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## BMW at the IAA Cars 2015 in Frankfurt. Contents.



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## 1. BMW at the IAA Cars 2015 in Frankfurt.



(Highlights at a glance)

- World premiere for the new BMW 7 Series: an unprecedented blend of dynamic performance, motoring comfort and luxury feel; the sixth generation of the luxury sedan employs technological innovations from BMW i including lightweight Carbon Core body, plus BMW eDrive powertrain in the BMW 740e; plug-in hybrid model with a total system output of 240 kW/326 hp and fuel consumption (combined) of 2.1 litres/100 km (134.5 mpg imp), CO<sub>2</sub> emissions combined: 49 g/km\*.
- World premiere for the new BMW X1: the second generation of the highly successful all-rounder; proportions, interior and specification modelled on the larger BMW X models; engines, transmission and xDrive all-wheeldrive system completely renewed; increased sportiness and efficiency; interior space, versatility and premium character all enhanced.
- World premiere for the new BMW 3 Series: the benchmark for driving pleasure in its class for 40 years now and the BMW brand's most successful model range with over 14 million sold; BMW 3 Series Sedan and BMW 3 Series Touring, as well as the BMW M3, with modified design and refined premium feel; largely revised engine line-up; BMW eDrive technology for the first time in the BMW 330e plug-in hybrid model with a total system output of 185 kW/252 hp and fuel consumption (combined) of 2.1–1.9 litres/100 km (134.5–148.7 mpg imp), CO<sub>2</sub> emissions combined: 49–44 g/km)\*.
- World premiere for the new BMW 225xe: innovative interior layout meets groundbreaking drive system; plug-in hybrid model fuses BMW eDrive technology with a front-mounted transverse three-cylinder petrol engine and a front-wheel-drive configuration for the first time ever; the electric motor powering the rear wheels results in an electrified all-wheel-drive system that is unique in this segment; combined system output of engine and motor: 165 kW/224 hp, fuel consumption (combined): 2.1–2.0 litres/100 km (134.5–141.2 mpg imp), CO<sub>2</sub> emissions combined: 49–46 g/km\*.
- BMW eDrive technology finds its way into the BMW model portfolio: allelectric mobility, exceptional efficiency and a highly distinctive brand of driving pleasure rooted in plug-in hybrid drive systems specially

developed for specific models by the BMW Group; premiere in the BMW X5 xDrive40e that is being launched very shortly; rapid expansion of the range to three further model segments with the BMW 740e, the BMW 330e and the BMW 225xe.

- World premiere for the BMW M6 GT3: new flagship model in the BMW customer racing range; V8 engine with M TwinPower Turbo technology; aerodynamically optimised chassis; crash structures and outer skin made from CFRP; total weight: under 1,300 kilograms; also making its debut appearance at the 2015 Frankfurt Motor Show: the BMW M6 Competition Edition (441 kW/600 hp; fuel consumption combined: 9.9 l/100 km (28.5 mpg imp); CO<sub>2</sub> emissions combined: 231 g/km), the new special edition for maximum on-road performance.
- Cutting-edge lighting technology: BMW is presenting the latest innovations and forward-looking concepts for optimised illumination of the road ahead, a high-class interior ambience and unmistakable design; increased safety, comfort and individuality with BMW Laserlight, LED interior lighting, logo projection and Welcome Light Carpet.
- Sophisticated connectivity: added comfort and safety as the result of new driver assistance systems and services from BMW ConnectedDrive; brand new developments such as Steering and lane control assistant, Remote Control Parking, Surround View with 3D View and Remote Cockpit available for the first time in the new BMW 7 Series range.
- Setting the pace for electric driving pleasure: BMW i is showcasing its current model range along with pioneering concepts for driving with zero local emissions offering impressive everyday practicality; effective impetus from technology transfer to BMW models, eCarsharing with the BMW i3 and innovative services from 360° ELECTRIC.

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# 2. BMW at the IAA Cars 2015 in Frankfurt. (Summary)



The BMW stand at the 2015 International Motor Show in Frankfurt am Main revolves around the arrival of a new generation at the top end of the model line-up and the advent of a wide range of plug-in hybrid models. Hall 11, which is located right next to the main entrance of the Frankfurt exhibition site and has been made available for the joint presentation by the BMW, MINI and Rolls-Royce brands, is where all the latest features and additions are being showcased. The entire exhibition area is surrounded by a circuit several hundred metres in length, where the public can experience the new models in action from 19–27 September 2015.

### Automotive luxury of the highest order: the new BMW 7 Series.

The new BMW 7 Series underlines its claim to redefine what an exclusive, luxurious driving experience looks like in contemporary, pioneering form with an exceptional array of innovations. Key factors in enhancing dynamics, efficiency, comfort and safety while on the move are the use of carbon-fibre-reinforced plastic (CFRP) in the body structure, engines from the BMW Group's new generation of power units, the plug-in hybrid system in the new BMW 740e, the Executive Drive Pro active chassis system, the Driving Experience Control switch with ADAPTIVE mode, and BMW Laserlight. Maximising well-being in the interior, meanwhile, are the Executive Lounge feature with massage function, the illuminated Sky Lounge Panorama glass roof, just the right amount of accent lighting and a smartphone holder with inductive charging station.

The new generation of the BMW 7 Series also boasts standout innovations when it comes to operating system and driver assistance technology. The various new features that are unprecedented in the luxury sedan segment include, for example, the extension of the iDrive system to include a touch display and BMW gesture control, Touch Command for controlling comfort and infotainment functions in the rear compartment, as well as a Remote Control Parking system. In addition to all this, BMW is also presenting the latest generation of the BMW Head-Up Display, Crossing traffic warning, the Steering and lane control assistant, active side collision protection and the Surround View system with 3D View and Panorama View in its new flagship model.

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## Urban all-rounder that has grown in character: the new BMW X1.

The second generation of the BMW X1 successfully transfers the trademark qualities of a Sports Activity Vehicle to the compact segment with greater intensity than ever. The new edition of this highly popular model makes its mark with powerful proportions and clean lines in the style of its larger BMW X siblings. Inside, the new BMW X1 offers far more space for both passengers and luggage, a state-of-the-art premium ambience and sophisticated functionality.

Petrol and diesel engines from the BMW Group's latest generation of power units, an efficiency-optimised version of the BMW xDrive intelligent all-wheel-drive system and newly developed chassis technology combine to produce a notable increase in sportiness and ride comfort along with far greater efficiency. Equipment features available for the BMW X1 for the first time include full-LED headlights, Dynamic Damper Control, the BMW Head-Up Display that projects driving-related information onto the windscreen as in the larger BMW X models, as well as the Driving Assistant Plus system.

### Top seller in top shape: the new BMW 3 Series.

Featuring a meticulously honed design on the outside, a painstakingly refined premium feel on the inside, a revised engine line-up, a more advanced chassis and additional equipment options, the new BMW 3 Series is perfectly poised to continue an unbroken run of success in the premium mid-size segment that first started four decades ago. The BMW brand's most popular model range with over 14 million already sold to date once again sets new standards for dynamism, efficiency and design in both BMW 3 Series Sedan and BMW 3 Series Touring guise.

The choice of engines for the new BMW 3 Series comprises four petrol and seven diesel units at market launch. Depending on the particular engine variant, power is transferred via traditional rear-wheel drive or, alternatively, via the BMW xDrive intelligent all-wheel-drive system. The BMW 330e Sedan will furthermore be added to the line-up for the 2016 model year. This plug-in hybrid marries BMW eDrive technology with a four-cylinder petrol unit from the BMW Group's newest engine generation. While extracting a total system output of 185 kW/252 hp from its duo of power units, the BMW 330e returns average fuel consumption (combined) of 2.1–1.9 litres/100 km (134.5–148.7 mpg imp) and CO<sub>2</sub> emissions (combined) of 49–44 g/km (in the EU test cycle).

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## Versatile interior layout, groundbreaking drive system: the new BMW 225xe.

The model range for the BMW 2 Series Active Tourer is also set to be expanded by the arrival of a plug-in hybrid variant in spring 2016. The BMW 225xe serves up a brand new cocktail of BMW EfficientDynamics, comfort, fun at the wheel and all-wheel-drive performance. What's more, this matchless driving experience is combined with impressive versatility and generous levels of space in a compact-sized vehicle. The space-saving location of the lithium-ion battery underneath the rear bench means that full use can continue to be made of the boot space above.

The interaction between BMW eDrive technology and a 1.5-litre three-cylinder petrol engine with BMW TwinPower Turbo technology makes it possible to enjoy both all-electric driving and unrestricted motoring mobility in the BMW 225xe. With a maximum electric range of 41 kilometres (25 miles), zero-local-emission driving can be experienced not just in the city, but beyond it too. Driving the rear wheels with the electric motor and the front wheels with the combustion engine's power furthermore produces an electrified all-wheel-drive system that is quite unique in the BMW 225xe's segment and promises outstanding traction in all weathers, especially in adverse conditions. The plug-in hybrid drive has an overall system output of 165 kW/224 hp. Average fuel consumption (combined) in the BMW 225xe is a frugal 2.1–2.0 litres/100 km (134.5–141.2 mpg imp), which equates to CO<sub>2</sub> emissions (combined) of 49–46 g/km (in the EU test cycle).

