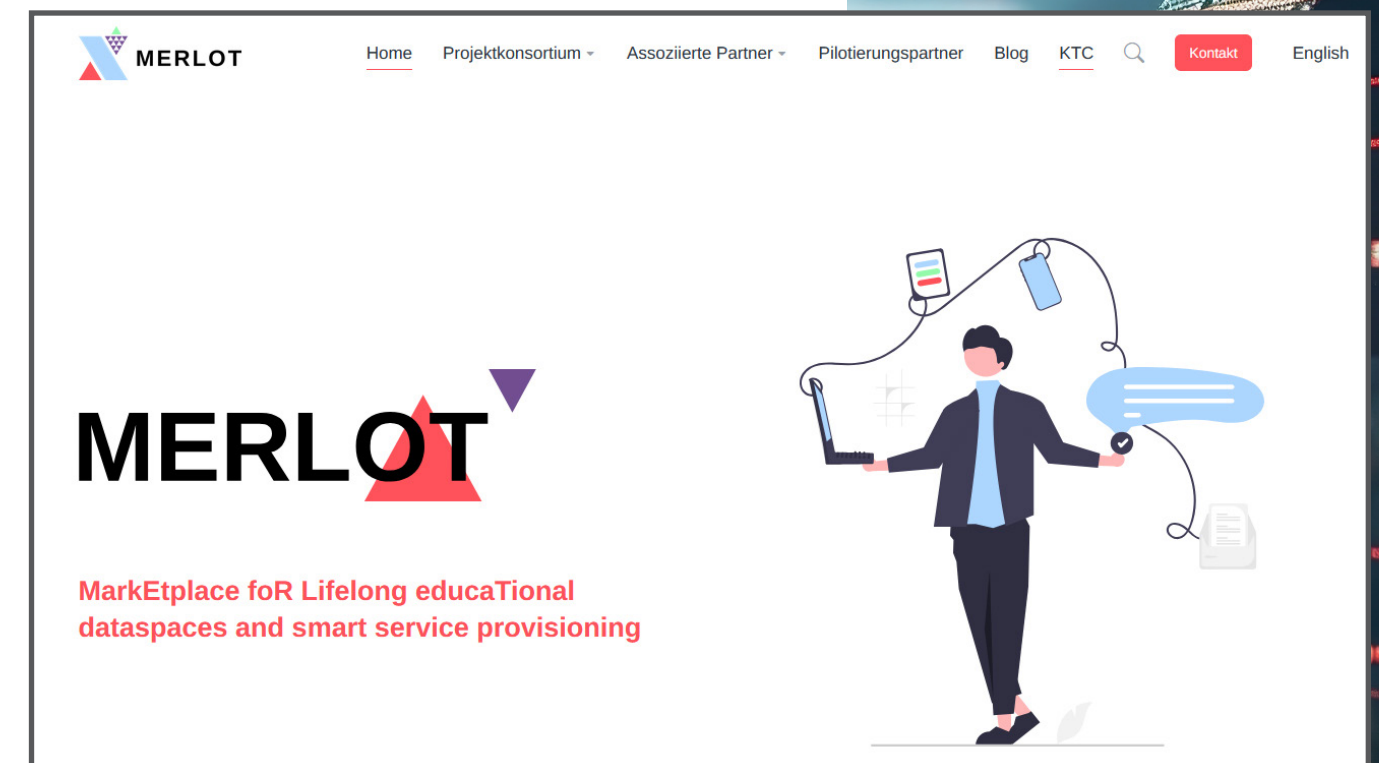
So you see MERLOT as a step towards Education 2.0 with a European flavour?

Rola Sayegh: Yes, you could say that. Because the Gaia-X dataspace technologies have great potential. Most of our project partners want to stay actively involved in MERLOT after the project ends, for example as service or data providers.

At the consortium meeting in July 2024, our consortium was able to present the great progress of the project, as we achieved most of the technical goals well before the end of the project. To get to the point where we are today, we as the MERLOT consortium had to overcome a number of challenges. It was often tedious, but we tried various options and developed completely new approaches and solutions. During this time, we have learned a lot and benefited from each other. And we ourselves have become familiar with a promising technology that opens up completely new business models and opportunities for innovation - even in such a diverse education market.

The MERLOT consortium will be increasingly approaching potential and interested companies in the coming months. Anyone interested in joining the network is welcome to contact MERLOT at:

https://merlot-education.eu/contact/

MERLOT

MarkEtplace foR Lifelong educaTional dataspaces and smart service provisioning

Interview partners:

Rola Sayegh, Senior Innovation Project Manager | Innovation Lab, imc Learning

Dr. Sabine Zander, Director Innovation Lab, imc Learning

Unlocking the Future of Construction: A European Data Space for Innovation and Sustainability

Isabel Borges, Senior Consultant at TICE.PT & **Christophe Castaing**, Consultant at Digital TER-X

Figure 1: Digital TER-X 2050 as a national and European Strategic Intermediary for the Construction DS

The construction industry, a cornerstone of Europe's economy with an impressive turnover of €2,1 trillion, it accounts for 7% of the total employment across the EU. This presents a significant opportunity to unlock the sector's full potential through a dedicated European Construction Data Space (DS), that could revolutionise the industry by fostering collaboration, innovation, and sustainability through enhanced data sharing and interoperability. Moreover, this sector has a substantial carbon footprint, and its industry is vital to Europe's sustainability ambitions. Existing technologies like Building Information Modelling (BIM) and Geographic Information Systems (GIS), IoT, already enable efficient, collaborative processes, but a unified data space could further accelerate the shift toward a low-carbon future.

Unlike other industries, construction operates in a complex and highly fragmented ecosystem. It is not a simple B2B market due to the required intermediation of authoring tools (e.g. there are no contractual relationships between the stakeholders and the Cloud hyper scalers). Contracts are short-term, while the infrastructure lifecycle spans decades, and that's why construction data-sharing dynamics extend beyond traditional B2B models. The sector's reliance on authoring tools and collaborative platforms highlights the need for a DS 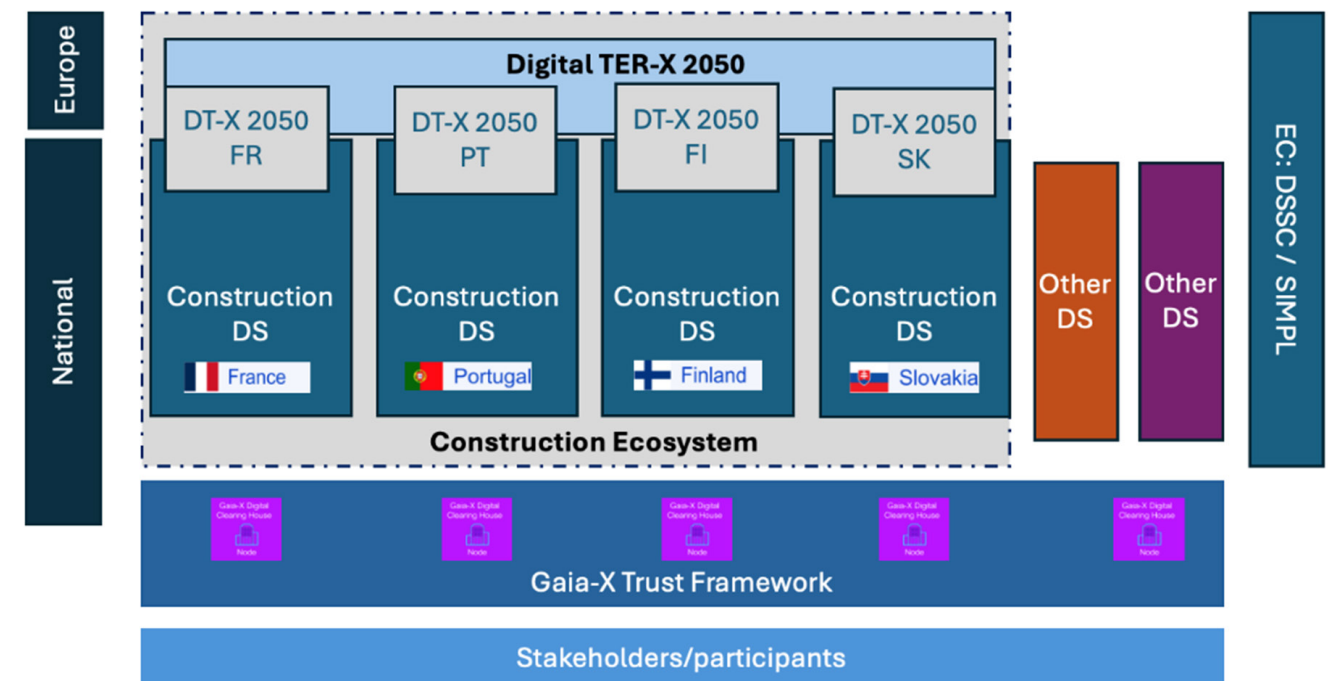to provide trustful, transparent and standardised long-term solutions, accommodating the evolving needs of stakeholders, particularly SMEs that account for more than 80% of construction workforce.

Digital TER-X 2050 is a Qualified project endorsed by Gaia-X, aiming to create a European framework for the Construction Data Space. This project delivers a ready-to-use suite of services, managed by an orchestrator. Digital TER-X serves a dual role—strategic and technical—within each country, enabling the development of business cases by leveraging the catalogued services. At the European level, it coordinates these services across national catalogues while ensuring compliance with key regulations such as GDPR, the Data Act, the Data Governance Act, and the AI Act. This approach is particularly beneficial for SMEs and is made possible through the trusted framework established by Gaia-X. Aligned with SIMPL and Gaia-X, it is crucial for achieving interoperability and fostering a secure, seamless environment for data exchange.

The authors believe that SMEs will adopt this data ecosystem driven by large Construction companies who increasingly want to automate their value chain processes in order to reduce costs. This will create the critical mass to operationalise the full ecosystem.

Two Business use cases will be addressed first: Urban Cavities Management by the French stakeholders and 360° holistic vision of the inside and the outside of the building by the Portuguese stakeholders.

The construction sector has reached a pivotal moment, and it is our conviction that a European Construction Data Space will offer a path to a smarter, greener future—one built on collaboration, data-driven decisions, and long-term sustainability.

This document results from the collaboration between Building Smart Chapters from Portugal, France, Finland, Gaia-X Hubs from Portugal, France, Finland and Slovakia, DST Group, CCG, University of Aveiro and OASC.

New Horizons for Gaia-X as Denmark, Norway, and Switzerland Join as Hubs

Gaia-X AISBL proudly announces the expansion of its network with the establishment of hubs in **Denmark**, **Norway**, and **Switzerland**. This milestone represents significant progress in Gaia-X's mission to drive global data spaces while recognising and adapting to local regulatory frameworks. The announcement was made by Gaia-X CEO Ulrich Ahle and the respective organisations coordinating the hubs, Digst, Smart Innovation Norway and Glenfis during the Gaia-X Summit 2024 in Helsinki.

The Danish government hailed the establishment of a Gaia-X Hub in Denmark as a pivotal step in the nation's digitalisation strategy. Morten Agerdal Kristiansen representing the Danish Hub stated, "Establishing a Gaia-X Hub in Denmark is an important political decision taken by the Danish Parliament as part of our national strategy for digitalisation. Through our hub, we aim to increase Denmark's participation in the European discourse on data and pave the way for Danish actors to take part in European projects."

