The Promise of Data Spaces for Urban Mobility

📌 **Thursday, 27 November 2025**
⏱️ **09:00 - 11:15**

SESSION 4B

Bits and Brains: Data-Driven Governance
in Cities and Regions

SPEAKERS

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Academy of Science and Engineering

What's holding back urban mobility data use?

*As a policymaker,
I need easy access to traffic data to make decisions about mobility—but **traffic measurement is scattered** across entities*

*As a planner at a PTO,
I want to optimise my bus fleet and on-demand services while keeping **full control of my data** and easily leveraging innovative **digital service providers***

*As a mobility startup,
I need access to high-quality data across cities so I can **build scalable services** without high integration costs*

CHALLENGES

Fragmentation of data sources

Reluctance to share data due to security and competition concerns

Lack of interoperability between different data types and standards

Underutilised innovation potential of mobility data

Icons by Sapann-Design / Freepik

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A data space can help – but what is it exactly?

- a **decentralised technical infrastructure**

- based on a **common governance framework**

- enabling participants to **securely exchange data**

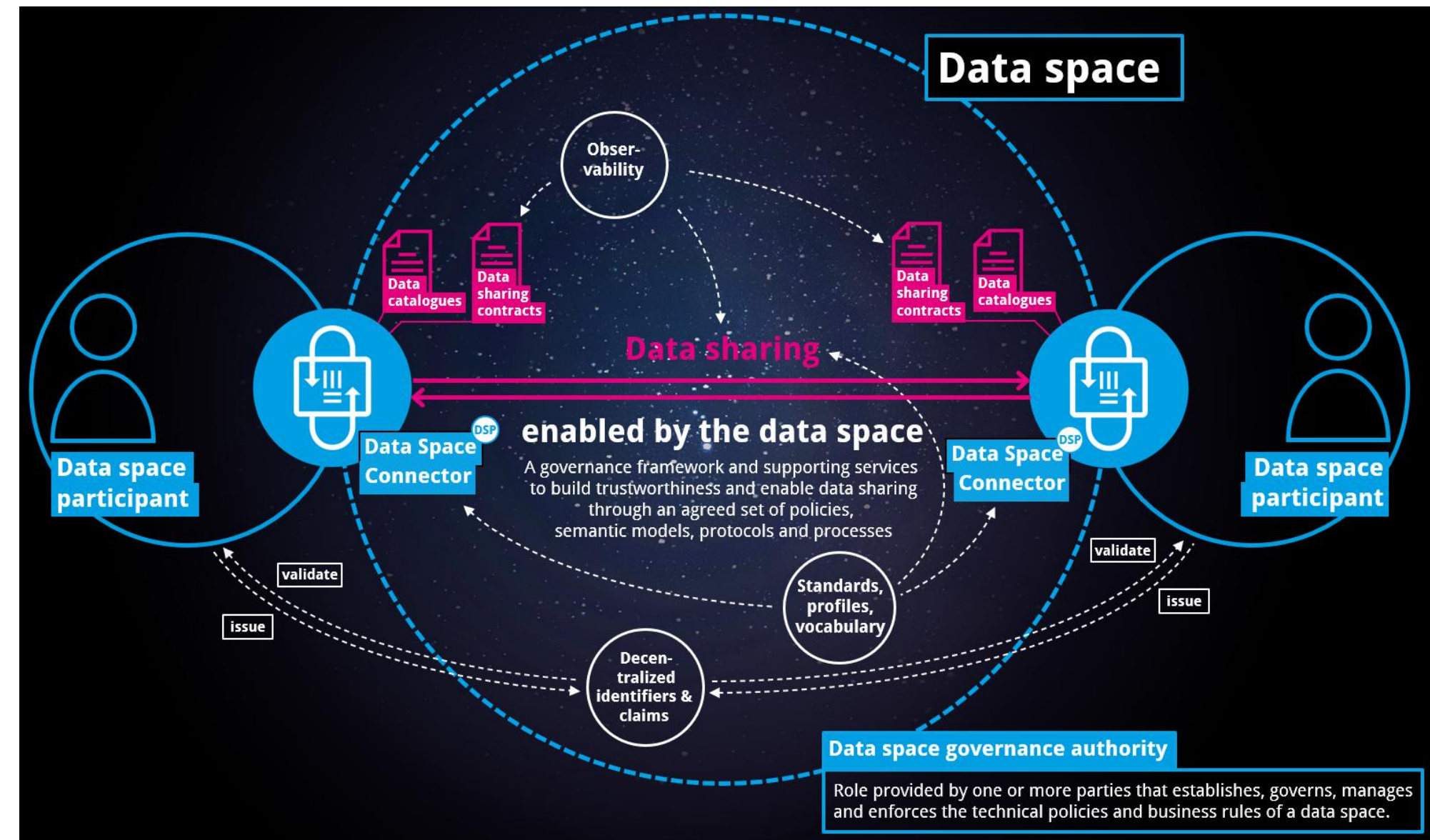- to create **value** for specific use cases

