

Data Spaces for Mobility, Tourism, Cities

How are dataspace transforming our lives?

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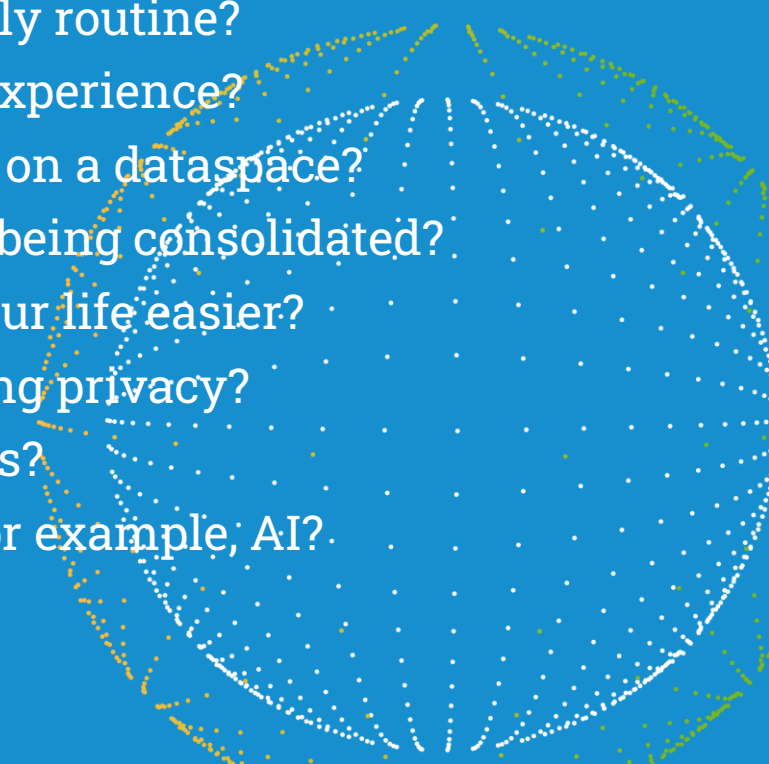


How are dataspace transforming our lives?

Mobility, tourism and smart cities are three sectors where the interaction to individuals is the key. Most of the use cases involve people.

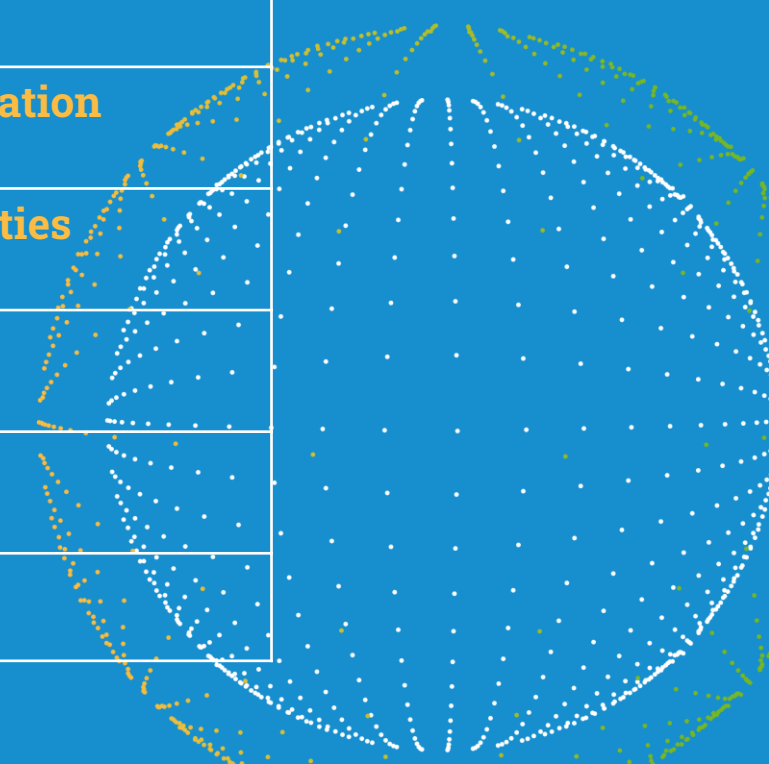
Some questions to be answered:

- As a hotel owner, how are the dataspace going to change my business?
- As a citizen, how are the mobility dataspace going to affect my daily routine?
- As a tourist, how are the tourism dataspace going to improve my experience?
- As a business owner, what will be the way to onboard my business on a dataspace?
- As a business owner, what can I do today while the dataspace are being consolidated?
- As a citizen, how smart cities together with dataspace will make our life easier?
- As an individual, should I be worried about being watched and losing privacy?
- As decision-maker, is this the right time to jump into the dataspace?
- As an outsider, why dataspace are not on the media as much as, for example; AI?



The agenda for today

Time	Agenda
15:30	Welcome Mariano Blaya-Andreu, IDSA
15:40	Common European mobility data space Dimitrios Gkatzoflias, European Commission (DG-MOVE)
15:50	Empowering SMEs in the Tourism Sector to Embrace Data Spaces María Tomás, Forwardkeys
16:00	GAIA-X 4 Future Mobility - laying foundations for digital transformation Prof. Dr. Frank Köster, DLR
16:10	Impact assessment in the European Data Space for Smart Communities Nuria de Lama Sánchez, IDC4EU
16:20	Mobility of people and goods by FIT Consulting Paola Cossu and Fabio Cartolano, FIT Consulting
16:30	Eona-X – improving mobility for the Olympic Games Jonathan Huffstutler, Eona-X
16:40	<i>Mini Break & room change, back to the Spectrum room.</i>



What are your highlights?

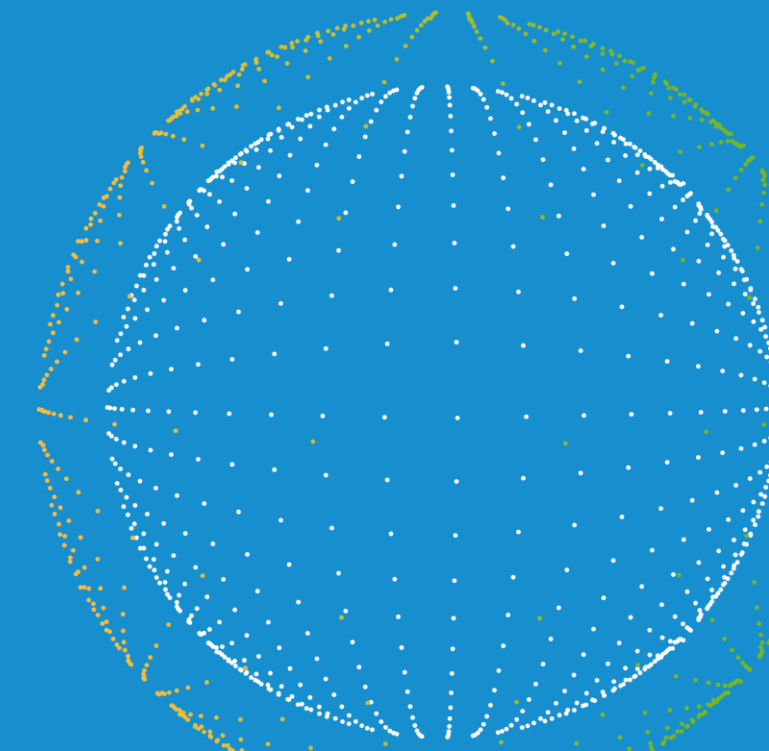
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Data Spaces for Mobility, Tourism, Cities

Common European Mobility Data Space

Dimitrios Gkatzoflias

European Commission (DG MOVE)





Towards a common European mobility data space (EMDS)

European Commission

Data Spaces Symposium, March 12-14, 2024

At the crossroads of two EU strategies

Data Strategy



Establish a single market for data.
Enable data sharing and establish fair and clear rules on data use and access.

Sustainable and Smart Mobility Strategy (SSMS)



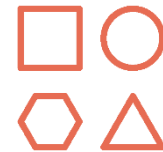
Ensure that the EU transport sector is fit for a clean, digital and modern economy.

→ A **common European mobility data space (EMDS)** facilitating access, pooling and sharing of data from existing and future transport and mobility data sources.

Challenges of mobility data sharing



Reluctance to share data:
security, competition
concerns, lack of trust



Heterogeneity and diversity
of stakeholders, transport
modes, data types, etc.



Fragmentation, lack of
access and interoperability

EMDS Communication (adopted Nov 29 , 2023)

- It outlines the Commission's proposed way forward for the creation of a common EMDS, including its **objectives, main components, supporting measures** and **milestones**.
- The Commission is seeking to promote the exchange of information on this topic, as well as collaboration more generally.
- It invites all relevant actors to take note of the measures set out in this communication.

Use cases and their added value for the mobility transition ahead

 Increasing the efficiency of the logistics sector at EU level

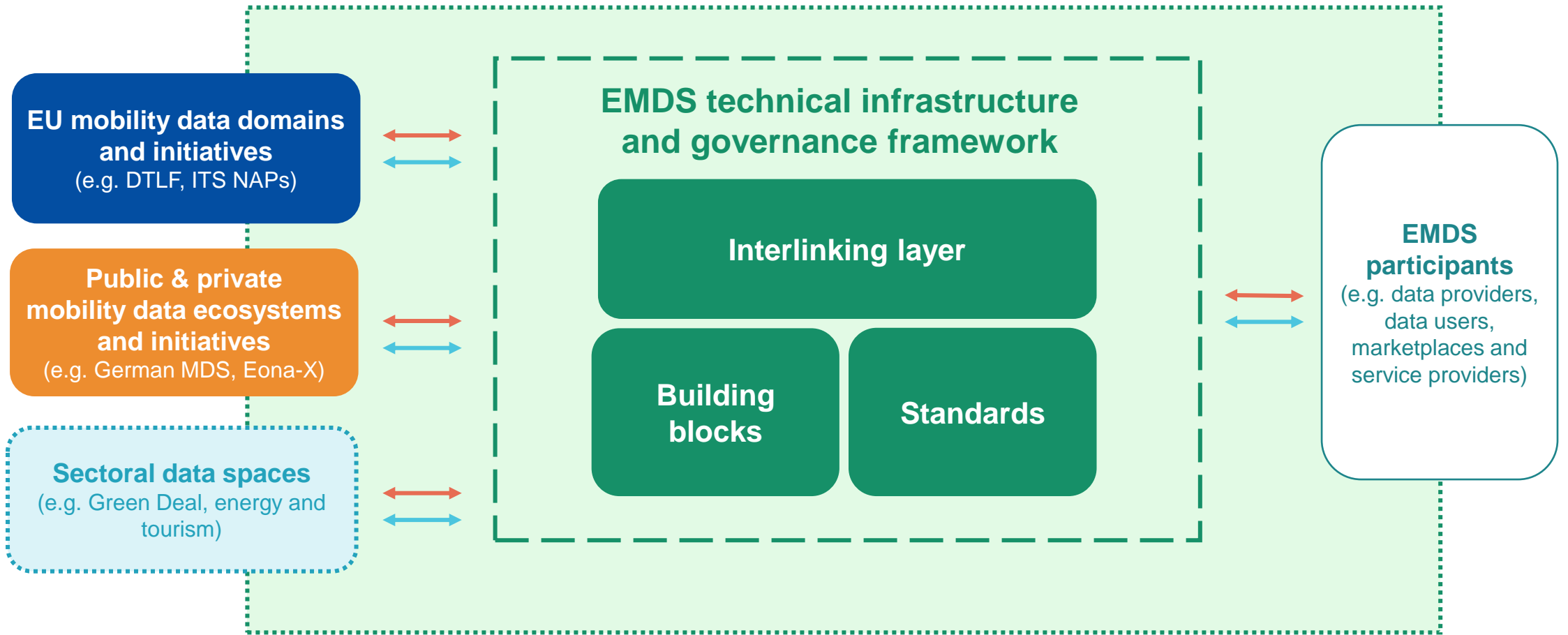
 Implementation of **urban vehicle access regulations (UVARs)**

 Boosting cross-border passenger & freight **multimodality**

 Facilitating access to **electromobility** data at EU level

EMDS framework

Envisioned concept



→ data access/sharing

→ metadata flows

Actions supporting the common European mobility data space (1/2)



Preparatory action Digital Europe Programme

12 months coordination & support action:

[PrepDSpace4mobility](#)

Oct 2022-Sept 2023 ✓

- Map existing mobility data ecosystems
- Recommend first common building blocks

Deployment action Digital Europe Programme

36 months deployment action: [deployEMDS](#)

Kick-off Nov 2023 ✓

- Deployment of mobility data sharing use cases related to **traffic and urban mobility** indicators

Technical assistance Connecting Europe Facility

12 months study

Kick-off Jan 2024 ✓

Followed by a deployment action in 2025 (TBC)

- Focus on the **governance, interlinking layer** and further definition of building blocks and **interoperability**

- Building on the **Data Spaces Support Centre** and **SIMPL**

Actions supporting the common European mobility data space (2/2)



New

Multi-country projects

Digital Europe Programme

First call will be:

- [published](#) Feb 13, 2024 ✓
- open Feb 29-May 29, 2024
- Support the establishment of a **lasting collaboration structure**
- Support the deployment of **cross-border use cases** in different areas

New

Proof-of-Concept

Digital Europe Programme

6 months PoC

Kick-off Jan 2024 ✓

- Focus on how **personal data** are managed in the EMDS framework, through a **multimodal use-case**
- Looking for **local authorities and transport operators** to test the PoC

- Building on the **Data Spaces Support Centre** and **SIMPL**

deployEMDS

- **45 European partners** deploy a functioning technical infrastructure for the EMDS
- across **9 European cities/regions**
- addressing **use-cases** that focus on **traffic** and **urban mobility** indicators
- **SMEs, start-ups and industry** are welcome to join the “Innovation and Scaling group” for collaboration and knowledge sharing
- **Public authorities** can get involved in workshops with NAPCORE or the Network of Cities managed by POLIS
- **do you want to get involved?** contact the project coordinator kirstein@acatech.de



Mobility and Logistics Data EDIC

European Digital Infrastructure Consortium (EDIC): new **mechanism to implement Multi-Country Projects (MCP)** created by the [Digital Decade Policy Programme 2030](#)

Ongoing preparation of a possible **Mobility and Logistics Data EDIC** to ensure long term sustainability of common data infrastructure and promote large scale adoption. Proposed scope:

- Allowing the **coordination** and **alignment** on common standards among its members.
- support the **implementation of cross-border use cases** under a coherent approach

Preparation of an application by the **Netherlands** (host), **Austria, Germany, Finland, France** and **Spain**, closely followed by the EC. Other Member States and organisations showed interest.

