



DATAWEEK²⁴
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Mobility Data Spaces and Digital Twins

Ongoing mobility data space initiatives

12/03/2024 14:00–15:30 (CET)

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the European Union

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DSBA



BDV BIG DATA VALUE ASSOCIATION



gaia-x



INTERNATIONAL DATA
SPACES ASSOCIATION



DATA SPACES
SUPPORT CENTRE

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530

%

**increase of global
data volume until 2025**

from 33 zettabytes in
2018 to 175 zettabytes

829

billion EUR

**value of data economy in the
EU27 in 2025**

from €301 billion (2.4% of EU
GDP) in 2018

Source: https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/european-data-strategy_en



Impaired free flow of data hinders digitalisation benefits



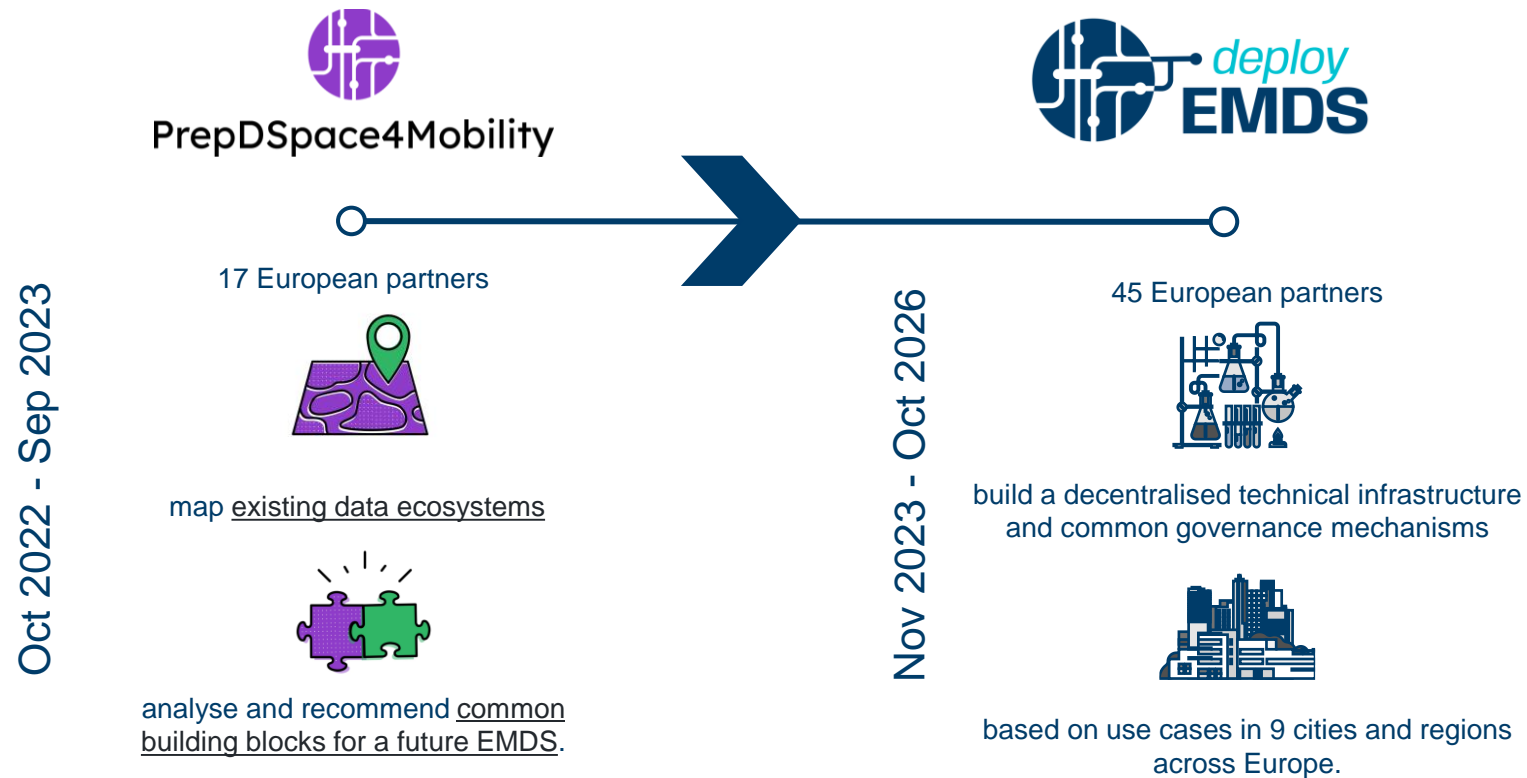
EMDS as part of the common European data spaces

