

The new BMW 5 Series Sedan Contents.



Model variants at market launch.	2
---	---

Vehicle concept and design.

The world's most successful business sedan - digital, dynamic and, for the first time, all-electric.	7
---	---

Interior and equipment.

Driving pleasure and travel comfort combined with innovative flair.	12
--	----

Drive and charging technology.

Consistent electrification to achieve outstanding efficiency.	18
--	----

Driving experience: chassis technology.

Refined sportiness in hallmark BMW harmony.	28
--	----

Driving experience: driver assistance systems.

Intelligent systems for automated driving and parking.	34
---	----

Display and control system, connectivity.

Intuitive operation & new digital experiences with latest-generation BMW iDrive.	39
---	----

Charging solutions from BMW Charging.

Introducing Connected Home Charging and Multi Contract Plug & Charge.	50
--	----

Product and manufacturing sustainability.

Holistic concept for using resources sustainably.	54
--	----

The history of the BMW 5 Series.

Half a century of dynamic performance and driving comfort.	62
---	----

The new BMW 5 Series Sedan. Model variants for market launch.



BMW i5 eDrive40:

Fifth-generation BMW eDrive technology, electric motor on the rear axle, system power output: 230 kW/313 hp at 8,000 rpm, 250 kW/340 hp in My Mode SPORT, max. system torque: 400 Nm (295 lb-ft) at 0 - 5,000 rpm, 430 Nm (317 lb-ft) with Sport Boost or Launch Control function, acceleration [0-100 km/h (62 mph)]: 6.0 seconds, top speed: 193 km/h (120 mph), combined consumption according to WLTP: 19.5 - 15.9 kWh/100 km (62 mph), range: 477 - 582 km (296 - 361 miles) according to WLTP.

BMW i5 M60 xDrive:

Fifth-generation BMW eDrive technology, one electric motor on the front axle and one on the rear axle, electric BMW xDrive all-wheel drive, system power output: 380 kW/517 hp at 8,000 rpm, 442 kW/601 hp in My Mode SPORT, max. system torque: 795 Nm (549 lb-ft) at 0 - 5,000 rpm, 820 Nm (605 lb-ft) with M Sport Boost or M Launch Control function, acceleration [0-100 km/h (62 mph)]: 3.8 seconds, top speed: 230 km/h (143 mph), combined consumption according to WLTP: 20.6 - 18.2 kWh/100 km (62 mph), range: 455 - 516 km (282 - 320 miles) according to WLTP.

BMW 530e (available from spring 2024):

In-line four-cylinder petrol engine, plug-in hybrid system with electric synchronous motor, 8-speed Steptronic Sport transmission,

total vehicle drive:

System power output: 220 kW/299 hp (incl. tempor. boost), system torque: 450 Nm (332 lb-ft)*,

BMW TwinPower Turbo engine:

Displacement: 1,998 cc,

nominal power output: 140 kW/190 hp at 4,400 - 6,500 rpm,

nominal torque: 310 Nm (229 lb-ft) at 1,500 - 4,000 rpm,

electric motor:

Nominal power output: 135 kW/184 hp,

nominal torque: 250 Nm (184 lb-ft),

max. torque at transmission input: 400 Nm (332 lb-ft),

Performance / consumption / emissions:

Acceleration [0-100 km/h (62 mph)]: 6.4 seconds,

top speed: 230 km/h (143 mph),

top speed electric: 140 km/h (87 mph),

electric range according to WLTP: 87 - 102 km (54 to 63 miles),

fuel consumption combined according to WLTP: 0.8 - 0.6 l/100 km (62 mph) (62 mph),

combined power consumption according to WLTP: 21.4 - 18.9 kWh/100 km (62 mph),

CO₂ emissions from fuel according to WLTP: 19 - 14 g/km,

emissions standard: Euro 6e.

BMW 550e xDrive (available from spring 2024):

In-line six-cylinder petrol engine, plug-in hybrid system with electric synchronous motor, 8-speed Steptronic Sport transmission, BMW xDrive,

total vehicle drive:

System power output: 360 kW/489 hp (incl. tempor. boost),

system torque: 700 Nm (332 lb-ft)*,

BMW TwinPower Turbo engine:

Displacement: 2,998 cc,

nominal power output: 230 kW/313 hp at 5,000 - 6,500 rpm,

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

electric motor:

Nominal power output: 145 kW/197 hp,

nominal torque: 280 Nm (184 lb-ft),

max. torque at transmission input: 450 Nm (332 lb-ft),

Performance / consumption / emissions:

Acceleration [0-100 km/h (62 mph)]: 4.3 seconds,

top speed: 250 km/h (143 mph),

top speed electric: 140 km/h (87 mph),

electric range according to WLTP: 79 - 90 km (49 - 56 miles),

fuel consumption combined according to WLTP: 1.1 - 0.8 l/100 km (62 mph) (62 mph),

combined power consumption according to WLTP: 22.5 - 20.1 kWh/100 km (62 mph),

CO₂ emissions from fuel according to WLTP: 24 - 19 g/km

emissions standard: Euro 6e.

BMW 520i:

In-line four-cylinder petrol engine, 48-volt mild hybrid technology, 8-

speed Steptronic transmission,

total vehicle drive:

Power output: 153 kW/208 hp, torque: 330 Nm (243 lb-ft)*,

BMW TwinPower Turbo engine:

Displacement: 1,998 cc,

nominal power output: 140 kW/190 hp at 4,400 – 6,500 rpm,

nominal torque: 310 Nm (229 lb-ft) at 1,500 - 4,000 rpm,

electric motor: (48 volt crankshaft generator):

Nominal power output: 13 kW/18 hp,

nominal torque: 200 Nm (148 lb-ft),

Performance / consumption / emissions:

Acceleration [0-100 km/h (62 mph)]: 7.5 seconds,

top speed: 230 km/h (143 miles),

combined consumption according to WLTP: 6.4 - 5.7 l/100 km/h (62 mph),

combined CO₂ emissions according to WLTP: 144 - 130 g/km,

emissions standard: Euro 6e.

BMW 530i (not available in Europe):

In-line four-cylinder petrol engine, 48-volt mild hybrid technology, 8-speed Steptronic transmission,

total vehicle drive:

Power output: 190 kW/258 hp, torque: 400 Nm (295 lb-ft)*,

BMW TwinPower Turbo engine:

Displacement: 1,998 cc,

nominal power output: 190 kW/258 hp at 4,700 – 6,500 rpm,

nominal torque: 400 Nm (295 lb-ft) at 1,500 - 4,000 rpm,

electric motor: (48 volt starter generator in belt drive):

Nominal power output: 8 kW/11 hp,

nominal torque: 25 Nm (18 lb-ft),

Performance / consumption / emissions:

Acceleration [0-100 km/h (62 mph)]: 6.2 seconds,

top speed: 250 km/h (155 mph),

combined consumption according to WLTP: 7.2 - 6.3 l/100 km (62 miles),

Co₂ emissions combined according to WLTP: 165 - 144 g/km,

BMW 530i xDrive (not available in Europe):

In-line four-cylinder petrol engine, 48-volt mild hybrid technology, 8-speed Steptronic transmission, BMW xDrive

total vehicle drive:

Power output: 190 kW/258 hp, torque: 400 Nm (295 lb-ft)*,

BMW TwinPower Turbo engine:

Displacement: 1,998 cc,
nominal power output: 190 kW/258 hp at 4,700 – 6,500 rpm,
nominal torque: 400 Nm (295 lb-ft) at 1,500 - 4,000 rpm,
electric motor: (48 volt starter generator in belt drive):
Nominal power output: 8 kW/11 hp,
nominal torque: 25 Nm (18 lb-ft),
Performance / consumption / emissions:
Acceleration [0-100 km/h (62 mph)]: 6.1 seconds,
top speed: 250 km/h,
combined consumption according to WLTP: 7.5 – 6.6 l/100 km (62 mph),
CO₂ emissions combined according to WLTP: 171 -151 g/km,

BMW 540i xDrive (from spring 2024, not available in Europe):
In-line six-cylinder petrol engine, 48-volt mild hybrid technology, 8-speed Steptronic transmission, BMW xDrive

total vehicle drive:
Power output: 280 kW/381 hp, torque: 540 Nm (243 lb-ft)*,

BMW TwinPower Turbo engine:

Displacement: 2,998 cc,
nominal power output: 280 kW/381 hp at 5,200 - 6,250 rpm,
nominal torque: 520 Nm (384 lb-ft) at 1,850 - 5,000 rpm,
electric motor: (48 volt crankshaft generator):
Nominal power output: 13 kW/18 hp,
nominal torque: 200 Nm (148 lb-ft),
Performance / consumption / emissions:
Acceleration [0-100 km/h (62 mph)]: 4.7 seconds,
top speed: 250 km/h (155 mph),
combined consumption according to WLTP: 7.7 – 6.8 l/100 km (62 miles),
CO₂ emissions combined according to WLTP: 176 -156 g/km,

BMW 520d:

In-line four-cylinder diesel engine, 48-volt mild hybrid technology, 8-speed Steptronic transmission,

total vehicle drive:
Power output: 145 kW/197 hp, torque: 400 Nm (295 lb-ft)*,

BMW TwinPower Turbo engine:

Displacement: 1,995 cc,
nominal power output: 145 kW/197 hp at 4,000 rpm,
nominal torque: 400 Nm (295 lb-ft) at 1,500 - 2,750 rpm,
electric motor: (48 volt starter generator in belt drive):
Nominal power output: 8 kW/11 hp,

nominal torque: 25 Nm (18 lb-ft),

Performance / consumption / emissions:

Acceleration [0-100 km/h (62 mph)]: 7.3 seconds,

top speed: 233 km/h (142 mph),

combined consumption according to WLTP: 5.6 - 5.1 l/0-100 km/h (62 mph),

CO₂ emissions combined according to WLTP: 147 - 133 g/km,

emissions standard: Euro 6e.

BMW 520d xDrive:

In-line four-cylinder diesel engine, 48-volt mild hybrid technology, 8-speed Steptronic transmission, BMW xDrive

total vehicle drive:

Power output: 145 kW/197 hp, torque: 400 Nm (243 lb-ft)*,

BMW TwinPower Turbo engine:

Displacement: 1,995 cc,

nominal power output: 145 kW/197 hp at 4,000 rpm,

nominal torque: 400 Nm (295 lb-ft) at 1,500 - 2,750 rpm,

electric motor: (48 volt starter generator in belt drive):

Nominal power output: 8 kW/11 hp,

nominal torque: 25 Nm (18 lb-ft),

Performance / consumption / emissions:

Acceleration [0-100 km/h (62 mph)]: 7.3 seconds,

top speed: 228 km/h (142 mph),

combined consumption according to WLTP: 6.0 - 5.5 l/0-100 km/h (62 mph),

CO₂ emissions combined according to WLTP: 157 - 143 g/km,

emissions standard: Euro 6e.

*is made up of internal combustion engine drive (stated nominal value) and electric drive (up to stated nominal value)

All performance, consumption, emission and range values are provisional.

All the model variants, equipment levels, technical specifications, consumption and emission values described correspond to what is available on the automotive market in Germany, provided the respective vehicle is offered there. Deviations in other markets are possible. The information on the dimensions refers to a vehicle in basic equipment in Germany, depending on the selected wheel and tyre size as well as selected optional equipment. These may change according how the car is configured.

Fuel consumption, CO₂ emission figures and power consumption as well as electric range are measured using the methods required according to Regulation VO (EC) 2007/715 as amended. This information is based on a vehicle with basic equipment in Germany; ranges take into account differences in wheel and tyre size selected as well as optional equipment.

All figures have already been calculated based on the new WLTP test cycle. WLTP values are used as a basis for the assessment of taxes and other vehicle-related levies that are (also) based on CO₂ emissions and, where applicable, for the purposes of vehicle-specific subsidies. Further information on the WLTP and NEDC measurement procedures is also available at www.bmw.de/wltp can be found.

For further details of the official fuel consumption figures and official specific CO₂ emissions of new cars, please refer to the "Manual on the fuel consumption, CO₂ emissions and power consumption of new cars", available at sales outlets free of charge, from Deutsche Automobil Treuhand GmbH (DAT), Hellmuth-Hirth-Str. 1, 73760 Ostfildern-Scharnhausen and at <https://www.dat.de/co2/>.



Vehicle concept and design.

The world's most successful business sedan - digital, dynamic and, for the first time, all-electric.

More dynamic than ever, featuring a wealth of digital innovations and, for the first time, all-electric drive - this is how the new BMW 5 Series Sedan steps up to the plate. As the BMW i5, the new edition of the world's most successful business sedan takes the lead on the road to sustainable premium mobility in the upper mid-range vehicle segment. The eighth generation of the BMW 5 Series Sedan continues to stand for advanced technology combined with sporty, elegant design and hallmark driving pleasure.

Consistent electrification, latest-generation BMW iDrive display and control system with new digital services, and increased sustainability throughout the entire product life cycle characterise the progress made in the fields of the future which are centrally important in the current transformation of the BMW Group. Mobility and business are seamlessly combined in a premium automobile. The new BMW 5 Series Sedan represents outstanding technological expertise and a progressive basic attitude, with which it confidently fulfils all the wishes and needs of its modern target groups.

The market launch of the new BMW 5 Series Sedan will begin in October 2023. The new model generation will be offered worldwide with all-electric drive. In addition, openness to different technologies is reflected in a flexible drive architecture that allows plug-in hybrid systems as well as highly efficient petrol and diesel engines including 48-volt mild hybrid technology to be used in the new BMW 5 Series Sedan, depending on the market region and target group. The next generation of the BMW 5 Series Touring, whose market launch will follow in spring 2024, will also be available with all-electric drive as well as with plug-in hybrid drive and pure combustion engine drive.

Number one in the segment continues success story.

The success story of the BMW 5 Series Sedan dates back to 1972. This is when the first generation of the sporty and elegant four-door sedan was presented. Since then, the worldwide popularity of the BMW 5 Series Sedan has steadily increased. With its unmistakable combination of dynamic performance and high level of long-distance comfort, it became the epitome of the business sedan.

The BMW 5 Series is the global market leader in the premium segment in its competitive environment. From the beginning until today, it has been one of the most important and profitable pillars of the BMW brand's product portfolio. In its last full year of production, the previous generation once again took third place in the brand's internal sales ranking. By spring 2023, more than ten million BMW 5 Series have already been produced.

With the introduction of the BMW i5 in the high-volume upper mid-range vehicle segment, the BMW Group is once again expanding its range of purely electrically powered cars. The BMW Group, with its brands BMW, MINI and Rolls-Royce Motor Cars, now offers a choice of all-electric models in all vehicle classes served, from the small car and compact to the mid-size and luxury class vehicle segments.

Traditional production site celebrates anniversary.

