

Mobility Data Space Event

19 MAY 2022



How can dataspaces contribute to the development of mobility activities in Europe and better serve travellers

Mobility Data Space Event Report – 19 May 2022

Event scope

In line with the European Commission vision, Gaia-X fully acknowledges that “mobility is an enabler of our economic and social life. Free movement of people and goods across its internal borders is a fundamental freedom of the European Union (EU) and its single market. Travelling in the EU has led to greater cohesion and a strengthened European identity. As the second-largest area of expenditure for European households, the transport sector contributes 5% to European GDP and directly employs around 10 million workers.”

Mobility initiatives within Gaia-X aim at supporting actively this European strategy through use cases to make the transport system sustainable and truly resilient against future crises. Seamless solutions for travellers and goods are explored to improve available and affordable transport for all, taking into account rural and remote regions’ connection needs and accessibility for persons with reduced mobility and persons with disabilities jobs.

The technology, data sovereignty, and trusted interoperable environments proposed by Gaia-X federated services approach are key to unlocking a wealth of unused datasets, which will allow the design of robust applications offering new and efficient services for travellers, governmental organisations and goods transportation.

How can dataspaces contribute to the development of mobility activities in Europe and better serve travellers?

During the mobility data space event on 19 May 2022, multi-disciplinary keynote speakers and panels addressed this important question and analysed specific topics in further detail during the breakout sessions.

Gaia-X ambition in the mobility domain

Based upon the common thread across all event presentations, the main ambitions for a **Gaia-X powered mobility data space** can be summarised as follows:

As is the case for many other areas, the European Mobility domain is very rich, but highly fragmented. Gaia-X aims to make mobility data more available to improve the capacity of better and more sustainable circulation for each individual citizen on the European territory and to support the development of new competitive businesses thanks to better data access. Privacy of personal data should be ensured, such that citizens stay entirely in control. The Gaia-X framework enables mobility data spaces that are sovereign and federated and that can be deployed with trust and at scale. These data spaces integrate existing data initiatives in a federated structure and invite new initiatives to join the federation, to enhance the mobility experience for travellers (short and long distance) and, reduce costs, for example, when linked to traffic disruption.

Session highlights

This event opened the floor to discover a series of intense activities of the national hubs from Germany, France, Belgium, Netherlands, Slovakia, Spain and Italy, covering an extremely rich panel of topics such as:

- Urban mobility - Connected & Automated Vehicles, Intelligent Traffic infrastructures, reliable & Safe Corridors, smart Parking, a simulation tool for modelling movements and behaviour of pedestrians at the microscopic and macroscopic level
- Contribution to automotive industry use cases with decentralised and open Data Ecosystems based on Digital Twins intended to support Product Development, Manufacturing, and After Sales, as well as Training and Validation of AI-based Components/Application, especially with Catena-X
- Multimodal trip management with real-time updates systems for multi-segment transport mode
- Research for Railways Design, development and maintenance of several large information systems and software tools which serves in many branches of railway transport
- Optimisation and simulation approaches for modelling city public transport
- Green performance of ships and airports
- Active contribution to the Digital Transport and Logistics Forum and the e FEDerATED project
- MaaS use cases with the example of a Rent a car process digitalisation ensuring the interoperability between all the players, both private and public organisations, and the data exchange between them.

This event was also a great moment as it welcomed DG Connect and DG Move representatives who exposed the main ambitions of the EU Digital and Mobility strategies:

- European Green Deal Reduction of greenhouse gas emissions from transport by 90% by 2050, to help the EU become the first climate neutral continent
- Fit for the digital age and make mobility smarter

- Ensure our digital sovereignty Industrial leadership
- Global competitiveness and innovative mobility and transport ecosystem.
- Smart mobility – achieving seamless, safe and efficient connectivity
- A more resilient single European Transport Area for inclusive connectivity
- From an international standpoint, EU becoming the world’s connectivity hub.

They provided guidelines to reach this goal: build on what exists, seize economic opportunities and value creation opportunities, notably based on voluntary data sharing and the need for viable business models.

As a reminder, the preparatory action for a European data space for mobility will deliver a detailed view of the whole mobility initiatives landscape and contribute to leveraging existing work and experience in a more efficient manner. In addition, the deployment action under the third call of DIGITAL (tentatively planned for September 2022) will be released with a focus on urban mobility data.

They strongly recommended to work with the Data Spaces Support Centre and the Alliance for Industrial Data, Cloud and Edge to ensure alignment with the emerging ecosystem of data spaces.

In addition, the event gave the floor to several experts who could detail specific and concrete topics of importance for mobility dataspace.

On the legal side, there was a review of the EU Data Act Proposal Legal environment for data spaces with the B2B/B2C Data Sharing Framework for IoT data, and a review of the topic to enable the interoperability of smart contracts within their services and activities. Key questions were raised, such as the shared responsibility if there are several operators (governing body, operating company/ies, ...). Regarding highly decentralised data space: how easy is the allocation of responsibilities? Can the operator provide all the required declarations? Should all these declarations be public?

The Technical Working Group of the Gaia-X DataSpace Business committee presented their inventory of the various technical components which have been selected so far by some dataspace, such as the Agriculture dataspace or the Catena-X one, referring to the OpenDei study. The EONA-X demonstrator based on a specific connector was used as a concrete example to explain a process of data exchange in a trusted environment. It is expected that the working group will release a white paper about best practices in the coming weeks once they finalise their work.