Data space: A distributed system defined by a governance framework that enables secure and trustworthy data transactions between participants while supporting trust and data sovereignty.

Common European data spaces: sectoral or domain-specific, EU-wide scope, adheres to European rules and values. E.g. energy, Green Deal, smart cities and communities, tourism, manufacturing...



EMDS - from preparation to implementation



Key challenges in digitising the mobility sector

272 entries of mobility and logistics platforms and ecosystems mapped



Different data sources and types of data sharing

- Most of the efforts to improve on data sharing, thus needs for certain data sources, are designed based on objectives related to a specific application domain.



Heterogeneity of the mobility landscape

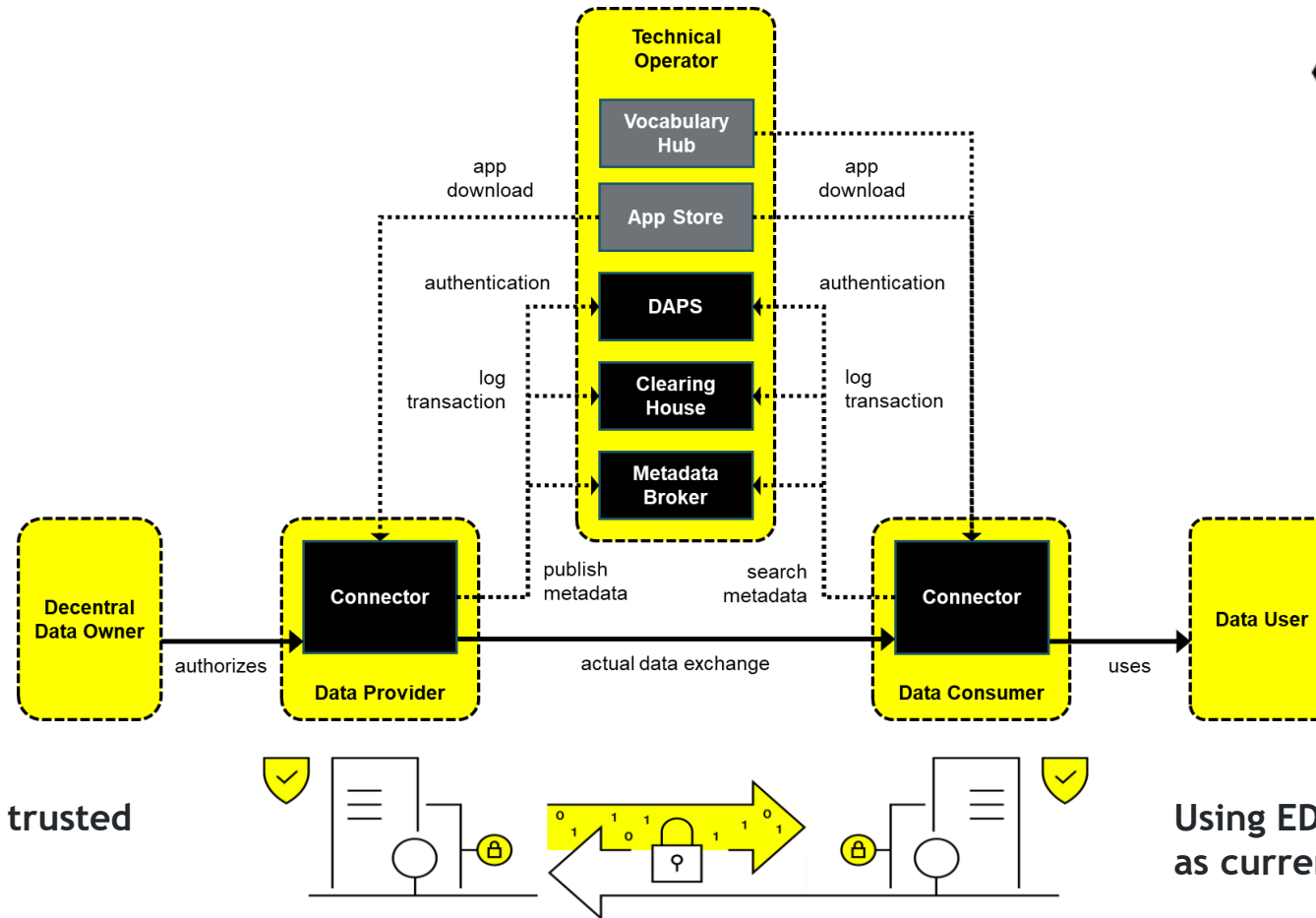
- Different application domains in the mobility domain exists and therefore creates a lot of heterogeneity and diverse data sharing needs among mobility actors
- Finding alignment or joint agreement on data source characteristics is a challenge given diverse set of use cases



