

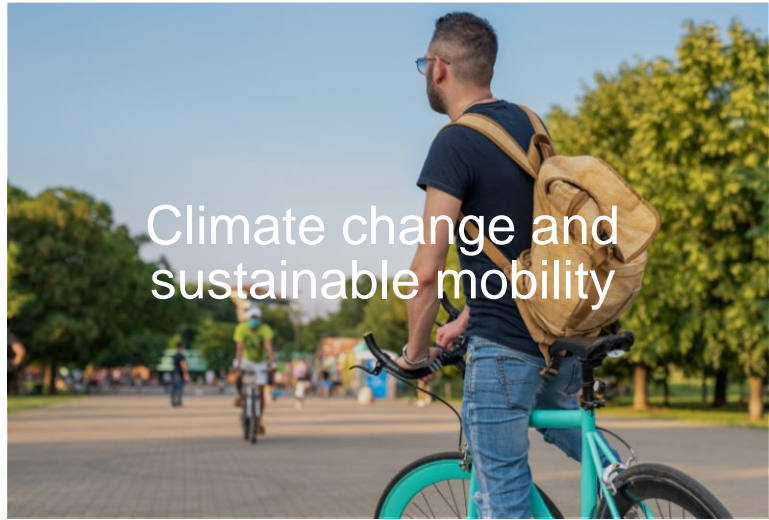
Mobility
Data Space
Data Sharing Community

Mobility Data Space: Data Sharing Community

01

Challenges

01 Challenges



”



Let's take the mobility of the future; data will play a crucial role in this - for autonomous driving, in the networking of different means of transport or in the intelligent control of traffic flows. That is why we need a uniform, cross-border European space for mobility data as soon as possible.

We have made a start in Germany with the Mobility Data Space. Let's link it with the whole of Europe. It is open to everyone who wants to make a difference. This way, we can become a global pioneer.

**Federal Chancellor Olaf Scholz,
Keynote speech on European policy,
Charles University, Prague, 29.08.2022.**

All of us - business, government, every citizen - have a duty to make a 180-degree turn in the way we think about data. We must recognise the collection and provision of data as an important service to the public. Digitalisation has long been a social issue.

”



Federal Minister for Digital and Transport Dr Volker Wissing
Guest article in “Die Welt” from 27.05.2024, in which he also emphasises the role of the MDS.

02

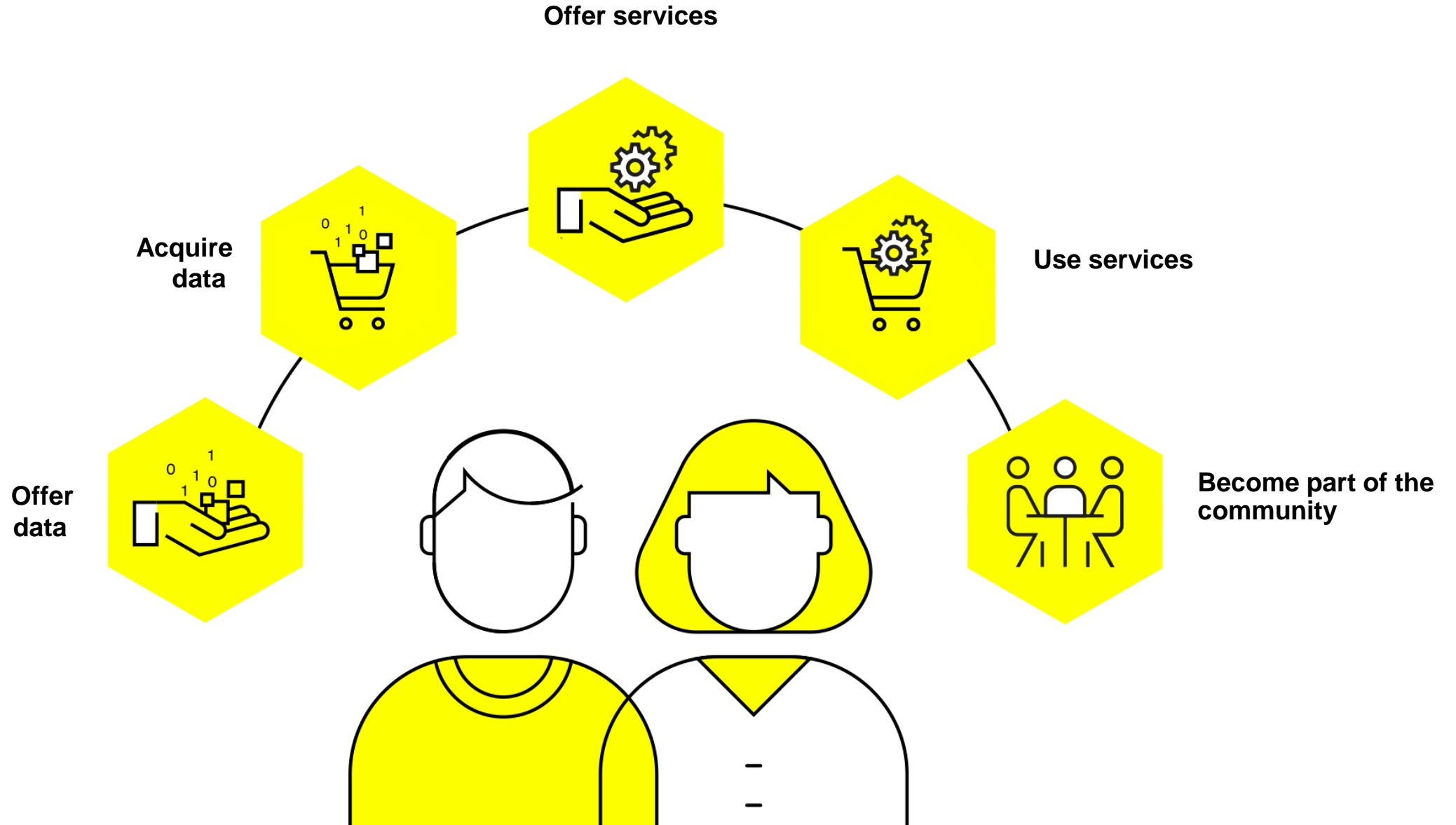
Vision

MDS is an independent marketplace for mobility data that is open to everyone. The data platform enables the mobility of tomorrow by providing a secure environment for sovereign data exchange. This results in innovative products, services and business models that benefit us all.

