

# Blueprint for Vehicle-Oriented, Data Strategy

Return of Experience



**Kevin Valdek**

CTO & founder HIGH MOBILITY

November 12, 2019 GENIVI Tech Summit

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- 1. About HIGH MOBILITY**
- 2. Today's data market**
- 3. 3rd party opportunities**
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# We are a car data company.

We are an alumni of



Trusted by



Recognized with awards by





# The HIGH MOBILITY platform

Powering the new mobility ecosystem.

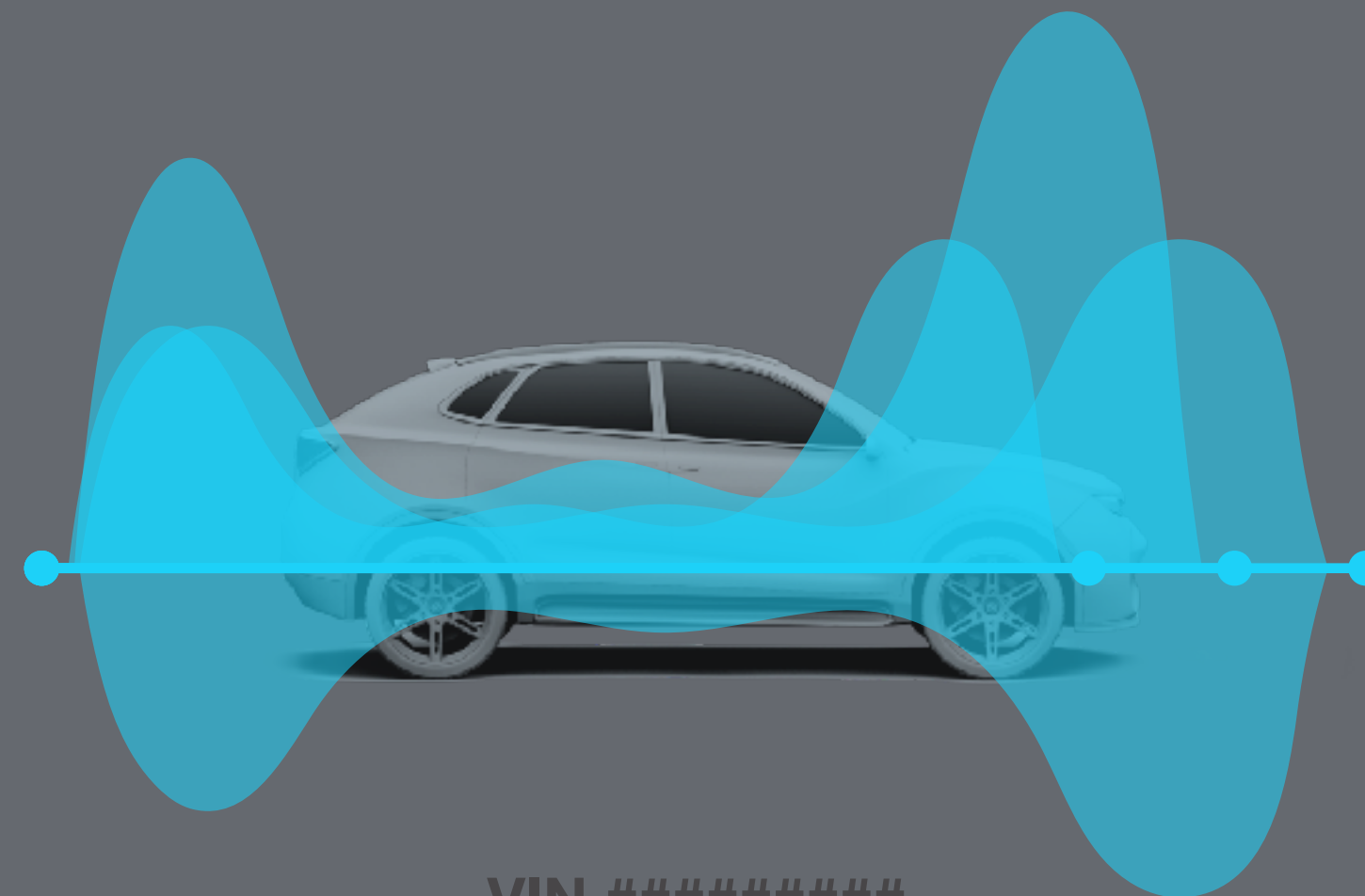
## SDKs

Comprehensive resources for developers to adopt Auto API.



## Production Mode

Developers get verified access to data from vehicles from Mercedes-Benz, BMW & Mini. More platforms added over time.



VIN #####

## Develop Mode

Prototype with 300+ data points and a dozen different vehicle simulators that run in your browser.



## Auto API

A binary cross-OEM protocol for connected vehicles.

## Data Integrations

ISO 20078

We are compliant with the Extended Vehicle framework as **Neutral Server (NS)**, and also can do integrations beyond NS scope.

7500+

developers joined

300+

prototypes created

2.000.000+

API calls prior to production

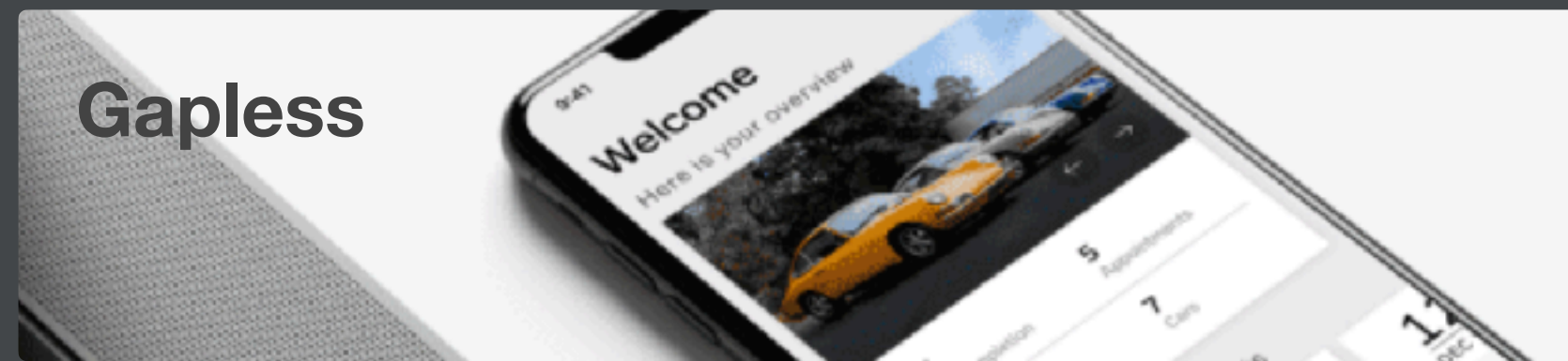
## Workspaces

Enables carmakers to run a data marketplace.

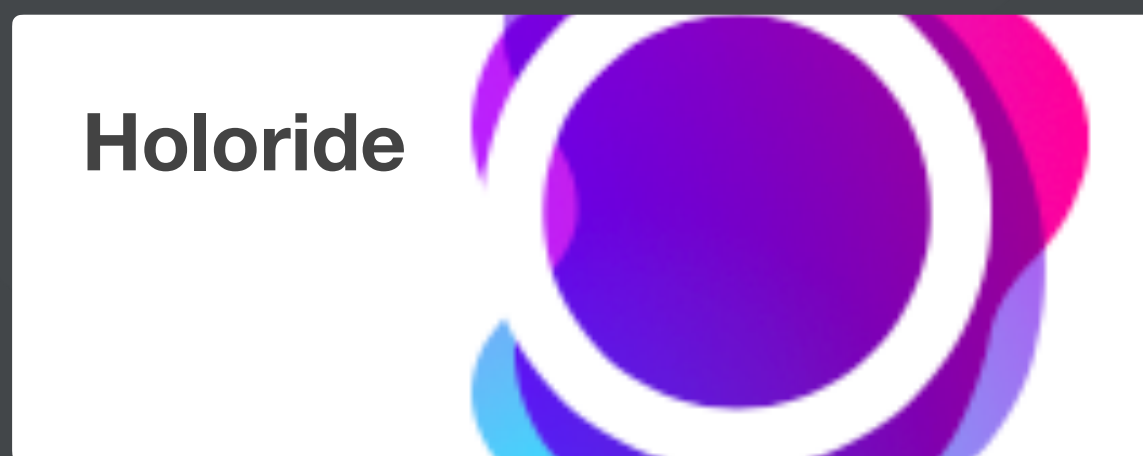
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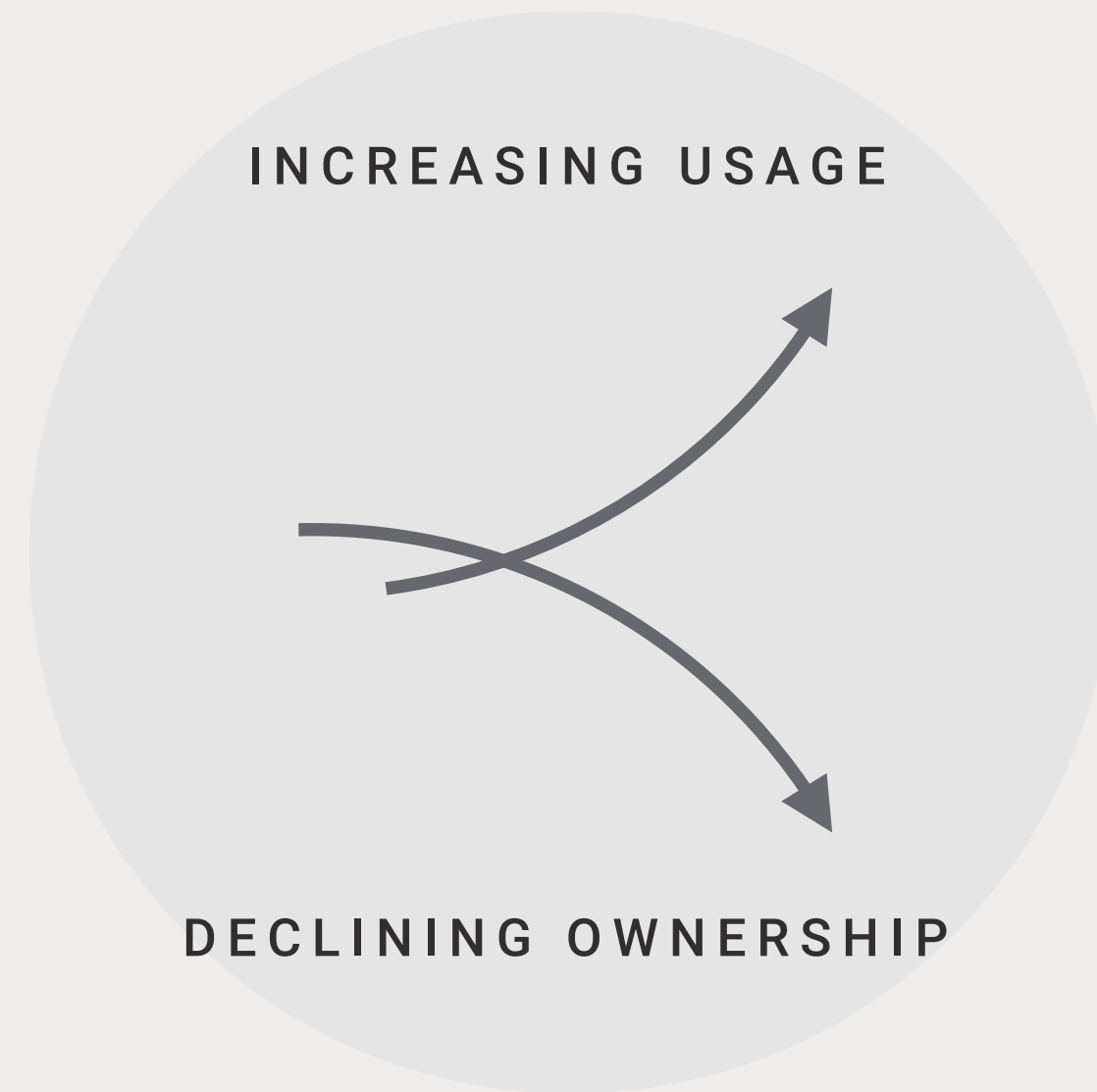