Application planned in May 2024.

Next steps

- Follow-up on the EMDS Communication
- EMDS technical assistance study preliminary deliverables
- deployEMDS preliminary deliverables
- Define terms of reference for the deployment action of the interlinking layer (Q3-Q4 2024)

Thank you

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gilles.carabin@ec.europa.eu

kristof.almasy@ec.europa.eu

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Useful links

European data strategy

https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/european-data-strategy_en

Sustainable and smart mobility strategy

https://transport.ec.europa.eu/transport-themes/mobility-strategy_en

DIGITAL Work Programme 2024

[Funding & tenders \(europa.eu\)](#)

Deployment call - Funding and tenders portal

[DIGITAL-2022-CLOUD-AI-03-DS-MOBILITY](#)

[PrepDSpace4Mobility \(mobilitydataspace-csa.eu\)](#)

Staff working document on data spaces

<https://digital-strategy.ec.europa.eu/en/library/staff-working-document-data-spaces>

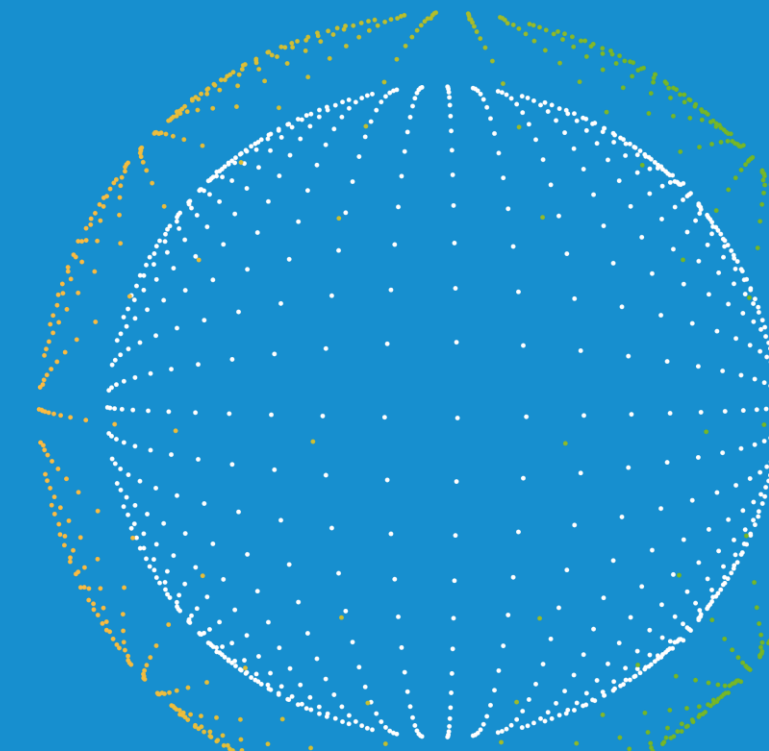
Consultation – Communication on common European mobility data space

[Have your say - creating a common European mobility data space](#)

Data Spaces for Mobility, Tourism, Cities

Empowering SMEs in the Tourism Sector to Embrace Data Spaces

María Tomás
Forwardkeys



Data Spaces Symposium

Unite. Innovate. Adopt.

Tourism sector and Data Spaces: The need to bridge the gap

Maria Tomas, ForwardKeys

13th March 2024

Data Spaces for
Mobility, Tourism, Cities

DSBA

BDV
BIG DATA VALUE
ASSOCIATION

FIWARE
FOUNDATION

gaia-x

INTERNATIONAL DATA
SPACES ASSOCIATION

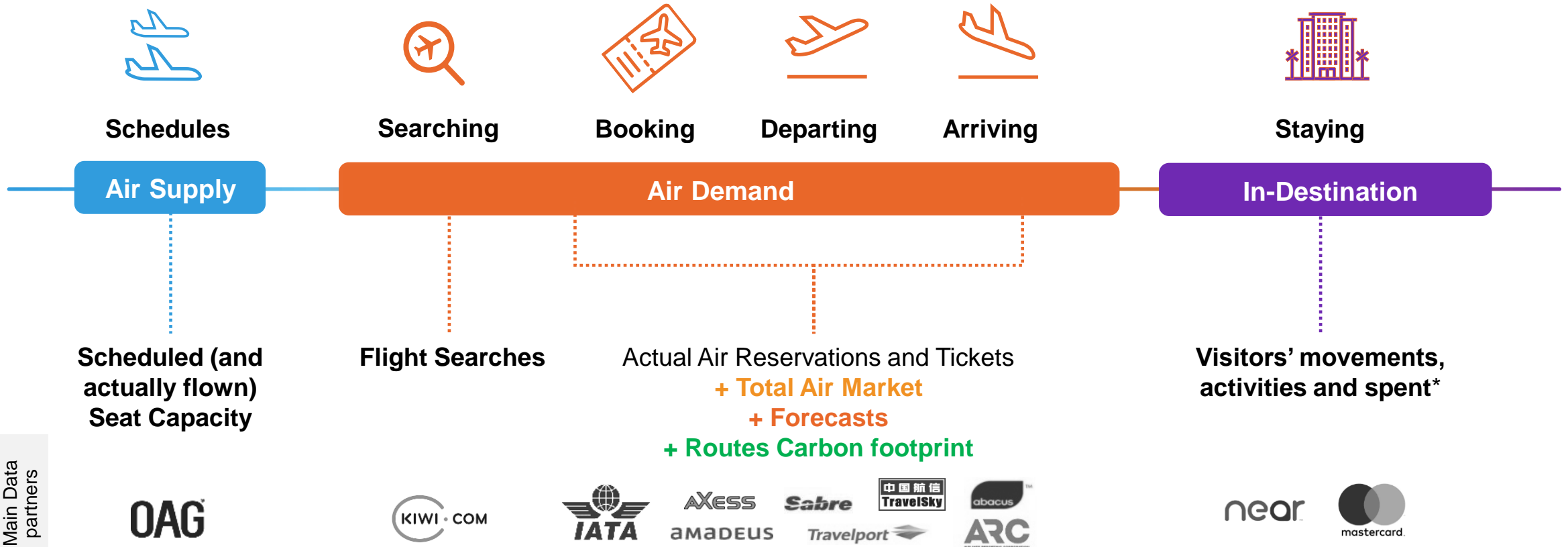


DATA SPACES
SUPPORT CENTRE

Forward Keys brief overview

FK has 15 years experience providing Destinations and Travel Retail companies with products and services based on data to predict traveller impact.

FK monitors and predicts air travel, from demand and supply perspectives, gathering, processing and enriching air travel data to provide the most comprehensive vision of the market:



Forward Keys in Data Economy

Data Spaces for
Mobility, Tourism, Cities



Analyse
historical travel
trends



Understand
passenger
behaviour



Optimise
operational &
marketing costs



Predict
future
demand



4,750
airports
world-wide



900+
airlines



180
low cost
carriers



10+ years
historical
data



40 million
flights
analyzed



100+ million
daily flight
searches



70,000
unique
routes

Customers and partners

VisitDenmark



TAHITI
TOURISME



Tourism sector and Data Spaces: The gap

Data Spaces for
Mobility, Tourism, Cities

Technical challenges upstream (with data providers)

- Diversity of sources and lack of industry standards.
- Data produced for transactional purposes and not fit for analytics purposes.
- Low maturity of data providers in data sharing.

Technical challenges downstream (with data consumers)

- Huge effort is required in data cleansing and quality control.
- Low data and tech-savviness of data consumer.
- Strict constraints due to compliance vs. regulations, Intellectual Property ownership and business legal limitations

DSBA



BIG DATA VALUE ASSOCIATION



INTERNATIONAL DATA SPACES ASSOCIATION



DATA SPACES
SUPPORT CENTRE



PREDICTING TRAVELLERS' IMPACT

Tourism sector and Data Spaces: The gap

Data Spaces for
Mobility, Tourism, Cities

Tourism companies challenges (>99% SMEs)

Data Spaces challenges

- Tourism companies are hardly able to evaluate the intrinsic value of Data Spaces and the required investment (technical, economic, knowledge)
- *Data Management as a Product* is not a reality in organizations, especially in the ones of Tourism sector
- Tourism SME's generally perceives Data Spaces as something disconnected of their businesses

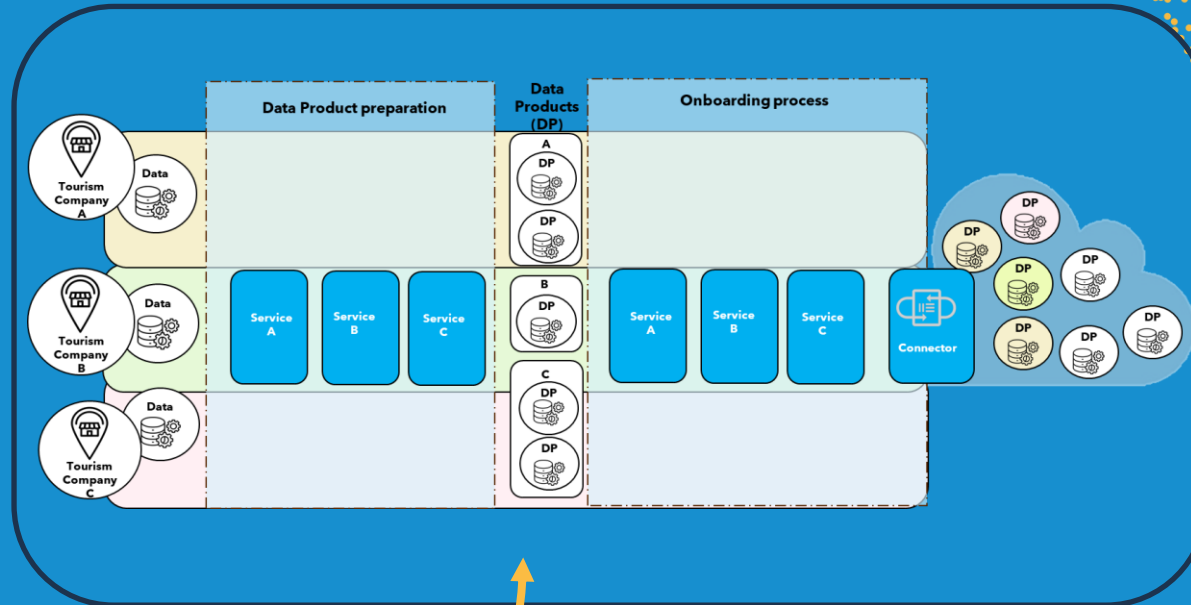
- Gaia-X Trust Framework defines an advanced onboarding process. However, it is still WiP and in constant evolution + not supported by digital tools.
- IDSA is developing the Data Space Protocol, being adopted as "de facto" standard by the Connectors' developers. But currently the process is complex and cannot be done by non-technical experts.
- Although the European Data Strategy, funding programmes, frameworks and initiatives are already in place, there are no real success stories yet to showcase in the Tourism sector.



Tourism sector and Data Spaces: The bridge

Data Spaces for
Mobility, Tourism, Cities

TOURISM COMPANIES



- 1.- Services to help data flow outside of the organisations
- 2.- Services to help create high-quality and interoperable Data Products
- 3.- Services to facilitate the Onboarding Process
- 4.- Train companies and give them autonomy with easy-to-use tools
- 5.- Demonstrate it with real use cases



Conclusions: ForwardKeys' perspective

Data Spaces for
Mobility, Tourism, Cities

- The tourism sector has vast amounts of valuable data (mobility of travellers, spent, reservations, type of product/services consumed...)
- The tourism sector is very atomized, so bilateral data exchanges cannot solve most of the Business questions.
- Data Spaces are the perfect ecosystem to see the benefits of data sharing and improve competitiveness in Tourism.
- Currently, there is a gap that prevents tourism companies from embracing Data Spaces: Technical barriers, knowledge and organisational challenges and Data Spaces inner challenges
- Now that the framework and rules are in place, there is a need for a set of tools and services to facilitate tourism companies to join Data Spaces, starting from managing Data as as high-quality Products in the organisations.



Data Spaces Symposium

Unite. Innovate. Adopt.

Tourism sector and Data Spaces: The need to bridge the gap

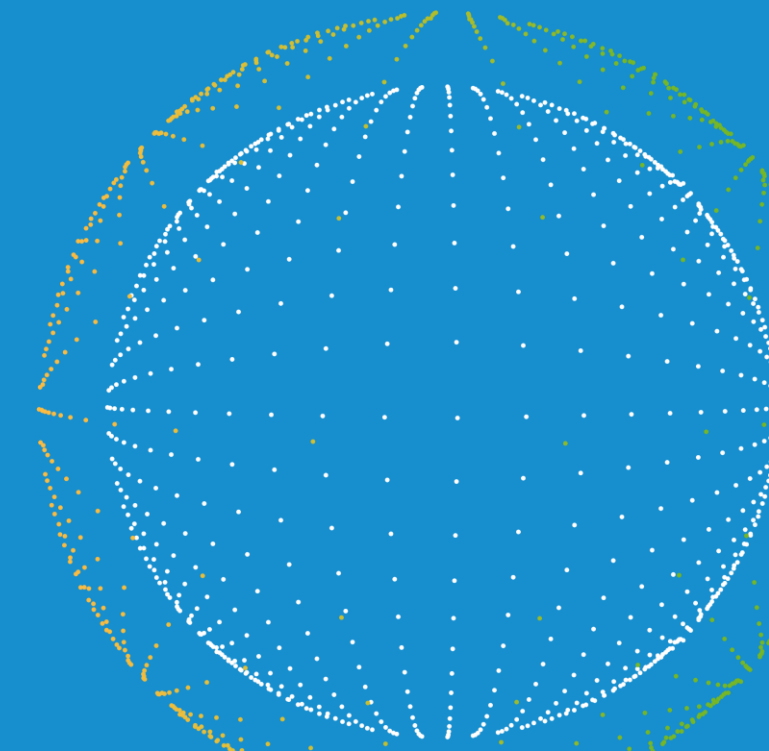
Maria Tomas, ForwardKeys
Innovation Manager

Many thanks for your
attention!