03

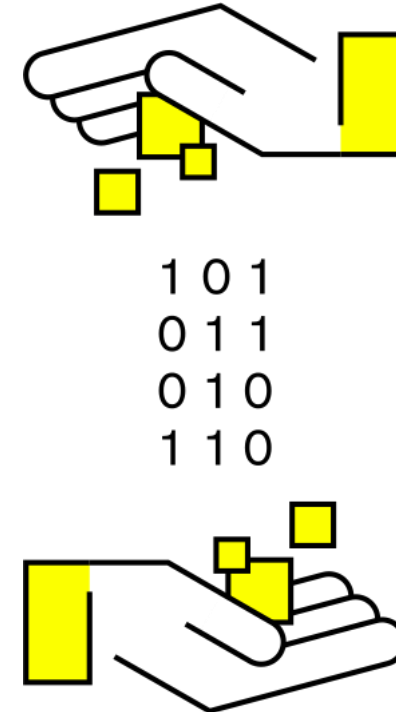
Data Sharing Community

Data Sharing Community: trustworthy ecosystem for mobility pioneers



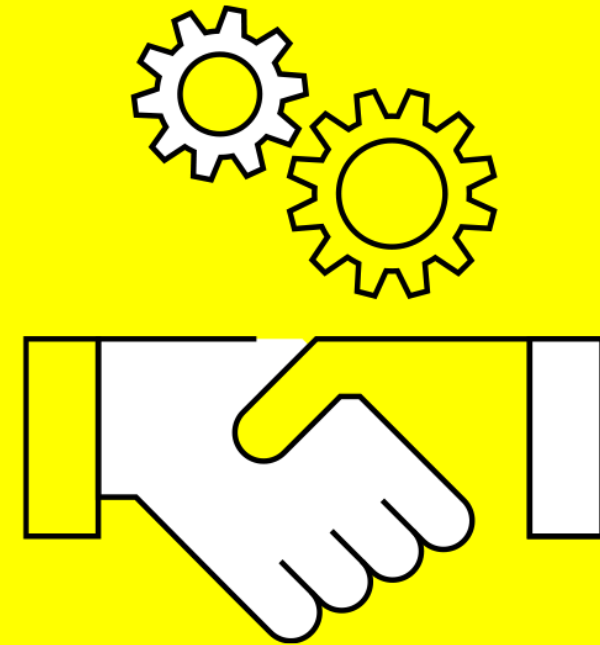
Marketplace for services: wide range and tailor-made services

- **Decentralisation:**
data is not stored centrally, but shared directly among members
- **Freedom of contract:**
contractual partners negotiate conditions directly and autonomously among themselves
- **Value creation:**
no transaction costs will be due for members until end 2024, and only low costs will be incurred thereafter



Marketplace for services: wide range and tailor-made services

- **Support in the selection of service providers:**
uncomplicated networking with service providers
- **Uncomplicated onboarding:**
service providers offer specialised services geared towards data rooms
- **Wide range of services:**
onboarding, operations, data & identity management, development, business development



Advice and Know-how

Mobility Data Space connects members with specialised service providers from key data management disciplines.