Example of data exchange architecture



Mobility
Data Space
Data Sharing Community



Connector-as-a-Service for trusted
and easy data exchange.

Using EDC connectors
as current de facto standard.

Collaboration among diverse stakeholders enriches the deployment of an EMDS

36 months (Nov 2023 – Oct 2026) | Budget: ~EUR 16 million

38 beneficiaries (cities, regions, technical & domain expertise) | 7 associated partners



EMDS empowers trustworthy, discoverable and interoperable data sharing

Data sovereignty and trust

Retaining authority and control over data.



Accessibility

Discoverability and availability of mobility data.

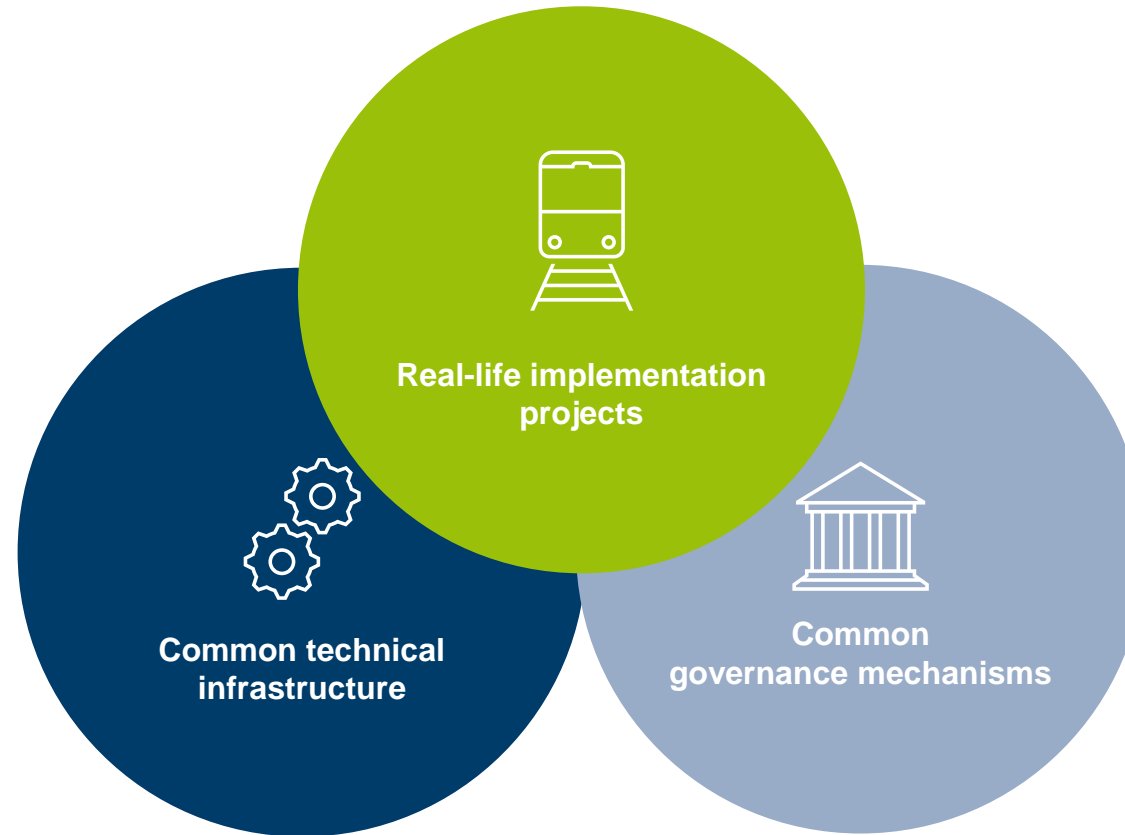


Data interoperability

Sharing and exchanging data in a standardised way.



deployEMDS supports to offer a framework for interlinking and federating ecosystems



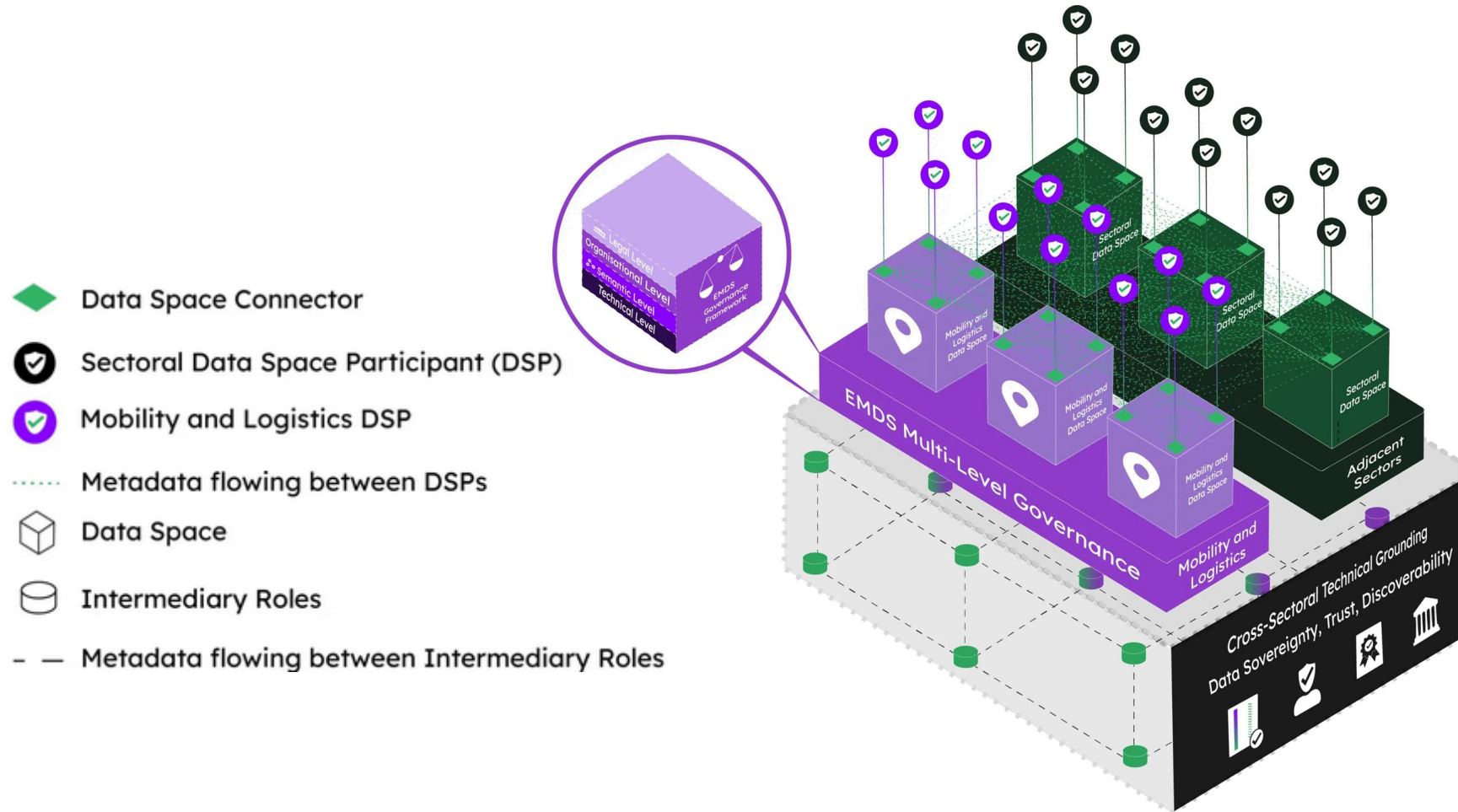
EMDS as a framework for decentral data exchange

