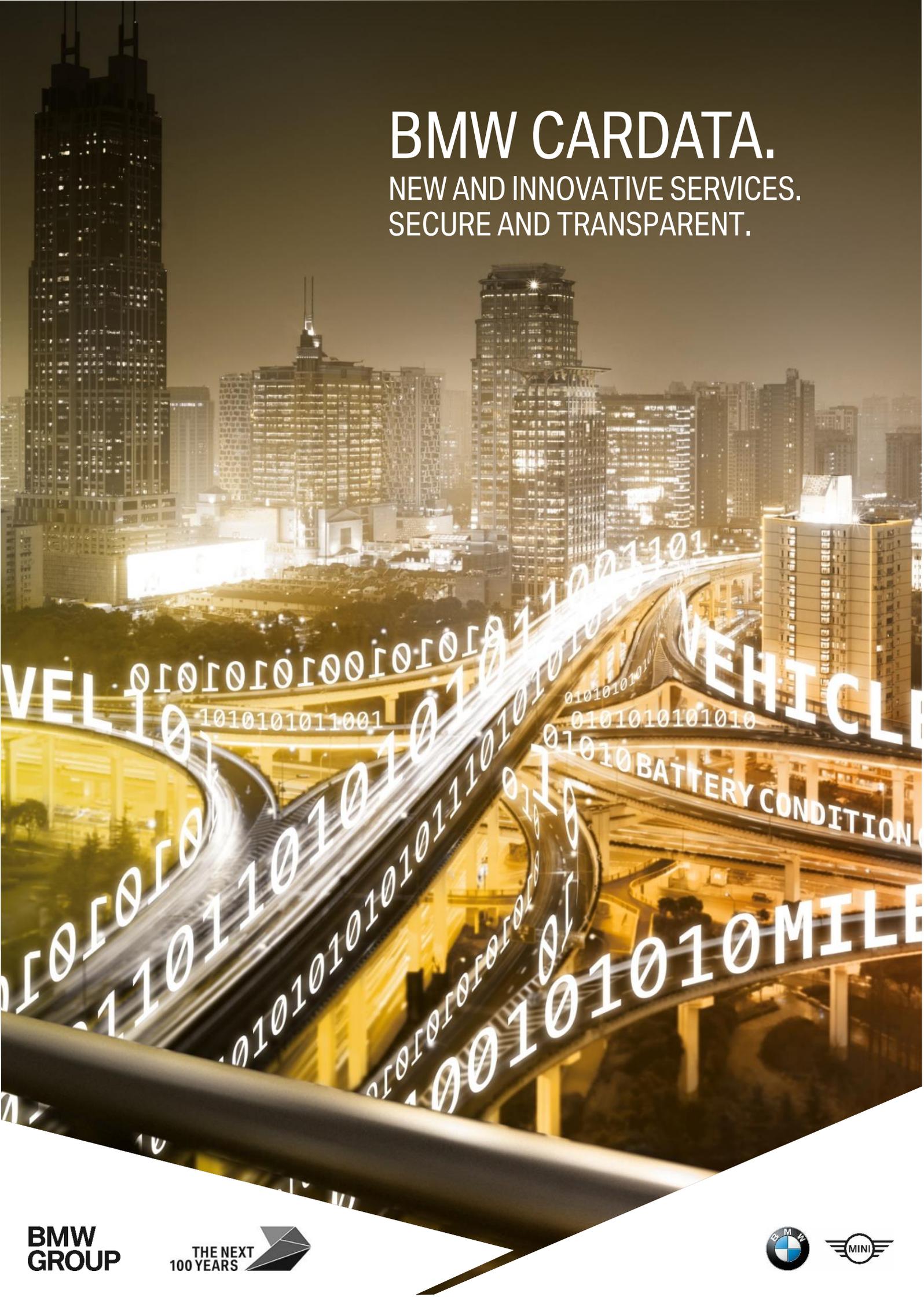


BMW CARDATA.

NEW AND INNOVATIVE SERVICES.
SECURE AND TRANSPARENT.