Data Spaces for Mobility, Tourism, Cities

GAIA-X 4 Future Mobility - laying foundations for digital transformation

Prof. Dr. Frank Köster
DLR



gaia-x 4 future mobility & base-x

Q1/2024

Prof. Dr. Frank Köster & Maximilian Stäbler

DLR Institute for AI Safety & Security



Funded by
the European Union
NextGenerationEU

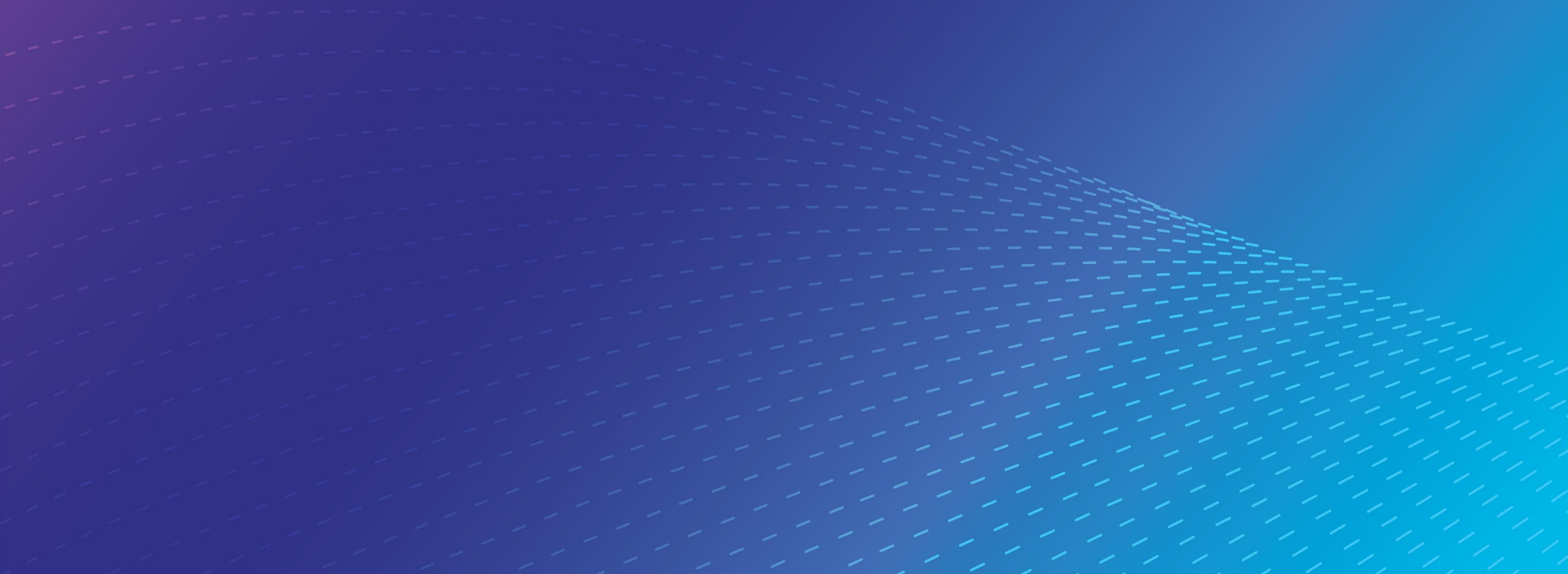
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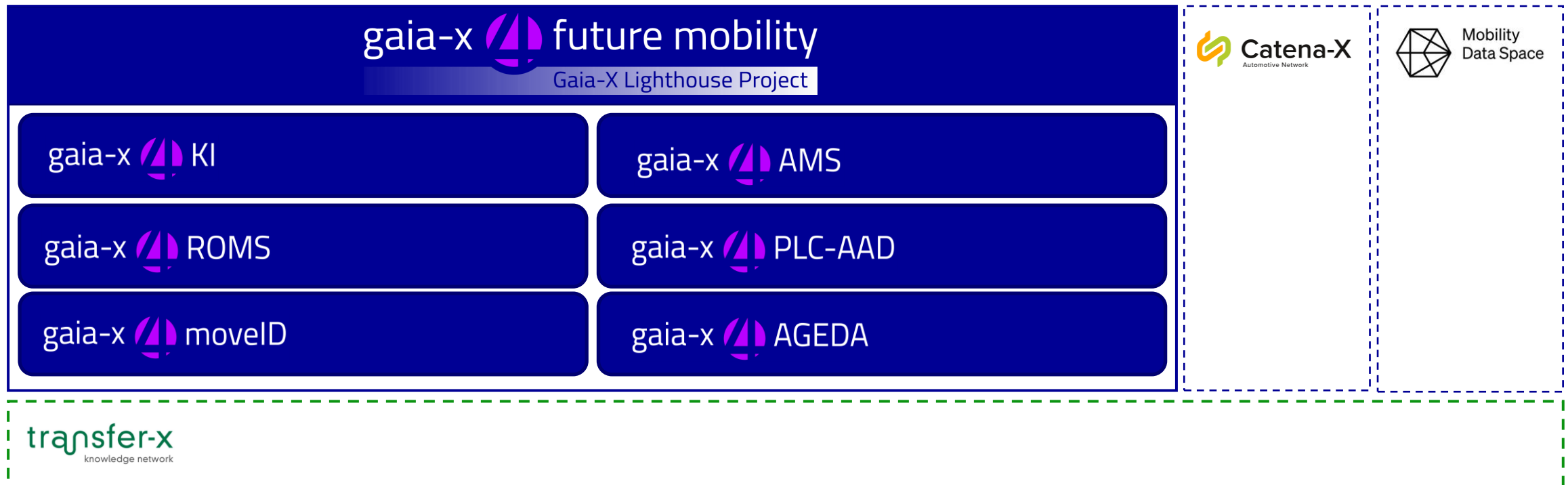
Federal Ministry
for Economic Affairs
and Climate Action

on the basis of a decision
by the German Bundestag







01 | Family of Projects



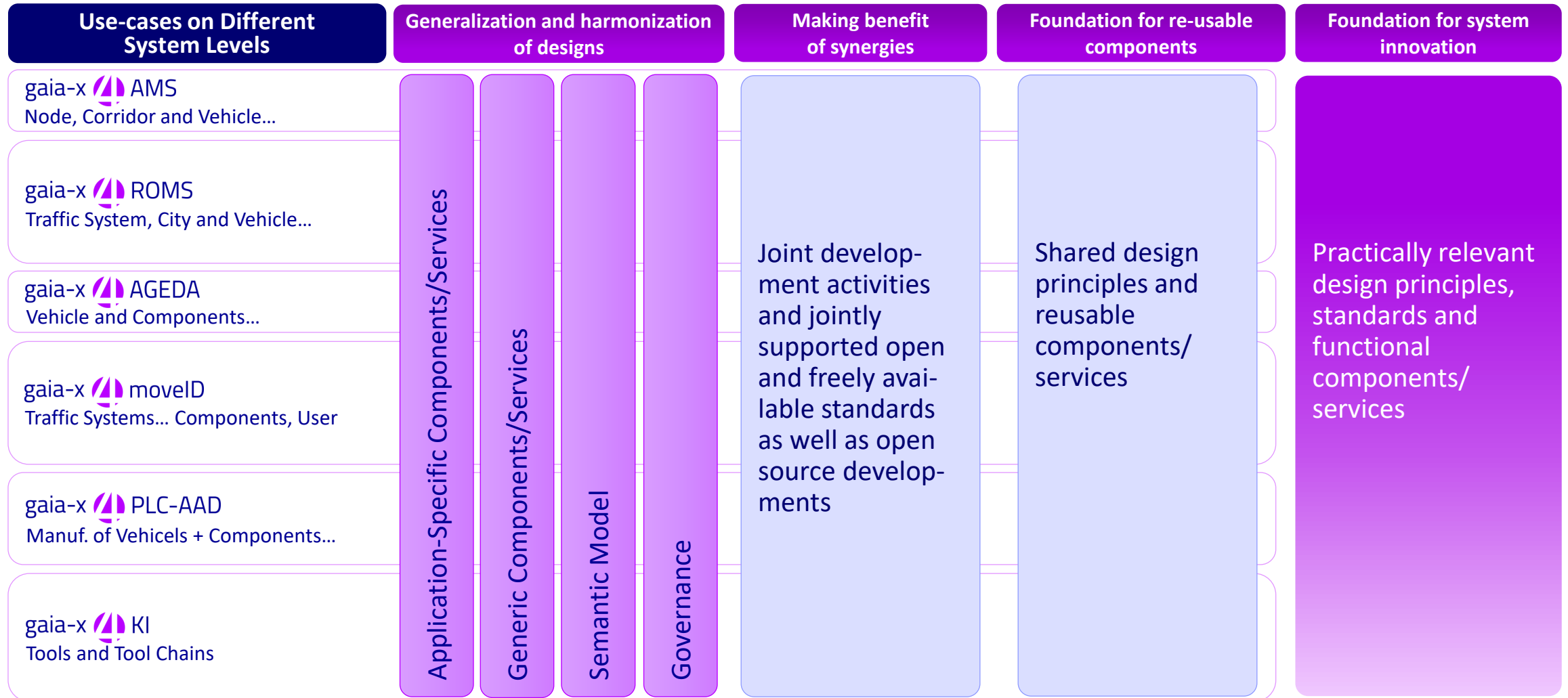
Family of Projects – Relation to other Domains and Initiatives



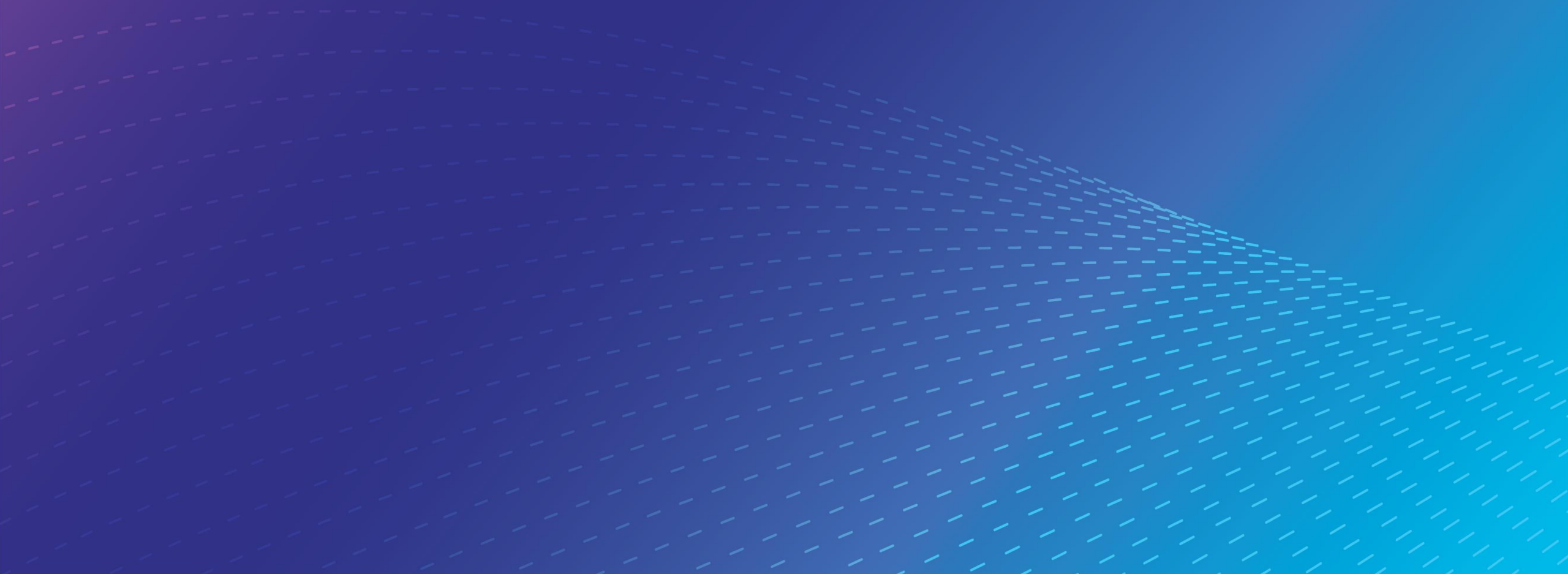
Family of Projects – Synergies by Design

Use-cases on Different System Levels	Backend System	Traffic Network	Traffic Nodes / Edges	Vehicle System	Subsystem	Component
gaia-x  AMS Node, Corridor and Vehicle...	Safe/Secure Cooperation of Automated Vehicles					
	Connected and Safe/Secure – Rescue Corridor					
gaia-x  ROMS Traffic System, City and Vehicle...				RO of Vehicles		
				RO of Fleets		
				Smart Managed Public Transport Fleet		
				Smart Managed Freight Fleet		
gaia-x  AGEDA Vehicle and Components...				Vehicle as Edge Device		
				Embedded Gaia-X		
gaia-x  moveID Traffic Systems... Components, User	DLT-Network		Vehicle Data Collection			
	Traffic Infrastructure Mgmt.					
	Smart Parking					
	Zoning					
gaia-x  PLC-AAD Manuf. of Vehicels + Components...				Sensor Validation		
				Bullwhip Mitigation		
				Digital Twin based Predictive Maintenance		
gaia-x  KI Tools and Tool Chains				Automated Optical		
				Digital Twin – Camera		
				SIEM		
				Scenario Identification		