Norway expressed enthusiasm about its inclusion in the Gaia-X network, with officials highlighting the potential benefits for Norwegian businesses. "We are proud to finally be a part of

Gaia-X," said Hermund Arntzen Dale, from the Norwegian Hub. "We look forward to helping Norwegian businesses unlock value from their data and connecting Norway to the European digital market."

The Swiss Hub emphasised the importance of international collaboration to create secure, transparent, and efficient data spaces tailored to diverse local needs.

The addition of these hubs underscores Gaia-X's core vision: creating interconnected data spaces that transcend borders, increases innovation, and promotes collaboration. By incorporating diverse perspectives and expertise, Gaia-X reaffirms its commitment to designing solutions that are inclusive, transparent, and aligned with local regulations. This development reinforces Gaia-X's mission to enable a more secure and interoperable digital ecosystem across Europe and beyond.

Hub
Denmark

Hub
Norway

Hub
Switzerland

LIGHTHOUSE UPDATES

EuProGigant

Lukas Schwab, Communication Associate at EIT Manufacturing & **Lukas Nagel**, Research Associate at PTW TU Darmstadt

What is EuProGigant?

The EuProGigant project officially started in 2021 as a Gaia-X initiative in the manufacturing industry and thus, marked the starting point of the current project ecosystem. Due to its impressive progress and resounding success, EuProGigant was listed as a Gaia-X Lighthouse Project in 2022. Since 2023, the ecosystem surrounding EuProGigant entails five research projects which aim to enhance different fields of the European manufacturing industry. The vision of the Austrian-German project is to enable the secure

and sovereign exchange of data in production, while increasing the competitiveness of the European manufacturing industry on a global scale by tackling essential topics with its use cases `Ideal Component matching´, `Validation platform´, `Mobile processing machines´ and `CO2 footprint prediction´.

Updates from the Use Cases

There have been significant contributions made by the respective EuProGigant use cases. Recently the `Ideal component matching´ use case was prominently featured as part of the Gaia-X Use Case testimonials. The publication offered insights into the functions of the use case and the underlying technological infrastructure which enable it to improve the component compatibility and reducing both rework and waste. Gaia-X provides the necessary transparency with its data logging mechanisms to ensure a sufficient level of trust among the stakeholders.

In light of the new EU regulations such as the Corporate Sustainability Reporting Directive (CSRD), the `CO2 footprint prediction´ use case gained increased prominence in the manufacturing industry. By leveraging the

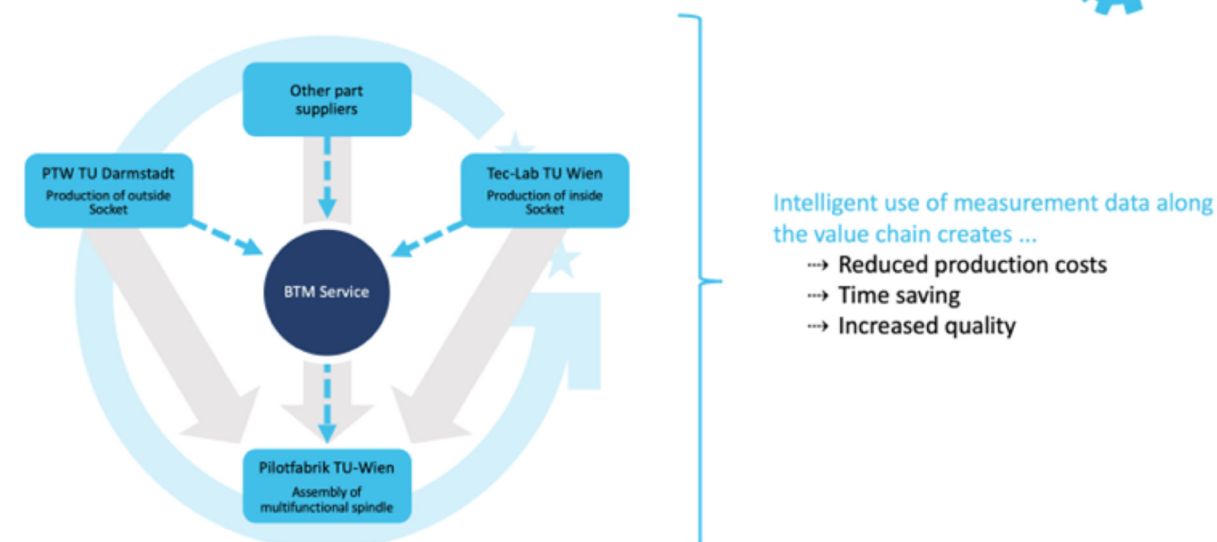Figure 1: Project ecosystem surrounding EuProGigant

Figure 2: Overview of the Ideal Component Matching Use Case

architecture and standards provided by Gaia-X, the stakeholders can operate in a secure data space and also track and predict the CO2 emissions generated along the supply chain in the injection moulding domain (as depicted in figure 3). This enables sound decisions by all members of the EuProGigant data space to act in an environmentally friendly fashion. Recently,

this use case was prominently presented at the Wiener Produktionstechnik Kongress (WPK) 2024 of TU Wien by Professor Matthias Weigold with the assistance of Lukas Nagel and Fabian Gast.
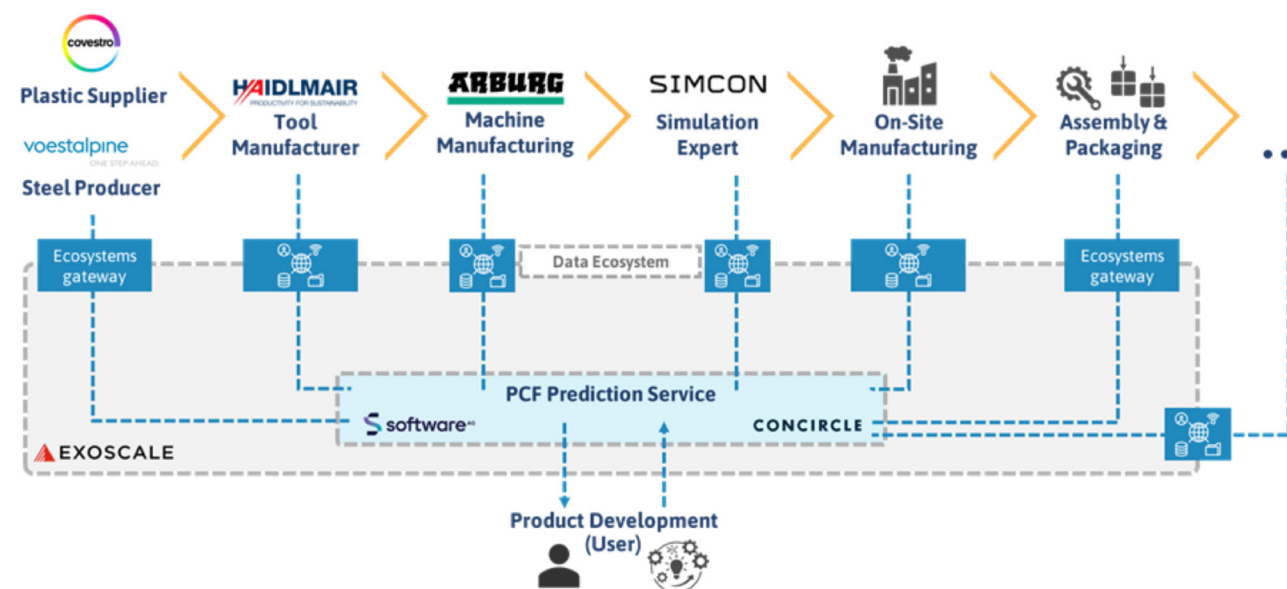

Figure 3: Collaboration across the Supply Chain

Noteworthy events

Within the last year, EuProGigant was prominently featured at multiple prestigious events. For instance, it was part of the Gaia-X community booth at the annual Hannover Messe in Germany. This event was filled with political exposure as the current German Vice chancellor, Robert Habeck was amongst the prominent participants.

Next, our EuProGigant team held the yearly Open House Day, this time in the esteemed Palais Ferstel in Vienna. Here, project partners, university - as well as industry representatives from corporates, SMEs and startups came together to share their expertise on data sharing. Once more, this event attracted high political interest as Austrian federal minister Leonore Gewessler and the director of TU Wien Jens Schneider gave their insightful keynote presentations and Gaia-X COO Roland Fadrany participated in a panel discussion on "Gaia-X for SMEs".

Next steps for EuProGigant

EuProGigant is heading towards its maturation in 2025. Therefore, the project partners are working hard on finalising the use cases. Currently a federator is in conceptualisation which might enable a promising future for EuProGigant!

Figure 4: Political representation at the EuProGigant Open House Day 2024

Figure 5: Collaboration at the Hannover Messe 2024 in Germany

Gaia-X Lighthouse Projects: Pioneers in healthcare

Verena Bartels, Communications officer & **Dennis Appelt**, Scientific advisor at Gaia-X Hub Germany

(This article was first published by Gaia-X Hub Germany on 21/10/2024)

Every day, huge amounts of data is generated in the healthcare sector that has great potential to significantly improve our healthcare. However, the exchange and comprehensive use of this data is currently still associated with a number of hurdles. Two projects of the Gaia-X funding competition - TEAM-X and HEALTH-X dataLOFT - are therefore developing innovative solutions that will make it possible to share data easily, confidently and with sovereignty in the future. Therefore, they were recognised as Gaia-X lighthouse projects at the beginning of the year.

The role of the Gaia-X Lighthouse Projects

Lighthouse Projects are pioneering initiatives that realise the values and goals of Gaia-X in a special way and serve as blueprints for the implementation of the Gaia-X principles. They are designed to address specific use cases and industries while demonstrating the benefits of the Gaia-X data ecosystem. The projects cover a wide range of application areas, including Industry 4.0, energy, mobility and public administration. They are characterised by their high market relevance and scalability, their level of innovation and their contribution to digital sovereignty. Lighthouse Projects meet certain criteria that have been defined by the Gaia-X Association for

Data and Cloud (AISBL) as the European umbrella organisation, which are reviewed as part of an application process.

Connecting health data from various sources

In the two healthcare projects of the Gaia-X funding competition, TEAM-X and HEALTH-X dataLOFT, data from the primary and secondary healthcare market is connected by a data space or platform and made accessible to various stakeholders in the healthcare system, such as patients, doctors, researchers and nursing staff. This means that a vast amount of data, primarily generated in hospitals, clinics, or care facilities and secondarily in daily life (via healthcare apps or modern devices like fitness trackers), can be interconnected and made available.

Citizens at the center

HEALTH-X dataLOFT and TEAM-X pursue several key objectives that could have a lasting impact on the healthcare sector:

1. **Data sovereignty and data security**: A key concern of the projects is to give citizens control over their own health data. Unlike many other digital offerings, these

Picture: Freepik (Link: https://de.freepik.com/fotos-kostenlos/medizinisches-banner-mit-arzt-der-eine-tablette-haelt_30555917.htm)

projects focus on citizens, allowing them to decide on their own, which entities have access to their data. At the same time, the decentralised structure of the Gaia-X framework ensures compliance with the highest data protection standards in order to protect sensitive personal information.