Our mobility experience is increasingly defined by services built by 3rd parties

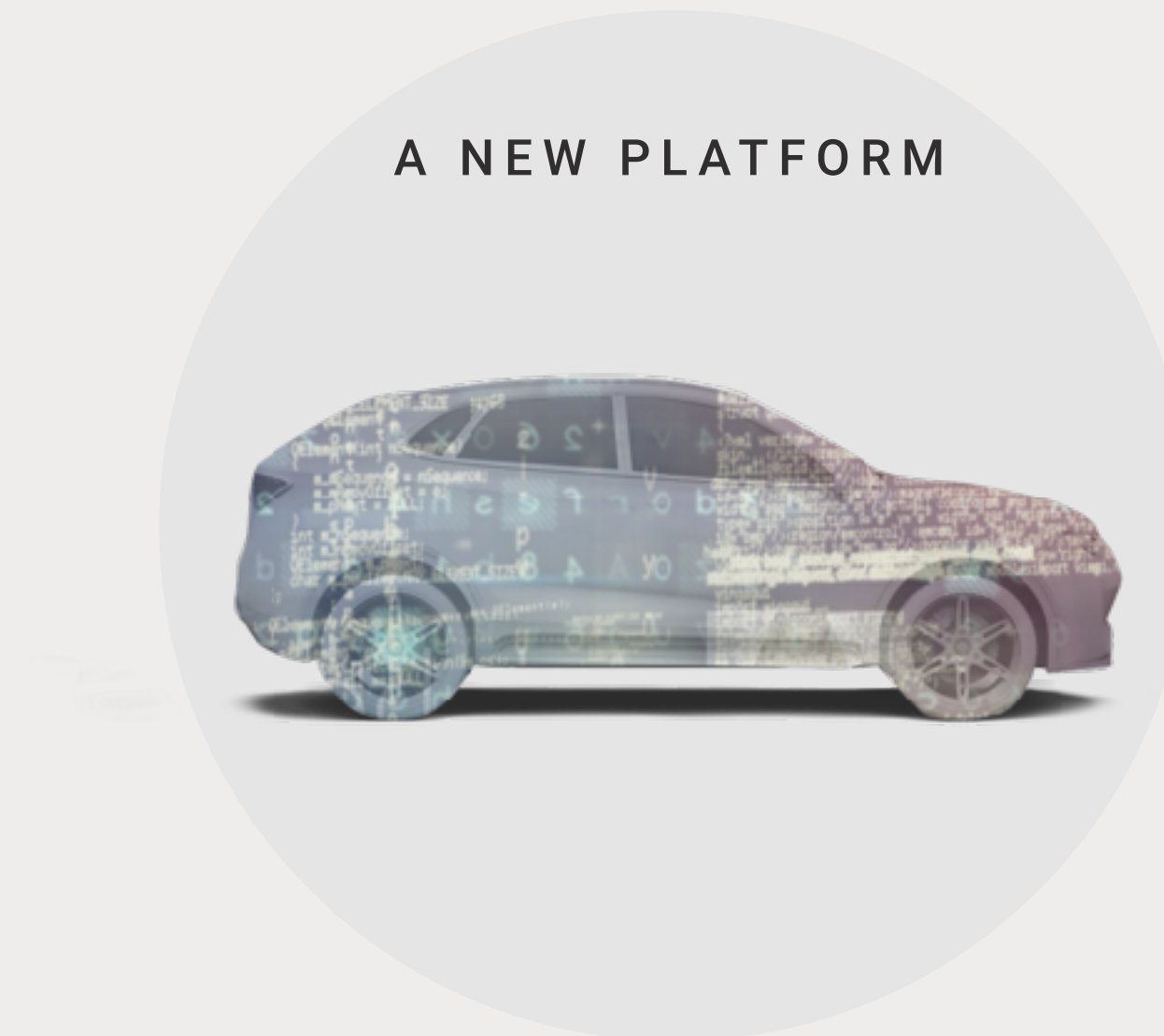




# From individual ownership to Mobility as a Service



Individual vehicle ownership is declining in cities but vehicle usage is increasing. We will see major growth in fleets.



The future of mobility is data! Every current and future mobility company needs data and vehicle interfaces.

# Case study: CarSharing in Berlin

While there is already a range of carsharing offerings, the market is dominated by OEM mobility brands.

## E-Scooter, Leihrad, Carsharing oder Roller: Was ist am günstigsten?

Kurzstrecke in Berlin

Gemessene Strecke: Hackescher Markt bis Checkpoint Charlie (2,3 km Radweg oder 2,8 km Straße)