Family of Projects – Synergies by Design and Joint Development Activities



02 | base-x



base-x Architecture

Scalable Mobility Solutions & Foundation for System Innovation

Data Space for a City

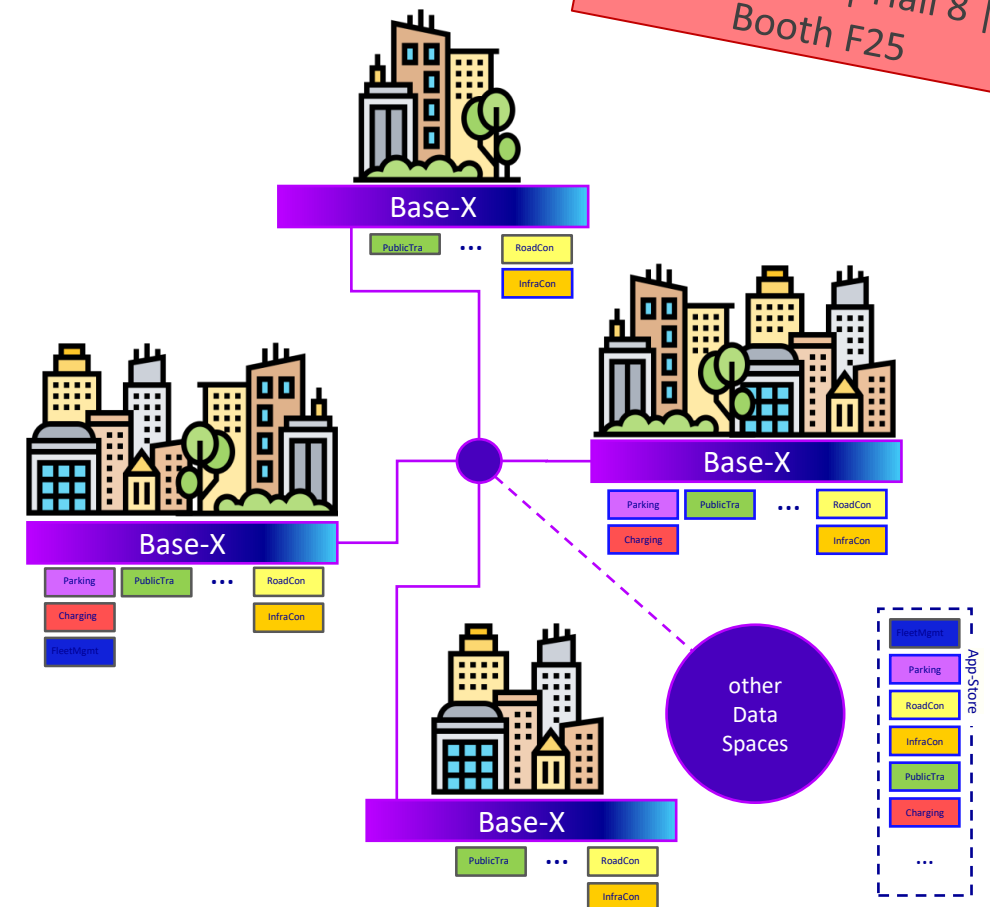
- city deploys Base-X-layer + domain-specific semantic model
- city selects applications from GX4FM + external sources

Data Spaces for many Cities

- further cities deploy Base-X-layer + domain-specific semantic model
- cities are in one federated/meshed data space
- city selects applications from GX4FM + external sources

Federated/Meshed Data Space of Cities + other Data Spaces

- (cross-sectoral) federated/meshed data space



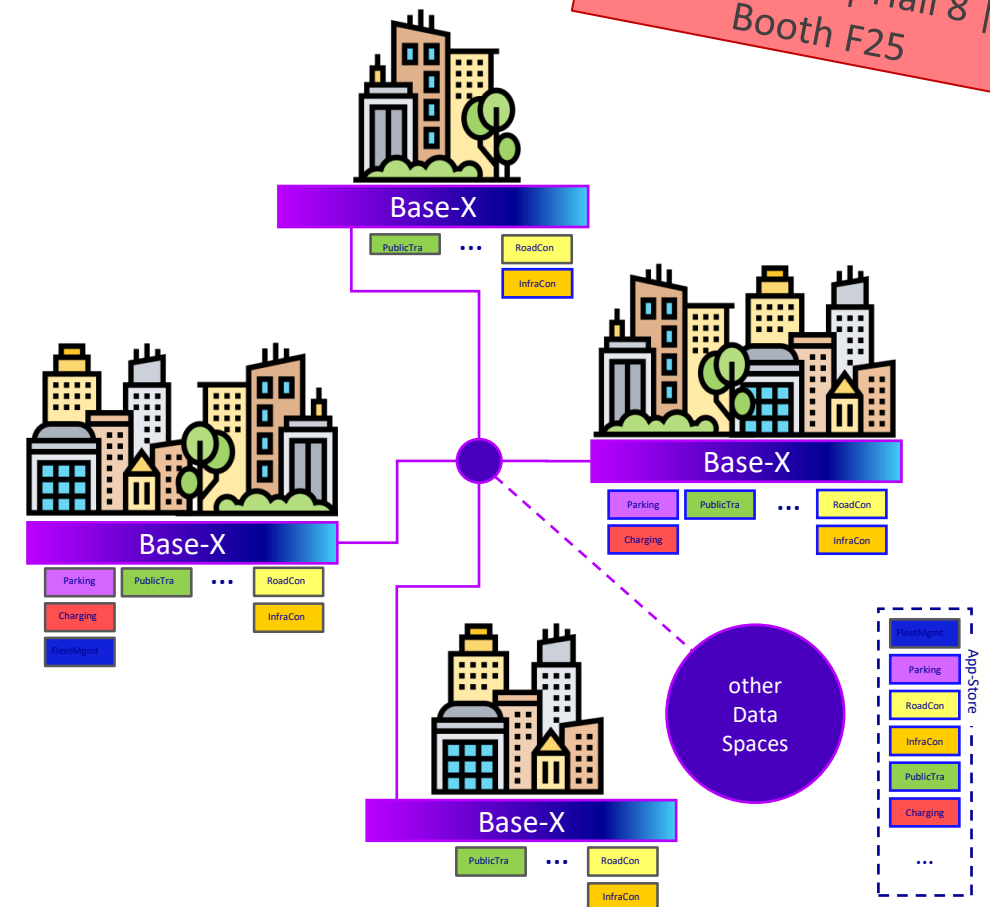
Hannover Messe | 22.-26.
April 2024 | Hall 8 |
Booth F25

base-x Architecture

Scalable Mobility Solutions & Foundation for System Innovation

First Use-Cases

- **Road Damage Detection:** Utilizing vehicle data (e.g. service vehicles in cities but also privately owned cars) to automatically detect and document road infrastructure status as well as potholes and make the data available for (predictive) maintenance.
- **Flexible Bus Stop Usage:** Involving selection and release of stops in a web application, a dashboard for visualizing stop attractiveness, and the creation of booking offers, available for third-party users.
- **OD Mapper:** This aims to automatically determine areas and streets where automated vehicles can drive based on various map data sources and considering vehicle characteristics described by standards derived from the field of verification and validation of automated vehicles.
- **Intermodal Traveling:** Demonstrating the combination of various mobility modes in Hamburg, highlighting the synergies between local public transport, German rail, e-scooters, and car-sharing services.



Hannover Messe | 22.-26.
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Booth F25

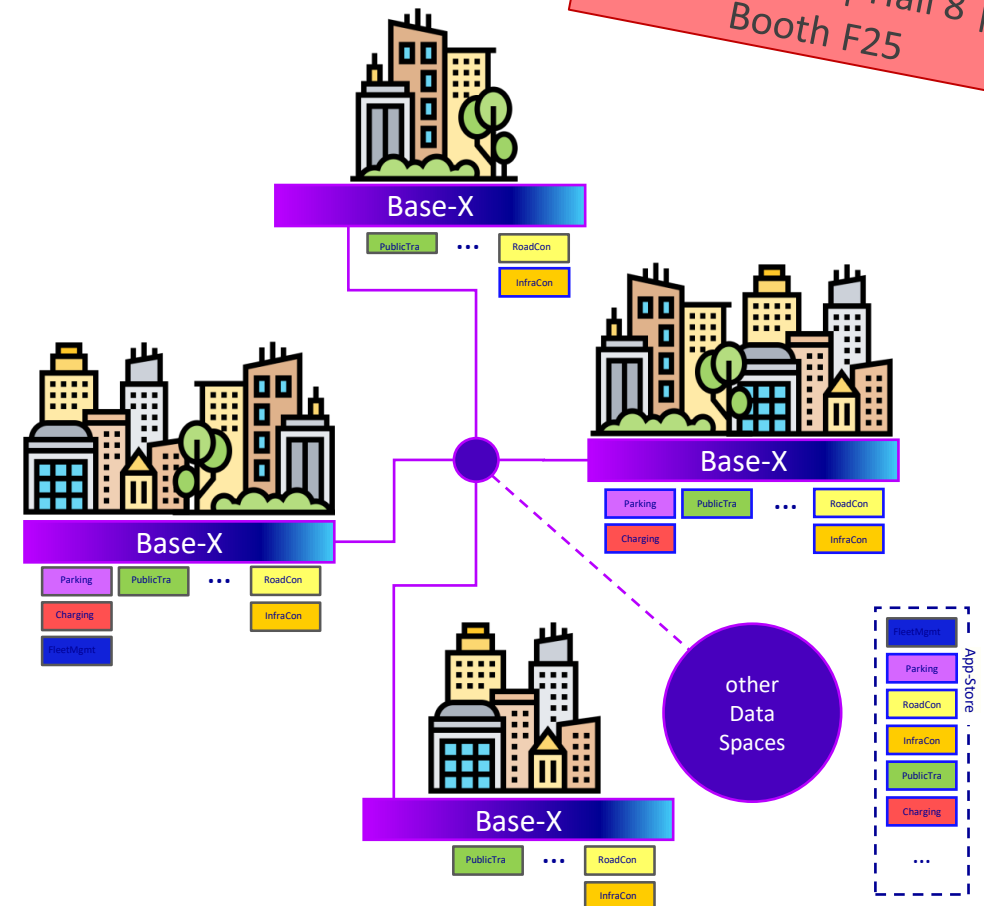
base-x Architecture

Scalable Mobility Solutions & Foundation for System Innovation

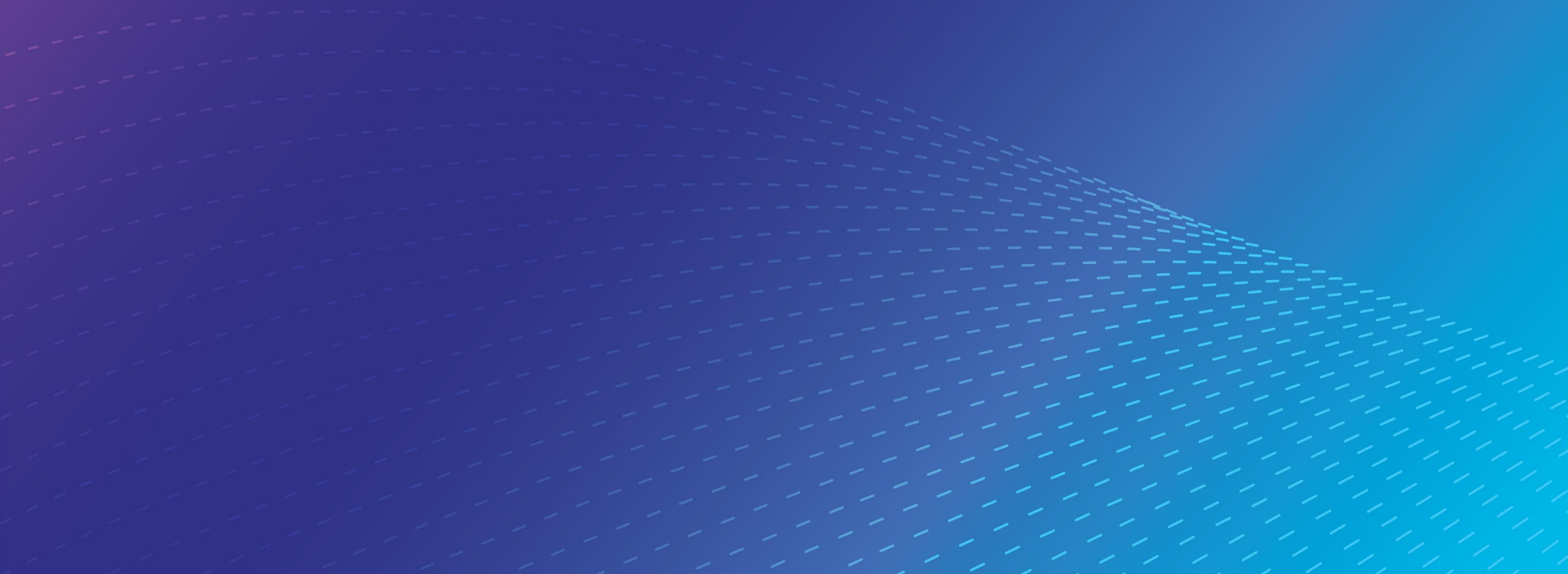
First Use-Cases

- **Road Damage Detection:** Utilizing vehicle data (e.g. service vehicles) Provide higher quality of the road infrastructure while lowering the costs and reducing negative effects of road construction works regarding e.g. congestions and traffic safety.
- **Flexible Bus Stop Usage:** Involving selection and release of stops in a On-street stops can be reduced, like e.g. for delivery vehicles and ride sharing offerings, which has a impact on traffic efficiency and safety.
- **OD Mapper:** This aims to automatically determine areas and streets Support e.g. the quick roll-out of automated vehicles and their integration in an holistic traffic/mobility planning approach.
- **Intermodal Traveling:** Demonstrating the combination of various The comfort of passengers can be raised and new (active) mobility modes can be offered in relation with the traveler needs.

Hannover Messe | 22.-26.
April 2024 | Hall 8 |
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03 | Current Participants




gaia-x future mobility

Gaia-X Lighthouse Project

The family of projects consists of

gaia-x  KI

gaia-x  AMS

gaia-x  ROMS

gaia-x  moveID

gaia-x  PLC-AAD

gaia-x  AGEDA

Contact for Gaia-X 4 Future Mobility

Prof. Dr. Frank Köster
DLR Institute for AI Safety and Security
Frank.Koester@dlr.de

Gaia-X 4 Future Mobility
Coordinated by the DLR Institute
for AI Safety and Security



Data Spaces Symposium

Data spaces for mobility, tourism, cities: How data spaces are transforming our lives

Impact assessment in the European Data Space for Smart Communities

13th March 2024, Darmstadt

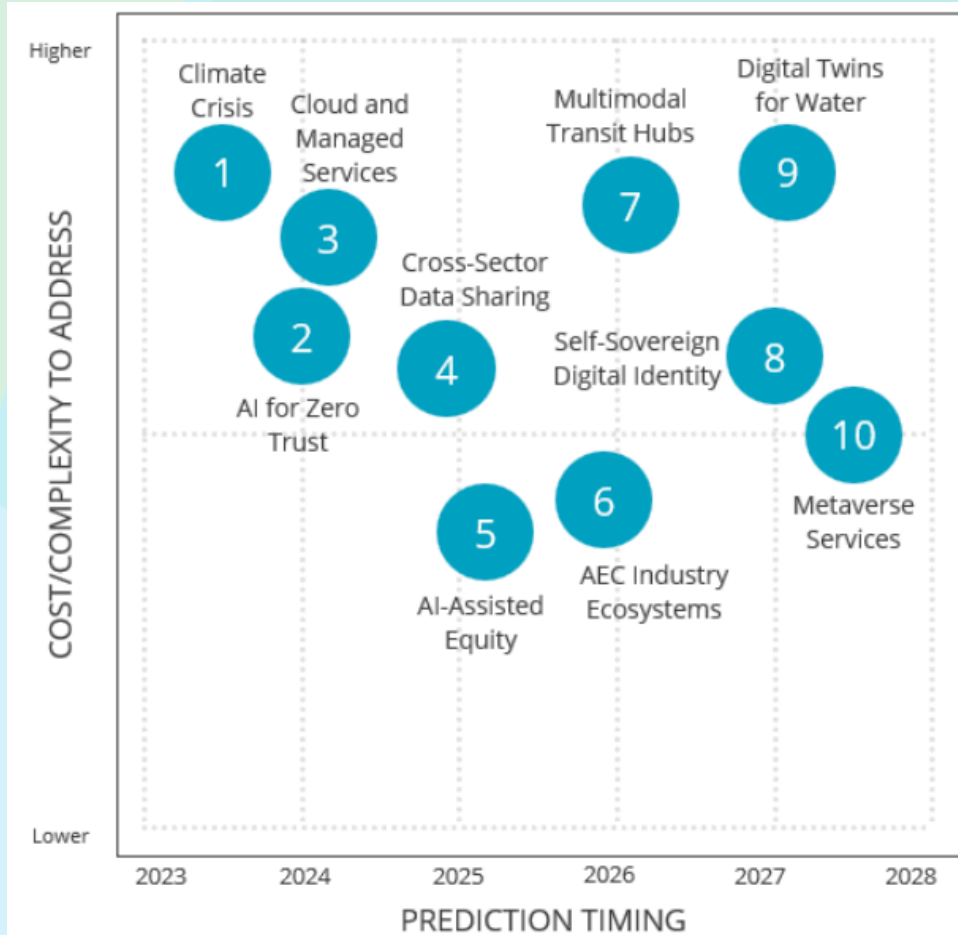
Nuria de Lama
Consulting Director
IDC, DS4SSCC-DEP

You will get insights about...