„The intention is **not to create one vast centralised database** or a single hardware infrastructure that will host all of the EU’s mobility and transport data through this initiative. The EMDS will instead offer a **framework for interlinking and federating** many different transport data ecosystems that are heterogeneous and often difficult to discover or access.“

European Commission, Brussels, 29.11.2023 COM(2023) 751 final



Vision for an EMDS ecosystem



Possible organisational governance scenarios for EMDS



01

Organisation driven by the EC

02

A member state driven EDIC

03

European association of data spaces in mobility and logistics

04

Governance, regulatory or certification framework

05

Expert working group

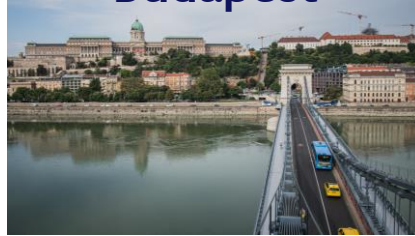


Real-life implementation projects mobilising Europe using data space infrastructure

Barcelona



Budapest



Flanders



Île-de-France



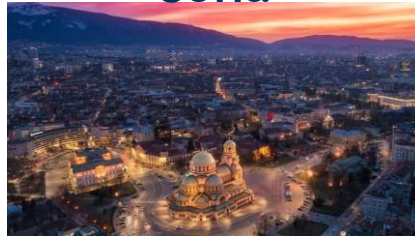
Milan



Lisbon



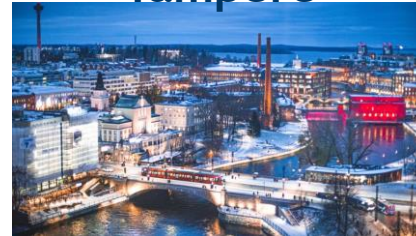
Sofia



Stockholm



Tampere



9 sites

17 local use cases

4 clusters

Public transport
operations

Data for mobility
planning

Multimodality

Speciality travel
information

Local use cases in the spotlight

Data for mobility planning



Barcelona

Using the data space for enhanced traffic analysis encompassing variables like weather's influence on traffic, its impact on air quality as well as the creation of predictive models for traffic and incident detection.

Speciality travel information



Lisbon

Using the data space to allow for reliable live door-to-door route planning and verification of accessibility of vehicles and spaces for people with reduced mobility.

EMDS enriches simulation models and improves decision-making of cities



Enhanced discoverability of comprehensive mobility data

Providing a one-stop solution to discover a wide range of mobility data sources, e.g., real-time data, schedule data, route data and infrastructure data.



Streamlined accessibility of mobility data

Ensuring easy access to a variety of mobility data sources via a trusted community through standardised terms, conditions and contracts.



Promotion of data standardisation

Facilitating harmonisation and compatibility among different data sources by supporting the standardisation of data formats and structures within EMDS.



Thank you!



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