Like all previous model generations, the new BMW 5 Series Sedan is manufactured at the BMW Group Plant Dingolfing. For the new generation of the BMW 5 Series, the Lower Bavarian plant is once again the exclusive production location. Parallel to the start of production, the 50th anniversary of what is now the BMW Group's largest European vehicle plant will be celebrated there. In 1973, the first vehicle manufactured at this company location was a BMW 5 Series Sedan of the first generation. Today, the BMW Group plant in Dingolfing is not only the lead plant for luxury class segment vehicles, but also the location of the company's e-drive production competence centre, which, among other things, produces both the electric motors and the high-voltage batteries for the BMW i5 directly on site.

In Dingolfing, the new BMW 5 Series Sedan is manufactured together with the luxury class segment models of the BMW 7 Series and BMW 8 Series as well as the all-electric BMW iX. In addition, the new BMW 5 Series Sedan is being built in a market-specific variant at the Chinese plant Dadong of the joint venture BMW Brilliance Automotive Ltd. in Shenyang.

Sporty, elegant sedan at the heart of the brand portfolio.

The exterior design of the latest model generation reinterprets the sporty elegance of a BMW 5 Series Sedan in the brand's current design language. Its brand-typical proportions make the character of the dynamic business sedan instantly recognisable. With its distinctive appearance, the new BMW 5 Series Sedan is right at the centre of the

brand's portfolio of four-door models - more present and elegant than the BMW 3 Series, more dynamic and sporty than the BMW 7 Series.

At the same time, the new edition of the sedan has a uniformly strong design character in every model variant and irrespective of what drive it is powered by. Like the plug-in hybrid and combustion engine models, the BMW i5 is also first and foremost a BMW 5 Series. Options for individualising the look of the BMW 5 Series are offered by the optional M Sport Package and the M Sport Package Pro. As a performance model from BMW M GmbH, the all-electric BMW i5 M60 xDrive comes as standard with specific exterior features that also visually underline its outstanding sport potential.

The heightened presence of the new BMW 5 Series Sedan is enhanced by the athletic proportions and the larger exterior measurements compared to the predecessor model in all dimensions. The new edition has grown in length by 97 millimetres to 5,060 millimetres, in width by 32 millimetres to 1,900 millimetres and in height by 36 millimetres to 1,515 millimetres. The wheelbase has been increased by 20 millimetres to 2,995 millimetres and improves seating comfort even more, especially in the rear.

Modern front section with almost vertical daytime driving light icons and optionally illuminated BMW kidney grille.

The front view of the new BMW 5 Series Sedan is characterised by a modern interpretation of the brand's signature twin headlights and BMW kidney grille. The LED headlights show the hallmark four-eye face in a modern and reduced form. Daytime driving lights and turn indicators are each generated by two nearly vertical LED elements arranged on the outside. The range of functions of the optional Adaptive LED Headlights includes the cornering light and the Matrix High Beam including the glare-free High Beam Assist BMW Selective Beam. In addition, blue design elements below the LED units stage the light sources impressively. M Shadow Line lights with black trim for the inside of the headlight housings are offered as a further option.

Regardless of the headlight variant chosen, the new BMW 5 Series Sedan offers customers an effective welcome and goodbye display. Among other things, the headlights, the illuminated kidney grille and the light carpet projected from the vehicle sill are atmospherically orchestrated. Further welcome and goodbye light projections are offered as part of corresponding software upgrades. Optionally, the projected graphic is displayed in the form of a dynamic carpet of light in the entry

area. This four-stage welcome already ensures lively interaction with the vehicle as soon as you approach it.

The BMW kidney grille, stylistically inspired by the so-called "Sharknose" and projecting far forward, functions as the visual centre of the vehicle front. All the lines of the front apron and the long bonnet, which connects directly to the kidney grille frame, run towards the vehicle front. With its wide surround and optional BMW Iconic Glow contour line lighting, the BMW kidney grille gives the front view a distinctively sporty appeal. Just like the headlights and the BMW kidney grille, the other areas of the front apron also feature precisely defined contours and tightly designed surfaces.

Sporty silhouette and dynamically stretched proportions.

The clear and reduced design language is also expressed in the side view of the BMW 5 Series Sedan. Its dynamically elongated proportions, long bonnet and almost upright BMW kidney grille are clearly visible from this perspective. The strikingly sporty character of the sedan's typical three-box design is also expressed in the steeply sloping A-pillar, the gently flowing roof line towards the rear and the slightly sloping luggage compartment line.

The side section has a pronounced athletic look thanks to a high shoulder line, powerfully modelled surfaces and two precisely guided character lines. Black side skirts provide a visual contrast to the rest of the bodywork, giving the vehicle a particularly flat and slim look. The door openers are integrated flush with the surface. The counter-swing at the base of the C-pillar, known as the Hofmeister kink, is elegantly highlighted by a graphic element with the number 5 embossed on the side window surround.

Powerful rear end with expressively designed lights.

At the transition to the rear, the shoulder and roof lines flow harmoniously into the contours of the lights. The finely tuned interplay of lines and surface gradients creates a particularly exclusive appearance. Generous surfaces generate a powerful aura and horizontal lines emphasise the width and solid stature of the rear view.

The flat rear lights interpret the brand's hallmark L-shaped lights with modern appeal. Inside, four narrow and horizontally aligned LED strips generate the respective lighting functions. They are divided by an L-shaped chrome strip. Similar to the headlight units, the expressively designed rear lights emphasise the advanced premium character of the

vehicle thanks to the technical precision of the light sources. Like in the headlights, strikingly designed LED units in the rear lights also function as daytime running lights.

Wide range of paintwork, BMW i5 M60 xDrive and M Sport Package with specific design features.

The range of paintwork colours includes one solid finish and nine metallic finishes. In addition, three BMW Individual paint finishes are available for the market launch of the new BMW 5 Series Sedan, including two particularly expressive matt paint finishes.

Individual design features give the BMW i5 M60 xDrive a striking look, which emphasise its dynamic performance. A front apron with black surfaces in its centre and large air intakes, a BMW kidney grille with contour line lighting, horizontal slats and M logo, side skirts and exterior mirror caps finished in high-gloss black, 20-inch M light alloy wheels and a rear apron with a pronounced diffuser insert signal the top-of-the-range model's sporty character. An M rear spoiler lip is also available on request and at no extra charge.

The M Sport Package, which is optionally available for all other model variants, also highlights this vehicle's dynamic performance. It also includes M specific design features, most notably the large air intakes at the front, strikingly flared side skirts in high-gloss black and a rear apron with diffuser insert, as well as 19-inch M light alloy wheels and the M high-gloss Shadow Line.

In addition, an M Sport Package Pro is also available for all model variants of the BMW 5 Series Sedan. The contents of the M Sport Package are expanded with the illuminated BMW kidney grille with black surround, the dynamic light carpet, high-gloss black exterior mirror caps and a black-painted M rear spoiler. In addition, there are also the M Shadow Line lights for the front and rear and red-painted brake calipers.

Interior and equipment. Driving pleasure and travel comfort combined with innovative flair.



The new BMW 5 Series Sedan offers ideal conditions for enjoying hallmark BMW driving pleasure in everyday traffic and a high level of comfort on long-distance journeys. Generous space, modern functionality, a high level of acoustic comfort as well as high-quality, precisely processed materials, fine workmanship and advanced digital services characterise the ambience in its interior. The clear and modern design of the interior, sporty flair and innovative equipment features, designed to optimise travelling comfort underline the vehicle's character as a dynamic business sedan for the digital age.

The fully digital BMW Curved Display, which reinterprets the brand's typical orientation towards the driver, represents the heart of the interior redesign. Other innovations include the optional BMW Interaction Bar in the instrument panel and door area, My Modes for a customisable driving and interior experience, and the new gear selector switch on the centre console control panel, which also features a particularly modern and high-quality design. With the significantly expanded level of standard equipment compared to the predecessor model and a new structure in the range of options, comfort and individuality are raised to a higher level.

Fully digital BMW Curved Display with new graphic display and optimised touch operation thanks to BMW Operating System 8.5.

With its frameless glass surface slightly inclined towards the driver, the BMW Curved Display sets high-quality and modern highlights in the interior of the new BMW 5 Series Sedan. It consists of a 12.3-inch Information Display behind the steering wheel and a Control Display with 14.9 inch screen, which merge into a single fully digital and high-resolution display unit. The BMW Curved Display is the central component of the multi-sensory BMW iDrive experience, which in its latest generation based on BMW Operating System 8.5 also offers a new graphic display with a particularly clear start screen and "QuickSelect" access for simple and intuitive touch operation (more on this in the Display and control system, connectivity chapter).

The advances in digitalisation that accompany the development of the BMW iDrive make it possible to significantly reduce the number of

buttons, knobs and controls used in the cockpit. They continue to be used where they are the ideal solution for fast and intuitive operation. A large-surface interior trim strip for the instrument panel highlights the BMW Curved Display and the optional BMW Interaction Bar. As an alternative to the standard Dark Graphite matt effect paintwork or Aluminium Rhombicle Dark Silver finish for the BMW i5 M60 xDrive and in conjunction with the M Sport Package, it is also optionally available in the Carbon Fibre variant with high-gloss silver threads and in several fine wood finishes.

BMW Interaction Bar with touch function and lighting effects.

The standard interior lighting includes a light strip in the instrument panel and door trim area. The BMW Interaction Bar combines modern functionality and fascinating design. It was first presented in the luxury sedans of the new BMW 7 Series and is now also available as an option in the new BMW 5 Series Sedan. The strikingly backlit functional unit with crystalline surface structure extends below the trim strip across the entire width of the instrument panel far into the door panels and includes touch-sensitive control panels for controlling ventilation and air conditioning and for activating the hazard warning lights.

The BMW Interaction Bar is part of the Ambient Light optional equipment. Its lighting design is based on the respective colour world of the selected My Modes and can also be customised. Getting in and out of the car is accompanied by a welcome and farewell scenario, which is staged with lights on the BMW Interaction Bar. The BMW Interaction Bar interacts with the passengers in the form of dynamic light animation and indicates incoming telephone calls, among other things. It also indicates to the driver and front passenger when it is safe to get out the car thanks to the Safe Exit function.

Newly designed steering wheel and control panel.

The newly designed steering wheel also contributes to the exclusive driving experience. The standard version has two spokes and a steering wheel rim that is flattened in the lower section. Precise control panels with haptic feedback make interacting with the system easier when driving. In the BMW i5 M60 xDrive and in conjunction with the M Sport Package, the optimised functionality of the M leather steering wheel is combined with a classic three-spoke design. Contrast stitching in BMW M GmbH colours and a red centre marker for the steering wheel of the Performance model emphasise the sporty character of this model. A heating function is offered as an optional extra for all steering wheel variants.

The control panel on the centre console has also been redesigned. The iDrive Controller, the new gear selector switch, the start/stop button, the My Modes buttons, the volume control for the audio system and buttons for controlling other vehicle functions are clearly arranged on the centre panel. With the CraftedClarity option, crystal glass applications for selected controls add a luxurious touch. At the front of the centre console, there is space for a wireless charging tray for inductively charging a suitable mobile phone and another tray.

A first at BMW: A fully vegan interior.

The newly designed seats in the new BMW 5 Series Sedan are characterised by a noticeable increase in comfort and optimised adjustment options. Sport seats, whose height and inclination can be adjusted electrically, are standard equipment. Optional features include heated seats for the driver and front passenger, additional electrically operated adjustment options for the sport seats, active seat ventilation with optimised air conditioning as well as Comfort seats.

The backrests of the outer rear seats extend far into the door areas, especially in the shoulder area, thus increasing seating comfort in back. The flowing transition between the instrument panel at the front and the backrests in the rear to the door panels harmoniously encloses all seats. The entire rear seat backrest is now divided as standard in the ratio 40:20:40. The three elements can be folded down individually or together to create additional space for long pieces of luggage. The luggage compartment of the new BMW 5 Series Sedan has a total storage volume of 520 litres. This amount of storage space is also available in the plug-in hybrid models, with the BMW i5 coming in at 490 litres. This means that, despite their drive units being integrated in the rear axle area, the all-electric models also have a luggage compartment volume that is almost equivalent to the other variants of the new BMW 5 Series Sedan. The intelligent storage concept helps the BMW i5 achieve the top position in its competitive environment.

Just like at the front, the rear door panels also feature a distinctive graphic structure. The rear seats can also be optionally heated. In conjunction with the Travel & Comfort System, which is also available as an option, ambient lighting elements for the backs of the front seats emphasise the atmospheric ambience in the rear.

As standard equipment, the new BMW 5 Series Sedan is the first model of the brand to feature a completely vegan interior. This applies to the seats as well as the dashboard and door panels and, for the first time,

the steering wheel. The standard equipment of the new BMW 5 Series Sedan includes black seat surfaces in the Veganza finish with leather-like properties. Optionally, the leather-free surface material is also available with a decorative perforation and in three other colours. Further optional equipment includes BMW Individual Merino leather upholstery in several bicolour variants.

The M Sport Package for the new BMW 5 Series Sedan includes exclusive seat surfaces in Veganza/Alcantara finish with unique perforation in the shoulder area and translucent accents in red and blue. In addition, an anthracite-coloured roof lining, an M pedal set and an M driver's footrest as well as specific displays on the Information Display add to the sporty flair. The M Sport Package Pro also includes M seat belts and the Harman Kardon Surround Sound System.

Air conditioning with almost invisible seam vents, heat pump technology in the BMW i5.

The standard equipment of the new BMW 5 Series Sedan includes automatic air conditioning with an extended range of features and advanced control logic. In the instrument panel area, seam vents are used instead of conventional air vents and are positioned at the height of the BMW Interaction Bar. The direction of the air coming out of the vents can be varied by means of adjusting control levers. In addition, air conditioning and ventilation are controlled via the touch function on the control display.

In order to achieve the longest possible range, the BMW i5 has air conditioning with particularly energy-efficient heat pump technology as standard. A 4-zone automatic air conditioning system with separate control panel in the rear, air vents in the B-pillars and nano particle filters is optionally available for all model variants of the new BMW 5 Series Sedan. For the first time, the air conditioning makes it possible to separately regulate the temperature in the footwell of the front seats. A second solar sensor is used to regulate the temperature in the rear especially precisely. Preheating is optionally available ex works and is standard equipment in the BMW i5. In the all-electric and plug-in hybrid models, the interior can be pre-conditioned as required by activating the heating or air conditioning. Further features: Roller sunblinds for the rear window and the side windows of the rear doors.

Fixed panoramic glass roof with significantly enlarged viewing area.

The panoramic glass roof is a first in the optional equipment range for the new BMW 5 Series Sedan. It is designed as a body-mounted module.

It connects almost the entire roof surface, extends without interruption from just behind the windscreen to almost the rear window and, with its dark glass surface, gives the vehicle a particularly elegant appearance.

With a length of 841 millimetres and a width of 818 millimetres, the viewing area is almost 90 percent larger than that of the slide/tilt sunroof of the predecessor model. This creates a generously light-flooded atmosphere in the interior. If required, an interior sunblind can provide discreet shading of the interior.

High payload and trailer load - for the BMW i5 too.