2. **Promoting research and innovation**: The secure exchange of health data can accelerate research and development in the healthcare sector. With their technical applications, TEAM-X and HEALTH-X, dataLOFT provide a basis for the development of innovative approaches such as personalised healthcare services, artificial intelligence in diagnostics, new therapies or digital assistance systems in care.

3. **Interoperability and scalability**: The projects place great importance on ensuring that the developed technical solutions

are interoperable, enabling seamless integration together with other systems and platforms. This enables broad use and high scalability of the applications, to facilitate the application in different European countries and healthcare systems and that they can also be connected to the European Health Data Space (EHDS) planned by the EU. In addition, the Gaia-X conformity and open interfaces allow further connections to other data ecosystems, such as mobility.

4. **Transparency and trust**: In order to gain the trust of users, HEALTH-X dataLOFT and TEAM-X focus on transparency. Users of the platforms and digital services will be able to understand exactly how and by whom their data is processed and what benefits result from this. Users retain full sovereignty over their data, with the ability to grant or withdraw consent for data processing at any time.

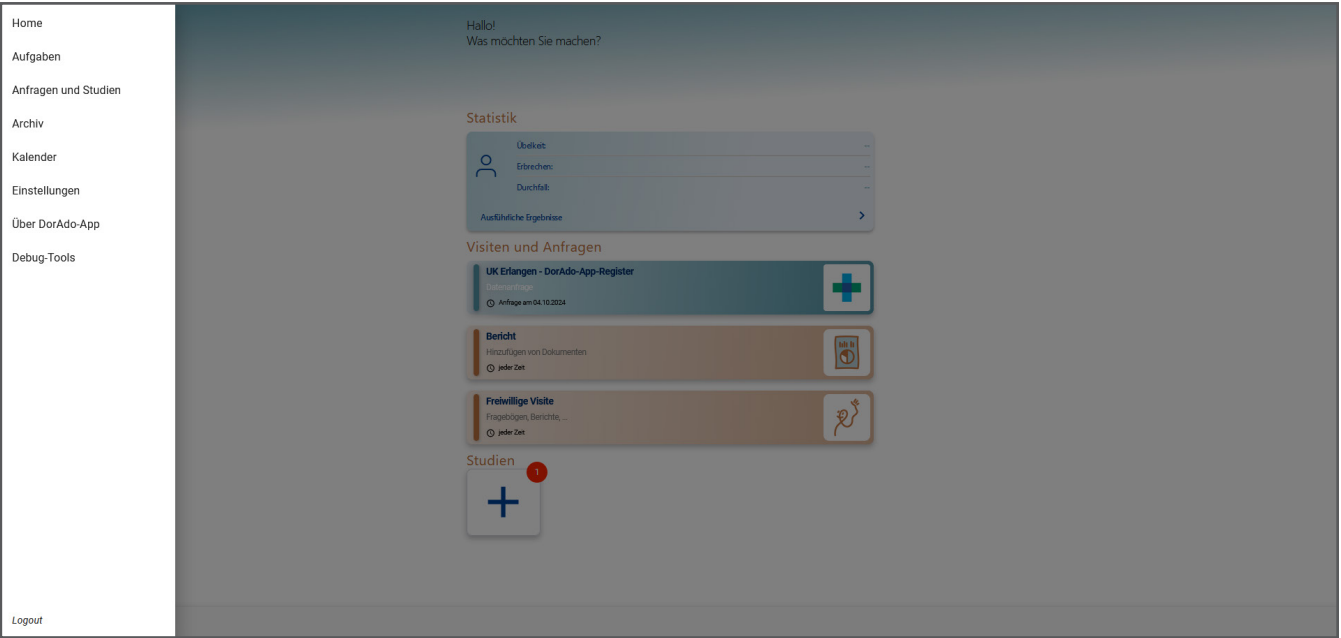## Data-based medicine and cross-border healthcare

The projects provide important groundwork, particularly with regard to the European Health Data Space. The EHDS is a pioneering initiative of the European Union to facilitate the secure exchange and shared use of health data. The EHDS aims to make patient data, research findings and clinical information accessible across borders. In the future, for example, hospitals and medical staff in Spain will be able to access the patient's electronic patient file in case of an accident on vacation with all information displayed in their own language to ensure accurate care.

For EHDS implementation, this sensitive data must be securely accessible from different sources. This is where Gaia-X data space projects such as TEAM-X and HEALTH-X dataLOFT come in. As pioneers of their sector, they have been working on the diverse legal, technical, economic and organisational challenges of data sharing, especially in the healthcare sector, since the start of the funding competition. They are thus making a decisive contribution to laying the foundations for the effective implementation of the European Health Data Space.

Added value for the healthcare sector

Small and medium-sized enterprises also benefit from the pioneering work done by the consortia in the two healthcare projects. For many SMEs in particular, remaining competitive and developing new business models in times of digital transformation is quite challenging, often due to limited financial resources, time or personnel. The trustworthy data ecosystem driven by these funding projects and based on common standards and shared values also enables SMEs and start-ups from the healthcare sector to develop and offer data-driven business models, products and services.

For example, the first applications and advanced smart services are already in development. They allow users to release their data for use in research. For example, after a hospital stay, patients can access information such as medical reports or laboratory results directly on mobile devices and decide if they want to share this valuable personal data with research institutions, focusing on specific topics or diseases and depending on large amounts of real data. The special thing about this is that the data providers retain control at all times by being able to specify certain uses for the data or to withdraw access to it again.

Additionally, new concepts, platforms and services for processing medical data can be implemented, improved and provided on the basis of an emerging health data space. This could lead to further innovations on the market, such as tools for data anonymisation and pseudonymisation for research institutions, pharmaceutical and medical technology companies, or AI developers.
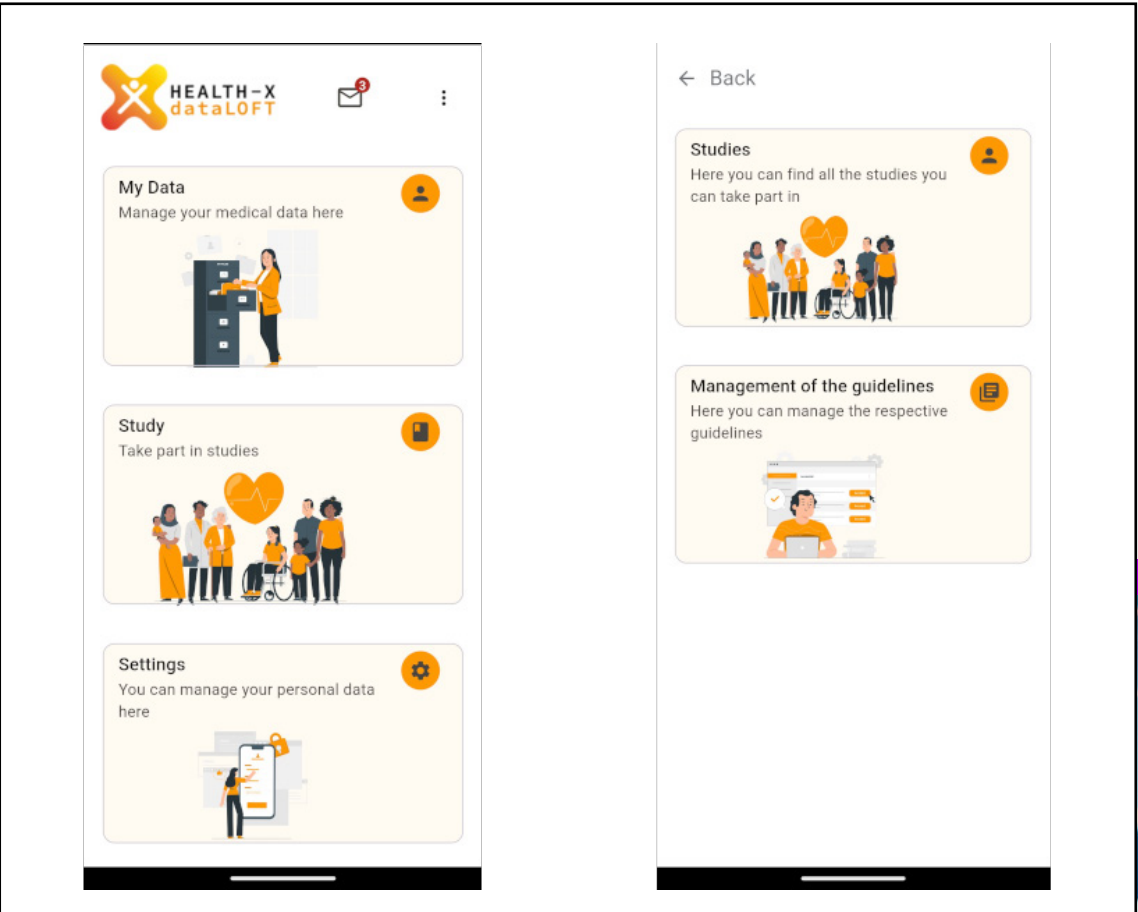
Promising strategies for the future

HEALTH-X dataLOFT and TEAM-X are working together to develop promising strategies for further utilisation in order to secure and build on the valuable findings and solutions beyond the duration of the project. The projects focus primarily on value-adding collaborations and partnerships with other players in the healthcare sector. With the newly founded, non-profit association - the European Health Data Alliance e.V. (EHDA) - the Gaia-X Lighthouse Projects aim to advance the development of citizen-centered health data spaces in Europe and to strengthen the innovative power of the industry. As a central point of contact, the EHDA brings together many different healthcare experts: it offers companies, research institutions or organisations the opportunity to network with each other and supports corresponding initiatives in their development of EHDS-compliant technologies. In some cases, the consortia also develop their own organisational and operating models for the modern, data-based healthcare of the future.

TEAM-X and HEALTH-X dataLOFT are good examples of how Gaia-X is driving digital transformation in the healthcare sector. The projects show that it is possible to develop and apply revolutionary technologies in line with the values of data protection, privacy and data sovereignty. In the long term, the projects and their innovative approaches could pave the way for a new era in healthcare where data is used securely and efficiently to improve healthcare for all people. These projects turn the Gaia-X vision into reality and create a model of best practices that can receive broad attention far beyond the borders of Germany and Europe.