**BMW
GROUP**

THE NEXT
100 YEARS 



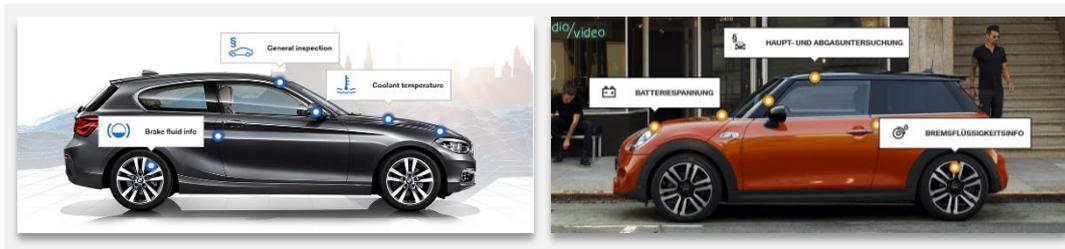
WHAT IS BMW CARDATA?	4
How does BMW CarData work?	4
What opportunities does BMW CarData offer?	4
WHICH DATA IS MADE ACCESSIBLE VIA BMW CARDATA?	5
WHICH DATA IS MADE ACCESSIBLE VIA BMW CARDATA?	6
WHAT BENEFITS DOES BMW CARDATA OFFER?	7
IS AN ODB DONGLE NEEDED TO USE BMW CARDATA?	8
WHAT APPLICATIONS DOES BMW CARDATA SUPPORT?	9
HOW CAN I ACCESS TELEMATICS DATA?	10
Container Management.	10
Request Data Access Clearances.	10
Notification of the Service Provider.	10
WHICH VEHICLES ARE COMPATIBLE?	11
HOW CAN I CHECK A VEHICLE FOR SUITABILITY FOR MY USE CASE?	12
BMW CarData Capability Service.	12
Check for basic CarData ability.	12
Checking the availability of telematics data for a container.	12
HOW DOES THE CUSTOMER EXPERIENCE CARDATA?	13
Notification of the customer.	13
Interfacing via the Customer Portal.	13
HOW MUCH DOES THE USAGE OF BMW CARDATA COST?	14
Prices.	14
Overview of my transactions.	14
Costs for BMW and MINI customers.	14
DO YOU WANT TO USE BMW CARDATA?	15
In a nutshell: BMW CarData.	15
Where can I access BMW CarData?	15
Is BMW CarData available for my business?	15
Any further questions?	15

WHAT IS BMW CARDATA?

With BMW CarData, the BMW Group is continuing to expand its future-orientated premium services, and enabling service partners to provide new, innovative and individually tailored services to BMW and MINI customers based on telematics data from their vehicle.

How does BMW CarData work?

The vehicle generates data. For example, these may be status data such as mileage, usage-based data such as average fuel consumption, or event data such as an automatic service call. Some of this data is encrypted in the form of “telematics data” and is transferred exclusively to secure BMW servers via the permanently installed SIM card.



Service providers such as repair shops, insurance companies or fleet managers can register for BMW CarData free of charge. If a BMW or MINI customer would like to use a certain service and has actively consented to the sharing of his telematics data, the requesting company will receive the data required for the service in question in an encrypted format via BMW's secure backend.

What opportunities does BMW CarData offer?

This information enables individually tailored, data-based and innovative service offers. From infotainment to smart home functionalities, there is a wide range of added value services available to customers. Data security and road safety are always given the highest priority. Direct access to the vehicle is not necessary, so reducing the risk of unauthorized access.

To be able to benefit from BMW CarData, vehicles must have an integrated SIM card. Currently several million of BMW and MINI vehicles meet this specification. The BMW Group is one of the first automotive groups to introduce this service.

WHICH DATA IS MADE ACCESSIBLE VIA BMW CARDATA?

Numerous electronic components in a vehicle contain memories that temporarily store information about the vehicle status and potential fault events.