The long-distance travel capabilities of the new BMW 5 Series Sedan are also underlined by the high payloads it can carry. Regardless of the type of drive, five passengers and their luggage can be transported without any problems. The total payload weight, for example, is already 610 kilograms for the BMW i5 eDrive40 Sedan, 630 kilograms for the BMW 520d Sedan and 650 kilograms for the plug-in hybrid models.

A trailer tow hitch is also available as an option for all model variants, which swings in and out electrically. Depending on the model variant and also for the electrified variants of the new BMW 5 Series Sedan, the permissible towing capacity can be up to 2,000 kilograms. This weight can be towed by the new BMW 520d Sedan as well as the BMW i5 M60 xDrive for example.

High-quality audio systems and BMW IconicSounds Electric.

The new BMW 5 Series Sedan features a six-speaker audio system and a DAB tuner for digital radio reception as standard. The Harman Kardon Surround Sound System, available as optional equipment, provides a high-level sound experience with 12 speakers and an amplifier output of 205 watts. With 18 speakers and an amplifier output boosted to 655 watts, the optional Bowers & Wilkins Surround Sound System guarantees an outstanding acoustic experience. A seven-channel digital amplifier creates a fascinatingly clear sound experience in all seats. Illuminated metal panels for the loudspeakers in the doors emphasise the exclusive character of the sound system.

Two USB-C ports for data transfer and charging personal devices are fitted as standard in the front in the new BMW 5 Series Sedan and two further USB-C ports for charging in the back. Optionally, a further USB-C port is available as a power source in the backrests of the driver and front passenger seats.

The newly designed Travel & Comfort System is also available to provide customised entertainment in the rear. With the plug-in couplings installed on the backrests of the driver's and front passenger's seats for attaching multifunction holders from the Original BMW Accessories range, tablets and other personal devices can be conveniently attached to serve as entertainment screens. In addition, the Travel & Comfort System includes mounting options for clothes hangers and fold-out table surfaces.

A very special soundscape can also be experienced in the BMW i5 and in the purely electric operating mode of the plug-in hybrid models. The optional BMW IconicSounds Electric (standard in the BMW i5 M60 xDrive) accompany every movement of the accelerator pedal with authentic acoustic feedback. Depending on the My Mode selected, the model-specific sound is staged in different ways. The sound spectrum in SPORT mode is particularly powerful and impressive. The BMW IconicSounds Electric were developed in a cooperation between the BMW Group and the renowned film music composer Hans Zimmer and are characterised by a strikingly transparent timbre featuring spherical components.

Drive and charging technology. Consistently electrified to achieve outstanding efficiency.



A flexibly designed drive architecture that was open to different technologies from the outset enables the new BMW 5 Series Sedan to be offered for the first time as an all-electric model, with plug-in hybrid systems and with highly efficient petrol and diesel engines. This global strategy ensures that customers around the world are offered a choice of models tailored to their individual needs, as well as to the infrastructure conditions and legal framework of their region.

Across the entire model range, consistent electrification ensures exemplary efficiency in the competitive environment as well as hallmark BMW driving pleasure, which is enhanced in particular by the spontaneous power delivery of the electric motors used in all variants. The electric motors developed by the BMW Group are characterised by particularly high power density and efficiency. They work according to the principle of a current-excited synchronous machine. This makes it possible to completely dispense with the critical raw materials from the rare earth metal sector required for magnetic components when manufacturing the rotor. With the launch of the new business sedan, the all-electric BMW i5 is being launched in two model variants. The BMW i5 M60 xDrive performance model is positioned at the top of the model series. Like the BMW i5 eDrive40, it is equipped with extensively enhanced fifth-generation BMW eDrive technology.

Petrol and diesel engines from the new modular generation of BMW Group Efficient Dynamics engines will be offered in a market-specific selection. All models now feature the latest version of 48-volt mild hybrid technology. The model range will be supplemented in spring 2024 by two variants of the new BMW 5 Series Sedan with plug-in hybrid drives of the latest generation. In addition, a new in-line six-cylinder diesel engine will be available for the BMW 5 Series Sedan from 2024. Another variant of the BMW i5 with electric all-wheel drive will also follow from 2024. All model variants are produced on one assembly line at the BMW Group Dingolfing plant.

BMW i5 eDrive40: Advanced BMW eDrive technology, traditional rear-wheel drive.

The BMW i5 eDrive40 combines advanced BMW eDrive technology with traditional rear-wheel drive. The electric motor of this model variant, which is located directly in the rear axle area, generates a maximum power output of 250 kW/340 hp and a maximum torque of 400 Nm (295 lb-ft) or 430 Nm (317 lb-ft) with the Sport Boost or Launch Control function. The highly integrated drive unit features outstanding power density.

6.0 seconds are sufficient for the sprint from 0 to 100 km/h (62 mph). The maximum speed of the BMW i5 eDrive40 is electronically cut off at 193 km/h (120 mph). Its combined power consumption is between 19.5 and 15.9 kWh per 100 kilometres (62 miles).

BMW i5 M60 xDrive: All-electric driving pleasure at the top of the model range.

The consistent shift towards electric mobility associated with the generation change of the BMW 5 Series Sedan is particularly evident at the top of the range. The new top model is the BMW i5 M60 xDrive, which combines a particularly powerful electric drive with hallmark M performance characteristics and specific design features. The system output of its two electric motors is 380 kW/517 hp and increases to a maximum of 442 kW/601 hp in My Mode SPORT.

Two highly integrated drive units on the front and rear axles, in which the electric motor, power electronics and transmission are very compactly combined in a common housing, form an electric all-wheel drive system that enables the BMW i5 M60 xDrive to deliver fascinating dynamic performance. The electric motor acting on the rear wheels generates a maximum power output of 250 kW/340 hp, while the drive positioned on the front axle produces 192 kW/261 hp. Both motors have an exceptionally high power density. The system torque generated by both motors is 795 Nm (549 lb-ft) or 820 Nm (605 lb-ft) when M Sport Boost or the M Launch Control function is activated.

This enables the new BMW i5 M60 to accelerate from zero to 100 km/h (62 mph) in 3.8 seconds. The typical M performance characteristics of the drive system also ensure that the power is delivered continuously. The maximum speed of the BMW i5 M60 xDrive is electronically cut off at 230 km/h (143 mph). Its combined power consumption, determined in the WLTP test cycle, is 20.6 to 18.2 kWh per 100 kilometres (62 miles).

In order to activate full drive power spontaneously, the BMW i5 M60 xDrive and, in conjunction with the M Sport Package, the BMW i5

eDrive40 as well, feature a shift paddle marked with "Boost" near the left steering wheel spoke. If the paddle is pulled for more than 0.8 seconds, a Sport Boost indicator appears on the Information Display. It indicates that a high level of power is being requested by the accelerator pedal which then triggers maximum acceleration. At the same time, the drive sound changes to the sound variant assigned to My Mode SPORT.

In conjunction with the M Sport Package Pro, the Launch Control function is also available, which also activates maximum drive power. Extremely dynamic acceleration from standstill is enabled as the drive and traction control are coordinated.

High-voltage battery with compact design and high energy content.

Like the drive units, the high-voltage battery used in the two all-electric model variants of the new BMW 5 Series Sedan is also derived from the latest fifth-generation BMW eDrive technology. It is composed of four modules with 72 battery cells each and three modules with twelve cells each. The high-voltage battery has a particularly flat design thanks to the modules being cleverly and model-specifically designed. This means it can be fitted in the underbody of the BMW i5 to save space. The amount of space available for the passengers, corresponds exactly to the capacities of the petrol and diesel engine variants of the new BMW 5 Series Sedan.

The high-voltage battery in the BMW i5 combines compact dimensions with high energy density. It provides a usable energy content of 81.2 kWh (BMW i5 M60 xDrive: 81.2 kWh). Combined with the high efficiency of their electric motors, this provides ranges suitable for long journeys for both model variants of the BMW i5. The BMW i5 M60 xDrive has a range of 455 to 516 kilometres (282 - 320 miles) determined in the WLTP test cycle. The BMW i5 eDrive40 has a range of 477 to 582 kilometres (296 to 362 miles) according to WLTP.

When driving, the latest version of adaptive recuperation helps to conserve the power reserves or even recover electrical energy during overrun and braking phases. Thanks to intelligent networking, the drive control system can use navigation data and information from sensors of the driver assistance systems to adjust how much power is recuperated according to the respective traffic situation. As an alternative to adaptive recuperation, the driver can select high, medium or low braking energy

recovery for all traffic situations in the BMW iDrive menu. Low recuperation corresponds to the coasting function. The BMW i5 rolls along without drive torque as soon as the accelerator pedal is released. The electric drive is not energised and thus no energy is consumed from the high-voltage battery. Efficiency is further enhanced by a novel intelligent combination of heat pump technology for the integrated heating and cooling circuit of the interior as well as for the heating and cooling system of the drive and the high-voltage battery of the BMW i5. This allows both the interior and the high-voltage battery to be heated simultaneously with the heat pump function and, if required, with a central electric auxiliary heater.

My Mode EFFICIENT with new MAX RANGE function.

When driving in My Mode EFFICIENT, the range of the BMW i5 can be increased by activating a new function for the drive system. By specifically limiting drive power and top speed, combined with reduced comfort functions, the range can be increased by up to 25 percent in MAX RANGE mode.

The MAX RANGE mode was designed in particular for situations where a planned charging stop is no longer possible because, for example, the charging station is defective. In order to get to an alternative charging station, a convenient range buffer is available after switching to My Mode EFFICIENT and activating the MAX RANGE function. The maximum speed of the vehicle is limited to 90 km/h (56 mph). The interior air conditioning is deactivated, the effect of the rear window heating is reduced, and seat and steering wheel heating as well as seat ventilation are initially deactivated in MAX RANGE mode. The number of range kilometres / miles gained in this way is shown in a pop-up window on the Control Display. In addition, the speed and power scales are adjusted on the Information Display and the additional range is taken into account in the range forecast.

The MAX RANGE mode can be called up using the touch function on the Control Display, with the Controller or also by voice command via the BMW Intelligent Personal Assistant. The function can also be deactivated by kickdown, via the M Sport Boost function or by switching on the maximum windscreen ventilation.

Combined Charging Unit and optimised charging software.

The Combined Charging Unit (CCU) of the BMW i5 was designed for charging the high-voltage battery in a particularly flexible manner. The highly integrated control unit ensures a powerful and precisely controlled

supply of energy to the electric drive as well as efficient and fast charging of the high-voltage battery. It also serves as a voltage transformer to supply the on-board power supply. The CCU enables charging with alternating current with up to 11 kW as standard and optionally with up to 22 kW. The high-voltage battery can be charged with direct current with a power of up to 205 kW. For example, the battery charge level in the BMW i5 can be raised from 10 to 80 percent in around 30 minutes. In addition the range can be increased by up to 156 kilometres (97 miles) within 10 minutes at a DC fast-charging station starting with a battery charge level of 10 percent.

Charging efficiency is optimised above all using the latest version of the charging software. When the battery charge level is already higher, the charging procedure continuously reduces the charging power instead of delivering the so-call "staircase curve". This makes the charging curve smoother, which means that the charging time becomes even shorter.

The waste heat generated by the electric motors is used for controlling the temperature of the high-voltage battery in the BMW i5 for the first time. This can significantly reduce the energy required for preheating the battery on the way to a fast charging station.

Battery thermal management for optimised DC fast charging.

Anticipatory thermal management ensures that the temperature of the high-voltage battery is optimally controlled in good time before a stopover at a fast-charging station. When the navigation system is active, the battery is automatically pre-conditioned before a planned charging stop. Pre-conditioning the battery can be manually activated and deactivated by the customer at any time. The time required for pre-conditioning is displayed to the customer.

"Overcooling" of the high-voltage storage unit during fast charging is prevented by implementing full and partial cooling power phases in the charging process. This prevents excessively low temperatures from occurring during fast charging, especially at high states of charge. This offers increased potential for short charging times and reduced ageing of the battery cells. In addition it is possible to save individual charging settings for several individual charging points. They are then automatically restored the next time you approach the respective charging point.

In addition to the charging software, the cloud-based navigation system BMW Maps in the BMW i5 also contributes to optimising long-range

suitability. Calculating charge-optimised routes will be even more precise in future, provides more information on the charging stops and also offers additional options for individual settings (more on this in the chapter Display and control system, connectivity).

48-volt mild hybrid technology for all petrol and diesel engines.

Worldwide, all petrol and diesel combustion engines available for the new BMW 5 Series will be equipped with 48-volt mild hybrid technology. Two different systems are used. The four-cylinder diesel drive of the BMW 520d Sedan and BMW 520d xDrive Sedan models is combined with a starter generator integrated into the belt drive, which delivers a supporting power output of 8 kW/11 hp and generates a maximum torque of 25 Nm (18 lb-ft).

In all in-line six-cylinder internal combustion engine models, the 48-volt mild hybrid system consists of an electric motor that acts as a crankshaft starter generator and, together with its power electronics, is integrated into the housing of the 8-speed Steptronic Sport transmission. It generates a torque of 200 Nm (148 lb-ft) and, depending on the driving situation, delivers an additional drive power of up to 13 kW/18 hp, with which it supports the combustion engine to deliver a smooth, dynamic and efficient ride. The four-cylinder petrol engine is also combined with a crankshaft starter generator in Europe and with a starter generator on the belt drive outside Europe. Both versions of the 48-volt mild hybrid technology produce a particularly spontaneous response to every accelerator movement, both when starting off and during intermediate sprints, and make driving more comfortable when using the Auto Start Stop function.

The energy required for the additional electric power is stored in a 48-volt battery located under the luggage compartment. It is charged by means of recuperation during overrun and braking phases. This makes it possible to efficiently recover previously lost braking energy from the vehicle. In addition to the electric motor, the 48-volt battery also supplies the vehicle's 12-volt electrical system via a voltage converter.

New generation of four-cylinder and in-line six-cylinder petrol engines.

All petrol engines in the drive portfolio of the new BMW 5 Series Sedan stem from a new modular generation. The associated innovations include the so-called Miller combustion process, which shortens the opening times of the intake valves, a redesign of the intake ducts and

combustion chambers, as well as innovations in the areas of camshaft control, injection, ignition system and exhaust gas routing.

In addition, all petrol engines feature the latest version of the fully variable valve control VALVETRONIC. Their switchable rocker arms on the exhaust side make it possible to stop the gas exchange when required, thus reducing the engine's frictional torque in overrun phases by about two thirds. This leads to braking energy being more intensively recuperated. In addition, the advanced VALVETRONIC in conjunction with the crankshaft starter generator creates the prerequisites for purely electric driving at minimum speed. The corresponding models are therefore equipped with acoustic pedestrian protection.

BMW 540i xDrive Sedan power output significantly increased.

In the in-line six-cylinder engine of the BMW 540i xDrive Sedan, which will be offered exclusively on the US automotive market from spring 2024, the VANOS camshaft phasing system is now operated electrically. The resulting extended adjustment range has a positive effect on the drive's emissions.