- A bit of context of the European Data Space for Smart Communities
- Impact Assessment: what and how?



Data is a prominent ingredient in major predictions for Smart Cities and Communities

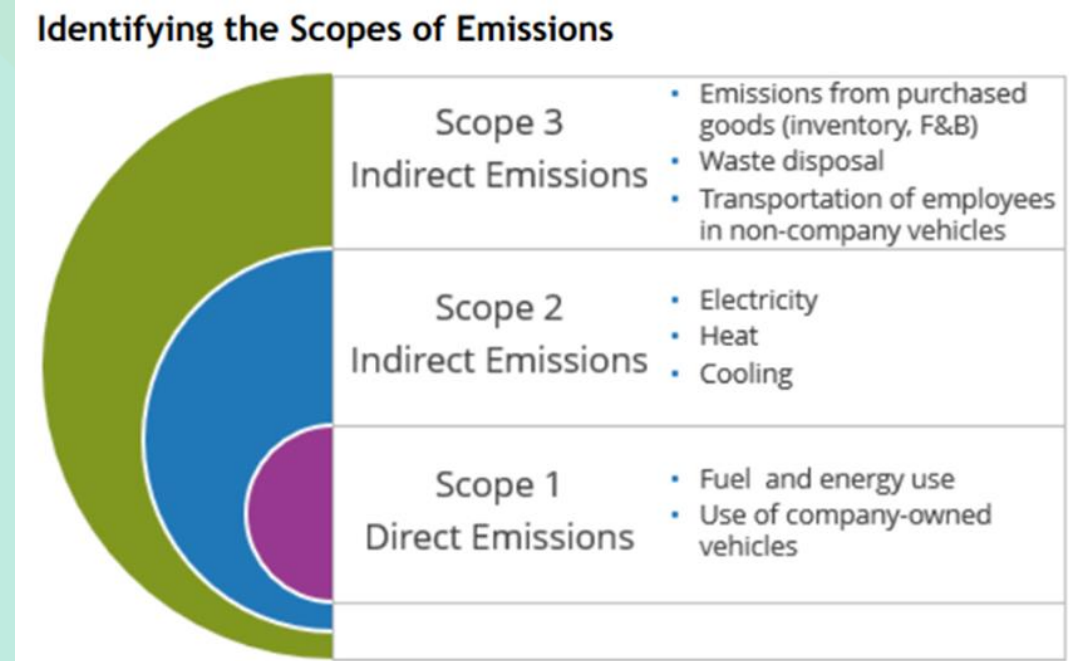


- Prediction 1: By 2023, **60% of cities and communities will have been impacted by the global energy and climate crisis**, despite some efforts in climate tracking, climate intelligence, and green procurement.
- Prediction 4: By 2024, **25% of states, provinces, and local governments will create platforms to enable data sharing** between government, the private sector, and users **to improve processes and the user experience.**
- Prediction 6: By 2025, **75% of large cities and communities will form industry ecosystems with IT, architectural, engineering, and real estate firms to share data, applications, and expertise to address ESG issues.**
- Prediction 9: Threatened by water scarcity and extreme weather, by 2027, **40% of large cities will have digital twins of their water resources to manage water supply, quality, resilience, and behavioral change.**
- Prediction 10: By 2027, **20% of city products and services will be delivered using metaverse or augmented reality solutions**, transforming services delivery, planning and simulation, and constituent interactions.

IDC FutureScape: Worldwide Smart Cities and Communities 2023. Top Predictions

Mainstream ESG/ IT for sustainability: Environmental, social and governance

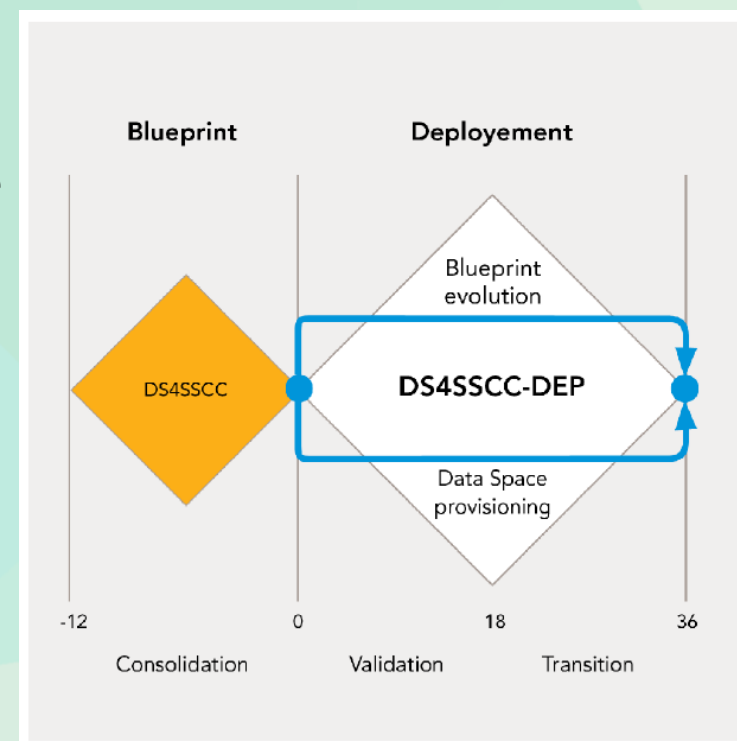
- **Collection/reporting of CO2 emissions:**
 - 42% companies are not doing anything
 - 43% collect scope 1 data (internal sources of CO2 emissions) → only 28% report data
 - 7% collect scope 2 data → 7% collect and report data
 - From those that do not collect and report data on CO2 emissions, 73% say this is due to a **lack of access to enough quality data** to accurately assess and report on emissions
 - 18% claim **lack of quality data**
- **Carbon neutral**= scope 1 + scope 2 (internal and energy supplier sources of emissions)
- **Net-zero**= scope 1 + scope 2 + scope 3 (data sources outside the company)



Source: *Can IT Make It Easy to Be Green? — Hospitality and Travel Turn to Technology Investments to Achieve Sustainability Initiatives (IDC, 2023)*

What is the European Data Space for Smart Communities?

- From Preparatory Action towards Deployment
 - Both actions co-funded by the Digital Europe programme
- The overarching aim is:
 - To create a large-scale cross-sectorial data space for smart communities in the EU...
 - ... and to advance its implementation **to support policy priorities of cities and communities within the EU...**
 - ... by validating the governance and technical blueprint developed by the preparatory action



Co-funded by
the European Union



European data space
for smart communities



Funded by
the European Union

Website update - inventory.ds4sscc.eu/

Interactive portal for building data spaces in Smart Communities

This is the entry point to the Data Space for Smart Communities. You may find all the assets you need to build your data space classified by categories below



Multi-stakeholder Governance Scheme

Discover



Catalogue of Specifications

Discover



Reference Architecture

Discover



Priority Datasets

Discover



Collected Use Cases

Discover



Roadmap for implementing DS4SSCC

Discover



European data space
for smart communities

CALL FOR PILOTS

These pilots will implement the governance and technical blueprint established by the European data space for smart communities preparatory action (DS4SSCC).

Through the piloting, city ecosystems can expect to:



Be placed in a forefront of innovative smart community development in Europe;



Enter into an expansive network of European communities, experts, and policymakers;



Be recognized as leading examples of sustainable and smart communities development;



Receive support and guidance in aligning with the DS4SSCC blueprint and integrating with broader European data ecosystems;



Directly contribute to the shaping of Europe's green and digital future.



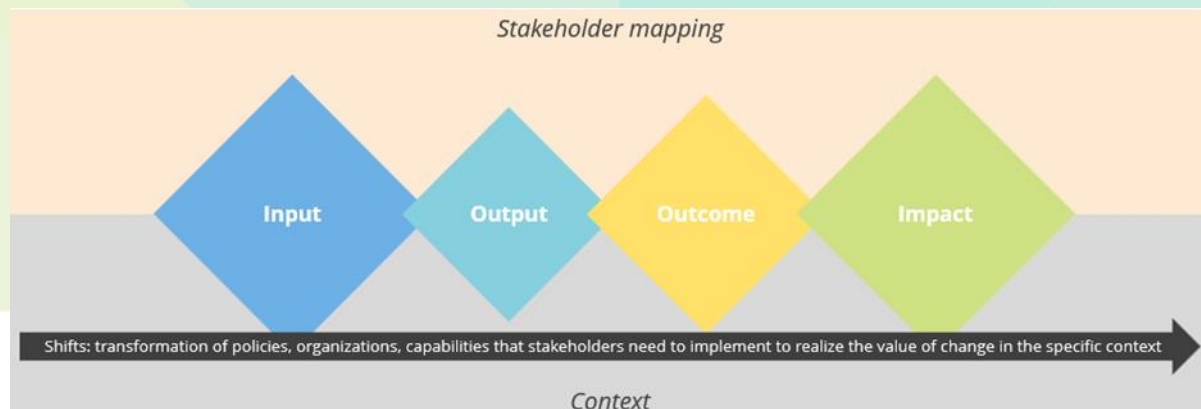
European data space
for smart communities

Impact Assessment. Challenges and Considerations

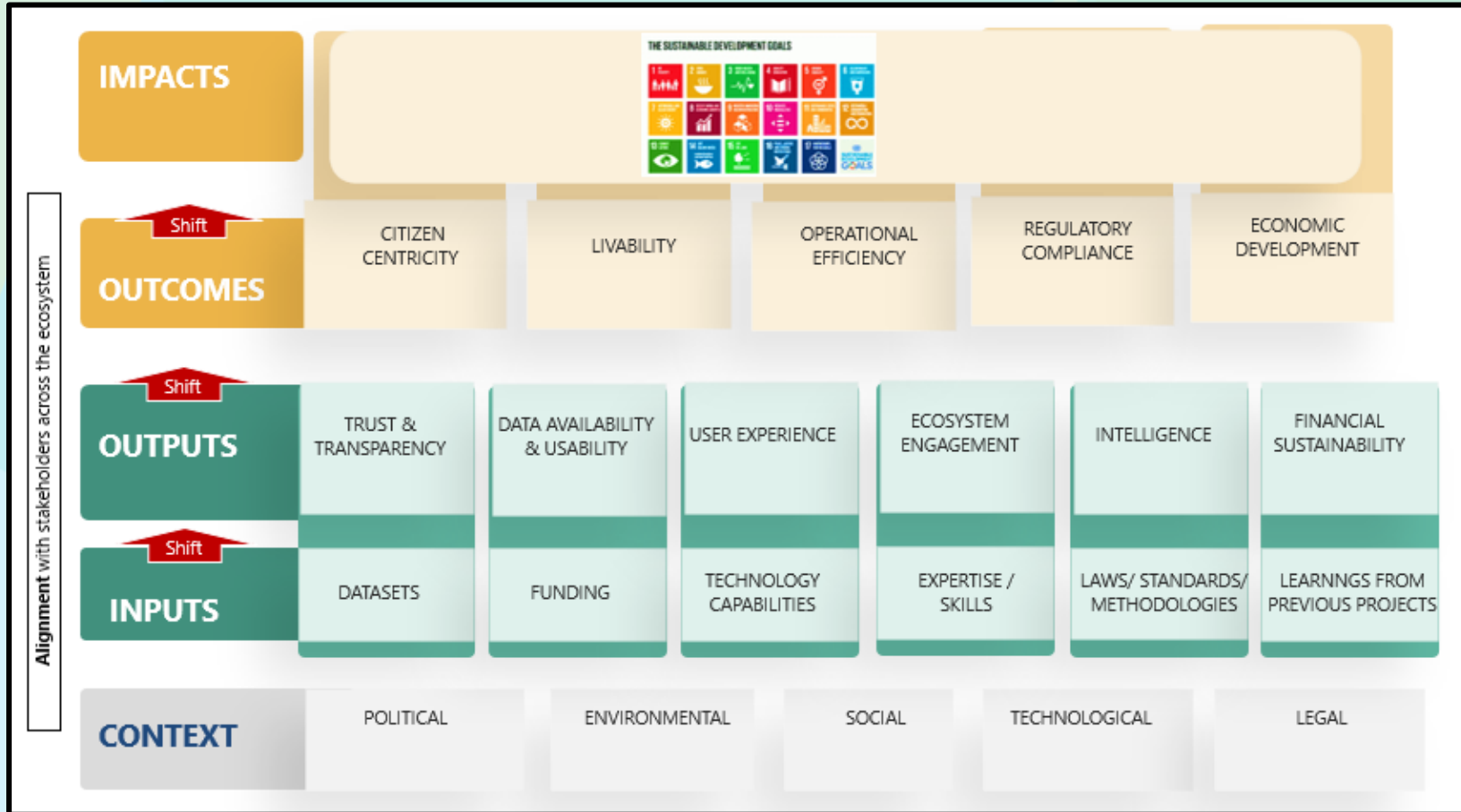
- **Lack of information and empirical evidence on impact** due to several factors:
 - This kind of information is not always documented in publicly available documents
 - Data on the impact of these initiatives is not systematically collected.
 - Productivity gains from technological innovation occur with a time lag (in fact, most data spaces talk about expected outcomes rather than realized outcomes due to the current maturity of data spaces-most in pilot phase)
- Impact Assessment should follow an **iterative approach** and measure **impact of both: i) the data space and ii) the pilots**
- Considerations/factors:
 - Impact through the whole life cycle (acknowledging the **evolution** of the data space)
 - Complex and **dynamic** stakeholder ecosystem
 - **Evolving** external context