Onboarding

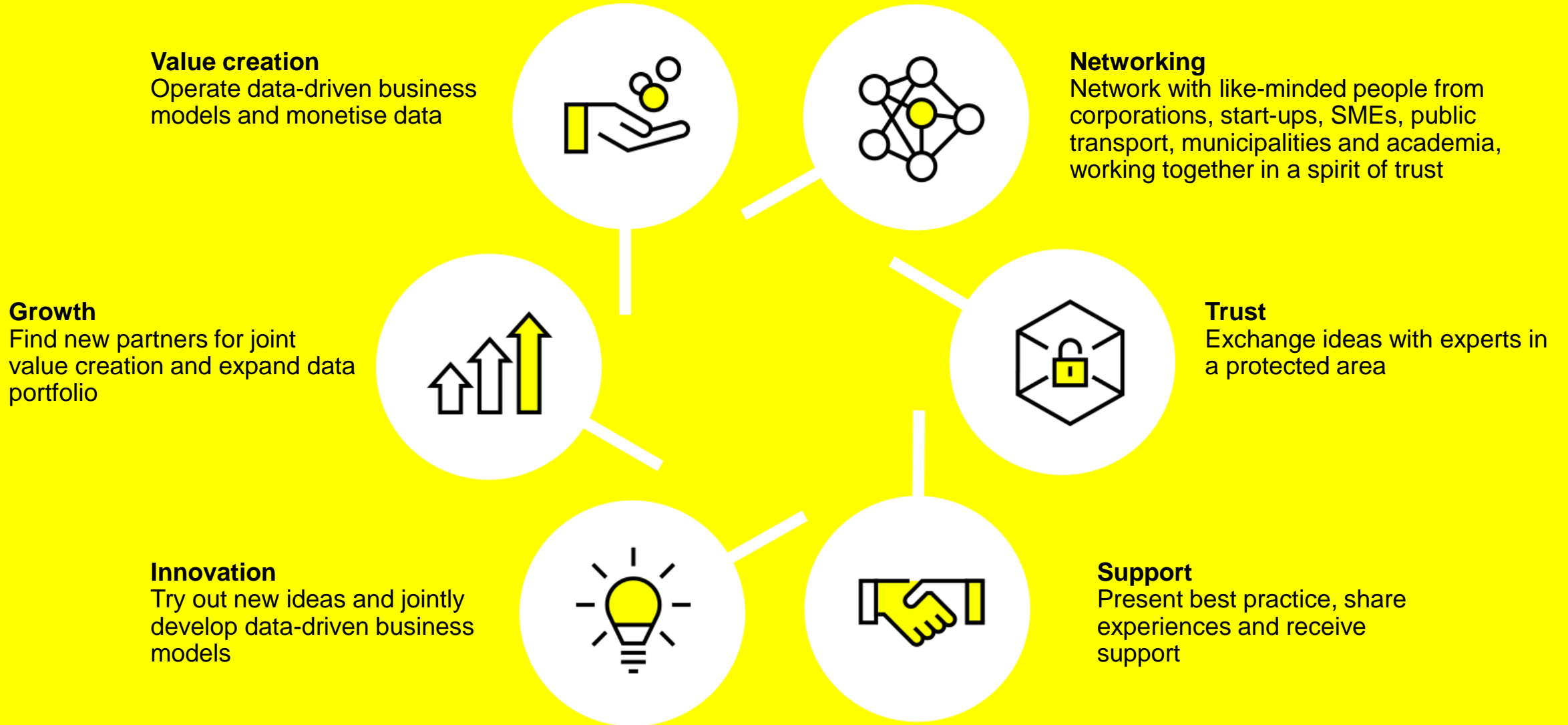
Operation

**Data & identity
management**

Development

**Business
development**

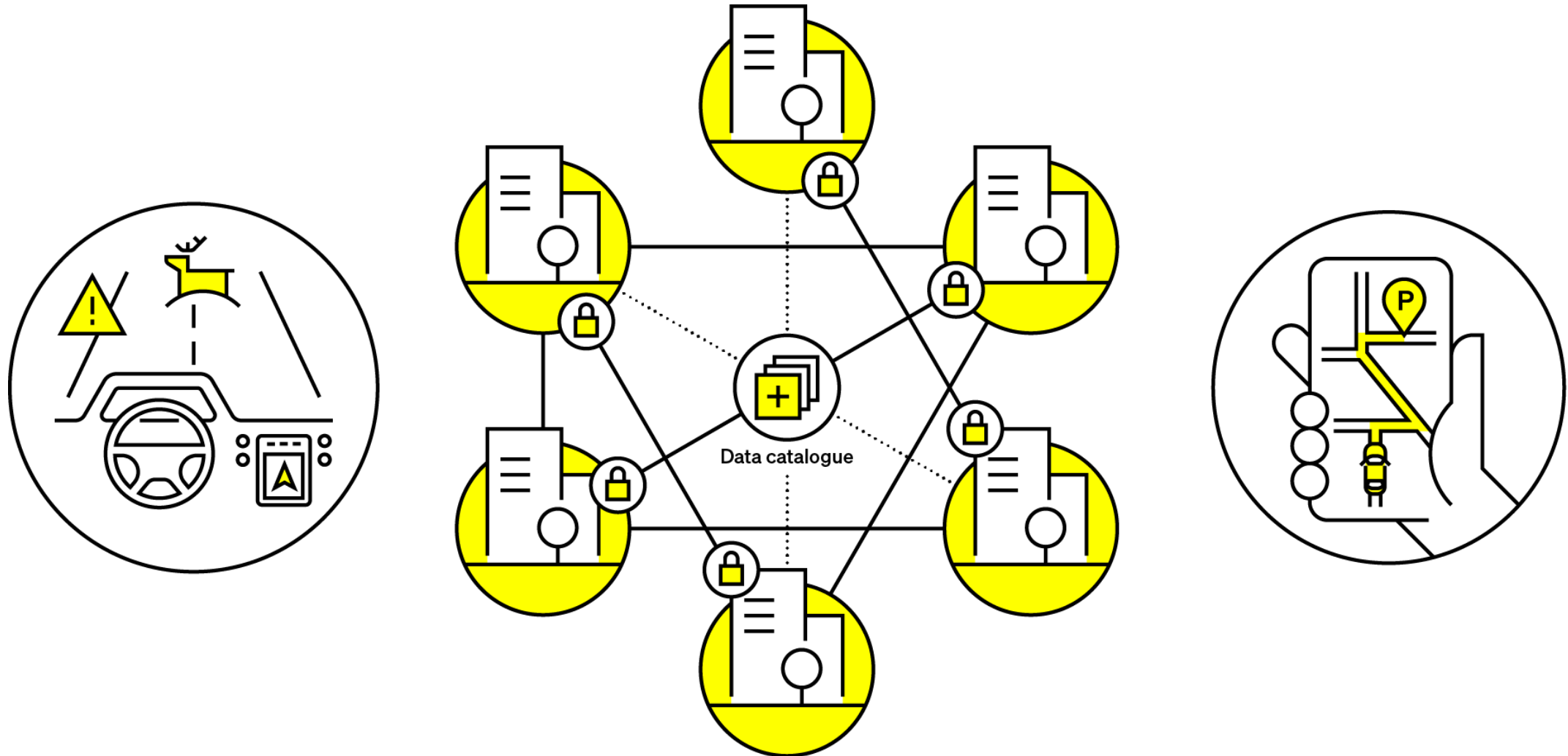
Advantages of participating in the Data Sharing Community at a glance



04

Mode of operation

Data transmission in Mobility Data Space: the basis for innovative products, services and business models