The 3.0-litre engine, even in the latest version, features the latest BMW TwinPower Turbo technology and generates a maximum power output of 280 kW/381hp. This exceeds the power output of the predecessor model by 35 kW/48 hp. The maximum torque increases by 70 Nm (52 lb-ft) to 520 Nm (384 lb-ft) and can be increased up to 540 Nm (398 lb-ft) thanks to the additional power of the mild hybrid system. The new BMW 540i xDrive Sedan accelerates from zero to 100 km/h (62 mph) in 4.7 seconds.

BMW 530i Sedan and BMW 520i Sedan: New four-cylinder engine in two variants.

The new generation of the in-line four-cylinder engine features in the new BMW 5 Series Sedan in two power output versions. Both variants of the 2.0-litre engine are equipped with the latest BMW TwinPower Turbo technology and an exhaust manifold integrated into the cylinder head. The BMW 530i Sedan and BMW 530i xDrive Sedan models, whose drive unit generates a maximum power output of 190 kW/258 hp and a maximum torque of 400 Nm (295 lb-ft), is offered for selected international sales regions. With this drive unit, the change of engine generations is associated with 5 kW/6 hp more power and 50 Nm (37 lb-ft) more torque. The acceleration figures from zero to 100 km/h (62 mph) are 6.2 seconds for the new BMW 530i Sedan and 6.1 seconds for the new BMW 530i xDrive Sedan.

The BMW 520i Sedan, which is already available at market launch in Europe and elsewhere, is powered by the 140 kW/190 hp version of the new four-cylinder engine. This engine delivers a maximum torque of 310 Nm (229 lb-ft). Engine power is increased to up to 153 kW/208 hp and the maximum torque to 330 Nm (234 lb-ft) thanks to the support of the crankshaft starter generator of 48-volt mild hybrid technology. Compared to the predecessor model, this results in 18 kW/24 hp more power output and 40 Nm (30 lb-ft) more torque. The new BMW 520i Sedan takes 7.5 seconds to accelerate from zero to 100 km/h (62 mph).

BMW 520d Sedan: Latest-generation four-cylinder diesel engine.

The four-cylinder diesel engine in the new BMW 520d Sedan and the new BMW 520d xDrive Sedan also comes from the latest BMW Group EfficientDynamics modular generation. In addition to 48-volt mild hybrid technology, the associated innovations include a lightweight crankcase with friction-optimised pistons made of heat-treated steel, a graphite coating for the piston skirts and an active oil separator with map-controlled electric drive.

The BMW TwinPower Turbo technology of the 2.0-litre engine has also been advanced. In order to reduce fuel consumption and emissions, the efficiency of the two-stage turbocharging has been optimised, as have the common rail injection system and exhaust gas recirculation. The new drive unit's power output has now increased by 5 kW/7 hp to 145 kW/197 hp and has a maximum torque of 400 Nm (295 lb-ft). The new BMW 520d Sedan accelerates from a standstill to 100 km/h (62 mph) in 7.3 seconds, the new BMW 520d xDrive Sedan in 7.3 seconds as well. Both models are available at market launch of the new BMW 5 Series Sedan in Europe and other selected regions.

New 8-speed Steptronic Sport transmission as standard.

All combustion engines come with a new 8-speed Steptronic Sport transmission as standard. This means that shift paddles on the steering wheel are also standard equipment on the corresponding models. They enable gears to be changed manually and can be used at any time. In conjunction with the M Sport Package, the left paddle is also used to activate Sport Boost, i.e. to call up maximum drive power for particularly rapid intermediate sprints.

The new 8-speed Steptronic Sport transmission is produced in two versions. The variant developed for the six-cylinder engines and the four-cylinder petrol engine offered in Europe now also houses the electric

motor and the power electronics of the 48-volt mild hybrid system in its housing. The four-cylinder diesel engines and the four-cylinder petrol engines available outside Europe are combined with a 48-volt starter generator integrated into the belt drive as well as a 48-volt recuperation system throughout. Irrespective of this, the shift times of both transmission versions are perfectly matched to the interaction of the combustion engine and electric motor. In addition, the internal efficiency of the 8-speed Steptronic Sport transmission has been optimised, as have vibration damping and torsional irregularity decoupling. A new electric transmission oil pump and a torsional damper system increase efficiency as well as shifting and driving comfort. The characteristics of the shift response are adjusted according to the selected My Mode. When SPORT mode is activated, the transmission automatically changes from D to S setting.

Two plug-in hybrid variants added to the model range.

State-of-the-art plug-in hybrid technology will be added to the drive portfolio for the new BMW 5 Series Sedan in spring 2024. Customers can choose from two model variants, whose in-line six-cylinder or in-line four-cylinder petrol engines from the new modular generation are combined with the latest version of BMW eDrive technology for plug-in hybrid systems. Both performance and power delivery, as well as efficiency and electric range, have been increased compared to the plug-in hybrid models of the previous generation BMW 5 Series Sedan.

The electric motor developed for the hybrid drive is also integrated into the 8-speed Steptronic Sport transmission together with its power electronics. It contributes up to 145 kW/197 hp to the maximum system power output. This is 360 kW/489 hp for the new BMW 550e xDrive Sedan and 220 kW/299 hp for the new BMW 530e Sedan.

In addition, the new plug-in hybrid models benefit from an innovative measure to increase the electrical machine's power generation. Its nominal torque is 280 Nm (184 lb-ft). With the aid of a BMW patented pre-transmission ratio, it is increased to a torque of up to 450 Nm (332 lb-ft), which is effectively applied to the engine-side transmission input. In this way, the compact electrical machine can develop additional drive torque that would conventionally could only be realised with a significantly larger and heavier electric motor. The optimised power delivery achieved with the pre-transmission between the rotor of the electrical machine and the transmission input shaft is clearly noticeable when accelerating as well as during intermediate sprints.

The electrical machine draws its energy from a lithium-ion high-voltage battery, which is also integrated in the underfloor area of the plug-in hybrid models of the new BMW 5 Series Sedan. It provides an increased usable energy content of up to 19.4 kWh. The maximum charging power has been doubled compared to the previous models and is now 7.4 kW. This means that the high-voltage battery can be charged within 3.0 hours from zero to 100 percent of its capacity. At a conventional household socket, the charging process is completed within 9.8 hours.

The electric range is now 79 to 90 kilometres (49 - 56 miles) according to WLTP for the new BMW 550e xDrive Sedan and 87 to 101 kilometres (54 to 62 miles) according to WLTP for the new BMW 530e Sedan. (The purely electric drive of the plug-in hybrid models is only available at temperatures below minus 10 degrees Celsius after a few kilometres, when the battery has warmed up to the operational state)

Driving experience: chassis technology.

Refined sportiness in hallmark BMW harmony-



Maximum sportiness and a high level of long-distance comfort have characterised the BMW 5 Series Sedan since the very first model generation. In the new edition, the brand typical harmony of dynamic performance and driving refinement is achieved more than ever through the layout of the design and the model-specific tuning of suspension and control systems. The vehicle concept of the new BMW 5 Series Sedan is characterised by the longest wheelbase in the upper mid-range vehicle segment, increased track widths at the front and rear axles compared to the previous generation, axle load distribution almost perfectly balanced at a 50:50 ratio, intelligent lightweight construction and body and chassis connection rigidity optimised with specific struts.

The flexible drive architecture of the new BMW 5 Series Sedan, which offers a choice between conventional combustion engines, plug-in hybrid systems and all-electric drive for the first time, also results in a wider range of vehicle weights. This is taken into account by specifically modifying and individually tuning chassis components and adapting all control systems correspondingly. Regardless of the drive concept, every model variant offers an excellent driving experience by combining the refined sportiness and superior driving comfort typical of the BMW 5 Series Sedan.

Both the double-wishbone front axle and the five-link rear axle of the new BMW 5 Series Sedan have undergone extensive further development. To optimise the acoustic properties, the front axle support received an elastic steering gear mount. In the BMW i5 M60 xDrive, noise from the electric drive is insulated by large-sized powertrain mounts. The all-wheel drive variants of the new BMW 5 Series Sedan each feature a model-specific aluminium stiffening plate under the front axle support. Like the housing of the high-voltage battery in the underbody of the BMW i5, it contributes to optimising the rigidity of the front end. The rear axle support, manufactured using the aluminium integral casting process, combines low weight with high rigidity. Its hydraulic suspension also contributes to increasing driving comfort. The vibration damping and acoustic insulation of the BMW i5's electric drive unit acting on the rear wheels are optimised by a large-sized bearing and specific rubber mounts for the rear axle support.

BMW i5 M60 xDrive top-of-the-range model features model-specific chassis technology for superior performance.

As the top model in the range, the BMW i5 M60 xDrive not only has the most powerful drive, but also comes with standard suspension equipment that ensures the power of its two electric motors can be harnessed to deliver a fascinatingly superior performance experience. Its Adaptive Suspension Professional includes electronically controlled shock absorbers and suspension lowering by 8 millimetres compared to the standard chassis of the BMW i5 eDrive40, as well as Integral Active Steering. In addition, the dynamic performance, agility and handling precision of the high-performance model are enhanced by 19-inch M light alloy wheels with mixed tyres and a powerful M sport braking system. Adaptive Suspension Professional is also standard equipment on the new BMW 550e xDrive Sedan.

All other model variants can be optionally equipped with M sport suspension, Adaptive Suspension Professional or Adaptive M Suspension Professional including Active Roll Stabilisation, which is also available for the BMW i5 M60 xDrive and the BMW 550e xDrive. Other options include a sport brake system with a choice of blue or red brake callipers, up to 21-inch light alloy wheels and sport tyres. This allows the longitudinal and lateral dynamic potential of the new BMW 5 Series Sedan to be raised to the highest level, depending on individual preferences. The adaptive suspension systems also offer the driver to experience the maximum spread from comfortable to decidedly dynamic overall vehicle characteristics when switching between the My Modes PERSONAL and SPORT.

Sport steering with variable steering ratio now standard, newly tuned Integral Active Steering optional.

All model variants of the new BMW 5 Series Sedan are equipped with the latest version of electromechanical power steering as standard. The standard sport steering now includes a particularly direct and also steering angle-dependent ratio. Its range of functions also includes the Servotronic speed-related steering power assistance. A steering characteristic optimised for dynamic driving is available in My Mode SPORT. Alternatively, a comfort-oriented setting can also be selected for this mode via the BMW iDrive menu, which is a fixed component of all further My Modes.

Both the height and the longitudinal position of the steering column can be adjusted mechanically as standard and electrically as an option. The

driver benefits from a longitudinal seat adjustment range extended by 20 millimetres to now 80 millimetres.

The advanced Integral Active Steering is also available for the new BMW 5 Series Sedan as part of the Adaptive Suspension Professional. It makes manoeuvring more comfortable, enhances agility at medium speeds and conveys confidence when changing lanes and cornering at higher speeds. Depending on the driving speed, the rear wheels are turned either against the steering angle of the front wheels or in the same direction by up to 2.5°. The counter-steering of the rear wheels at low speeds can be used for comfortable manoeuvring in and out of parking spaces almost to a standstill of the vehicle. The turning circle of the new BMW 5 Series Sedan is reduced by more than 0.6 metres to 11.7 metres.

Optional lowered sport suspension, stroke-dependent shock absorbers for the BMW i5 and the plug-in hybrid models.

In conjunction with the optional M Sport Package, all model variants of the new BMW 5 Series Sedan are equipped with M sport suspension. It includes a noticeably firmer tuning of the shock absorbers, the suspension and additional springs as well as the anti-roll bars, which is combined with a lowering of the vehicle by 8 millimetres.

The BMW i5 and the plug-in hybrid models also feature stroke-dependent control of the shock absorbers on both axes, both as standard and with the M sport suspension. The additional hydraulic damping, which acts in the direction of pull, noticeably calms the body when compensating for the vibrations caused by uneven road surfaces and dynamic cornering, thus enhancing the sporty and confident handling of the vehicle. The additional damping is spring-travel-dependent, so that vibrations building up are initially damped linearly and then additionally absorbed by a second piston in the event of greater deflection. This prevents excessive bouncing or rocking of the body when driving over large bumps and thus prevents inharmonious vibration behaviour.

The stroke-dependent damping serves as an active tuning element, which optimises finding the balance between sportiness and comfort specifically for each vehicle. The positive influence of the additional damping on the car's harmonious driving behaviour is not only noticeable under heavy load, but already if a wheel lifts slightly after being triggered by a small bump.

The BMW i5 and the plug-in hybrid models of the new BMW 5 Series Sedan are also equipped with rear-axle air suspension as standard. The self-levelling suspension ensures optimum vehicle height for comfortable and safe driving, even when heavily loaded. The air supply to the suspension is regulated individually for each wheel and can thus also compensate for uneven loading.

Adaptive Suspension Professional with newly developed, extensively networked control logic.

The Adaptive Suspension Professional with electronically controlled shock absorbers is offered as optional equipment. Infinitely adjustable valves enable wheel-specific regulation of the damper forces, which is adaptive to the driving style, the road conditions and also the load condition. The rebound and compression stages of the shock absorbers are infinitely variable. This benefits not only the driving dynamics but also the rolling and body comfort of the new BMW 5 Series Sedan. Using the selections possible in My Modes, two clearly distinguishable maps can be activated for the characteristics of the shock absorbers. For My Mode SPORT, instead of the standard tight connection, the comfort-oriented setting obligatory in all other modes can also be configured.

The shock absorber control takes into account longitudinal and lateral acceleration, driving speed and steering angle, as well as body and wheel acceleration on the front axle, in order to activate the required damper force within a few milliseconds. The latest version of the system uses a newly developed control logic. In order to ensure clearly defined body control and at the same time sensitive spring deflection, the ideal damper force in each case is no longer calculated on the basis of mathematical models, but on the basis of a physical calculation of the data on the driving condition obtained through extensive networking. This means that when changing to My Mode SPORT, the connection of the body can be strengthened without compromising rolling and acoustic comfort.

The Adaptive Suspension Professional also includes a suspension lowered by 4 millimetres or 8 millimetres for the BMW i5 M60 xDrive. In addition, Integral Active Steering is part of this optional equipment.

Adaptive M Suspension Professional with additional Active Roll Stabilisation.

The Adaptive M Suspension Professional also uses the new control logic to optimise sportiness and comfort. The damper forces are controlled using an M specific characteristic.

In addition, this option includes Active Roll Stabilisation including Active Roll Comfort. The electric swivel motors ensure particularly fast and precise compensation of lateral inclination forces. In its latest version, the system is equipped with a 48-volt electric motor for this purpose.

Active Roll Stabilisation benefits agility and driving precision, while at the same time enabling a dynamic steering response by providing better roll support. It also increases comfort when driving straight ahead by decoupling the fixed connection of a conventional anti-roll bar between the wheels of an axle. This reduces body roll caused by one-sided road unevenness. The Active Roll Comfort function ensures that the system not only reduces body roll, but also builds up a counter-torque to keep the body horizontal, especially when the road surface is uneven on one side. In this way, the driver and passengers hardly notice any bumps in the road. In the rear, passengers can concentrate fully on their work or enjoy the entertainment programme undisturbed.