For further information on the projects click here:

https://project-team-x.eu/

https://www.health-x.org

Written by Verena Bartels and Dennis Appelt

Information about the authors:

Verena Bartels: Communications officer at Gaia-X Hub Germany for the founding projects TEAM-X and HEALTH-X dataLOFT
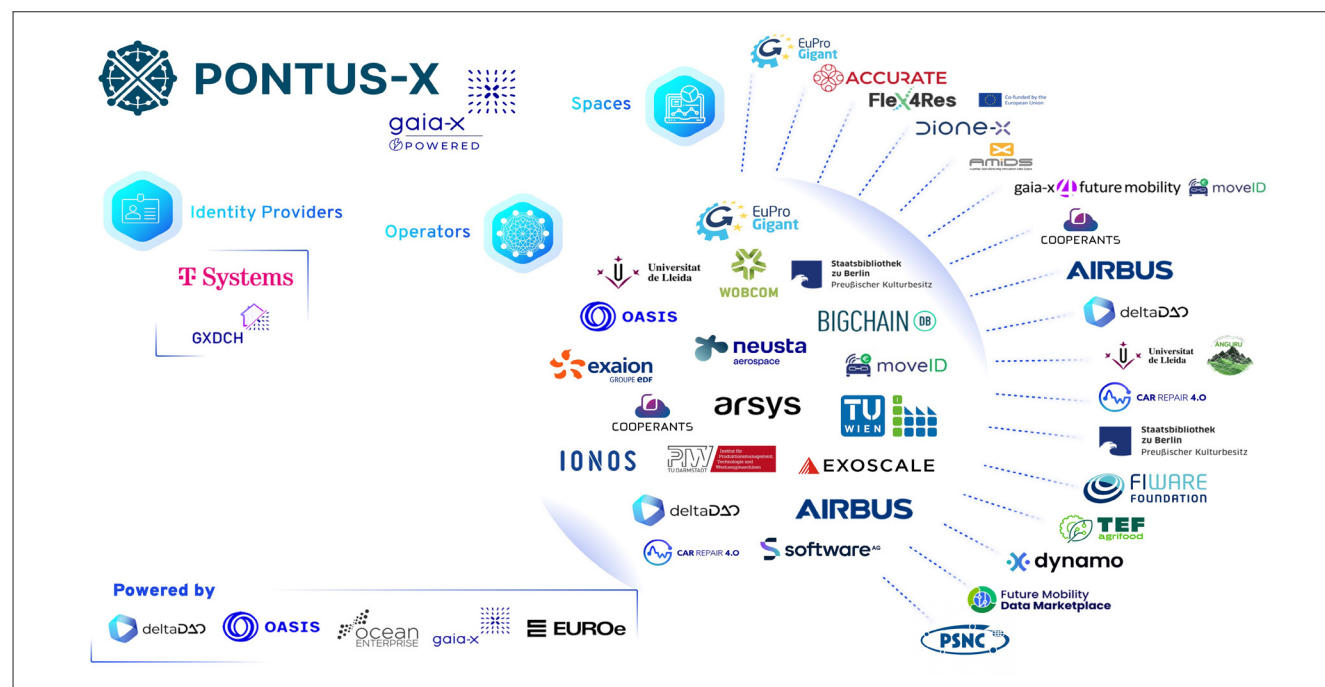
Dennis Appelt: Scientific advisor at Gaia-X Hub Germany for the founding projects TEAM-X and HEALTH-X dataLOFT

The Pontus-X Everything-as-a-Service Ecosystem

Kai Meinke , Co-Founder and Business Lead, deltaDAO AG


Today, Pontus-X, a reference implementation of the X-ecosystem, initially orchestrated by deltaDAO AG, showcases four Gaia-X Lighthouses: COOPERANTS (aviation and space), EuProGigant (manufacturing), ACCURATE (manufacturing) and Gaia-X 4 Future Mobility (mobility and logistics). Additionally, it features use cases from various domains within a decentralised digital service ecosystem that is owned and operated by its participants.

In the Pontus-X ecosystem, federated across the Gaia-X Hubs of Germany, Austria, Finland, France, Spain and the Netherlands, all participants can offer data, software, manufacturing, mobility, and cloud services in a unified Everything-as-a-Service ecosystem.

deltaDAO AG is proud to be an accredited provider of the Gaia-X Digital Clearing House (GXDCH). deltaDAO supports all Gaia-X participants through the freely available validation services as the one-stop place to get verified against the Gaia-X rules to obtain compliance in an automated way.

The largest publicly available X-ecosystem, Pontus-X, powered by Gaia-X and smart contracts, moves towards production in 2025.
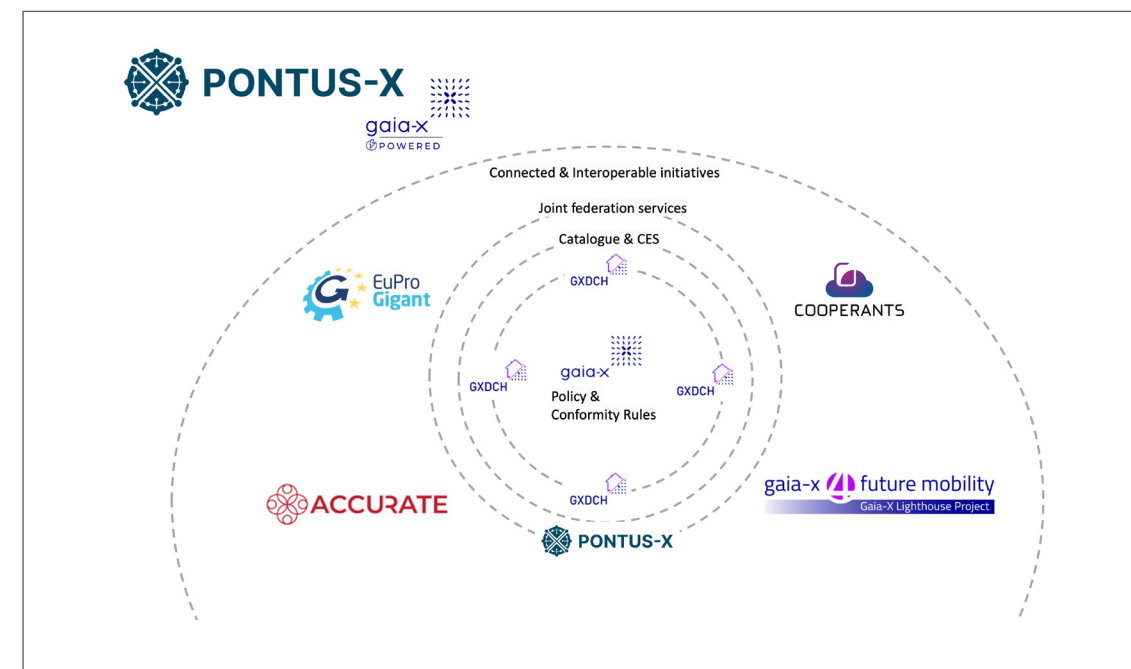
After two years of bootstrapping this ecosystem and decentralisation of its operating companies, Pontus-X moves to the production phase, building on the Gaia-X framework from day 1. With over 100 institutions onboarded to the Gaia-X framework and hundreds of use cases developed and tested in the public ecosystem, the critical mass has been reached to transition to the production ecosystem.

Built upon six of the eight validated services of the Data Space Support Centre (DSSC) Toolbox 1.5 for the creation of data spaces, the robust

Ocean Enterprise open-source software framework, the OASIS privacy-preserving network, and the Gaia-X Framework, the production implementation of Pontus-X will be available in early 2025. This initiative aims to enhance collaboration and the production of digital services across domains.

If you want to start your data space journey today, explore the full potential of Gaia-X ecosystems and benefit from an open ecosystem that allows you to make the most out of your digital services, do not hesitate to reach out and join the Pontus-X ecosystem via https://pontus-x.eu

A New Lighthouse for Europe

Silvia Osman, Events and Communications Manager & **Cristina Brandtstetter**, Chief Marketing Officer at Dynamo

A lighthouse usually brings guidance and hope to those navigating troubled seas. **Dynamo**, the European Cloud Alternative, became, since its foundation, a perfect model of such a lighthouse for 'cloud navigators' in the often-intricate digital waters, a voice to raise concerns in tough times for the industry's many Cloud Service Providers.

Europe has been waiting for a real European alternative for far too long, leading to the high concentration of hyperscalers to allow for more choice and innovation, as well as for European trusted and sovereign solutions. The regulatory effort of institutions produced high expectations in the market to regain control, yet the market share of European providers has dropped linearly at a loss rate of 2-3% year on year, reaching 10% as we speak. This clearly shows in a tangible way, the point of no return in 3 to 5 years.

Dynamo aims to support the creation of a true European alternative for cloud services, realised through a commercial federation across multiple suppliers. Besides building the critical mass that no individual can achieve, Dynamo wants to create a one-stop-place for all providers, of all types and all sizes, to easily find and adopt the best of European solutions, often unknown and invisible to the end users.

To enable a federation, **Dynamo** implements a simple but pragmatic business model that gives advantage to all participants through an indirect sales channel acting as a multiplier effect. Interoperability needs to be enabled at multiple levels, from the selection of alike participants, to uniform contractual conditions, uniform sales processes, technology interoperability across provisioning platforms, down to technology agnostic virtualisation, and multi-supplier service composition.

As a Gaia-X Lighthouse, **Dynamo** wants to leverage the common standard for trust defined by the organisation, complementing it with automated collaboration mechanisms to enable a seamless cooperation, much like all being part

of a single virtual company. Our priority is to enable growth leveraging existing assets, whilst they will evolve in time to be more and more uniform, with a speed of execution necessary to react before European cloud and digital assets will be completely colonised by the expansion of dominant big technology players.

Dynamo addresses the key challenges in the European cloud market. Historically, EU operators and funded project initiatives have struggled to increase competitiveness, due to an excessive focus on regulation, and on research and innovation only. By developing an operational framework to increase sales and market penetration, **Dynamo** helps to achieve the high-level objectives of the European Data Strategy, accelerating the creation of a true cloud-to- edge, catalysing fragmentation, while also protecting and giving visibility to SMEs, and transforming the Europe footprint into a compelling advantage, and the capillary proximity to the end customers.

Dynamo exemplifies Europe's strategic shift toward fostering a homegrown digital economy that prioritises independence from foreign providers by championing interoperability and controllability, fostering trust and innovation, and shifting from one-to-one direct competition between small providers to forming numerous partnerships to achieve significant presence in the global market.
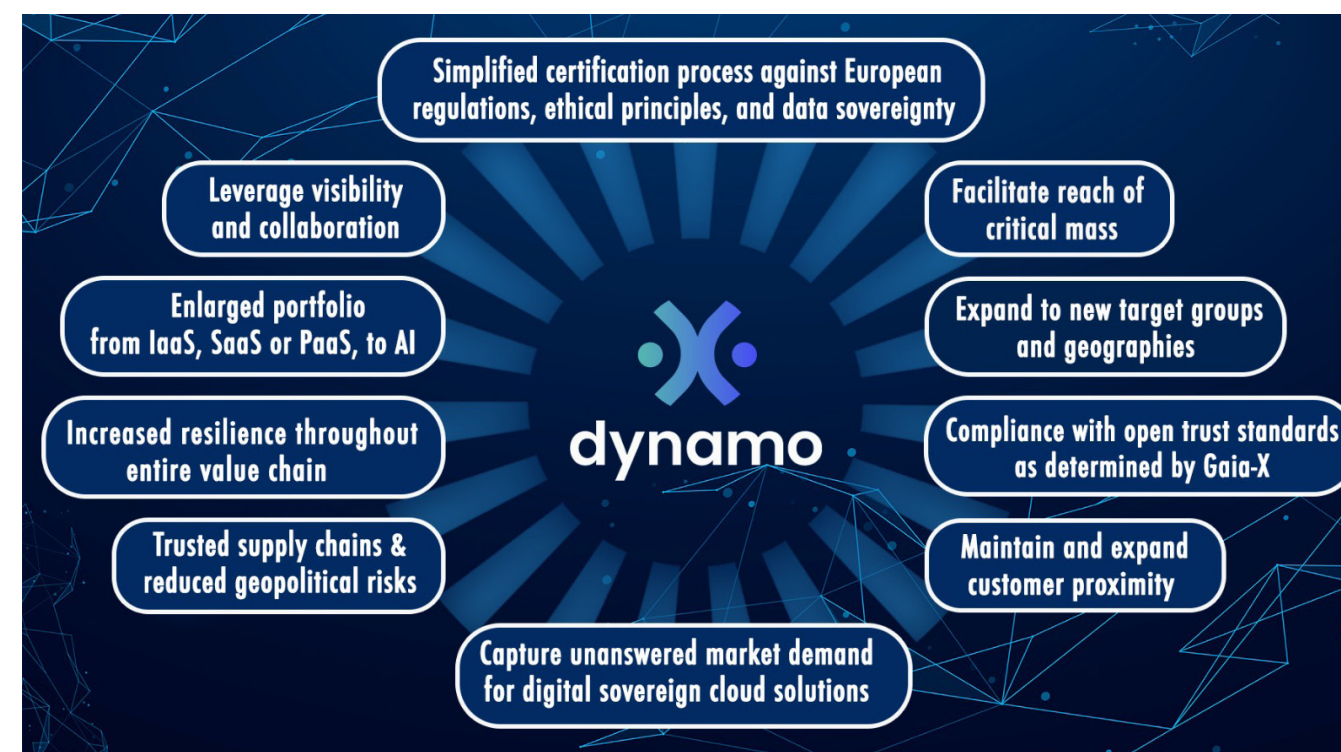
Behind the scenes: EONA-X's collaborative impact to the success of the Paris 2024 Olympics