The concept of Self Sovereign Identity and decentralised data was furthermore developed in the afternoon with urban examples using the Connector developed in Open Source by the Eclipse Foundation and Mydata.org described some urban experiences such as 5000 empowered citizens who will report the status of liveability of their streets, or other citizens sharing bike data. The goal of this organisation is to guarantee that the human centric thinking is embedded in the European Dataspace as far as personal data is concerned and to develop further interoperability of data intermediaries in the context of dataspace.

Standards to exchange data were then explored as this is key to having efficient processes for sharing information. La Fabrique des Mobilites presented a concrete and very useful overview of the main standards used by the mobility players, and their stage of maturity. The importance of standards was as well highlighted in the following sessions as they are critical to enabling the use of applications based on artificial intelligence.

Regarding decentral and heterogeneous data with decentral applications, special requirements were listed, because data is different from the organisation that gathered it is (bias, semantics). It is recommended to have a good and representative data, make life of data transparent, and allow a deeper understanding of data (provenance, taxonomy, ontologies).

Having a good data quality is critical to exploit the full potential of AI in a reliable and relevant manner because in the mobility domain, AI must be able to meet the requirements of safety critical applications and also secure against attacks and misuse. The last session was dedicated to showing how AI is an important enabler in most mobility use cases, such as for example, automated parking, smart shuttle, intermodal mobility, rerouting...). It was detailed how AI contributes to automated and connected driving with several levels of integration.

Next steps

The following actions are now in progress and for the interested audience to consider:

- Join Gaia-X as a member: <https://www.gaia-x.eu/how-to-join>. More information may be checked here: <https://gaia-x.eu/sites/default/files/2021-10/Gaia-X%20Membership.pdf>
- Join the Gaia-X Mobility community, an open working group for interested stakeholders in the mobility domain (Gaia-X membership not required)
 - A request can be sent via email to join Alessandra.Perna@gaia-x.eu
 - Here we will continue the match-making process between mobility data space initiatives of interest to adopt the Gaia-X trust framework and explore all relevant opportunities.

Recordings and presentations

All sessions of the event were recorded; both the presentations and recordings may be accessed through the Gaia-X dedicated event agenda of the Mobility Data Space Event, [here](#), which may also be seen below:

Chapter 1

- **Welcome & Opening:** Jean-Francois Cases, VP & Associate General Counsel Amadeus, EONA-X President
- **Keynote addresses:** Denis Losfelt, IT Systems Director at SNCF Group

Overview of the Gaia-X Mobility dataspace landscape in Europe

- **Project family Gaia-X 4 Future Mobility:** Prof. Frank Koester, Founding Director of the Institute for AI Safety and Security, German Aerospace Center (DLR)
- **German Mobility Dataspace:** Andreas Heindl, Peter Kraemer, MDS
- **EONA-X Multimodal use case:** Jean-Francois Cases, VP & Associate General Counsel Amadeus, EONA-X President

- **Belgium Mobility Initiatives:** Jelle Hoedemaekers, Expert – Regulations & Standardisation Agoria and Belgium Gaia-X Hub Coordinator
- **Slovakian Mobility Initiatives:** Martina Malakova, Industry Innovation Cluster President and Gaia-X Hub Slovakia Coordinator
- **Netherlands Mobility Initiatives:** Peter Verkoulen, Programme Manager Gaia-X NL Hub and TNO
- **Spanish Mobility initiatives:** Rizkallah Touma, I2Cat, Samuel Fraga, Eccocar
- **Italian Mobility Initiatives:** Cristina De Berardinis, Gaia-X Hub Italy Coordinator and Head of Industrial Policies & Sustainability Confindustria

Overview of the key challenges to address for having successful mobility dataspace

- **EU Mobility Vision:** Kristóf Almásy, Policy Officer, Directorate-General for Communications Network, Content and Technology and Edoardo Felici, Policy Officer (Seconded National Expert) at European Commission, DG MOVE
- **Technical components:** Stefan Ettl, BMW Group IT – Data Transformation, KI, Daten-, DevOps-Plattformen Extended Enterprise, Gaia-X (FG-260) and Patrick Hebant, Associate Director – Amadeus Dataspace ecosystem
- **Legal environment: data act:** David Schönwerth, Policy Officer Data Economy, Bitkom e. V.

Chapter 2: Panel sessions

- **#1 Urban mobility** – Moderators: Maximilian Staebler & Simon Odrowski
 - **a) From IoT to the Economy of Things – Self Sovereign Identity & Decentralized Data Spaces:** Peter Busch, Robert Bosch Group: Technical Strategy for Mobility and Matthias Burchhorn, Data Space Architect EDC / IDSA / DSBA / Gaia-X (Hub Germany)
 - **b) Gaia-X – Mobility Data Spaces and Citizen Data sharing:** Paul Theyskens, MyData Brussels Hub, IMEC and MaaS Alliance Working Group Technology & Standards Leader
- **#2 Intercity mobility** – Moderator: Dominique Epardeau, Chairperson of Gaia-X Mobility DSBC and Executive Member of the Mobility, Transport & Tourism Data Space EONA-X
 - **Speaker:** Ghislain Delabie, Fabrique des mobilités
- **#3 Enabler Data Standards** – Moderators: Harmen van der Kooij and Jelle Hoedemaekers
 - **Speaker:** Michael Karl, Head of Safety-Critical Data Infrastructures – Institute for AI Safety & Security – DLR
- **#4 Enabler AI** – Moderators: Harmen van der Kooij and Jelle Hoedemaekers
 - **Speaker:** Arne Raulf, Head Of Department (DLR): Algorithms & hybrid solutions

Special thanks to [Agoria](#) for hosting this event.