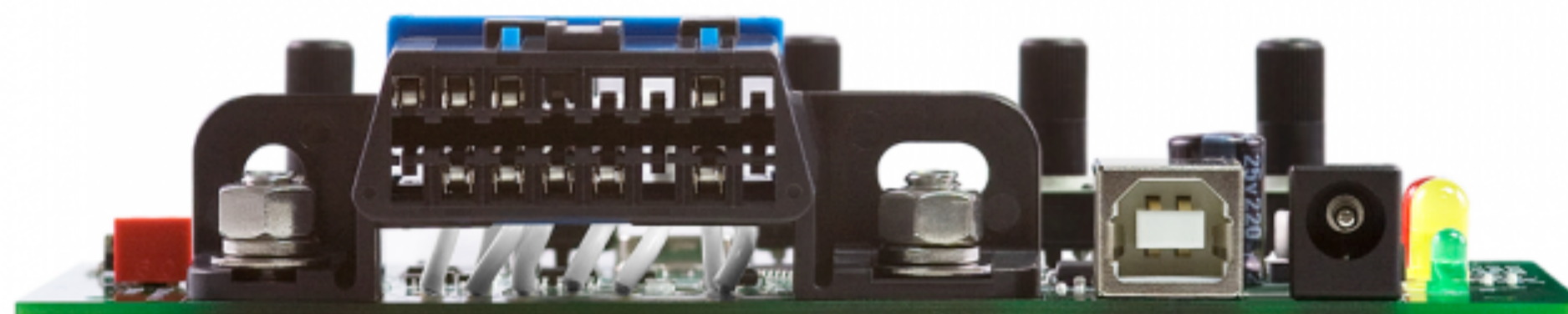
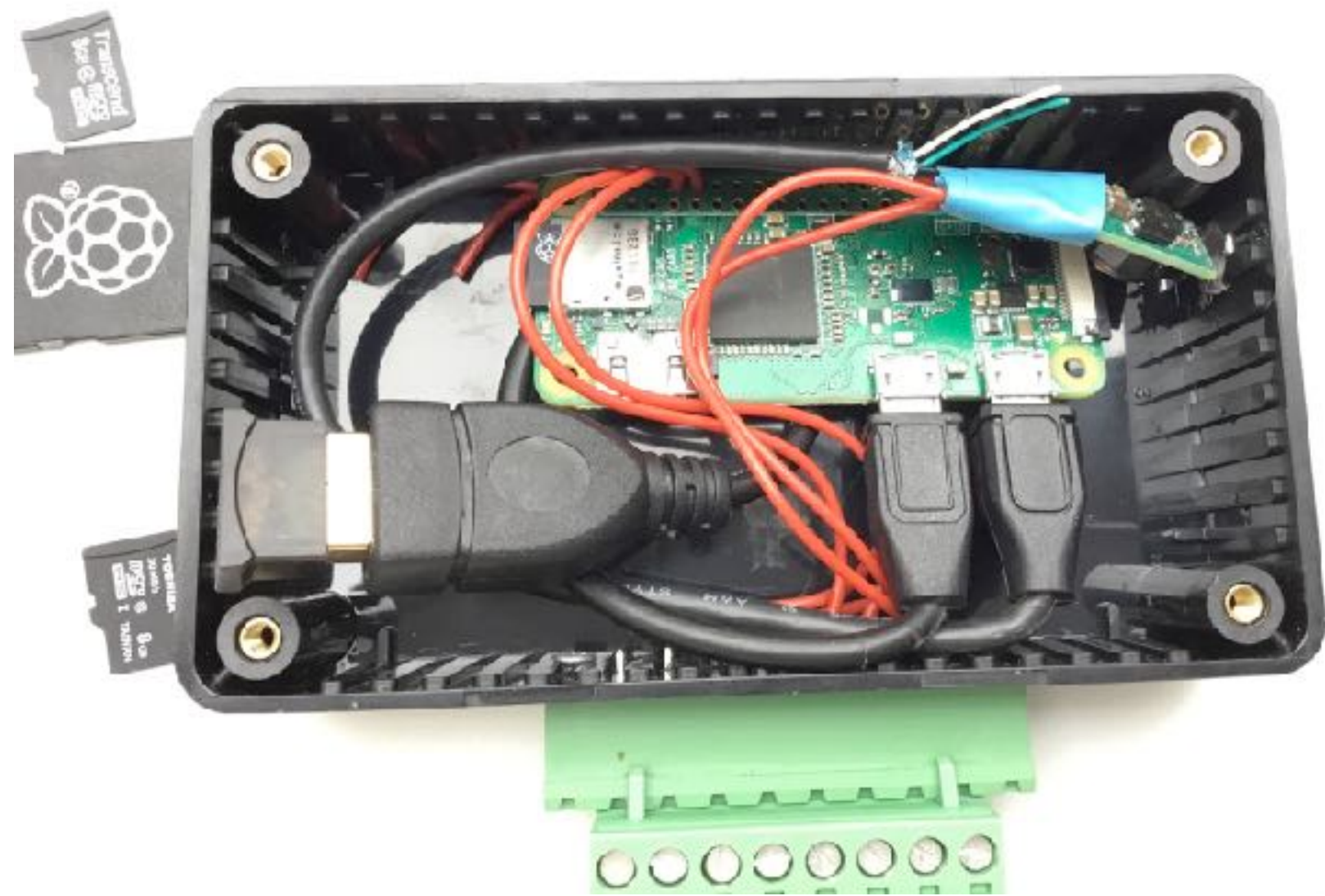


Quelle: Mydealz  
Datenanalyse

• Preise und Angebote können in anderen  
Städten abweichen.

BUSINESS  
INSIDER  
DE







# Mobility service providers face several issues

## AVOIDING HARDWARE



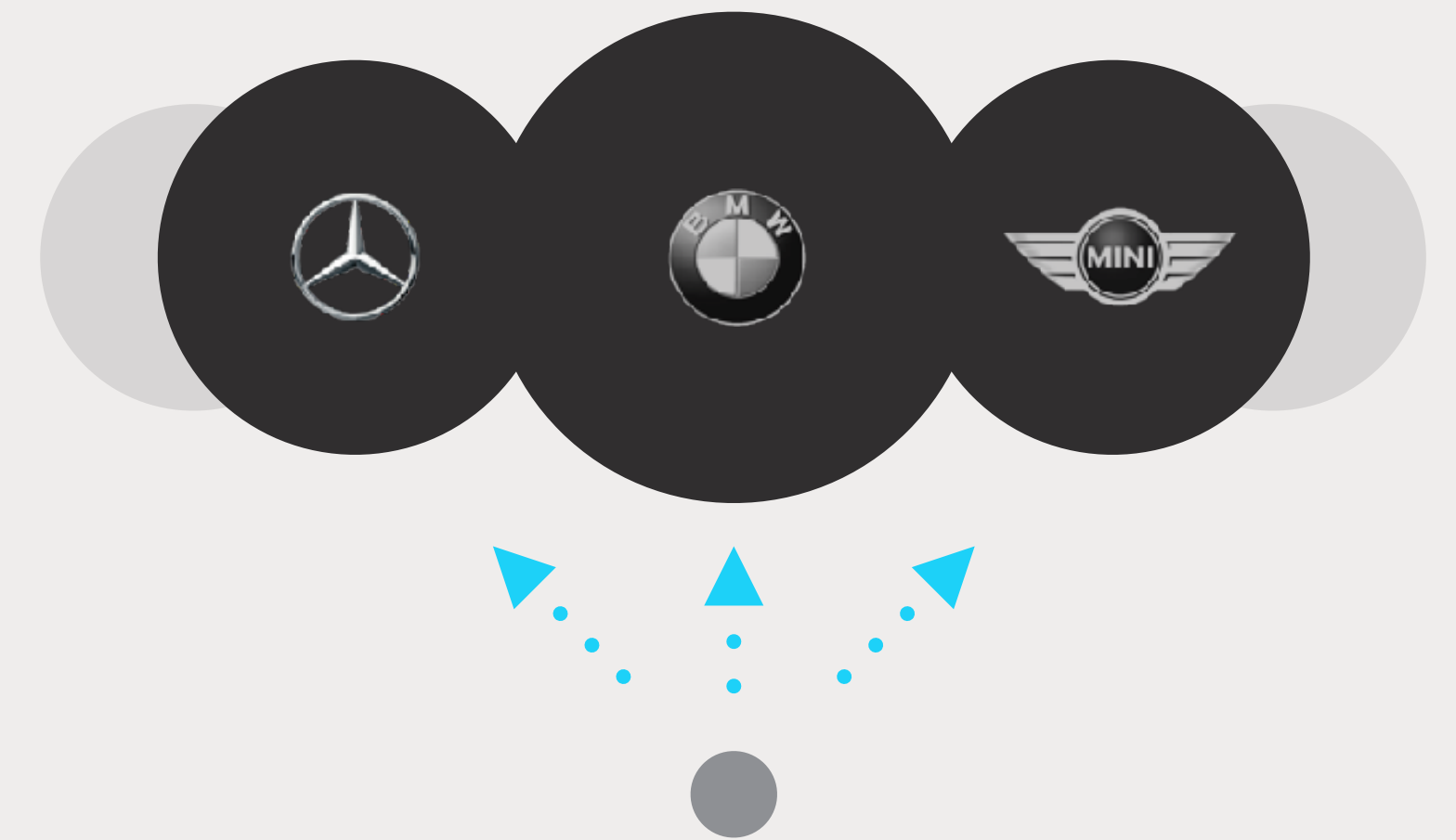
- Fixing issues with hardware is costly.

## OEM-AUTHORIZED ROUTE



- Data quality and availability is significantly increased when getting the data from the source.

## FRAGMENTATION











- Working with each carmaker individually does not scale.





# What's possible today: data bundle examples

 <p><b>PAYD Insurance</b> Starting from €0,39 /mo</p>	 <p><b>Fueling</b> Starting from €0,29 /mo</p>	 <p><b>Charging</b> Starting from €0,29 /mo</p>	 <p><b>Damage prevention</b> Starting from €0,29 /mo</p>
 <p><b>Theft prevention</b> Starting from €0,29 /mo</p>	 <p><b>Parking</b> Starting from €1,56 /mo</p>	 <p><b>Fleet management</b> Starting from €2,34 /mo</p>	 <p><b>Maintenance</b> Starting from €0,78 /mo</p>

Close ✕

# Choose the permissions for your app

Select one or more available permissions and check which carmakers are available for your development

APP PRESET Choose an app preset ▼

Show all permissions

- > Charging
- > Climate
- > Diagnostics
- > Door locks
- > Engine
- > Fueling

CANCEL

SAVE SELECTION

*ACEA Position Paper*

*Access to vehicle data  
for third-party services*



# Extended Vehicle & Neutral Server recap

## EXTENDED VEHICLE

- Sharing of vehicle telematics data with 3rd parties
- Both anonymous and personalised vehicle data
- Customer consent and customer choice in focus
- Read-only data

## NEUTRAL SERVER

- Independent intermediary engaged by OEMs
- Allowed to broker data to 3rd parties within allowed scope
- Protects direct visibility of 3rd party business models from OEMs

# Reception from 3rd parties

## 3RD PARTIES PROS

- Finally a scalable model
- No need for to administer hardware or dongles
- Choice in selecting which Neutral Server to integrate with
- Possible to integrate once and continuously support new car brands
- Can avoid individual negotiations with each OEM

## 3RD PARTY CHALLENGES

- Trade-off when it comes to data update rates
- Pricing and request limits vary significantly
- SLAs of high importance to invest in the effort