Image source: International Data Spaces Association (IDSA)

Data spaces help solve key challenges

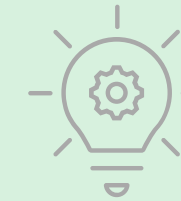| OPPORTUNITIES			
Better data discoverability & accessibility	Data sovereignty and trust through identification & usage policies	Convergence towards common standards	New data-driven solutions and business models

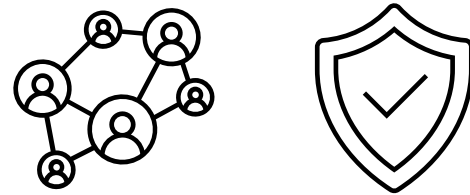| CHALLENGES			
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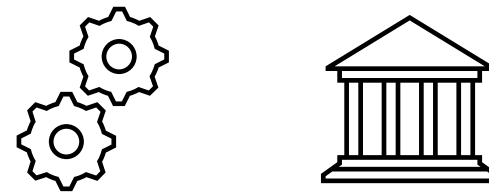
deployEMDS at a glance

36 months (Nov 2023 – Oct 2026) | Co-financed by the Digital Europe Programme (50%)
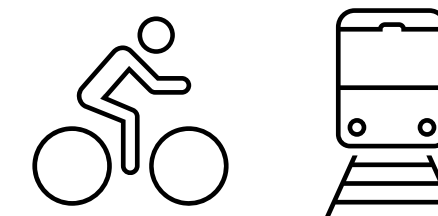
deployEMDS supports the European Commission's **common European mobility data space (EMDS)** initiative, which aims to facilitate data access, pooling and sharing for more **efficient**, **safe**, **sustainable** and **resilient transport**

45 European partners (cities, regions, technical and domain expertise)

develop decentralised **technical** infrastructure and shared **governance** mechanisms