## BMW EfficientDynamics: BMW eDrive technology paves the way for electric driving pleasure in four plug-in hybrid models from BMW.

The introduction of BMW eDrive technology in BMW brand models opens up all-electric motoring with zero local emissions to new target groups. Coinciding with the world premiere of the new BMW 7 Series, the plug-in hybrid variant of the luxury sedan, the BMW 740e, is also being unveiled. The BMW 330e with plug-in hybrid drive is being added to the model line-up for the new BMW 3 Series. And it will also be possible to sample the pleasure of all-electric driving with zero local emissions in the BMW 2 Series Active Tourer in future – with the BMW 225xe. This means that, together with the soon-to-be-launched BMW X5 xDrive40e also on display at the 2015 Frankfurt Motor Show, the BMW eDrive technology initially developed for BMW i cars will already be available for BMW models spanning four different vehicle segments in 2016.

## New performance athlete for endurance racing: the BMW M6 GT3.

BMW Motorsport has chosen the 2015 Frankfurt Motor Show as the setting for the world premiere of the new flagship model in the BMW customer racing

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range: the BMW M6 GT3 has been built for endurance racing and will make its debut on the starting grid in the 2016 season. The racing car designed on the basis of the BMW M6 Coupe is powered by a V8 engine with M TwinPower Turbo technology that has only undergone minor modifications for competition and comes with an aerodynamically optimised chassis. Crash structures and an outer skin made from carbon-fibre-reinforced plastic (CFRP) help to keep the overall vehicle weight below 1,300 kilograms.

Besides the BMW M6 GT3, BMW M GmbH is also showcasing its latest range-topping model offering the ultimate in dynamic, road-going performance at the 2015 Frankfurt Motor Show. The new BMW M6 Competition Edition underlines its status as a yet more individual version of the high-performance coupe with a choice of special exterior paint finishes, components manufactured from high-tech CFRP, exclusive leather upholstery with coordinated contrast stitching, and more distinctive touches besides. The new special edition model is available exclusively in the guise of the BMW M6 Coupe in conjunction with the Competition Package that has been geared for supreme performance. This gives the 4.4-litre V8 petrol engine with M TwinPower Turbo technology an output of 441 kW/600 hp and a peak torque of 700 Nm (516 lb-ft), and when combined with the optional Driver's Package allows the BMW M6 Coupe to reach a top speed of 305 km/h (190 mph).

## Cutting-edge lighting technology: BMW Laserlight, expressive interior and peripheral lighting.

BMW makes systematic and successful use of cutting-edge lighting technology in order to increase safety when driving in the dark and to mould a signature brand look. The latest innovations in this field are being presented at the 2015 Frankfurt Motor Show. Following on from their world premiere in the BMW i8, the exceptionally powerful BMW Laserlight headlights with antidazzle High Beam Assistant are now being made available for the new BMW 7 Series too. The development of lighting technology for the interior of BMW models and the immediate surrounding area never stops advancing either. In the new BMW 7 Series range, a precisely configured lighting design adds to the cabin's exclusive feel.

### BMW ConnectedDrive with new applications and systems.

BMW has translated the latest advances in the field of intelligent connectivity into a further increase in the wealth of driver assistance systems and applications that enhance comfort and safety. The latest additions to the BMW ConnectedDrive portfolio include the new BMW ConnectedDrive App, the BMW Remote Cockpit, the super-fast WiFi hotspot, automatic navigation map updates, smart home integration, as well as Remote Control Parking and

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other highly sophisticated driver assistance systems making their debut in the new BMW 7 Series.

## BMW i: trailblazer for electric driving pleasure and everyday usability.

Following the successful global launch of the purely electrically powered BMW i3 (energy consumption combined: 12.9 kWh; CO<sub>2</sub> emissions combined: 0 g/km) and the BMW i8 plug-in hybrid sports car (fuel consumption combined: 2.1 l/100 km / 134.5 mpg imp; CO<sub>2</sub> emissions combined: 49 g/km) the BMW i brand is now further cementing its status as a trailblazer for sustainable mobility with a growing variety of vehicle and mobility services. BMW i is already the brand to have won most awards during its introductory phase in the history of motoring. The inclusion of the BMW i3 in the model fleets of the premium car-sharing service, DriveNow, in the United Kingdom, Germany and Denmark now offers the wider public an easy, lowcost way of trying out electric mobility for the first time. At the 2015 Frankfurt Motor Show, BMW i is additionally presenting the complete range of technological concepts that are ideal for everyday charging at home and in the public domain. The most recent innovation is BMW i Light and Charge – a street light from which the high-voltage battery in an electric car can also be recharged.

BMW i is providing further impetus by transferring technology to current BMW brand models. All the plug-in hybrid models being exhibited by BMW at the 2015 Frankfurt Motor Show, for instance, employ the BMW eDrive technology initially developed for BMW i cars in the form of electric motors, power electronics, high-voltage batteries and intelligent energy management. Equally, the experience with using industrially manufactured CFRP garnered during development of the BMW i cars has now helped to reduce the weight of the new BMW 7 Series luxury sedans.

Further information on official fuel consumption figures and specific  $CO_2$  emission values of new passenger cars is included in the following guideline: "Leitfaden über Kraftstoffverbrauch, die  $CO_2$ -Emissionen und den Stromverbrauch neuer Personenkraftwagen" (Guideline for fuel consumption,  $CO_2$  emissions and electric power consumption of new passenger cars), which can be obtained free of charge from all dealerships, from the Deutsche Automobil Treuhand GmbH (DAT), Hellmuth-Hirth-Str. 1, 73760 Ostfildern-Scharnhausen and at http://www.dat.de/en/offers/publications/guideline-for-fuel-consumption.html.

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## 3. BMW at the IAA Cars 2015 in Frankfurt.





3.1 Driving pleasure, luxury and longdistance comfort redefined: The new BMW 7 Series – world premiere with the BMW 740e plug-in hybrid model.

With the new BMW 7 Series, BMW has redefined what an exclusive, luxurious driving experience looks like in contemporary, pioneering form. Groundbreaking technologies in the areas of lightweight design, powertrains, chassis, operating systems, intelligent connectivity and interior ambience underline its mission to bring together unbeatable driving pleasure and long-distance comfort in a luxury sedan. The handing over of the baton from one generation to the next at the top end of BMW's model line-up sees the brand presenting a raft of innovations unmatched by any of its rivals.

Key factors in enhancing dynamics, efficiency, comfort and safety while on the move are the use of carbon-fibre-reinforced plastic (CFRP) in the body structure, engines from the BMW Group's new generation of power units, the plug-in hybrid system in the new BMW 740e, the Executive Drive Pro active chassis system, the Driving Experience Control switch with ADAPTIVE mode and BMW Laserlight. Maximising well-being in the interior, meanwhile, are the Executive Lounge feature with massage function, the illuminated Sky Lounge Panorama glass roof, judiciously placed lighting accents and a smartphone holder with inductive charging station. Standout innovations in operating system, driver assistance and lighting technology include the extension of the iDrive system by a touch display and BMW gesture control, as well as Touch Command for controlling comfort and infotainment features in the rear, the new BMW Head-Up Display, Crossing traffic warning, the Steering and lane control assistant, active side collision protection, Surround View with 3D View, a remote parking system and the Welcome Light Carpet.

### Design: stylish presence, assured dynamics, exclusive elegance.

The design of the new BMW 7 Series provides an authentic showcase for the car's character. Harmonious proportions, a strongly controlled surface design and precise lines point to the stylistic confidence, assured dynamics and exclusive elegance at work here. The optimised balance of driving pleasure and long-distance comfort finds clear expression in the unmistakable aura of the luxury sedan, which is available in both standard and long wheelbase variants.

Characteristic features of the interior include generous levels of space accentuated by its horizontal surfaces and lines, the driver-focused cockpit design, the fusion of exquisite materials and precision craftsmanship and the sophisticated functionality of the control and display elements. The M Sport

package, the design Pure Excellence package and a BMW Individual Design Composition will be available for the new BMW 7 Series from launch. They underline the car's dynamic ability, exclusive elegance and luxurious ambience to great effect, and satisfy the diverse expectations of customers around the world.

"At BMW we believe the future can be predicted most effectively if we're helping to shape it," explains Adrian van Hooydonk, Senior Vice President BMW Group Design. "The primary objective in the development of the new car was to create a vision of modern luxury and to exceed our customers' expectations. In BMW's eyes, modern luxury is rooted in the most advanced technologies and extremely fine attention to detail. This generation of the BMW 7 Series is the most luxurious, most comfortable and – all round – the best car we have ever built in this class."

## BMW EfficientLightweight: a Carbon Core and a weight reduction of up to 130 kilograms.

BMW EfficientLightweight helps to reduce the weight of the new BMW 7 Series models by up to 130 kilograms compared to their previous-generation counterparts. At the centre of it all is the body structure with Carbon Core, a product of the transfer of technology from the development of BMW i cars. The new BMW 7 Series is the first car in its segment in which industrially manufactured CFRP combines with steel and aluminium. The intelligent body concept uses this mixed-materials approach to increase the strength and rigidity of the passenger cell while at the same time significantly reducing vehicle weight.

#### New-generation straight-six engines.

The new BMW 7 Series is available with an extensively updated V8 engine and six-cylinder in-line variants from the BMW Group's latest generation of power units. All the engines link up as standard with the likewise further developed eight-speed Steptronic transmission. The BMW xDrive intelligent all-wheel-drive system, which can be specified as an option, also operates more effectively than ever.