To provide BMW ConnectedDrive and MINI Connected services, some of the telematics data stored in the vehicle are forwarded to the BMW server via the permanently installed SIM card. BMW CarData bundles these telematics data and provides them to customers (in the form of an CarData data archive) and service providers (in the form of an interface).

The customer's explicit permission is always required for service providers to access their telematics data.



BMW CarData provides data in different categories:

- **Vehicle-based data:**
This category, for example, includes the available mileage or a concrete service requirement.
- **Usage-based data:**
These keys contain information, for example about the daily mileage of a specific vehicle or about its average fuel consumption.
- **Event data:**
You will also receive automatic push messages, e.g. for events such as a "Teleservice Battery Guard" event, as required.
- **Basic data:**
This category offers you basic information about a vehicle, for example an image of the vehicle or vehicles colour.

Further details about the BMW CarData service can be found after registration and activation on the AOS portal at <https://aos.bmwgroup.com/apps/>. AOS stands for the official Aftersales Online System of the BMW Group.

WHICH DATA IS MADE ACCESSIBLE VIA BMW CARDATA?

Available telematics data as of August 2019.

Navigation – location based

- Number of free POI spaces in navigation system
- Orientation of the vehicle
- Motion status of the vehicle
- Distance to navigation destination
- Maximum number of POIs stored in the navigation system
- Navigation destination
- Vehicle position – degrees of latitude
- Vehicle position – degrees of longitude
- Time to the navigation destination

Service

- Automatic Teleservice Call (ASC)¹
- Teleservice Battery Guard
- Number of CBS reports
- Battery Voltage
- Condition Based Service
- Date of next inspection
- Date of next service
- The date when the brake fluid needs to be replaced
- Distance to the next service
- Distance threshold for service information
- Main and exhaust gas investigation
- Check Control messages
- Coolant temperature
- Low-voltage battery
- Remote service result
- Remote service type
- Time threshold for service information
- Time of most recent drive

Consumption data

- Mileage
- Tank content range
- Remaining range
- Mileage data statistics
- Tank content
- Activation period for ECO mode during most recent drive
- Activation period for ECO Plus mode during most recent drive
- Average distance per week
- Average distance per week (long-life)
- Driving style evaluation – “acceleration behaviour”
- Driving style evaluation – “pro active driving”
- Mileage after last drive
- Fuel consumption during most recent drive

Electric vehicle

- AC charging voltage
- AC charging current
- Selection of the most beneficial charging window
- Charging profile
- Charging profile (remote)
- Charging status
- Charging status of high-voltage battery
- Status of charging plug
- Electrically driven distance during the most recent drive
- Charging status of battery
- Electrical energy consumption during last drive
- Electrical energy consumption in COMFORT mode during the most recent drive
- Energy recuperated during the last drive

Statically vehicle status

- Tilting status of sunroof
- Position of sunroof
- Status of the hood
- Status of rear left door
- Status of rear right door
- Status of front left door
- Status of front right door
- Status of doors
- Status of convertible roof
- Status of rear left window
- Status of rear right window
- Status of front left window
- Status of front right window
- Status of boot lid
- Status of sunroof
- Status of lights
- Door status
- State of ignition

Environmental/regional data/settings

- Display unit of instrument panel in vehicle
- Environmental temperature
- Date and time in vehicle
- Mobile phone connection
- Availability of teleservices

1) Without diagnostic trouble codes (DTC). ASC covers, for example, maintenance events such as condition-based maintenance, date of next inspection or distance to next service.

WHAT BENEFITS DOES BMW CARDATA OFFER?



BMW CarData offers the option to use the telematics data of connected BMW and MINI vehicles to develop new and innovative services and business models. From fleet services to smart home functionalities, there is a wide range of added value services available to 3rd parties and customers.

