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# The new BMW 7 Series. Model variants at launch.



## **BMW i7 xDrive60:**

Fifth-generation BMW eDrive technology, one electric motor at the front axle and one at the rear, electric BMW xDrive all-wheel drive.

Output: 400 kW/544 hp at 5,000 – 12,000 rpm.

Max. system torque: 745 Nm (549 lb-ft) at 0 – 5,000 rpm.

Acceleration [0 – 100 km/h (62 mph)]: 4.7 seconds.

Top speed: 240 km/h (149 mph).

Electric power consumption, combined in WLTP cycle: 19.6 – 18.4 kWh/100 km.

Electric power consumption, combined in NEDC: – .

Range: 590 – 625 km (367 – 388 miles) in WLTP cycle.

## **BMW 735i (not available in Europe):**

Six-cylinder in-line petrol engine, 48V mild hybrid technology, eight-speed Steptronic transmission.

### **Drive system overall:**

Output: 210 kW/286 hp, torque: 425 Nm (313 lb-ft)\*.

### **BMW TwinPower Turbo engine:**

Capacity: 2,998 cc,

Nominal power: 200 kW/272 hp at 5,000 – 6,500 rpm,

Nominal torque: 400 Nm (295 lb-ft) at 1,750 – 4,500 rpm,

### **Electric motor:**

Nominal power: 13 kW/18 hp.

Nominal torque: 200 Nm (147 lb-ft).

### **Performance / Consumption / Emissions:**

Acceleration [0 – 100 km/h (62 mph)]: 6.7 seconds.

Top speed: 250 km/h (155 mph).

Fuel consumption, combined in WLTP cycle: 7.9 l/100 km (35.8 mpg imp).

Fuel consumption, combined in NEDC: – .

CO<sub>2</sub> emissions combined in WLTP cycle: 182 g/km.

CO<sub>2</sub> emissions combined in NEDC: – .

Exhaust standard: Euro 6d.

## **BMW 740i (not available in Europe):**

Six-cylinder in-line petrol engine, 48V mild hybrid technology, eight-speed Steptronic transmission.

**Drive system overall:**

Output: 280 kW/380 hp, torque: 540 Nm (398 lb-ft)\*.

**BMW TwinPower Turbo engine:**

Capacity: 2,998 cc,

Nominal power: 280 kW/380 hp at 5,200 – 6,250 rpm.

Nominal torque: 520 Nm (383 lb-ft) at 1,850 – 5,000 rpm.

**Electric motor:**

Nominal power: 13 kW/18 hp.

Nominal torque: 200 Nm (147 lb-ft).

**Performance / Consumption / Emissions:**

Acceleration [0 – 100 km/h (62 mph)]: 5.4 seconds.

Top speed: 250 km/h (155 mph).

Fuel consumption, combined in WLTP cycle: 8.0 – 7.0 l/100 km (35.3 – 40.4 mpg imp).

Fuel consumption, combined in NEDC: – .

CO<sub>2</sub> emissions combined in WLTP cycle: 183 – 159 g/km.

CO<sub>2</sub> emissions combined in NEDC: – .

Exhaust standard: Euro 6d.

**BMW 760i xDrive (not available in Europe):**

V8 petrol engine, 48V mild hybrid technology, eight-speed Steptronic transmission, BMW xDrive.

**Drive system overall:**

Output: 400 kW/544 hp, torque: 750 Nm (553 lb-ft).

**BMW TwinPower Turbo engine:**

Capacity: 4,395 cc.

Nominal power: 400 kW/544 hp at 5,500 rpm,

Nominal torque: 750 Nm (553 lb-ft) 1,800 – 5,000 rpm,

**Electric motor:**

Nominal power: 13 kW/18 hp.

Nominal torque: 200 Nm (147 lb-ft).

**Performance / Consumption / Emissions:**

Acceleration [0 – 100 km/h (62 mph)]: 4.2 seconds.

Top speed: 250 km/h (155 mph).

Fuel consumption, combined in WLTP cycle: 11.2 l/100 km (25.2 mpg imp).

Fuel consumption, combined in NEDC: – .

CO<sub>2</sub> emissions combined in WLTP cycle: 255 g/km.

CO<sub>2</sub> emissions combined in NEDC: – .

Exhaust standard: Euro 6d.

**BMW 740d xDrive (est. available from spring 2023):**

Six-cylinder in-line diesel engine, 48V mild hybrid technology,

eight-speed Steptronic transmission, BMW xDrive.

**Drive system overall:**

Output: 220 kW/300 hp, torque: 670 Nm (494 lb-ft)\*.

**BMW TwinPower Turbo engine:**

Capacity: 2,993 cc,

Nominal power: 210 kW/286 hp at 4,400 rpm.

Nominal torque: 650 Nm (479 lb-ft) at 1,750 – 3,000 rpm.

**Electric motor:**

Nominal power: 13 kW/18 hp.

Nominal torque: 200 Nm (147 lb-ft).

**Performance / Consumption / Emissions:**

Acceleration [0 – 100 km/h (62 mph)]: 6.3 seconds.

Top speed: 250 km/h (155 mph).

Fuel consumption, combined in WLTP cycle: 6.9 – 5.9 l/100 km (40.9 – 47.9 mpg imp).

Fuel consumption, combined in NEDC: – .

CO<sub>2</sub> emissions combined in WLTP cycle: 182 – 157 g/km.

CO<sub>2</sub> emissions combined in NEDC: – .

Exhaust standard: Euro 6d.

**BMW 750e xDrive (est. available from spring 2023):**

Six-cylinder in-line petrol engine, plug-in hybrid system with electric synchronous motor, eight-speed Steptronic transmission, BMW xDrive.

**Drive system overall:**

System output: 360 kW/490 hp (incl. temporary boost).

System torque: 700 Nm (516 lb-ft)\*.

**Internal combustion engine:**

Capacity: 2,998 cc.

Nominal power: 230 kW/310 hp at 5,000 – 6,500 rpm.

Nominal torque: 450 Nm (332 lb-ft) at 1,750 – 4,700 rpm.

**Electric motor:**

Nominal power: 145 kW/200 hp.

Nominal torque: 280 Nm (206 lb-ft).

**Performance / Consumption / Emissions:**

Acceleration [0 – 100 km/h (62 mph)]: 4.9 seconds.

Top speed: 250 km/h (155 mph).

Top speed (electric): 140 km/h (87 mph).

Electric range in WLTP cycle: 80 – 89 km (52 – 57 miles).

Petrol consumption, combined in WLTP cycle: 1.2 – 1.0 l/100 km (235.4 – 282.5 mpg imp).

Petrol consumption, combined in NEDC cycle: –.

Electric power consumption, combined in WLTP cycle: 26.9 – 24.5 kWh/100 km.

Electric power consumption, combined in NEDC cycle: –.  
CO<sub>2</sub> emissions from petrol, combined in WLTP cycle: 28 – 22 g/km.  
CO<sub>2</sub> emissions from petrol, combined in NEDC cycle: –.  
Exhaust standard: Euro 6d.

**BMW M760e xDrive (est. available from spring 2023):**

Six-cylinder in-line petrol engine, plug-in hybrid system with electric synchronous motor, eight-speed Steptronic transmission, BMW xDrive.

**Drive system overall:**

System output: 420 kW/571 hp (incl. temporary boost).

System torque: 800 Nm (590 lb-ft)\*.

**Internal combustion engine:**

Capacity: 2,998 cc.

Nominal power: 280 kW/380 hp at 5,200 – 6,250 rpm.

Nominal torque: 520 Nm (383 lb-ft) at 1,850 – 5,000 rpm.

**Electric motor:**

Nominal output: 145 kW/200 hp.

Nominal torque: 280 Nm (206 lb-ft).

**Performance / Consumption / Emissions:**

Acceleration [0 – 100 km/h (62 mph)]: 4.3 seconds.

Top speed: 250 km/h (155 mph).

Top speed (electric): 140 km/h (87 mph).

Electric range in WLTP cycle: 80 – 84 km (50 – 52 miles).

Petrol consumption, combined in WLTP cycle: 1.2 – 1.1 l/100 km (235.4 – 256.8 mpg imp).

Petrol consumption, combined in NEDC cycle: –.

Electric power consumption, combined in WLTP cycle: 26.9 – 25.8 kWh/100 km.

Electric power consumption, combined in NEDC cycle: –.

CO<sub>2</sub> emissions from petrol, combined in WLTP cycle: 28 – 25 g/km.

CO<sub>2</sub> emissions from petrol, combined in NEDC cycle: –.

Exhaust standard: Euro 6d.

\*Composed of internal combustion engine (stated nominal value) and electric motor (up to stated nominal value)

All figures relating to performance, fuel/electric power consumption and emissions are provisional.

All of the stated model variants, equipment features, technical data and fuel/electric power consumption and emissions figures relate to the offering in the German market, if the respective vehicle is available there. These may vary for other markets. Dimensions and measurements refer to vehicles with basic configuration in Germany. These may vary depending on the wheel/tyre size and items of optional equipment selected.

The fuel consumption, CO<sub>2</sub> emissions, electric power consumption and electric range figures are determined according to the European Regulation (EC) 715/2007 in the version applicable. The figures refer to a vehicle with basic configuration in Germany and the range shown considers the different sizes of the selected wheels/tyres and the selected items of optional equipment.

All values were calculated based on the new WLTP test cycle. WLTP values are taken as the basis for determining vehicle-related taxes or other duties based (at least inter alia) on CO<sub>2</sub> emissions as well as eligibility for any applicable vehicle-specific subsidies. Further information on the WLTP and NEDC measurement procedures can also be found at [www.bmw.de/wltp](http://www.bmw.de/wltp).

Further information on official fuel consumption figures and specific CO<sub>2</sub> emission values of new passenger cars is included in the following guideline: 'Leitfaden über den Kraftstoffverbrauch, die CO<sub>2</sub>-Emissionen und den Stromverbrauch neuer Personenkraftwagen' (Guide to the fuel economy, CO<sub>2</sub> emissions and electric power consumption of new passenger cars), which can be obtained free of charge from all dealerships, from Deutsche Automobil Treuhand GmbH (DAT), Hellmuth-Hirth-Str. 1, 73760 Ostfildern-Scharnhausen and at <https://www.dat.de/co2>.

# Vehicle concept.

## Automotive luxury and innovations for the digital era.



BMW is leading the luxury segment into a new era that will be shaped by innovations in the fields of sustainability and digitalisation. With the new BMW 7 Series, the world's most successful manufacturer of premium vehicles is creating forward-looking ways to enjoy driving pleasure, unsurpassed long-distance comfort and a top-end digital experience. Central to this reinterpretation is the BMW i7. The all-electric luxury sedan is a fully integrated member of the model family and clearly demonstrates how an exclusive driving experience and the ultimate feeling of on-board wellbeing can be combined with an unwavering commitment to sustainability.

The generation change at the pinnacle of BMW's model range is wrapped up in a new definition of luxury that focuses on the individual and their personal attitudes, needs and emotions. In addition to presence, elegance and exclusive premium quality, there is a progressive approach characterised by innovations that directly enhance the user experience, wide-ranging connectivity and standard-setting sustainability of the car. In this way, the new BMW 7 Series has been designed to meet the needs of a modern target group that sees itself as committed to meeting challenges in a responsible manner – and one that views personal mobility as a way to experience unique moments in everyday life and on trips away.

### **A symbol of innovative strength and a milestone in the current model offensive.**

The new BMW 7 Series incorporates a modern style that focuses on the essentials in its exterior and interior design. The front-end design for BMW vehicles in the luxury segment is dominated by features that are typical of the brand, but a clear distinction is maintained between these models and the others in the BMW range. Innovative features such as the BMW Theatre Screen, the multi-sensory vehicle experience BMW iDrive with the latest generation of BMW Operating System 8, plus the BMW Curved Display and the Manoeuvre Assistant for automated parking and manoeuvring, highlight the progressive character of the luxury sedan. In addition to the enhanced level of comfort and the unique in-car entertainment system, the Executive Lounge option for the rear with optimised reclining seat position and new BMW Individual Merino

leather/cashmere wool interior trim takes a pioneering route to maximising wellbeing inside the car.

45 years on from the debut of the BMW 7 Series, the seventh model generation takes to the stage as the most advanced and innovative vehicle in the luxury segment. At the same time, the new edition captures the imagination with an overall design coherence unmatched by any rival. The BMW 7 Series is therefore once again a symbol of the BMW Group's innovative strength.

The world premiere of the new BMW 7 Series in April 2022 and its global market launch starting in November 2022 are the key milestones in the brand's current model offensive in the luxury segment.

**Market-specific drive system portfolio, tradition-rich production location.**

The new BMW 7 Series was designed from the ground up for particularly demanding target groups in a globalised marketplace. This is also reflected in a market-specific drive system portfolio that includes exclusive offerings for China – as the company's most important sales region – and a diesel model for Europe.

The new generation of luxury sedans from BMW opens up a whole new dimension in spaciousness. Unlike its predecessors, the new BMW 7 Series will be available worldwide exclusively as a long-wheelbase model that maximises space in the rear. Different facets of its character are defined by the use of specific design features and drive system variants. The new BMW 7 Series range also includes models from the BMW i and BMW M brands, which allow its myriad characteristics – from elegant, modern and sustainable to expressive, sporty and dynamic – to be brought prominently to the fore.

The new BMW 7 Series now offers a choice of combustion engines, plug-in hybrid systems and all-electric drive for the first time ever. The degree of diversity in the drive system portfolio is based on a newly developed flexible vehicle architecture and is an expression of a global model strategy for the new edition of the BMW 7 Series. This enables the BMW Group to take into consideration a customer's individual needs, infrastructure factors and legal regulations in all relevant automotive markets around the world. The market launch in Europe will initially feature only the BMW i7. In the USA, China and other selected sales regions, two models will be offered at market launch in addition to the

all-electric variant, each equipped with a petrol engine and 48V mild hybrid technology.

Plug-in hybrid variants of the new BMW 7 Series are expected to follow in numerous markets from the beginning of 2023. These will include the first BMW M model with a six-cylinder in-line petrol engine and plug-in hybrid drive system. A model variant with a diesel engine and 48V mild hybrid technology will be added to the range in Europe just after the market launch. Further variants of the all-electric BMW i7, including the future top-of-the-line BMW i7 M70 xDrive, will be made available at a later stage.

As was the case with all its predecessors, the new BMW 7 Series will be built at BMW Group Plant Dingolfing. The company's largest production facility in Europe will be fusing tradition with the future and is also the BMW Group's centre of excellence for the production of e-drive components. The highly integrated electric drive system and the high-voltage battery of the BMW i7 will also be manufactured there. Vehicles with combustion engines, plug-in hybrid systems and all-electric drive systems will come off the same production line in Dingolfing. In addition to the all-electric BMW iX and the new BMW 7 Series, the BMW 8 Series luxury sports car and BMW 5 Series models, among others, are also produced here.

### **Two BMW M models based on the new BMW 7 Series.**

The new BMW 7 Series model range worldwide will expand to include two BMW M models equipped with electrified drive systems. The new BMW M760e xDrive (fuel consumption combined: 1.2 – 1.1 l/100 km [235.4 – 256.8 mpg imp]; electric power consumption combined: 26.9 – 25.8 kWh/100 km; CO<sub>2</sub> emissions: 28 – 25 g/km in the WLTP cycle; figures in NEDC cycle: –) has output of 420 kW/571 hp and torque of 800 Nm (590 lb-ft) and will debut as early as spring 2023. Its electric motor generates a temporary boost worth an extra 30 kW/40 hp when particularly invigorating acceleration is the order of the day. An M-specific design for the exterior and interior, including an exhaust system featuring the distinctive twin tailpipes with unique geometry, underscores the performance characteristics of the BMW M model with plug-in hybrid technology.