In the BMW 750i xDrive and BMW 750Li xDrive models, the new 330 kW/450 hp eight-cylinder engine is combined with the latest version of intelligent all-wheel drive. The efficiency boost for all drive components gives the new BMW 750i xDrive combined fuel consumption figures of 8.3–8.1 litres per 100 kilometres / 34.0–34.9 mpg imp (BMW 750Li xDrive: 8.5–8.3 litres per 100 kilometres / 33.2–34.0 mpg imp) and CO<sub>2</sub> emissions (combined) of 194–189 grams (BMW 750Li xDrive: 197–192 grams) per kilometre. The 3.0-litre six-cylinder in-line petrol engine in the BMW 740i and BMW 740Li models produces output of 240 kW/326 hp, which exceeds that of its

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predecessor by 5 kW. Fuel consumption (combined) and  $CO_2$  emissions (combined) of both models have been reduced to shared figures of 7.0–6.6 litres per 100 kilometres (40.4–42.8 mpg imp) and 164–154 grams per kilometre.

A likewise newly developed straight-six diesel engine is deployed in the BMW 730d, BMW 730Ld, BMW 730d xDrive and BMW 730Ld xDrive models, producing peak output of 195 kW/265 hp from its 3.0-litre displacement. The new diesel unit also combines output boosted by 5 kW with optimised efficiency, as reflected in fuel consumption and emission figures of 4.9–4.5 litres per 100 kilometres / 57.7–62.8 mpg imp (fuel consumption combined) and 129–119 grams per kilometre (CO<sub>2</sub> emissions combined) for the new BMW 730d, 5.0–4.6 l/100 km and 132–122 g/km for the new BMW 730Ld, and 5.2–4.8 l/100 km and 137–127 g/km each for the new BMW 730d xDrive and the new BMW 730Ld xDrive (all figures given for the models of the new BMW 7 Series are based on the EU test cycle and may vary depending on the tyre format specified).

### Plug-in hybrid BMW 740e with BMW eDrive technology.

The addition to the model range of the BMW 740e sees the arrival in the luxury sedan segment of BMW eDrive technology which was first introduced in BMW i cars. The plug-in hybrid model, which will also be launched in long-wheelbase form and with intelligent all-wheel drive, is powered by a four-cylinder petrol engine and an electric motor, which together generate total system output of 240 kW/326 hp. The BMW 740e records combined fuel consumption of 2.1 litres per 100 kilometres (134.5 mpg imp) as calculated in the EU test cycle. CO<sub>2</sub> emissions (combined) stand at 49 grams per kilometre (provisional). The electric drive system, supplied with energy by a high-voltage lithium-ion battery, provides a noticeable boost for the combustion engines when dynamic acceleration is required. Moreover, the BMW eDrive technology enables all-electric and therefore locally emission-free driving at speeds of up to 120 km/h (75 mph) and with a range of up to 40 kilometres (25 miles).

## Dynamics and ride comfort made to measure – and to the highest standard.

Sophisticated, precision-honed chassis technology and additional chassis control systems – fitted as standard or available as an option – enhance both the dynamics of the new BMW 7 Series and its ride quality. At the same time, the balance between these two facets of driving pleasure reaches a level without parallel in the luxury sedan segment. Standard specification includes 2-axle air suspension with automatic self-levelling and Dynamic Damper Control.

Further enhancing comfort, dynamics, poise and assurance are the latest update of the Integral Active Steering system, which can now be specified in conjunction with BMW xDrive, and the Executive Drive Pro system with active roll stabilisation and data-based predictive function, which is available for the first time. Electromechanical anti-roll bars reduce body roll under dynamic cornering and the active chassis control system adapts the dampers' responses to ruts and bumps in the road.

The latest wave of innovations offer drivers greater freedom when selecting the perfect set-up for their car; they can opt for even sportier handling or further improved ride comfort, or use the high-efficiency ECO PRO mode. ADAPTIVE mode can now also be activated via the newly designed Driving Experience Control switch. In this setting, the car set-up adapts to driving style and route characteristics.

## Intuitive operation with touch display and BMW gesture control.

In the new BMW 7 Series the iDrive operating system's monitor comes in touch display form for the first time. This means customers will also be able to operate the system in the same way as modern electronic devices. In addition to using the Controller to control the system in familiar style, its functions can also be selected and activated by touching the screen's surface.

Another new addition to the iDrive system's functionality is BMW gesture control, which is being introduced for the first time. Hand movements detected by a 3D sensor control infotainment functions in an extremely intuitive and user-friendly fashion. The gestures can be used for a number of functions, including controlling the volume in audio applications and accepting or rejecting incoming telephone calls. There is also the option of pairing a specific gesture with an individual choice of function. Also joining the fray is a new smartphone holder integrated into the centre console, which allows wireless, inductive charging for mobile phones for the first time in a car.

## Luxury ambience with all the trimmings: Executive Lounge, Touch Command.

Levels of comfort a class apart are offered in the rear of the long-wheelbase models specified with the optional Executive Lounge, which redefines personal well-being in a luxury car. This equipment package includes Automatic air conditioning with 4-zone control, Electrically adjustable comfort seats with massage function in the rear and Active seat ventilation for all seats, plus the optional Executive Lounge Seating, Executive Lounge rear console and Rear-seat entertainment Experience with BMW Touch Command. The massage function now also includes the Vitality Programme, which allows rear passengers to engage in active physical exercise for recuperation purposes.

The Executive Lounge Seating option increases comfort in the rear seat behind the front passenger seat, which can slide forward by an additional 90 millimetres and has an electrically extendable footrest integrated into its backrest. The rear passenger can unwind into an extremely relaxing position thanks to a backrest which can recline impressively close to the horizontal position.

The Executive Lounge rear console houses a fold-out table, additional cupholders and the Touch Command system. This removable 7-inch tablet computer allows the user to control the infotainment and comfort functions available in the rear of the new BMW 7 Series and can also be used to play back external audio and video files, as a games console or to surf the internet.

### Atmospheric touches: Ambient light, Sky Lounge Panorama glass roof.

The exclusive ambience inside the new BMW 7 Series is also enhanced by a precisely arranged lighting design. The Ambient light option now includes the Welcome Light Carpet, which provides eye-catching illumination of the ground next to the car in the entry and exit area. Another unique feature is the Ambient highlight for the long-wheelbase versions of the new BMW 7 Series, which bathes the rear compartment in an atmospheric light from light sources positioned vertically on the B-pillars.

Long-wheelbase versions of the new BMW 7 Series will also be available with the Sky Lounge Panorama glass roof, which is likewise one of a kind in the luxury sedan segment. When it gets dark, the light emitted from side-mounted LED modules is directed evenly onto the glass surface, where it hits an imprinted graphic. This creates an atmospheric motif mimicking a starry sky.

Another option customers can select to increase the feeling of well-being on board is the Ambient Air package, which ionises the air and generates a selection of eight aromas. Outstanding sound quality, meanwhile, is the speciality of the likewise newly developed Bowers & Wilkins Diamond surround sound system, which has been specifically tuned to the interior of the new BMW 7 Series.

### World premiere in the new BMW 7 Series: Remote Control Parking.

The new BMW 7 Series is the world's first series-produced car that owners will be able to manoeuvre in or out of forward-parking spaces or garages without anyone at the wheel. As such, the Remote Control Parking option allows drivers to access tight parking spaces with ease. The driver initiates the car's progress forwards into or in reverse out of a space using the likewise newly developed BMW Display Key. While the car is carrying out the semi-automated manoeuvre, the driver watches out for obstacles.

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## Unique in the luxury sedan segment: BMW Laserlight.

Another new feature in the luxury sedan segment is BMW Laserlight, familiar from the BMW i8. This includes the added function of the BMW Selective Beam, the dazzle-free high beam assistant that can be specified for the new BMW 7 Series as an alternative to the standard full-LED headlights. The laser headlights generate a particularly bright, pure white light as well as providing a high-beam range of 600 metres, double that of xenon and LED headlights.

## Innovative driver assistance systems from BMW ConnectedDrive enhance comfort and safety.

The Steering and lane control assistant, Lane keeping assistant with active side collision protection, Rear collision prevention and Crossing traffic warning functions have been added to the Driving Assistant Plus system. Meanwhile, the Traffic jam assistant – which involves semi-automated driving – can be used on any type of road. And the Active Cruise Control with Stop & Go function now only requires drivers to press a button to incorporate speed restrictions detected by the Speed Limit Info function. The new generation of the Surround View system now also includes a 3D View and Panorama Side View option in the Control Display.

## Production at BMW Plant Dingolfing: globally unparalleled lightweight design expertise.

The new BMW 7 Series will be built, like all of its predecessors, at BMW Plant Dingolfing. The Dingolfing factory combines its many years of experience in building luxury sedans with globally unmatched expertise in the field of lightweight design. BMW Plant Dingolfing serves as the aluminium competence centre within the BMW Group's worldwide production network and has now also become the world's first automotive manufacturing facility in which CFRP is used in body construction as part of a hybrid technique.

Further information on the new BMW 7 Series can be found here.

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# 3.2 Urban all-rounder delivers boundless driving pleasure: The new BMW X1.