for **16 urban mobility use cases** in 9 cities and regions across Europe

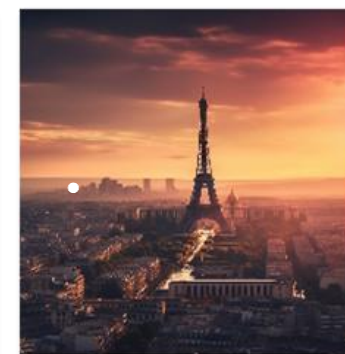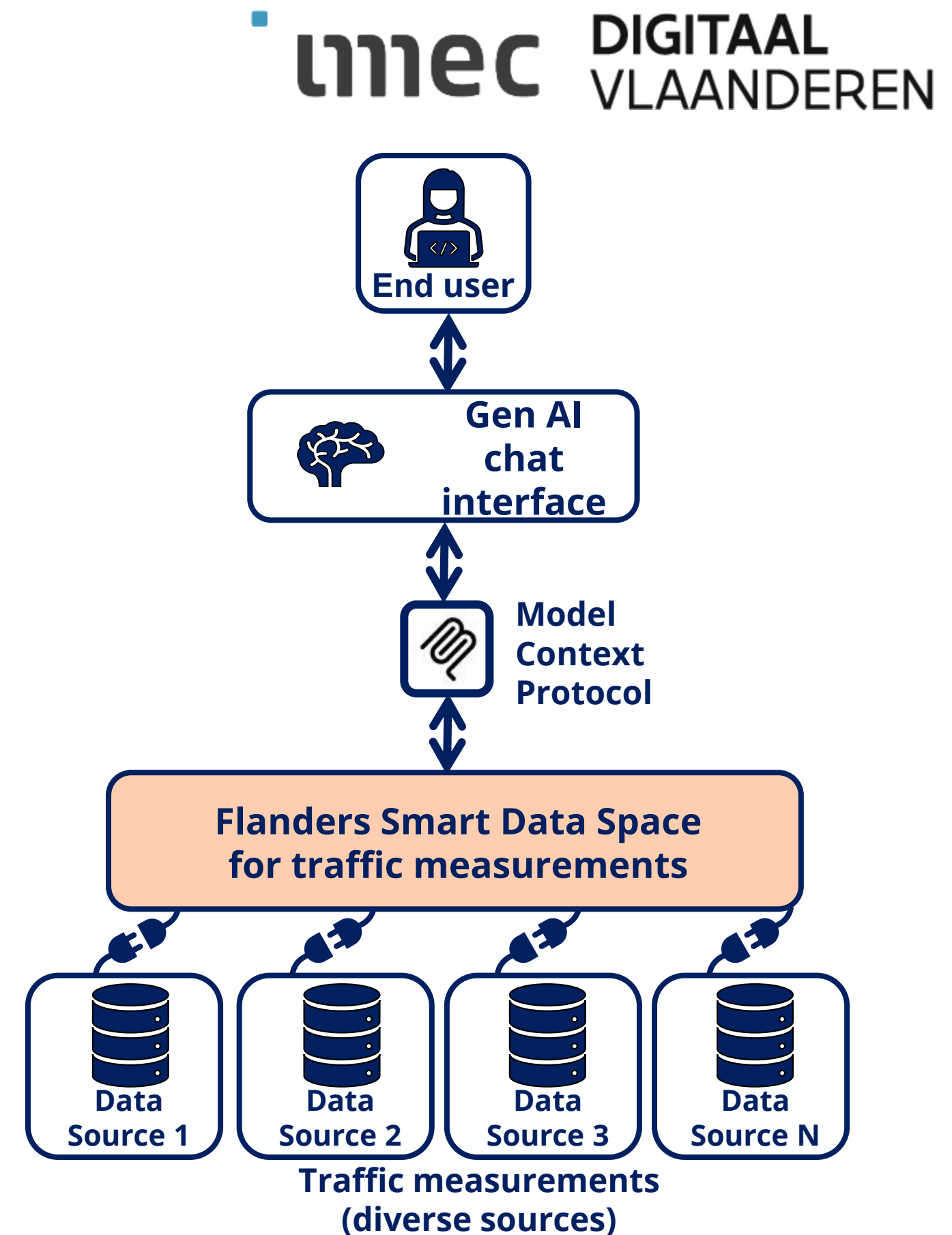Flanders   Sofia   Barcelona   Tampere   Île-de-France   Budapest   Milan   Lisbon   Stockholm