Data transmission in Mobility Data Space

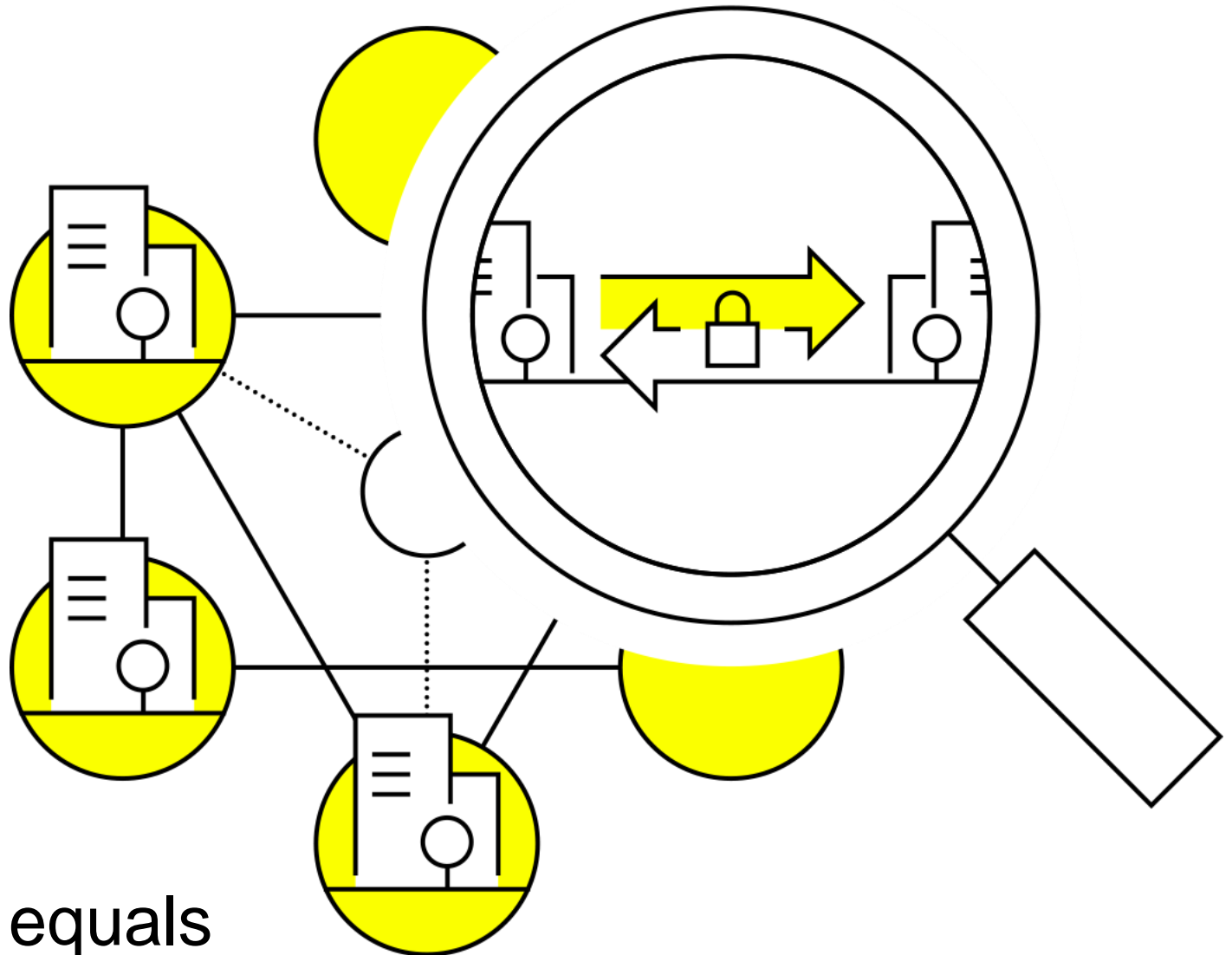


The image shows a person's hand pointing at a laptop screen. The screen displays a code editor with a file explorer on the left and code in the main area. The code is a mix of JavaScript and HTML, likely for a web application. The file explorer shows a project structure with folders like 'components', 'dashboard', and 'queries'. The code in the main area includes HTML tags like `<div className="col col-1">` and ``, and JavaScript code for handling scroll events and rendering lists.

```
76 </span></div>
77 <div className="col col-1">
78   <span className="text-sm" style={{
79     fontSize: '18px'
80   }}>Status</span>
81 </div>
82 <div className="col col-9 no-gutters">
83   <div className="filter-status-container">
84     <div className={classNames({
85       'button-scroll': true,
86       'left': true,
87       'disabled': this.state.isLeftScrollDisabled
88     })} onClick={() => {
89       let elem = document.getElementById('filter-status-scroll')
90       elem.scrollLeft = 0;
91     }}>
92     <span className="ic-chevron-right"></span>
93   </div>
94   <div className="filter-status-scroll" id="filter-status-scroll" r
95   <div className="filter-status-list">
96     {
97       this.props.state.order_status_types.length <= 0
98     ?
99     [0,1,2,3,4,5].map(() => (
100       <span className="inline-block mr-8">
101         <chip loading className="mr-8" width="130px" marg
102       </span>
103     ))
104     :
105     this.props.state.order_status_types.map((v,k) => (
106       <div className={classNames({
107         'filter-status-item-wrapper': true,
108         checked: v.isChecked
109       })}>
110         <chip className="mb-8" active={v.isChecked} onCli
111         <span style={{verticalAlign: 'middle', fontSi
112       </span>
113     </div>
114     </div>
115     </div>
116     </div>
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```