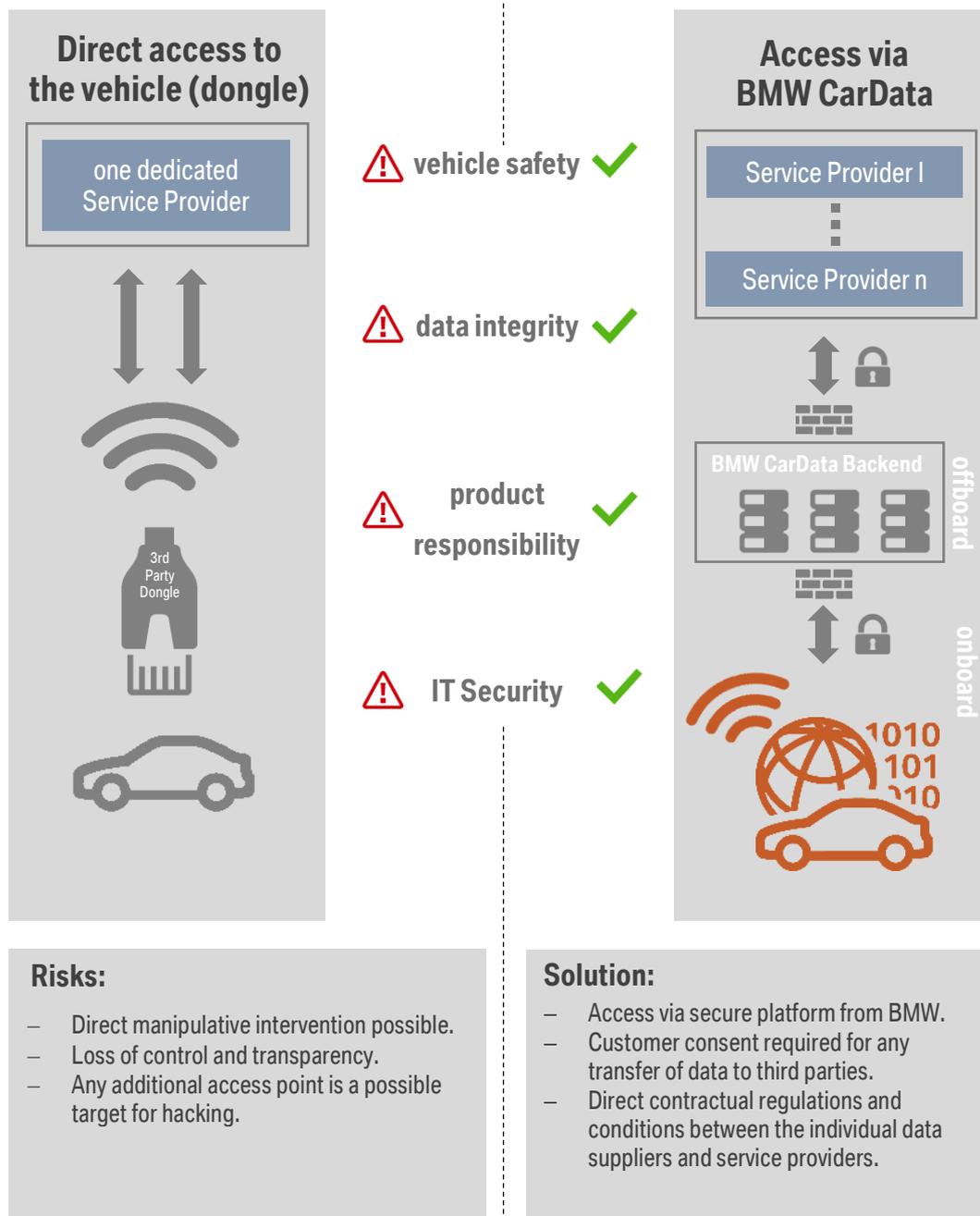
Data security and road safety are always given the highest priority. Direct access to the vehicle is not necessary, so reducing the risk of unauthorized access. The main benefits of using BMW CarData are outlined as follows:

-  Access to **telematics data** from BMW and MINI vehicles **for personal services**, with the permission of the customer.
-  **Scalable** and **cost-effective**² access to telematics data from BMW and MINI vehicles.
-  Access to telematics data **without** the need to install a hardware **OBd dongle** in the vehicle.
-  Standardised **web interface** for simple, automated access to telematics data. Easy integration into your personal software solution.
-  Automatic **notification of events**, such as an automatically triggered service call in the vehicle or updated position data.