The new BMW X1 – the successor to the model that blazed the trail for this class of car – treats the premium compact segment to an even more potent shot of Sports Activity Vehicle DNA. The second generation of this successful model, more than 730,000 units of which have now been sold, takes to the stage with a body design straight out of the BMW X model mould. The interior of the new BMW X1, meanwhile, offers significantly more space for passengers and luggage, a cutting-edge premium ambience and functionality grounded in solid engineering. Four-cylinder engines from the BMW Group's latest generation of power units, an efficiency-optimised version of the BMW xDrive intelligent all-wheel-drive system and newly developed chassis technology all help to palpably enhance sporting ability and ride comfort compared to the outgoing model – with fuel consumption and emissions reduced by up to 17 per cent, model-on-model.

Alongside its market-leading dynamics and efficiency, a host of innovative equipment features also help to secure the new BMW X1 its stand-out position in the segment. Among the items on the options list are full-LED headlights, Dynamic Damper Control, the BMW Head-Up Display and the Driving Assistant Plus system.

## A typical BMW X model: sturdy proportions, impressive variability and established premium characteristics.

Rugged proportions, a powerful presence and dynamic lines lend the new BMW X1 a commanding appearance and highlight its status as the youngest member of the BMW X model family. The new model has grown in height compared to its predecessor (+53 millimetres), which has helped increase the spaciousness of the interior. And its significantly raised seating position (+36 millimetres at the front, +64 millimetres at the rear) optimises the driver's view out over the road.

Knee room in the rear has increased by 37 millimetres in standard specification and by up to 66 millimetres with the optionally adjustable rear seat, while the 505-litre boot capacity is 85 litres larger than that of its predecessor. Folding down the standard-fitted 40:20:40 rear seat backrest, which can also be specified in angle-adjustable form as an option, allows load capacity to be expanded to as much as 1,550 litres. The optional folding front passenger seat backrest and a rear seat bench which can slide 13 centimetres fore and aft offer additional variability.

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The interior design of the new BMW X1 combines the driver-focused cockpit design that has become a hallmark of the brand's models with touches promoting authoritative, SAV-style driving pleasure and a contemporary premium ambience. Standard equipment includes air conditioning, an audio system with USB and AUX-in sockets, and the iDrive operating system, whose 6.5-inch display is integrated into the instrument panel in freestanding monitor form. Meanwhile, the Advantage, Sport Line, xLine and M Sport packages available as an alternative to standard specification open the door for targeted individualisation.

## New generation of engines, efficiency-optimised xDrive all-wheeldrive system.

The second-generation BMW X1 lines up with an all-new selection of engines. Two petrol and three diesel units will be available from launch in October 2015, all of which have four cylinders and are members of the BMW Group's new engine family. Outputs range from 110 kW/150 hp to 170 kW/231 hp (fuel consumption combined: 6.4–4.1 litres/100 km [44.1–68.9 mpg imp]; CO<sub>2</sub> emissions combined: 149–109 g/km). The engines link up with a six-speed manual gearbox or an eight-speed Steptronic unit, both of which are also new developments

The xDrive intelligent all-wheel-drive system also takes its place in the new BMW X1 in a further developed form. The weight-saving, compact and efficient system uses an electro-hydraulically controlled multi-plate clutch to distribute drive between the front and rear axle just as required for the situation at hand. The BMW X1 sDrive18d (110 kW/150 hp, fuel consumption combined: 4.3–4.1 l/100 km / 65.7–68.9 mpg imp; CO<sub>2</sub> emissions combined: 114–109 g/km) features a front-wheel drive construction that is designed to deliver hallmark BMW driving dynamics and has already proved its mettle in the BMW 2 Series Active Tourer and BMW 2 Series Gran Tourer.

The engine portfolio is set to be complemented by two particularly efficient three-cylinder engines. The BMW X1 sDrive18i (fuel consumption combined: 5.3-5.1 l/100 km / 53.3-55.4 mpg imp;  $CO_2$  emissions combined: 124-119 g/km) will be powered by a petrol engine with output of 100 kW/136 hp. The diesel unit in the BMW X1 sDrive16d (fuel consumption combined: 4.1-3.9 l/100 km / 65.7-72.4 mpg imp;  $CO_2$  emissions combined: 109-104 g/km) produces 85 kW/116 hp.

### Premiere in the BMW X1: Head-Up Display and Driving Assistant Plus.

The change of BMW X1 generations also brings significant advances in the field of intelligent connectivity. A new addition to the range of BMW ConnectedDrive features is a BMW Head-Up Display which, as in the

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larger BMW X models, projects driving-related information directly onto the windscreen. The BMW X1 can now also be specified with the Driving Assistant Plus line-up of the Active Cruise Control system with Stop & Go function, Lane Departure Warning, Traffic Jam Assistant, Collision Warning and Pedestrian Warning with City Braking function. These systems are complemented by an up-to-the-minute selection of apps allowing customers to add to the car's comfort, navigation and infotainment functionality, as desired

Further information on the new BMW X1 can be found here.

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# 3.3 The bestseller – more premium, sporty and efficient than ever: The new BMW 3 Series – world premiere with the BMW 330e plug-in hybrid model.



The BMW 3 Series is the founder of the modern sports sedan segment and has been fêted as an icon of this vehicle class for 40 years. Over what is now six model generations, the BMW 3 Series has set the standard for dynamic excellence, efficiency and design, forging an emotionally rich connection between a sporting driving experience and unbeatable everyday practicality. With more than 14 million sales worldwide to date, this model series is the most successful in the BMW brand's line-up. Currently, around one in every four BMWs sold is a BMW 3 Series. Sharper design, even more advanced technology and cutting-edge engines ensure the new BMW 3 Series Sedan and new BMW 3 Series Touring are a more attractive proposition than ever before. The new BMW 3 Series model range will be available with an extensive spread of engines from launch. Four petrol units and seven diesels are available, developing from 85 kW/116 hp to 240 kW/326 hp (combined fuel consumption: 7.9-3.8 I/100 km [35.8-74.3 mpg imp]; combined CO<sub>2</sub> emissions: 185–99 g/km). They can be linked up with a six-speed manual gearbox and an eight-speed Steptronic transmission. The new BMW 3 Series is available with classical rear-wheel drive or BMW xDrive intelligent all-wheel drive, depending on the model.

## Great exterior presence, sophisticated and high-quality interior.

The design of the new BMW 3 Series stands out with even greater precision. At the front end, aprons with revised air intakes accentuate the feeling of width, while the sensor for the optional Active Cruise Control (ACC) is harmoniously integrated into the central air intake. The sculptural rear apron design, including a Line-specific trim element, and standard LED rear lights likewise emphasise the car's width and thus its sporting appearance. An innovative lighting concept, featuring newly designed headlights and striking LED daytime driving lights, underlines the car's sporty and powerful visual appeal. Full-LED headlights can now be specified as an option.

The interior makes an even classier impression with new materials and additional chrome highlights for the controls, air vents and central control panel. The newly crafted centre console with a sliding cover for the cupholders enables better use of the storage surfaces forward of the gearshift lever, while a wide range of personalisation options for upholstery and interior trim elements, as well as new wheels, exterior colours and equipment options, round off the specification choices for the new BMW 3 Series.

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### Setting the benchmark - even sportier, even more efficient.

All the petrol and diesel engines deployed in the new BMW 3 Series for the first time hail from the BMW Group's latest generation of drive units. A newcomer to the segment is the three-cylinder petrol engine in the BMW 318i. The four-cylinder and six-cylinder in-line petrol units in the BMW 330i and BMW 340i mark their world premiere in the new BMW 3 Series. All new engines at a glance:

BMW 318i Sedan (BMW 318i Touring): 1.5-litre three-cylinder petrol engine, 100 kW/136 hp, 0-100 km/h (62 mph): 8.9 s (9.2 s), fuel consumption combined: 5.5-5.1 I/100 km / 51.3-55.4 mpg imp (5.9-5.4 I/100 km / 47.8-52.3 mpg imp), CO<sub>2</sub> emissions combined: 129–119 g/km (137–126 g/km). BMW 320i Sedan (BMW 320i Touring): 2.0-litre four-cylinder petrol engine, 135 kW/184 hp, 0-100 km/h (62 mph): 7.2 s (7.5 s), fuel consumption combined: 5.9-5.5 I/100 km / 47.8-51.3 mpg imp (6.3-5.9 I/100 km / 44.8-47.8 mpg imp), CO<sub>2</sub> emissions combined: 138–128 g/km (147–137 g/km). BMW 330i Sedan (BMW 330i Touring): 2.0-litre four-cylinder petrol engine, 185 kW/252 hp, 0-100 km/h (62 mph): 5.9 s (6.0 s), fuel consumption combined: 6.5-6.1 I/100 km / 43.4-46.3 mpg imp (6.7-6.4 I/100 km / 42.1-44.1 mpg imp), CO<sub>2</sub> emissions combined: 151–143 g/km (157–149 g/km). BMW 340i Sedan (BMW 340i Touring): 3.0-litre six-cylinder petrol engine, 240 kW/326 hp, 0-100 km/h (62 mph): 5.2 s (5.1 s), fuel consumption combined: 7.7-7.4 I/100 km / 36.7-38.1 mpg imp (7.0-6.8 I/100 km / 40.3-41.5 mpg imp), CO<sub>2</sub> emissions combined: 179–172 g/km (164–158 g/km). BMW 316d Sedan (BMW 316d Touring): 2.0-litre four-cylinder-diesel engine, 85 kW/116 hp, 0-100 km/h (62 mph): 10.7 s (11.2 s), fuel consumption combined: 4.3-3.9 I/100 km / 65.7-72.4 mpg imp (4.6-4.1 l/100 km / 61.4-68.9 mpg imp), CO<sub>2</sub> emissions combined: 113-102 g/km (120-109 g/km).

