

Media Information
1st of July 2020

BMW Connected Car Beta Days 2020: July will bring a comprehensive software upgrade with numerous new services.

New services such as the cloud-based navigation BMW Maps, Digital Key for iPhone and an update for the BMW Intelligent Personal Assistant.

Oliver Zipse, Chairman of the Board of Management of BMW AG:

“Digital technologies belong to the core of BMW – because hardware and software are of equal importance for premium cars. Our mission is to integrate advanced digital technologies with highest product excellence to enhance our customers’ experience and driving pleasure even more.”

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1. Overview.

In July 2020, BMW will release its most comprehensive vehicle software upgrade to date, with new and improved features for vehicle connectivity and navigation. These features will be included straight from the factory with every BMW vehicle that has Operating System 7, such as the new BMW 5 Series. And for compatible BMW vehicles built before July, already in customers’ hands, these great new updates can be added with a free over-the-air software upgrade, which will be available from third quarter onwards.

- **BMW Maps** offers a completely new navigation experience: Faster, more intuitive, and more accurate. Destinations can be entered more easily. New cloud-based route calculation brings a significant improvement in performance. BMW Maps also provides contextual information for points of interest, such as ratings, business hours and images. **Connected Parking** also supports the search for parking spaces with additional services.

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- As a new and globally unique digital service, BMW **eDrive Zone** plug-in hybrids automatically allow emission-free local driving.
- **Connected Charging** is making mobility more sustainable and innovative. BMW is supplementing it with Charging Management and other functions.
- The **BMW Digital Key**, which has just been announced at the Apple Worldwide Developers Conference, turns an iPhone into a fully digital – and secure - vehicle key.
- With the upgrade, BMW vehicles receive wireless support of **Google's Android Auto™**.
- The **BMW Intelligent Personal Assistant** is getting a new design and has been enhanced with numerous intelligent functions. For example, the virtual character now turns towards the person talking and can distinguish between addressing the driver and the passenger.
- Since 2018, the **Remote Software Upgrade** has enabled BMW drivers to keep their vehicle up to date with the latest software, just like with a smartphone. The new functions can be downloaded and installed over-the-air. This is particularly convenient and extremely fast: even for extensive upgrades, hardly more than 20 minutes of pure installation time is required.
- With Remote Software Upgrade, BMW also offers its customers maximum flexibility and security when booking optional extras at a later date – regardless of whether the vehicle is new or used.

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2. Digital personalization with functions on demand.**Flexible offers, available immediately, simple to book and easy to use.**

BMW sees the car as a digital platform. More than two decades ago, BMW ConnectedDrive paved the way to more individual mobility. Since then, the company has been enabling its customers to benefit from the rapid technological development at any time with the continuously added digital services. With Remote Software Upgrade, BMW has created the technical basis for keeping vehicles up to date, adding or booking additional vehicle functions, and installing them quickly and easily over the air.

BMW already offers its customers digital services and additional vehicle functions in the form of digital after-sales, some of which are deeply embedded in the vehicle's software. Currently available examples of these services are the High Beam Assistant, Active Cruise Control (ACC) driver assistance system with Stop & Go function, BMW Driver Recorder, BMW IconicSounds Sport, and Adaptive M Suspension (the offer may vary in individual markets). In the near future, additional functions will be added that can access the vehicle's existing hardware and software, such as certain comfort functions or driver assistance systems.

In addition, BMW will offer an even greater degree of flexibility in terms of booking periods in the future. Customers will benefit in advance from the opportunity to try out the products for a trial period of one month, after which they can book the respective service for one or three years.

With the option of subsequently booking additional vehicle functions via the ConnectedDrive Store, BMW is strengthening selection and personalisation for customers, offering them maximum flexibility. BMW provides the hardware and software in the vehicle ex factory for the implementation so that it can be adapted later on as required and in accordance with customer preferences. If, for example, vehicle functions were not yet requested at the time

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of purchase, they can be added later. A second owner thus can configure the used vehicle according to their own wishes.

In addition, BMW is also digitalizing the customer communication in the future. In-car communication is becoming increasingly important as a channel. BMW will be able to offer its customers tailor-made services directly in the vehicle depending on the situation – if the driver so desires.

The introduction of the BMW iNext will further expand the opportunities for personalization.

3. BMW Maps.**The new cloud-based navigation promises relaxed driving and safe arrival.**

Arrive faster, safer and more relaxed: the next generation of the online routing service offers a completely new type of route guidance and usability. The cloud-based system enables a significant improvement in performance, makes navigation more agile, and impresses customers with its intuitive destination entry and high level of accuracy. BMW Maps calculates routes faster and more dynamically than before by combining real-time information with prediction models.