The secure space for data exchange between partners among equals

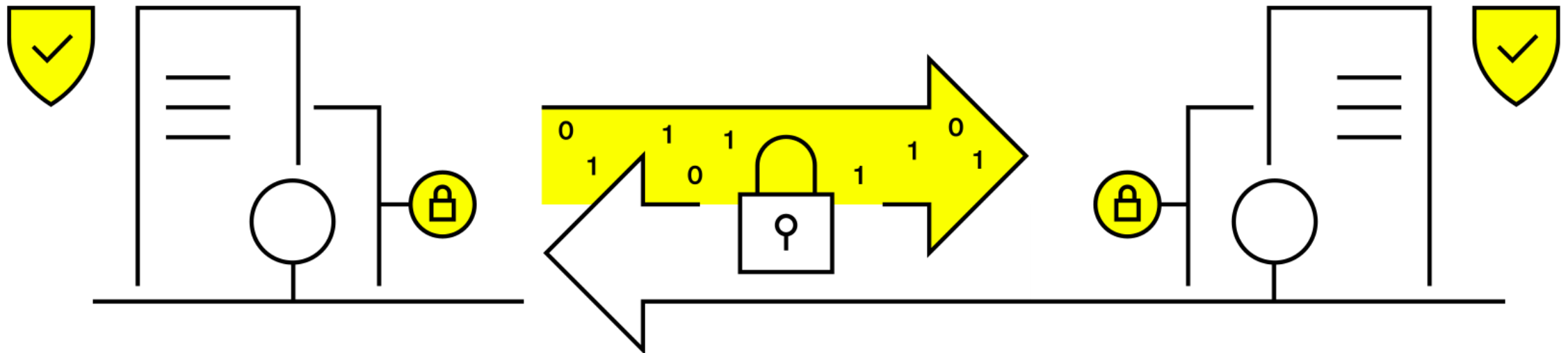
Data transmission in Mobility Data Space



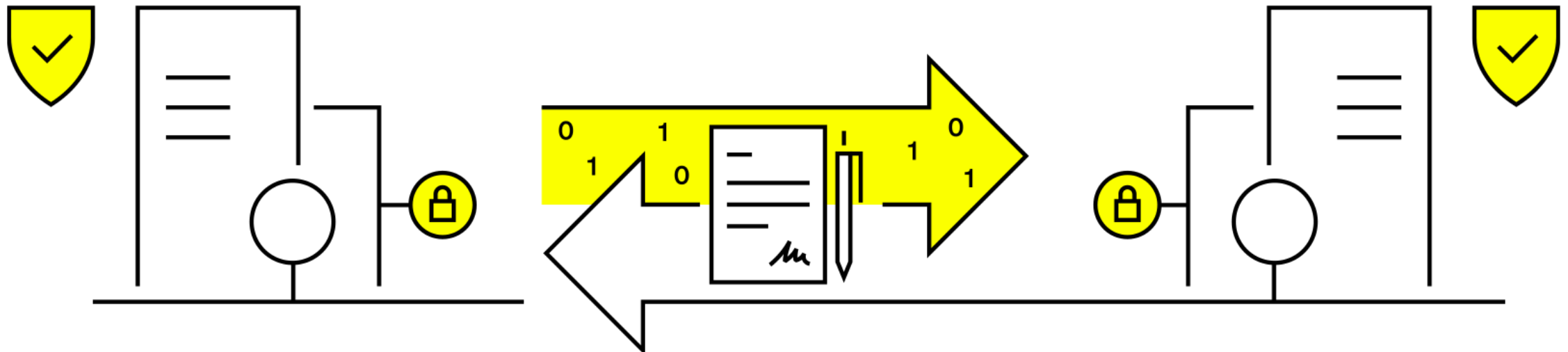
The secure space
for data exchange
between partners among equals

Step 1: peer-to-peer data transfer via trusted IT architecture

Data transmission via connectors



Step 2: negotiating the conditions between the contracting parties



05

Data


Wide range of mobility data



Traffic information




Roadworks and road conditions




Traffic flow information



Parking information



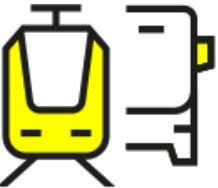
Fuel price and electromobility




Traffic signs and speed information




Weather information



Public transport information



Car and bike sharing



Infrastructure

Wide range of mobility data

...
More

...
More

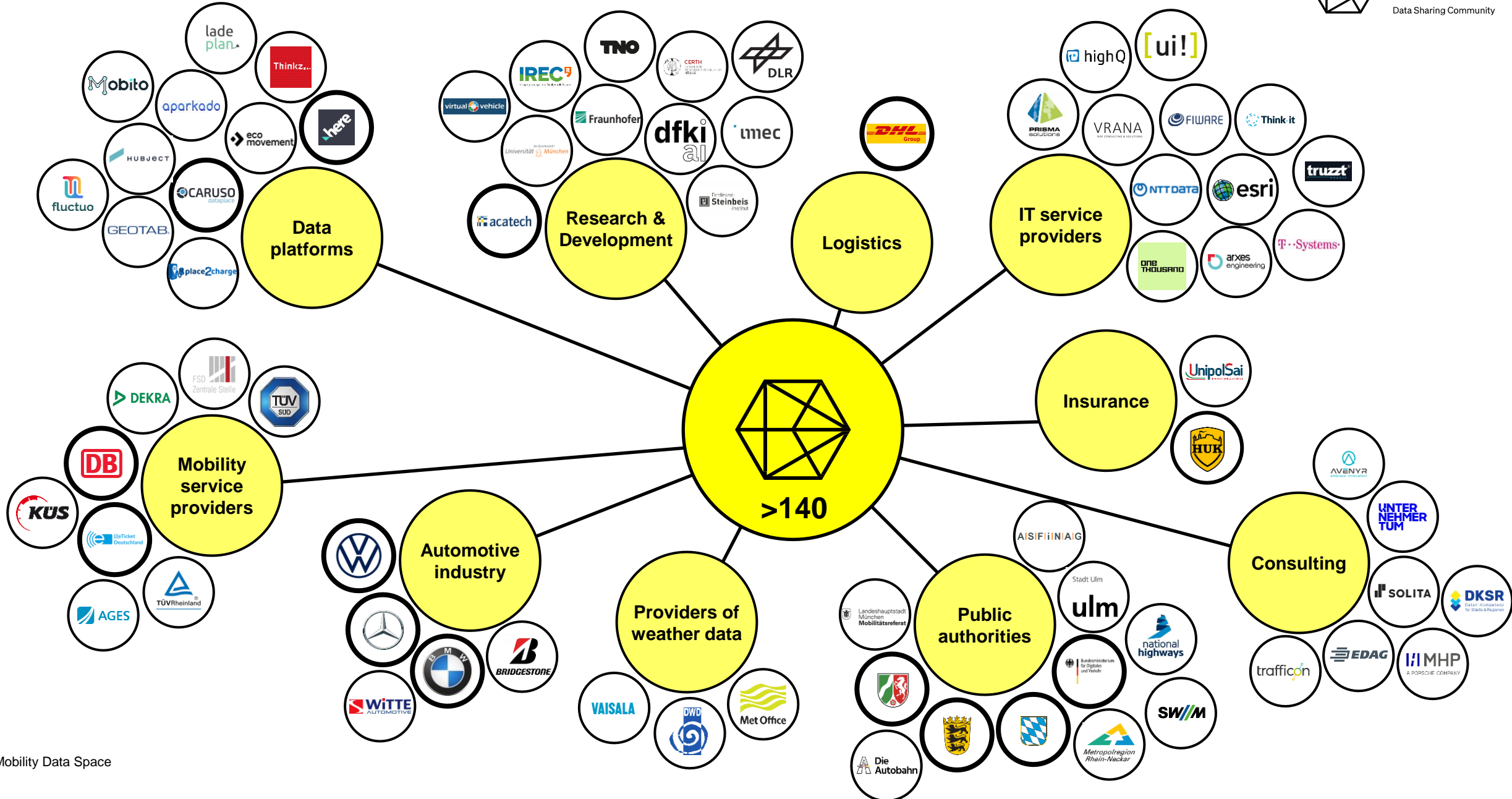
...
More

... categories to come

06

Members

02 MDS-Community (extract)

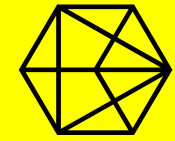


Shareholders of MDS

More than 200 stakeholders from science, industry and public administration worked on the conception of the MDS. For long-term operation, the acatech Foundation has transferred the project to the DRM Datenraum Mobilität GmbH as a supporting company (non-profit GmbH). The MDS is funded by the Federal Ministry for Digital and Transport.

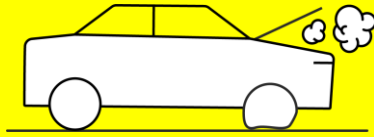
Shareholders of DRM GmbH are:





07 Data Offerings

BMW Data Offerings



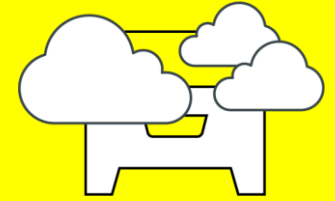
Car breakdowns

Event is generated from the relevant vehicle signals in a completely anonymised form.



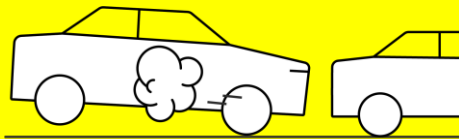
Heavy rainfall events

Event is generated completely anonymously from the relevant vehicle signals (e.g. wiper speed).



Fog

Based on the respective vehicle signals (e.g. fog lights), the event is generated completely anonymously.



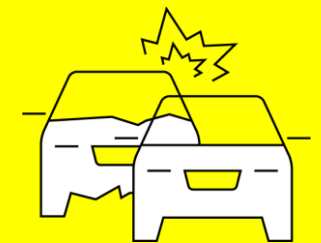
Emergency braking

Data, e.g. Dynamic Stabilization Control (DSC), is generated completely anonymously.