# Car data availability in Europe in the next years



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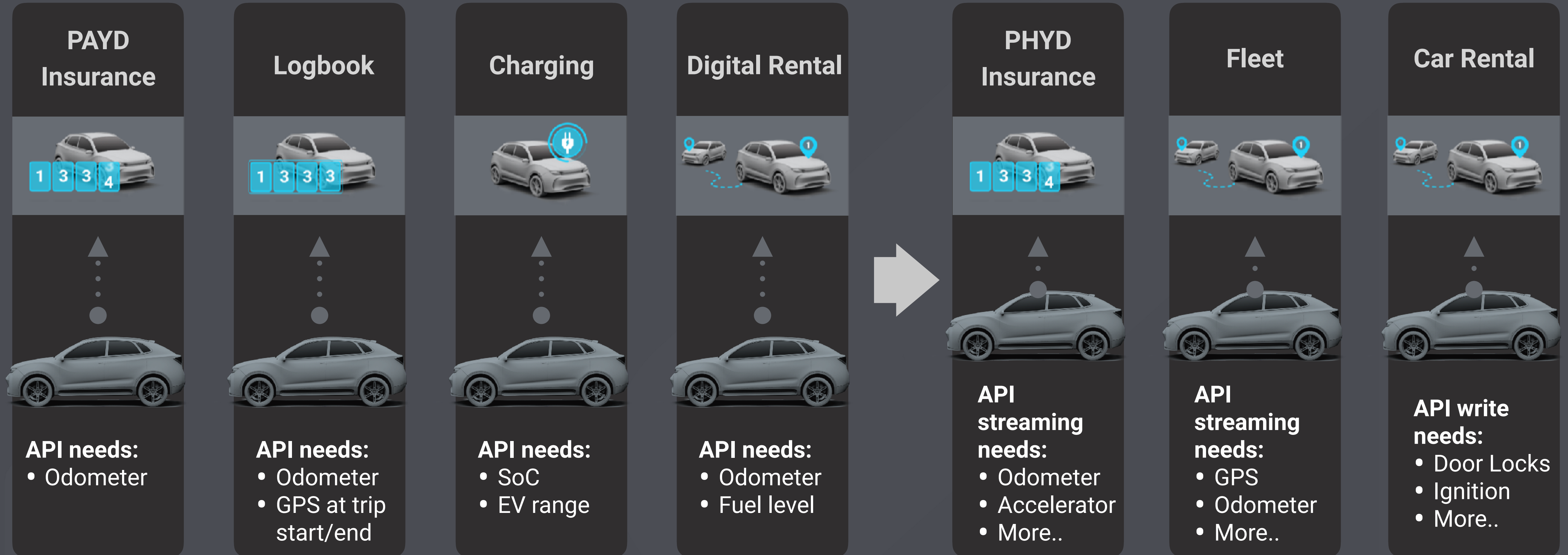
# Almost every new car is a data transmitter



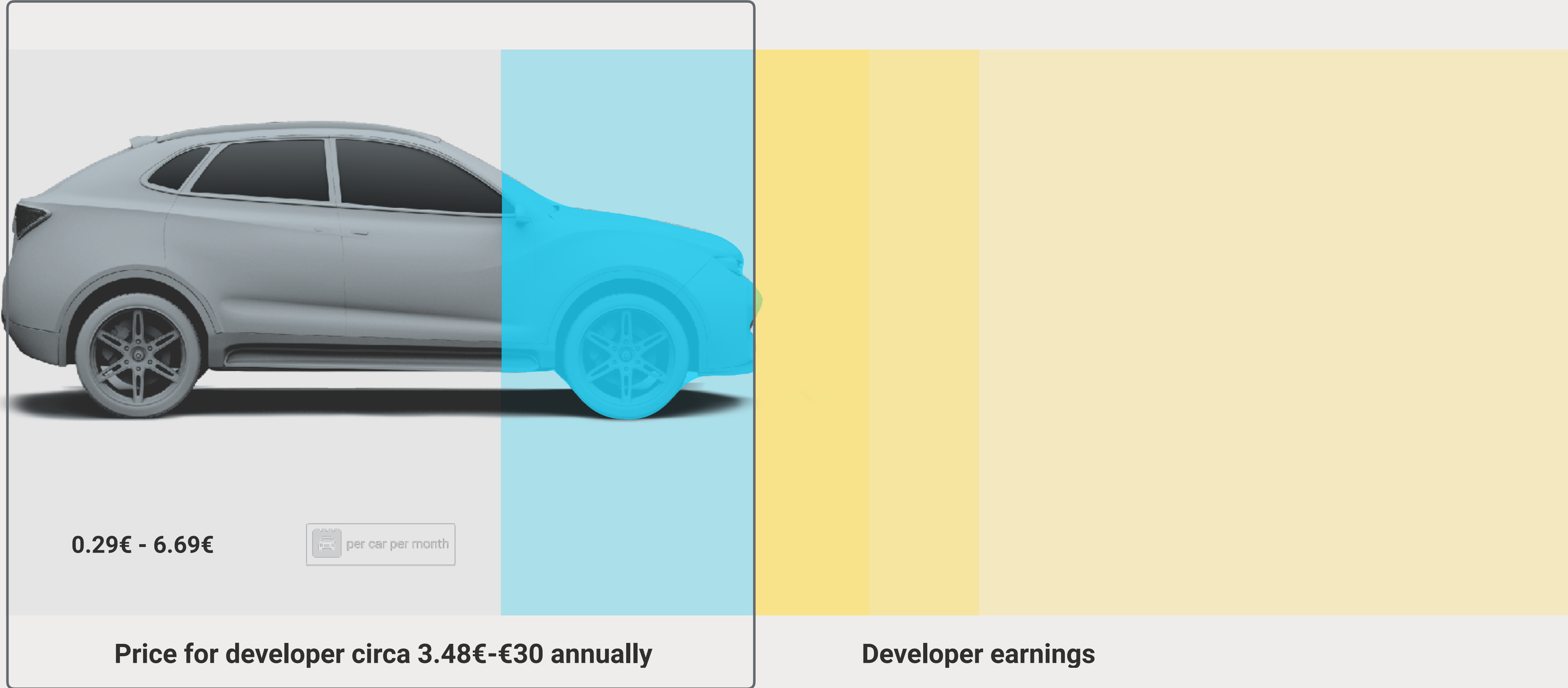
	2017	2018	EST 2019	EST 2020	EST 2021	EST 2022	EST 2023	EST 2024	EST 2025	EST 2026	EST 2027	EST 2028	EST 2029	EST 2030
<b>Number of connected vehicles</b>	<b>16M</b>	<b>34M</b>	<b>51M</b>	69M	90M	111M	136M	166M	195M	224M	254M	283M	313M	342M



# Read-access paves the way, write-access scales the created value



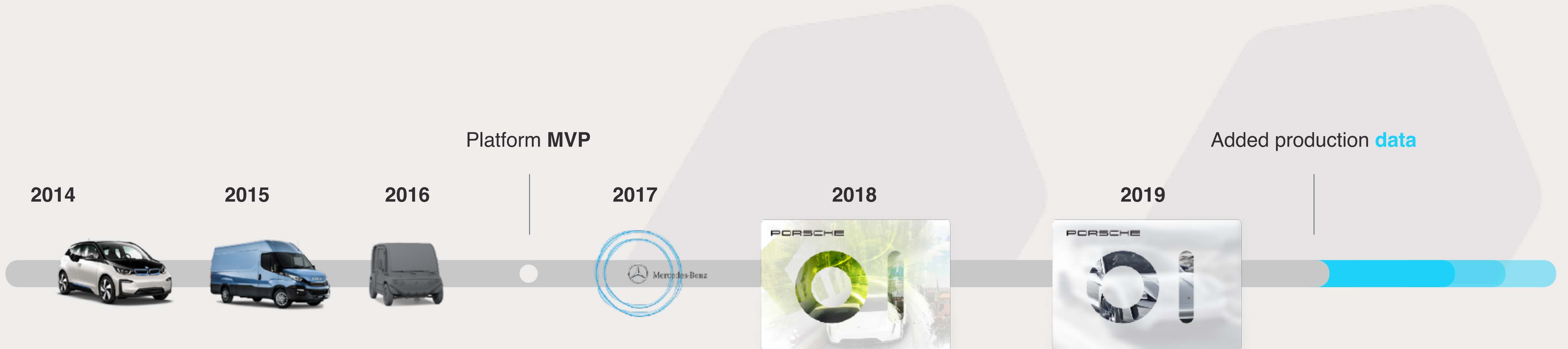
# Price per car per month seems the most scalable model



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# HIGH MOBILITY's journey with OEMs towards data monetization



## EARLY PHASE

### Building a developer toolkit

Building and testing the SDKs and sample apps through various UX concepts with carmakers.

## TRANSITIONING PHASE

DEVELOP MODE

Made available to developers via open innovation competitions with Mercedes-Benz and Porsche.

## GROWTH PHASE

PRODUCTION MODE

Data platform completed and launched with data from Mercedes-Benz, BMW, and MINI.



