Press release

Dornbirn, 22. April 2024

NEW GAIA-X SERVICE CENTRE FOR THE VORARLBERG SITE

Digital Factory Vorarlberg becomes regional service centre of Gaia-X Hub Austria for the production-intensive Vorarlberg economy

With the involvement of data space experts from the AIT Austrian Institute of Technology and the Digital Factory Vorarlberg, the Gaia-X Hub Austria presented an implemented test infrastructure for the rule-defined and secure exchange of data for the first time on 18 April 2024. In a live demo between Vienna and Dornbirn, the technical implementation of a data room based on the Gaia-X trust framework was presented in the form of a robotics application. More than 30 representatives from the production-intensive Vorarlberg economy were informed about the enormous potential of new data-driven business models that can ensure maximum data sovereignty.

New service centre for industry in Vorarlberg

In particular, the sharing of sensitive data and the associated loss of control over one's own data is often an obstacle to the use of information across company boundaries. In the future, data rooms will make it possible for data to remain with the owners or authors, for them to retain full control over access rights, for monetary compensation to be negotiated for the use of data and for data to be analysed in encrypted form. In order to support Vorarlberg companies in this area, a Gaia-X Hub Austria service centre will be established at the Digital Factory Vorarlberg to support the Vorarlberg economy in the use and exchange of data to increase their competitiveness. In addition to its own experts, the service centre can draw on the experience gained in recent years in the design and implementation of data rooms in various domains of the Gaia-X Hub Austria in its advisory function and in the transfer of knowledge. The new Vorarlberg service centre also has access to the comprehensive digital expertise of the AIT Center for Digital Safety & Security, as well as the entire knowledge pool of the European Gaia-X umbrella organisation AISBL and the European Data Space Support Center (DSSC).

Manufacturing industry faces new challenges

While the focus in recent decades has been on the digitalisation of production, there is currently increasing pressure to digitalise products and companies. On the one hand, companies are increasingly required to provide information digitally. This starts with the handling of business processes, but now extends to mandatory reports on sustainability aspects (ESG). The planned Supply Chain Act is also increasing the pressure on companies to have information about their company and their products, including supplier data, available digitally.

On the other hand, traditional products are also becoming increasingly digitalised. Digital product passports or digital twins are already a reality in many areas. For example, in some product groups (e.g. batteries), digital product passports must be made available as early as 2027 in order to facilitate the recycling of valuable raw materials. But the products themselves are also becoming

smarter and producing data that in many cases is of interest to both users and producers. For example, data on the charging and usage behaviour of batteries can be used to predict the remaining useful life, but can also contribute to improving product design.

To enable such applications, companies not only need data from their own production, but also from their suppliers. At the same time, they themselves need to pass on data to third parties. Data rooms provide the organisational and technical framework for carrying out this data exchange in a trustworthy manner while maintaining corporate sovereignty.

Data markets, the future basis for economic growth and innovation

The Internet as we know it today has developed step by step over various innovation cycles. It began with the development and expansion of the infrastructure, in which legacy networks for voice traffic were continuously converted into IP-capable broadband for the transmission of large volumes of data. Following the emergence of the World Wide Web, which today reflects the world's knowledge, as well as services for fast, highly available personal communication such as email, which still has its traditional place in business today, the next generation of the Internet brought global networking of all people under the heading of "social media" on the one hand, and developments such as "Industry 4.0" on the other thanks to rapid advances in machine communication.

In terms of data storage, we have recently seen a massive shift towards various cloud services in which the huge volumes of data that are generated today are stored and made available for targeted processing. Companies are currently faced with the challenge of not losing control of their data, as it represents a key business asset, but also having to share more and more data with others, for example to pass on information along the supply chain. This latest stage in the evolution of economic digitalisation is currently leading to the development of so-called data rooms, which provide an organisational and technical framework for the exchange of data. Data rooms enable the flexible, trustworthy exchange of data and thus open up completely new business models and opportunities to adapt to changing customer requirements while retaining full sovereignty over one's own data. To put it bluntly, data rooms offer secure and flexible on-demand data utilisation from the socket.

Gaia-X as a European reference framework for data spaces

With the vision of data spaces based on European values as a decentralised, open and federated cloud infrastructure, the commercial basis for trustworthy data exchange is to be created through defined rules of the game. At Gaia-X, legal frameworks in the form of agreements, contracts and regulations promote user confidence in this new form of data management. Technical standards developed in lighthouse projects for software based on open source, the design of interfaces to ensure interoperability (APIs) and various labels for proof of conformity with the Gaia-X rules (protocols) jointly ensure the required data security and quality in cross-domain data exchange, which is in line with all relevant legislative acts of the European Union such as the GDPR (General Data Protection Regulation), the Data Governance Act or the Data Service and Data Market Act.

Data sovereignty for data controllers

A wide variety of goods are usually traded on markets. Potential buyers look for suppliers of the goods they need, who offer their products with defined conditions, whereby traders and buyers do not have to know each other. Transferred to the digital world of data trading, this requires platforms or data markets where data can be offered and data owners and interested parties can process intended transactions.