Directly controlled wheel slip limitation for fast and precisely optimised traction.

The new BMW 5 Series Sedan now also features directly controlled wheel slip limitation to deliver maximum agility and control in demanding driving situations. With this system, the traction control is integrated into the engine control unit. This eliminates the long signal paths to the control unit of the DSC (Dynamic Stability Control), so that the control interventions take place at up to 10 times the speed of conventional systems and in particularly precise fashion.

The directly controlled wheel slip limitation ensures optimised traction and superior directional stability even on slippery roads. Since it prevents loss of traction from the outset, especially when accelerating fast, but also during high-speed cornering, the Dynamic Stability Control DSC has to intervene much less frequently by selectively braking individual wheels to ensure confident and safe handling.

Integrated braking system, optional M sport braking system.

The latest version of the integrated braking system is fitted as standard in the new BMW 5 Series Sedan. It responds particularly precisely to the driver's pedal commands and provides a constant pedal feel. The system combines the functions of brake activation, brake boosting and brake control in one compact module. The required braking pressure is triggered by means of an electric actuator. As a result, the deceleration requested by the driver assistance systems also results in particularly short braking distances, thus optimising active safety.

Both the fixed caliper and the floating caliper brakes feature a new mechanism for adjusting the distance between the brake pad and the disc. This reduces the residual braking torque caused by the brakes dragging lightly while driving. The new generation of lightweight brake discs provides a weight saving of around 3 percent.

The optional M sport brake system is characterised by particularly powerful deceleration performance and a high thermal load capacity. The brake calipers, painted either blue or red, bear an M logo.

Light alloy wheels up to 21-inch size, performance tyres and tyres with integrated noise insulation.

The standard equipment of the new BMW 5 Series Sedan includes light alloy wheels in 18-inch and 19-inch sizes for the plug-in hybrid models and the BMW i5. The enlarged diameter line of the wheels compared to the predecessor model gives the vehicle an even more sporty presence in the side view. Optional 19-inch, 20-inch and 21-inch light alloy wheels are available ex-works and in the genuine BMW accessories range. The range also includes aerodynamic wheels, whose design and construction methods reduce both weight and air resistance.

In conjunction with selected 20-inch light alloy wheels, performance tyres are offered for the new BMW 5 Series Sedan, whose rubber compound enables higher lateral forces, acceleration and deceleration forces to be transmitted. On this tyre, as well as on the tyres mounted on the front axle for 21-inch light alloy wheels, foam absorbers on the inside provide integrated noise insulation. In this way, acoustic comfort in the interior of the new BMW 5 Series Sedan is optimised further.

In addition to the wheel-specific tyre pressure display, the new BMW 5 Series Sedan features a digital tyre condition monitoring system as standard. This function, which is unique in the competitive environment, makes it possible to detect tyre inflation pressure losses significantly earlier than through the vehicle's tyre pressure monitoring system using a cloud-based algorithm. This is made possible by a diagnostic function using artificial intelligence (AI) in the BMW backend. A loss of pressure is reported to the driver by the My BMW app and, depending on the market, also in the vehicle, together with a recommendation for taking action. Also using statistical information and AI methods, predictions can be made about the wear behaviour of the vehicle tyres, so that a forecast can be made about the remaining life of the tyres until the recommended minimum tread depth is reached.

Driving experience: driver assistance systems. Intelligent systems for automated driving and parking.



The systems for automated driving and parking available as standard or as an option for the new BMW 5 Series Sedan set standards in the competitive environment with their range of functions, reliability and everyday benefits. They underline the brand's leading role in the field of advanced assistance systems. A technology kit providing outstanding performance in the automotive sector, featuring the latest generation of cameras, ultrasonic and radar sensors, a new software stack, a powerful computing platform and a connection to the BMW Cloud via the 5G mobile communications standard, creates the conditions for the outstanding functionality of all current systems and offers unique potential for developing future automated driving functions.

The assistance systems used in the new BMW 5 Series Sedan increase comfort and safety in everyday life and on long-distance journeys. They support and relieve the driver in a variety of situations. Highlights in the range include the Highway Assistant, which relieves the driver of steering tasks at speeds of up to 130 km/h or 85 mph, Active Lane Change Assistant with eye activation and the Parking Assistant Professional including BMW Manoeuvre Assistant, which allows parking and manoeuvring of up to 200 metres to be controlled in the vehicle or also outside the vehicle via smartphone.

Intensive automated driving experience with the new Highway Assistant including Active Lane Change Assistant.

The optional Driving Assistant Professional, including Distance Control with Stop & Go function and Steering and Lane Control Assistant, provides the driver of the new BMW 5 Series Sedan with maximum support on long journeys and in city traffic. The combination of these two features intensifies the experience of automated driving to level 2.

In the automotive markets in the US and Canada, as well as in Germany, Driving Assistant Professional includes the Highway Assistant, which relieves the driver of steering tasks on highways with structurally separated directional lanes. At driving speeds of up to 130 km/h or 85 mph, it is possible to take your hands off the steering wheel and position them comfortably as long as you keep a close eye on the traffic. This is continuously monitored by the system with the help of an attentiveness

camera. The driver is fully responsible for the driving task even when the Highway Assistant is activated and must always be able to take over the steering wheel again completely.

The automated driving functions of Driving Assistant Professional also include the new version of the Active Lane Change Assistant, available for the first time in the new BMW 5 Series Sedan. This system can automatically carry out the respective driving manoeuvre with corresponding steering movements and adjust the driving speed when merging the car into traffic during a lane change. As a world first, the Active Lane Change Assistant in the new BMW 5 Series Sedan can be controlled by eye activation. This comfort feature now achieves a new level of interaction between the driver and the vehicle. The vehicle suggests a lane change and this can be carried out for the first time by looking in the exterior mirror to confirm the lane change. The Active Lane Change Assistant takes over the necessary steering movements automatically up to a speed of 130 km/h (85 mph), the traffic situation permitting. It is no longer necessary to confirm the lane change with the turn indicator, however it can still be used. This seamless interaction between the driver and the Automatic Lane Change Assistant provides a level of comfort and safety which is unique in the automotive sector.

In vehicles equipped with the new Highway Assistant, the Bluetooth SIM Reader cannot be used for the Personal eSIM for technical reasons. In this case, the Personal eSIM functions can only be used in the form of a direct connection of the eSIM via the corresponding mobile network providers (Telekom and Vodafone).

In addition, Distance Control with Stop & Go function and Steering and the Lane Control Assistant functions provide extensive relief for the driver, both when driving on motorways at up to 210 km/h (130 mph) and on country roads and in city traffic. With automatic Speed Limit Assist, traffic light detection (market-dependent), route control and active navigation guidance, both the speed and lane change assistance in the new BMW 5 Series Sedan can be adapted particularly precisely to the respective traffic situation, the distance to vehicles in front, speed limits, overtaking bans, illuminated traffic signs and route guidance.

Further components of the system are Side Collision Protection with active return, the Road Priority Warning and Wrong-way Warning, the front and rear Crossing-traffic Warning with braking function as well as the Emergency Lane Assistant and Emergency Stop Assistant functions which can be used in selected countries.

An overview of the activated systems and their functionality is available to the driver via Assisted View in the instrument cluster. The central area of the cockpit display is reserved for an augmented reality representation of the vehicle and its surroundings. For this purpose, camera images are combined with additional graphics and information. The images from the vehicle environment processed in this way provide the driver with a precise overview of the vehicle surrounding captured by cameras and sensors.

Driving Assistant with advanced front collision warning and Lane Departure Warning.

Depending on the market, the new BMW 5 Series Sedan already offers a comprehensive package for optimised safety in various traffic situations as standard equipment with the Driving Assistant. The functional scope of the front collision warning now also includes the detection of oncoming traffic when turning left and of pedestrians or cyclists when turning right. The latest version of the Lane Departure Warning with active lane return now also reacts to oncoming traffic that poses a potential collision risk.

Active lane return has been added to the Lane Change Warning, and a braking function has been added to the rear Crossing-traffic Warning. Further components of the Driving Assistant are the rear collision warning, the exit warning, the Evasion Assistant and the Crossroads Warning with brake intervention. Cruise control with brake function and manual Speed Limit Assist is also available as standard in the new BMW 5 Series Sedan.

Optional Driving Assistant Plus - also available as a BMW ConnectedDrive upgrade.

Driving Assistant Plus is offered as optional equipment. This system includes a basic version of Steering and Lane Control Assist and Active Cruise Control and Distance Control with Stop & Go function which can be used at speeds of up to 180 km/h (112 mph).

Driving Assistant Plus is available both ex-works and as part of the BMW ConnectedDrive upgrades. This gives the customer the opportunity to test the additional functions and then book them for a defined period in the BMW ConnectedDrive Shop.

Parking Assistant including Reversing Assistant as standard.

The new BMW 5 Series Sedan also provides extensive support when parking and manoeuvring. The standard Parking Assistant includes start

monitoring and the Trailer Assistant, as well as a Reversing Assist Camera that creates panoramic view images of the area behind the vehicle. In addition, the Parking Assistant assists the driver in selecting and using parking spaces that are either parallel or perpendicular to the driving lane. In addition to the steering tasks, it also takes over accelerating and braking as well as the gear shifts necessary when manoeuvring, both when parking and when backing out.

The Reversing Assistant, which is also standard, enables automated reversing in narrow and unclear environments such as multi-storey car parks or driveways. To do this, it stores the steering movements on the route last driven forwards and at a maximum speed of 36 km/h (22 mph). The system can then keep the vehicle in reverse gear for a distance of up to 50 metres on the line previously driven forwards.

The optional Parking Assistant Plus additionally includes the Parking View, Panorama View front and 3D View functions. This shows a 360-degree image of the new BMW 5 Series Sedan and its surroundings from different perspectives on the Control Display. In addition, the Remote 3D View function allows the driver to view a three-dimensional live image of his vehicle and its surroundings transmitted to his smartphone (available for Apple iPhone from operating system iOS 16.2). The BMW Drive Recorder and the anti-theft recorder are also included in the range of functions of Parking Assistant Plus.

Parking Assistant Professional: Control parking manoeuvres via smartphone.

In conjunction with the optional Parking Assistant Professional, the Reversing Assistant can take over the task of steering on a stretch of road which has been previously driven up to 200 metres long. The capabilities of the new BMW 5 Series Sedan in the area of automated parking and backing up are also significantly enhanced with this optional equipment - which can also be booked retrospectively in the BMW ConnectedDrive Store (if the vehicle is equipped accordingly). For example, the system can no longer only orient itself to other vehicles when parking and backing out automatically, but also to marker lines and kerbs. When parking in particularly tight parking spaces, the driver can now control the manoeuvring in and out of the space outside his vehicle using the My BMW app via smartphone (available for Apple iPhone from operating system iOS 16.2).

Also included in Parking Assistant Professional is the BMW Manoeuvre Assistant which can use GPS data and trajectory data defined by

steering movements to store and then automatically complete significantly more complex parking manoeuvres. In total, up to ten parking manoeuvres can be recorded at different locations with a total length of up to 600 metres. 200 metres of road length is possible per manoeuvre. When arriving again at the respective starting point, the BMW Manoeuvre Assistant then takes over the complete driving task, including accelerating, braking, steering and shifting between forward and reverse gear, following confirmation by the driver. If necessary - for example in a narrow and winding parking garage - multiple changes of direction with gear shifts and steering operations are also carried out. The driver can concentrate on monitoring the surroundings during the automated parking manoeuvre.

Just like automated parking and backing out, the driver can also control manoeuvring using the BMW Manoeuvre Assistant either in the vehicle or from outside using the Apple iPhone. A spontaneous mode change is also possible: Once a parking manoeuvre has been started, it can be interrupted at any time and then continued in the vehicle via the control system or outside the vehicle via smartphone using the My BMW app.

Display and control system, connectivity. Intuitive operation and new digital experiences with latest-generation BMW iDrive.



The enhanced version of the BMW iDrive display and control system with "QuickSelect" based on BMW Operating System 8.5 also contributes to the characteristic driving and travelling experience in the new BMW 5 Series Sedan. To make selecting and controlling the numerous functions and digital services more intuitive and comfortable, the latest-generation BMW iDrive offers a redesigned start screen and "QuickSelect" access. This means that the system has received an improved menu structure, oriented towards devices from the consumer electronics sector. The new BMW iDrive supports a focused and confident driving experience as it provides the right information in the right place.

In addition, BMW Operating System 8.5 in the new BMW 5 Series offers a wider range of digital content for information and entertainment, faster update cycles for functions, improved information on charging points for electric vehicles and optimised access to many specific online services. A broad range of video streaming is possible on the Control Display, as is an innovative form of in-car gaming presented for the first time in the new BMW 5 Series Sedan with the AirConsole platform.

The new BMW iDrive is also combined with the BMW Curved Display and the BMW Intelligent Personal Assistant. It is consistently designed to be operated by means of a touch display and natural language. In addition, the control system in the new BMW 5 Series Sedan also includes steering wheel buttons and the BMW iDrive Controller on the centre console. The BMW Head-Up Display and the BMW Natural Interaction option for controlling functions using gestures are available as optional equipment.

The advanced BMW Operating System 8 used in current BMW models with BMW Curved Display is used as the basis for the new BMW iDrive with "QuickSelect". It is called BMW Operating System 8.5, continues to be based on Linux and uses the latest generation of infotainment head units in the BMW mid-range and luxury class segment vehicles, which are responsible for graphics computing, among other things. The new edition of the business sedan represents not only a new dimension of driving pleasure and long-distance comfort with different forms of drive, but also the current progress in the field of digitalisation.

BMW iDrive featuring "QuickSelect". Functions are displayed on one level and can be quickly selected.

The new BMW Operating System 8.5 start screen permanently shows the map view of the navigation system or other individually configurable displays. On the same level, vertically arranged widgets are available on the driver's side of the BMW Control Display. You can switch between the widgets by swiping vertically. To display different content, horizontal swiping is also possible within some widgets, for example in the "My car" area.

The corresponding functions can be called up directly with "QuickSelect" without switching to a submenu. Once the settings have been made, it is again sufficient to tap the Home symbol at the bottom of the display to return to the start screen. In addition to the Home symbol, there are now also the symbols for direct access to the Air conditioning menu, the All Apps menu, Navigation as well as Media, Telephony and Apple CarPlay® and AndroidAuto™, if activated.

Thanks to the new, flat menu structure, selecting desired functions or settings becomes much more convenient. Just like the hardware in the form of the BMW Curved Display, the digital content is also geared towards the familiar and hall-mark idea of orienting everything towards the driver. BMW iDrive provides the right information at the right time and in the right place. To make sure that the system is intuitive to use while driving, the graphic interface and menu structure feature a design developed by BMW Group Design that is as uniform as it is characteristic.

In-car gaming with AirConsole premieres in the new BMW 5 Series.