Free text input in the search bar ensures a contemporary user experience. As an intuitive input line, it allows free search for destinations, just like on smartphones and search engines. Of course, BMW Maps can also be controlled easily and conveniently by voice using the BMW Intelligent Personal Assistant.

BMW Maps lists the search results based on the vehicle's position and provides contextual information on the destination such as images, opening hours and ratings, as well as an indication of the parking situation at the destination.

The cloud-based navigation enables a continuous update of the expected arrival time. Using real-time traffic information (RTTI) as well as historical and extrapolated data, BMW Maps keeps the driver informed at all times, optimally adjusts routes and keeps an eye on potential

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danger spots. Thanks to the very comprehensive data volume on traffic, even on smaller streets, BMW Maps avoids unnecessary detours through residential areas.

These services are also made possible by the consolidated information from over 14 million BMW vehicles. The connected cars transmit anonymised data on current traffic conditions on-site and allow other BMW vehicles to benefit from it, for example on traffic flow or danger spots. For navigation, BMW Maps always uses the latest map material, which is regularly updated over-the-air.

BMW eDrive Zones as a contribution to sustainable mobility.

With the eDrive Zones, BMW is further expanding its e-mobility services and supporting BMW customers with a plug-in hybrid to be even more environmentally conscious on the road. Using geofencing, the vehicle automatically switches to pure electric driving mode when entering low emission zones. In future, BMW drivers will receive BMW Points for emission-free journeys as part of a loyalty programme, which can be exchanged for useful rewards. For purely electric driving in eDrive zones, the number of points is doubled. Currently, the eDrive Zones function is available in more than 80 European cities.

More support around parking with Connected Parking services.

Connected Parking supports the search for a parking space at the arrival point with various service. On-Street Parking Information not only shows the driver parking spaces, but also calculates the probability that a parking space is free based on the available data. The service now also takes the size of the vehicle into account when comparing it with the parking space situation on site. Connected Parking also provides general information on the parking situation at the destination.

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4. Connected Charging.**Comprehensive charging services for plug-in hybrids and electric vehicles.**

Electrified vehicles benefit from the extended possibilities of the innovative Connected Charging services. The charge management as an essential component allows customers to view details of past charging processes in the app, define specific time windows in which the car should be charged – especially helpful in the context of fluctuating electricity prices during the course of the day – and can send push notifications directly to the customer's smartphone when charging events occur.

The services in the area of public charging have been expanded to include additional detailed information on the individual charging stations, such as opening hours, providers, or authentication options. Additionally, it displays their availability at first sight. Furthermore, points of interest such as cafés or restaurants near the charging station are listed to make the best use of charging time. The driver has optimum transparency regarding range and charging status at all times, both in the vehicle and via app. For fully electrified vehicles, a range indication in the form of a blue circle on the map overview is added.

If the BMW recognizes that the driver needs a break, it automatically suggests a suitable stopover, including available charging options. The optimized route planner for electrified vehicles proactively and automatically adds charging stations according to the route and schedule and takes rapid charging stations into account.

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5. BMW Digital Key for iPhone.

BMW is the first car manufacturer to enable its customers to use their iPhone as a fully digital car key. The digital key from BMW is stored on a chip in the iPhone as a so-called secure element and communicates with the vehicle using NFC technology. It was developed according to the standards of the Car Connectivity Consortium (CCC), to which both Apple and BMW belong.

Not only does the digital key make it possible to open and close the car without a physical key, the car can also be started via iPhone. The customer furthermore has the option of sharing the key with up to five users quickly and easily via smartphone. This technology can even regulate the vehicle's use: for example, if the key is shared with an inexperienced or young driver, the owner of the master key can set limits for speed, power (HP) and radio volume. The digital key can also manage several vehicles simultaneously. The NFC hardware required for the digital key is available for vehicles produced from July 2020.

6. Android Auto.

The BMW Group is extending the reach of seamless connectivity in its vehicles with the introduction of Android Auto™. Android Auto is a safe and easy way to use Android smartphone functions during a journey - whether that's music, messaging, or navigation. You can use the Google Assistant to interact with your smartphone with your voice, and see the results on your BMW's widescreen display.

The highlights of the Android Auto at BMW are the seamless and wireless integration and the intelligent adoption of turn-by-turn guidance from Google Maps™ in the instrument cluster's Info Display as well as in the Head-Up Display.

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7. BMW Intelligent Personal Assistant.**A personal assistant with character in the cockpit.**

The interaction between driver and vehicle will grow increasingly important in the future. Around 70 percent of BMW customers use voice commands. In the future, arguably even more BMW drivers will operate their vehicle by voice. In addition to a new design, the Intelligent Personal Assistant also has numerous new functions with the 07/20 update.