Charles Telitsine, Director General of EONA-X

Tackling the challenge of welcoming the Paris 2024 Olympic delegations

The Paris 2024 Olympic delegations represented around 60,000 athletes, technical staff, officials and press. Coordinating their arrivals and departure, without disturbing the daily flow passing through Groupe ADP's Orly and Charles-de-Gaule airports (around 330,000 passengers per day) called for comprehensive collaboration across France's public and private mobility, logistics, and tourism teams. Coordination, and access to the right information at the right time by the right people (and no one else) was central to its success.

Such a challenge, with sovereignty and accessibility of data between multiple stakeholders is exactly what EONA-X was designed for. This data space – which is a Gaia-X Lighthouse Project since 2022 – is indeed conceived to ensure trust, and secure data-sharing at scale.

Making use of it in real conditions, at such a degree, to coordinate up to 600 vehicles per day dedicated for delegations, meeting all the event's complex logistical and security requirements was however, like the Olympics, a feat no one could afford to miss.

Preparing for this once in a century event in France, the data sharing project has been designed for success and financed with the help of France 2030, investment for the future initiative (deep tech innovation funding) and of course private members of EONA-X.

Predictive Capabilities through Digital Twin Technology

In preparation of the games, Groupe ADP developed a digital twin simulation of its airports, offering enhanced predictive capabilities based on real operational data, enabling proactive management of delegations without negatively impacting the flow of other passengers. This technology provided a real-time model of the transit environment, allowing the airport staff to test scenarios, anticipate congestion points, and to dynamically adjust routes. Through this predictive planning, the platform helped optimise traffic flow during peak times and reduced journey times for delegations and other passengers, supporting more consistent punctuality. This first impression of France at arrival was important as 30,000 journalists from across the world were welcomed and had to be accredited on-site at the airport. The data of each delegation's progress was collected from thousands of existing captors in the airport with additional reinforcement from an app developed specially for that purpose, where volunteers were able confirm the different steps, each delegation had reached inside and outside the terminals, which reduced waiting time in the usually crowded and limited resources areas. This exceptional work, using AI and algorithms from an innovative company called Cosmotech, has been awarded a special prize by 30 French CIOs gathered during the 2024 famous Data Night.

Scan me for more info

More info here : bit.ly/digital_twin ADP

Real-Time Flow Management

To support the needs of Groupe ADP's staff, EONA-X working with innovation and operational teams of the airports also developed a vehicles regulation application. Built with low-code no code technology, but also disposing of predictive features, this app enabled Paris - Charles de Gaulle Airport staff to process over 21,000 vehicles during the few weeks of the Games, including shuttles, buses, trucks and other essential transport services. In addition, data integration with partners like Airlines, SNCF, Apidae, and other data coming from the Olympic Organisation Committee allowed Groupe ADP to successfully acquire the right information and make it available in the EONA-X data space. This approach was instrumental in reducing bottlenecks, providing a streamlined experience for arrivals and departures H24 and 7/7. To secure a perfect journey for each delegation, the platform powered by Amadeus, performed without any interruption during all the events, and thanks to the thorough preparation and active

team involvement, it was also able to be deliver to new partners with a high level of support when necessary.

Secure, Collaborative Data Sharing

The European platform's secure data-sharing features also facilitated high-level coordination with the Ministry of Home affairs in charge of Police forces coordination, for whom an EDC connector was installed. This real-time access to multiple sources of enriched data enabled close monitoring of operations, both for government agencies and transport providers, enhancing security and logistical coordination across venues and transit routes in the whole of the Great Paris Area.

Legacy and Future Applications

The coordination achieved during the Paris 2024 Olympics demonstrated the potential for connected data ecosystems to meet complex logistical demands. As a replicable model, EONA-X's data space is well-suited for future large events, including the 2025 UN Summit for Oceans in Nice (also member of EONA-X) or potentially the 2026 Winter Olympics in Milan and of course the next Winter Olympics in the French Alps in 2030.

Charles Telitsine, Director General of EONA-X
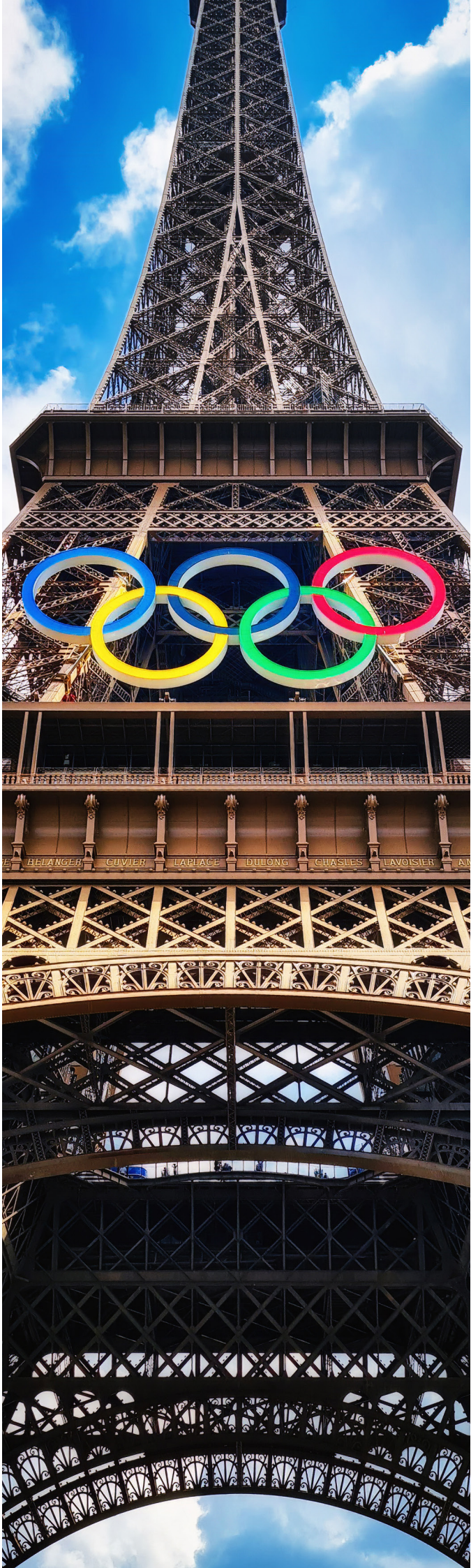
New business models through data cooperation

Establishing a manufacturing data sharing ecosystem

Johannes Hunschofsky, Managing Director, & **Wolfgang Kniejski**, Senior Project Manager, EIT Manufacturing East

Figure 1: Paradigm shift towards data-based value creation (Source: Felix Hoffmann, TU Darmstadt)

Digitalisation is transforming traditional business models across industries, offering significant advantages, especially for small and medium-sized enterprises (SMEs) in manufacturing. The key lies in leveraging data from information and communication technologies to optimise internal processes, increasing both efficiency and effectiveness of core operations. Digital tools enable SMEs to create new services and business models, enhancing their competitiveness and resilience. Beyond product innovations, process innovations driven by innovative software and artificial intelligence can increase value creation, both within a company and across industries by integrating partners and sharing data along supply chains (Kaufmann 2015). In manufacturing, the shift from product-based to solution-based offerings is growing, with data-driven models like intelligent products and services playing a central role. For SMEs, data cooperation is crucial, allowing access to valuable business data without bearing all the costs. Thus, data sharing strengthens innovation, competitiveness, and long-term growth. However, many organisations hesitate

to share data due to concerns over control and security. Nevertheless, as technological change has progressed very quickly, the systems and processes we use to collect and share data have evolved incrementally in parallel with the technology (Ahle 2024). To fully capitalise on the value of data, a secure and collaborative environment, known as a data space, is essential to ensure trust, interoperability, and sovereignty through established standards.

This article refers to the European Production Giganet ("EuProGigant"), which aims to create a smart, resilient, and sustainable manufacturing industry in Europe (Dumss et al. 2021). EuProGigant is a binational project currently funded by the Austrian Federal Ministry for Climate Protection, Environment, Energy, Mobility, Innovation and Technology (BMK) and the German Federal Ministry for Economic Affairs and Climate Protection (BMWK). EuProGigant was created and motivated by the conviction to drive the development of a sustainable and innovative data economy in the manufacturing sector in Europe. It is not geographically limited, but primarily
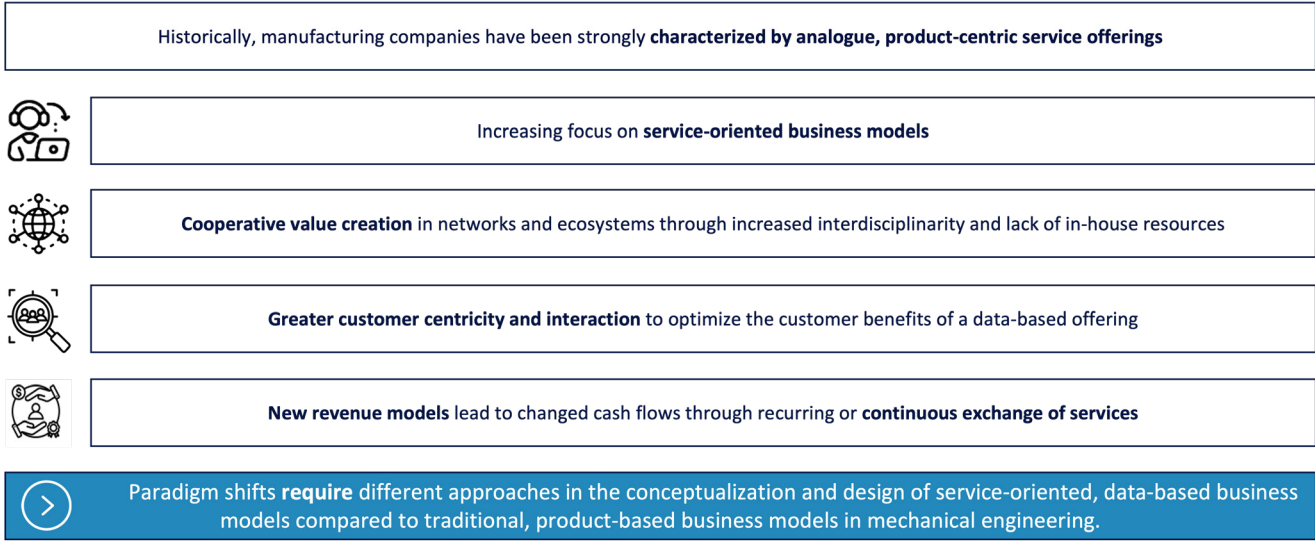
refers to European values. To this end, Gaia-X conformity enables the interoperability and portability of infrastructure, data and services on the one hand, and creates a high level of trust among users on the other. While Gaia-X focuses on setting standards and technical frameworks, activities of the EuProGigant project also address the development of business and governance models that enable collaboration in data exchange between all stakeholders in the manufacturing industry. One of the stated goals remains the development of a sustainable business model for orchestrating and federating data exchange services on a trusted and sovereign basis. In such an ecosystem, companies can then exchange data securely and reliably and develop the technical and semantic interoperability required for the full use of manufacturing-relevant data. This way, we contribute to building federated data exchange services in a manufacturing data ecosystem using the Gaia-X framework (Gaia-X AISBL 2020).