²You will receive the telematics data required for your service under fair conditions: You only pay for the provision of the telematics data that you have actually requested and received within the same time frame as any other user of these data. For further information, see page 14.

IS AN ODB DONGLE NEEDED TO USE BMW CARDATA?

To protect vehicle safety, only the car manufacturer must be authorized to remotely retrieve the data generated in the vehicle or to carry out updates via remote access.



This procedure protects the vehicle from attacks on the vehicle systems while ensuring non-discriminatory access to the telematics data generated in the vehicle.

WHAT APPLICATIONS DOES BMW CARDATA SUPPORT?

Telematics data provided via BMW CarData can be used to streamline existing processes or to make them more customer-friendly. Here are three potential use cases:

Usage-based insurance:

Insurance companies, for example, can offer their customers pay-as-you-drive contracts, priced according to the customer's actual mileage.



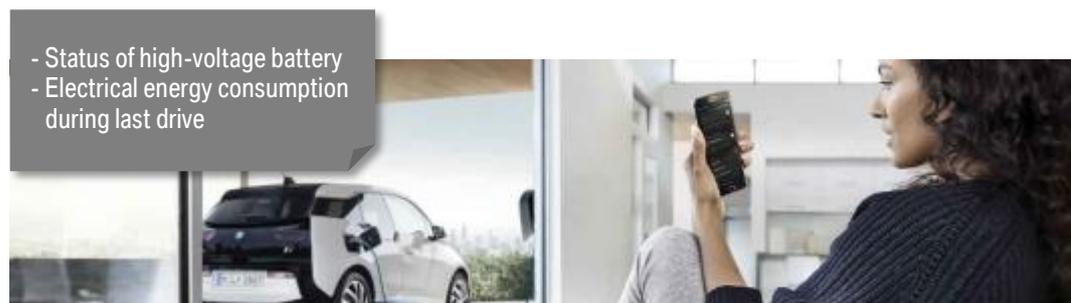
Fleet management:

BMW and MINI vehicles with active ConnectedDrive services collect data, such as mileage, the next inspection and service date, condition based service messages, check control messages, position of the vehicle or occurring events like an automatic ServiceCall just to name a few. Based on these telematics data BMW CarData can support you to implement and improve your fleet use cases.



Smart Home:

BMW CarData provides scope for innovative smart home applications. This allows third-party service providers to use telematics data from BMW and MINI vehicles, such as the charging status of the high-voltage battery, to optimise charging control in the customer's home garage, for example – and so provide more convenience.



HOW CAN I ACCESS TELEMATICS DATA?

Container Management.

Once you have registered for BMW CarData and successfully completed the set-up, you can manage your containers in the BMW CarData application. A container corresponds to a use case for which you need telematics data and can contain one or more telematics data keys.

Name	Description	Price	Selection
Vehicle altitude	This value indicates the height of the vehicle above sea-level at the time of data collection. The values range from -100 to 8091.	0.29	<input type="checkbox"/>
AC charging current	This value indicates the maximum charging current for the most recent charging process in amperes (A) (only when charging with alternating current). Values between 0 and 254 are possible.	0.29	<input type="checkbox"/>

Request Data Access Clearances.

To access telematics data for a container or a vehicle, the permission of the respective customer is needed. As a service provider, you can request a data access clearance via the BMW CarData API, which is then sent to the customers by BMW. This requires the customer and their vehicle to be successfully registered on the BMW ConnectedDrive or MINI Connected portal. Further details can be found on page 13.