The future flagship model, the new BMW i7 M70 xDrive (power consumption combined in the WLTP cycle: 26.4 – 21.2 kWh/100 km; CO<sub>2</sub> emissions: 0 g/km; figures in NEDC cycle: –), will have an all-electric drive system with two motors – on the front and rear axle – and will be

available later in 2023. Its drive system generates maximum output of well over 600 hp and maximum torque of more than 1,000 Nm (737 lb-ft). The most powerful BMW model ever registered for road use accelerates from 0 to 100 km/h (62 mph) in under 4.0 seconds. (All output, performance and energy consumption figures for the BMW i7 M70 xDrive are estimates based on the car's current development stage incl. temporary boost.)

### **Unique digital experience with the new vehicle experience BMW iDrive and BMW Operating System 8.**

Driving pleasure, long-distance comfort and the user experience in the new BMW 7 Series are shaped largely by the latest innovations in the field of digitalisation. The new BMW 7 Series offers customers the new multi-sensory vehicle experience BMW iDrive with the latest generation of BMW Operating System 8. With the fully digital BMW Curved Display, the innovative BMW Interaction Bar, the enhanced capabilities of the BMW Intelligent Personal Assistant – plus additional My Modes, the latest version of the BMW Head-Up Display, and the Augmented View function available for the first time on the information display behind the steering wheel – intuitive dialogue between the driver and vehicle has reached a new level.

Passengers in the rear are greeted by a unique entertainment offering in the form of the new BMW Theatre Screen – a 31.3-inch panoramic display in 32:9 format with 8K resolution which extends downwards from the roof and transforms the second row of seats into an exclusive private cinema on wheels. The driver and front passenger can also use YouTube video-on-demand streaming on the control display for the first time. A 5G-compatible aerial system takes care of high-speed connectivity in the new BMW 7 Series.

### **Security redefined: the new BMW 7 Series in BMW Protection Vehicle specification.**

A high-security vehicle based on the new BMW 7 Series is now being developed and will be added to the range in the course of 2023. With its integrated protection concept, which is unique in the segment and has been developed entirely from scratch, the armoured model variant meets the special requirements of authorities, state representatives and high-profile individuals in need of special protection.

The development of the new high-security BMW 7 Series centres on an innovative protection concept developed by the BMW Group. This provides extremely high standards of security combined with the levels

of interior comfort, driving dynamics and ride comfort applied across the new BMW 7 Series range. Integrated development and production in a special manufacturing process at BMW Group Plant Dingolfing will ensure the high-security vehicle based on the new BMW 7 Series sets new standards.

## Exterior design.

### A new dimension in presence, expressive power and exclusivity.



The powerfully expressive design features for the exterior of the new BMW 7 Series authentically reflect its central product attributes and the associated on-board experience. The new-generation model's exclusive appearance signals the presence of an exceptional driving experience and progressive luxury at work, with next-level spaciousness and an innovative digital experience making the headlines in the rear compartment. The vertically prominent front end, with the combination of the illuminated BMW kidney grille standing dominant as its centrepiece and two-piece split headlight units, give the new 7 Series a forceful and highly distinctive presence. The front-end design, in the new style developed specifically for BMW's flagship models, enables clear differentiation from the brand's other models.

Visually prominent surfaces extend from the upright front end to the eye-catching rear and accentuate the luxurious impression and therefore also the high level of travelling comfort and spaciousness to be enjoyed on board. The BMW i7 uses accents in BMW i Blue to advertise its segment-leading sustainability qualities. On all other variants – with the exception of the BMW M760e xDrive, which will be available at a later stage, and the eight-cylinder model – the exhaust tailpipes are integrated out of sight into the rear apron.

All model variants of the new BMW 7 Series can be specified as an option – for the first time in series production – with a BMW Individual two-tone paint finish which highlights the exclusive aura of the luxury sedan with particular intensity. Added to which, specific design features for the BMW M models and 7 Series examples specified with the M Sport package underscore the more dynamic side of the cars' character.

#### **Familiar proportions with maximised comfort in the rear seats.**

The exterior measurements of the new BMW 7 Series have expanded in a discreet and harmonious way, so it retains the familiar proportions of the outgoing model. Those dimensions are more closely aligned with the long-wheelbase version of the previous-generation car, showing a three per cent increase in its length, height and wheel diameter respectively.

The new BMW 7 Series has grown by 130 millimetres in length to 5,391 millimetres, by 48 millimetres in width to 1,950 millimetres and by 51 millimetres in height to 1,544 millimetres. Its wheelbase is now 5 millimetres longer at 3,215 millimetres, which also helps bring about a further improvement in seating comfort in the rear. The headroom in the interior of the new BMW 7 Series has also been noticeably improved.

**New front end focuses on the distinctive headlight signature;  
illuminated BMW kidney grille Iconic Glow and BMW crystal headlights  
Iconic Glow.**

At the front of the new BMW 7 Series, the brand's hallmark twin circular headlights and BMW kidney grille have been newly interpreted. The light functions are divided into two separate areas, with the upper elements acting as the more prominent focal point and cut from exclusive crystal glass as an option. This gives the front end of the new BMW 7 Series a progressive and memorable appearance. The low-beam and high-beam headlights are positioned in the dark lower units chiselled deep into the front apron. These light sources only become visible when switched on in the hours of darkness. The new BMW 7 Series comes as standard with Adaptive LED Headlights including cornering light, plus matrix high beam and the BMW Selective Beam non-dazzling high beam assistant.

The extremely slim strip of lights set higher up in the front end brings together the daytime driving lights, sidelights and turn indicators. Its LED units appear to shine directly out of the glass covers. Their crisp graphic replicating a pair of upturned "L"s projects a technically sophisticated feel. The optional BMW crystal headlights Iconic Glow create an all-new light effect unmatched by any other car. Here, crystals from Swarovski – again arranged in L-shapes and each backlit by 14 LED units – perform the role of sidelights and daytime driving lights. Both when the lights are switched on and when they are off, the crystals reflect the light in a multitude of facets. Indeed, even sunshine sparks a unique aesthetic in the evolved crystal structure and brings the front end to life. At night, 22 LED units light up the crystals from behind and team up with the kidney grille's contour lighting to create an unmistakable light graphic. Two LED elements below the crystals provide the striking daytime driving light signature, integrate the turn indicator and increase the sparkle of the crystals in each function and colour.

The BMW crystal headlights Iconic Glow also lay on a visually expressive Welcome and Goodbye Scenario. When the customer approaches their car, first the illuminated surround of the BMW kidney grille is activated, followed by the enhanced sparkle of the BMW crystal headlights. Then

the standard-fit dynamic light carpet is revealed. LED lights integrated into the door sills project four graphics, one after the other, onto the ground just outside the doors of the new BMW 7 Series. This welcome display continues in the interior as part of a neatly composed overall choreography that enhances the luxury-infused digital experience.

The contour lighting is a decisive factor in the BMW kidney grille's impressive presence. Integrated subtly into the surface of the BMW kidney grille are a front camera complete with cleaning system and radar sensors, which keep the driving assistance systems of the new BMW 7 Series supplied with data.

The clean surfacing of the front apron, with only a small number of structuring lines, underscores the muscular and solid appearance of the new BMW 7 Series. The car's width is also emphasised by the single-piece lower air intake and slim side intakes positioned at the outer edges of the front end. Another bespoke design cue for the new-generation car is the chiselled bonnet with dynamic streak down its centreline.

#### **Visually imposing: clear surfacing for the flanks.**

The presence of the front end is complemented by a clear and monolithic surface design for the flanks of the new BMW 7 Series. Like the exterior dimensions, which have grown proportionally in both length and height, and the forward-surging front section of the car, it exudes sublime visual elegance. This impression is reinforced by the virtually flush-fitted side windows with invisible seals. A shoulderline running from the daytime driving lights into the rear lights subdivides the taut bodywork. The long bonnet, a second character line above the side skirts rising slightly towards the rear, and the powerfully sculpted surfaces below the flush door handles convey an understated sense of dynamism.

The side window graphic is bordered towards the C-pillar by a high-class chrome element, which stays in place as part of the body when the rear door is opened. This creates a new interpretation of the Hofmeister kink counter-swing. The long doors provide ease of entry and exit for the rear passengers, while the broad C-pillars and a pattern graphic on the rear section of the side windows protect their privacy from prying eyes.

#### **Eye-catching rear end with precise contours.**

Like the front end of the new BMW 7 Series, the rear is also shaped by a clearly divided surface structure. Here, too, horizontal lines accentuate the car's width. Embedding the license plate mount in the lower section of the rear apron creates vibrant light and shadow effects.

The slim LED rear light units exude puristic elegance and extend well into the car's flanks. This progression into the side surfaces is accentuated by a discreet patterning in the glass covers. The "L" shape familiar from many other BMW models is formed by an integrated chrome strip and the rear light bars positioned below it. The homogeneous distribution of light creates the impression of light being emitted directly from the glass covers. The braking light and turn indicator light are generated by two slim strips below the main rear lights.

**BMW i7 with subtle points to top-level sustainability.**

The all-electric BMW i7 brings a selection of distinctive design accents to mark out its particularly sustainable character. Its BMW kidney grille – fully enclosed to optimise airflow – sports the logo of the BMW i sub-brand. And the horizontal bar in the lower air intake, the decorative elements in the side skirts and rear apron, and the surrounds of the BMW logo at the front and rear all come in BMW i Blue as standard.

**Exclusive dynamism: M Sport package and M Sport package Pro, M Performance package for the BMW M models.**

The seventh generation of the BMW 7 Series again elevates itself above its rivals with a sporting appeal rooted deeply in the brand's history. All the model variants stand out with their impressive agility and handling, and these qualities come particularly prominently to the fore when the optional M Sport package is specified. M-specific design features for the exterior and interior highlight the dynamic side to the car's character.

The M-specific geometry of the front apron includes a three-section lower air intake. The side intakes, like the low-beam and high-beam headlights, are set deep into the front apron, which ensures the visual focus is centred even more squarely on the daytime driving light units and the BMW kidney grille. The indented sweep running down the centre of the bonnet extends into the upper section of the bumper and frames the BMW logo. The side skirts and rear apron also have an M-specific design. The optional Chrome Line for the exterior includes chrome elements for the side skirts and the otherwise high-gloss Black surrounds for the side windows.

Other features designed to enhance the sense of exclusive sportiness are 20-inch M light-alloy wheels, M logos on the front side panels and illuminated door sill cover strips bearing the M logo, while a discreet M rear spoiler in body colour can be added as an option. Also available is the M Sport package Pro, which additionally brings 21-inch

M aerodynamic wheels in a dark shade, BMW M High-gloss Shadow Line with extended features including the BMW kidney grille, a black M rear spoiler, an M Sport braking system with black-painted callipers, and seat belts with contrast stitching in the colours of BMW M GmbH.

The BMW M models based on the new BMW 7 Series – which will become available during the course of 2023 – will cut a particularly expressive figure. They too will feature their own take on M-specific design cues designed to signal the presence of standout performance attributes. Their BMW kidney grilles will carry an M logo against a black background. Other features will include aerodynamically optimised M exterior mirrors, 21-inch M light-alloy wheels, the blue brake callipers included as part of the M Sport braking system and a model-specific trim element with M logo next to the air breathers. The BMW M760e xDrive will additionally come with two pairs of trapezoidal twin exhaust tailpipes integrated along with a diffuser into the rear apron. An M Performance package can be specified as an option for the BMW M models. This includes BMW M High-gloss Shadow Line with extended features, a black M rear spoiler, the black-painted brake callipers from the M Sport braking system and the M seat belts.

**Bold exterior colours, exclusive BMW Individual two-tone paint finish.**

One non-metallic and nine metallic colour shades can be ordered for the paintwork of the new BMW 7 Series' body. Also available are four BMW Individual paint finishes, with extremely bold BMW Individual special paint finishes set to be added to the range at a later stage. A new addition to the spectrum of colours for series-produced cars is a BMW Individual two-tone paint finish, which gives the luxury sedan a particularly exclusive appearance. Two colours are offered for the section of the body above the shoulderline, while five shades are available for the lower section. This means customers can choose from a total of eight distinctive colour combinations. An exquisite, precisely drawn coach line separates the two colour zones from one another like a delicate signature.

All variants of the new BMW 7 Series are fitted as standard with 19-inch light-alloy wheels. Other light-alloy wheels in 19- to 21-inch formats are offered, while the Original BMW M Performance Accessories range also contains 22-inch M light-alloy wheels.

## **Interior and equipment.**

### **Exceptional travelling comfort in an innovative feel-good ambience.**



Luxury at its most progressive awaits the driver and passengers inside the new BMW 7 Series. A select choice of materials, precision craftsmanship of the highest order and a clearly structured, minimalist interior design underpin the exclusive on-board experience for both the person behind the wheel and the occupants of the other seats. Here, generous amounts of space meet innovative equipment features and the neat interplay of high-tech control/operation, connectivity, driver assistance, infotainment and digitalisation solutions.

The design of the interior also reflects the balance between driving dynamics and travelling comfort that marks out the BMW 7 Series in its latest generation. To the driver, the new model is an alluringly dynamic sedan, while the rear-seat passengers can luxuriate in a feel-good ambience from another dimension.

A host of cutting-edge equipment details provide a richer showcase than ever for both sides of the new BMW 7 Series' character. With the BMW Curved Display fully digital screen grouping, additional My Modes, the BMW Interaction Bar (making its debut here) and the newly designed gear selector, the cockpit represents an invitation to enjoy concentrated driving pleasure. The lounge-like atmosphere in the second row of seats is elevated to extraordinary heights both by the extra spaciousness on offer and, most prominently, by innovations like the BMW Theatre Screen and upgraded comfort seats with optional reclining function. The new BMW 7 Series pre-emptively adapts its responses to the needs of the driver and their passengers and uses its digital expertise and judicious composition of equipment features to provide the required solutions.

And then there is the achingly stylish selection of materials, which capture the imagination in terms of both looks and haptic appeal. A new feature here is the use of exquisite cashmere wool for the seat surfaces. The soft and pleasantly warm feel of this sumptuously refined natural material come together with the optional BMW CraftedClarity crystal glass applications for selected controls, the open-pored fine wood of the interior trim strip and the stainless steel speaker covers to create a luxurious sense of wellbeing.

### **Unmatched in-car entertainment with BMW Theatre Screen and Amazon Fire TV.**

One of the main highlights of the equipment options available for the new BMW 7 Series is the BMW Theatre Screen with Amazon Fire TV built-in. This includes a 31.3" 8K touchscreen display with Bowers & Wilkins surround sound system with optional in-seat exciters, built-in touch screen remotes in the door panels (BMW Touch Command), and an automated rear shade system that closes when the BMW Theatre Screen is turned on.

Wide variety of content. The BMW Theatre Screen with Fire TV built-in lets passengers enjoy content up to 4K/UHD from popular apps (subscriptions may be required). Stream videos, play games, listen to music, get information, and watch downloaded programs – all while on the road.

All entertainment in one place. Fire TV brings together the content customers value most in one place by combining popular streaming originals, live sports, and news into a single experience that they can search, browse, and filter.

Find content fast. Customers can enjoy personalised streaming using Profiles, with recommendations, viewing history, and watch lists. Profiles also allow customers to start a film or TV show at home and pick it up on the road.