Impact Assessment. Approach

- **Theory of Change + Design Thinking**
 - **Casual chain** linking inputs, activities, outputs, outcomes and impacts
 - **Context of the initiative** (economic, social, political and environmental conditions influencing the casual chain)
- This enables stakeholders to map out and **connect data space interventions with expected long-term goals** in order to enable:
 - **Better planning** by understanding how change happens throughout the entire process, from the launch of pilots to the achievement of long-term goals.
 - **Better evaluation** by measuring progress of the DS4SSCC initiatives throughout the full cycle



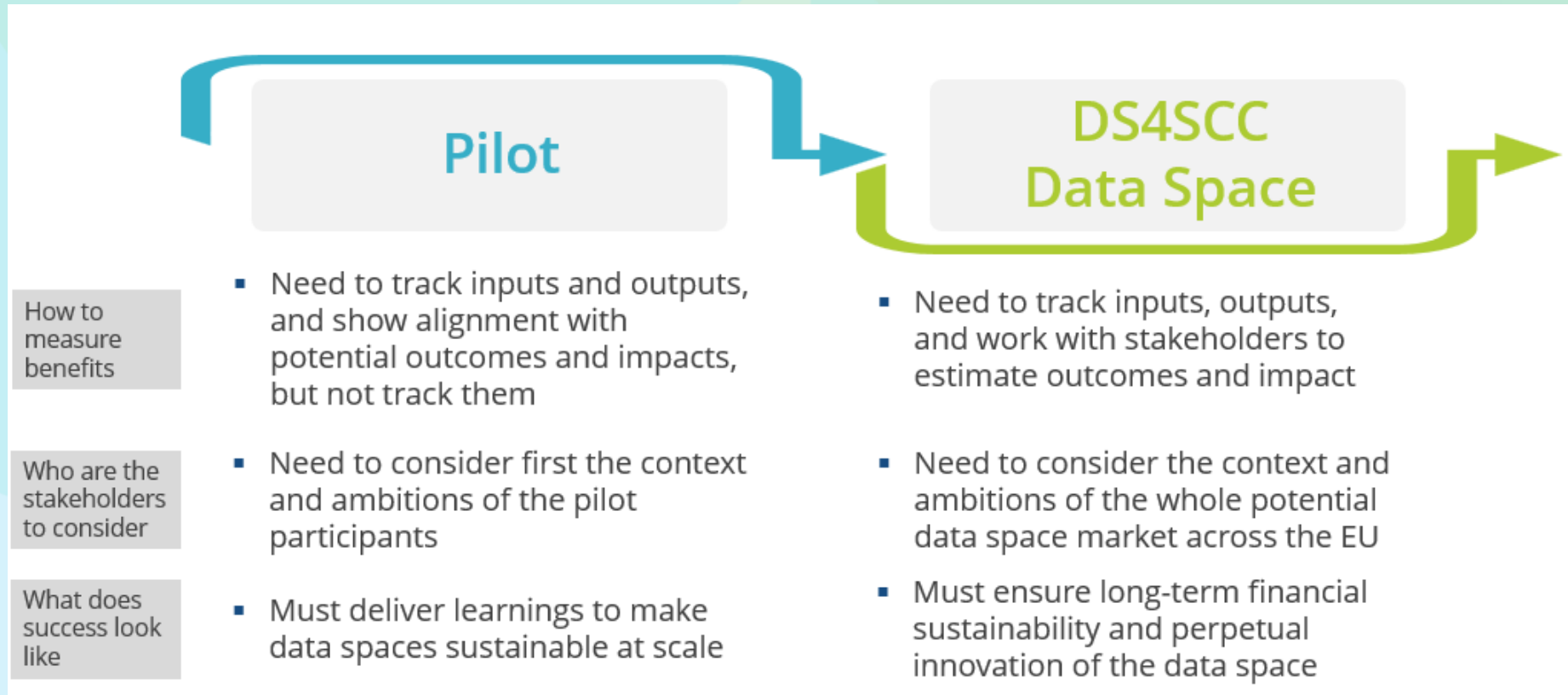
D4SSCC Impact Assessment Framework. Components



- **Impacts:** long-term effects produced as a result of an intervention
- An **outcome** is a likely or achieved short-medium term effect of an intervention's outputs
- **Outputs** are the products, goods and services which result from implemented change activities including new policies, legislation, technological solutions, infrastructure.
- **Inputs** are the required set of resources needed for a transformation process
- The **context** refers to specific features and dimensions to drive transformation and impact through data space use cases and initiatives

DS4SSCC-DEP; March 2024

Application of the Impact Assessment Framework



Impact Assessment Framework. Preliminary indicators/KPIs

• OUTPUT KPIS

Trust and transparency	<ul style="list-style-type: none"> Compliance with cybersecurity regulation Compliance with digital identity regulation Adoption of international cybersecurity standards Compliance with GDPR Compliance with EU data regulation (e.g., Data Act, Data Governance Act, AI Act, Open Data Directive) Adoption of ethics policy
Data availability and usability	<ul style="list-style-type: none"> Number of datasets % distribution of datasets across smart city domains Compliance with MIMs Compliance with Interoperable Europe Act Compliance with INSPIRE Directive Number of downloads / views / API calls % distribution of downloads / views / API calls across datasets
User experience	<ul style="list-style-type: none"> Compliance with accessibility regulation Adoption of international accessibility standards User satisfaction score Omni-channel experience
Ecosystem engagement	<ul style="list-style-type: none"> Number of data users Number of data providers Number of data intermediaries % distribution of users/providers/intermediaries across countries Participation in communication and dissemination events Social media engagement
Intelligence	<ul style="list-style-type: none"> Availability of analytical dashboards visual Number of third-party analytical and AI applications developed using DS4SSCC datasets % distribution of third-party applications across smart city domains

• OUTCOME KPIS

Citizen-centricity	<ul style="list-style-type: none"> Citizen satisfaction Level of personalization and proactivity of smart cities services enabled by the data space Number of datasets available on the city open data portal Number of downloads / views / API calls out of the city open data portal
Liveability	<ul style="list-style-type: none"> Availability and downloads of data and insights on cities and communities' safety and security Availability and downloads of data and insights on cities and communities' environmental sustainability Availability and downloads of data and insights on cities and communities' sustainable mobility Availability and downloads of data and insights on cities and communities' social inclusion
Operational efficiency	<ul style="list-style-type: none"> Employee productivity Responsiveness to citizen requests Time to market of new services
Regulatory compliance	<ul style="list-style-type: none"> Compliance with European Data Act Compliance with European Data Governance Act Compliance with Open Data Directive Compliance with Interoperable Europe Act Compliance with Inspire Directive Compliance with GDPR
Economic development	<ul style="list-style-type: none"> Number of SMEs involved in the Data space Number of new products and services launched based on the Data space dataset Type of skills nurtured through the dataspace

Website



- Project information
- News, events, Press releases & Publications
- Open Calls
- Pilots
- Stakeholder Forum
- Contact information & Newsletter

Social Media



- Project News & Updates
- Open Call announcement & updates
- Pilot updates
- Events announcements
- Stakeholder Forum Updates
- Project collaborations

Youtube



- Stakeholder Forum meetings
- Online Workshops
- Stakeholder Engagement

@DS4SSCC

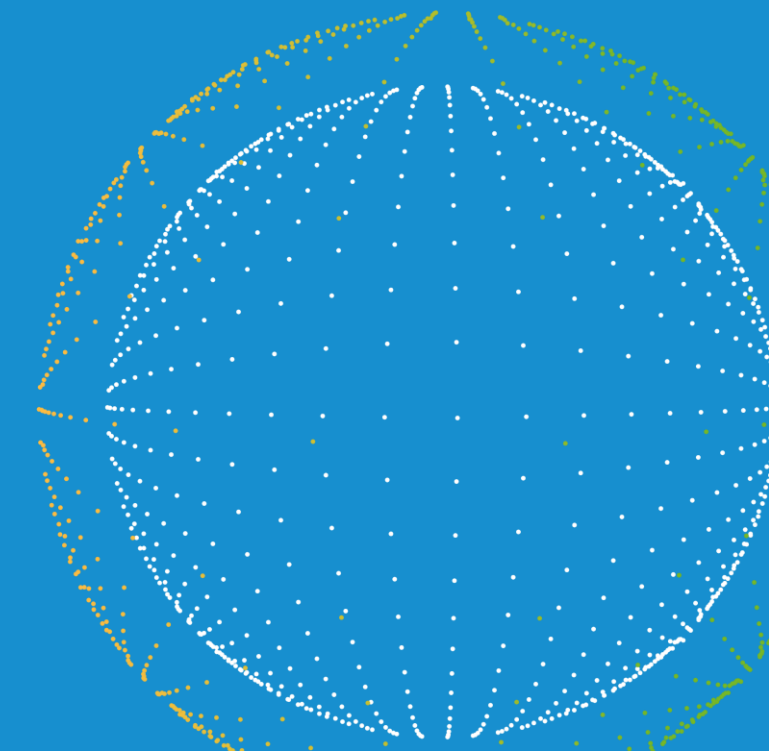
Data Spaces for Mobility, Tourism, Cities

Mobility of people and goods by FIT

Consulting

Paola Cossu, Fabio Cartolano

FIT Consulting



Data Spaces Symposium

12-14 March 2024

Darmstadtium | Frankfurt region



Paola Cossu
CEO
FIT Consulting



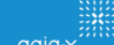
Fabio Cartolano
Managing Director
FIT Consulting



Funded by
the European Union

The Data Spaces Support Centre receives funding from the European Union Digital Europe Programme under grant agreement n° 101083412

DSBA



DATA SPACES
SUPPORT CENTRE

Towards Data Spaces for Mobility

Modern cities have become agglomerations of ad hoc sensor networks

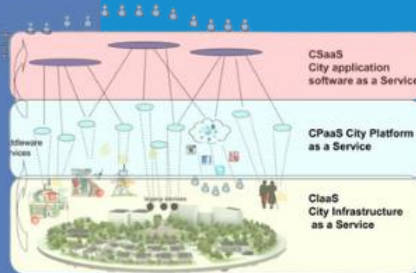


This has resulted in silos of intelligence, but a disconnected city knowledge system

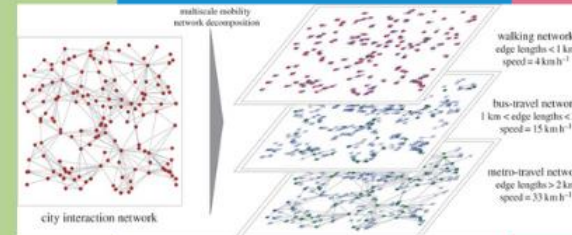


Managing the flow of city services in an integrated and optimal manner is not possible when individual silos control fundamental data

The Data Space for Mobility is the natural environment for Multi-Sided platforms enabling collaborative innovation and creating new markets

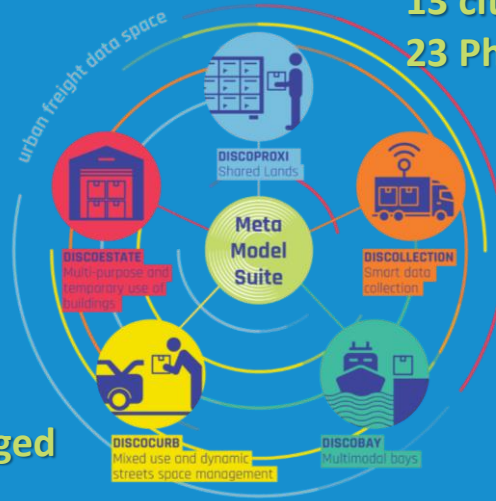


Digital representation of every physical entity reduces barriers among diverse networks



Cities are composed of multiple networks that interact with one another in complex ways

DISCO



13 cities and regions committed in demonstrating and adopting
23 Physical Internet-like-zero-emission urban logistics solutions

Showcase replicability of >15 implementation cases

Enable >50 cities and business players

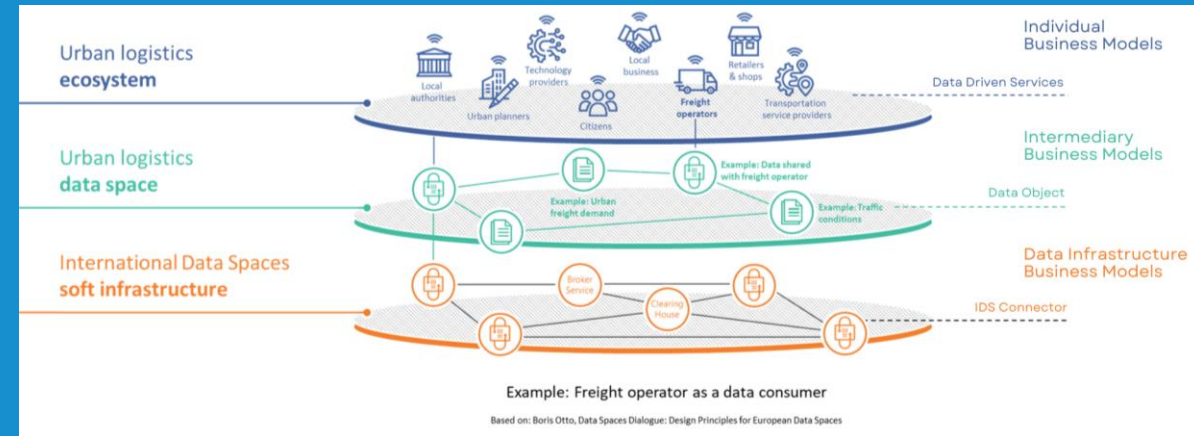
Engage >50 collaborating urban logistics communities

Citizens' participation >1000 people actively involved

DISCO-X: a super-hero supporting cities in going fast and innovate in optimal and strategic use of space

- Pooling resources making urban space well managed and equally accessible
- New urban warehouses concepts and «proximity logistics»
- Dynamic decision-making

THE DISCO BLUEPRINT FOR PI-LIKE URBAN LOGISTICS AND PLANNING



EUROPEAN LIVING LABS AND EARLY ADOPTERS



Starring Living Labs

Twinning Living Labs

Follower Cities and Regions



DISCOCURB

DISCOCURB - Mixed use and dynamic streets space management - Smart and flexible use of curb side, for parking slots, pick up points and network management



DISCOPROXI

DISCOPROXI - Shared Lands - Urban corners or lockers for nearby deliveries and omnichannel shipments, to optimise multiple collection and delivery solutions



DISCOESTATE

DISCOESTATE - Multi-purpose, flexible and temporary use of building space - Retrofitting building space for multi-tenant and temporary logistics use and enhance the reliability of last mile deliveries.



