

Access to in-vehicle data: A car rental and mobility service provider perspective

The advent of connected and autonomous vehicle technology is transforming Europe's mobility landscape at a rapid pace. As key stakeholders in this transformation, **leading car rental companies Avis Budget Group, Europcar Mobility Group and Hertz** welcome the creation of a "Common European Mobility Data Space" as laid out in the Commission's [Data Strategy](#) of 19 February 2020. In particular, we support the ambition of this proposal to "facilitate access, pooling and sharing of data from existing and future transport and mobility databases".

Access to in-vehicle data is key to unlocking the advantages that today and tomorrow's technology offers our European customers. For this reason, it is imperative the EU framework for connected and autonomous vehicles be designed in a manner that is future-proof and ensures direct, fair and competitive access to in-vehicle data, whilst fully respecting privacy.

In this context, we also welcome the recently adopted European Commission's legislative proposal on a [Data Act](#), as we expect it to clarify data usage and access rights in business-to-customers operations, such as those involving mobility service providers and vehicle manufacturers.

The role of car rental companies in Europe's mobility revolution

Car rental companies were "mobility providers" before the term was coined. Our companies fulfil a crucial role in the mobility ecosystem by enabling people to travel flexibly, whether for vacation, work, to reach a one-way destination or simply day-to-day transit.

Car ownership models are also changing as European consumers increasingly seek alternatives to private car ownership in the transition to sustainable and smart mobility. Our services play a natural role in this regard. We thus encourage the Commission to make the Common Mobility Data Space future-proof for all mobility providers.

To ensure optimum innovation capacity and foster a diverse, competitive and thriving mobility landscape, clear rules governing access to in-vehicle data are needed. This access is especially critical to provide innovative services and support to our customers, as well as to carry out our function as vehicle owners and/or fleet managers: As owners of our vehicles, it is essential we obtain all necessary data to ensure top maintenance and safety, particularly as vehicles are becoming more advanced. Furthermore, fair data access can favour the uptake of electric vehicles (EVs) by allowing the development of innovative data-driven services for such vehicles.

Through decades of helping people meet their transport needs, we have moreover built up expertise as trustworthy data managers and are sensitive to the handling of such data. Where personal data is concerned, we ensure it is well protected in accordance with the General Data Protection Regulation and other applicable legislation, including (if required) by obtaining consent from the individual renting the car and by providing our services on an opt-in basis.

Future-proofing the Mobility Data Space

In examining the EU governance framework for in-vehicle data, three core points must be addressed:

- (1) **As a guiding principle, vertical monopolies must be prevented to maintain a healthy and competitive market around connected and autonomous vehicles**

A level playing field must be preserved between mobility providers to ensure the market for autonomous and connected cars remains competitive. In line with this, car rental companies, as trustworthy third-party service providers, should have the **same level of data access as a vehicle manufacturer's subsidiary performing a comparable service.**

Manufacturers are in a privileged position to develop competing services, e.g. fleet-management solutions, based on data collected from their own subsidiaries and potentially from third-party service providers using their vehicles or other solutions. Without intervention, this will: facilitate vertical monopolies in the entire after-sales market, including mobility solutions; lead to monopolistic pricing of the data and gatekeeper issues; and diminish opportunities and innovation along the entire supply chain.

We therefore call for access to in-vehicle data under fair, reasonable and non-discriminatory conditions. This ensures that all stakeholders in the emerging digital car ecosystem are considered by providing equal access to in-vehicle generated data and safeguarding the privacy and freedom of choice for consumers. Such access enables us to monitor and analyse the data generated by our own vehicles and follow through with important operational services, such as fleet maintenance or vehicle repair, as well as provide cost-efficient and market sensitive added value services for our customers.

In addition to that, we recommend that the Data Act implements a "B2B fairness test" to avoid unilaterally imposed unfair conditions for access to and use of data.

(2) Direct and real-time access to data supporting our innovative services must be available in all scenarios

The optimal solution for our required data points (highlighted in annex below) is **direct and real-time access while the vehicle is in use as well as stationary.** Additionally, we require access to historic data which is also critical, as not all of our business is conducted in real time (e.g. claims management following damage).