# Open innovation around vehicle data



2018

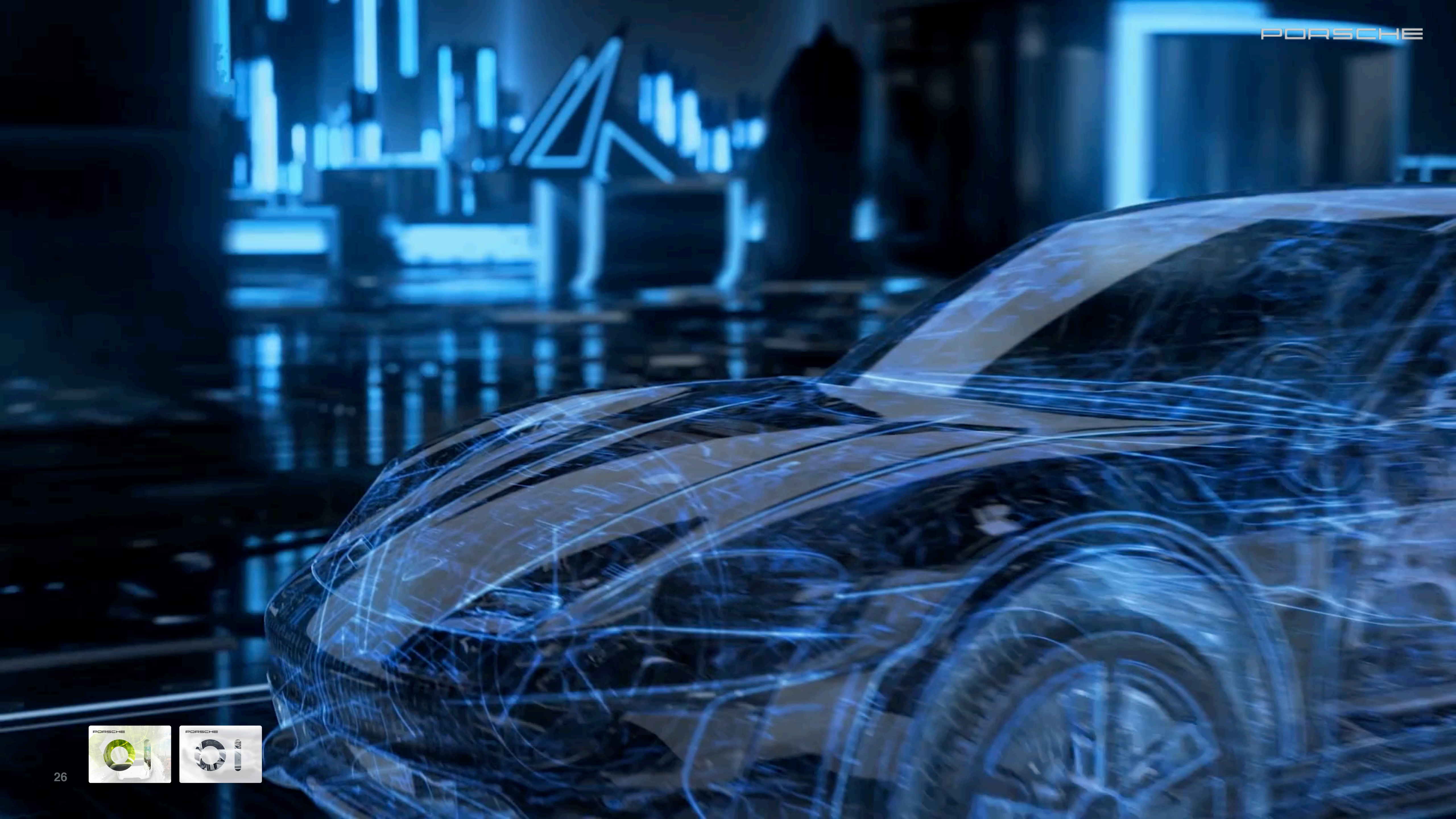


2019



2020









## Avg Registrations

Number of registrations on microsites per competition.

**1,055**  
TOTAL

## Avg Active users

Number of developers who have completed their registration by creating a developer account.

**604**  
TOTAL

## Total Projects

Number of users who have created a project for their app.

**272**  
TOTAL

## Submitted projects

Number of projects submitted for the competition's final deadline.

**70**  
TOTAL

## TOP 5 CAPABILITIES USED

**212,540**

DIAGNOSTICS

**127,280**

VEHICLE STATUS

**105,404**

RACE

**68,179**

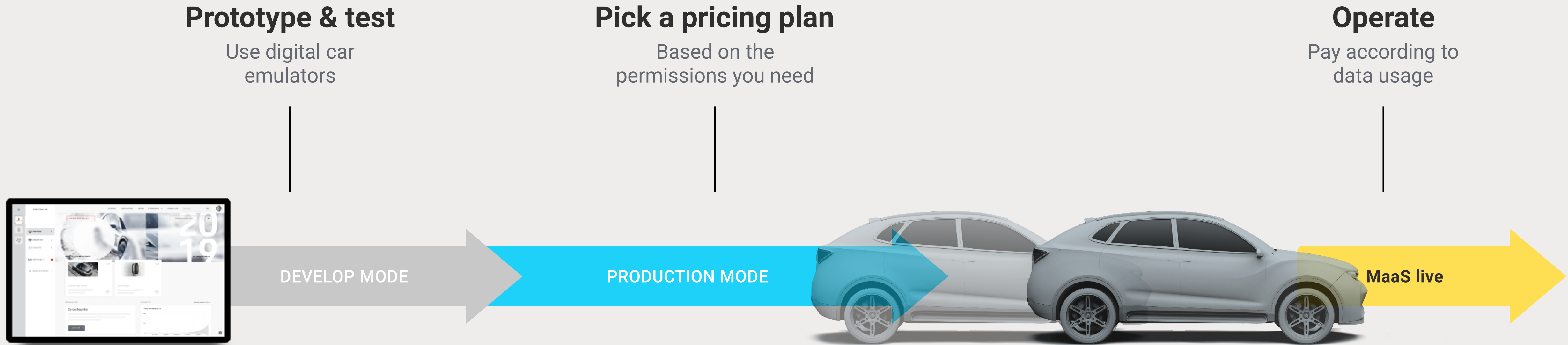
VEHICLE LOCATION

**35,977**

CHARGING

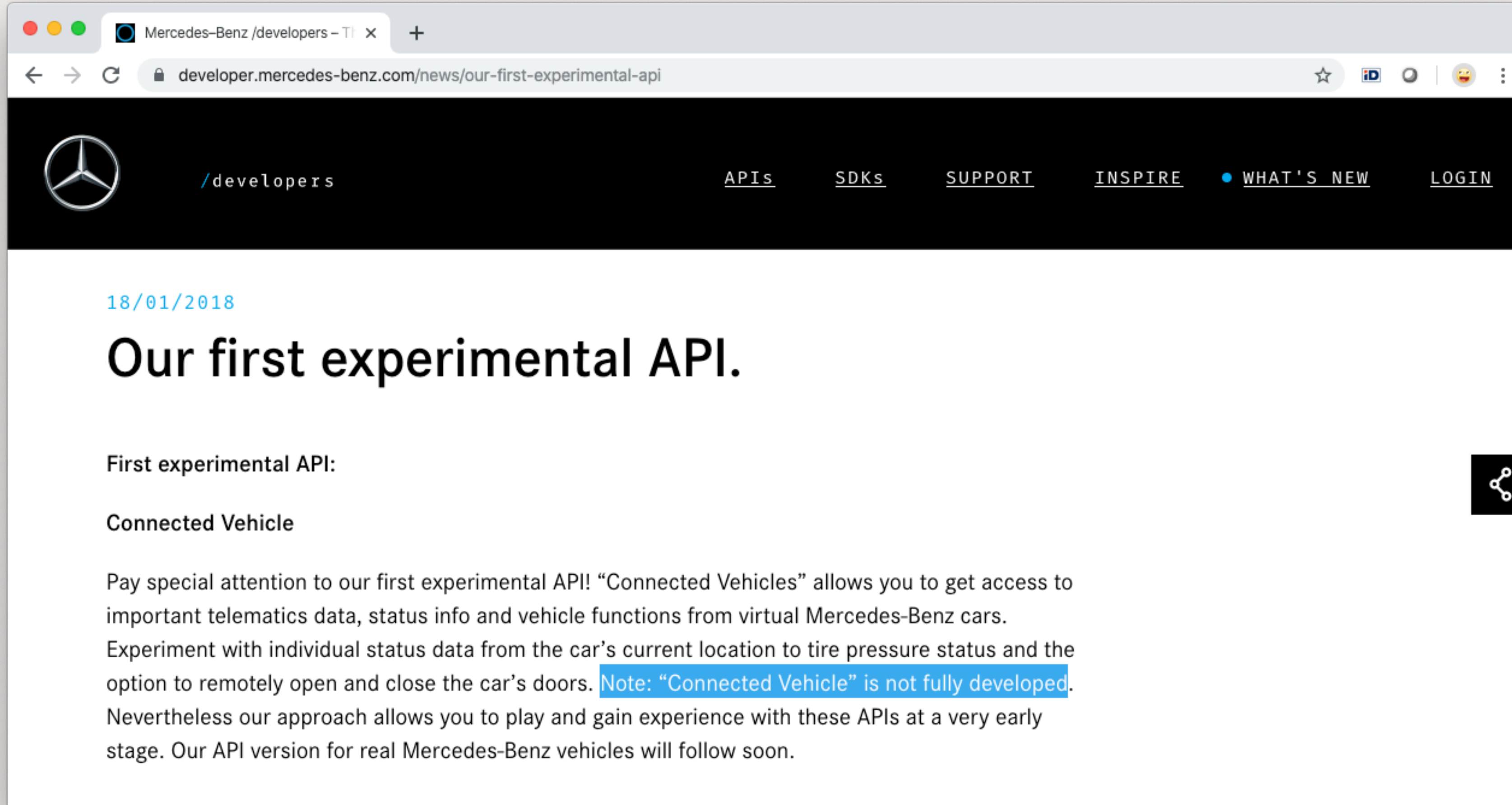


# Implementing a 3rd party onboarding process





# API previews to 3rd parties



The screenshot shows a web browser window with the URL `developer.mercedes-benz.com/news/our-first-experimental-api`. The page features the Mercedes-Benz logo and a navigation menu with links for `/developers`, `APIs`, `SDKs`, `SUPPORT`, `INSPIRE`, `WHAT'S NEW` (highlighted), and `LOGIN`. The article content includes a date of `18/01/2018`, a title `Our first experimental API.`, and a sub-heading `First experimental API:`. The main text discusses the 'Connected Vehicle' API, highlighting its experimental nature and the data it provides, such as location, tire pressure, and door status. A note states that the API is not fully developed. A share icon is visible on the right side of the article content.