Together, these data markets form ecosystems that are subject to certain conditions and rules. First and foremost, a data catalogue is needed in which the owners and providers of data describe it (their offering) in detail themselves. What type of data is involved? At what cost can data be acquired? Are there differences depending on the data set that certain data users need to consider? For example, data that is only needed for research purposes could be accessed free of charge, while the same data for commercial purposes could have fixed prices or be subject to other special conditions for data use, such as one-time use only or geographically limited to a specific country or continent. In addition, data owners can also define certain access rights to the data in the data catalogue, e.g. only for authorised representatives of a buyer company. All in all, this creates clear and transparent terms and conditions for data market transfers as a prerequisite for prosperous data trading.

The core objective of Gaia-X as a whole is to guarantee data sovereignty for data owners. In the market model described, the data always remains under the sovereignty of the data owner, regardless of whether he or she hosts it with a provider or operates the data centre themselves. European data protection and the protection of all trade secrets and IPRs (Intellectual Property Rights) is ensured by applying the aforementioned technically mapped Gaia-X rules. The underlying data storage can also be additionally protected by special cryptographic security measures, such as the product range of AIT partner fragmentiX.

Trustworthy artificial intelligence

Trustworthy artificial intelligence will not work in the medium to long term without available, high-quality data sets. In the Gaia-X context, external market participants will in future be able to send their algorithms to the data owner and train the AI models on the data sets provided for a fee. This will achieve a certain level of data quality, such as that shown for product passports. With this approach, you know who the data comes from, where it comes from and thus receives a kind of data quality seal. This means that data users can, for example, prove at any time that the AI model they use in the next step does not contain any bias because the data set acquired for training the model has a corresponding seal of approval.

Helmut Leopold, Chairman of the Gaia-X Hub Austria: "Sustained close cooperation between industry, research and the public sector is the basis for being able to play a leading role globally in the new and future-oriented digital economy. We are proud that we have been able to successfully establish an internationally recognised information hub with the Gaia-X Hub Austria."

Robert Merz, Head of Digital Factory Vorarlberg: "Keeping data and access rights in one's own hands and processing while maintaining encryption are decisive factors for the future, cross-

company use of data. We are proud to be able to provide expertise for these forward-looking topics in Vorarberg together with AIT and the Gaia-X Hub Austria."

About AIT

With around 1,400 employees, the AIT Austrian Institute of Technology is Austria's largest non-university research institution and a highly specialised research and development partner for industry. At the Center for Digital Safety & Security, more than 200 experts work on key digitalisation technologies in order to build state-of-the-art information and communication technologies in an energy-efficient, highly secure and reliable manner and to use them as required. The centre focuses on various key technology areas. In the Cooperative Digital Technologies research area, for example, the AIT experts deal with future IT architectures and technologies and place a special focus on distributed and virtualised IT systems, data ecosystems, the Internet of Things and smart applications for the environment, e-government as well as public security and crisis and disaster management. The Center's research activities are based on strong networking with leading universities and research institutions worldwide, but also with international organisations such as the United Nations or the International Atomic Energy Agency IAEA, as well as with the European innovation system (EU Commission, EU agencies and authorities in the EU member states). The centre therefore also acts as an effective link for Austrian industry and authorities to international innovation ecosystems.
Further information: https://www.ait.ac.at/dss/

About Digital Factory Vorarlberg

The Digital Factory Vorarlberg (DFV) is an inter-company competence centre for digitalisation. Through application-oriented research, development and innovation, DFV supports companies in the design, implementation and introduction of digitalised processes. The expertise of the Digital Factory Vorarlberg ranges from the point of origin of data at sensors, controllers or higher-level systems, to networking, data organisation and data semantics, state-of-the-art methods of data analysis and artificial intelligence, to the provision of prototype applications that are used in real operations. Examples of applications include the development of artificial intelligence for machine monitoring, quality control or the detection of cyber attacks, neural networks for predicting and optimising energy or resource consumption, simulation models for production processes, modern data hubs for networking different companies or multi-RAT wireless and IoT applications including the use of private 5G mobile networks in companies. DFV has a model factory for modelling the complete production of material goods. Digital Factory Vorarlberg GmbH is a joint venture between the AIT Austrian Institute of Technology and FH Vorarlberg.

About Gaia-X Hub Austria

The Gaia-X Hub Austria is funded by the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK) and the Federal Ministry of Finance (BMF) and acts as a national competence centre to support the Austrian economy and public administration in the digital transformation towards secure and sovereign data-driven service and business models. The hub thus provides guidance by advising political and economic decision-makers, supports the development of expertise by imparting concrete knowledge about data ecosystems as well as technical platforms and solutions, provides opportunities for testing systems and solutions and supports the development of strategic alliances and international partnerships.

Contactt:
Mag. (FH) Michael W. Mürling
Marketing and Communications Manager
AIT Austrian Institute of Technology
Center for Digital Safety & Security
T +43 (0)50550-4126
michael.muerling@ait.ac.at I www.ait.ac.at

Mag. Michael H. Hlava
Head of Corporate and Marketing Communications
AIT Austrian Institute of Technology
T +43 (0)50550-4014
michael.hlava@ait.ac.at I www.ait.ac.at

Monika Matt-Egger
Assistant to the CEO
Digital Factory Vorarlberg GmbH
T +43 (0)676 794 7415
monika.matt@vactory.at I www.vactory.at

Photo Credits: Digital Factory Vorarlberg/Karl-Heinz Weidmann

Photo-Caption:
Persons from left to right: Helmut Leopold (AIT), Julia Schmelz (AIT), Veronika Siska (AIT), Ralph Hoch (DFV), Mario Drobics (AIT), Robert Merz (DFV)