DISCOBAY

DISCOBAY - Multimodal bays - Mutualised and multimodal (e.g., rail/waterborne) distribution centres pooling green last mile delivery



DISCOLLECTION

DISCOLLECTION - Smart data collection methods - Advanced access control and real time routing for optimised and prioritized, incentivised and dynamic access permission enabling smart network management upon priorities and functional areas.



DISCOCURB

DISCOCURB - HELSINKI

Goal: (i) provide real-time data about the availability of loading/unloading zones and parking spots; (ii) explores the implementation of a dynamic low emission zone, this 'before and after' study will focus on how emission restrictions affect delivery routes and vehicle usage

Steps:

- Assessment of climate-resilient sensor technologies
- Careful selection of strategic areas for sensor installation, ensuring alignment with low emission zones and dynamic curb management needs
- Real-time insights into loading zone and parking spot availability for logistics operators and drivers will be provided
- Operational testing of curb spaces for multiple functions



DISCOCURB

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**DISCOPROXI**

DISCOPROXI - GHENT

Goal: ensure smooth delivery paths, avoiding surprises like restricted zones, while also promoting green/sustainable last-mile operations with data-driven arguments

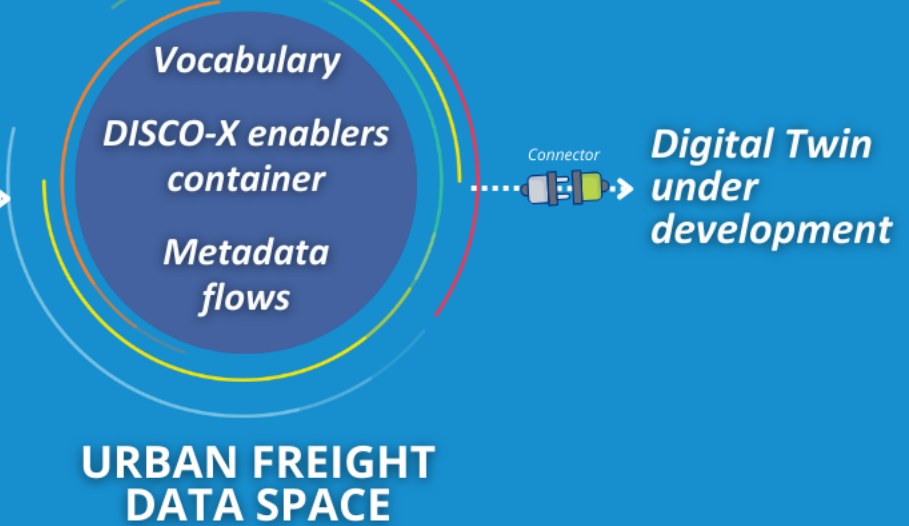
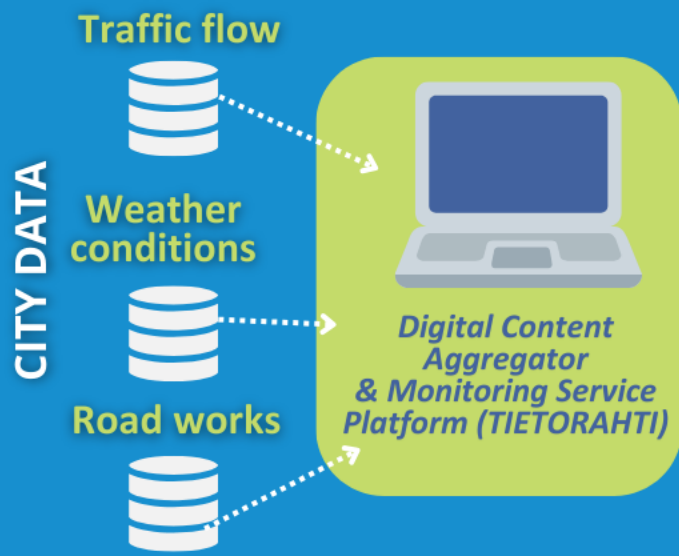
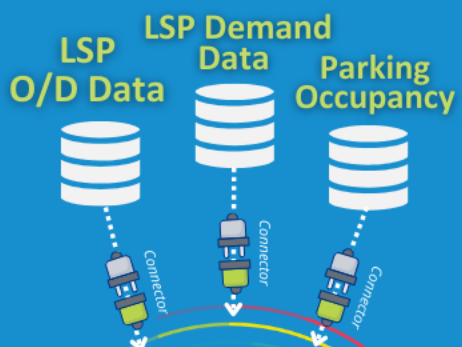
Steps:

- Define the supply of green last-mile operators and ensure the availability of their data, whether it's real or simulated
- The Urban access control (UAC) system will utilize this information to offer pre-routing advice and on-route adjustments to delivery operators, aligning with the city's goal of reducing traffic and emissions in the city center
- UAC will calculate the most efficient delivery routes and propose sustainable alternatives

DISCO

HELSINKI
DISCOCURB

PRIVATE DATA SOURCES



Algorithm for selecting the optimum curb location (minimize customers pick-up "cost")

Algorithms for selecting of parking slots (minimizing CO2 of routing of trucks and no of stops to fulfill demand)

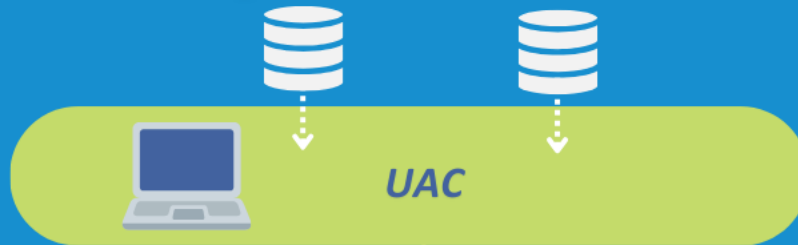
Mobility Digital Twin to estimating the impact/efficiency of DISCOCURB management to fulfill dynamic LEZ

DISCO

GHENT
DISCOPROXI

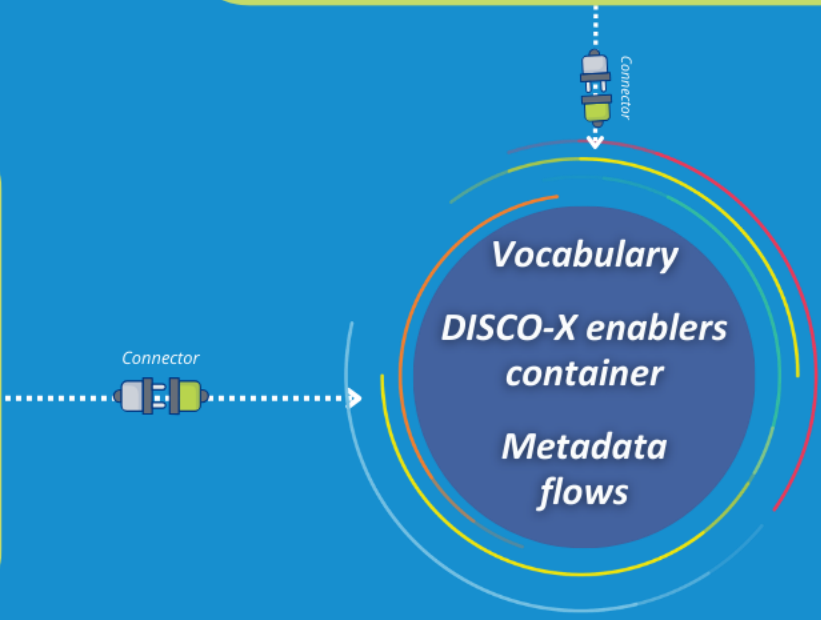
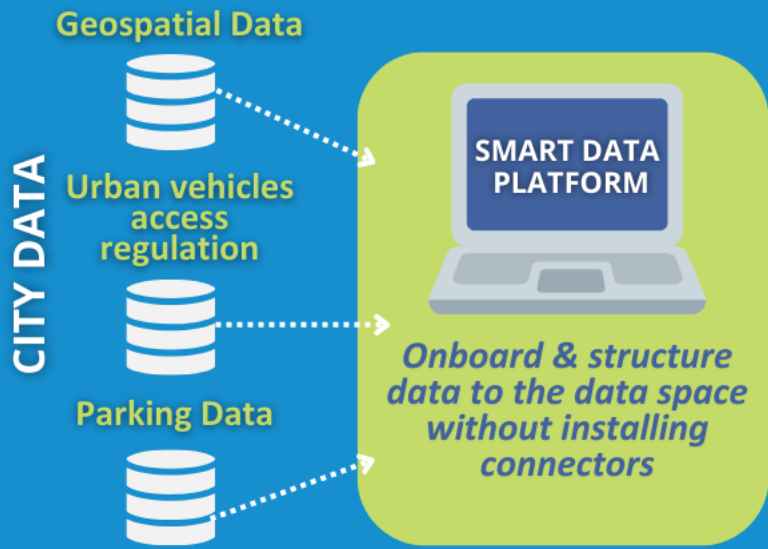
PRIVATE DATA SOURCES

LSP O/D Data LSP Demand Data



Algorithm of Route Planning for generating a new BoL including environmental considerations

Algorithms for matching Demand and Available Capacity



STAKEHOLDERS:

CITY AUTHORITY AND REGIONS

LSP, COURIERS, POSTAL

RETAILERS

REAL ESTATE/ INFRASTRUCTURE OWNERS & OPERATORS

CITIZENS

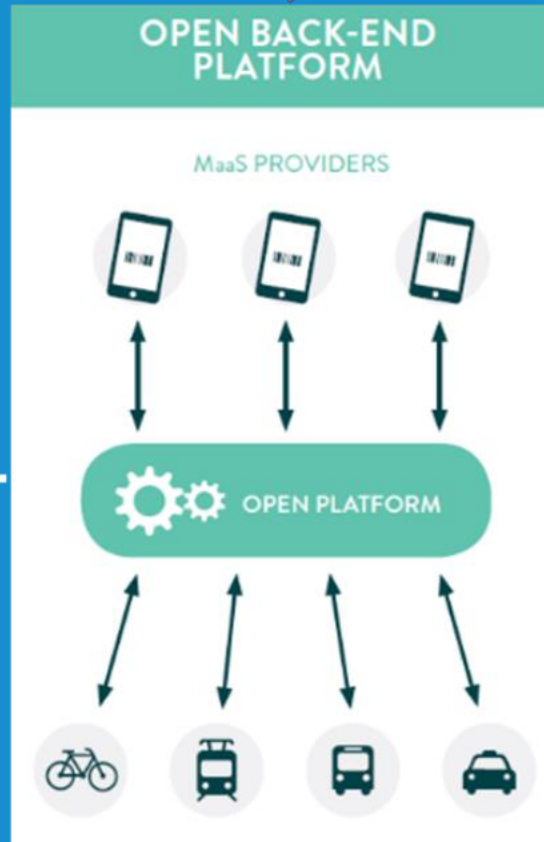
The Data Space as natural environment for MaaS governance and PP cooperation

ENABLER FOR:

PA, willing to adopt MaaS level 4, integrating societal goals

Users, able to access to profiled information and services

Operators, profiting from a competitive while fair environment



Source UITP

Enforcing rules in the ecosystem:

- Data exchange
- Service dispatch
- Conflict resolution
- Policies

Building principles for a peer community:

- Transparent
- Contestable
- Shared



Data Spaces Symposium thanks for your attention!



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Managing Director
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DSBA



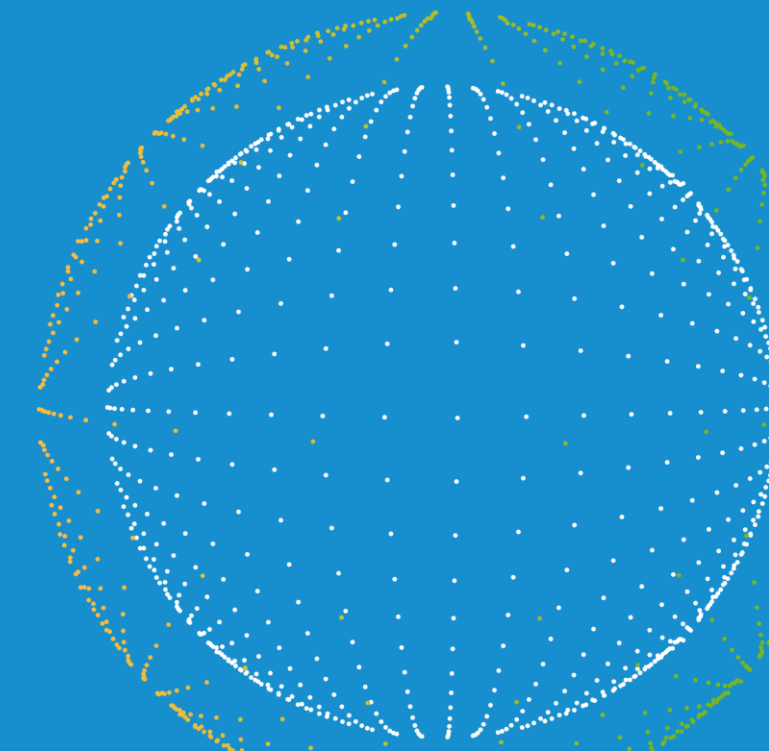
DATA SPACES
SUPPORT CENTRE

Data Spaces for Mobility, Tourism, Cities

Mobility of people and goods by FIT Consulting

Jonathan Huffstutler

Eona-X – improving mobility for the Olympic Games



How are dataspace transforming our lives?

improving mobility for
the Olympic Games



Our Members



amadeus



Inria

How are dataspace transforming our lives?