Slippery Road

Data, e.g. Dynamic Stabilization Control (DSC), is also generated completely anonymously.



Accident

Events such as the triggering of an emergency call are generated anonymously from the vehicle signals.

Mercedes-Benz Data Offerings

Hazard Warnings



Display of aggregated warnings about local hazards from the Mercedes-Benz fleet to increase safety and optimise navigation services.

Parking Monitoring



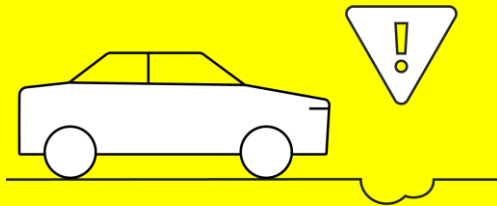
Anonymised real-time parking behaviour data from the Mercedes-Benz fleet to improve your own applications.

Road Safety Hotspots



With the world's safest cars on the world's safest roads - using the power of data to identify safety-critical hotspots.

Surface Events



Detection of potholes and other surface events on the road network for efficient repair allocation and budget planning.

Micro Weather

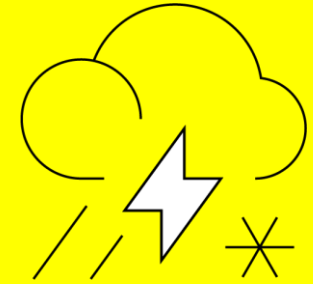
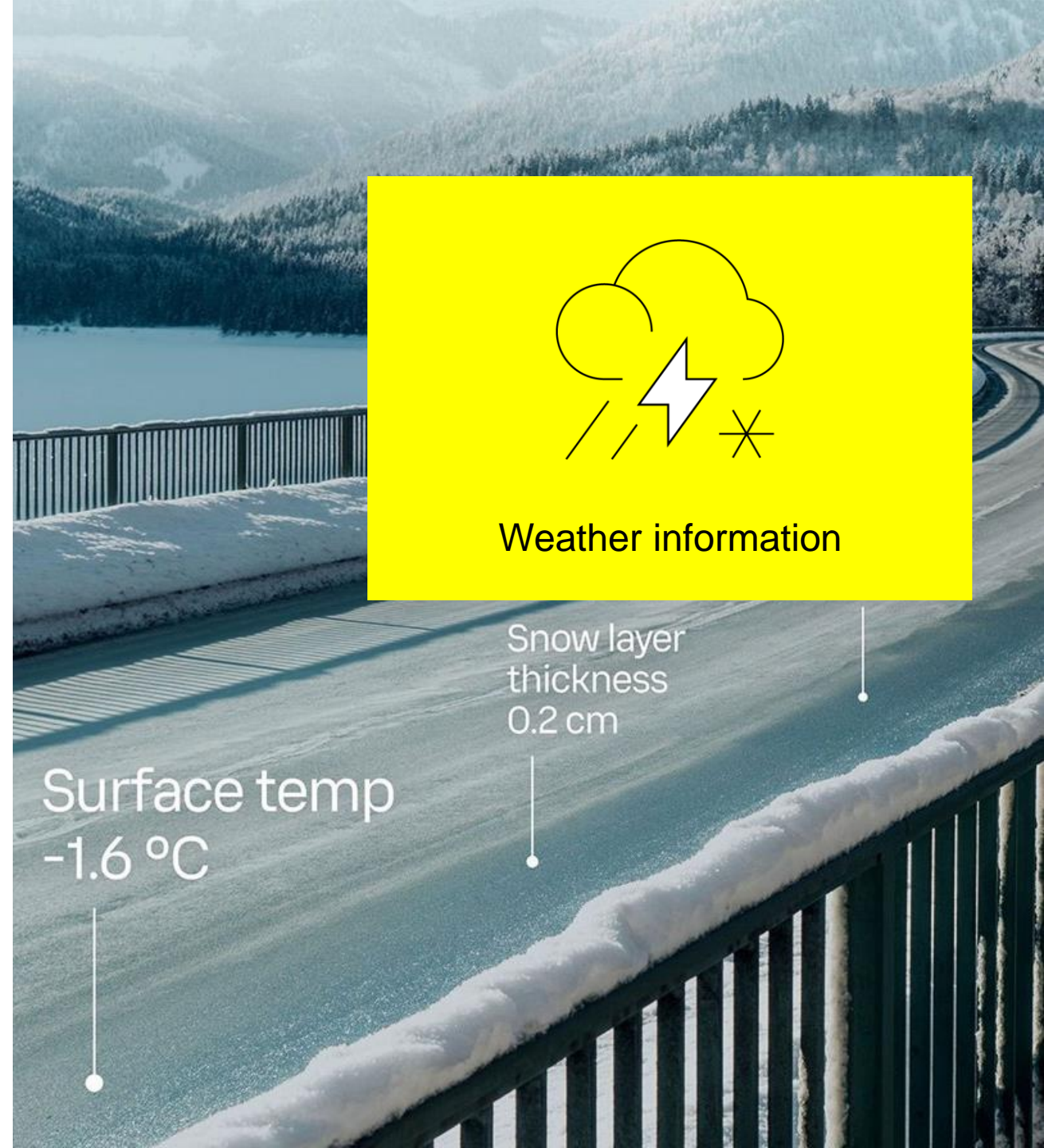


The Mercedes-Benz vehicle as a "mobile weather station": current weather data at GPS level, collected anonymously in the Mercedes-Benz vehicle fleet.

Vaisala Xweather Data Offerings

"Weather Conditions" provides interpolated global current, forecast and historical weather conditions, and a minute-by-minute precipitation forecast for up to 60 minutes.

The data is generated for the requested location and time using a proprietary blend of data including weather station observations, radar and satellite information, global and regional models, and other proprietary sources.



Weather information

Snow layer
thickness
0.2 cm

Surface temp
-1.6 °C

DB Parking Information

Information on "DB BahnPark" car parks in Germany. This dataset allows you to search for parking facilities, e.g. car parks and multi-storey car parks, especially near railway stations, and to obtain more detailed information about them.



Bridgestone Data Offerings

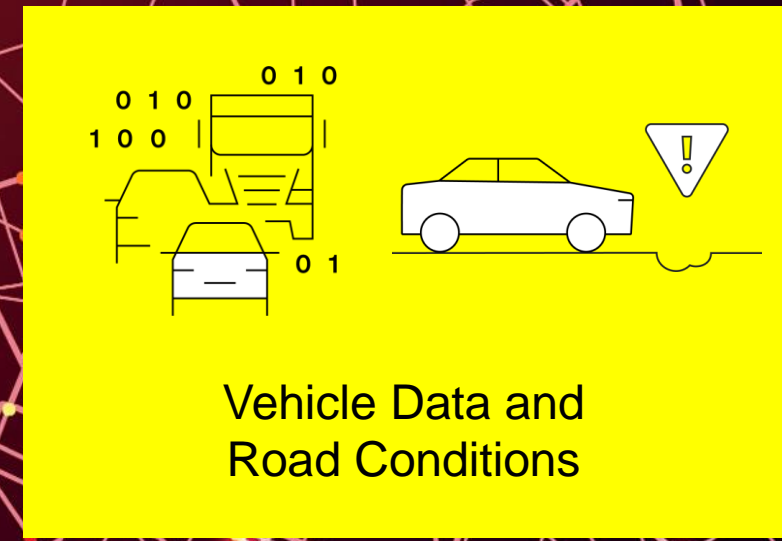