BMW 318d Sedan (BMW 318d Touring): 2.0-litre four-cylinder-diesel engine, 110 kW/150 hp, 0–100 km/h (62 mph): 8.6 s (8.9 s), fuel consumption combined: 4.4–4.0 l/100 km / 64.2–70.6 mpg imp (4.6–4.3 l/100 km / 61.4–65.7 mpg imp), CO<sub>2</sub> emissions combined: 116–106 g/km (122–112 g/km). BMW 320d Sedan (BMW 320d Touring): 2.0-litre four-cylinder-diesel engine, 140 kW/190 hp, 0–100 km/h (62 mph): 7.3 s (7.6 s), fuel consumption combined: 4.4–4.0 l/100 km / 64.2–70.6 mpg imp (4.7–4.3 l/100 km / 60.1–65.7 mpg imp), CO<sub>2</sub> emissions combined: 116–106 g/km (123–113 g/km). BMW 320d EfficientDynamics Edition Sedan (BMW 320d EfficientDynamics Edition Touring): 2.0-litre four-cylinder-diesel engine, 120 kW/163 hp, 0–100 km/h (62 mph): 7.9 s (8.2 s), fuel consumption combined: 4.3–3.9 l/100 km / 65.7–72.4 mpg imp (4.5–4.1 l/100 km 62.8–68.9 mpg imp), CO<sub>2</sub> emissions combined: 113–102 g/km (118–107 g/km).

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Beyond this, the engine portfolio includes three further diesel units with four or six cylinders:

BMW 325d Sedan (BMW 325d Touring): 2.0-litre four-cylinder-diesel engine, 160 kW/218 hp, 0–100 km/h (62 mph): 6.8 s (6.9 s), fuel consumption combined: 5.0–4.9 l/100 km / 56.6–57.6 mpg imp (5.2–5.1 l/100 km / 54.3–55.4 mpg imp), CO<sub>2</sub> emissions combined: 132–129 g/km (137–134 g/km). BMW 330d Sedan (BMW 330d Touring): 3.0-litre six-cylinder diesel engine, 190 kW/258 hp, 0–100 km/h (62 mph): 5.6 s (5.6 s), fuel consumption combined: 5.0–4.9 l/100 km / 56.6–57.6 mpg imp (5.3–5.1 l/100 km / 53.3–55.4 mpg imp), CO<sub>2</sub> emissions combined: 131–129 g/km (138–135 g/km). BMW 335d xDrive Sedan (BMW 335d xDrive Touring): 3.0-litre six-cylinder diesel engine, 230 kW/313 hp, 0–100 km/h (62 mph): 4.8 s (4.9 s), fuel consumption combined: 5.5–5.4 l/100 km / 51.4–52.3 mpg imp (5.7–5.6 l/100 km / 49.6–50.4 mpg imp), CO<sub>2</sub> emissions combined: 145–143 g/km (151–148 g/km).

(All figures for models in the new BMW 3 Series according to the EU test cycle, may vary depending on the tyre format specified)

The new transmissions also contribute to a boost in efficiency. In models with the new version of the six-speed manual gearbox, the engagement speed control function also automatically blips the throttle on downshifts, for example. The eight-speed Steptronic transmission, which is standard on BMW 330d, BMW 335d and BMW 340i Touring models, allows multiple sequential downshifts, which has a positive effect on smoothness and acoustics. The coasting function, meanwhile, increases efficiency by another notch. The further developed dampers, stiffer suspension and even more precise steering of the new BMW 3 Series ensure a clear elevation of the new BMW 3 Series' dynamic potential, combined with the same impressive ride quality as that of its predecessor.

### Milestone in efficiency: the BMW 330e plug-in hybrid model.

Marking a further milestone for efficiency in its segment is the new BMW 330e, which will extend the range of engines from 2016. Its state-of-the-art plug-in hybrid technology pairs a 135 kW/184 hp 2.0-litre petrol engine with an electric motor producing 65 kW/88 hp. With a system output of 185 kW/252 hp and combined torque of 420 Nm, the BMW 330e accelerates to 100 km/h (62 mph) in just 6.1 seconds before reaching a top speed of 225 km/h (140 mph).

Combined fuel consumption is just 2.1–1.9 litres per 100 kilometres (134.5–148.7 mpg imp) and CO<sub>2</sub> emissions (combined) are 49–44 grams per

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kilometre (figures based on the EU test cycle, may vary depending on the tyre format specified). Moreover, in an urban environment, for example, the new BMW 330e can cover a range of up to 40 kilometres (25 miles) on purely electric power and therefore with zero local emissions.

## New Navigation system Professional and LTE mobile technology.

BMW plays a leading role in the link-up of driver, vehicle and outside world. Its BMW ConnectedDrive range of products and services offers a unique selection of web-based services and innovative driver assistance systems designed to enhance comfort and improve safety. For example, the full-colour BMW Head-Up Display in the new BMW 3 Series enables all relevant information to be displayed directly in the driver's field of vision, leaving the motorist to concentrate fully on the road ahead.

The Navigation system Professional impresses in city centres, in particular, with quicker start-up, significantly faster route calculation and even more realistic 3D graphics. The navigation maps are automatically updated free of charge for a period of three years. In the owner's home region, the embedded SIM card allows these updates to take place automatically over the air via the mobile phone network. The new BMW 3 Series is the first model (depending on the equipment specified) in the premium mid-size sports segment to support the fastest current mobile technology standard (LTE). The Parking Assistant now enables automatic parallel parking as well.

Further information on the new BMW 3 Series can be found here.

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# 3.4 Variable space concept meets multifaceted drive technology: The new BMW 225xe.



The new BMW 225xe is the first plug-in hybrid model at the premium end of the compact all-rounder class to offer a generously-sized and variable-usage interior. It enables locally emission-free driving without compromising the driving pleasure you'd expect from a BMW, and combines an electric driving experience and high operating range with excellent spatial functionality and everyday practicality. The BMW 225xe also offers a higher system output and more boot capacity than comparable hybrid models from other manufacturers.

The BMW 225xe brings together BMW eDrive technology and a 1.5-litre three-cylinder petrol engine with BMW TwinPower Turbo technology to deliver both an all-electric driving experience and unrestricted long-distance mobility. It is therefore perfectly suited for use in urban areas and for family leisure activities. Its average combined fuel consumption of 2.1–2.0 litres per 100 kilometres (134.5–141.2 mpg imp) and combined CO<sub>2</sub> emissions of just 49–46 grams per kilometre (figures based on the EU test cycle, may vary depending on the tyre format specified) set the benchmark in its class.

Like all variants of the BMW 2 Series Active Tourer, the BMW 225xe also impresses with its generously-sized interior, practical details and ergonomically optimised ease of use. Since the lithium-ion battery is arranged in a space-saving position under the rear seat bench, the upper area of the boot's capacity can be used without restriction.

### Electric, efficient and dynamically accomplished.

The BMW eDrive and BMW TwinPower Turbo technologies developed under the banner of BMW EfficientDynamics team up in the BMW 225xe to create an efficient and dynamically accomplished hybrid drive system. Dynamically talented, locally emission-free and efficient over long distances, it represents the perfect solution for a BMW brand model. The electric drive system at the rear axle and the power from the combustion engine flowing through the front wheels join forces to create electrified all-wheel drive. The result is outstanding traction even in adverse weather conditions.

The rear-mounted, 65 kW/88 hp electric motor drives the rear wheels and allows an electric range of up to 41 kilometres (25 miles). This makes it the obvious emission-free drive option for short distances, urban traffic and, with a

top speed of 125 km/h (78 mph) on electric power alone, cross-country routes and even motorways.

## Multifaceted driving experience with front-wheel, rear-wheel or allwheel drive.

A high-revving three-cylinder petrol engine with BMW TwinPower Turbo technology and an output of 100 kW/136 hp is standing by for longer journeys and when higher speeds are the order of the day. The combustion engine sends its power to the front wheels via a six-speed Steptronic transmission and represents a compelling proposition up to the 202 km/h (126 mph) top speed with its smooth running and 220 Newton metres (162 lb-ft) of torque.

Under heavy acceleration from rest and for overtaking manoeuvres, the power from the two drive systems combines to give a system output of 165 kW/224 hp and peak torque of up to 385 Newton metres (284 lb-ft). As with the BMW i8, the hybrid drive system in the BMW 225xe offers electrified all-wheel drive. When the driver accelerates, the combustion engine is activated by the high-voltage starter-generator almost imperceptibly.

The hybrid-specific functions of BMW ConnectedDrive also reduce fuel consumption. For example, the BMW 225xe's proactive energy management can be used to ensure the hybrid system is employed as efficiently as possible, part of which includes adapting to the driving style and route profile.