In a cooperation with the gaming platform AirConsole, BMW presents a new and unique form of in-car gaming in the new BMW 5 Series Sedan. Driver and passengers can play so-called casual games while the vehicle is stationary, for example to bridge waiting times while charging the high-voltage battery of the BMW i5.

Setting up the gaming experience with AirConsole is seamless. Players only need their smartphone, which acts as a controller, and the BMW Curved Display. After launching the AirConsole app in the vehicle, the connection between the smartphone and the vehicle can be established by scanning a QR code on the Curved Display. The players can then start playing right away.

AirConsole technology enables instant delivery of games over-the-air and players can control them via their smartphones. Thanks to this

unique configuration, several players can take part in the in-car gaming fun at the same time, i.e. also the passengers in the rear of the new BMW 5 Series Sedan for example during a stopover. In general, it is possible to play solo or with all passengers in the vehicle, either together or in competition mode.

So-called casual games are offered, which are characterised by being easily accessible and providing intuitive gameplay control. The selection available for the market launch of the new BMW 5 Series Sedan includes racing, sports, quiz and music quiz games as well as simulation, strategy, jump-and-run and puzzle games. The 20 or so titles that can be played right from the start include "Go Kart Go", "Golazo", "Music Guess" and "Overcooked". The portfolio of available games is being continuously expanded.

Video streaming on the Control Display with YouTube, Bundesliga In-Car app and other providers.

In the new BMW 5 Series Sedan, the driver and front passenger can enjoy video on demand on the Control Display. In addition to YouTube, the Bundesliga In-Car app is also available as part of a pilot application for the market launch in over 15 countries. The app contains selected on-demand and live content from the current Bundesliga football season and is initially available until 31 March 2024.

In addition, the BMW Group will expand its entertainment package in collaboration with Xperi to include the TiVo video streaming platform. This will give customers access to a continuously growing amount of aggregated video content, such as live and on-demand streaming services, which include a variety of country-specific channels with news, movies and access to media libraries. The video streaming portal will be made available over-the-air to customers of the new BMW 5 Series and other models equipped with the latest BMW infotainment system by the end of 2023.

Translated with www.DeepL.com/Translator (free version) BMW Maps with Augmented View behind the steering wheel and other Improvements in route guidance optimised for charging.

The cloud-based navigation system BMW Maps is part of the standard BMW Live Cockpit Plus. It offers extremely fast and dynamic route calculation based on precise real-time traffic data delivered at short intervals. In conjunction with BMW Operating System 8.5, it makes entering a destination even easier and offers additional information while driving.

In addition, the new BMW Maps system allows drivers to use improved functions for particularly precise route planning optimised for charging on long-distance journeys with the BMW i5 - both in the vehicle and via the My BMW app. The charging stops are planned so that the entered destination is reached as quickly as possible. The driver's preferred charging status, with which he wants to reach the stopovers and the final destination, can be set in five-percent increments and incorporated into the planning of the route. The system can give preference to charging stations from selected providers and exclude others from route planning at the driver's request. Excluding other providers is only suggested if the journey can be completed efficiently without major detours.

Even more detailed information can be provided on request for the charging stations en route. Current availability, supported plug types and payment options are listed, as well as the availability of sanitary facilities, catering or playgrounds in the vicinity of the respective charging station. How long the planned charging stop will take and what it will cost can also be shown in advance.

In the new BMW 5 Series, calculating the route optimised for charging via the BMW Cloud is even faster than before. The information is also updated at shorter intervals. The closer the vehicle gets to a scheduled stopover, the more frequently the availability of the charging station is checked so that an alternative route can be determined in good time if necessary. All the details of a completed charging process are stored in the BMW backend. This means, for example, that the actual charging performance achieved can be precisely documented and the best charging stations for the route optimised for charging can be recommended to the customer.

In particular, the MAX RANGE function can be used in the BMW i5 if, contrary to expectations, a charging station provided for in the route guidance should not be available. The function is available in My Mode EFFICIENT and extends the range by up to 25 percent by specifically limiting the drive power and top speed, combined with a reduction in comfort functions (more on this in the Drive and charging technology chapter).

The display and control system of the new BMW 5 Series Sedan is expanded to include the BMW Head-Up Display in conjunction with the optional BMW Live Cockpit Professional. In addition, the Augmented View function, which supplements the map display of the navigation system, enables particularly precise orientation in traffic. In the new

BMW 5 Series Sedan, a live video stream from the driver's point of view is shown on either the Control Display or the instrument cluster and enriched with contextually relevant additional information. For example, in if an intersection seems complicated, an animated direction arrow integrated into the video image can support the driver in taking the ideal turn according to the planned route. Augmented View can also provide helpful information when looking for a parking space by displaying the current parking regulations for the parking zone.

Optimum connectivity and phone quality thanks to 5G and Personal eSIM.

The new edition of the business sedan provides particularly powerful mobile phone reception both for in-car gaming and data transmission for streaming and other online services, as well as for trouble-free phone use while driving. This is ensured by the advanced design of the vehicle's own 5G-capable antenna system. Outstanding voice and data transmission quality is guaranteed thanks to two 5G mobile antennas as standard and up to four as an option.

The Personal eSIM, which is standard in Europe, can be activated by the customer in addition to the vehicle SIM (DSDA: dual SIM, dual active). With the Personal eSIM, the customer can use the communication and networking functions provided by his mobile phone contract particularly conveniently in the vehicle - even if he has not got the smartphone with him in the vehicle. The new BMW 5 Series Sedan becomes another digital and networked terminal.

The Personal eSIM is not only linked to the vehicle, but also to the BMW ID of the user and is therefore transferable to other BMW vehicles with Personal eSIM function. The Personal eSIM also provides a Wi-Fi hotspot for up to ten devices simultaneously in the vehicle.

Directly connecting the Personal eSIM to the mobile phone contract varies depending on the country and mobile phone provider. If the customer has a mobile phone contract with a mobile phone provider that does not offer a direct connection of the eSIM to BMW, the customer can use the Personal eSIM via the Bluetooth SIM Reader in conjunction with a nano SIM card from his mobile phone provider.

Personalisation with BMW ID and My BMW app.

In the new BMW 5 Series Sedan, customers benefit from an increasingly automated and personalised user experience based on BMW ID: After registering for the first time using a QR code scan, the profile is added to

the vehicle. Personal and synchronisable settings are loaded. The vehicle key detected in the vehicle is automatically linked to the BMW ID. In addition, the vehicle is added to the My BMW app without the customer having to do anything, so that the customer can benefit from the extensive functions offered by the My BMW app.

Functioning as a universal digital interface, the My BMW app provides information on the vehicle's status, the vehicle charge and available range at all times. Via remote access, it enables the use of functions such as vehicle location, locking and unlocking the doors or recording the vehicle's surroundings. The driver can have a three-dimensional live image of the vehicle's surroundings and interior transmitted to his smartphone using the Remote 3D View and Remote Inside View functions. Different perspectives on the vehicle and its surroundings can be selected. In conjunction with the BMW Digital Key Plus, Remote Control Parking functions are also available in the My BMW app when the customer is in the immediate vicinity of the vehicle.

Managing the vehicle's service and maintenance needs is a convenient feature offered by the My BMW app. If the vehicle has to be serviced, users receive a push notification and can make an appointment directly in the app. The entire service process is supported via the app including check-in, service video, status tracking and payment.

In addition, the My BMW app can be used to send destination addresses from the smartphone to the vehicle's navigation system and to initiate, purchase or extend ConnectedDrive upgrades. Charging for the BMW i5 and the plug-in hybrid models can also be controlled via the My BMW app. The function My journeys including efficiency trainer provides the user with data and evaluations on distances travelled, consumption, average speed and the eDrive share on the smartphone and provides tips for even more efficient driving. A total of up to seven users can link the same vehicle with the My BMW App and a BMW ID that is unique to each user.

Proactive Care: New service promise characterised by digitalisation.

The market launch of the new BMW 5 Series Sedan also marks the beginning of a new chapter in the field of customer service. With Proactive Care, BMW is creating a new platform for exchanges with customers when different types of car servicing is required. The focus is on recognising the vehicle's service needs also by using artificial intelligence and proactively offering solutions to the customer without them having to take action themselves.

This is not the first time that BMW has taken on a pioneering role in the use of digital technology to optimise customer service. With BMW TeleServices, customers have already been benefiting for many years from the fact that service-relevant data is transmitted directly from the vehicle to the BMW dealer. It is also possible to arrange service appointments online in this way - either by calling from the vehicle or via the My BMW app. With Proactive Care, BMW is now going one step further. From Condition Based Service to digital tyre diagnostics and Battery Guard to accident detection as part of the automatic emergency call, the new BMW 5 Series Sedan features numerous options for identifying servicing or assistance needs and reporting them to BMW according to the customer's preferences. As soon as this happens, BMW contacts the customer and proposes a suitable solution, which is then carried out using the suitable channel depending on the urgency. In case of the vehicle needs servicing urgently while on the road, the customer receives suggestions for a visit to a nearby dealership.

Depending on the type of service required, communication takes place via different channels: with an in-car message on the Control Display, a message in the My BMW app, by e-mail or - in the event of a collision or breakdown - by means of a Roadside Assistance call. Proactive Care offers the customer various types of services. This includes remote diagnosis with possible problem solving via software update as well as online appointment scheduling or the personalised service video including online payment processing (the scope of service of "Proactive Care" may vary depending on the country of delivery) In the event of a breakdown, BMW will activate Mobile Service or a tow truck and inform the customer in advance when assistance will arrive.

Paying parking fees directly in the vehicle.

Using the BMW ID, the driver of the new BMW 5 Series Sedan can now pay parking fees directly in the vehicle. The new Park Payments function can initially be used in Germany and Austria and in the course of 2023 also in other European countries.

When arriving at a parking zone, the vehicle automatically detects whether the service is available and displays the payment function if the parking zone is covered by one of the connected providers. The parking stay can be conveniently paid for using the credit card stored in the My BMW app. When the vehicle leaves the parking space again, the parking stay is automatically terminated.

Natural dialogue with the BMW Intelligent Personal Assistant.

With the new generation of BMW iDrive, the BMW Intelligent Personal Assistant also features additional functions. Naturally spoken instructions can now be used to adjust the seat position, start the Parking Assistant or activate the IconicSounds Electric in the BMW i5, among other things. A direct text overlay also shows the customer which command the voice assistant has just understood and processed. In conjunction with the optional BMW Live Cockpit Professional, the BMW Intelligent Personal Assistant in the new BMW 5 Series Sedan also responds to instructions from rear-seat passengers. In addition, the digital companion can recognise user behaviour and proactively make suggestions to the driver on how to use the vehicle. The BMW Intelligent Personal Assistant suggests sample commands and rarely used functions that can be found in the "Personal Assistant" widget "within QuickSelect.

Using the BMW Intelligent Personal Assistant is accompanied by new graphic symbols on the displays that emphasise the interactive character of the system. The digital assistant is visualised in such a way that it "leans" towards the active speaker and thus shows that it is "paying attention" when there is speech input.

In addition, the new BMW 5 Series Sedan offers the option of integrating the Amazon Alexa. The personal AI can be used in the vehicle, for example, to make shopping lists using your voice, play music or control your smart home remotely. At home, you can also check on the BMW i5's high-voltage battery charge status or activate the pre-conditioning by voice command using an Alexa capable device.

Welcome Scenario with light show and personal welcome.

The Welcome Scenario provides the driver with a fascinating user experience as soon as he approaches the new BMW 5 Series Sedan. Ultra-wideband radio technology (UWB) enables precise localisation of the key or compatible smartphones when approaching to trigger the welcome.

The perfectly coordinated welcome scenario is initiated from a distance of three metres. It includes an orchestrated light show from the exterior and interior lights. The light carpet is also activated. At a distance of around 1.5 metres, the doors are automatically unlocked and light signals are activated in the exterior mirrors and on the BMW Interaction Bar, as well as a harmonious Welcome Sound. After getting in, the BMW

Curved Display displays a choreographed start-up animation with a personal greeting.

BMW Digital Key Plus as a fully-fledged vehicle key.

The optional Comfort Access function also includes the BMW Digital Key Plus. It offers the option of unlocking and locking the new BMW 5 Series Sedan via security-optimised Ultra Wideband radio technology (UWB) using suitable smartphones with the iOS or Android operating systems as well as the Apple Watch. The conventional car key thus becomes superfluous. Approaching or moving away from the vehicle is sufficient to trigger unlocking or locking. The smartphone can remain in the customer's pocket.

BMW Digital Key can be set up via the BMW app. The vehicle owner can also share the digital key and thus the access rights with up to five other users, regardless of whether they use a smartphone with iOS or Android operating system. Within a radius of approximately six metres, BMW Digital Key Plus in conjunction with the optional Parking Assistant Professional in the My BMW app offers additional functions such as remotely controlling parking manoeuvres.

Smartphone integration.

The standard equipment of the new BMW 5 Series Sedan includes optimised smartphone integration via Apple CarPlay® and Android Auto™. The services are integrated directly in the display and operating system via a Wi-Fi connection between the respective smartphone and the vehicle. Here, the driver can view all the important information from the apps on the Control Display and also – in intelligently processed form – in the instrument cluster and the optional Head-Up Display.

Individual driving experience with My Modes.

My Modes ensure the overall, harmonious interplay of vehicle functions, displays, ambient lighting and sound. They can be called up by voice command or via a button on the centre console, which has taken the place of the Driving Experience Control button previously located there. The My Modes PERSONAL, SPORT, EFFICIENT as well as RELAX, EXPRESSIVE and DIGITAL ART are available in the new BMW 5 Series Sedan. They can be used to activate specific settings for the drive and suspension, the style of the displays on the BMW Curved Display and the interior lighting including the BMW Interaction Bar - to suit the current mood or personal preferences.

Interior camera for image and video recording as well as for taking a look inside the vehicle via the My BMW app on your smartphone.

An interior camera in the roof area allows passengers to take photos and record video, including sound, when stationary and while driving. This is a great way to capture special moments and share them with friends or family. The recordings can be easily transferred by scanning a QR code in the control display with a smartphone connected to the vehicle via Wi-Fi.

In addition the customer can use the remote function in the My BMW app to request footage from the interior camera on their smartphone and take a look inside the vehicle to see if any bags or other items have been left behind. The interior camera is also activated when the anti-theft recorder is triggered. This starts a recording of the interior as soon as the vehicle's anti-theft alarm system is triggered. In conjunction with the optional Parking Assistant Plus, a recording of the exterior cameras is also provided in this case.

"Over-the-air" updates: Remote Software Upgrade and BMW ConnectedDrive Upgrades.

With more than 5 million vehicles on the road, the BMW Group has the world's largest fully over-the-air upgradeable vehicle fleet. With the Remote Software Upgrades function, the new BMW 5 Series Sedan always stays up to date with the latest software. Upgrades may include free quality improvements or even additional features or functional improvements (availability depends on country, vehicle model, equipment and vehicle condition).