Cinematic experience. Customers can watch films and TV shows in 16:9, 21:9, or 32:9 cinemascope aspect ratio for an immersive experience (may crop content when zoomed). The screen folds into the ceiling to be out of the way when not in use, and can be moved closer or further from the passenger to put it within arm's reach for touch controls or to put it at the preferred viewing distance.

Immersive audio. Audio can be enjoyed through the vehicle's Bowers & Wilkins speakers or by connecting up to two Bluetooth headphones with independent volume controls.

Content, services, and features vary, may not be available in all areas and languages, and may require separate subscriptions. For a country-specific streaming and entertainment offer in China, BMW partnered with Huawei and Iqiyi. As a prerequisite for video streaming the Personal eSIM in the vehicle needs to be activated via the data plan of the customers' mobile network operator.

The BMW Theatre Screen is revealed to the accompaniment of a sound composition created exclusively for this purpose as part of the collaboration between the BMW Group and renowned film score composer and Academy Award winner Hans Zimmer. At the same time, the sunblinds for the side windows, rear window and panoramic glass sunroof are closed and the ambient lighting in the rear compartment is dimmed. The sequence unfolds to a choreography developed with a sharp eye for detail and which brings all the functions and digital content together into an all-encompassing user experience. The BMW Theatre Screen spreads out horizontally across virtually the full width of the interior and extends down from the headliner to the front seat backrests.

### **Unique sound experience with 4D audio system and new BMW IconicSounds Electric.**

The optional Bowers & Wilkins Diamond Surround Sound System adds an extremely high-quality and multi-faceted sound experience to film-watching in the rear of the new BMW 7 Series. It sets new standards in its segment not only with up to 36 speakers, of which four are integrated into the headliner, and amplifier output of 1,965 watts, but also in terms of sound quality. The fully active audio system with seven-band equalizer offers microphone-assisted sound control based on dynamic performance and four sound modes. Two surround speakers are integrated into the head restraints of both the front seats and outer rear seats. The new Bowers & Wilkins Diamond Surround Sound System also has a 4D audio function generated using exciters in the front and rear seat backrests. Their precise, magnetically controlled vibrations result in improved perception of bass frequencies, even at low volumes. The Audio Demo Mode, included here for the first time, allows the customer to call up a video – around a minute in length – from the iDrive menu which explains the extraordinary sound potential of the audio system and the functions and adjustment settings available to deliver a captivating sound experience.

The audio system fitted as standard in the new BMW 7 Series already delivers a high-class sound experience. The Bowers & Wilkins Surround Sound System features a seven-band equalizer and up to 18 speakers with attractive metal covers. Its amplifier output is 655 watts.

Whatever the entertainment programme being enjoyed, BMW i7 customers will be greeted by another unmistakeable sound experience in the form of BMW IconicSounds Electric. Pressing the Start/Stop button sparks an inspiring acoustic accompaniment that builds anticipation for the all-electric driving experience to come. This distinctive sound

production is again the result of the collaboration between the BMW Group and Hans Zimmer. If desired, a drive sound developing a strikingly transparent timbre with spherical components delivers authentic feedback to every movement of the accelerator. The character of the sound alters according to the vehicle setting chosen with the My Modes button. This means that in SPORT mode the car's aural spectrum is more dominant and powerful.

### **Progressive cockpit design with BMW Curved Display and BMW Interaction Bar.**

Like the entertainment experience in the rear compartment, the brand-typical driver-focused cockpit design in the new BMW 7 Series has been re-interpreted in a progressive style. Digitalisation enables the number of buttons, switches and controls in the cockpit to be significantly reduced. Standard specification includes an interior trim strip in Fineline Lime Brown open-pored matt fine-wood trim for the instrument panel. This provides an elegant stage for the BMW Curved Display. The fully digital screen grouping consists of a 12.3-inch information display behind the steering wheel and a control display with a screen diagonal of 14.9 inches. Arranged beneath a shared glass surface, the displays are directed ergonomically towards the driver, making the already intuitive touch control even more straightforward.

The BMW Interaction Bar makes its debut in the new generation of the luxury sedan as a new breed of control/operation and design element. This functional unit, which boasts a crystalline surface structure and highly effective backlighting, extends from below the trim strip across the full width of the instrument panel and well into the door panel trim. It houses touch-sensitive control panels for adjusting the ventilation and climate control, activating the hazard warning lights and opening the glove compartment. The light design of the BMW Interaction Bar takes its cues from the colour world of the My Mode setting currently selected and can also be set as desired by the user.

The BMW Interaction Bar brings a whole new angle to the interaction between the driver and vehicle. It combines function control, ambient lighting and the ability to adjust its decorative appearance as desired into one fully integrated component. Entry into and exit from the car are accompanied by a welcome/goodbye production incorporating lights on the BMW Interaction Bar. And it also shows the driver and front passenger via the Safe Exit function when it is safe to get out. From the ambient lighting menu the driver can decide which events the BMW Interaction Bar reacts to with dynamic light animations, e.g. incoming

phone calls. The BMW Intelligent Personal Assistant can also appear on the BMW Interaction Bar in an artistic glow.

### **New design for the steering wheel and gear selector.**

The newly designed steering wheel also plays its part in the exclusive driving experience. It has two spokes and a flat-bottomed rim. Its control panels contain rocker switches and scroll wheels as well as buttons offering haptic feedback when pressed. In the BMW M models and cars specified with the M Sport package, the optimised functionality of the wheel combines with a classical three-spoke design.

An exquisitely designed control panel on the centre console hosts the iDrive Controller, Start/Stop button, volume control for the audio system and buttons to control vehicle functions. Also positioned here are the My Modes buttons, which replace the Driving Experience Control switch, and the newly designed gear selector.

Discreet backlighting brings greater visual emphasis to the control panel. Exclusive glass applications for selected controls can be ordered as an option. This stylistically and haptically appealing design feature is applied to the gear selector, the Controller, the Start/Stop button, the volume control for the audio system on the centre console and the seat adjustment controls integrated into the doors.

### **Interior surfaces and door trim imbued with modern elegance.**

Like the trim strip on the instrument panel, the surfaces of the centre console come in Fineline Lime open-pored matt fine wood as standard. The options list includes Mirror Oak Grey metallic high-gloss and Ash Grain Grey metallic open-pored matt fine-wood trim, the Carbon Fibre with Silver Threads variant and BMW Individual interior surfaces in Ash Flowing Grey open-pored fine wood. Cars specified with the M Sport package and BMW M models are also offered with Fineline Black fine-wood trim with metal effect and M Signature.

The clear structure of the instrument panel continues into the design of the door trim. This allows a harmonious appearance to be created for the surfaces around the seats. The line of the BMW Interaction Bar progresses into the front door trim. From the control panel integrated here, users can activate the seat heating and store their preferred seat setting. High-quality accents also come in the form of perforated metal covers for the speakers integrated into the doors and the subtly backlit storage compartments.

A digital control unit is integrated into the rear door trim. This 5.5-inch colour display with touchscreen functionality allows passengers to select their choice of entertainment programme, the image display and the volume when using the BMW Theatre Screen. Added to which, operating the audio system, climate control functions, seat adjustment settings, ambient lighting and rear sunblinds is all extremely user-friendly.

**New comfort seats fitted as standard, multifunction seats and Executive Lounge available as options.**

Newly developed comfort seats come as standard in the new BMW 7 Series. They offer wider seat surfaces than the outgoing model, as well as extensive electric adjustment, seat heating and lumbar support for the driver and front passenger. The driver and passengers can select their desired seat position using the door panels in the door trim and by touch on the control display via the relevant menu in the iDrive control/operation system. The optional multifunction seats for the driver and front passenger offer additional electrically operated adjustment. Features include active seat ventilation with optimised cooling, and a massage function with nine programs and a noticeably increased vitalising and relaxation effect. The backs of the head restraints have high-quality decorative wood trim with electroplated accent strips. The optional Travel & Comfort System includes features such as a mount for attaching tablets.

Multifunction seats, active seat ventilation and a massage function are also available for the rear compartment. Here, the seats are adjusted from the digital touch-control panels integrated into the door trim. The padded side sections of the backrests ease entry into and exit from the car. The new BMW 7 Series offers customers an exceptionally broad-based and detailed upgrade in seat comfort – both as standard and through items on the options list. For example, the standard-fit speakers in the outer head restraints provide particularly intense listening pleasure. In the multifunction seats, the audio experience is further enhanced by shakers in the backrests.

The Executive Lounge option brings unbeatable seating comfort and a peerless feel-good factor to the rear compartment. It includes a reclining function with integrated leg rest for the space behind the front passenger seat, plus an optionally quilted and heated armrest with high-quality glass insert and integrated smartphone tray for inductive charging. Coordinated adjustment of the backrest angle and backrest upper section angle, forward/back position and seat surface tilt enables an extremely comfortable reclining position. A torso angle of 42.5° can be

achieved between the seat surface and backrest, which sets the benchmark in this segment. Added to which, individually adjustable neck cushions and significantly increased headroom compared with the outgoing model also enhance travelling comfort.

Also unique is the design principle for the leg rest, which allows passengers to perfect the relaxed resting position. Here, the calf support fixed directly to the seat surface without a gap teams up with a heel rest extending out from the back of the front passenger seat. To create the ideal seating position and legroom for the rear passenger, the front passenger seat can be moved fully forward and its backrest tilted forward to the greatest possible degree. In addition, the front passenger seat also offers the multifunction seat's full selection of comfort-enhancing features and adjustment range.

#### **Carefully coordinated interior appointments.**

Customers looking to bring a personal touch to the interior design of their new 7 Series can choose from the host of equipment variants and colour combinations included in a newly structured offering. This approach sees the elements of the interior matched and blended with one another to stylish effect. The new BMW 7 Series is specified as standard with seat surfaces in the new Veganza material, which is available in a choice of four colours. The high-quality surface material with leather-like qualities stands out with its particularly pleasant feel and offers a high level of comfort. The seat surfaces are perforated and have prominent quilting in a diamond pattern. The headliner is in a light grey shade.

Multifunction seats and an anthracite-coloured M headliner mark out the M Sport interior. This is part of standard specification for the BMW M models and offered as an option for cars with the M Sport package. As an alternative to the seat surfaces in Veganza, customers can order M Merino leather trim in Black/Atlas Grey with applications in the colours of BMW M GmbH as an option.

The likewise optional BMW Individual interior brings an anthracite-coloured headliner, multifunction seats, and BMW Individual Merino leather trim in Black, Mocha, Smoke White, Amarone or Tartufo with elaborate quilting. A BMW Individual Alcantara headliner is also available as an option.

The optional BMW Individual interior with exclusive elements takes the feeling of wellbeing on board the new BMW 7 Series to another new level. This specification also includes multifunction seats, plus the BMW

Individual Alcantara headliner and BMW Individual Merino extended leather trim in Black, Mocha, Smoke White, Amarone or Tartufo. From March 2023, this will also be available in the bi-colour variants Caramel/Atlas Grey and Taupe/Night Blue. In cars with the BMW Individual interior with exclusive elements, the instrument panel, headliner, door trim, carpets and steering wheel come either in Black or Atlas Grey/Night Blue, depending on the leather shade.

**New from BMW Individual: seat surfaces in leather/cashmere wool.**

The BMW Individual interior with exclusive elements generates an exclusive yet also cosy atmosphere inside the new BMW 7 Series – especially when BMW Individual Merino leather/cashmere wool in the Smoke White/Atlas Grey combination is specified. The highly exclusive wool/textile surfaces bring a whole new haptic quality to the interior and combine sustainability with luxury.

The light-coloured leather in the upper section of the seats and the darker cashmere-rich cloth in the lower section, elaborate quilting and fine perforation create a unique impression – both visually and haptically. Their intricate, symmetrically embroidered pattern makes these seats a particularly eye-catching feature of the interior. The colour contrast between the leather and cashmere surfaces creates a horizontal band that wraps around the interior and envelopes the passengers. From March 2023, the BMW Individual Merino leather/cashmere wool trim will also be available in Black/Dark Grey.

**Four-zone automatic climate control fitted as standard, panel heating optional.**

Standard equipment for the new BMW 7 Series includes four-zone automatic climate control with further developed control logic. In place of conventional air vents, the instrument panel incorporates slot-type outlets arranged along the full width of the BMW Interaction Bar. This also contributes to the clear and minimalist style of the cockpit design in the new BMW 7 Series. It is now also possible to adjust the temperature in the front seat footwells separately. Meanwhile, a standard-fitted nanoparticle filter removes virus-sized particles and allergens from the air inside the cabin. The BMW i7 comes with a model-specific climate control unit featuring extremely efficient heat pump technology.

Like the driver and front passenger, those in the second row of seats can also set the temperature in their area of the car to their personal preferences thanks to separate controls in the rear compartment. An additional solar sensor optimises temperature adjustment in the rear.

The climate control unit also uses the seat heating and, if fitted, the seat ventilation function to match the interior temperature to the specifications of those on board.

Customers can adjust the overall temperature in their car even more accurately and intensively if the optional Heat Comfort package is fitted. This optional extra includes steering wheel heating and panel heating for the armrests in the door trim and centre console. In cold outside temperatures, the panel heating allows a pleasant on-board climate to be achieved much more quickly than when using warm air alone. Direct contact with the heated surfaces ensures occupants in the new BMW 7 Series feel warm and cosy again in no time.

### **Sky Lounge panoramic glass sunroof with new light effects.**

A panoramic glass sunroof is also fitted as standard on the new BMW 7 Series. The roof now consists of a single fixed glass surface framed by a steel surround. The roof's transparent surface is larger than that of any rival and now also much longer than on the outgoing 7 Series in its rear section in particular, creating a light-filled ambience in the rear compartment too. The sliding headliner of the panoramic glass sunroof is electrically operated.

The optionally available Sky Lounge panoramic glass sunroof enthralls and delights with a newly designed light show using light threads backlit by LED units. The structure this creates replicates the pattern of the quilting on the seat surfaces. The glass construction consists of three highly functional and fully integrated individual sections of glass. A pattern within this construction emits the light and intensifies the feeling of acceleration when the car is moving. The colour world of the light effects, which are also part of the Welcome Scenario, takes its cues from the activated My Mode and can also be selected independently.

### **Automatic doors with unique control modules in the rear.**

Another comfort-enhancing feature of the new BMW 7 Series is the automatic door mechanism available as an option. To open or close the front and rear doors, all those on board need to do is touch the handles set flush into the body or the buttons in the BMW Interaction Bar at the front of the cabin or the rear door trim. The opening and closing sequence can also be activated using the radio-operated key. At a later stage this will additionally be possible via the My BMW App from outside the car and by voice command or using the iDrive control/operation system while on board. Visible and audible signals alert users that the automatic door system is activated. Other tech includes a helpful

collision protection function when opening the doors – which utilises the data from 12 ultrasound sensors on either side of the car – and a sensitive obstruction alert when closing them. An integral servo mode allows the doors to be opened and closed manually with little effort.

The boot lid also has an automatic opening and closing mechanism. It is activated by either the push of a button or the movement of a foot under the rear apron. The load capacity of the conventionally powered model variants is 540 litres, 25 litres up on the figure for the predecessor model. The plug-in hybrid models now offer 525 litres, an increase of 105 litres. The BMW i7 has 500 litres of load space.

An electrical fold-in-fold-out trailer tow hitch is available as an option for all variants of the new BMW 7 Series. The maximum permissible trailer load is up to 2,100 kilograms, depending on the model.