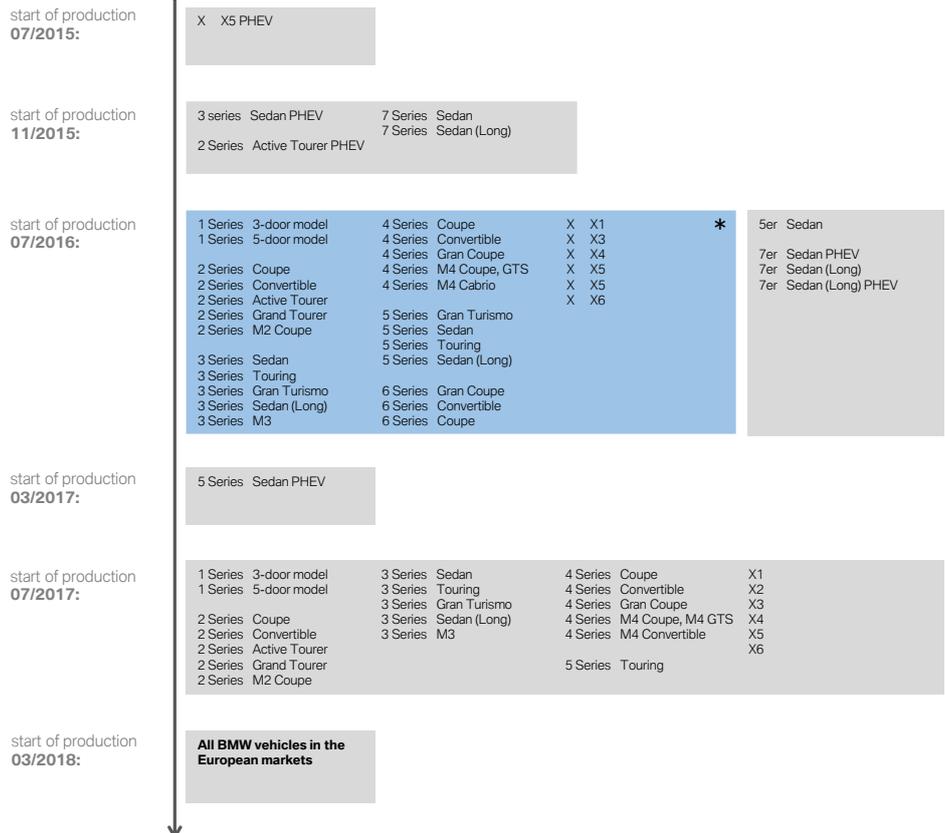
Notification of the Service Provider.

Once the customer has approved your request, you will be notified via the BMW CarData PUSH service. You can now access the telematics data for the container and the vehicle via the BMW CarData API.

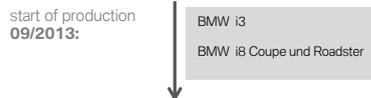
WHICH VEHICLES ARE COMPATIBLE?

Every connected BMW and MINI is! If you would like to receive data at high update rates, we recommend that you offer your services for the following vehicles. They are technically able to send frequent data updates to the BMW Group backend.

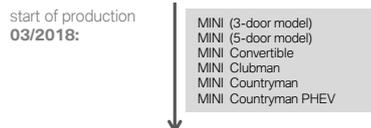
BMW:



BMW i:



MINI:



*) basically compatible with the exception of individual derivatives (depending on configuration). Please use the Capability Service to test a vehicle.

