GAIA-X DATA ROOMS FOR MOBILITY

FACTSHEET

Author: Prof. Dr. Dr. e.h. Lutz Heuser
Action Cluster: Sustainable Urban Mobility

Contributors: Ana Dragutescu (AC Senior expert), Judith Borsboom (AC coordinator)

sustainablemobility@eu-smartcities.eu
Introduction

What is the context of digitalisation and GAIA-X data?

The digitalisation of the urban (mobility) space is all about creating, analysing, and consuming mobility data in various applications and services. Today, the data is captured in different data silos and barely shared. One of the reasons is proper control of data access. Data sovereignty is considered a critical asset to most (private) transport operators.

Furthermore, the significant growth of APP-based data and floating car data provides insight into real-time traffic and mobility. Travellers and traffic participants seek for up-to-date information allowing intermodal trips. But how could cities develop a proper Sustainable Urban Mobility Plan if they only have limited access to mobility data?

Thus, there is a need for a reliable, safe and secure data space for sharing mobility data with cities and communities as well as the private sector and travellers.

The Action Cluster “Sustainable Urban Mobility” (AC SUM) calls for proposals to develop a pan-European Urban Mobility Data Space (EU-Mob-DS) which could facilitate the exchange of urban mobility data for planning and management. The EU-Mob-DS should build upon other European initiatives such as GAIA-X, Digital Europe, and the sustainable urban mobility plan (SUMP) concept.
General information

What is GAIA-X?

GAIA-X is a project initiated by Europe for Europe and beyond. It is an initiative that aims at boosting Europe’s own digital unified ecosystem of cloud and data services protected by European data laws.

The system would see various suppliers of cloud services linked up via an interoperable data exchange that would act as a vessel for data across industries. It will also act as a repository that businesses can search when looking for specific data services – such as artificial intelligence (AI), IoT, analytics and big data. (TechRepublic - Hughes, 2020)

What are the aims and objectives?

It aims to develop common requirements for a European data infrastructure.

Therefore openness, transparency and the ability to connect to other European countries are central to GAIA-X. Representatives from several European countries and further international partners are currently involved in the project.

How does it work? What are the rules?

GAIA-X will build on existing European policies and rules in order to develop. Participants can choose which kind of data they would like to share with other organisations and what the data can be used for. They will also maintain ownership of the data.

The guiding principles leading this initiative are:

→ European Data Protection
→ Openness and Transparency
→ Authenticity and Trust
→ Digital sovereignty and self-determination
→ Free market access and European value creation
→ Modularity and interoperability
→ User-friendliness
What is the current status?
GAIA-X is expected to launch in 2021, with Germany and France hoping to have a prototype platform up and running by the end of the year.

How is it linked to mobility? What are specific application examples (e.g. parking management, intermodal mobility,...)?
In the mobility sector, GAIA-X can help to protect data sovereignty and create the necessary framework for the implementation of alternative mobility approaches. (Eisenreich, 2021)

What are the pros and cons compared with regular solutions and how does it contribute to overall sustainability and clean energy goals? What is the ‘big picture’?
The vision is to have cities planning their infrastructures and processes such as sustainably managing all of the trips. GAIA-X data spaces are defined such that data sovereignty should be assured for all participants. This includes contractual terms on access rights, usage, and the like. Regular solutions are silo-based and do not allow sharing the urban mobility data in a trusted way.

Current mobility platforms are mainly driven by single (public) transport operators to control which service and, therefore, which data could be integrated and often not shared with the city itself, e.g. for planning and monitoring. EUMob-DS intends to create a holistic view on ideally 100% of all trips in a given city or region. This way, services for sustainable and clean transport could be planned and monitored.

Based on the findings, adjustments on the urban mobility plan could be identified and executed in very short cycles up to real-time.

What is the role of the city and how can the city support it?
Cities and communities represent the (public) demand side as they need the data for developing their own SUMP and to manage traffic and mobility meeting travellers’ expectations.
Societal & User aspects

What are the benefits for mobility users?

This is a unique opportunity to deploy new data spaces and innovative data-driven business models and new solutions for the benefit of society, for example, in the areas of energy, health, mobility and smart cities.

This is a very important step forward that will offer both providers and users a multitude of new possibilities. (GAIA-X The European Project Kicks off The Next Phase, 2021)

How will personal data be treated?

GAIA-X is following European rules and legislation. Some of them relevant for GAIA-X include requirements of the European Data Protection Regulation, the ‘Free Flow of Non-Personal Data Regulation’ and the Cybersecurity Act.

How can the added value for society be proven?

Based on the modal split today and after implementing the data space, it is expected to shift the modality towards cleaner and more sustainable transport modes. Intermodal transport trips will require real-time data for travellers to identify appropriate opportunities. Projects such as Real-labHH shows the potential of such an approach using the IDS Connectors as proposed by GAIA-X.
Regulations and policies

Which regulations are in place?

The Directive on open data and the re-use of public sector information, also known as the ‘Open Data Directive’ (Directive (EU) 2019/1024).

GAIA-X is following European rules and legislation. Some of them, relevant for GAIA-X, include requirements of the European Data Protection Regulation, the ‘Free Flow of Non-Personal Data Regulation’ and the Cybersecurity Act.
Finance

Which business models are there now?
There are no business models for pan-European data spaces. GAIA-X has just been set up to create such business models. The lead initiative as well as the intended project should provide research and insights into possible models.

Reference:
Hughes, O. 2020 - What is Gaia-X? A guide to Europe's cloud computing fight-back plan
GAIA-X, A Federated Data Structure for Europe
Federal Ministry for Economic Affairs and Energy, 2021
GAIA-X The European Project Kicks off The Next Phase, 2021
Join the community of the Action Clusters and Initiatives of the Smart Cities Marketplace

The community consists of many action clusters and initiatives with a variety of activities to help to shape the market for smart cities in Europe. These are assemblies of partners, committing to work on specific issues related to smart cities, by sharing the knowledge and expertise with their peers, providing added value with their national and local experience and identifying gaps that need to be filled at the European level. The work of each Action Cluster is collected under thematic initiatives.

An Initiative pools the work of the various partners around a particular objective while promoting learning beyond the project and geographic borders, and opening the results to the world at large. Links with EU-funded projects allow results to be consumed by thousands of active people on the Marketplace. Each Initiative is led by an Action Cluster.

<table>
<thead>
<tr>
<th>Action Clusters of the Smart Cities Marketplace:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sustainable Urban Mobility</strong></td>
</tr>
<tr>
<td><a href="mailto:sustainablemobility@eu-smartcities.eu">sustainablemobility@eu-smartcities.eu</a></td>
</tr>
<tr>
<td><strong>Sustainable Districts and Built Environment</strong></td>
</tr>
<tr>
<td><a href="mailto:sustainabledistricts@eu-smartcities.eu">sustainabledistricts@eu-smartcities.eu</a></td>
</tr>
</tbody>
</table>