## Drive system and charging technology. Flexible choice, unwavering efficiency.



The models in the new BMW 7 Series range are based on a flexible vehicle architecture that has been devised for three different drive types from the outset. This has made it possible to equip the luxury sedans not just with the new modular generation of BMW Group Efficient Dynamics engines – all of which now come with the latest 48V mild hybrid technology – but also plug-in hybrid systems and even an all-electric powertrain. Despite these differences, all model variants are manufactured on a single assembly line at BMW Group Plant Dingolfing. As a result, purely electric mobility will now also play a key role at the very pinnacle of the BMW model line-up. No model captures the range's forward-looking premium character with its strong emphasis on sustainability better than the new BMW i7.

The BMW i7 xDrive60 will be the only model variant that is available worldwide from launch. As part of a globally structured product strategy, the powertrain portfolio for selected markets will also include petrol and diesel engines – either from launch or from spring 2023 – whose efficiency, dynamism and comfort characteristics have been greatly enhanced thanks to the inclusion of the latest 48V mild hybrid technology, among other things. Plug-in hybrid variants for all markets worldwide will follow at a later date, along with further variants of the all-electric BMW i7.

### **BMW i7: pure luxury and dynamic performance with zero emissions.**

Driving pleasure, passenger comfort and a luxurious ambience without compromise – and with zero local emissions: the BMW i7 xDrive60 has it all. Its fifth-generation BMW eDrive technology comprises highly integrated drive units at the front and rear axles that bring together the electric motor, power electronics and transmission within a single, very compact housing, plus the accompanying charging technology and high-voltage battery.

Control of the adaptive recuperation function has been further refined in the BMW i7 to increase range. The efficiency with which power is taken on board the BMW i7 and the durability of its high-voltage battery both benefit from the latest advances in the field of charging technology. Compared with the BMW iX and BMW i4 models, the charging software

has undergone further improvement, the temperature of the high-voltage battery is controlled more precisely and there is also an innovative facility for saving charging profiles. In addition to this, the BMW Maps navigation system displays the charging-optimised route even faster and in even greater detail in the BMW i7.

**Electric motors with no critical raw materials in the rotor.**

The electric motors work according to the principle of an electrically excited synchronous motor, where it is a precisely controllable electrical feed that sets the rotor in motion rather than fixed permanent magnets. This allows the use of critical rare earth metals (required for magnetic components) to be avoided altogether in the manufacture of the rotor.

The virtually silent power delivery of the BMW i7 xDrive60, and the luxurious sense of driving comfort this instils, are further helped by improvements to the electric drive units' acoustics, a model-specific mounting concept and newly developed noise encapsulation for the electric motors. The motor driving the rear wheels generates peak output of 230 kW/313 hp, while the unit at the front axle produces 190 kW/258 hp. The duo of drive units delivers a combined maximum output of 400 kW/544 hp and posts overall torque of 745 Nm (549 lb-ft). All of which enables the new BMW i7 xDrive60 to power from 0 to 100 km/h (62 mph) in 4.7 seconds.

The experience when accelerating is defined not just by the car's electrifying, instantaneous power delivery, but also by its supreme traction and directional stability. Underpinning the majestic dynamic prowess of the BMW i7 xDrive60 are its electric all-wheel drive and its precisely tuned driving stability systems headlined by the near-actuator wheel slip limitation. The fully variable drive system is intelligently connected with the system of powertrain and chassis control functions, whose extremely quick and precise responses help to sustain thrilling forward momentum even in adverse road and weather conditions. The top speed of the new BMW i7 xDrive60 is electronically limited to 240 km/h (149 mph).

The outstanding efficiency of the current BMW eDrive technology translates into combined electric power consumption of 19.6 – 18.4 kWh per 100 kilometres in the WLTP test cycle (figures in NEDC cycle: –). This enables the BMW i7 xDrive60 to post a range of 590 – 625 kilometres (367 – 388 miles), likewise in the WLTP cycle. The extensive standard specification, and a selection of wheels and tyres whose efficiency has been optimised across the full spectrum of available sizes, give

customers plenty of scope when choosing optional extras without them having any notable impact on range.

The car's impressive long-distance credentials are also down to the high-voltage battery's excellent energy density. The extremely slim high-voltage battery with a cell height of just 110 millimetres is located low down in the vehicle floor and provides 101.7 kWh of usable energy. The heat pump technology used in the integrated heating and cooling system for the cabin and drive system also helps boost efficiency, as does the adaptive or individually adjustable recuperation feature. The high-voltage battery is heated using a dedicated 5.5 kW electric flow heater.

**Innovation: adaptive recuperation of an even higher standard.**

The adaptive recuperation feature familiar from the BMW iX and BMW i4 models has been further honed for the BMW i7 and is now also able to take downhill sections and information from the traffic light recognition function into account. Adaptive recuperation generally allows the intensity of brake energy regeneration during overrun and braking to be automatically optimised for the road situation, as detected using data from the navigation system and the driver assistance systems' sensors. When approaching a junction, for example, the level of recuperation can be increased – even if route guidance isn't activated – thereby feeding energy back into the high-voltage battery while harnessing the deceleration effect at the same time. On the open road, meanwhile, the coasting function can take over, allowing the car to “freewheel” with no drive power whenever the driver eases off the accelerator. Energy is no longer supplied to the two electric motors in this state, meaning no battery power is consumed.

Adaptive recuperation is the default setting in driving position D. Alternatively, the driver can choose a high, medium or low brake energy regeneration setting for all driving situations in the BMW iDrive menu. The highest recuperation setting is automatically activated in driving position B, which also produces the characteristic one-pedal feeling.

Information on the energy flow can be viewed in the control display no matter which driving position is selected. The range horizon clearly illustrates the impact of driving style on the high-voltage battery's charge level.

**Innovation: more rounded charging curve thanks to new charging process.**

The charging software from the BMW i4 and BMW iX models has been further refined for the new BMW i7. Once the high-voltage battery reaches a higher charge level, the new charging process aims to ensure the charging rate drops smoothly instead of following the previous "stepped" curve. This produces a more rounded charging curve overall, resulting in even shorter charging times. Following an initial, temperature-dependent phase of constant power supply, the new process now also controls charging based on a continuous nominal voltage curve that makes allowance for the variables of temperature, recharged capacity and charge level at start of charging.

The Combined Charging Unit in the BMW i7 xDrive60 allows AC charging at a rate of up to 11 kW, while DC power can be taken on board at a rate of up to 195 kW. This means the range can be extended by as much as 170 kilometres (106 miles, WLTP) in just ten minutes during a mid-journey stop at a high-power charging station.

**Innovation: improved temperature control for long high-voltage battery life.**

An optimised cooling strategy while DC charging is in progress further improves the durability of the high-voltage battery. Alternating phases of full and partial cooling power are used during fast charging of the BMW i7 to avoid excessive cooling of the battery. This prevents cell temperatures from dropping too low in the process, particularly at higher charge levels, thereby opening up potential for short charging times and reduced ageing of the high-voltage battery's cells.

**Innovation: automated charging profile settings.**

For the first time, the BMW i7 makes it possible to store customised charging settings for multiple individual charging points. These settings will then be automatically restored the next time the car returns to a memorised charging point. In addition to this, preheating of the high-voltage battery can also now be started manually in the BMW i7 when approaching a high-power charging station without the navigation system's route guidance function activated.

Besides the improved charging software on board the new BMW i7, the cloud-based BMW Maps navigation system also helps to further enhance its performance on long journeys. For instance, a charging-optimised route is calculated as soon as the destination has been entered if the vehicle's current range is not enough to reach the

destination. Further improvements have been made to both the calculation algorithm used here and the speed of calculation for charging-optimised routes. More about this can be found in the chapter "Display and operating system, connectivity."

Further all-electric variants are set to join the BMW 7 Series line-up at a later date. These include the BMW i7 M70 xDrive (electric power consumption combined in WLTP cycle: 26.4 – 21.2 kWh/100 km; CO<sub>2</sub> emissions: 0 g/km [figures in NEDC cycle: –]) due to be brought out in 2023, whose output of 485 kW/660 hp promises exceptionally sporty performance for the luxury segment. (The figures relating to output and energy consumption for the BMW i7 M70 xDrive are predicted values based on the car's current stage of development and include temporary boost effects.)

**Enhanced efficiency across all variants: all combustion engines come with new 48V mild hybrid technology.**

Besides the locally emission-free driving pleasure on offer in the new BMW i7, the remaining powertrain variants for the brand's new flagship model are also a shining example of efficiency through electrification. All petrol and diesel units available for the new BMW 7 Series range are members of a new modular generation of the BMW Group Efficient Dynamics engine family and will be equipped with 48V mild hybrid technology worldwide.

Playing a key role here is the world premiere of the eight-speed Steptronic Sport transmission, which is included in all combustion-engined model variants as standard and is unique in this segment. Now installed in its compact housing as part of a 48V mild hybrid system is an electric motor complete with the necessary power electronics, which acts as a crankshaft-mounted starter generator and helps the combustion engine to deliver a smooth, dynamic and, at the same time, efficient drive. The mild hybrid system generates torque of 200 Nm (147 lb-ft) and an output boost of up to 10 kW, depending on the driving situation. This additional drive torque translates into remarkably instantaneous response to the slightest movement of the accelerator, both when pulling away and when putting in a sudden burst of speed.

The powerful starter generator also enables more comfortable operation of the Auto Start Stop function. In the case of the BMW 740i and BMW 735i models with their six-cylinder in-line petrol engines, the mild hybrid system can also be used for driving purely on electric power at very low speeds.

The energy required for providing the electric power boost is stored in a 48V battery located under the luggage compartment. It is charged via recuperation in overrun and braking phases. This provides an efficient means of recuperating braking energy that went unused in the past. Besides supplying the electric motor, the 48V battery also feeds power to the vehicle's 12V electrical system via a voltage transformer.

**BMW 760i xDrive: new eight-cylinder unit with extra technological highlights.**

Under the bonnet of the new BMW 760i xDrive is a 4.4-litre V8 petrol engine, whose power is channelled through to the road via an eight-speed Steptronic Sport transmission and BMW xDrive intelligent all-wheel drive. The new V8 boasts a number of technological highlights that are designed to enhance both its sporty power delivery and its efficiency. It utilises the thermodynamic benefits of a cross-bank exhaust manifold and external engine oil cooling. In addition, a reinforced crankshaft drive, further developed turbocharging with a blow-off valve, a new oil pump and a weight-minimised oil sump all play their part in increasing the engine's efficiency.

The combination of the engine and the electric motor integrated into the eight-speed Steptronic Sport transmission hands customers the twin benefits of optimised response and power delivery under acceleration, and greater efficiency thanks to adaptive recuperation. The controlled intervention of the electric motor also noticeably increases comfort levels when the Auto Start Stop function cuts in and in idling and coasting situations. The coasting function with deactivated combustion engine comes into play in the My Mode Efficient.

With an increased output of 400 kW/544 hp and peak torque of 750 Nm (553 lb-ft), the eight-cylinder engine propels the new BMW 760i xDrive from 0 to 100 km/h (62 mph) in 4.2 seconds. The combined fuel consumption and CO<sub>2</sub> emissions figures come in at 11.2 litres per 100 kilometres (25.2 mpg imp) and 255 grams per kilometre in the WLTP cycle (figures in NEDC cycle: –).

**BMW 740i and BMW 735i with new six-cylinder in-line engines.**

Two model variants in the new 7 Series launch line-up feature six-cylinder in-line petrol engines from the new modular generation. Available in the USA, China and other selected markets, the BMW 740i is fitted with the most powerful version of the new 3.0-litre unit. Its drive system generates maximum output of 280 kW/380 hp and peak torque of 520 Nm (383 lb-ft), which can be briefly boosted to as much as

540 Nm (398 lb-ft) with the help of the mild hybrid technology. The engine powering the BMW 735i (available in China and other selected sales regions) musters 210 kW/286 hp and up to 425 Nm (313 lb-ft).

The various innovations that have a beneficial effect on both the output of the straight-six engines and their efficiency and emissions performance include the Miller cycle (which shortens the opening time of the intake valves), redesigned intake ports and combustion chambers, and an ignition system featuring an active coil with integrated electronics. At the same time, the effectiveness of the turbocharging system and intercooler has also been increased.

The VALVETRONIC fully variable valve control on the intake side is now complemented by switchable rocker arms on the exhaust side, allowing gas exchange to be interrupted, if required. In this way, the engine's frictional torque on the overrun can be reduced by around two thirds. So when the driver releases the accelerator, a higher proportion of the braking energy can be absorbed by the mild hybrid system's generator and fed into the 48V battery by means of recuperation. This also forms the basis for enabling purely electric driving at very low speeds.

Besides this, the VANOS variable camshaft timing now works electrically and the cylinder head with integrated exhaust manifold is now fitted worldwide. Mixture preparation also takes place using a new dual injection system. In addition to the existing high-pressure injection system, some of the fuel is now injected into the combustion chambers via a low-pressure system. The resultant flow behaviour inside the inlet ports and the cylinders results in reduced particulate formation and lower CO<sub>2</sub> emission levels.

The new BMW 740i brings all its sporty essence to the fore with a time of 5.4 seconds for the standard sprint to 100 km/h (62 mph) from rest, while posting combined fuel consumption of 8.0 – 7.0 litres per 100 kilometres (35.3 – 40.4 mpg imp) in the WLTP cycle, equating to CO<sub>2</sub> emissions of 183 – 159 grams per kilometre (figures in NEDC cycle: –). The new BMW 735i, meanwhile, combines a 0 to 100 km/h (62 mph) acceleration time of 6.7 seconds with WLTP fuel consumption and CO<sub>2</sub> figures of 7.9 litres per 100 kilometres (35.8 mpg imp) and 182 grams per kilometre respectively (figures in NEDC cycle: –).

**BMW 740d xDrive: exceptionally efficient diesel engine for Europe.**

A BMW 7 Series model powered by a six-cylinder in-line diesel engine from the new modular generation will be added to the line-up in Europe

and other selected sales regions straight after launch. The new BMW 740d xDrive unites a power unit benefiting from a wealth of detail upgrades with the intelligent all-wheel-drive system's sublime transfer of power to the road. Steel pistons instead of aluminium items enable higher combustion pressures and help to refine the engine sound. When mated to the latest-generation eight-speed Steptronic transmission and its newly integrated electrification features, the result is unprecedented levels of comfort in terms of engine smoothness and sound.

At the same time, the effectiveness of the oil separation process has been enhanced too. The 3.0-litre straight-six engine's new common-rail direct injection system now works with solenoid valve injectors, which deliver up to twelve injections per power stroke with maximum pressure of 2,500 bar.

The new power unit develops a maximum 220 kW/300 hp and peak torque of 650 Nm (479 lb-ft), which can be briefly upped to 670 Nm (494 lb-ft) courtesy of the 48V mild hybrid system. The sustained build-up of torque enables the car to sprint from 0 to 100 km/h (62 mph) in 6.3 seconds. Combined fuel consumption of 6.9 – 5.9 litres per 100 kilometres (40.9 – 47.9 mpg imp) and CO<sub>2</sub> emissions of 182 – 157 grams per kilometre as measured in the WLTP test cycle (figures in NEDC cycle: –) underline the engine's remarkable efficiency.

### **Two plug-in hybrid models due to join the range.**

In early 2023, two plug-in hybrid drive systems are also going to be launched as part of the new BMW 7 Series range and will herald some significant advances over the preceding generation of plug-in hybrid technology in terms of sporting prowess, efficiency, electric range and charging capacity. This is all made possible by fifth-generation BMW eDrive technology, which is featuring in luxury plug-in hybrid models for the first time. It is being deployed in both the new BMW 750e xDrive and a BMW M car, the BMW M760e xDrive.