The federator is set to become a legal entity by 2025 with a sustainable medium and long-term business model. Federators are Gaia-X compatible data exchange orchestrators

authorised to operate federation services and manage federation business independently. A production data ecosystem includes shared functions and value-added services that enable data value chains between data holders and users across the complex production sector. It offers federated benefits to stakeholders by making data selectively accessible while adhering to European data protection laws and other relevant regulations.

Business models for federated data exchange services contribute to both core production processes (primary data use) and secondary data use in ecosystems involving diverse stakeholders: industrial companies, SMEs, start-ups, research institutions, public organisations, developers, IT, and cloud providers. These parties can present products, exchange data, and co-develop innovative business models based on Gaia-X principles and a Gaia-X compliant technical architecture framework.

Consequently, data owners can decide, control and monitor what happens to their data, for instance who receives it and what it is used for. The EuProGigant federator will closely follow the European data strategy and the specifications
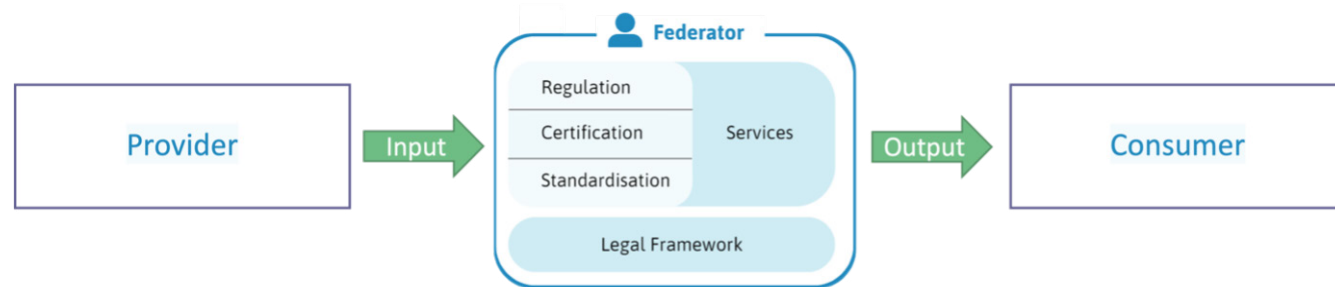
Figure 2: The federator as orchestrator of data cooperation (Source: own graphic)

of the Gaia-X framework when orchestrating the exchange. Providers and consumers of data, analysed data, infrastructures, and value-added services, as well as all other participants in the production data ecosystem, will understand the benefits and added value of federated data exchange activities: sovereignty, openness, fairness, security, and trust. Thus, the EuProGigant federator will not only serve a few large players but will also make work easier for countless companies and organisations involved in production processes and operating in related industries worldwide.

The collaborative role of the federator in EuProGigant creates "multi-sided business models" based on network effects that serve both the supply and demand of data and data-related services. Unlike linear data collaboration models, our federator model allows data providers to interact with data consumers and create value. The model's features define the customer value proposition and the mechanism for data exchange. Companies that consume data can choose who they collaborate with to create value. They, thus, also make decisions about how to design their supply chains. The multi-sided value flow enables synergies and scaling through network effects, where the overall value of activities in the ecosystem increases as more participants join. This promotes growth and can create a self-reinforcing cycle. The federator acts as an intermediary, providing the infrastructure,

tools, and rules for conducting interactions. This enables the federator to generate revenue from various sources, including transaction fees, service fees, membership fees, advertisement, and other forms of data monetisation. This culture of trust is crucial for the successful acquisition and integration of participants into the data exchange ecosystem. Trust-building measures on a personal, organisational, and technical level can ensure a productive and harmonious working environment and lead to the development of innovative business opportunities. The following diagram simplifies the flow of data and money that will be applied in the EuProGigant data exchange ecosystem:
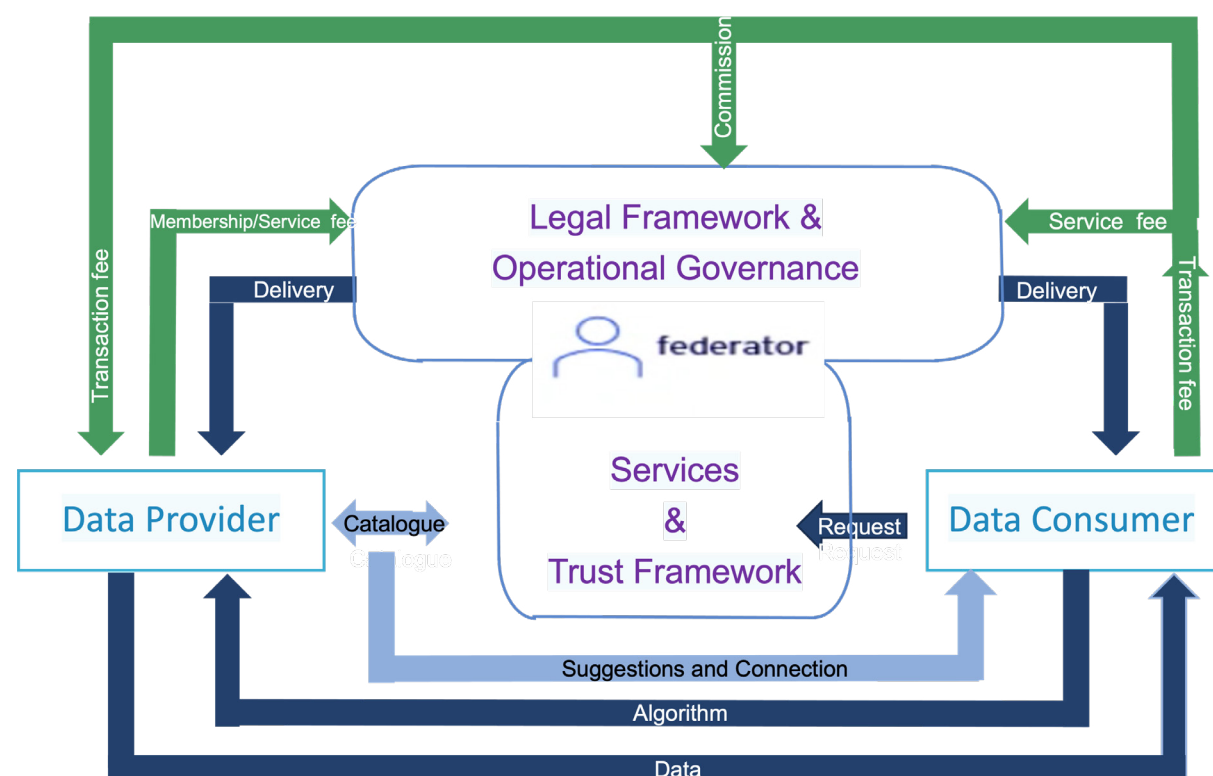
The schematic flow can be described as follows: (a) The consumer has access to the data and service catalogue and finds the desired dataset and its respective provider. (b) He connects with the provider and agrees with them on the terms of contract conclusion, pricing, and data transfer. (c) Using distributed ledger technology, the consumer sends their algorithm to the dataset provider, (d) who loads the algorithm with the data and (e) sends it back to the consumer. (f) The consumer is now ready to apply the purchased dataset. (g) The data consumer pays a transaction fee for the dataset, (h) with a small percentage of the transaction fee going to the federator for orchestrating the deal. (i) Other compensation models such as direct service fee, membership fees, etc. are also possible.

The federation (orchestration) of data exchange can induce one or more positive effects within the very heterogeneous interest groups in the manufacturing sector. Thus, the EuProGigant federator acts as an intermediary that provides the infrastructure, tools, and rules for interactions. It offers a "data marketplace", whereby the data space can be seen as a "sales channel" between data service providers and data service users, and helps to exploit the following potentials:

- **Cost sharing**: Data room participants share their data to meet common requirements (e.g. compliance, process efficiency, transparency, interoperability).

- **Shared innovation**: Customer innovation can be realised through collaboration among ecosystem members. No single ecosystem member has all the data needed.

- **Joint forces**: Ecosystem members join forces to prevent the emergence of a limited number of dominant market participants. No single ecosystem member has the resources and commitment needed to oppose this alone.

- **Shared marketplace**: Ecosystem members join forces in providing quality-assured, easy access to data of an area of common interest (e.g.: open data, business partner data, etc.). Thus, transaction costs decrease for all ecosystem members.

- **Network effects**: The value of the platform increases as more participants join. This promotes growth and can create a self-reinforcing cycle.

- **Multi-sided value flow**: The architecture and governance models facilitate interactions and value exchange between multiple parties. Users on one side can create value for users on the other side.

- **Scalability**: The business platform can thus scale quickly because the focus is on expanding the user base and improving interactions rather than on linear production and delivery of services.

- **Diverse revenue streams**: The federator as an "orchestration" can generate revenue from various sources.

- **Greater common good**: Public and private sectors share data for larger common societal goals (e.g. climate protection).

Figure 3: Schematic flow of data and money in EuProGigant's data sharing ecosystem (Source: own graphic)

New business models in Industry 4.0 focus on a consistently service-oriented approach. Many business models have already evolved according to the shift from product/service/data ownership to on-demand usage. This means that manufacturers no longer just manufacture and sell products, but offer comprehensive services tailored to individual customer needs. By applying this concept to data exchange and data collaboration business modelling, companies can now unlock the potential to develop new models where data is shared and used as a service. Instead of simply selling data, companies can offer data-driven services that provide real value to customers. This can include analytics, insights or integrated data solutions tailored to the user's specific needs. By connecting data sources, production facilities and business processes, companies can create flexible revenue models that depend on the value and intensity of data usage. This service-oriented approach to data can lead to innovative business opportunities and greater collaboration between companies. For all these reasons, data sharing has gained increasing attention. The focus is now shifting from established concepts to data collaborations. The EuProGigant federator can "sail in this wind of change" and unleash the potential for sustainable business activities in manufacturing ecosystems. Therefore, to address these challenges, manufacturing ecosystems should ensure that all relevant stakeholders have access to the high-quality and affordable forms of data cooperation presented, without regional restriction and in line with Europe's sustainable development goals (EU recovery plan).