18/01/2018

## Our first experimental API.

First experimental API:

### Connected Vehicle

Pay special attention to our first experimental API! "Connected Vehicles" allows you to get access to important telematics data, status info and vehicle functions from virtual Mercedes-Benz cars. Experiment with individual status data from the car's current location to tire pressure status and the option to remotely open and close the car's doors. **Note: "Connected Vehicle" is not fully developed.** Nevertheless our approach allows you to play and gain experience with these APIs at a very early stage. Our API version for real Mercedes-Benz vehicles will follow soon.

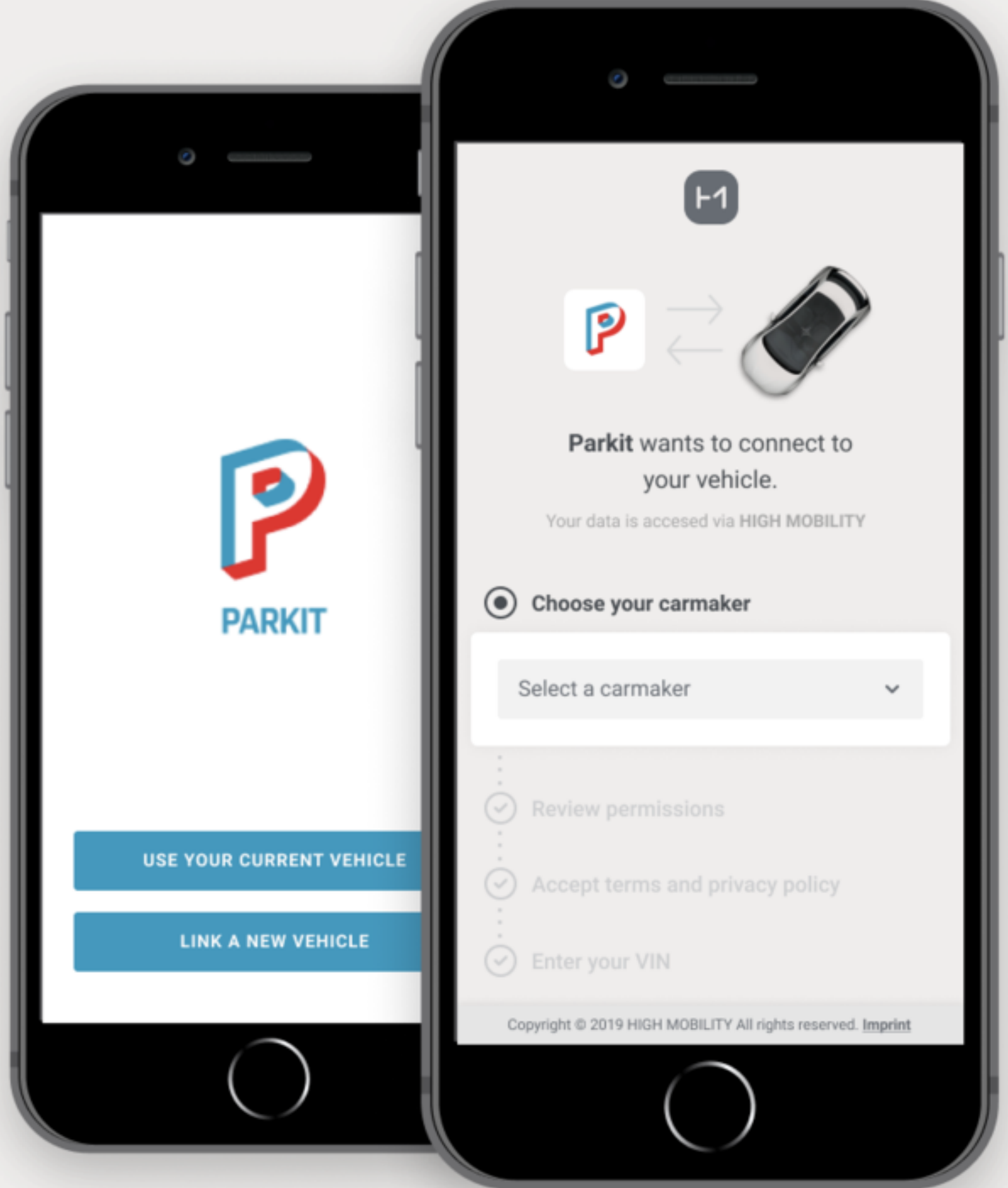
# Simulation environment

The screenshot displays a simulation environment for a Mercedes-Benz vehicle. The interface includes a top navigation bar with the Mercedes-Benz logo, a user profile 'developers', a VIN 'WDC253900261MOCK', and links for 'POWERED BY HIGH MOBILITY', 'DOCUMENTATION', and 'SIGN OUT'. The main area shows a 3D model of a silver SUV with several status indicators: 'CLOSED' for the sunroof, 'OPEN' for the rear window, 'NOT CHARGING' for the battery, 'CLOSED' for the front door, 'CLOSED' for the rear door, and 'IGNITION OFF' for the engine. A right-hand sidebar contains 'Capabilities' and 'Trip Simulations' with right-pointing arrows. At the bottom, a 'CONSOLE LOG' section shows the following entries:

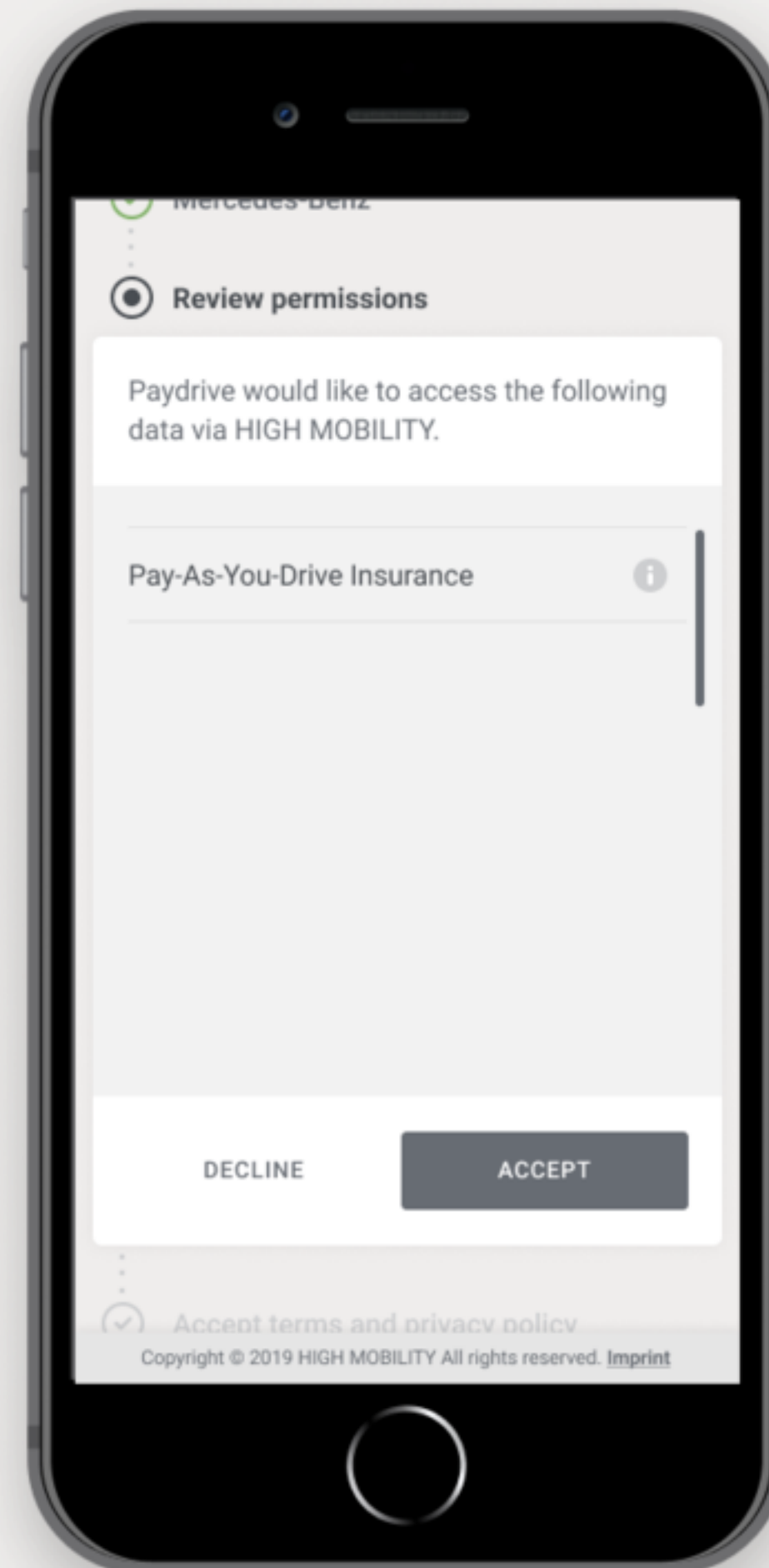
TIME	AUTHOR	MESSAGE
9:45:01	TEMP	Initialized simulator
9:45:01	TEMP	Initialized capabilities
9:45:11	TEMP	Car initialized
9:45:15	TEMP	simulator message