For all the use cases and data points highlighted, this information could be provided through an external vehicle server to guarantee interoperability and an even distribution of the cost across the mobility sector.

(3) One common "data language" and data access technology for all types of vehicles

Mobility providers will be faced with extra costs if required to adapt their solutions to the products and systems of each manufacturer or aftermarket provider. Currently, there are no common standards around in-vehicle data relating to measures, API's, reading frequency, methodology or accuracy. As a result, different cars speak a different "data language" and the cost of "translation" falls on the mobility providers.

This issue is likely to be exacerbated by the advancement of electric vehicles (EVs) and other alternatively powered vehicles such as fuel cell electric vehicles (FCEVs), as these vehicles rely on different technologies and have different data points compared to internal combustion engine vehicles (ICEs). **The data access technology (e.g. data access protocols and interfaces) should therefore be standardised so as to prevent additional obstacles to the uptake of alternative fuels vehicles.**

Day-to-day use cases in a rental car scenario

Car rental companies are innovating each and every day to improve both customer experience and enhance the performance and safety of shared vehicles. Access to in-vehicle data is therefore essential to our ability to carry out these activities in the future.

We illustrate below some of the data points we require access to and their use in a rental scenario. Please find a more comprehensive list of data points provided in the annex.

General use cases (in- and off-rental)

- **GPS position:** This data point allows rental companies to track stolen or missing vehicles. In case of full automation of the rental service, near real-time location data is also necessary to verify that the vehicle has been returned to the agreed location. This also allows us to identify the location of the vehicle when it is off-rental on the car rental lot to support automated inventories/car counts and to pin-point the location of the car on our customer rental app.
- **Telemetry:** All maintenance and vehicle health parameters including fluid levels (oil, ad blue, coolant, hydraulic), tyre pressure, warning messages, Diagnostic Trouble Codes (DTCs) and time/mileage to next vehicle service are required to support better fleet management and cost efficiencies to fleet operators.
- **Command and control capability:** This would include lock/unlock, mobilise/immobilise, honk horn, open boot, flashlights. For example, this would enable us to unlock a vehicle should a customer have lost access.

In-rental use cases

- **Services for drivers:** Car rental companies seek to offer and provide in-vehicle Wi-Fi, parking and refuelling services. This might also enable us to give the customer the possibility to easily erase personal data stored in the infotainment system such as phone logs, address books, etc.

Off-rental use cases

- **Fuel:** Car rental companies need to accurately measure the level of fuel or level of charge for EVs both at the start and end of a rental. Based on accurate readings (ideally +/- 0.5 litres) provided through data, customers can be billed more accurately for fuel used.
- **Mileage:** Accurate capture of fuel readings allows the rental start and end process to be digitised, opening up new business models to car rental companies. In terms of fleet management, there are benefits in being able to track mileage use through the rental to better manage that use on monthly or longer-term rentals.
- **Accident/damage information:** The ability to establish the events leading up to an accident are critical in being able to better manage claims. The data points required for this are GPS location, vehicle speed, acceleration and direction.

Ensuring safety and security without compromising on competition

Our customers' safety and security is paramount. Cybersecurity and strict compliance with data protection laws are an intrinsic part of this and our preconditions to ensure the user's trust in technology.

From the car rental perspective, there is a **difference between ensuring cybersecurity and preventing the creation and/or maintenance of vertical monopolies**. Cybersecurity concerns should not be used as means to justify withholding access to trustworthy third-party service providers: outgoing data bear no security or cybersecurity risk and can be easily shared, Nonetheless, car rental companies will adopt the cybersecurity standards developed and implemented in the market for all data transmitted to the vehicle.

In terms of access, this should include the following:

- Direct real-time access to time-critical in-vehicle generated data;
- Access to the bi-directional communication with the vehicle and its functions; and
- The ability to safely and securely interact with the driver (via the dashboard or voice commands) to fulfil our service offers.

The above can be achieved through different means depending on the technical solution. For car rental companies, the level of access is a crucial factor as it has implications from a competition point of view. For example, the above can be secured via access to a neutral third-party server **where equal access to the data is given to third-party service providers**. The level of access should be **the same level as the vehicle manufacturers' own services at the same level of the value chain** (i.e. mobility services provided by a subsidiary), since the server would be managed impartially and grant equal rights to all players in the market.