Like the mild hybrid variants, the new plug-in hybrid models are also host to an eight-speed Steptronic transmission that is making its global debut and is the only one of its kind in this segment. A permanently excited synchronous motor with a nominal output of 145 kW/200 hp has been installed there together with the power electronics, all within the same compact housing used on the mild hybrid variants without taking up any additional space.

The motor draws its energy from a fifth-generation high-voltage lithium-ion battery, which has been integrated into the car's underbody for the first time. This paves the way for combining a high electric range with a luggage compartment capacity that is unchanged compared with the petrol and diesel models with mild-hybrid technology, as well as an almost identical fuel tank capacity. It also gives the plug-in hybrids a low centre of gravity that has a positive effect on their handling dynamics.

The new electric drive unit teams up with a six-cylinder in-line petrol engine and BMW xDrive intelligent all-wheel drive in both models. Thus equipped, the BMW M760e xDrive (fuel consumption combined: 1.2 – 1.1 l/100 km [235.4 – 256.8 mpg imp]; electric power consumption combined: 26.9 kWh – 25.8 kWh/100 km; CO<sub>2</sub> emissions combined: 28 – 25 g/km in WLTP cycle [figures in NEDC cycle: –]) produces 420 kW/571 hp (developed by the combination of the combustion engine with up to 280 kW/380 hp and the electric motor with up to 145 kW/200 hp) and peak torque of 800 Nm (590 lb-ft). Meanwhile, the new BMW 750e xDrive (fuel consumption combined: 1.2 – 1.0 l/100 km [235.4 – 282.5 mpg imp]; electric power consumption combined: 26.9 kWh – 24.5 kWh/100 km; CO<sub>2</sub> emissions combined: 28 – 22 g/km in WLTP cycle [figures in NEDC cycle: –]) posts figures of 360 kW/490 hp (developed by the combination of the combustion engine with up to 230 kW/310 hp and the electric motor with up to 145 kW/200 hp) and 700 Nm (516 lb-ft).

The high-voltage batteries in the new plug-in hybrids can store 18.7 kWh of usable energy, an increase of more than 50 per cent compared with the preceding generation. At the same time, maximum charging capacity has climbed from 3.7 kW to 7.4 kW, enabling the high-voltage battery to be fully recharged from empty in less than three hours. When hooked up to a conventional domestic power socket, a full vehicle charge is completed in around nine hours. There has also been a notable increase in electric range, with drivers now able to enjoy over 80 kilometres (50 miles) of purely electric driving according to the WLTP cycle. (All figures relating to output, charging capacity, battery capacity, fuel/electric power consumption, CO<sub>2</sub> emissions and electric range are provisional. At temperatures below minus 10 degrees Celsius, the plug-in hybrid models' all-electric drive functionality will only be enabled once the battery has warmed up to operating temperature after a few miles of driving.)

# Chassis technology and driving experience.

## The perfect blend of sporting prowess and driving comfort.



The chassis technology for the new BMW 7 Series range has been engineered and tuned to make allowance for both varying customer preferences around the world and the increased diversity of the powertrain portfolio, which ranges from conventional combustion engines to plug-in hybrids and all-electric drive. Wheel suspension, the spring and damping systems, the steering and the braking system are all designed to ensure the latest generation of the BMW 7 Series delivers the blend of dynamic performance and ride comfort for which it is renowned. Intensive testing and the integrated application of all powertrain and chassis systems have ensured all model variants are able to produce a spectrum of handling qualities unrivalled in this segment. As a result, they are equally adept at delivering sporty driving pleasure behind the wheel and outstanding passenger comfort in the rear seats.

The increased body rigidity, larger wheels and broader tyres of the new BMW 7 Series combine with its wider tracks of 1,665 millimetres at the front (+ 47 mm) and 1,650 millimetres at the rear (+ 4 mm) to equip the car even more effectively to provide remarkable agility, precise steering and high lateral acceleration. The sedan's double-wishbone front axle and five-link rear axle have also undergone an extensive upgrade. An elastic steering gear mounting has been fitted on the front axle subframe to improve acoustic properties. This is supplemented by a model-specific motor mount on the BMW i7. In the all-wheel-drive models, an aluminium shear panel now increases torsional rigidity at the front end. The new hydro mounts for the rear axle subframe (bi-directional on the BMW i7) are another contributory factor in the vehicle's enhanced ride comfort.

### **Adaptive two-axle air suspension with electronically controlled dampers as standard.**

All model variants in the new BMW 7 Series range are fitted as standard with adaptive two-axle air suspension with automatic self-levelling as well as adaptive suspension with electronically controlled dampers. The suspension's air supply is controlled individually for each wheel, making it possible to balance out an unevenly loaded car. This enables the

adaptive two-axle air suspension to constantly maintain the optimum ride height at all speeds, resulting in comfortable, assured handling.

In addition to this, the system also allows the height of the body to be adjusted to suit the driving situation. The ride height automatically drops by 10 millimetres in Sport Mode, while in all other My Modes the body is lowered in the same way once the speed passes 140 km/h (87 mph) or, in the BMW i7, 120 km/h (75 mph). The body can also be raised by 20 millimetres at the touch of a button on rough roads, for example, or on steeply angled ramps on the way into garages. A larger pressure reservoir and a new mounting for the air compressor serve to improve the system's working acoustics compared with the previous model generation.

The dampers are controlled electronically for each individual wheel, enhancing the primary and secondary ride at the same time as endowing the new BMW 7 Series with sharper handling abilities. A new rod eye for the rear dampers has brought about a significant improvement in ride quality over small bumps and ridges in the road. The dampers respond adaptively both to road surface conditions and to driving style, with their compression and rebound stages adjusting smoothly and independently of one another in the process. The basic damper setting also varies depending on the selected My Mode. Sport Mode activates optimal damper responses for dynamic handling, creating a noticeable contrast to the more comfort-oriented damper setting in all other My Modes.

**Integral Active Steering gives the car greater poise and makes manoeuvring easier.**

The new BMW 7 Series is fitted as standard with a new version of the Electric Power Steering system, whose ratio now varies with the steering angle. Its functions also include Servotronic speed-sensitive power assistance. The various My Modes again offer a choice of two settings for either very sporty or more comfort-oriented steering response.

The Integral Active Steering available as an option for all model variants in the new 7 Series range makes even lighter work of manoeuvring, increases agility at moderate speeds and enhances poise and assurance when changing lanes and cornering at high speeds. To this end, the rear wheels are turned in either the same or the opposite direction to the front wheels – depending on road speed – by up to 3.5°.

Steering the rear wheels in the opposite direction to the front wheels at low speeds enables easy manoeuvring almost until the car is at a

standstill. This has the effect of making its turning circle around 0.8 metres smaller.

### **Executive Drive Pro with improved roll stabilisation.**

The Executive Drive Pro option offers customers another way of maximising not just the ride comfort of the new BMW 7 Series but also its agility and steering precision. It comprises an active roll stabilisation feature, which employs electric swivel motors to smooth out – exceptionally quickly and precisely – the lateral forces inducing body roll through dynamically taken corners. The latest version of the system uses a 48V electric motor for this purpose.

Executive Drive Pro improves agility, directional accuracy and handling precision, and enables highly dynamic steering response thanks to its ability to stabilise body roll more effectively. As a result, the driver enjoys extremely precise reactions from the steering and particularly fleet-footed performance. The potential for lateral acceleration and dynamic handling is also increased with Executive Drive Pro, due to the optimum distribution of roll moment as a function of the driving state and the resulting balance between the contact forces at the front and rear wheels.

The active roll stabilisation also increases comfort when driving in a straight line by decoupling the fixed connection between each axle's wheels provided by a conventional anti-roll bar. As a result, suppression of body vibrations is also improved when driving straight ahead or at low levels of lateral acceleration: since the adaptive two-axle air suspension with self-levelling function maintains the full range of spring travel even when the vehicle is heavily laden, the addition of active roll stabilisation makes it possible to activate a softer air spring setting and increase ride comfort. The amount of body roll caused by surface imperfections on one side of the vehicle is reduced thanks to the decoupled anti-roll bars. This has the effect of decreasing the lateral acceleration forces and the obtrusive side-to-side head movements they can cause.

As well as reducing rolling movements caused by bumps in the road on one side of the car, the Active Roll Comfort function making its debut in the new BMW 7 Series goes further still by actively adjusting the body height on the corresponding side of the vehicle at the same time. The extended scope of functions included with the Executive Drive Pro option allows the new 7 Series to offer unprecedented levels of ride and passenger comfort.

**BMW M models and cars with the M Sport package have bespoke chassis technology.**

An M-specific version of the Executive Drive Pro system will be included as standard on the BMW M models in the new 7 Series range, which are scheduled for introduction at a later stage. M Sport brakes – with enhanced stopping power and blue-painted callipers bearing the M logo – and 21-inch M light-alloy wheels with mixed-size tyres will also be fitted, adding to the dynamic flair.

Meanwhile, the M Sport package offered as an option for all other model variants includes 20-inch light-alloy wheels with mixed-size tyres and M Sport brakes with blue-painted callipers. The M Sport package Pro brings 21-inch M light-alloy wheels M Sport brakes with black callipers. Riding as standard on 19-inch light-alloy wheels, the new BMW 7 Series can also be specified with 20-inch and 21-inch items in a variety of designs as factory-fitted options, or even 22-inch M light-alloy wheels from the Original BMW M Performance Accessories range.

Performance tyres with a rubber compound capable of transmitting higher cornering forces are also available as an option for the 20-inch light-alloy wheels. These tyres – like those for the 20- and 21-inch light-alloy wheels – have foam absorbers inside them for built-in sound insulation, further increasing acoustic comfort in the cabin of the new luxury sedan.

As well as its tyre pressure indicator for each individual wheel, the new BMW 7 Series also features a digital tyre condition monitoring system as standard. Unique in this segment, this function uses a cloud-based algorithm to detect pressure loss far sooner than the vehicle's Tyre Pressure Monitor can. This is made possible by a diagnostics function in the BMW backend that has been implemented with the help of artificial intelligence (AI). The driver is notified of any pressure loss together with the recommended course of action via the My BMW App (depending on the market, they may also receive a Teleservice message). Statistical information and AI methods can also be employed to predict wear performance for the vehicle's tyres and thereby forecast the remaining tyre life until the recommended minimum tread depth is reached. The digital tyre diagnosis function can be set to automatically inform the customer of any tyre-related technical issue requiring action. Depending on the particular market, notification is sent via the vehicle in the form of a Teleservice message, by e-mail or via the My BMW App.

**Integrated braking system optimises handling characteristics.**

The new BMW 7 Series is equipped with the latest-generation integrated braking system that delivers outstanding stopping power and excellent pedal feel. This system brings together the brake activation, brake booster, brake slip control and vehicle stabilisation functions within a compact module. The brake pressure is transmitted to the brake system's hydraulics by an electric actuator, an operating principle that enhances the dynamics of the system as a whole and ensures significantly faster and more precise interventions by the DSC (Dynamic Stability Control). The integrated braking system generates a degree of stopping power that is matched exactly to the driver's inputs, while also producing excellent pedal feel.

The integrated braking system also provides the relevant brake control functions. The control inputs are calculated and controlled via the individual functions using the sensors fitted. The inputs are applied by the actuator with great dynamism and precision. This enables extremely rapid responses to braking requests from the driver assistance systems and extremely short stopping distances.

The integrated braking system has the additional benefit of enabling the stopping power generated by recuperation and the friction brake to be combined with great precision – on both the conventionally powered and the electrified model variants in the new BMW 7 Series range. Consequently, the driver enjoys superb brake feel in all situations.

**Extremely quick and precise: near-actuator wheel slip limitation.**

The new BMW 7 Series also now comes with near-actuator wheel slip limitation to maximise the car's agility and poise in challenging driving situations. This traction control system is integrated into the engine management, eliminating the long signal paths to the DSC control unit. This allows corrective inputs to be applied up to ten times faster than in conventional systems and with exceptional precision.

Near-actuator wheel slip limitation ensures optimum traction, even on slippery roads, and superb directional stability. Because this function nips any loss of traction in the bud, especially when accelerating hard or taking corners at speed, the DSC system has to intervene far less frequently to maintain composed and assured handling with selective applications of the brakes at individual wheels.

# Driver assistance systems. Intelligent assistance for automated driving and parking.



The new BMW 7 Series also marks the cutting edge of technological development at the Bavarian premium carmaker when it comes to automated driving and parking systems. The luxury sedan boasts the largest selection of standard and optional automated assistance functions ever to be offered for a BMW model. Its innovative technology toolkit featuring the latest generation of cameras and ultrasonic and radar sensors, a new software stack, a powerful computing platform and a 5G link-up to the BMW Cloud lays the foundation for both the outstanding functionality of all current systems and implementation of Level 3 automated driving functions in the medium term.

The BMW Group runs one of Europe's most sophisticated computing centres to help with the development of assistance functions. Highly advanced software algorithms are employed for analysing data and creating an environment model, as well as for visualisation and control functions. 8-megapixel automotive cameras with leading-edge technology from Mobileye are being fitted for the first time anywhere in the world, making it possible to reduce the number of front cameras while still doubling the amount of measurement points. Existing functions can be improved or expanded by means of the Remote Software Upgrades facility, which also lets customers add new functions at a later stage (availability depends on the hardware fitted in the vehicle and the market conditions). Consequently, the new BMW 7 Series will be kept right up to date with the latest software.

## **BMW-typical characteristics optimise collaboration between driver and car.**

The BMW-typical characteristics of the assistance functions are perfectly geared towards providing the driver with the best possible support in all traffic situations. At the same time, their harmonious integration with the powertrain and chassis technology helps to ensure a safe and supremely assured driving experience under all circumstances. All functions are collaborative in nature and can be overridden by the driver at any time. Drivers also have the option of customising the steering and braking functions by adjusting their comfort- and safety-enhancing settings. In this way, the vehicle is able to replicate the customer's personal driving

style more closely, always acting and reacting just how the driver would intuitively expect and providing optimum assistance in every situation.

Interaction between driver and car is further helped by the intuitive operation of the assistance functions and the way they are depicted so clearly in the vehicle. This is done using advanced forms of visualisation not yet found in any competitor, such as the Augmented View function, which appears in the information display – i.e. directly in the driver's line of sight – for the first time in the new BMW 7 Series.

A single button on the steering wheel's left-hand spoke allows both Active Cruise Control with Stop&Go function and the Steering and Lane Control Assistant to be activated with the greatest of ease. Combining the two functions allows Level 2 automated driving, as defined by SAE international standard J3016, to be experienced in a more intense form.

#### **Front-collision warning for improved safety.**

The front-collision warning system fitted as standard in the new BMW 7 Series comes with numerous additional functions and serves to improve safety in urban traffic and many other driving situations. Comprising features such as Collision Warning, pedestrian and cyclist warning with braking function, and Crossroads Warning, the system now reacts to oncoming traffic too. And it can also warn the driver of pedestrians and cyclists who are parallel to the road and approaching the vehicle from the front or rear when turning right (in countries where vehicles drive on the right), reducing the risk of a collision.

The front-collision warning system also helps to increase safety when turning left (in countries where vehicles drive on the right). If a vehicle is approaching on the side of the road the driver needs to cross, visible and acoustic warnings are triggered and the brakes are applied to prevent the driver from continuing with their turn-off manoeuvre. Speed Limit Info with no-overtaking indicator and pre-warning, manual Speed Limit Assist and the Evasion Assistant are likewise all fitted as standard, as is Lane Departure Warning with active lane return, and Crossroads Warning.