The lithium-ion high-voltage battery of the BMW 225xe can be charged not only through the recuperation of braking energy and generation of power while the car is on the move, but also from a domestic power socket, the optional Wallbox with high-voltage power supply, and public charging stations.

The electric drive components, including the high-voltage battery and electric motor, are produced at BMW Plant Dingolfing. Series production of the BMW 225xe will begin in late 2015 at Plant Leipzig.

Further information on the new BMW 225xe can be found here.

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# 3.5 BMW EfficientDynamics with BMW eDrive – electric driving pleasure of unrivalled diversity: The BMW X5 xDrive40e, BMW 740e, BMW 330e and BMW 225xe plug-in hybrid models.



In addition to the soon-to-be-launched BMW X5 xDrive40e (fuel consumption combined:  $3.4-3.3\ I/100\ km$  /  $83.1-85.6\ mpg$  imp;  $CO_2$  emissions combined:  $78-77\ g/km$ ; figures based on the EU test cycle, may vary depending on the tyre format specified), BMW is unveiling three further plug-in hybrid models at the 2015 Frankfurt Motor Show. Besides the BMW 740e plug-in hybrid luxury sedan, the new BMW 330e Sedan and the BMW 225xe are also receiving their world premiere in Frankfurt am Main.

## BMW eDrive: hallmark brand characteristics, flexible range of applications.

BMW eDrive technology basically comprises the electric motor, the lithium-ion high-voltage battery and the power electronics. All plug-in hybrid models from BMW employ a common boost strategy, combining the two drive systems to ensure superb power delivery and give the BMW TwinPower Turbo technology even sharper response.

BMW eDrive enables an all-electric driving experience both in urban traffic and on cross-country journeys that offers genuine added value for customers. A key element of the operating strategy involves deploying the externally charged and recuperated electrical energy as required in order to maximise efficiency.

The individual components of the BMW eDrive architecture are tailored to each model concept. They can be paired with both four- and three-cylinder petrol engines, combined with either classic rear-wheel drive or BMW xDrive, and even turned into an electrified all-wheel-drive system. The eDrive components initially developed for BMW i can be integrated into further model series from the core brands in a short space of time. The scalable architecture is furthermore a vital prerequisite for marketing plug-in hybrid models at attractive prices comparable with those for conventionally powered model variants with similar outputs. Customers opting for this advanced drive concept therefore stand to reap not just the ecological but also the economic benefits of electric mobility.

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### Intelligent energy management, hybrid driving experience.

The intelligent energy management in plug-in hybrid models ensures that engine and electric motor interact to optimum effect in all driving situations. The operating strategy has been configured for the vehicle starting in all-electric mode. At low and moderate speeds, BMW plug-in hybrid models give preference to electrical operation, thereby capitalising on the advantage of zero-emission driving on electrical power.

When accelerating more briskly or travelling at higher speeds, the combustion engine also cuts in. By merging the torques from the two drive sources, the boost function maximises dynamism while endowing the vehicle with authoritative performance. Even at higher speeds, BMW eDrive provides an electric assist function that allows the engine to run more efficiently. This makes it possible to also lower fuel consumption on faster cross-country or motorway drives, for example. The predictive energy function, meanwhile, devises an anticipatory operating strategy designed for optimised efficiency and maximised electric driving whenever the navigation system is being used for route guidance.

Like the BMW i8, the BMW X5 xDrive40e, BMW 740e and BMW 330e are able to drive on electric power alone in MAX eDRIVE mode at speeds of up to 120 km/h / 75 mph (BMW 225xe: up to 125 km/h / 78 mph) at the simple push of a button. In this driving mode, the combustion engine only cuts in if the kickdown function is activated.

Selecting the SAVE BATTERY mode allows the high-voltage battery's charge to be maintained for electric driving at a later time. If the charge level is below 50 per cent, the battery is recharged during the journey. When the selector lever is moved into the S gate, the combustion engine starts regardless of the current mode, which means the maximum power output of both drive units is permanently on tap. At the same time, the charge level of the high-voltage battery is increased to 80 per cent. Compared to conventionally powered models, the eDrive functions further intensify the range of characters encompassed by the Driving Experience Control modes ECO PRO, COMFORT and SPORT.

## BMW X5 xDrive40e: a new form of motoring supremacy.

The first plug-in hybrid model from the BMW brand is a Sports Activity Vehicle. In the BMW X5 xDrive40e, intelligent all-wheel drive melds with exceptionally efficient hybrid technology to create a brand new form of motoring supremacy. The long-distance capabilities and driving dynamics expected of a large BMW X model are beautifully complemented by the ability

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to drive in all-electric mode virtually silently and with zero local emissions in urban traffic.

The drive system on board the BMW X5 xDrive40e comprises a 2.0-litre 180 kW/245 hp four-cylinder petrol engine with BMW TwinPower Turbo technology and a permanently excited synchronous electric motor with an output of 83 kW/113 hp. The power stemming from the two drive units is routed via an eight-speed Steptronic transmission, before being directed to all four wheels by means of xDrive – permanently and always as the situation requires. The overall system output is 230 kW/313 hp with a combined peak torque of 450 Newton metres (332 lb-ft) – both engine and motor contributing to the pulling power of the BMW X5 xDrive40e. The electric drive furthermore unleashes its full torque of 250 Newton metres (184 lb-ft) from standstill. The maximum torque of the combustion engine, meanwhile, is 350 Newton metres (258 lb-ft) and is reached at just 1,250 rpm. The BMW X5 xDrive40e completes the sprint from 0 to 100 km/h (62 mph) in 6.8 seconds.

The BMW X5 xDrive40e is able to drive purely on electric power with zero tailpipe emissions for a maximum distance of 31 kilometres (19 miles). The maximum speed that can be attained in the MAX eDRIVE electric driving mode is 120 km/h (75 mph). The BMW X5 xDrive40e returns combined fuel consumption figures of 3.4–3.3 litres per 100 kilometres (83.1–85.6 mpg imp), CO<sub>2</sub> emissions come in at 78–77 grams per kilometre (figures based on the EU test cycle, may vary depending on the tyre format specified).

With 500–1,720 litres of luggage space, a three-part folding rear backrest and a luxuriously designed interior, the BMW X5 xDrive40e also boasts the high versatility associated with a large Sports Activity Vehicle within an exclusive ambience. The charging cable can be stored in a compartment underneath the luggage compartment floor.

### BMW 740e: trailblazing luxury, exemplary efficiency.

The introduction of BMW eDrive technology paves the way for outstanding efficiency and a particularly intense hybrid driving experience in the luxury sedan segment as well. In 2016, the BMW 740e will be joining the new BMW 7 Series range, along with two further model variants of the luxury sedan with plug-in hybrid drive: the long-wheelbase BMW 740Le and the BMW 740Le xDrive, which additionally comes equipped with intelligent all-wheel drive.

The drive system is composed of a 2.0-litre petrol engine with BMW TwinPower Turbo technology and a permanently excited synchronous electric motor integrated in the eight-speed Steptronic transmission. The

internal combustion engine from the BMW Group's latest generation of power units produces a maximum output of 190 kW/258 hp together with a peak torque of 400 Newton metres (295 lb-ft). The electric motor generates 83 kW/113 hp and delivers its maximum torque of 250 Newton metres (184 lb-ft) from stationary.

The intelligently controlled interaction between engine and electric motor helps to give the plug-in hybrid models in the new BMW 7 Series line-up terrific acceleration and bring about a substantial reduction in fuel consumption and emissions in everyday driving. The dash from standstill to 100 km/h (62 mph) is completed by the BMW 740e in 5.6 seconds, the BMW 740Le in 5.7 and the BMW 740Le xDrive in 5.5. Despite a total system output of 240 kW/326 hp and a combined maximum torque of 500 Newton metres (369 lb-ft), the BMW 740e and BMW 740Le versions of the luxury sedan achieve a combined fuel consumption figure of 2.1 litres per 100 kilometres / 134.5 mpg imp (BMW 740Le xDrive: 2.3 litres / 123 mpg imp). Combined CO<sub>2</sub> emissions are 49 grams (BMW 740Le xDrive: 53 grams) per kilometre (provisional figures based on EU test cycle).

The energy for the electric motor comes from a high-voltage lithium-ion battery located underneath the rear seat. When MAX eDRIVE mode is engaged, the BMW 740e is capable of travelling at speeds up to 120 km/h (75 mph) and for a range of up to 40 kilometres (25 miles) on electric power alone, which means zero local emissions.

The luggage compartment in the BMW 740e, BMW 740Le and BMW 740Le xDrive models has a flat surface, while its capacity of 420 litres comfortably exceeds the figures for other comparable plug-in hybrid models in the luxury sedan segment. Additional stowage space can be gained by lowering the cover in the rear portion of the luggage compartment and opening the storage compartments at the sides.

## BMW 330e: BMW eDrive technology for the world's most successful premium sedan.

The new BMW 3 Series model range will also be expanded to include a variant with an electrified powertrain in 2016. And the plug-in hybrid version of the BMW 3 Series retains all the sporty essence of the most successful premium sedan in the world.