improving mobility for
the Olympic Games



18 current use cases

6 operational from 2024

The Paris 2024 Olympics an accelerator for EONA-X



**Flow
management**

Digital twin



Example N°1



Access / Mobility

Applications de
dispatch



Example N°2



Security

Collaboration with
authorities



Services

Fluidification of PRM
stay

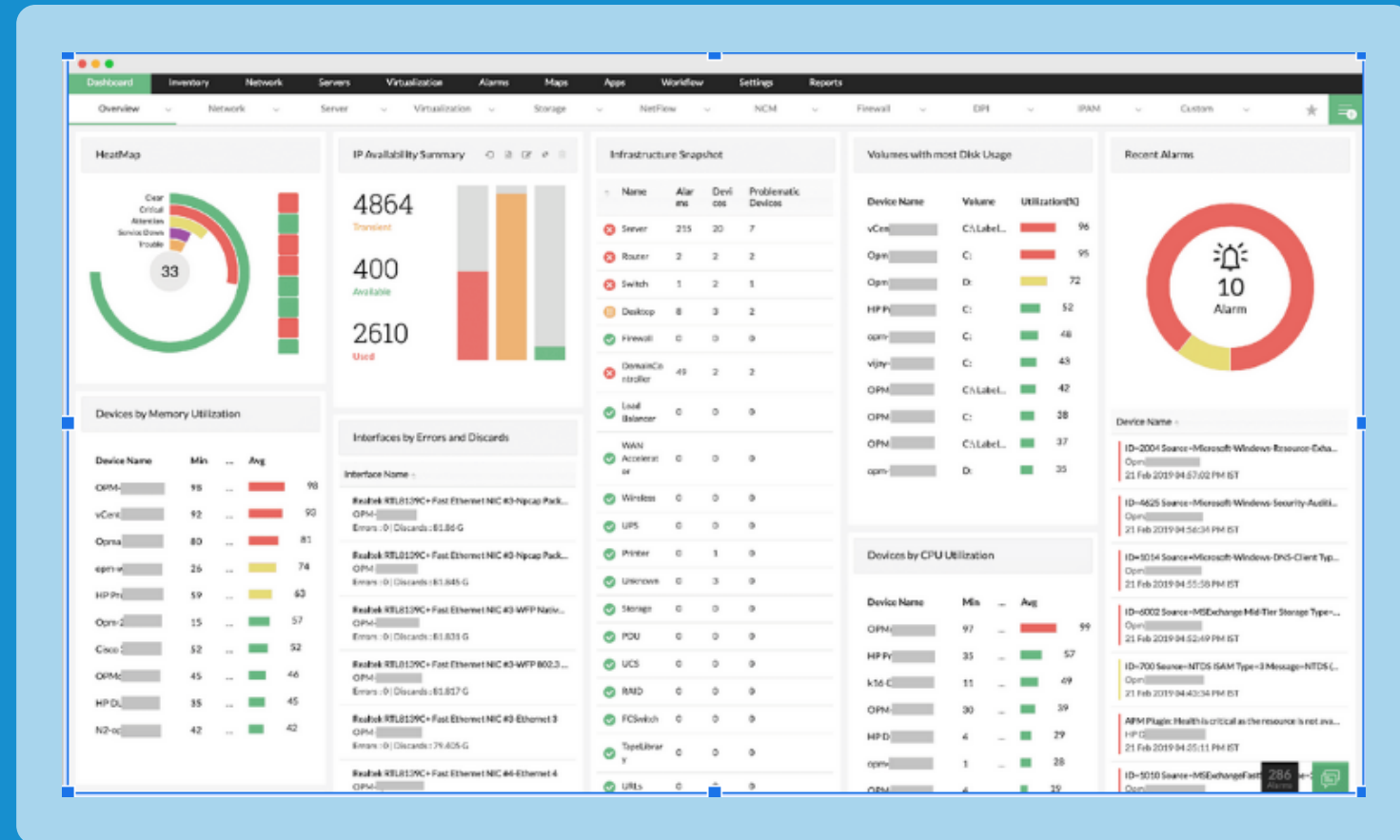
Flow management and high attendance

JOP Paris 2024

Example N° 1

Real-time feedback of each stage of the journey on the dashboard :

- Name of supported delegation
- Number and type of accreditation
- Type of route (PRM/non-PRM)
- Distance/time display
- Course status alert
 - Position at border control
 - Accreditation position
 - Luggage position
 - Position exit
 - Position pick-up zone
 - departure from the airport
 - View the journey of the different delegations
 - View traffic to destination

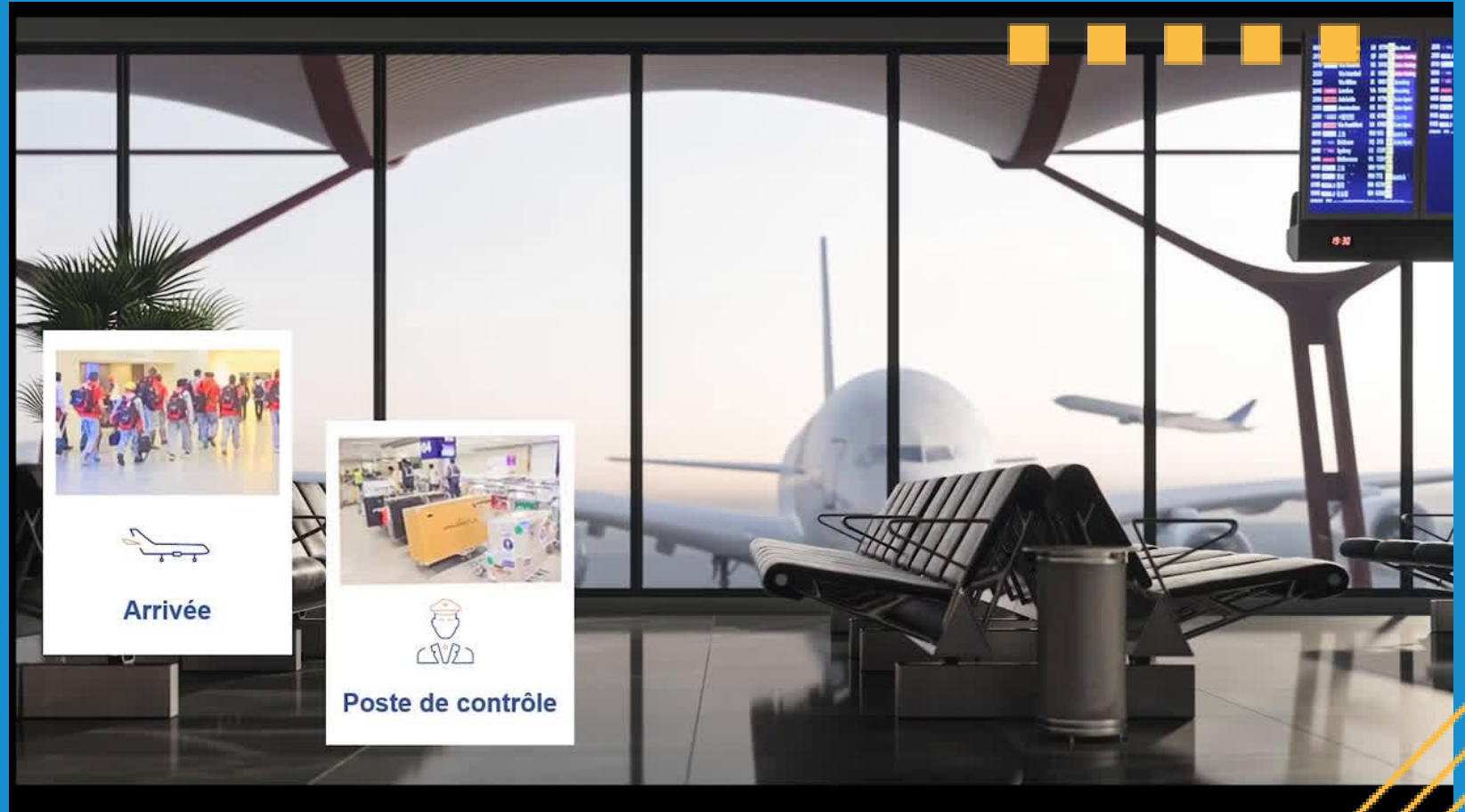


Multiple sources of data are consumed by the digital twin from Eona-X Dataspace

Better efficiency of existing infrastructure

Digital Twin

a simulation digital twin, allowing a predictive vision of each journey in a context of heavy traffic. Harnessing the power of AI simulation technology to ensure an optimal experience for each delegation arriving at the airport for the Paris 2024 Olympic Games.



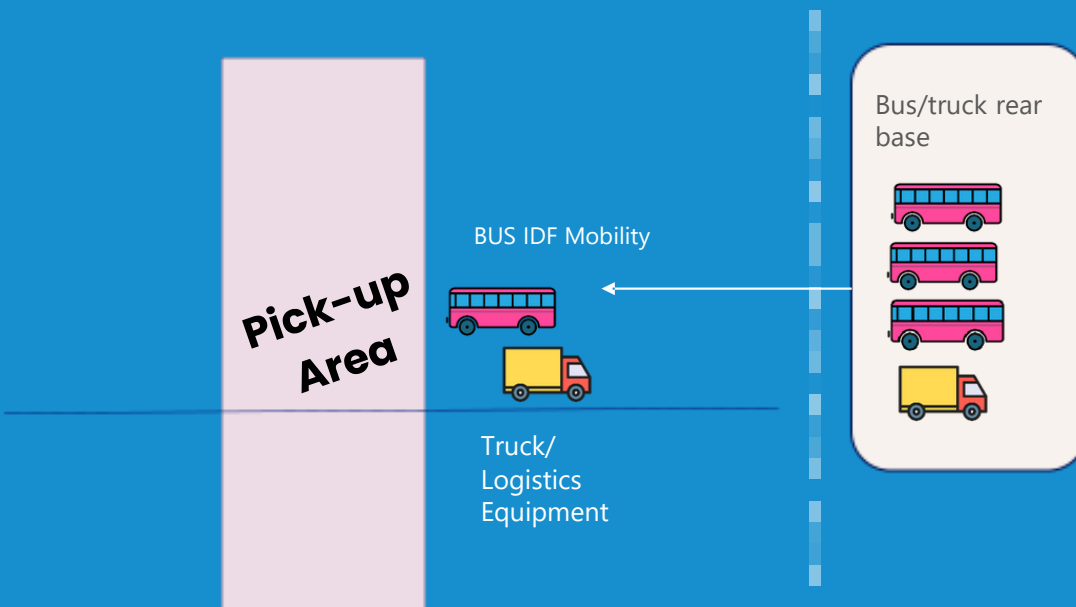
Silver medal prize at
Data & AI Night 2024

Management of vehicle dispatch (city side)

Example N° 2

Management of the vehicle fleet in the waiting area towards the pick-up locations

Use of a solution during the JOP Paris 2024 that can potentially be used as a legacy for the management of shared mobility vehicles (touring coaches, taxis, VTC, etc.)



How are dataspaces transforming our lives?

improving mobility for the Olympic Games



Example N° 2



Powering a vehicle fleet management application via Eona-X

How are dataspaces transforming our lives?

improving mobility for the Olympic Games



Succeed in the Olympic Games



Welcoming new members



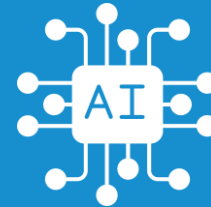
Service(s) around data quality



Method for researching economically viable use cases



Active participation in EU Projects



Conditions for making company data available for AI training purposes



Supporting cross-border use cases (EDIC)



Work on interoperability with other Data Spaces

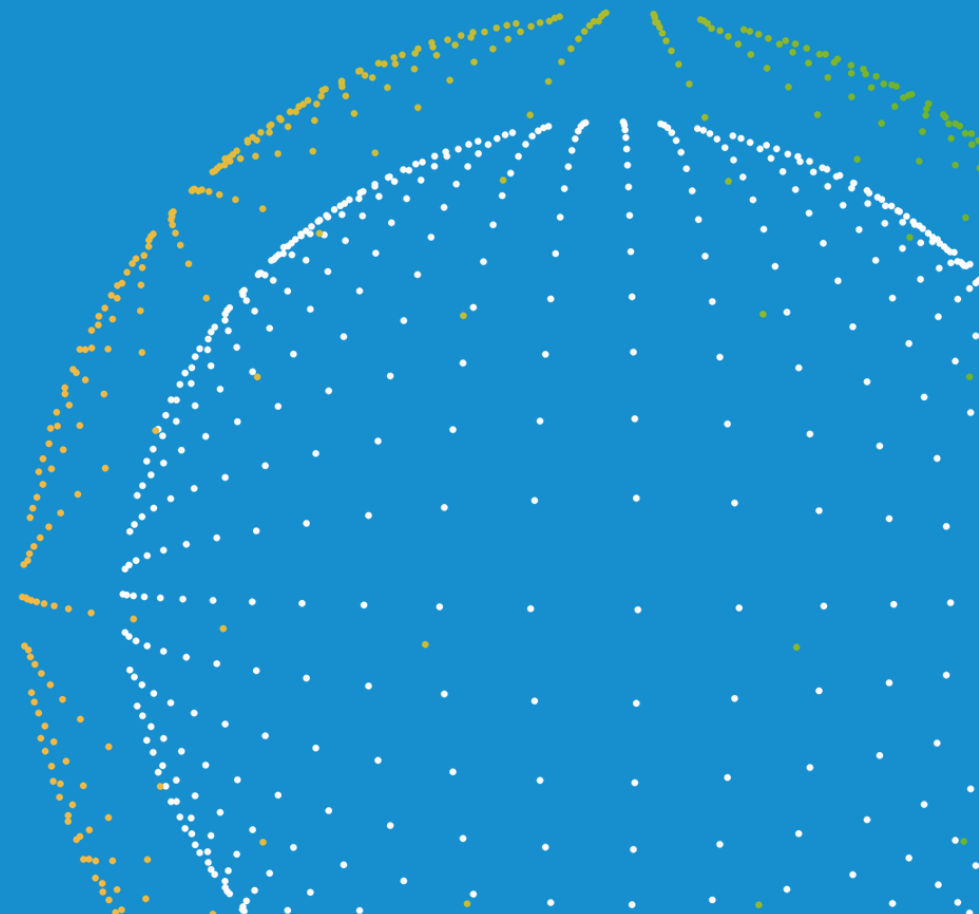
Thank You !

Stay tuned

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Highlights from the session "Data spaces for mobility, tourism, cities: How data spaces are transforming our lives?"

ⓘ Start presenting to display the poll results on this slide.

Data Spaces for Mobility, Tourism, Cities

Q&A

Participants can send
questions

slido.com with
#2724181