#### **Customised level of automated driving for added comfort and safety.**

The optional Driving Assistant upgrades standard specification by adding Lane Change Warning with active lane return, Rear Collision Prevention and rear crossing traffic warning including braking function, which reduces the danger of a collision when reversing towards roads that are difficult to see into.

Another new feature is the exit warning function, which provides a safety boost when the vehicle is stationary. If a vehicle or cyclist is approaching the new 7 Series at speed resulting in a risk of collision on either side of the car if a door were to be opened, the occupants are alerted to the danger by an acoustic signal and either flashing LEDs in the mirror or the ambient lighting and BMW Interaction Bar. The doors are also prevented from opening automatically.

Combining Active Cruise Control with Stop&Go function and the Steering and Lane Control Assistant, the optional Driving Assistant Plus represents another step towards automated driving. The system is on hand at speeds of up to 180 km/h (112 mph). The cruise control functions include automatic Speed Limit Assist, meaning the car's speed is regulated not just by maintaining the desired safe distance from vehicles travelling in front, but also by observing speed restrictions along the route. Speed limits detected either by the Speed Limit Info system, or by looking ahead along the route using data from the navigation system, can automatically be adopted as the new set speed. Meanwhile, the route monitoring function means the nature of the current route can also be factored in when regulating speed. This function uses the navigation system's map to look ahead and reduce the car's speed when approaching a corner, a roundabout, a junction or an exit. The system also adjusts the speed as required before entering built-up areas. After passing through the applicable section of the route at a suitable speed, the system will accelerate the new BMW 7 Series back up to the speed set by the driver or the current speed limit, as appropriate.

The Steering and Lane Control Assistant takes its cues from road markings and vehicles driving ahead and works together with the driver to keep the vehicle in the lane detected by the system. The system's hands-on-wheel detection is very sensitive and recognises contact even when only a few fingers briefly touch the wheel.

### **Driving Assistant Professional with traffic light recognition and Active Navigation.**

On models with the optional Driving Assistant Professional package, cruise control and steering assistance continue to be active at speeds up to 210 km/h (130 mph). Besides this, Active Cruise Control can also take traffic signals into account to help it regulate the vehicle's speed (in Germany). At a large number of traffic signals, if a red light is detected by the system, this is displayed in the instrument cluster and the car is automatically braked to a standstill – either in the first row of vehicles at the lights or behind a vehicle that is also stopping. At a more complex

intersection – for example, where different traffic light signals apply to different lanes – the driver can confirm a detected and displayed red light with the press of a button on the multifunction steering wheel, and the car then brakes smoothly to a standstill. Regardless of whether the cruise control system is activated, at many traffic lights the drive-off reminder tells the driver when the lights switch to green

If Driving Assistant Professional is specified, the Steering and Lane Control Assistant can also come to the driver's aid in situations where the lane narrows, as is the case when driving through motorway roadworks. The system also comprises the Emergency Lane Assistant (can be used in selected European countries), the Lane Keeping Assistant with active side collision protection, and Active Navigation, which helps the driver to keep to the route calculated by the navigation system on motorways. This can also involve use of the Active Lane Change and Merging Assistant, which performs the manoeuvre in question automatically by turning the steering as appropriate and adjusting the vehicle's speed. The package of Driving Assistant Professional functions additionally includes Road Priority Warning and Wrong-way Warning, front crossing traffic warning and the Emergency Stop Assistant (can be used in selected countries).

In North American markets, the Steering and Lane Control Assistant also lets the driver permanently take their hands off the steering wheel when driving on highways or other roads with structurally separated carriageways at speeds up to 130 km/h (81 mph). They must, however, always be in a position to assume responsibility for steering again. The USA also offers a market-specific version of the Active Navigation function, which helps the driver to perform several lane changes in succession until the vehicle reaches a highway exit when route guidance is active.

Assisted View in the instrument cluster gives the driver an overview of the activated systems and their functionality. To this end, the central area of the cockpit display is reserved for a three-dimensional mock-up of the vehicle and its surroundings. Here, the driver can see an image of the cars, trucks and motorcycles detected by the cameras and sensors in the driver's current lane, along with those in any adjacent lanes

**Providing the help required with manoeuvring: Parking Assistant with Reversing Assistant as standard.**

Drivers of the new BMW 7 Series also benefit from effective assistance when parking and manoeuvring as standard thanks to technology such

as Active Park Distance Control (PDC) with sensors at the front and rear. Besides emitting visual and acoustic alerts, this system also offers the option of automatic brake inputs to help avoid collisions with obstacles to the sides and rear of the vehicle. A Reversing Assist Camera is also available as standard.

The standard Parking Assistant, meanwhile, helps the driver to select and park in spaces either parallel or perpendicular to the road. Suitable spaces are detected using ultrasonic sensors and cameras as the vehicle drives past. What's more, the Parking Assistant can be used both to enter and exit spaces. As well as the necessary steering inputs, it also carries out the acceleration, braking and gear changes required for the manoeuvre.

The Reversing Assistant is another element of the Parking Assistant, alongside the Reversing Assist Camera including rear panorama view. It offers the handy option of automated reversing in confined spaces or situations where the driver does not have a clear view, such as multi-storey car parks or the driveways of properties. To do this, it stores the steering movements for any section the car has just driven forward through at no more than 36 km/h (22 mph). The system is then able to reverse the vehicle for distances of up to 50 metres by steering it along the same line it took when moving forward. All the driver has to do is operate the accelerator and brake pedal and monitor the vehicle's surroundings. The Reversing Assistant can back the car up automatically at a maximum 9 km/h (5.5 mph).

The optional Parking Assistant Plus adds Parking View, front and rear Panorama View and 3D View to the repertoire of functions, allowing a 360-degree image of the new BMW 7 Series and its surroundings to be shown from various angles in the control display. Meanwhile, the Remote 3D View function gives drivers the ability to call up a three-dimensional live image of their vehicle and its immediate vicinity on their smartphone.

The BMW Drive Recorder is another feature of Parking Assistant Plus and uses the driver assistance systems' cameras to record video images all around the vehicle, so these can be stored and later either played back on the control display when the vehicle is stationary or exported via the USB interface. It therefore allows the driver to record high-definition videos up to 60 seconds in length while driving through spectacular countryside or performing eye-catching driving manoeuvres, for example, and then save them to a connected USB device. In the event of

a collision, up to 30 seconds of video taken both before and after the impact (i.e. 60 seconds in total) are stored.

If the anti-theft recorder is triggered it will also activate the interior camera in the new BMW 7 Series. If this happens, the system relays a message to the customer's smartphone. The customer can then access and store the images from the interior camera and videos recorded by the cameras at the front and rear of the new BMW 7 Series and on its exterior mirrors.

**Automated parking: remote control and Manoeuvre Assistant.**

The BMW brand is also reinforcing its pioneering role in the field of automated parking and manoeuvring with the arrival of the new generation of its luxury sedan. The Reversing Assistant fitted in the new BMW 7 Series as standard was the first system of its kind anywhere in the world when it was brought out in 2018. On models fitted with Parking Assistant Professional, its capabilities are increased yet further, as it is then able to store steering movements for distances of up to 200 metres and subsequently reproduce them in reverse. Besides this, Parking Assistant Professional also brings further automated parking innovations with it. Instead of just using other vehicles to help it select a parking space and straighten the vehicle when parking, for instance, the system is now also able to use the kerb and any road lines as a guide. What's more, the new remote functionality (est. available from spring 2023) gives drivers the ability to also control all manoeuvres into and out of parking spaces from outside the vehicle using the My BMW App on their smartphone. It is possible to switch between in-vehicle and remote control at any point during the manoeuvre.

The same applies when using the Manoeuvre Assistant, another new feature which uses GPS data and the trajectory data from steering movements to store various manoeuvres covering a distance of up to 200 metres each. Up to ten manoeuvres can be recorded in total at different locations. When the vehicle next arrives at a memorised starting point, the Manoeuvre Assistant will be able to carry out all the tasks required to complete the manoeuvre, controlling the accelerator, brakes and steering as well as changing gear to move forward or reverse. If necessary, the car can switch between the two directions of travel repeatedly while carrying out the corresponding gear changes and steering inputs, for example when negotiating its way through a parking garage with little space and sharp corners. While the automated manoeuvre is being performed, the driver can focus on monitoring the vehicle's surroundings. The remote functionality (est. available from

spring 2023) will give them the option of halting the vehicle at any point, then getting out in order to control the remainder of the manoeuvre from their smartphone. This can be done from a distance of up to six metres from the car.



# Display and operating system, connectivity.

## The new vehicle experience: BMW iDrive and innovative digital services.

The BMW Live Cockpit Plus fitted as standard in the new BMW 7 Series range includes the latest edition of the display/operation system. Boasting new-generation BMW Operating System 8 software along with exceptionally powerful connectivity and data processing capabilities, it takes the interaction between the driver and vehicle into the digital future. The new multi-sensory vehicle experience BMW iDrive system offers many more options for drivers to enjoy easy, intuitive, multimodal control of vehicle, navigation, infotainment and communication functions and also use digital services.

The user experience aboard the new BMW 7 Series is underpinned by intuitive, multimodal operation using the touch-focused BMW Curved Display, voice control, the iDrive Controller, the multifunction buttons on the steering wheel and the optional BMW Natural Interaction gesture control. The fully digital BMW Curved Display and the continually expanding capabilities of the BMW Intelligent Personal Assistant mean the new vehicle experience BMW iDrive has been primarily geared towards interaction using touch and voice control. The customisable displays also help to create a close bond between driver and vehicle. Besides the BMW Curved Display and BMW Interaction Bar, the latest-generation BMW Head-Up Display – also fitted as standard – and the optional Augmented View feature now shown in the information display behind the steering wheel for the first time also help maximise driving pleasure, comfort and safety by providing exactly the right information and optimum guidance in all driving situations.

### **BMW Curved Display: a fully digital setting with superb graphics.**

The BMW Curved Display in the new BMW 7 Series is formed by a 12.3-inch information display and a control display with a screen diagonal of 14.9 inches. The screens are housed together behind a glass surface that curves towards the driver so they merge into a single, fully digital, high-resolution unit. With its ergonomic driver-centric positioning, the BMW Curved Display makes the already intuitive touch control even more user-friendly.

The BMW Curved Display's state-of-the-art graphics and the operating system's menu structure have been designed with a smartphone-style

appearance. The user interface impresses with its striking forms, dynamic light effects, strong depth of colour and modern colour worlds that change depending on the selected My Mode. The graphical layout of the information display and the content shown in the centre of the display can both be adapted to suit the situation and requirements. The clearly structured arrangement of widgets on the control display's home screen provides a simple overview of the menu options and can be configured by the driver, as desired. Frequently used functions can be added to a favourites bar.

The automatic climate control is also operated by voice control or by touching the control display with BMW Operating System 8. Controls for quickly setting the temperature on the driver and front passenger side are shown permanently.

**"Great Entrance Moments": emotional connection with vehicle starts on the approach.**

"Great Entrance Moments" is the name given to the user experience from the point when the driver first approaches the new BMW 7 Series until the journey commences. Once the distance drops below about three metres, the vehicle prepares and carries out a perfectly choreographed sequence of steps. This begins with an orchestrated lighting effect using the exterior and interior lights, including the BMW Iconic Glow kidney grille, the dynamic light carpet in the entrance area, the Panorama glass roof Sky Lounge and the BMW Interaction Bar. When the driver is 1.5 metres away, the greeting scenario proceeds to automatically unlock and open the doors at the same time as playing a start-up animation on the BMW Curved Display. This shows a personal greeting in a welcome window as well as handy suggestions and information, all with some distinctive acoustic accompaniment.

The security-enhanced ultra-wideband (UWB) radio technology included with the standard Comfort Access feature allows precision location pinpointing between the vehicle and the key or compatible smartphone.

**Personalised driving experience with up to seven My Modes.**

The new My Modes create an all-encompassing interplay of vehicle functions, displays and interior ambience. They can be selected very easily by voice command or by using a button on the centre console that replaces the Driving Experience Control switch previously located there. The new BMW 7 Series offers a choice of up to seven My Modes, depending on specification. They each activate specific settings for the powertrain and chassis, the style of the readouts on the BMW Curved

Display and the interior lighting including BMW Interaction Bar. In the case of the BMW i7, the drive sound likewise changes to suit the selected My Mode. And, for the first time, the content shown in the BMW Head-Up Display also adapts when the My Modes Sport and Efficient are activated.

Personal Mode, Sport Mode and Efficient Mode are joined in the new BMW 7 Series by three new My Modes as standard. Expressive Mode blends the driving experience with a particularly dramatic interior mood. Expressive colours and abstract patterns set the tone for visualisation of content on the BMW Curved Display. When combined with the BMW IconicSounds Electric created for the BMW i7 as part of a collaboration between the BMW Group and film score composer Hans Zimmer, switching to Expressive Mode also produces an unconventional soundtrack inside the car that captures the prevailing driving situation with remarkable intensity. In Relax Mode, the focus shifts to well-being, harmony and relaxation, accompanied by graphics on the BMW Curved Display inspired by natural landscapes. The seats' massage function is also activated if fitted, while the BMW i7 generates a subtle and harmonious interior soundscape to match. For the first time, the Digital Art Mode (est. available from spring 2023) offers occupants the opportunity to enjoy an exclusive cultural experience during the journey. It is the work of Chinese multimedia artist Cao Fei, who has created a digital work of art entitled "Quantum Garden" for the first Digital Art Mode.

Theatre Mode features as part of the new in-car entertainment system with BMW Theatre Screen in the rear. When activated, the rear compartment of the cabin is transformed into a private cinema lounge by gracefully lowering the 31-inch BMW Theatre Screen, closing the sun blinds and adjusting the seat position and interior lighting accordingly. Passengers in the rear are also able to select the different My Modes using the BMW Touch Command units.

### **Unique in-car entertainment with BMW Theatre Screen and Amazon Fire TV.**

The BMW Theatre Screen with Amazon Fire TV built-in includes a 31.3" 8K touchscreen display with Bowers & Wilkins surround sound system with optional in-seat exciters, built-in touch screen remotes in the door panels (BMW Touch Command), and an automated rear shade system that closes when the BMW Theatre Screen is turned on.

The BMW Theatre Screen with Fire TV built-in lets passengers enjoy content up to 4K/UHD from popular apps (subscriptions may be required). Stream videos, play games, listen to music, get information, and watch downloaded programs – all while on the road.

Content, services, and features vary, may not be available in all areas and languages, and may require separate subscriptions. For a country-specific streaming and entertainment offer in China, BMW partnered with Huawei and Iqiyi. As a prerequisite for video streaming the Personal eSIM in the vehicle needs to be activated via the data plan of the customers' mobile network operator.

### **BMW Intelligent Personal Assistant with new skills.**

The BMW Intelligent Personal Assistant in the new BMW 7 Series comes with additional skills and new features for enhanced interaction, meaning the perfect digital companion for every journey just got even better. Information can now be processed faster, while an instant text display underneath the Intelligent Personal Assistant graphic also now indicates the command that has just been understood and processed by the voice assistant. Naturally formulated spoken instructions can also be used in the new BMW 7 Series to activate driver assistance systems, for instance, adjust the transparency of the Panorama glass roof Sky Lounge or open the doors (on models fitted with the automatic doors option). Plus, the Intelligent Personal Assistant now reacts to instructions from passengers in the rear for the first time.

Communicating with the voice assistant has been made even more interactive and dynamic thanks to its new ability to transform into some 20 different icons. In addition to this, the Intelligent Personal Assistant can now assume a more animated "Expressive" look when required, featuring a pair of eyes that brings it even more to life.