In the BMW 330e Sedan, a four-cylinder petrol unit from the BMW Group's latest generation of engines is teamed up with a permanently excited synchronous electric motor integrated in the eight-speed Steptronic transmission. The combustion engine featuring BMW TwinPower Turbo

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technology generates a maximum output of 135 kW/184 hp, the electric motor produces 65 kW/88 hp. Both drive units transmit their power via the standard eight-speed Steptronic transmission to the rear wheels. Delivering an overall system output of 185 kW/252 hp and a total torque of 420 Newton metres (310 lb-ft), the BMW 330e races to 100 km/h (62 mph) from a standing start in 6.1 seconds and goes on to reach a top speed of 225 km/h (140 mph). Combined fuel consumption, meanwhile, comes in at between 2.1 and 1.9 litres per 100 kilometres (134.5–149 mpg imp), which equates to CO<sub>2</sub> emissions of 49–44 grams per kilometre (figures based on the EU test cycle, may vary depending on the tyre format specified).

The BMW 330e delivers the hybrid driving experience in all its glory. Accommodating the high-voltage lithium-ion battery above the rear axle allows unrestricted everyday use of the luggage compartment with no loss of versatility. All-electric driving with zero tailpipe emissions is possible for distances of up to 40 kilometres (25 miles), while the top speed that can be reached in MAX eDRIVE mode is 120 km/h (75 mph).

## BMW 225xe: efficient all-rounder with matchless all-wheel-drive system and versatile interior.

Also slated for launch in spring 2016, the BMW 225xe provides further proof of the BMW eDrive technology's tremendous adaptability. This is the first time that the BMW eDrive technology has been mated to a transversely mounted three-cylinder petrol engine with BMW TwinPower Turbo technology at the front, with the engine's power being relayed to the front wheels and an electric motor driving the rear wheels. Intelligent control of this drive duo gives rise to an all-wheel-drive system with road-hugging qualities that is unique in its segment. The principle is similar to the all-wheel-drive system on the BMW i8 – albeit with the positions of the motor and engine reversed and characteristics that have been carefully tailored to the BMW 2 Series Active Tourer vehicle concept.

All-electric driving is possible with a range of up to 41 kilometres (25.5 miles). The energy required for this is drawn from a high-voltage lithium-ion battery, which is housed in a space-saving location underneath the rear seat, thereby allowing unrestricted everyday use of the principal luggage compartment capacity.

The 65 kW/88 hp permanently excited hybrid synchronous electric motor in the BMW 225xe is located at the vehicle's rear end and propels the rear wheels. With the MAX eDRIVE mode activated, the BMW 225xe is capable of driving at speeds of up to 125 km/h (78 mph) with zero local emissions.

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The 1.5-litre three-cylinder petrol engine from the BMW Group's latest generation of power units provides a maximum output of 100 kW/136 hp, which is directed to the front wheels via a six-speed Steptronic transmission. The engine switches on extremely smoothly thanks to a high-voltage starter generator, which also serves to charge the lithium-ion battery while on the move and to provide a boost effect.

When SPORT mode is selected via the Driving Experience Control switch, the two drive units' maximum system output of 165 kW/224 hp and combined peak torque of 385 Newton metres (284 lb-ft) can be summoned up. The electrified all-wheel drive ensures sporty handling and superb traction in all driving situations. The BMW 225xe accelerates from standstill to 100 km/h (62 mph) in 6.7 seconds and has a top speed of 202 km/h (126 mph). The BMW 225xe returns combined fuel consumption figures of 2.1–2.0 litres per 100 kilometres (134.5–141.2 mpg imp), combined CO<sub>2</sub> emissions are 49–46 grams per kilometre (figures based on the EU test cycle, may vary depending on the tyre format specified).

## Flexible charging options for maximum efficiency: pioneering products and services from 360° ELECTRIC.

Besides the signature qualities of BMW eDrive technology, the various products and services that have been grouped together under the collective name of 360° ELECTRIC are also available for the plug-in hybrid models from the BMW core brand. Intelligent connectivity makes it possible to both plan vehicle mobility and charge the high-voltage battery in accordance with requirements to optimum effect.

The lithium-ion batteries in all plug-in hybrid models from BMW can be supplied with energy from the mains supply by hooking them up to a conventional domestic power socket or – for extra fast, safe and convenient charging – a BMW i Wallbox, as well as at public charging stations. The BMW i Wallbox Pure is capable of replenishing the high-voltage battery at a charging rate of 3.5 kW (16 A/230 V). The home charging station comes in a second version, the BMW i Wallbox Pro, offering added comfort features. It comes equipped with a 7-inch colour monitor, whose user-friendly touchscreen indicates how vehicle charging is progressing as well as allowing customised settings to be made for load management and self-produced electricity. Under the umbrella of 360° ELECTRIC, customers are offered an allencompassing service concept covering everything from the supply and installation of the charging station to maintenance, advice and other services.

There is also the ChargeNow service, comprising a ChargeNow card that grants straightforward access to partner charging stations and can also be

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used for convenient billing of the monthly energy costs. The hybrid-specific version of the navigation system not only aids anticipatory energy management, it also adds the locations of public charging stations to the selection of points of interest shown on the map. The BMW ConnectedDrive App also comes in a hybrid-specific version with a remote function that lets drivers retrieve information on the high-voltage battery's state of charge even when they are away from the vehicle by using their smartphone. Efficiency evaluations for the last journey completed can also be viewed on the smartphone, along with the total distance driven purely on electric power and the amount of fuel saved by using mains electricity. The auxiliary heating and ventilation functions of the plug-in hybrid models from BMW can likewise be activated remotely with the help of the BMW ConnectedDrive App.

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# 3.6 High performance for the race track, exceptional dynamics on the road: The new BMW M6 GT3 and new BMW M6 Competition Edition.



BMW is presenting two new models at the 2015 Frankfurt Motor Show that promise to capture the imagination of visitors with a passion for speed. A hot favourite for pole position on the race track will share centre stage with a sports machine born to lead all-comers along the ideal line on the road. The show is hosting the world premiere of the new flagship model in BMW's customer sport programme – the BMW M6 GT3 endurance racer. And the enthusiasts in Frankfurt will also be among the first to admire the new standard-bearer for dynamic ability in everyday driving: the BMW M6 Competition Edition. This new special-edition model with a character very much its own fits the BMW M6 Coupe template and is equipped with the Competition Package.

BMW has set a course for the future in GT racing with the presentation of the newly developed BMW M6 GT3 at the 2015 IAA. The racing version of the BMW M6 Coupe will be sent into action by numerous privately-run teams from the 2016 season in a host of championships and renowned race events around the world as part of the BMW Sports Trophy.

## Top performance, minimised weight, unparalleled driving feeling.

BMW Motorsport has channelled its vast well of experience amassed since 2010 with the BMW M6 GT3's successful predecessor, the BMW Z4 GT3, into the development of the new car. Indeed, the new GT3 racer boasts a raft of improvements, particularly in the areas of drivability and economy. One example is the use of a series-produced engine with M TwinPower Turbo technology, which develops higher output and an increase in torque. Moreover, with its centrally-positioned driver's seat and long wheelbase, the BMW M6 GT3 offers a driving feeling unparalleled on the racing scene.

The BMW M6 GT3 weighs less than 1,300 kilograms, and the transaxle drive concept, sequential six-speed racing gearbox and body aerodynamics optimised in the BMW wind tunnel also highlight the imminent arrival of a full-blooded racer from BMW Motorsport in 2016. The reliability, efficiency and ease of maintenance of the BMW M6 GT3 will likewise be tuned to master the demands of endurance racing, and its longer wheelbase promises to deliver significantly improved handling characteristics compared with the BMW Z4 GT3. Like the car itself, the level of service laid on by

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BMW Motorsport support engineers and the supply of parts trackside provide the ideal platform for sporting success with the BMW M6 GT3.

### Extensive testing programme on numerous race circuits.

In May 2015, ahead of the 24-hour race at the Nürburgring-Nordschleife circuit in Germany, BMW Motorsport customers from around the world were treated to an exclusive glimpse of the BMW M6 GT3 – not to mention a detailed presentation of the car by drivers and engineers – at a "closed room" event at the BMW M Testcenter Nürburg. The GT racing car was subsequently introduced to fans of "the most powerful letter in the world" at the traditional M Night event on the Friday before the classic endurance race in the "Green Hell". Customer teams in North America were able to feast their eyes on the BMW M6 GT3 for the first time at the United SportsCar Championship (USCC) in Watkins Glen, where the racing car was given its first public appearance on the other side of the Atlantic in late June. The BMW M6 GT3 was then revealed to teams, drivers and fans at the Spa-Francorchamps 24-hour race in Belgium – the most important GT race in the world. And now, the car will appear in BMW Motorsport racing livery for the first time at the IAA.

Since the beginning of 2015 the BMW M6 GT3 has undergone an extensive programme of testing on a variety of circuits. This has allowed the experienced BMW works drivers to amass many valuable kilometres at the wheel of the BMW M6 GT3 and to carry out important work on the baseline set-up of the new GT and endurance racing challenger. This new poster car for customer racing is now undergoing a final round of fine-tuning prior to its race debut in the coming year.

## A high-performance coupe with its own distinct character: the BMW M6 Competition Edition.

Alongside the BMW M6 GT3, BMW M GmbH is also unveiling the latest dynamic flagship for its road car line-up at the 2015 Frankfurt Motor Show. The new BMW M6 Competition Edition underlines its status as an even more individually-focused version of the high-performance coupe with the introduction of special exterior colours, components made from high-tech carbon-fibre reinforced plastic (CFRP), exclusive leather with coordinated contrast stitching, and other stand-out details.

