

Expectations towards a GAIA-X roadmap for the European Mobility Dataspace

This position paper is based on a work initiated in October 2020 by the Mobility Dataspace within GAIA-X. The intent of this document is to share widely our dataspace's vision, mission and expectations, then to provide a first overview as to a desired 2021-2025 roadmap.

Mission and Goals of the Mobility Dataspace

The use of transport and mobility services needs and generates an increasingly important volume of information and would greatly benefit from a frictionless flow of both **open and private data**, currently siloed for various reasons, mostly in relation to legal, regulation, property, security and technical aspects. The members of the Mobility Dataspace, as providers of mobility services, aim to **foster a system of data exchange to deliver more value to the users, improve mobility services, as well as to increase business productivity and innovation in the sector**. However, by design, the dataspace architecture allows all the participants to it to **remain fully in control** about what they share, to who they share and at what price they share, contrary to a former vision of closed data ecosystems, like data lakes.

By focusing on **enhancing user experience in mobility, while creating new business opportunities for the ecosystem's members**, our working group aims to:

- **offer end-to-end seamless and safer mobility** for users,
- **increase productivity for the various stakeholders** of the mobility and digital sectors, whether public organizations, large private companies, or SMEs,
- **be fully aligned with EU and National** government priorities: Privacy Protection, Digitization, Environment, Industrial development, Territorial cohesion, etc.

We therefore actively support the emergence of federated service and data platforms which can provide for an **easy and trusted exchange of data**.

Challenges to be addressed

This mobility initiative seeks to address several challenges. Firstly, it should meet users' expectations to **benefit from seamless mobility, notably between different geographical areas (such as countries, regions or cities areas) and different mobility modes**. Therefore, the highest-level objective is to improve the mobility user experience and to make Europe the leader in this aspect, even considering the complexity of its political structure.

This initiative should ensure **data security for the mobility user, like for any other EU citizen**, and above all, assure that data shared is trustful, and cannot be used for another purpose than the one agreed by the user. Notably, it should also affirm that players are **compliant with the GDPR regulation**, this includes where the data is stored (EU territory or compliant with European Commission Adequacy list for instance) and what kind of data would be transferred abroad.

Participants to the Mobility Dataspace would share their data through **an infrastructure that they can trust**, and that they know will **respect "by design" European values for data**, independently of where and how they share their data. As several participants need to transfer customer information outside European territory, data exchange must convey sufficient "GDPR qualification" to allow full compliance, traceability and audit at any time.

This initiative will also allow for the **creation, collection and sharing of open data to foster innovation** where possible in this field.

Another challenge regards the wide spread of storage options for data in the extended mobility ecosystem. Players in the mobility ecosystem are rapidly turning to cloud infrastructure systems to solve their data

management requirements. These cloud infrastructure systems may be very different in functionality and operation. Therefore, the Mobility Dataspace should **ensure interoperability** between the members' cloud infrastructure systems.

Data to be exchanged between users and Dataspace members will be both **open data and private data**, each to be managed and shared according to radically different principles.

Such an infrastructure for the Mobility Dataspace should be effective enough to be connected to without major investment, allowing SMEs to participate and to gain from it (typically the small hotel chains or the local travel content providers proposing activities at destination).

The mobility user is at the center of a huge ecosystem, composed of private companies and public organizations where multimodal travels are structured by nodes. For instance, **a multimodal node can be an airport** interconnecting airlines, railways, public transports, taxis and vehicles with drivers. Therefore, this ecosystem brings together a variety of business sectors:

- **Airlines, railways and travel sellers** for instance which are usually linked to long trips;
- **Customs and other governmental agencies** take a crucial part of this ecosystem to secure national and European borders, especially in airports;
- **Travel by car such as taxis, vehicles with drivers, or carpool** and more generally the whole variety of travel modes;
- **Buses, metros, and suburban trains**
- **Hospitality businesses** like hotels
- **Tourism actors** such as tourism boards or associations;
- And eventually the financial layers which support these activities, such as **insurance and payment services**.

Other sectors are also linked to this ecosystem:

- **Automotive** is directly linked to travel by car, especially with the recent emergence of autonomous cars and the associated infrastructures;
- The pandemic shed lights on the link between international travels and travelers' **health information**, provided by a trusted third party in most of cases;
- The **environmental impact of mobility** is essential and urges to monitor data linked to **energy** consumption through data transparency.

Mobility Dataspace Objectives

We have outlined below three maturity-based stages that can drive future cooperation between us.

Short term (2021):

- Structure the working group through an **appropriate governance** and the creation of a **legal body**
- **Define and refine two main use cases** for products and services around data, which will be validated by the executives and business of the members of this endeavor. The use cases could be chosen between:
 - **Seamless travel & Digital Identity**
 - **Health pass**
 - **Multimodal travel**
 - **Loyalty**
 - **Local content distribution**
- **Design and implement a demonstrator** based on one use case, more focused on travel since it corresponds to the business needs of the founding partners

- **Enlarge the working group** to partners which are willing to contribute improving the mobility experience in a safe and seamless way
- **Secure access to funds** and **establish basic business cases**

Mid-term (2022-2023):

- **Provide minimum viable products** for a wider range of businesses related to mobility, with multimodal travels at its center
- These minimum viable products will be focused on the business needs of major players, but the possibility for **SME** to benefit from them will be tested
- **Define the business models** of these products, and for the most advanced the business plans
- **Define a series of use cases**, enabling a variety of partners to join the dataspace

Long term (2023-2025):

- **Provide competitive positions** for the private companies and significant added value for public organizations
- **Provide these services and products worldwide**, to non-European users and mobility companies