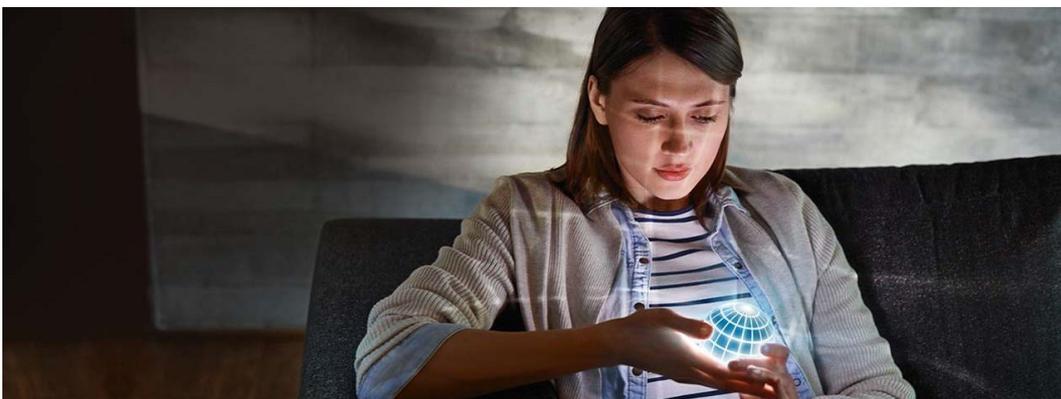
Data transmissions to the BMW backend take place regularly as part of the LSC (Last State Call).

For all other vehicles, a limited amount of telematics data is transmitted while the customer interacts with BMW ConnectedDrive or MINI Connected services, at irregular frequencies. To check a vehicle for compatibility with your use case, please use the Capability Service. We recommend making use of the Capability Service prior asking for customer consent. Details on the Capability Service can be found in the Integration Guide.

HOW CAN I CHECK A VEHICLE FOR SUITABILITY FOR MY USE CASE?

BMW CarData Capability Service.

To check what data is available for a particular vehicle and at what frequency it is typically updated, you can use the Capability Service. Please note that the service always returns the capabilities of the vehicle at the time of the request. The vehicle functions may change at a later date, e.g. if the customer purchases additional ConnectedDrive services or active services expire and are not extended by the customer.



Check for basic CarData ability.

The Capability Service provides you with the following information:

- 1) Is a vehicle capable of telematics?
- 2) Does the vehicle have an activated SIM card?
- 3) Is the vehicle assigned to a BMW ConnectedDrive or MINI Connected Account?
- 4) Is the country in which the vehicle is registered available from BMW CarData?
- 5) Is the vehicle brand supported by BMW CarData?

If these tests apply to the vehicle, it can be used with CarData.

Checking the availability of telematics data for a container.

Furthermore, the Capability Service can provide detailed information on the availability of the individual telematics data of a vehicle. This enables you to check whether a vehicle transmits all the necessary data for your use case. The Capability Service provides the following information for a vehicle identification number and your container:

- 1) Is the telematics data key available?
- 2) How often can the telematics data key be requested via the BMW CarData API?
- 3) How often is the telematics data key typically updated?
- 4) What kind of answer can be expected (last status or historical data)?

HOW DOES THE CUSTOMER EXPERIENCE CARDATA?

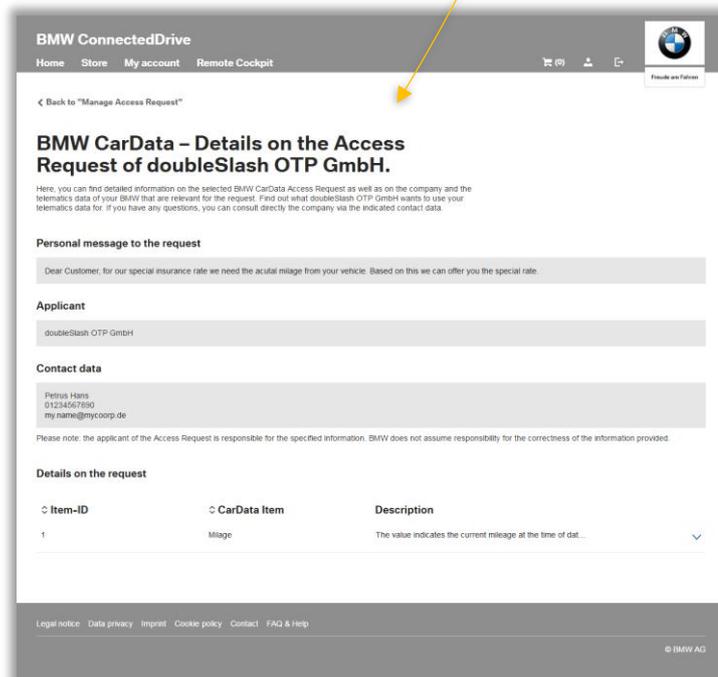
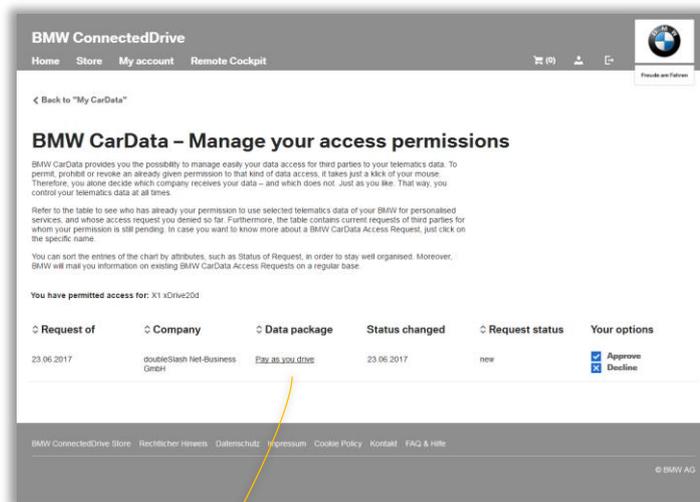
Notification of the customer.