With its revised appearance, BMW is emphasizing the assistant's agile and emotional character. The virtual assistant leans towards the respective conversation partner and can thus differentiate even more clearly between the way it addresses the driver and the passenger.

Thanks to the BMW Intelligent Personal Assistant, a BMW expert is always on board. The driver can ask BMW related questions and receive a wealth of vehicle information. For example, the customer can ask for tips on how to drive more efficiently. Additional functions in the car can also be controlled by voice command using the Personal Assistant – for example, to open or close the windows. In addition, the various driving modes can be activated by voice. With the help of vehicle data such as the GPS signal, the assistant can also automate the driver's routines and adapt accordingly, for example, by automatically opening the window when entering a parking garage.

With the new update, the BMW Intelligent Personal Assistant provides more proactive assistance with possible voice commands to improve natural interaction. The suggestions are also displayed in the newly-designed widget. These suggestions are not selected randomly but based on the respective driving situation.

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8. Data Strategy.**Complete control and maximum benefit for the customer.**

All latest BMW models are networked with their environment through numerous digital services. Many of the new services and functions that have been introduced with this latest upgrade would not be possible without adequate data. BMW Group's strategy in dealing with data is essentially aimed at improving the comfort, safety and efficiency of products and services without compromising on security and privacy. BMW therefore only collects and uses data for specific purposes. Customers can use the data protection menu to choose which digital services they wish to use and transmit relevant data from the vehicle for this purpose. With BMW and MINI CarData, customers have transparency and control over their personal data and can decide for themselves whether and with which service providers they want to share data.

The BMW Group has already put more than 14 million networked vehicles on the road. These vehicles are connected to the BMW ConnectedDrive backend and can send and receive live data. BMW vehicles can use cameras, ultrasound, radar, chassis sensors and numerous other measuring systems to perceive and process more and more information from their surroundings and react to it intelligently. These cars are constantly measuring road network, analyzing, and processing traffic information. For example, if one vehicle detects a hazard, it is automatically communicated to other road users.

In total, the BMW fleet drives 98.5 percent of the entire German motorway network in 24 hours. Every day, it collects information on 25 million traffic sign sightings worldwide and transmits more than 700 million GPS points on the traffic situation. BMW processes the fleet data exclusively in anonymized form, evaluates it using machine learning, and develops new algorithms and services based on this data, from which the entire fleet benefits.

BMW always applies the principles of Security by Design and Privacy by Design. Security and data protection are considered and taken into account at every step of the development process. As a result of these measures, BMW vehicles are not directly connected to the

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Internet. They communicate via a secure connection in a virtual private network exclusively with the BMW ConnectedDrive backend. This prevents unauthorized third parties from gaining direct access to vehicle systems.

In a current generation BMW (BMW Operating System 7), the customer can individually manage more than 30 different data services and adjust the settings, depending on the equipment. Customers configure and decide which services and which data are used or sent. In addition, BMW drivers have the option of switching off all services including the corresponding data transmission. It is not possible to deactivate services that are essential for the safety and health of the occupants, such as the legally-required eCall.

CONNECTED CAR BETA DAYS, JULY 1st 2020 - VR-EXPERIENCE:

- **Chapter 1:** [Digital Personalization](#)
- **Chapter 2:** [Driving Experience](#)
- **Chapter 3:** [Data Strategy](#)

CO2 EMISSIONS & CONSUMPTION.

BMW 530e Sedan (BMW 530e xDrive Sedan):

Fuel consumption, combined: 1.8 – 1.7 l/100 km (2.1 – 2.0 l/100 km),

electric power consumption, combined: 14.8 – 13.7 kWh/100 km

(16.4 – 15.9 kWh/100 km), CO2 emissions from fuel, combined: 42 – 39 g/km
(49 – 46 g/km).

PLEASE NOTE:

The availability of equipment and functions depends on engine variants or additional optional equipment. Market and production availability may vary. For detailed information on running times, standard and optional equipment, please contact your BMW dealer or contact us online.

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With its four brands BMW, MINI, Rolls-Royce and BMW Motorrad, the BMW Group is the world's leading premium manufacturer of automobiles and motorcycles and also provides premium financial and mobility services. The BMW Group production network comprises 31 production and assembly facilities in 15 countries; the company has a global sales network in more than 140 countries.

In 2019, the BMW Group sold over 2.5 million passenger vehicles and more than 175,000 motorcycles worldwide. The profit before tax in the financial year 2019 was € 7.118 billion on revenues amounting to € 104.210 billion. As of 31 December 2019, the BMW Group had a workforce of 126,016 employees.

The success of the BMW Group has always been based on long-term thinking and responsible action. The company has therefore established ecological and social sustainability throughout the value chain, comprehensive product responsibility and a clear commitment to conserving resources as an integral part of its strategy.

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