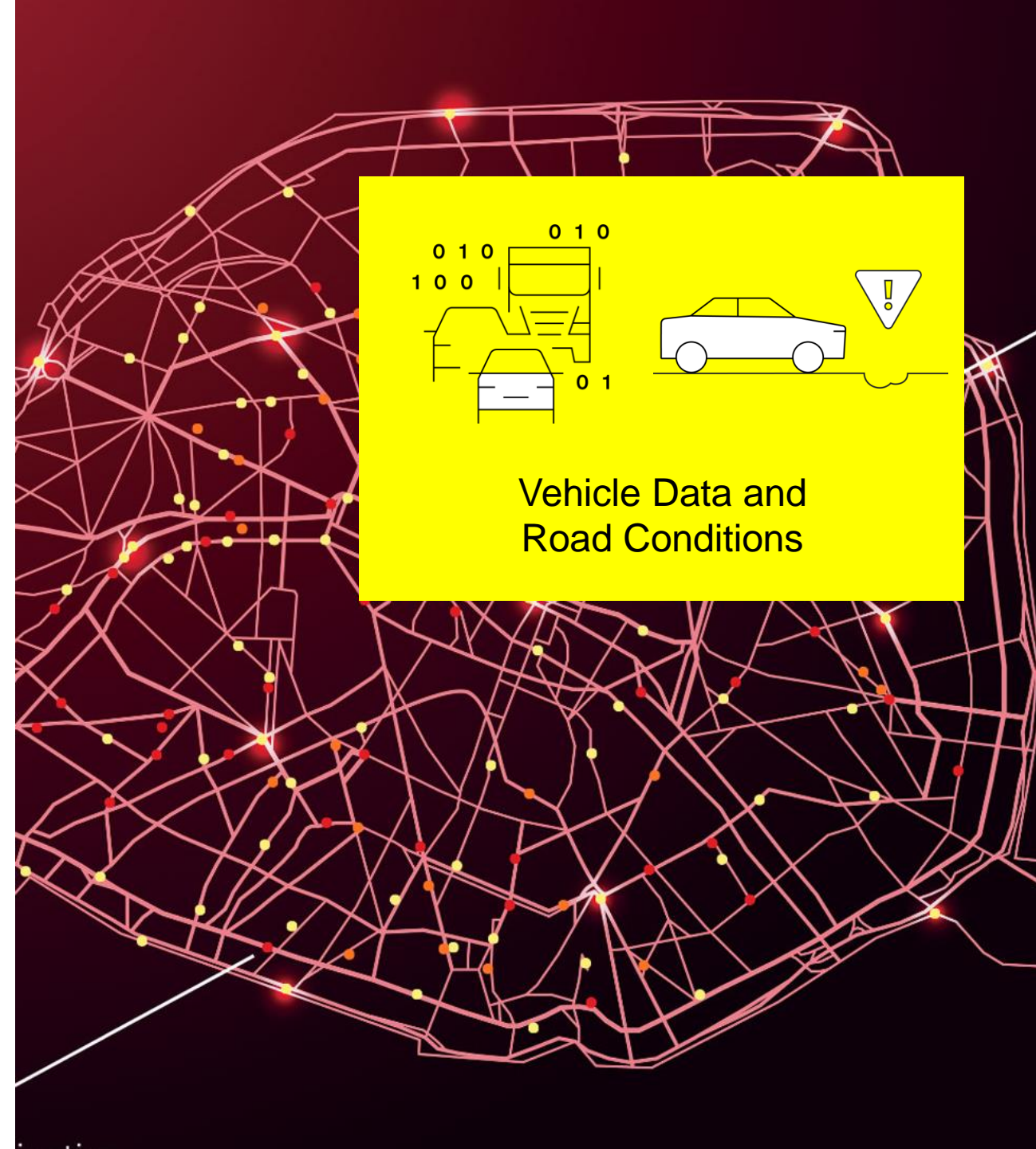
Vehicle Data Portfolio

This data source provides deep insights into vehicle performance, driving behaviour, traffic dynamics, CO2 emissions, electric vehicle insights, and road and weather conditions. The portfolio consists of the following products:

- Floating Car Data
- Origin Destination Data
- Hazardous Driving Events
- Standstill Data
- Vehicle Profiles
- EV Charging Events

Road Conditions Portfolio

- **Road Damage Detection:** Identification of road damage such as potholes, cracks, manhole covers and patches
- **Road Asset Visualization:** Analysis of road data from connected vehicles and camera streams, including information on traffic signs, traffic lights, road markings, and road conditions
- **Road Roughness Monitoring:** Calculation of the International Roughness Index (IRI) for real-time and long-term monitoring of road conditions



Vehicle Data and Road Conditions



08 Use Cases

Initiative for safe roads and the City of Hamburg

PrioBike-HH: Enhancing Cyclist Safety

Description

In collaboration with the Initiative for Safe Roads GmbH and the City of Hamburg, an innovative system for improving traffic safety was tested at a critical intersection in Hamburg's HafenCity (Am Sandtorkai / Großer Grasbrook).

Objective

The use of digital technology and optical signals prevents car and lorry turning accidents and significantly improves cyclist safety.

Partners involved

- Initiative for safe roads
- The City of Hamburg



Solita

Intelligent Urban Ecosystem for Human centric city living

Description

Solita integrates live data on car parks in Heidelberg into its "Intelligent Urban Ecosystem" solution. The data comes from MobiDataBW, which is operated by the Ministry of Transport of Baden-Württemberg and brings together municipal data offerings.

Objective

The dashboard provides local authorities with a graphical solution to obtain a real-time overview of information on population density, traffic, air quality and parking facilities and to take the necessary measures.