After you have submitted a request for data access clearance via the BMW CarData API as a service provider, the BMW or MINI customer will be informed of this new request and asked to decide on your request.

Interfacing via the Customer Portal.

In the BMW ConnectedDrive or MINI Connected customer portal, the customer selects the section CarData under “My account”. Your data access clearance request is shown in the “Manage data permissions” section.

The customer can view details about your data access clearance, and either accept or reject the request.



BMW will show the customer the purpose for which the data you have requested is to be used, you as the company with your address and contact details, as well as any data you have requested in the container with a brief explanation.

HOW MUCH DOES THE USAGE OF BMW CARDATA COST?

Prices.

BMW CarData is a chargeable service. You pay for the provision of the telematics data you have requested and received, but only up to a maximum monthly amount per vehicle and container. If you request data for a large number of vehicles, you will receive a major customer discount. No additional usage fees or other costs apply. Current prices can be found on the [pricing sheet](#) in the BMW CarData app.

Invoicing is performed on a monthly basis, retroactive for the past calendar month.

Overview of my transactions.

BMW CarData provides you with monthly reports so that you can keep an overview of your data transfers and track the costs associated with them.

Such a report contains a detailed summary of all data transfers and requests concerning customer releases during the previous month. You can subscribe to the BMW CarData report in the Reporting area of the BMW CarData application on the AOS portal.

Costs for BMW and MINI customers.

BMW and MINI customers can use CarData to request a telematics data archive for their vehicle or to manage data access clearance requests from service providers.

The use of BMW and MINI CarData is free of charge for customers.



DO YOU WANT TO USE BMW CARDATA?

In a nutshell: BMW CarData.

To find out exactly what is behind BMW CarData and how you can use this service for your use cases, please watch the following [video](#).



Link to video: <https://www.youtube.com/watch?v=ucS0uZ8-LMw>

Where can I access BMW CarData?

Further information about BMW CarData is available at: <https://aos.bmwgroup.com/apps>

There, select the application BMW CarData.

You would like to use CarData? Please register free of charge in the AOS Portal of the BMW Group.

Please use the following form: <https://aos.bmwgroup.com/web/oss/registration>

When asked to provide your general company data, select the option "Access to BMW CarData".

Is BMW CarData available for my business?

BMW CarData is available for companies located within the European Economic Area. Registration is free for service providers.

The use of this service by private individuals is not permitted.



Any further questions?

After registering, you can find answers to frequently asked questions in the FAQs on the BMW CarData app.

Read the FAQs and still have questions? Feel free to contact our BMW CarData support at:

BMWCarData-B2BSupport@bmwgroup.com

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