With BMW ConnectedDrive Upgrades, customers can also test selected functions free of charge for a period of one month and then book them for a specific term. The range available in the BMW ConnectedDrive Store for the new BMW 5 Series Sedan includes Remote Engine Start, Parking Assistant Professional and Welcome Light projection.

M specific displays on the BMW Curved Display.

In the new BMW i5 M60 xDrive, the emotional performance experience is supported by M specific displays on the BMW Curved Display. The typography and graphics are based on the display in the cockpit of high-performance cars from BMW M GmbH. The bands of the main displays and associated design elements in the instrument cluster appear in a platinum silver finish.

In conjunction with the optional M Sport Package, the BMW Curved Display also offers a specific design in all other model variants of the new BMW 5 Series Sedan. As in the BMW i5 M60 xDrive, the Sport Boost and Launch Control functions appear impressively in the instrument cluster when activated.

In all models, the content shown in the centre of the Information Display can be selected individually. For example, by pressing the corresponding multifunction button on the right steering wheel spoke, you can switch between a detailed map view, infotainment lists, the Assisted View and the Augmented View or the range prediction in the BMW i5.

Charging solutions from BMW Charging. Introducing Connected Home Charging and Multi Contract Plug & Charge.



BMW Charging is continuously expanding its range of products and services for easy and convenient charging at home, at work and on the move. The Connected Home Charging Package will be offered for the first time for the BMW i5 and the plug-in hybrid models of the new BMW 5 Series. It creates optimal conditions for reducing energy costs, easing the burden on electricity grids and reducing the need for fossil fuels.

Connected Home Charging offers a complete ecosystem for smart charging for the first time and at a premium level. The package offered in many European markets together with the strategic cooperation partner E.ON creates optimal conditions for solar and load-optimised charging (stage 1) and, in a further expansion stage, for cost-optimised charging based on a dynamic electricity tariff contract (stage 2, from 2024) and networking with the energy market. This creates the basis for integrating e-vehicles into the energy system to a higher level - up to and including using the vehicle battery as a buffer for the electricity demand in one's own household or in the public electricity grid based on the technology of bidirectional charging (stage 3, from 2025) with suitably enabled future vehicles. BMW is leading the way and is an innovator even before any legal regulation has been passed.

The Flexible Fast Charger for AC charging with an output of up to 11 kW is available as standard in the BMW i5 and in the plug-in hybrid models of the new BMW 5 Series Sedan for charging at home or at work. With the appropriate adapters, it can be connected to conventional household sockets as well as to industrial sockets. The BMW Wallbox, which can be permanently installed, is offered as an option and enables three-phase charging with an output of up to 22 kW. In addition to being very compact, it also offers convenient cable management.

Connected Home Charging enables smart charging for the BMW i5.

With the optional Connected Home Charging Package, customers benefit from both reduced energy costs and an optimised carbon footprint as the charging processes at home are controlled intelligently. The first stage of this control system, which has now been launched, includes so-called load-optimised charging. The charging power is automatically adapted to the power available in the household. In this way, the maximum power

is always provided for charging the high-voltage battery depending on other consumers in the household, without the vehicle owner having to actively intervene. This is a great gain in convenience and safety, especially in markets where the house connection capacity is usually low.

In addition, Connected Home Charging can maximise the use of self-generated solar power for charging. The intelligent control system ensures that the solar power provided by the customer's photovoltaic system is primarily used to charge the vehicle's high-voltage battery after supplying the other consumers in the household - and is not fed into the power grid. So in addition to energy costs, the customer can also optimise the efficient use of green electricity by means of this solar-optimised charging method.

The Connected Home Charging Package includes the new BMW Wallbox Plus equipped with comprehensive connectivity, including installation service and networking, as well as the use of digital services to control charging processes via the My BMW app. Intelligent charging management offers the option of choosing between the two strategies for load-optimised or solar-optimised charging when optimising home charging processes.

With the Connected Home Charging Package, the customer is set up for smart charging and can also benefit from further expansion stages of the system. From 2024 onwards, in the second stage, so-called cost-optimised charging will be possible, which is already based on the connection to the energy market - via the strategic cooperation partner E.ON in Europe. This allows the customer to benefit for example from price fluctuations on the electricity exchange on the basis of a dynamic electricity tariff. The intelligent control system then places charging processes in time windows with a low price level if possible. Of course, this planning also takes into account the customer's individual data and requirements - for example, the next planned departure time and the minimum amount of charge required for this. This means that the customer can always use his vehicle without any restrictions; ensuring mobility is always the top priority.

In addition, further functionalities and expansion stages of Connected Home Charging will follow in future vehicle models. This will also include the technology of so-called bidirectional charging in future generations of electric vehicles from 2025 onwards in the third stage. In this process, (regeneratively) generated electricity is first stored in the vehicle's high-

voltage battery. The vehicle-to-home function makes it possible to use this electricity in the customer's home when needed, while the vehicle-to-grid function feeds it into the public grid. In both cases, the high-voltage battery serves as intermediate storage and can thus support the efficient and sustainable use of energy.

Plug & Charge: Contactless authentication with access to multiple contracts.

The all-electric models in the new BMW 5 Series are also the first BMW vehicles to be suitable for use with the Plug & Charge function. Plug & Charge makes charging at compatible public charging stations even more convenient, as digital authentication via app or charging card is no longer required to access them. The vehicle authenticates itself independently through a technical interface (ISO15118-2).

The multi-contract option of the Plug & Charge functionality is groundbreaking and unique. Customers can digitally store up to five individual Plug & Charge-enabled power contracts from different providers in the vehicle. The authentication required for the charging process and billing takes place automatically at compatible charging points. As soon as the vehicle is connected to the charging point, not only electricity but also the necessary contract data is transmitted through a communication interface via the charging cable. In this way, users of electric-drive company vehicles can, for example, obtain electricity particularly conveniently from those providers with whom their employer has concluded a separate charging contract.

Fixed kilowatt-hour prices for public charging.

In Europe, the scope of delivery of the BMW i5 and the plug-in hybrid models of the new BMW 5 Series includes the Flexible Faster Charger for charging at home as well as the BMW Charging Card and a charging cable (Mode 3) for use at public charging stations. It enables three-phase charging with up to 22 kW.

The main advantage of BMW Charging's public charging offer is the fixed and attractive kilowatt hour prices per country for AC and DC charging in the Active Tariff in Europe, independent of the charging infrastructure operator and independent of the price displayed at the charging station. The High Power Charging Network of the BMW Group participation IONITY, which is generally equipped with the Plug & Charge functionality, is also integrated into the BMW Charging Network.

For drivers of a BMW i5, the monthly basic fees for the BMW Charging Active tariff and the IONITY Plus package are waived for the first twelve months after the new vehicle has been registered - in line with all other new electric vehicles from the brand. BMW Charging ensures that every charging process by customers supports using renewable energies, thereby contributing to reducing the vehicle's - carbon footprint. In addition to Europe, similar local market-optimised charging offers are being developed worldwide.

The BMW Charging public charging offer provides access to more than 466,300 public charging points in 29 countries in Europe alone with just one registration. In Germany, drivers can access more than 87,000 charging points. BMW Charging is among the top providers with around 95 per cent coverage in the public charging network.



Product and manufacturing sustainability

Holistic concept for using resources sustainably

The BMW Group consistently pursues its goal of becoming the most successful and at the same time sustainable manufacturer of premium automobiles. Since 2007, BMW EfficientDynamics has been optimising every aspect of vehicle development to see how it can contribute to sustainability improvements - from powertrain and energy as well as thermal management to digital efficiency functions and service requirements, aerodynamic properties and weight reduction through intelligent lightweight construction. The holistic approach to reducing the ecological footprint takes into account the entire life cycle of a vehicle - from development and procuring raw materials as well as using secondary materials, through production to the use of the vehicle and how it is subsequently recycled with the circular economy in mind. Sustainability and premium standards are not a contradiction for the brand, but are inextricably linked.

By continuously increasing efficiency and through consistent electrification, the company has succeeded in reducing CO₂ emissions in the EU by more than 9 per cent in 2022 compared to 2021, according to preliminary calculations. With emissions of 105 grams per kilometre according to WLTP, the BMW Group is 22 grams below the fleet target limit of the European Union EU27+2 (EU, Norway, Iceland) of 127 grams per kilometre, according to preliminary calculations.

In addition to consistently optimising vehicle efficiency, the BMW Group is committed to the Paris Climate Agreement and, together with the renowned Science Based Targets Initiative (SBTi), has defined CO₂e reduction targets for the supply chain, production and use phase on the road to climate neutrality. This ambitious objective was decisive in developing the new BMW 5 Series.

New BMW 5 Series Sedan meets premium standards also in terms of sustainability.

The new BMW 5 Series Sedan makes a significant contribution to achieving the company's ambitious climate goals and the targets of the Paris Climate Agreement. By reducing the carbon footprint in the supply chain by 20 to 25 per cent and by up to 58 percent across the entire lifecycle compared to the predecessor model, the new BMW 5 Series

Sedan fulfils its premium claim not only in terms of build quality and driving pleasure, but also with regard to its environmental impact.

The new BMW 5 Series is the brand's first model to feature a completely leather-free interior as standard. Innovative Frozen paints produced using the Biomass Balance process are available for the paintwork. In the BMW i5, the waste heat from the electric drive can be used for the first time to warm up the high-voltage battery. With the new MAX RANGE function, the range can be increased by up to 25 percent if required. In addition, the new Connected Home Charging feature also offers the technical prerequisites for intelligent charging, which contributes to relieving the burden on the electricity grids and reducing the demand for fossil energy.

The variety of innovations underlines the holistic approach to optimising sustainability that is also being pursued with the new BMW 5 Series. This applies in particular to the new BMW i5. The all-electric model opens up the possibility of significantly improving the carbon footprint compared to a comparable model with a conventional combustion engine. Compared to the new BMW 520i xDrive with combustion engine, the new BMW i5 eDrive40 has an approximately 27 per cent lower global warming potential over its entire life cycle when using the current EU electricity mix. When using regenerative charging power, the new BMW 520i even has around 56 per cent less global warming potential over its entire life cycle than the new BMW 520i xDrive.

When using DC fast-charging stations of the High Power Charging network IONITY, the high-voltage battery of the BMW i5 is charged with electricity which is 100 percent green. BMW Charging ensures that every charging process by customers supports using renewable energies, thereby contributing to reducing the vehicle's carbon footprint.

The measures implemented in the BMW i5 to minimise CO₂ emissions in the supply chain have saved more than 25 per cent in emissions compared to a vehicle where these measures were not applied. This corresponds to a reduction of more than five tons of CO₂ per vehicle. The CO₂ emissions of the combustion engine models could also be improved by 20 per cent in the supply chain and by up to 15 per cent in the use phase. Short transport routes and regionally based suppliers play a decisive role especially with regard to sustainable supply chains. To ensure that purchasing takes place as close as possible to the respective production site, the principle for the BMW Group's global sourcing strategy is "local for local". Making supply chains more local and thus

more resilient is becoming increasingly important in the face of geostrategic development.

Sustainable production at the BMW Group Plant Dingolfing.

All model variants of the new BMW 5 Series Sedan are manufactured at the BMW Group Plant Dingolfing. In the course of the transformation to electric mobility, both the production capacities and the number of employees at the e-drive production competence centre located at this site have recently been significantly increased. In addition, the transformation at the BMW Group plant in Dingolfing is characterised by the iFactory vision with its "lean", "green" and "digital" thrusts.

In the body shop, it was possible to integrate body production for the new models into the production lines which were originally not designed for flexible follow-up model production. This means that a large part of the equipment and several hundred production robots can continue to be used. The consumption of resources in the paint shop is currently being reduced following investments in the double-digit million range. It will have new lines for cathodic dip coating and dry deposition, which will significantly reduce both the amount of water and energy which has to be used. The waste heat generated in the drying processes will not be recycled as process heat as before, but will be used to generate electricity in the future.

The electricity used for vehicle production is generated from renewable sources to 100%. Other sustainable production measures include an energy-efficient plant park, packaging planning as well as transport logistics, recycling and water management. Electric trucks are being used on a pilot basis for transport within the plant site. The recycling rate at the Dingolfing plant is over 90 percent, and the recovery rate is even over 99 percent. At the BMW Group plant in Dingolfing, for example, only around 620 grams of residual waste were produced per vehicle manufactured in 2022. More than 40 per cent of the water demand is covered by the company's own wells. This conserves drinking water reserves in the region.

By using artificial intelligence to cut leather surfaces for optional interior trim, the amount of raw material consumed in the Individual workshop at the BMW Group plant in Dingolfing was reduced by around 15 percent. The number of incorrectly cut or faulty leather parts has even decreased by around 75 per cent thanks to digital technology.

Sustainably produced Frozen paintwork based on biomass.

The BMW Group is the first car manufacturer in the world to use matt paints produced on the basis of biomass instead of petroleum in its European plants. The Frozen paint finishes available for the new BMW 5 Series Sedan are also produced using this innovative process. Renewable raw materials such as biowaste or waste from sewage treatment plants serve as the starting material for these so-called biomass balance paints. They can replace the organic components in paints.

The sustainable paints are chemically identical to their fossil-based counterparts and meet the same high quality standards that the BMW Group applies to all materials used. Using sustainable paints made from biowaste not only reduces the consumption of fossil raw materials, but the CO₂ emissions associated with extraction, transporting and processing crude oil can also be avoided.

BMW Group relies on green power for sustainability in the supply chain.

Using electricity from renewable sources in the supply chain is an important lever for achieving CO₂ savings. The BMW Group has already concluded more than 400 supply contracts that include the use of green electricity. This also affects the manufacturers of the battery cells for BMW eDrive technology as well as suppliers of aluminium and components made from this light metal. In battery cell production, for example, using secondary materials and green electricity saves around 45 per cent of CO₂ emissions compared to a conventional production method.

Since February 2021, the BMW Group has been sourcing aluminium from the United Arab Emirates that has been produced with the help of solar power. The electricity is generated by a large solar park in the desert outside Dubai. This purchase covers almost half of the annual demand of the light metal foundry at the BMW Group plant in Landshut, where, among other things, the engine blocks for the new BMW 5 Series and the housings for the latest generation of electric motors are produced.

Getting to a circular economy step by step with the Secondary First approach.

In addition to a responsible approach to energy and using regenerative sources, the BMW Group's ambitious sustainability goals include using secondary raw materials in vehicle production to an increasing extent.

The company is pursuing the vision of the circular economy, in which raw materials are kept in circulation for as long as possible in order to reduce the use of primary materials and the associated mining of new raw materials and their energy and CO₂ intensive processing. Currently, an average of nearly 30 per cent of BMW Group vehicles are made from recycled materials. With the "Secondary First" approach, this value is to be successively expanded to 50 percent.

In order to reduce the use of primary aluminium, which is particularly energy-intensive to produce, the BMW Group focuses on the targeted use of secondary materials for the high-quality light metal. In addition to the components from suppliers, for example the aluminium wheels, this applies in particular to the components manufactured in-house from the light metal foundry in Landshut, which uses only secondary or green aluminium. In this way, a particularly large saving of more than 60 percent can be achieved compared to conventional aluminium components.