This neutral server would also need to comply with stringent data protection and cybersecurity requirements, ensuring that any user access authorization/certification process is secured. The data must be encrypted when the vehicle is either in motion or stationary. Command and control capabilities would be controlled by the vehicle's OEM-developed software so that access is secure and can only take place when the vehicle is stationary.

Regarding digital keys, we require the **ability to reset keys** at the vehicle level as well as the customers' device. This would allow us to close a rental securely even if we cannot reach the customers' device. Equally, this would give us the ability to prevent customers from re-entering the vehicle when they no longer have it on rent (this is an established solution and well-documented with e.g. Fordpass and Mercedes Me)

May 2022

CONTACT:

[REDACTED]
[REDACTED]@ [REDACTED] [REDACTED]
[REDACTED] [REDACTED] [REDACTED] [REDACTED]
[REDACTED] [REDACTED] [REDACTED] [REDACTED]

Annex – Data Use Cases for Car Rentals

- **Fuel used and damage detection – guarantees accuracy for consumer protection and billing**
 - Which data points would be required?
 - Geo location
 - Speed / distance
 - Fuel level and consumption
 - Damages

- **Accident logs – helps with claims management.**
 - Which data points would be required?
 - Event notifications
 - Geo location
 - Speed
 - Driver manoeuvres alerts - i.e. tailgating, aggressive driving, rapid acceleration, hard braking, speeding, unsafe phone use (if available).
 - Confirmed impacts and collusion data and videos if available
 - Time stamps on the above
 - Driving assistance system activation (e.g. ABS, lane keep assist, ...)

- **Security perspective – tracking stolen vehicles; or companies getting notified when vehicles are not used in compliance with rental conditions.**
 - Which data points would be required?
 - Geo location and geofencing events (suspicious areas entrance, border crossing)
 - Time stamps
 - In-vehicle generated safety alerts

- **Services for drivers, offered as required or on an opt-in basis. Required ones include insurance purposes, either for concluding the contract or to help offer lower premiums to responsible drivers. Opt-in services can for example be evaluations of driver performance, remote diagnostics and servicing.**
 - Which data points would be required?
 - Dynamic data including real-time status information
 - Option for bi-directional communication
 - Driving events and data: harsh acceleration, braking, cornering, engine RPM, ...

- **Fleet management (e.g. tracking condition and upcoming maintenance – in general a rental company cannot anticipate how much a vehicle will be driven in any one week, or over one year).**
 - Which data points would be required?
 - Event notifications
 - Policy violations

- Trip history (Start / end timestamps, location points, events ...)
 - Maintenance information (dashboard alerts, next maintenance mileage/date, ...)

- **Fleet control: Improved operational management of the fleet in station (e.g. locate available vehicles, transfer monitoring, etc.) and fleet utilization (balanced mileage consumption, buyback limits control, track idle vehicles, etc.).**
 - Which data points would be required?
 - Geolocation and geofencing alerts
 - Time stamps
 - Vehicle conditions (maintenance alerts and data)

- **Managing a fleet of increasing numbers of electric vehicles (EVs) – standardisation on access and availability of the data needs to be achieved as new technologies/manufactures do not follow same parameters.**
 - Which data points would be required?
 - Status of battery charge
 - Battery health
 - Miles per kilowatt hour and range achieved in a single journey (to measure efficiency)
 - Recharging information (amount of recharge; operator & billing information in some cases, depending on the billing system used)
 - Geolocation and by-directional communication (to ensure real time information can be given around availability and status of the closest charging stations)

- **Added opt-in services for customers such as alerts to nearby points of interest.**
 - Which data points would be required (open list)?
 - Near real time geolocation and geofencing events

- **Compliance requirements for the development of new services (i.e. Highly Automated Road Passenger Services).**
 - Which data points would be required (open list)?
 - Reporting accident
 - Vehicle supervision
 - Remote control of vehicle – installation of software critical updates
 - Untoward event reporting for collecting service/system statistics