New technologies and the exchange and use of smart data revolutionise the way manufacturers operate and create wider economical, ecological and societal impact. Overcoming financial, technical, and cultural barriers to data sharing, and offering incentives for engaging in it, can boost efficiency, innovation, and economic opportunities. This requires industry, government, and tech providers to create a collaborative and secure data-sharing ecosystem.
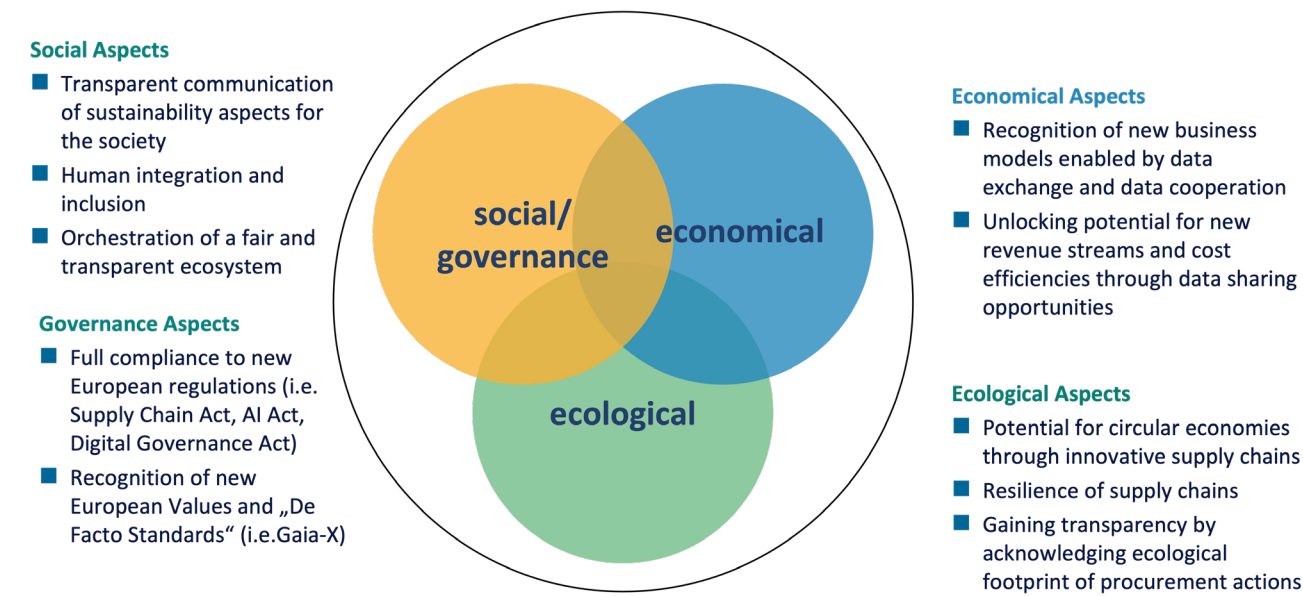
Conclusion

To realise the full potential of data sharing, several challenges, such as data interoperability, need to be addressed. While disparate data formats and systems make integration difficult, industry-wide standards for data formats and communication protocols will facilitate smoother data exchange.

The economics of data sharing must address disparities between large and small manufacturers. Large companies can invest in data infrastructure and analytics, but smaller ones may struggle. Thus, cooperative models and support mechanisms are needed to ensure all industry players' benefit.

However, long-term benefits will only be realised when these initiatives reach significantly larger scales, a higher level of semantic interoperability and a high level of trust within the user community. Many of the existing data cooperation initiatives today still face the same or similar fundamental functional problems. By networking with other Gaia-X Lighthouse Projects in areas such as energy, mobility and aerospace, the EuProGigant federator will create a framework into which existing data initiatives can be integrated with reasonable effort. This will also facilitate the creation of new initiatives.

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Social Aspects
- Transparent communication of sustainability aspects for the society
- Human integration and inclusion
- Orchestration of a fair and transparent ecosystem

Governance Aspects
- Full compliance to new European regulations (i.e. Supply Chain Act, AI Act, Digital Governance Act)
- Recognition of new European Values and „De Facto Standards" (i.e.Gaia-X)

Economical Aspects
- Recognition of new business models enabled by data exchange and data cooperation
- Unlocking potential for new revenue streams and cost efficiencies through data sharing opportunities

Ecological Aspects
- Potential for circular economies through innovative supply chains
- Resilience of supply chains
- Gaining transparency by acknowledging ecological footprint of procurement actions

social/governance — economical — ecological

Figure 4: Impact of federated data cooperation in the manufacturing sector (Source: own graphic)

Johannes Hunschofsky, Managing Director, EIT Manufacturing East

Wolfgang Kniejski, Senior Project Manager, EIT Manufacturing East

GAIA-X VOICES: USE CASE TESTIMONIALS

French-Korean Professional Mobility Tool

Félix Bole, Matthias De Bièvre, Prometheus-X, Visions, Headai & Solideo
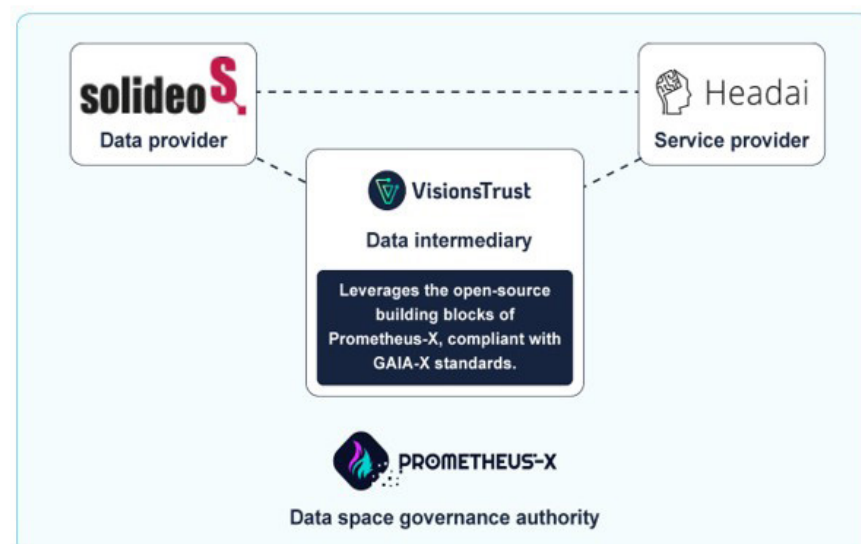
INTERACTIVE
Read full use case

Challenge

Difficulties faced by Korean professionals seeking international employment opportunities, and by international organisations aiming to efficiently recruit qualified Korean candidates. Notably the fact that individuals lack a simple way to share their skills data for matching with job opportunities.

Solution

The implementation of tools and protocols enable Korean professionals to share their data to be matched with job data and recommendations by AI services, while remaining GDPR-compliant and utilising the individual's consent.

Added value through Gaia-X

The aim is to add trust to all the data exchanges. Indeed, the Data Provider Solideo System is sending its data to the Prometheus-X data space, insisting that the data only be used by trustworthy third parties. The Gaia-X Trust Framework is the perfect solution to do this.

Ideal Component Matching

Gernot Baumgartner, Clemens Neuwirth, Lukas Schwab, EuProGigant

INTERACTIVE
Read full use case

Challenge

When components need to perfectly fit together, production companies have to deal with waste and rework (if the components do not fit as required), leading to loss of productivity due to mismatch components, and added time investment in measuring to find the best match.

Solution

Data from suppliers (high precision component measures) are collected in a data space where a side service provided by BTM Service is used to process this data regarding the production company requirements, providing the perfect match between components.

Added value through Gaia-X

Data sovereignty povided by Gaia-X, but also trust, transparency, and interoperability are key elements to enable effortless communication between all the participants involved in the production processes.

Ideal Component Matching - Overview
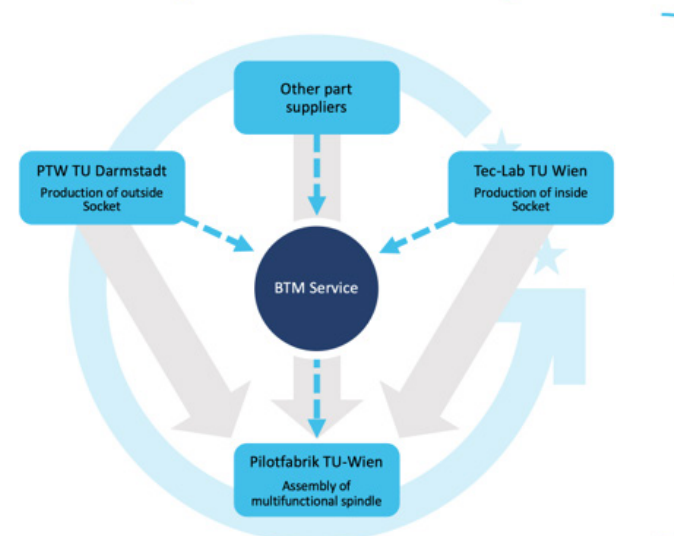
Digital Road Condition Monitoring

**Thomas Komenda, Kai Meinke, Albert Peci,** DeltaDao, Pontus-X, Peregrine Technology, City of Hamburg

Challenge

The poor state of roads and other mobility infrastructures causes unnecessary economic cost. Road conditions are monitored but not in a shared and efficient way and thus it becomes more costly.

Solution

Data providers, software providers, infrastructure providers and consumers efficiently work together to exchange and combine mobility infrastructure data and AI applications for analysis. The results can be shared as a service for example to city councils to improve the mobility infrastructure condition.
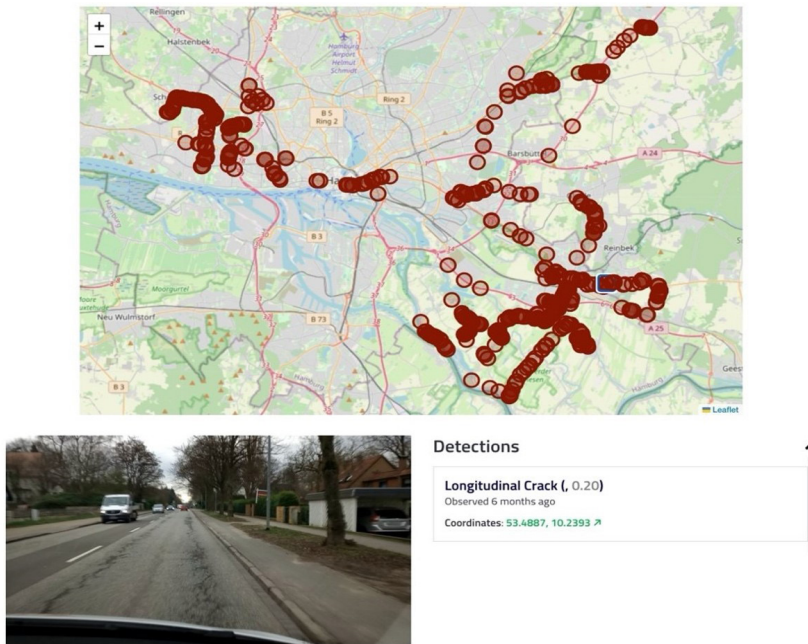
Added value through Gaia-X

Using Gaia-X concepts enables the orchestration of data, software, and cloud resources in an environment that benefits from transparency, standardised services, and open-source software without any lock-in to specific cloud services or platforms.