Sustainability goals are also being pursued when it comes to plastic components by using secondary raw materials to the maximum extent. The proportion of recycled plastic materials in the interior of the new BMW 5 Series Sedan, such as the tailgate trim, is around 60 per cent. For other components, it was even possible to rely entirely on recyclates. For the upper material of the floor covering, 100 percent recycled material is used, which is obtained from old fishing nets, among other things. The design covers in the engine compartment are also made entirely of secondary material.

High-quality, sustainable materials are also used in a wide range of other components. The new BMW 5 Series thus has a completely leather-free interior as standard, including the steering wheel. By using vegan surface material, the carbon footprint can be reduced by around 85 percent compared to leather. In addition, the loudspeakers in the door trim are covered with a decorative spacer fabric, which eliminates the need for fabrics and adhesives. The chrome part of the lettering is also omitted.

BMW Group is looking to establish closed-loop recycling for battery cells.

As electric mobility increases, manufacturing high-voltage batteries in a resource-saving way is also becoming more important. The BMW Group has contractually committed all suppliers of battery cells for the current

fifth and future sixth generation of BMW eDrive technology to using electricity which is 100% green.

The second use and recycling of high-voltage batteries are also already part of the BMW Group's sustainability concept. Since 2013, the company has been involved in various projects for reusing and recycling high-voltage batteries. Examples include battery storage at the BMW Group plant in Leipzig and at the ferry terminal in Hamburg. When the BMW i3 made its debut in 2013, it was already envisaged to use the high-voltage battery units as electricity storage units for stabilising the public electricity grid. At the same time, the BMW Group is working with various partners to establish closed-loop recycling systems for battery cells and to promote recycling. The goal is a recycling rate of more than 95 per cent, including graphite and electrolytes.

In China, the BMW Brilliance Automotive (BBA) joint venture has already established a closed loop for reusing the raw materials nickel, lithium and cobalt from high-voltage batteries. The raw materials obtained in this way are used for producing new battery cells for the BMW Group. The closed material cycle reduces the consumption of resources and lowers CO₂ emissions by 70 percent compared to using newly mined primary material.

How the mix of recycling batteries for reusing them will develop also depends on the raw material prices for battery cells. As there is not yet a significant number of old high-voltage batteries available, the BMW Group is therefore pursuing both strategies to ensure the sustainable production and use of high-voltage batteries in the future.

Lightweight construction and aerodynamics are the most important factors for saving CO₂ in the use phase.

Lightweight construction and optimised aerodynamic properties are key factors in BMW EfficientDynamics for more achieving more driving pleasure combined with lower fuel consumption and greater range. Intelligent lightweight construction also makes it possible to distribute axle load weight optimally and to achieve a low centre of gravity, contributing to the outstanding hallmark BMW dynamic performance. In order to optimise the performance and efficiency of the new BMW 5 Series, the manufacturer relies on using an optimised mix of materials with regard to lightweight construction: from high-strength steels and aluminium doors and tailgates to density-reduced plastics in the exterior and interior. For example, using hollow glass beads reduces the density of PVC components by more than 20 per cent.

The proportions of the new BMW 5 Series Sedan combine the flexibility of being able to choose between combustion engines, plug-in hybrid systems and all-electric drive and customer-oriented interior requirements with high aerodynamic efficiency. A vehicle's aerodynamic properties are crucial for both electric range and CO₂ emissions. From a speed of about 80 km/h (50 mph), air resistance becomes the dominant driving resistance factor. Combined with EfficientDynamics measures such as air flap control, an AirCurtain in the front apron, the aerodynamic wheels available as optional equipment and a smooth underbody, optimally closed off for each type of drive, it was possible to achieve the outstanding C_d value of 0.23.

The air flap control can not only increase the electric range of the BMW i5 by up to 25 kilometres (16 miles), but also makes EfficientDynamics directly visible and tangible. The cooling air intakes in the BMW kidney grille and the lower cooling air intake, including the brake cooling air ducts, can be actively closed and are only opened in stages when cooling air is required. This makes it possible to achieve an optimum balance between necessary cooling and the lowest possible air resistance depending on the needs of the drive and the air conditioning.

Thanks to the Air Curtains, which direct the high-energy airflow from the front apron specifically past the front wheels, thereby reducing turbulence at the wheel arch, a further increase in electric range of up to two kilometres (1.25 miles) is achieved.

The optional cast aluminium aerodynamic wheels with aerodynamically optimised inserts combine optimum aerodynamics with low weight. The smooth and flat design of the wheels and the aerodynamically optimised shape of the tyres, combined with the Air Curtains, contribute significantly to the air flowing around the wheels calmly generating little resistance. The wheels make a significant contribution to reducing air resistance and increasing the electric range by up to ten kilometres (6 miles).

In the new all-electric BMW i5 as well as in the plug-in hybrid and combustion engine models, the underbody is closed off as far as possible thanks to the optimised panelling and air control elements in the entire area, thus contributing to reducing air resistance. In the front area, the airflow is guided past the wheels in a defined manner by the displacement bodies. A convex contour guides the airflow harmoniously from the front apron to the underbody, thus enabling an ideal airflow to the rear of the underbody.

At the rear, the Rear Axle Cover (RAC) and the aerodynamically shaped diffuser contribute to optimising the underbody airflow, particularly in conjunction with the displacement bodies in the area behind the rear wheels. These displacement bodies are being used for the first time. Bracing bead lines and the contoured surfaces are oriented according to how the air really flows. Particular emphasis was placed on optimising everything at the detail level, with almost every radius, bead and connection point being individually designed. For example, optimising the underbody aerodynamically can achieve an additional reduction in CO₂ emissions or increase the electric range by up to ten kilometres (6 miles).

The new EfficiencyCoach helps make driving more efficient.

With EfficientDynamics, the BMW Group has been developing technologies to increase the efficiency of its vehicles and reduce their emissions for many years. However, the driver himself is also a significant factor influencing efficiency. By driving in an economical driving style, depending on the route and traffic situation, up to 25 percent of fuel or electrical energy can be saved with combustion engine and plug-in hybrid models as well as with all-electric vehicles.

The new EfficiencyCoach in the My BMW app provides helpful tips to make driving more efficient and sustainable. The assistant analyses the current consumption values and compares them both with the values from the previous month and with the consumption values of the community with comparable engines and makes suggestions for driving more economically.

The history of the BMW 5 Series. Half a century of dynamic performance and driving comfort.



The launch of the new BMW 5 Series Sedan marks the eighth chapter in an extraordinary success story. Thanks to its characteristic balance between sportiness and long-distance comfort, it is the epitome of driving pleasure in the premium upper mid-range segment. The launch of the first BMW 5 Series Sedan in 1972 ushered in a new era in the brand's model range - including the model nomenclature that is still valid today with a three-digit number combination to indicate the model series and engine. It has become the world's most successful business sedan within a period of 50 years and over seven model generations. By spring 2023, more than ten million BMW 5 Series have already been produced.

1972 – 1981 (E12): The first BMW 5 Series follows on the "New Class".

The success story of the BMW 5 Series began more than half a century ago with the BMW 520. As the successor to the BMW 2000, the "New Class", it offered customers noticeably more space and comfort. Petrol engine power output ranged from 66 kW/90 hp in the BMW 518 to 160 kW/218 hp in the BMW M535i. The pioneering design was led by Paul Bracq, who created a perfect balance between sportiness and elegance in a modern three-box design with distinctive features such as twin circular headlights, "Sharknose" and vertical BMW kidney-shaped kidney grille.

At that time already the latest computer technology was used to make occupant safety calculations. In addition to dynamic performance and safety, the series also focussed on increasing efficiency by introducing fuel-injection engines. Pioneering work was done by the BMW 5 Series as the basis for the brand's first hydrogen-powered test vehicle. In July 1981, production of the first BMW 5 Series ended with almost 700,000 units sold.

1981 – 1987 (E28): A proven concept in a modern shape.

For the first time, the second generation of the BMW 5 Series featured a two-part radiator grille kidney-shape element and round headlights with different diameters for high and low beam headlights. The clean lines of the exterior were dominated by large window areas. In the redesigned interior, the driver-oriented cockpit, whose steering wheel was optionally

equipped with a driver's airbag from 1986, stood out immediately. The engine programme largely corresponded to that of the previous generation: At market launch, petrol engines ranging from 66 kW/90 hp (BMW 518) to 135 kW/184 hp (BMW 528i) were available. With the BMW 524td a diesel engine followed for the first time in 1983. In 1985, BMW Motorsport GmbH presented the epitome of the large sports Sedan: the BMW M5. Its in-line six-cylinder engine, derived from the power unit of the legendary BMW M1, generated 210 kW/286 hp.

The second generation became a pioneer in the field of digital features with an on-board computer, the Energy Control direct fuel consumption display and the Service Interval Display as an absolute world first. The newly developed chassis with intelligent lightweight construction - not least in conjunction with optional ABS - increased dynamic performance, safety and reliability. In June 1988, production of the second generation of the BMW 5 Series ended with a new record of more than 722,000 units sold within eight years of production.

1987 – 1995 (E34): Launch of the third generation, in which all-wheel drive, V8 engine and the BMW 5 Series Touring make their debut.

The BMW design team headed by Claus Luthe clearly oriented its styling for the third generation of the BMW 5 Series on the appearance of the new BMW 7 Series launched shortly before. The power output of the eleven petrol and diesel engines available ranged from 83 kW/113 hp in the BMW 518i to 250 kW/340 hp in the BMW M5. All petrol engines were fitted with closed-loop catalytic converters as standard and were designed to run on unleaded regular petrol. All-wheel drive was also available in the BMW 525iX for the first time.

The BMW 5 Series Touring premiered in 1991. Its tailgate had a window that opened separately - a characteristic feature to this day. In the third generation, the BMW 5 Series became larger more spacious and stylish than its predecessors. A great deal of innovative technology slumbered beneath the aerodynamically optimised body of the high-tech vehicle. As a world first, the series had cracked connecting rods, which optimised the accuracy of fit during assembly on the crankshaft. The more precise fixation of the connecting rods reduced vibrations, improved running smoothness and increased durability.

In addition, V8 engines featured for the first time in the BMW 535i and the BMW 540i. Production of the BMW 5 Series Sedan ended in September 1995; the BMW 5 Series Touring continued to be built until

June 1996. With a total of more than 1.3 million units sold, this model generation had raised the success of the series to a new level.

1995 – 2003 (E39): Light alloy chassis used for the first time.

The fourth generation of the BMW 5 Series made its debut at the 1995 International Motor Show (IAA). This BMW 5 Series was the world's first large-scale production automobile to feature a chassis made almost entirely of light alloy. The newly developed all-aluminium engines also contributed to optimising weight. By offering more space, an even higher-quality interior including a multifunction steering wheel and a high level of ride comfort, the fourth generation of the BMW 5 Series met the requirements of drivers who travelled a lot for work more than ever before.

The twin circular headlights behind a glass cover became an eye-catcher on the elegant exterior of the Sedan. Characteristic map-controlled engine cooling contributed significantly to increasing engine efficiency. Power output of the four diesel and six petrol engines ranged from 100 kW/136 hp in the BMW 520d to 294 kW/400 hp in the BMW M5. The fourth generation of the BMW 5 Series also set a new sales record: Production ended in early 2004 with more than 1.47 million units sold,

2003 – 2009 (E60): The dawn of a new age.

The fifth generation of the BMW 5 Series stood out right from the start thanks to its progressive design and innovative technology. The BMW 5 Series, which was offered as a Sedan and, from 2004, also as a Touring model, set standards above all in the areas of active safety, driver assistance and efficiency. Chris Bangle's progressive design, which was characterised by an interplay of convex and concave surfaces, combined driving pleasure with modern aesthetic appeal. In the interior, the innovative BMW iDrive operating system made its debut in the upper mid-range vehicle segment. In the fifth generation, the BMW 5 Series finally became a business sedan - a term that was mentioned for the first time in the communication for the new model.

Dynamic Drive Roll Stabilisation, Active Steering, Brake Energy Regeneration, Shift Point Display and Night Vision were innovations that optimised the driving experience and safety in equal measure. And there was also the first Head-Up Display to feature in a BMW model. The engine range of the BMW 5 Series in this generation comprised six petrol and four diesel units generating between 120 kW/163 hp (BMW 520d) and 373 kW/507 hp (BMW M5). In 2007, the BMW EfficientDynamics technology package became part of the standard equipment. Between

2005 and 2008, the BMW 5 Series was the best-selling vehicle in its segment for four years in a row, with a total of more than 1.4 million units sold.

2010 – 2017 (F10): The world's most successful business sedan.

The sixth generation of the BMW 5 Series became the global market leader in its class immediately following its market launch in January 2010. It had a more rigid body than its predecessor, offered more safety features and a wider range of driver assistance systems. The BMW 5 Series Gran Turismo added a third body version with a large tailgate to the range. The wide range of equipment with innovative technologies for chassis, driver assistance and networking above all increased long-distance comfort. The clearly structured cockpit also supported the brand's hallmark idea of driver orientation in a particularly modern way.

The engine portfolio provided a power output range from 105 kW/143 hp in the BMW 518d to 423 kW/575 hp in the BMW M5 and was more diverse than ever before. In November 2011, the BMW Active Hybrid 5 (system power output 250 kW/340 hp), the first BMW 5 Series with hybrid technology, was launched. With well over two million units sold, the sixth generation of the BMW 5 Series outperformed its predecessors by around 42 per cent. This made it the world's most successful model series in the competitive environment.

2017 – 2023 (G30): Lighter, more dynamic, more efficient and connected in every way.

The seventh generation of the BMW 5 Series Sedan was launched in February 2017. Advanced dynamic performance, numerous driver assistance systems from the BMW 7 Series, a high level of connectivity thanks to the BMW ConnectedDrive features and a new, innovative control system with gesture control were among the most important innovations. The seventh generation of the BMW 5 Series took a big step on the road towards automated driving thanks to enhanced Active Cruise Control and Steering and Lane Control Assist functions. The wide range of assistance systems provided maximum support for the driver - not only in critical situations, but also in situations that are less demanding from a driving point of view, such as traffic jams, slow-moving traffic or monotonous stretches of motorway.

The seventh edition of the BMW 5 Series Sedan was developed according in line with a lightweight construction concept that reduced the vehicle weight by up to 100 kilograms compared to its predecessor. Thanks to the lighter weight and advanced suspension systems, it was

possible to raise the brand's hallmark balance between dynamic performance and travelling comfort to an even higher level. The output range of the engine portfolio extends from 135 kW/184 hp in the BMW 520i to 460 kW/625 hp in the BMW M5 Competition. The BMW 530e iPerformance, the first BMW 5 Series Sedan with plug-in hybrid drive, was also launched in March 2017. By the beginning of 2023, more than two million units of the seventh-generation BMW 5 Series had already been delivered to customers around the world.