### **Innovation: BMW Maps navigation system with improved functions for charging-optimised route planning.**

The cloud-based BMW Maps navigation system boasts even better performance, enhanced accuracy and remarkably intuitive destination entry in the new BMW 7 Series. Forming part of the standard-fitted BMW Live Cockpit Plus, the new-generation BMW Maps system enables very fast and dynamic route calculation based on precise real-time traffic data transmitted at short intervals combined with forecasting models.

As soon as the destination has been entered in the BMW i7, a charging-optimised route will be calculated if the vehicle's current range is not

enough to reach the destination. Further improvements have been made to both the calculation algorithm and the speed of calculation for charging-optimised routes. Important additional information about the charging stops has been added in the route summary, such as the estimated charge level upon arrival, the recommended charging time and the target charge level for the onward journey. Live data is processed during the journey, allowing new charging stations to be automatically added to the itinerary if any of the stations originally planned for charging stops no longer have any availability. The driver is also now offered alternative charging-optimised routes, where available. By default, the system is set to ensure that the vehicle reaches both the final destination and the charging stops with a charge level of at least 10 per cent. Drivers are now able to adjust this spare charge setting if required.

Charging the BMW i7 is even easier than with the BMW i4 and BMW iX, thanks to the authorisation and start functions for the charging process now being integrated into the My BMW App.

The new Augmented View function included as part of the optional BMW Live Cockpit Professional forms a perfect complement to the navigation system's instructions in crucial situations, enabling exceptionally accurate guidance while driving. For this purpose, a live video stream from the driver's perspective is shown on the information display behind the steering wheel in the new BMW 7 Series and augmented by supplementary information that matches the context. When dealing with confusing junctions, for instance, an animated directional arrow is integrated into the video image to help the driver take the best turn-off for the planned route. In addition to this, information on applicable local parking regulations also appears in the live video stream in augmented reality form.

### **Front-seat entertainment: YouTube streaming on the BMW Curved Display.**

The new BMW 7 Series will allow the driver and front passenger to watch video on demand services on the control display for the first time (est. available from spring 2023). This means they can pass the time while waiting for the vehicle to recharge or be refuelled, for example, by enjoying a diverse programme of in-car entertainment.

Starting with YouTube, the range of available services is set to expand continually as the BMW Group adds further third-party apps. The Personal eSIM in the vehicle has to be activated for video streaming.

### **Optimum connectivity with 5G and Personal eSIM.**

The new BMW 7 Series is moving into the era of 5G. If the customer selects the optional Personal eSIM, it will be integrated into the vehicle alongside the Vehicle SIM. DSDA (Dual SIM Dual Active) capability allows the two SIMs to be active simultaneously, and both are designed for the new 5G mobile technology. The Personal eSIM essentially turns the car into another digital and connected device in the customer's ecosystem. Mobile reception is significantly improved by the vehicle's own 5G antenna system.

The Personal eSIM allows the customer to use the communications and connectivity functions covered by their mobile contract from their car with ease – even in situations where they don't have their smartphone with them. Users can extend an existing mobile contract by activating the Personal eSIM via one of the available network operators. What's more, the Personal eSIM isn't linked to just one car, but the user's BMW ID – meaning it can be transferred to other BMW vehicles with Personal eSIM functionality.

### **Telephony highlight for the rear.**

The new BMW 7 Series also allows passengers in the rear to use the integrated audio system for making phone calls. The Touch Command units in the rear doors enable them to both access their contacts and place or accept calls. The built-in head restraint speakers that are optionally available as part of the Bowers & Wilkins Diamond Surround Sound System ensure premium audio quality for hands-free phone calls. Calls can either be kept within the occupant's personal audio zone or shared with the rest of the vehicle. The microphones filter out unwanted background noise, guaranteeing outstanding audio quality.

### **BMW Digital Key Plus is turning into a full-function vehicle key.**

The optional BMW Digital Key Plus enables customers to automatically lock and unlock their new BMW 7 Series with their Apple iPhone when close to the vehicle by means of security-enhanced ultra-wideband (UWB) radio technology, making a conventional car key superfluous. There is no need to even remove the iPhone from their pocket as they approach the car or walk away. Once they have got in, the Apple iPhone can continue to be simply left in the user's pocket or placed in the smartphone tray. At a later stage, the Digital Key Plus will be capable of enabling additional functions to be performed in the vicinity of the vehicle via the My BMW App using UWB technology. These will include automatic opening and closing of the doors and boot as well as partial activation of the alarm system.

The BMW Digital Key Plus can be set up using the My BMW App. The car owner can also share it – and therefore access to the vehicle – with up to five other users.

**Interior camera for snapshots and taking a glance inside the car using the My BMW App on a smartphone.**

The new overhead interior camera can be used by the car's occupants to take snapshots during the journey, allowing them to capture special moments and share them with friends and family. Pictures can be transmitted by simply scanning a QR code in the control display with any smartphone connected to the car via WiFi.

Customers are also able to have pictures from the interior camera sent to their smartphone using the My BMW App's remote function if they wish to glance inside the car to check whether bags or other items have been left there, for example. The interior camera is also activated together with the anti-theft recorder, which starts a recording of the interior the instant the vehicle's anti-theft alarm system is triggered.

**BMW ConnectedDrive Store: digital interface for BMW ConnectedDrive Upgrades.**

Customers can use the BMW ConnectedDrive Upgrades service to have selected functions activated in the new BMW 7 Series at a later stage. The new BMW ConnectedDrive Store provides a central interface for adding these functions. Customers can call up an overview of functions they have already added in the control display and add further functions at any time. For greater flexibility, functions can be added for a selected period of one month, one year, three years or permanently. Plus, certain functions are also available for a free trial.

The vehicle may suggest functions the customer could add depending on the driving situations encountered. The selection of functions that can be added from the BMW ConnectedDrive Store ranges from steering wheel heating to Parking Assistant Professional to Driving Assistant Plus.

## BMW Charging. Included as standard.



The key benefit of the BMW Charging offering for public charging stations is the attractive kilowatt hour tariffs for AC and DC charging in Europe, which are set for each country and do not vary regardless of the charging infrastructure operator or the advertised price on the charging point. The high-power charging network run by the BMW Group's joint venture IONITY also forms part of the BMW Charging network. The basic monthly fee for BMW Charging and IONITY is waived for BMW i7 drivers – as it is for BMW i4 and BMW iX drivers – for the first 12 months following registration of their new vehicle. All BMW Charging customers will now be charging their car with 100% green electricity.

BMW i7 models in Europe are supplied complete with a BMW Charging Card, a charging cable (mode 3) for use at public charging stations and the Flexible Fast Charger. As well as a third-generation BMW Wallbox, other home charging products are also offered in cooperation with expert partners. These include a Smart Wallbox with extensive connectivity options enabling features such as billing in accordance with calibration law regulations and intelligent control of vehicle charging, as well as hassle-free installation of charging hardware and special green electricity tariffs.

In Europe alone, BMW Charging provides access – with a one-off registration – to more than 305,000 public charging points run by around 1,000 charging infrastructure operators. In Germany, users are able to access over 58,000 charging points operated by some 450 power suppliers. This makes BMW Charging one of the leading providers in terms of market coverage.



# **Sustainability in product design and manufacturing.**

## **Driving pleasure and prestige against the backdrop of responsibility.**

The BMW Group is relentlessly pursuing its goal of being the most successful and also the most sustainable manufacturer of premium cars. Continuous improvements to efficiency and systematic electrification enabled the company to cut its brands' fleet CO<sub>2</sub> emissions by 53 per cent between 1995 and 2020. The BMW Group continued in very much the same vein in 2021, beating its CO<sub>2</sub> emissions targets in the EU. According to its own calculations, the company undercut the target fleet value of around 126 g/km for the 27 EU countries plus Norway and Iceland by some ten grams, with WLTP fleet emissions of 115.9 grams per kilometre.

Improving sustainability is not just about drive systems with minimal or zero local emissions. Instead, consideration is given to the complete lifecycle of a vehicle, from development and procurement of raw materials through manufacturing and the use phase to subsequent recycling. The BMW Group has set itself the target of reducing carbon emissions throughout the value chain by 40 per cent by 2030. It is also the first German carmaker to have joined the Business Ambition for 1.5°C campaign led by the Science Based Targets initiative (SBTi). The company's roadmap to climate neutrality is therefore following a scientifically validated and transparent route that is in tune with the Paris Agreement's most ambitious objectives. At the same time, the company has also undertaken to meet the target of complete climate neutrality throughout the value chain by 2050 at the latest.

### **New BMW 7 Series plays a distinct role in helping to achieve the sustainability goals.**

The new BMW 7 Series range makes its own individual contribution to efforts to reduce the ecological footprint throughout the product lifecycle. Consequently, the brand's new flagship model delivers the ultimate in driving pleasure and prestige against a backdrop of a responsible corporate strategy that sets ambitious sustainability targets for each model and each model range. Implementation of the appropriate measures at all stages of the value chain makes the new BMW 7 Series a unique proposition within its segment.

This is particularly true of the BMW i7 with its all-electric drive system. The premiere of a fully electrified model variant represents the new BMW 7 Series range's most valuable contribution to accomplishing the sustainability goals and underlines how the company is endeavouring to cut carbon emissions in the use phase of the entire fleet and across all segments by a further 50 per cent by 2030 (compared with the figure for 2019).

### **Carbon footprint for the new BMW i7.**

The global warming potential of the BMW i7 xDrive60 throughout its lifecycle is around 33 / 39 per cent lower respectively than that of the new petrol-engined BMW 740i xDrive / BMW 740i when using the current EU electricity mix. If renewable power is used for charging, the difference in lifecycle global warming potential increases even further to around 60 / 64 per cent respectively. The carbon footprint for the new BMW i7 will be stated in a validation certificate endorsed by independent auditors by the time production starts in July 2022.

A particularly rigorous approach is taken to reducing the CO<sub>2</sub> emissions released during production of the fifth-generation BMW eDrive technology fitted in the new BMW i7. In the supply chain alone, utilising green electricity for battery cell production and making increased use of secondary raw materials cuts CO<sub>2</sub> emissions by around 20 per cent compared with a vehicle where these measures are not deployed.

### **Responsible raw materials production.**

The sustainability targets defined for all model variants in the new 7 Series range also include the upstream production chains. The BMW Group has undertaken to create the most sustainable supply chain anywhere in the automotive industry. The focal points on the purchasing side are compliance with environmental and social standards, respect for human rights, conservation of natural resources and reduction of CO<sub>2</sub> emissions. Measures for optimising sustainability are therefore established in consultation with suppliers, such as using secondary raw materials and harnessing renewable energy.

Besides an eco-friendly manufacturing process, consideration is also given here to the recyclability of the component in question and to health-related aspects. The checks also include ensuring that potentially allergenic materials, such as nickel, are not used in areas where they could be touched by customers.

This holistic approach to improving sustainability also embraces those technological developments that make it possible to reduce the use of critical materials, or even dispense with them altogether. For instance, a design principle has been devised for the electric motors forming part of the fifth-generation BMW eDrive technology in the BMW i7 (which are also manufactured at BMW Group Plant Dingolfing alongside the car) that eliminates the need to use rare-earth metals in the rotor. Instead of the customary magnets for which these raw materials are needed, an electrically excited rotor is used to ensure both instantaneous and precisely controllable actuation of the electric drive. The BMW Group has thereby capitalised on its industry-leading development and production expertise in the field of drive systems to enable it to manufacture electric motors irrespective of the availability of critical raw materials.

The BMW Group procures the cobalt required to manufacture the battery cells itself, before making it available to the battery cell suppliers. This gives the company complete transparency with regard to the material's origin and the mining methods used.

Although no cobalt from the Democratic Republic of the Congo (DRC) is being used in the battery cells for fifth-generation BMW eDrive technology, the BMW Group is following the principle of "empowerment before withdrawal" by participating in a local project there. The company, together with its partners, has commissioned the German Agency for International Cooperation (GIZ) to develop measures aimed at improving working and living conditions for both artisanal mine workers and the inhabitants of nearby communities. If the project is successful, having cobalt supplied directly from the DRC could become an option for the BMW Group once more.

Lithium is another raw material that is vital for the production of high-voltage batteries but classified as critical. The BMW Group again sources this raw material directly before supplying it to battery cell manufacturers. This ensures complete transparency regarding its origin. In 2019, the BMW Group already signed a supply agreement for lithium from hard-rock deposits in Australian mines. Since 2022, the company has additionally been procuring lithium from Argentina, where this raw material is extracted from the saline water in salt lakes using an innovative technique, minimising the impact on local ecosystems and communities.

The BMW Group has also commissioned two prestigious American universities to carry out a study into sustainable lithium extraction

in Latin America. The aim of the study is to investigate the impact of lithium extraction on local water supplies.

**Use of secondary materials and renewable raw materials.**

Among other sustainability goals set out by the BMW Group is the increased use of secondary raw materials in vehicle production. The company is pursuing the vision of a circular economy with the aim of keeping raw materials within a loop for as long as possible, thereby reducing the input of primary materials as well as the associated potentially environmentally harmful mining of raw materials and their often energy- and carbon-intensive processing. At present, vehicles are manufactured using nearly 30 per cent recycled and reused material on average. The 'secondary first' approach is intended to gradually increase this figure to 50 per cent.

To reduce the input of primary aluminium, which leads to a particularly energy-intensive manufacturing process, the BMW Group has decided to make targeted use of secondary material for this high-grade lightweight metal. The proportion of secondary aluminium used in manufacturing the castings for the models in the new 7 Series range is already up to as much as 50 per cent.

The BMW Group has created closed loops for steel and aluminium between the plants responsible for the new BMW 7 Series in Dingolfing and Landshut as well as its suppliers. Using secondary materials instead of primary materials brings about a substantial reduction in CO<sub>2</sub> emissions of around 80 per cent for aluminium and up to 70 per cent for steel (depending on the exact alloy/material composition). Utilizing secondary materials has the additional benefits of preserving natural resources and helping to prevent infringement of environmental and social standards along the entire supply chain.

All steel waste from the BMW Group's press shops is supplied to steel companies and reused. Aluminium waste from the Dingolfing and Munich plants is likewise sent to aluminium companies, with some 70 per cent of the residual material eventually being reused as part of a direct closed-loop system.

The cabin of the new BMW 7 Series features carefully selected materials combining top standards of quality with a high sustainability factor. The key considerations here are conservation of resources, energy efficiency in manufacture and suitability for recycling. The floor coverings in the new BMW 7 Series are made from a synthetic yarn that is produced from

recycled nylon waste material in a specially developed process. The source material for this includes fishing nets recovered from the sea along with worn flooring and residual waste from plastics manufacturing. Using this material, which is known by the name of Econyl, helps to both preserve resources and reduce climate-damaging emissions. The process for manufacturing the recycled plastic emits around 80 per cent less CO<sub>2</sub> than conventional production of petroleum-based nylon.

High-quality recycled material is also featured in a multitude of other components in the new BMW 7 Series. The substructure of the door panelling, the cowl panel cover, the bumper guides and the surround for the front grille, for example, are all made from up to 100 per cent reused plastic. Meanwhile, the fibres used for the surface material of both the headliner and the A-, B- and C-pillar trim originate entirely from recycled PET bottles. The cable ducts are manufactured using between 60 and 100 per cent recycled plastic.