Partners involved

- MobiDataBW
- Solita

Esri

Connecting data for more road safety

Description

Esri is evolving the classic digital twin into a living digital twin by integrating dynamic sensor data. Dynamic data from car manufacturers enable continuous adaptation to the current traffic situation. The Living Digital Twin can be used in a wide range of applications, including traffic planning, police and rescue operations, and logistics and transport companies.

Objective

Optimised traffic control and resource planning

Partners involved

- OEM
- Esri



Insurance company

Pay as you drive

Description

In this working group, OEMs and insurance companies are working on cases, where driving behaviour data from the vehicle will be provided to insurers for risk assessment in order to create personalised insurance policies.

Objective

Tailor-made and customer-friendly insurance products that will be based on actual driving behaviour.

Partners involved

- OEMs
- Insurance companies



Telematics Service Providers (TSP)

Standardisation of fleet data

Description

Digital fleet management tools face the challenge that fleet data is provided in different forms depending on the vehicle brand. The working group of OEMs and TSPs is working to standardise the data points provided (e.g. charge level, location, vehicle condition), data formats and data quality.

Objective

Standardisation will help reduce integration efforts and enable the development of new fleet solutions.

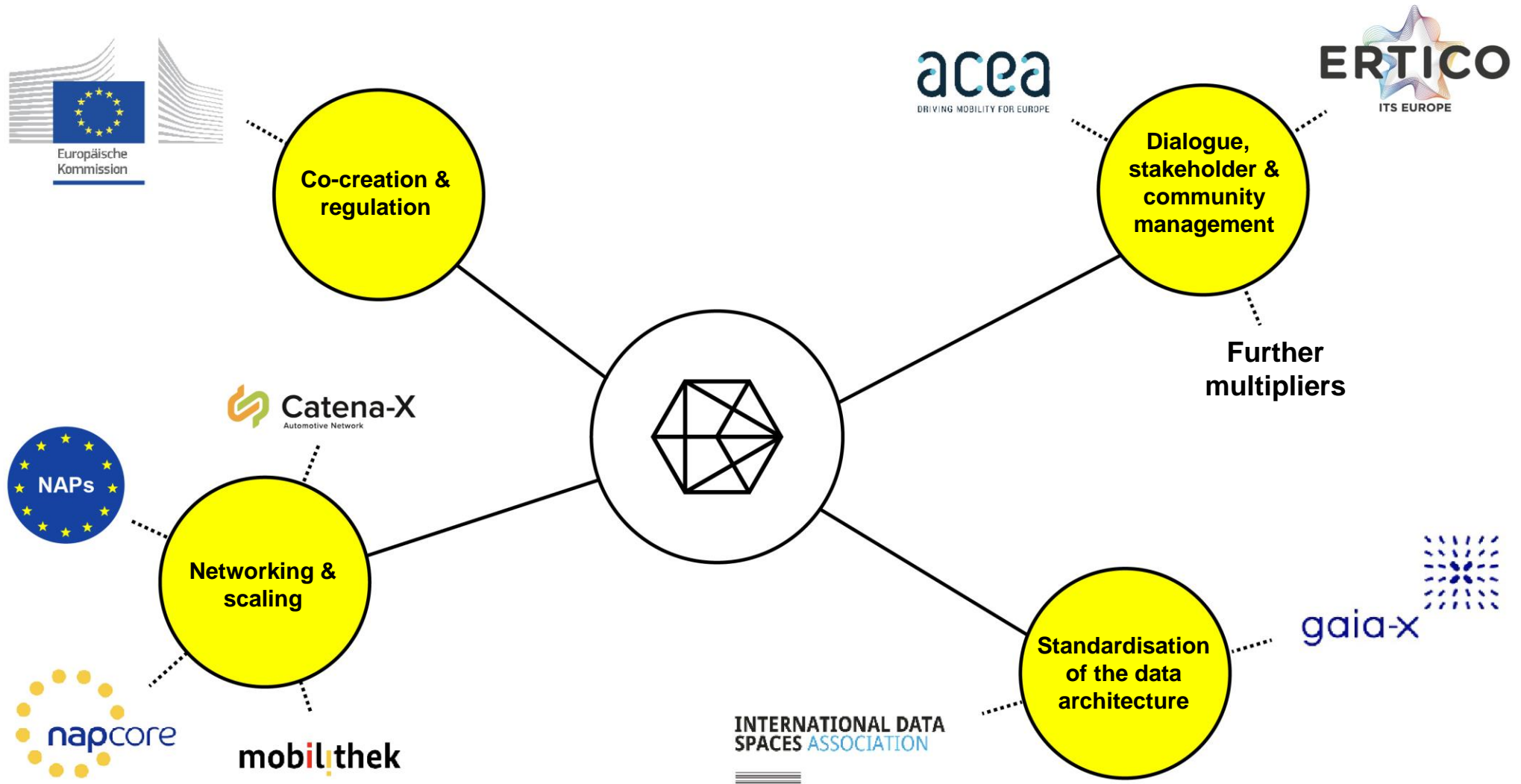
Partners involved

- OEMs
- Telematics Service Providers

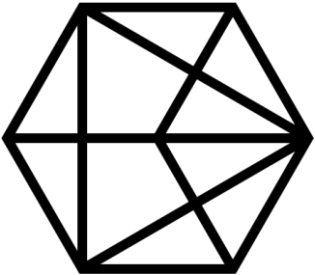
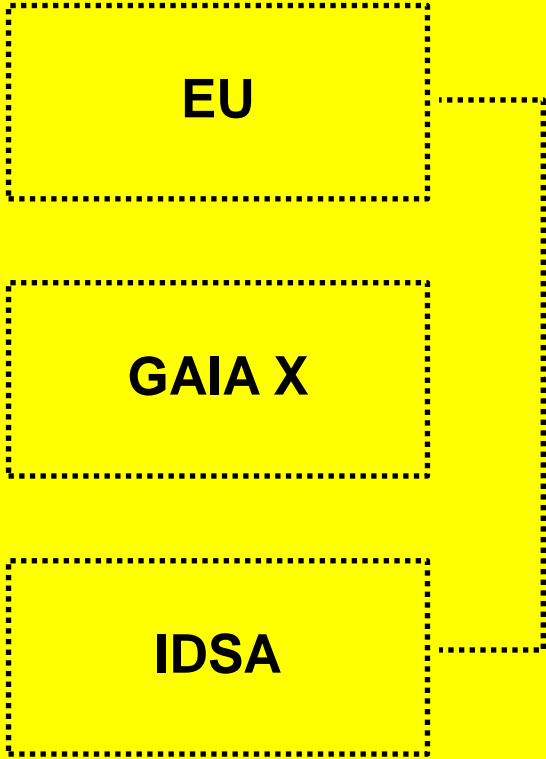
09

Objectives

Europeanisation and networking



Ecosystems of data spaces



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Funded by:



Federal Ministry
for Digital
and Transport

on the basis of a decision
by the German Bundestag