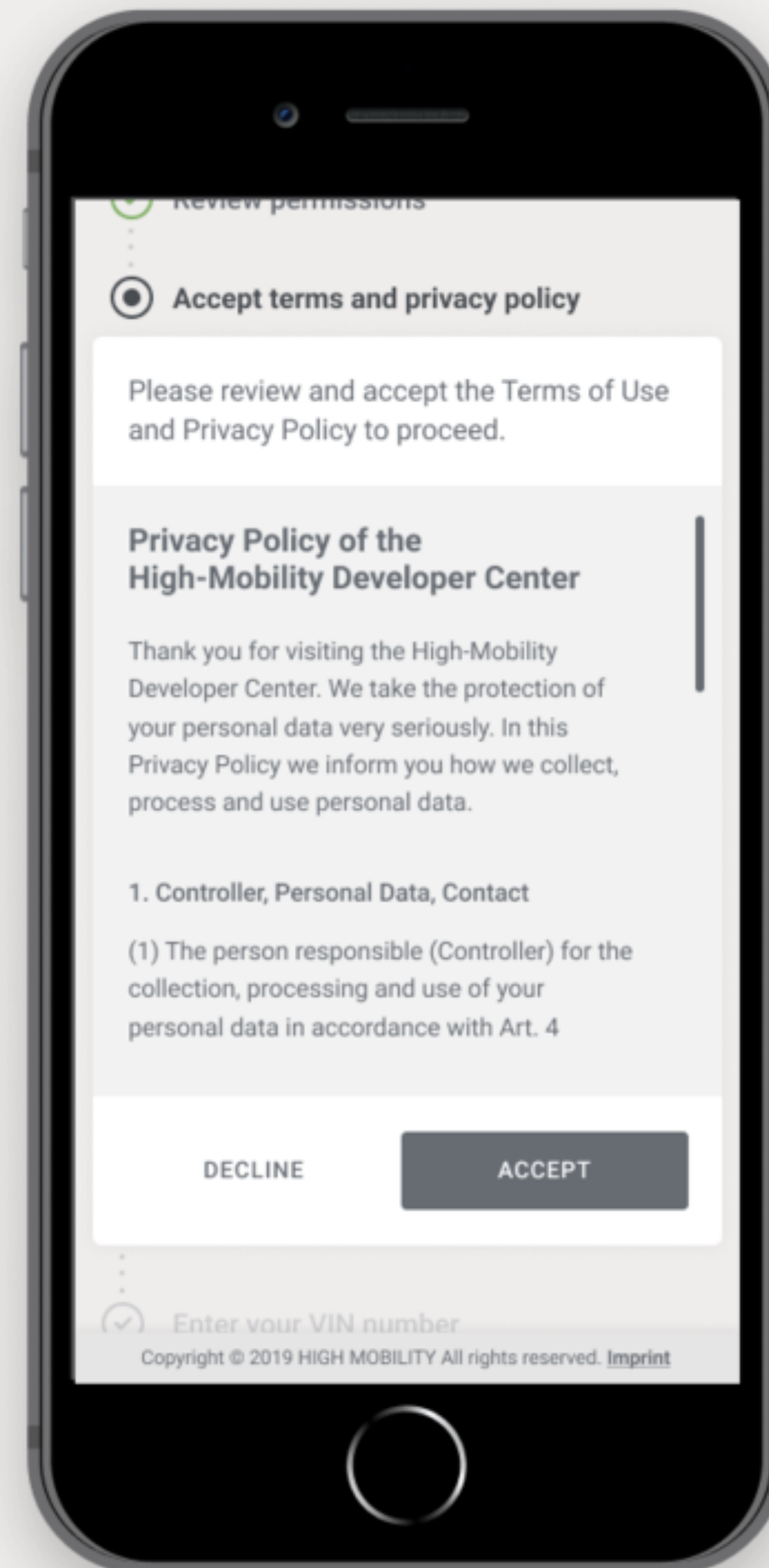
# Handling customer consent



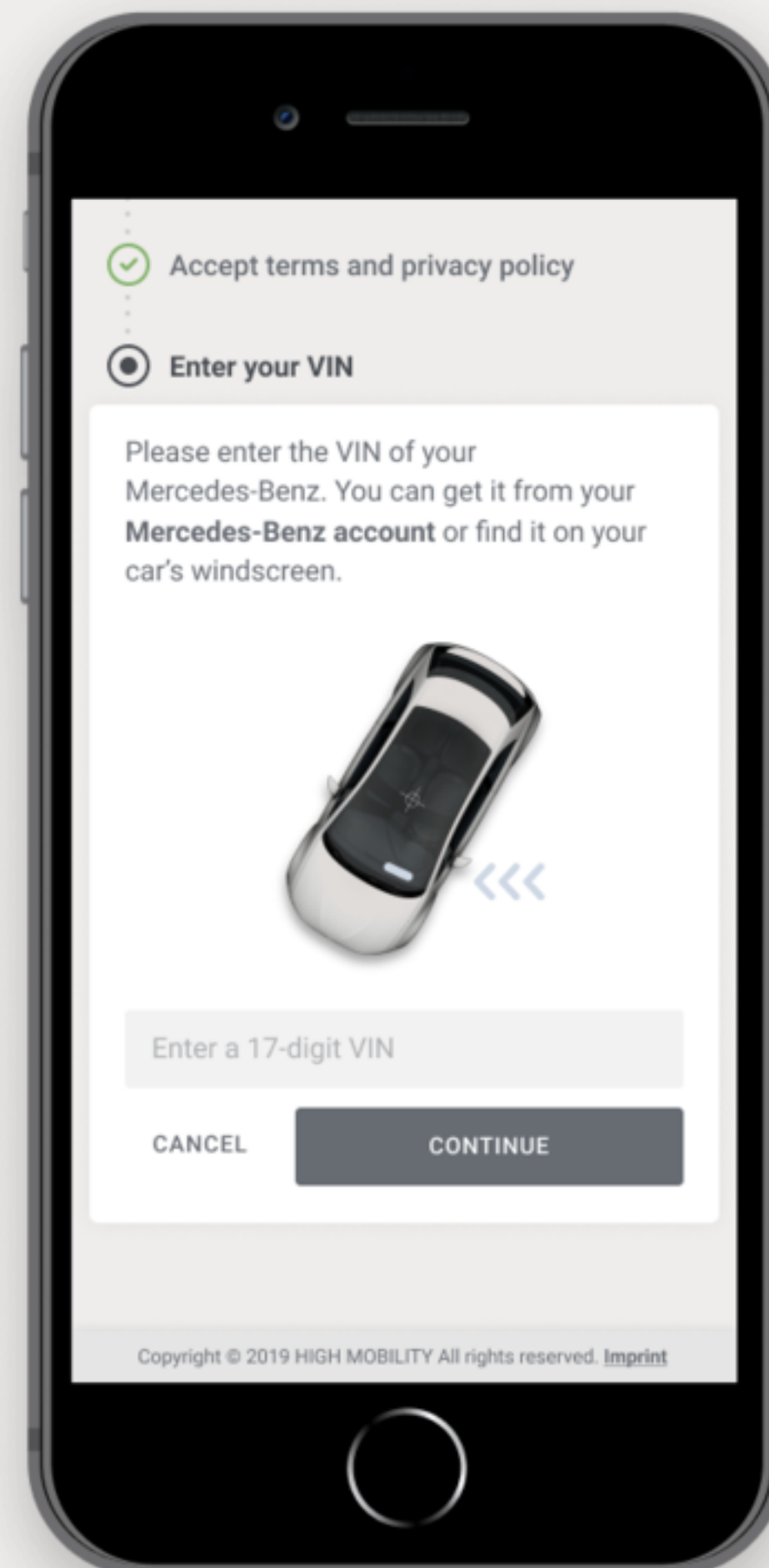
# Handling customer consent



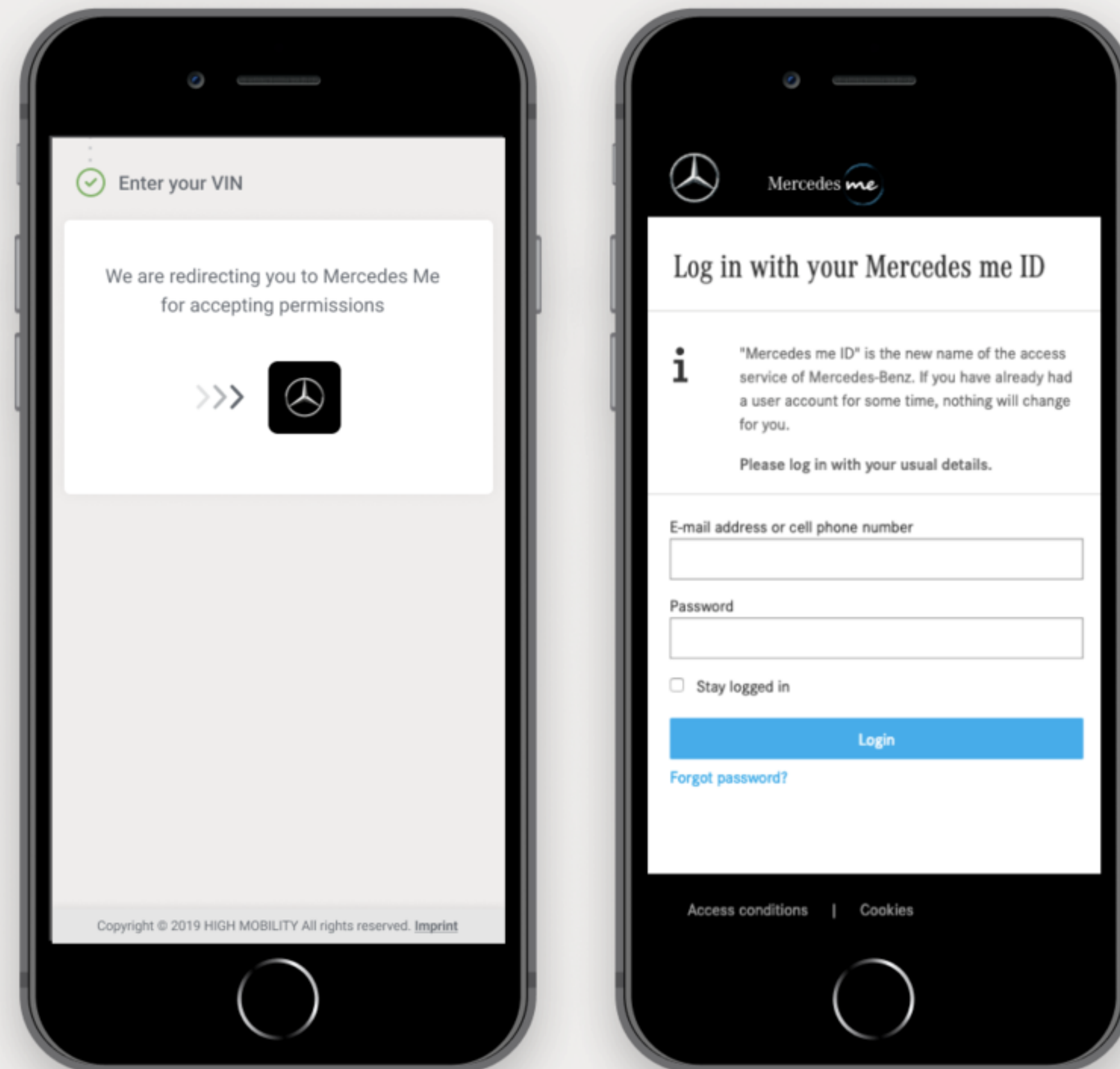
# Handling customer consent



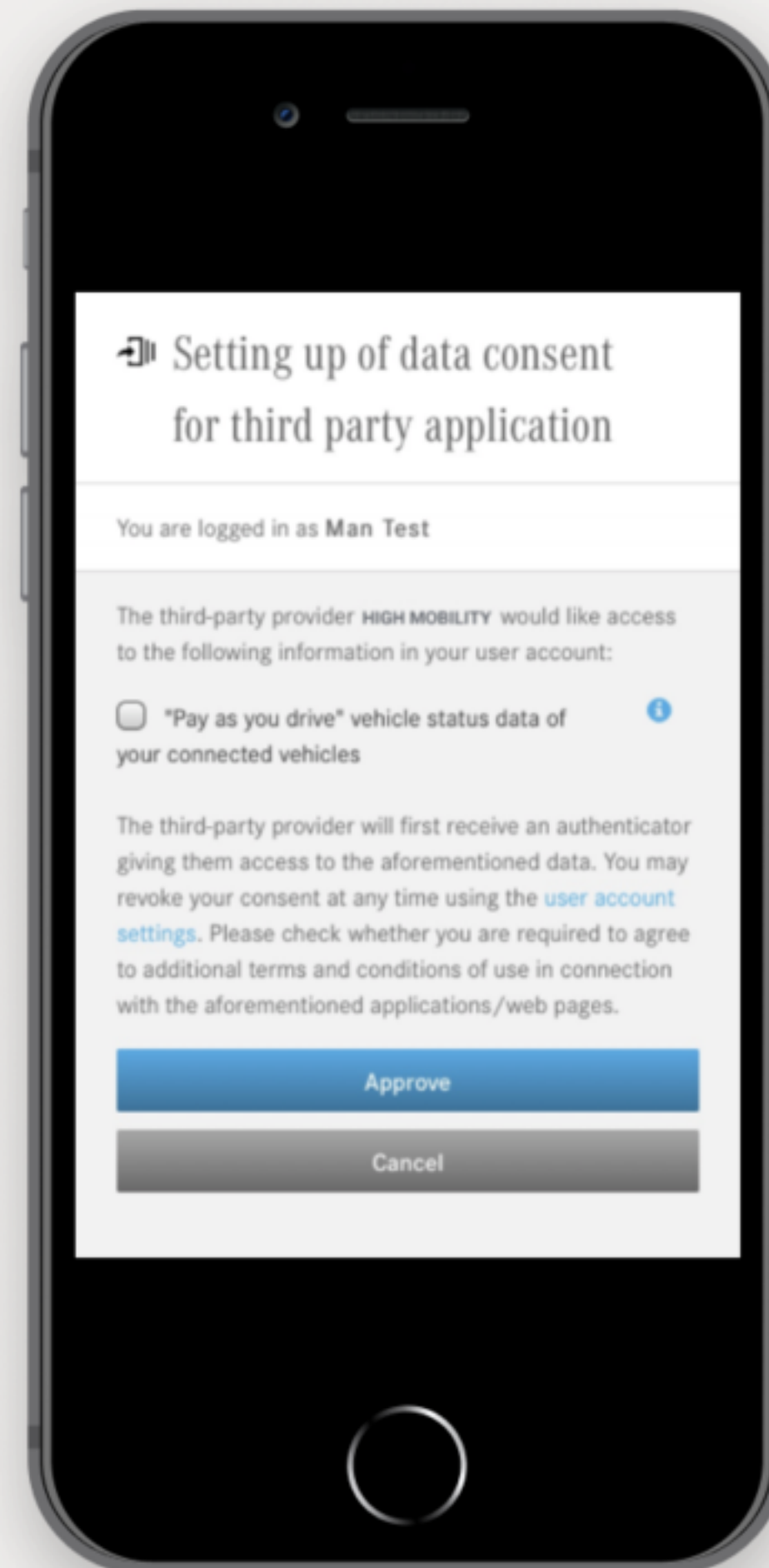
# Handling customer consent



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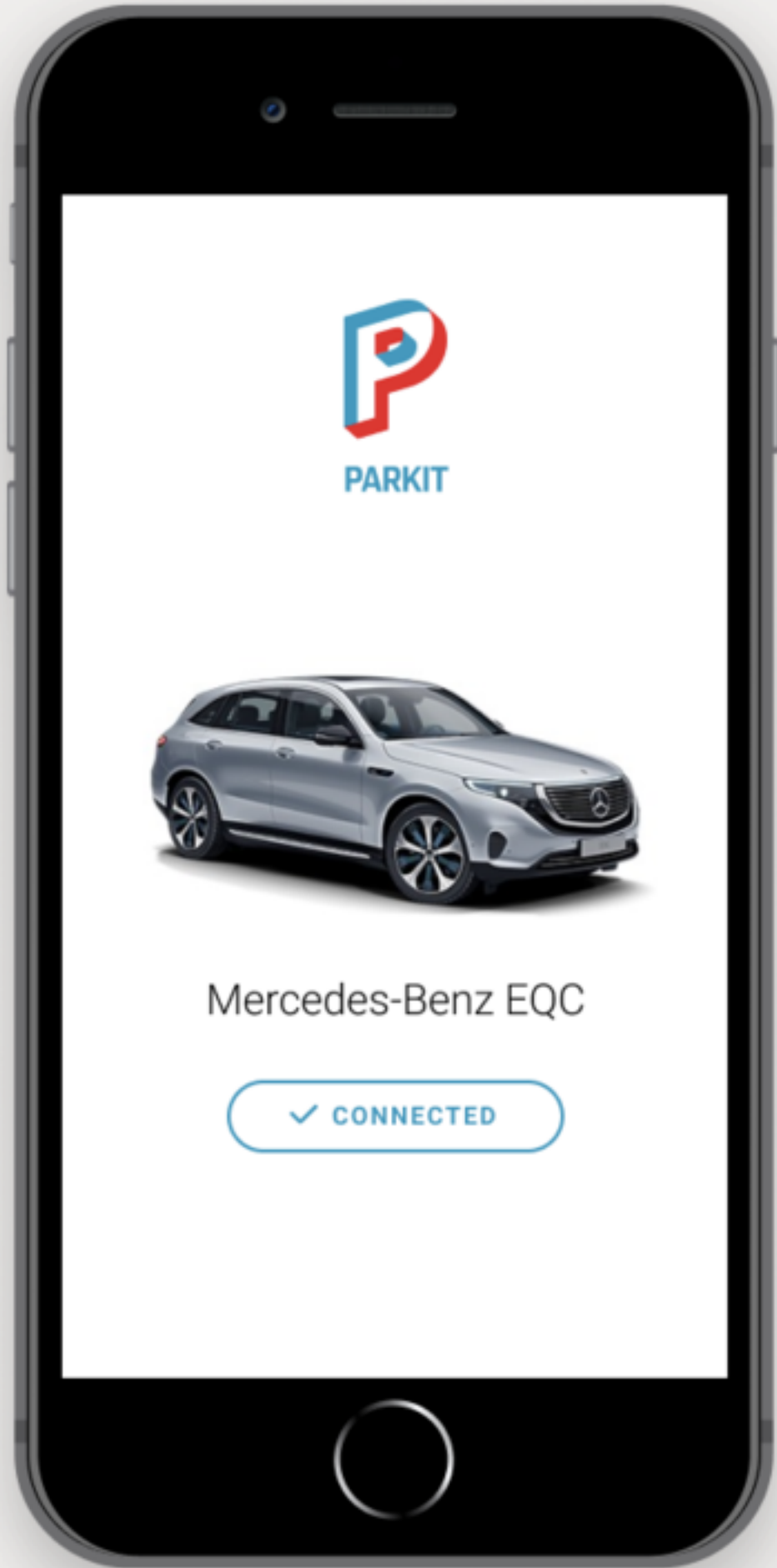


# Handling customer consent





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# CARS ARE THE NEXT 3rd PARTY PLATFORM

API

API

API - application programming interface



**The automotive industry will change more in the next five years than it has in the last 50.**

Oliver Blume / Chairman of the Executive Board, Porsche AG



# Thank you for listening!

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