The new high-quality upholstery material Veganza offers properties similar to leather as far as seat comfort and surface feel are concerned. At the same time, this material heralds a CO<sub>2</sub> saving of around 85 per cent compared with full leather trim. The materials used for leather upholsteries come from controlled sources either in Europe or the USA, Canada and Mexico.

The use of natural-fibre materials likewise has a positive effect on the environmental footprint of the new 7 Series. Not only do they weigh around 30 per cent less than the equivalent plastic materials, they also result in deductions from the calculated CO<sub>2</sub> figure, as they absorb CO<sub>2</sub> while growing and release oxygen. Natural fibres are used for various components in the new BMW 7 Series, including the support for the centre console's sub-structure.

### **Electricity from renewable resources for component and vehicle manufacture.**

CO<sub>2</sub> emissions from vehicle production have been lowered by over 70 per cent since 2006. All plants in the BMW Group's international production network have been operating a net carbon-neutral policy since 2021. The electricity purchased for production of the new BMW 7 Series at BMW Group Plant Dingolfing is fully renewable.

Electricity from renewable sources represents one of the most important levers for cutting CO<sub>2</sub> emissions in the supply chain too. The BMW Group has signed over 400 contracts with suppliers agreeing the use of green

power, encompassing not just manufacturers of battery cells for the fifth-generation BMW eDrive technology, but also aluminium suppliers and manufacturers of aluminium components. Since February 2021, the BMW Group has been procuring aluminium manufactured in the United Arab Emirates with the help of solar power. Electricity generated in a vast solar park located in the desert outside Dubai is used for producing the lightweight metal. The quantity of aluminium acquired that has been produced using solar power covers nearly half the annual requirements of the light metal foundry at BMW Group Plant Landshut, whose output includes the casings for the latest-generation electric motors fitted in the BMW i7.

Starting in 2024, the new BMW 7 Series will also benefit from the switch to cast aluminium wheels manufactured entirely using green electricity. This will see the BMW Group take another step towards its target of establishing the most sustainable supply chain in the entire automotive industry. The switch will apply to both the extremely energy-intensive electrolysis stage during aluminium manufacture and the process of casting the wheels. The necessary agreements for this have been reached with all the BMW Group's wheel suppliers.

Wheels have hitherto accounted for some five per cent of the CO<sub>2</sub> emissions produced in the supply chain. This figure will be more than halved by the switch to more sustainable production using green electricity. The BMW Group is supplied with around 10 million light-alloy wheels every year, 95 per cent of which are cast aluminium wheels. The company will be able to ensure that the aluminium material is handled in a conscious and sustainable way by the contracted manufacturers by conducting independent inspections and will save as much as 500,000 tonnes of CO<sub>2</sub> per year.

### **Sustainable production at BMW Group Plant Dingolfing.**

All model variants in the new BMW 7 Series range will be built at BMW Group Plant Dingolfing. The plant in Lower Bavaria is the first facility in the BMW Group's international production network to manufacture all-electric, plug-in hybrid and combustion-engined models on a single assembly line. Besides being the lead plant for luxury models, BMW Group Plant Dingolfing is also home to the company's competence centre for electric drive system production, whose tasks include manufacturing both the electric motors and the high-voltage batteries for the BMW i7 directly on site. As part of the ongoing transformation to electric mobility, manufacturing capacity and the workforce at the competence centre for electric drive system production have both been

expanded significantly in recent times – from around 600 employees at the start of 2020 to over 2,000 now.

Many other measures have been implemented with a view to making production of the new BMW 7 Series at BMW Group Plant Dingolfing sustainable, besides purchasing green energy. The plant succeeded in integrating body production for the new models into the body shop's existing facilities, despite them not having been originally designed to be adaptable for successor production. This means that much of the machinery there can continue to be used, along with several hundred production robots. Tens of millions of euros are currently being invested in the paint shop to reduce its resource consumption. New cathodic dip coating lines and a dry separation system are being installed there that will reduce both water and energy requirements significantly. Rather than being recycled as process heat as in the past, the waste heat given off by the drying processes will be used for generating electricity in future.

Energy-efficient machinery, packaging planning and transport logistics form further aspects of sustainable production, as do recycling and water management. The plant is piloting the use of electric trucks for internal goods transport. The recycling rate at the Dingolfing plant exceeds 90 per cent, while the recovery rate is even higher at over 99 per cent. As a result, BMW Group Plant Dingolfing produced a mere 580 grams or so of residual waste per manufactured vehicle in 2021. And over 40 per cent of the water needed is sourced from the plant's own wells, reducing the burden on the region's drinking water reserves.

### **Systematic reduction of CO<sub>2</sub> in the use phase.**

The BMW 7 Series is a technology flagship and driver of innovation for the BMW Group's entire product range, and this also applies to technological innovations designed to increase efficiency during the use phase. All model variants come with the latest generation of the all-electric, plug-in hybrid or combustion-engined drive system that powers them.

The new BMW i7 is fitted with an upgraded version of adaptive recuperation for increased efficiency and range. When combined with an anticipatory style of driving, this adaptive recuperation function allows more than 90 per cent of all deceleration to be performed using brake energy regeneration alone, without any need to trouble the braking system. Optimised control of the high-voltage battery's temperature prolongs its service life. BMW Charging customers are able to replenish

the high-voltage battery purely with carbon-neutral energy from all power suppliers.

The new plug-in hybrid model variants set to be brought out at a later date boast a much longer electric range than the outgoing generation. The standard BMW eDrive Zone function can automatically trigger the switch to the pure-electric driving mode when entering city centres, thereby making the most of the plug-in hybrid drive's potential for providing locally emission-free mobility. The BMW eDrive Zone function is already available in 138 European cities, where vehicles can recognise the designated zones with the help of geofencing technology and GPS. Associated with this is a bonus system unique worldwide. Here, drivers of BMW plug-in hybrid models earn points for every all-electric mile they clock up, with double points awarded in eDrive Zones. These points can then be redeemed against electricity for charging the car.

On all other models, petrol and diesel units from the new BMW Group Efficient Dynamics engine family are combined with the latest 48V mild hybrid technology. This has the effect of compensating for the additional fuel consumption caused by the car's far more extensive standard specification, and actually more than cancels out the difference on some model variants. This is further helped by the intelligent lightweight design measures for the body and chassis of the new BMW 7 Series as well as its optimised aerodynamic properties. The flush-fitting door handles and aerodynamically optimised light-alloy wheels are two of the new features that serve to streamline airflow.

Digital technology is also used to boost efficiency on all model variants. The new Efficiency Trainer keeps the driver permanently informed of the driving state and energy flow as well as encouraging them to drive in the most efficient way possible. At the same time, the new My Modes provide a complete efficiency experience. The driver receives advice on throttle control for the situation at hand in both the information display and the optional BMW Head-Up Display. A power meter displays tips for accelerating, decelerating or driving at a constant speed efficiently. In the process, camera and navigation system data is also used to assist with anticipatory driving when approaching a junction, a built-up area or a change of speed limit. The driving style analysis provides an evaluation of acceleration behaviour and anticipatory use of the accelerator. The reward for efficiency-optimised driving is extra range.



# The history of the BMW 7 Series.

## A time-honoured blend of elegance, dynamic excellence and innovation.



Ever since the first generation made its debut in 1977, the BMW 7 Series has embodied the definition of highly exclusive individual mobility in its very distinct, very BMW way. A design exuding prestigious elegance has gone hand-in-hand with supreme interior comfort and the driving pleasure for which the Bavarian brand is renowned. From the outset, this combination has delivered a level of dynamic handling without equal in the luxury sedan segment. And with each new model generation, the 7 Series takes its outstanding driving qualities and the levels of comfort and well-being enjoyed above all in the rear seats to new heights.

Another hallmark of the BMW 7 Series is its status as an innovation leader and a pioneer of trailblazing technological solutions. This has a positive impact not only on the vehicle's handling characteristics but also on its efficiency and sustainability, the selection and processing of the materials employed in its construction, and its operation and connectivity. The BMW 7 Series leads the way in ground-breaking exterior and interior design, sets new standards of digitalisation, and paves the way for innovative production processes that combine uncompromising premium quality with resource conservation and the ongoing reduction of its carbon footprint.

### **1977: The first-generation BMW 7 Series – the sportiest player in the luxury sedan segment.**

The very first generation of the BMW 7 Series laid down clear benchmarks in terms of poise, assurance and driving dynamics. With its elongated lines, driver-centric cockpit, powerful engines and sophisticated suspension technology, from the outset the BMW 7 Series lived up to its billing as a sporty luxury sedan. Among its innovations were the world's first electronic speedometer, speed-sensitive power steering and electrically adjustable exterior mirrors. In 1980, the world's first on-board computer with outside temperature display joined the line-up.

In 1979, BMW replaced the carburettor engines with fuel-efficient petrol injection versions. The BMW 728i was introduced in place of the BMW 728 and BMW 730 models, while the BMW 733i was succeeded by the BMW 732i that came with globally unique digital engine electronics. The

previous year, the BMW 735i had joined the range with its 3.5-litre displacement and 218 hp. Top of the line from 1980 was the BMW 745i, powered by a 252 hp six-cylinder engine with turbocharger and intercooler.

**1986: The second-generation BMW 7 Series – featuring Germany's first 12-cylinder engine of the post-war period.**

With its harmonious lines, sporty performance and innovative suspension control systems, the second-generation BMW 7 Series made a sparkling debut in 1986. At the front end, the wide BMW kidney grille conveyed a powerful presence, while at the rear, L-shaped tail lights became a new BMW brand signature. This was also the first BMW 7 Series to be offered in a long-wheelbase version. The key technical innovations included ASC (Automatic Stability Control), along with an electronic accelerator and drag torque control.

The BMW 750i launched in 1987 was the first 12-cylinder sedan to be built in Germany since the late 1930s. The 5.0-litre V12 light-alloy engine featured separate fuel injection, ignition and catalytic converter systems for each bank of cylinders. Despite an impressive output of 220 kW/300 hp and maximum torque of 450 Nm (332 lb-ft), it made do with regular fuel. Also celebrating its debut in the 12-cylinder model was BMW's adaptive transmission control tech, known as AGS. Two straight-six models and two V8s completed the line-up.

**1994: The third-generation BMW 7 Series – with trailblazing innovations and the first diesel engine.**

With virtually unchanged exterior dimensions, a sensitive evolution in design and further progress in terms of comfort and driving dynamics, the third generation of the BMW 7 Series took up where its successful predecessor left off. Initially there were two eight-cylinder engines and a new edition of the 12-cylinder model. The displacement of the V12 was increased to 5.4 litres and its output to 240 kW/326 hp. At the same time, the average fuel consumption of the BMW 750i fell by approximately 11 per cent.

New driving stability systems also made the third-generation BMW 7 Series a trendsetter in terms of active safety: along with anti-lock brakes, the V8 models were optionally available with ASC (Automatic Stability Control), while the BMW 750i came with DSC (Dynamic Stability Control) as standard. The comfort-enhancing features of the 7 Series also reached new heights, with notable highlights including an integrated navigation system with a colour monitor that doubled up as a display for

other functions. And to raise safety another notch or two, BMW equipped the luxury sedan with up to eight airbags and a tyre pressure control system christened RDC.

In 1995, a new straight-six engine was added to the range, while just 12 months later BMW launched a new generation of V8s. The BMW 725tds, which joined the line-up in 1996, offered a particularly economical alternative. Its 2.5-litre six-cylinder diesel engine developed 105 kW/143 hp while delivering impressive economy and exemplary smoothness. This was followed in 1998 by the BMW 730d with a 3.0-litre common-rail six-cylinder engine developing 135 kW/184 hp. Then, in 1999, the BMW 740d raised the bar even higher as the world's first sedan to feature a V8 diesel with common-rail fuel injection and an output of 180 kW/245 hp.

### **2001: The fourth-generation BMW 7 Series – driving progress.**

Newly designed from the ground up, the fourth-generation BMW 7 Series offered an avant-garde reinterpretation of the classic luxury sedan blueprint. With its latest model, BMW upped the ante in many respects, bringing new ideas to the automotive sector as a whole. Examples included the ground-breaking BMW iDrive control concept and the modern BMW design language. Further innovations followed in 2005 with BMW Night Vision and the first high-beam assistant in Europe.

The BMW 735i and BMW 745i hosted newly developed eight-cylinder engines with infinitely variable valve timing (double VANOS) and valve lift adjustment (VALVETRONIC). The power from the engines was channelled through the world's first standard-fitted six-speed automatic transmission. The flagship model of this generation of 7 Series was the BMW 760i launched in January 2003 with a 6-litre 12-cylinder engine developing 327 kW/445 hp and peak torque of 600 Nm (442 lb-ft). Joining the line-up in autumn 2005 were two diesel models – the BMW 730d and BMW 745d, also featuring higher outputs. In autumn 2006, BMW became the world's first car maker to present a hydrogen-powered luxury sedan, which was based on the BMW 760Li. The BMW Hydrogen 7 with bi-fuel 12-cylinder combustion engine was the world's first hydrogen vehicle to have come through the full series development process. It was produced in a small series of 100 cars and handed over to a selected group of customers to be used in everyday conditions.

To attain peerless driving dynamics and comfort, the BMW 7 Series was equipped not only with a largely aluminium chassis and EDC (Electronic Damper Control), but also with Dynamic Drive active roll stabilisation. In

2004, BMW's flagship model topped the worldwide sales charts for luxury sedans, making the BMW 7 Series once again the best-selling car in its segment.

**2008: The fifth-generation BMW 7 Series – redefining ride quality and style.**

The fifth generation of the BMW 7 Series took to the stage with an all-new interpretation of style, luxury and ride quality. The combination of an all-new chassis, the global debut of Integral Active Steering and a unique composition of driver assistance systems paved the way for an exceptional driving experience. Innovative infotainment functions such as unrestricted on-board internet completed the picture.

Customers could choose from a range of six- and eight-cylinder models from launch. These were soon followed by the top-of-the-line BMW 760i and BMW 760Li. The newly developed 6-litre 12-cylinder engine with TwinPower Turbo technology and direct petrol injection was harnessed to a likewise all-new eight-speed automatic transmission and developed 400 kW/544 hp with maximum torque of 750 Nm (553 lb-ft). 2009 saw the first appearance of the BMW xDrive intelligent all-wheel drive system in the prestigious luxury sedan segment. Another new arrival was the BMW ActiveHybrid 7, with a sophisticated drivetrain that combined a V8 combustion engine with an electric motor.

**2015: The sixth-generation BMW 7 Series – the first to offer plug-in hybrid drive.**

The sixth generation of the BMW 7 Series introduced a wealth of visionary technologies. The use of carbon-fibre reinforced plastic in the body structure, the plug-in hybrid drive system in the BMW 740e, BMW gesture control, the active suspension control system Executive Drive Pro, the Driving Experience Control switch with ADAPTIVE mode, and BMW Laserlight together delivered a marked boost in dynamic performance, efficiency, comfort and safety. The sense of well-being in the rear seats was enhanced not least by the Executive Lounge package with massage function and Vitality Programme. The innovative nature of the BMW 7 Series was further underlined by a substantially expanded range of driver assistance systems, including the Steering and Lane Control Assistant and Remote Control Parking.

At launch, the engine line-up included an extensively upgraded V8 and the BMW Group's latest generation of straight-six units. A new V12 engine developing 448 kW/610 hp arrived the following year in the BMW M760Li xDrive. No fewer than three plug-in hybrid variants of this

latest 7 Series demonstrated the luxury sedan's commitment to expanding electrification. The combination of a combustion engine and electric motor was available in standard or long-wheelbase models, as well as in conjunction with the BMW xDrive intelligent all-wheel drive.