Flanders: Optimising the (re-)use of traffic measurements

> *As a policymaker, I need easy access to traffic data to make decisions about mobility—but **traffic measurement is scattered** across entities*
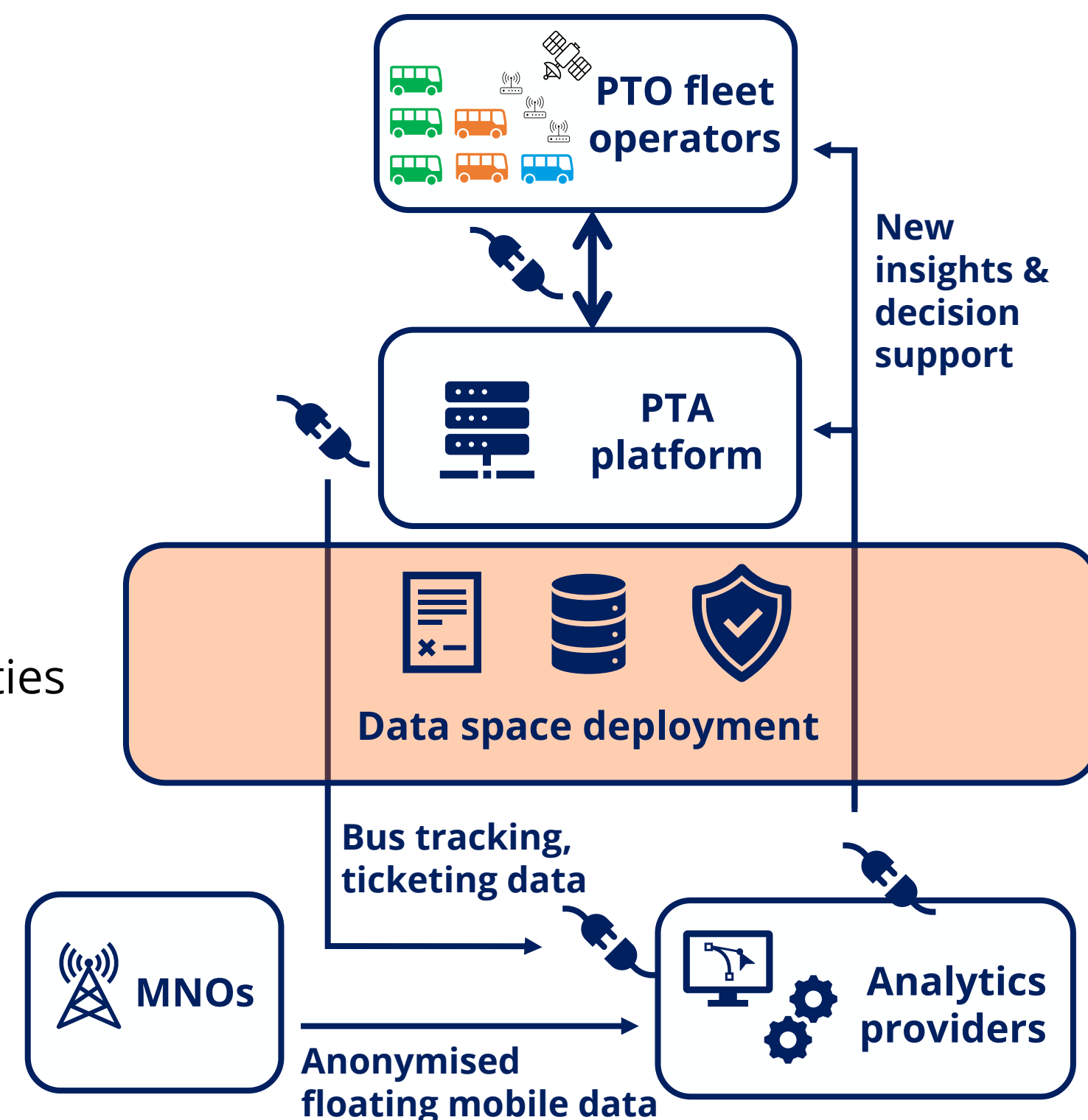
- **Traffic measurement data space**: part of Flanders Smart Data Space
- Connects traffic data from diverse sources using **standard vocabulary** (OSLO)
- Linked to **trained AI model** for analysis, prediction, transfer learning
- **User interface** for non-technical users: see what data, from where, by whom, etc.
- Further opportunities: interlinking with other regions via EMDS

End user

Gen AI chat interface

Model Context Protocol

Flanders Smart Data Space for traffic measurements

Data Source 1 | Data Source 2 | Data Source 3 | Data Source N

Traffic measurements (diverse sources)

Barcelona: Multi-operator data ecosystem with value-added services

*As a planner at a PTO,
I want to optimise my bus fleet and on-demand services while keeping **full control of my data** and easily leveraging innovative **digital service providers***

- PTOs share operational data to **platform operated by local PTA**, but need trusted mechanisms to share sensitive data with third parties
- **Data space connectors, usage control and verifiable credentials** enables secure, permission-based data sharing with third-party analytics providers
- **Shared insights** support route analysis, service planning, and on-demand optimisation
- Vision: **trusted, scalable ecosystem** where PTA & PTOs collaborate with digital service providers to improve mobility services

Why does this matter?

- **Strategic priority** across Europe – shaping how mobility data will be governed
- **Trusted data sharing** is essential for complex, multi-stakeholder mobility challenges
- Breaking silos and overcoming data sharing resistance unlocks new **value creation opportunities**

Where do we go from here?

- Focus on **governance, trust** and **incentives** – tech alone won't solve data sharing
- **Invest in the foundations**: skills, data quality, interoperability
- **Start small, show value**: pilot concrete use cases to build buy-in

Making data work for urban mobility is **a shared, collaborative effort – and data spaces can be a key enabler.**

Thank you for your attention!

For more information:

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