X-Road®

Petteri Kivimäki, Ville Sirviö, Nordic Institute for Interoperability Solutions (NIIS)

Challenge

Provide a solution to help organisations easily build data spaces whatever their industry may be, including Gaia-X concepts of trust and interoperability.

Solution

X-Road 8 provides a generic and data-agnostic solution to build data spaces for different business domains. X-Road 8 will be technically compatible and interoperable with the Gaia-X Trust Framework, enabling X-Road user organisations and services to meet the requirements of the Gaia-X Compliance rules.

Added value through Gaia-X

X-Road and Gaia-X are aligned on the fact that interoperability plays a key role to ease data exchanges within a data space, but also between data spaces themselves. Gaia-X standards and technology, such as Gaia-X Compliance, are therefore enabling better connectivity.
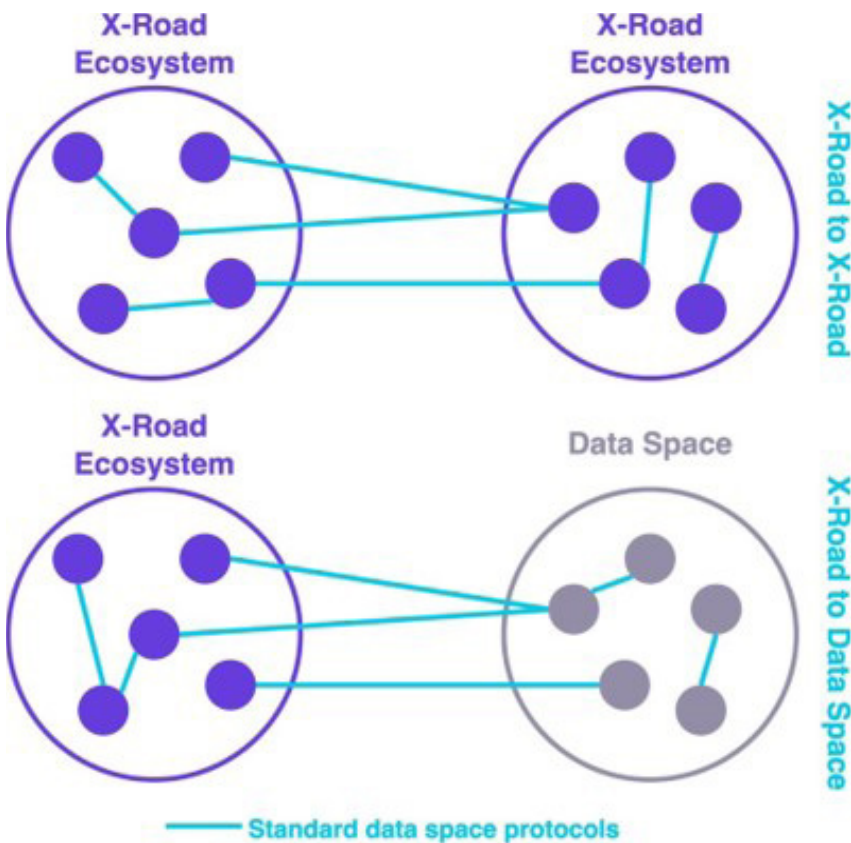
EVENTS

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.

07

PAST EVENTS

Gaia-X Summit 2024

The 5th Gaia-X Summit, "Empowering Global Data Spaces, Shaping Tomorrow's Cloud Infrastructure," successfully concluded at Finnkino Tennispalatsi, Helsinki. With over 600 registrants from more than 40 countries, the event showcased significant advancements in Gaia-X's mission to establish a secure, federated, and interoperable digital ecosystem, setting new milestones for digital sovereignty and global collaboration.

Key announcements included launching the Loire Release components for the Gaia-X Digital Clearing Houses, new Gaia-X hubs in Denmark, Norway, and Switzerland, the Gaia-X Evangelist Programme and a new compliance-focused Academy course.

Experts emphasised the importance of interoperability, economic sustainability, and global collaboration to drive innovation and create trusted data spaces. This Summit reaffirmed Gaia-X's mission to foster a resilient, standards-based digital ecosystem.

UPCOMING EVENTS

European Parliament Reception "Trusted Data Exchange over Federated Cloud: Gaia-X Enables the European AI Economy"

Hosted in collaboration with a leading MEP, the reception will feature insights from Gaia-X Management and project partners, highlighting our initiatives such as the Data Spaces Support Centre (DSSC) and the development of Common European Data Spaces—an essential component of Europe's strategy for a data-driven future. This event will provide an engaging platform to explore synergies between Gaia-X's mission and the legislative efforts of the European Parliament, fostering collaboration and paving the way for Europe's digital transformation.

Data Sharing Festival

4-5 February
The Hague

Gaia-X is proud to partner with the Data Sharing Festival (DSF) on 4-5 February 2025 at the Postillion Hotel & Convention Centre in The Hague. This year's theme, "Next Level Dataspaces: Adopt, Scale, and Roll-out," will focus on driving the adoption and scaling of data spaces. The event will feature two half-days of plenary sessions, along with workshops and breakouts aimed at fostering interactive discussions.

Data Spaces Symposium (DSS)

11–12 March 2025
Warsaw, Poland

Join Europe's top leaders and innovators at the Data Spaces Symposium 2024, hosted by the Data Spaces Support Centre (DSSC) and the Data Spaces Business Alliance (Gaia-X, IDSA, FIWARE, BDVA). Discover real-world use cases, gain exclusive insights into the latest Data Spaces Blueprint, Radar, and Toolbox, and explore the business value of data sharing.

Whether you're from an SME, a large enterprise, or passionate about data spaces, connect with key players, exchange best practices, and shape the future of data sharing.

Hannover Messe

31 March – 04 April 2025
Hannover, Germany

Visit Gaia-X at the world's leading industrial trade fair! Stop by our stand to learn more about our Market Adoption Strategy and the Gaia-X Digital Clearing House. We look forward to answering your questions and sharing insights!

Tech-X and Market-X

The Tech-X Conference & Hackathon and Market-X Conference & Expo will merge into one exciting event taking place in May 2025! This event will bring innovators, developers, and industry leaders to collaborate, solve real-world challenges, and explore market-ready solutions shaping the future of data spaces. Get ready for an experience where cutting-edge tech meets real-world business impact! Stay tuned for more details!

Gitex Berlin

21- 23 May 2025
Messe Berlin, Germany

Gaia-X will be present with an exhibition booth at Gitex Europe Berlin in 2025. Ulrich Ahle, CEO of Gaia-X, will open the first day on the Cloud Stage. This major tech event will feature AI, blockchain, green tech, cybersecurity, and more innovations. Join us to discover the latest advancements!
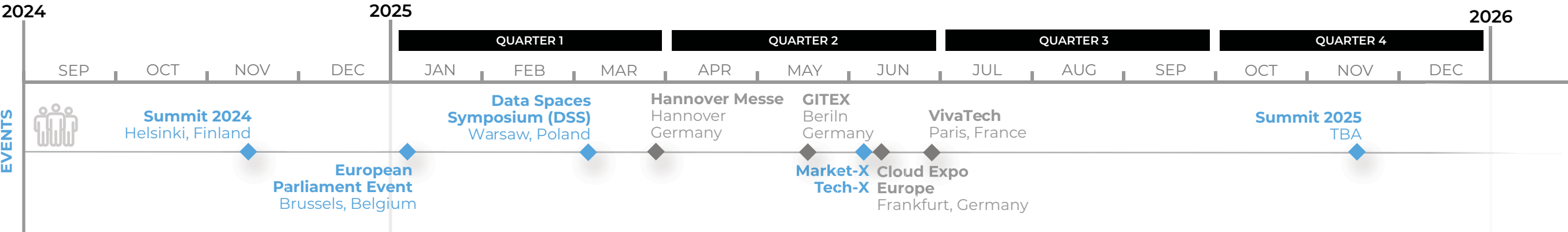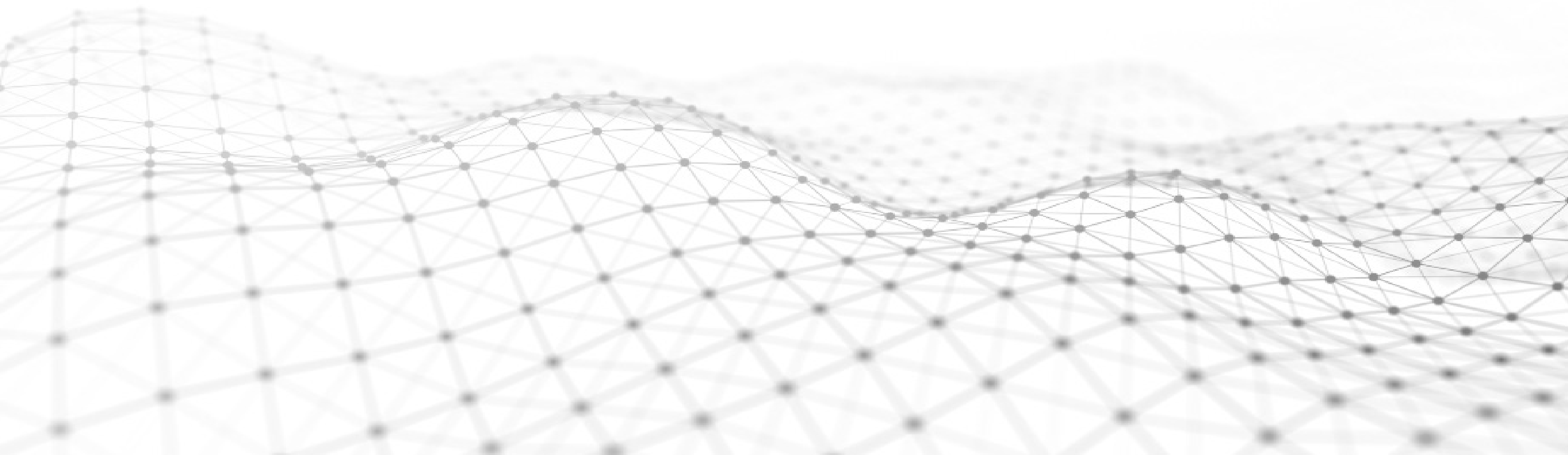
Gaia-X Summit 2025

Get ready for the 6th edition of the Gaia-X Summit, taking place in November 2025 in Porto, in partnership with the Portuguese Hub! Stay tuned for exciting updates and announcements as we prepare for this transformative event!

Timeline

2024 — 2025 — 2026

		QUARTER 1			QUARTER 2			QUARTER 3			QUARTER 4		
SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

EVENTS

- **Summit 2024** — Helsinki, Finland
- **European Parliament Event** — Brussels, Belgium
- **Data Spaces Symposium (DSS)** — Warsaw, Poland
- **Hannover Messe** — Hannover, Germany
- **GITEX** — Beriln, Germany
- **Market-X Tech-X**
- **Cloud Expo Europe** — Frankfurt, Germany
- **VivaTech** — Paris, France
- **Summit 2025** — TBA

Stay tuned.

Gaia-X is up and running.

Gaia-X MAGAZINE

gaia-x