The new special edition is offered exclusively in BMW M6 Coupe form, and fitted with the performance-maximising Competition Package. And that means the 4.4-litre V8 petrol engine with M TwinPower Turbo technology develops 441 kW/600 hp, offers peak torque of 700 Nm and enables the BMW M6 Coupe (fuel consumption combined: 9.9 l/100 km [28.5 mpg imp];

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 ${\rm CO_2}$  emissions combined: 231 g/km) to hit speeds of up to 305 km/h (189 mph) with the help of the optional Driver's Package.

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# 3.7 Perfect illumination and individual appeal: Cutting-edge lighting technology for headlights, rear lights, interior and vehicle periphery.



Highly advanced, top-class lighting technology for BMW cars not only helps to enhance safety when driving in the dark, it also gives added emphasis to the signature brand look. At the 2015 Frankfurt Motor Show, BMW is exhibiting some of the latest innovations that once again highlight the premium carmaker's innovative strength in the field of vehicle lighting. Taking pride of place at the show are the BMW Laserlight headlights that are now also available for the new BMW 7 Series, as well as new vehicle interior and peripheral lighting concepts. The developers have also focused on further ways of intelligently interlinking the lighting systems with the vehicle functions and assistance systems.

The latest technologies give an additional boost to safety by providing extremely intense illumination of the road ahead that is adapted to the particular driving situation on the one hand, and optimising vehicle perceptibility on the other. What's more, the specific design of headlights and rear lights will continue to help mould the unmistakable appearance of BMW cars in future, not just at night but during the daytime too. BMW Laserlight, for example, provides a new take on the trademark twin circular headlight arrangement. While on the move, fine blue LED strips set off the laser technology to stunning effect.

### Lighting design means BMW cars are unmistakable.

BMW is more consistent and successful than other premium carmakers in its use of lighting design to give the brand's models a highly distinctive look. It was back in 2000 when the twin circular headlights' corona rings became a hallmark feature, making their debut in the BMW 5 Series.

The design of the rear light units likewise helps to ensure BMW cars can instantly be identified as the brand's models both in daylight and in the dark. The L-shaped contour of the rear light clusters is given further impact by appropriate styling and structuring of the lighting functions, depending on the specific model. The rear light design first introduced on the predecessor to the new BMW 7 Series, consisting of horizontally arranged units with a uniform lighting effect, produces a highly sophisticated night-time appearance that is equally unmistakable. The banks of LED lights create an individual look that has the additional effect of emphasising the width of the vehicle's rear end.

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## BMW, a pioneer of xenon, LED and laser light technology.

For a long time now, BMW has repeatedly taken on the role of pioneer by introducing cutting-edge lighting technology time and time again. In 1991, BMW became the first manufacturer to offer xenon headlights – a brand new innovation at the time – as an alternative to the conventional halogen light units. The gas discharge lamps were made available as an optional extra for the BMW 7 Series, first for low beam and later for high beam as well.

Today, BMW offers all-LED headlights for an increasing number of model series. They were first made available for BMW 6 Series models, which now feature them as standard, as does the new BMW 7 Series. Compared to xenon headlights, they use up around 30 per cent less energy and are even longer lasting, while their compact construction opens up additional scope for headlight unit design.

The premiere of BMW Laserlight marks the latest milestone in the evolution of vehicle lighting technology. The BMW i8 became the first production car in the world to be offered with the option of laser headlights, and they are now also available for the new BMW 7 Series. By precisely converting the beams emitted by tiny laser diodes, they generate a pure white and very bright light that the human eye finds particularly pleasant due to its close similarity to daylight. BMW Laserlight combines excellent lighting performance with reduced power consumption and a compact design. The high-beam range of around 600 metres is double that of LED headlights. The camera-based, digital high-beam assistant, BMW Selective Beam, effectively eliminates the risk of oncoming traffic or vehicles travelling ahead being dazzled. The energy consumption of the BMW Laserlight headlights, meanwhile, is another 30 per cent lower than that of LED headlights, which are themselves very efficient.

The BMW M4 Concept Iconic Lights study unveiled at this year's Consumer Electronics Show (CES) in Las Vegas went one step further by demonstrating innovative ways of controlling the laser light to suit the situation by means of intelligent interlinking. These new developments build on the Adaptive Headlights and the BMW Night Vision system with Dynamic Light Spot. When combined with a navigation system, for instance, the BMW Laserlight control can analyse the route ahead in order to light up the line of a bend in advance before the steering wheel has even been turned. BMW Laserlight takes the Night Vision system's Dynamic Light Spot function to the next level too: the infrared camera means that pedestrians and animals can be detected from distances of up to 100 metres in pitch darkness and accurately picked out with the Dynamic Light Spot using laser technology.

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Employing the laser headlights to illuminate narrow sections of the road is another conceivable possibility. This function is activated as soon as the system detects a narrow road and uses a laser projection to mark the vehicle's exact width on the road surface and in this way guide the driver safely through the narrow section. Yet another innovation showcased in the BMW M4 Concept Iconic Lights study is the facility for projecting driving-related information such as direction arrows onto the road directly in front of the vehicle. This allows drivers to devote their attention to what is happening on the road, even in complete darkness.

## From LED to OLED: three-dimensional light effects and intelligent interlinking.

LED units are employed as light sources in current BMW models for all exterior lighting functions, including low and high beam, as well as the direction indicators and tail lights. LED semiconductors are moreover used in the passenger compartment and for peripheral lighting functions as well. Quite apart from a service life of over 10,000 hours, a compact construction and reduced power consumption, their shorter response time represents a key advantage over conventional bulbs. The ability to reach full signal strength a hundred times faster is particularly important from the point of view of safety when used in brake lights.

The next generation in lighting design was presented in the BMW M4 Concept Iconic Lights study. Its rear light assemblies contain organic light-emitting diodes, or OLEDs for short, which generate light in wafer-thin semi-conductive layers made from organic materials. For the first time ever, both the indicators and tail lights run on this technology. The arrangement of the luminous surfaces has a three-dimensional feel to it and takes up remarkably little space thanks to the flat design of the OLEDs.

Unlike LED units, which emit their light in the form of points, OLEDs light up over their full surface with a very homogeneous effect. Their flat design – they measure just 1.4 millimetres high – and the ability to trigger individual light modules separately opens up all manner of new possibilities for creating light effects with the rear lights. For example, different light patterns can be produced to match the driving mode, so that when the Driving Experience Control switch is set to SPORT mode, the uniformly and broadly illuminated L shape seen in normal driving mode changes. Partial activation of the OLED segments transforms it into a slim, sharply outlined and ultra-precise light strip.

The BMW Concept M4 GTS that made its debut at this year's Pebble Beach Concours d'Elegance provides another tantalising insight into the wealth of

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possibilities presented by the use of OLED units for the rear lights. BMW is set to introduce this OLED technology in a road-going production car for the first time as soon as spring 2016.

## Expressive and characteristically BMW: interior and peripheral lighting.

The evolution of lighting technology for the interior of BMW models and the peripheral area around them is also a story of continual progress. In the new BMW 7 Series, a precisely configured lighting design adds to the cabin's exclusive feel. The standard Ambient light feature provides harmonious indirect illumination in the vicinity of the instrument panel, the door beltlines, the map pockets on the front seatbacks, as well as in the footwells. There is a choice of six different colour variants, which can be selected in the iDrive menu. Courtesy lights and illuminated bars on the door sills also form part of the specification. Beyond this, there is also the Welcome Light Carpet, which is a first in a production car and produces eye-catching light graphics next to the vehicle when getting in and out. The graphics are projected with the help of a multi-lens array system that can be incorporated into the side skirts out of sight thanks to its compact design. This feature can be complemented by the LED door projectors available from the Original BMW Accessories range. When the driver's door is opened they project light graphics onto the floor at the same time as illuminating the entrance/exit area. There is a choice of four designs, including the BMW logo.

The range of optional extras for the long-wheelbase versions of the new BMW 7 Series furthermore includes another brand new feature known as Ambient highlight. This consists of vertically arranged light sources in the B-pillar area whose brightness can be controlled by means of contact sensors, thereby providing atmospheric, individually adjustable illumination of the rear compartment. The Sky Lounge Panorama glass roof is another option that is exclusive to the long-wheelbase versions of the new BMW 7 Series, and is quite unique in the luxury sedan segment. It comprises LED modules along the side whose light is spread evenly across the glass surface. Here, it strikes an imprinted graphic to create the magical effect of a starlit sky. As with the Ambient light, there is a choice of six different colour schemes for the lighting pattern.

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# 3.8 Intelligent applications and systems offer enhanced comfort and safety: The latest innovations from BMW ConnectedDrive.



Connectivity between driver, vehicle and the outside world is becoming ever more important. BMW was quick to recognise this trend and today ranks among the leading carmakers worldwide in this area. Driver assistance systems and digital services and features are pooled together under the umbrella of BMW ConnectedDrive and serve to increase safety and convenience while using the vehicle. At the 2015 Frankfurt Motor Show, BMW is underlining its status as a leading innovator in this field with numerous new features and extensions for the existing wealth of applications. These include the new BMW ConnectedDrive App, the BMW Remote Cockpit, the super-fast WiFi hotspot, automatic navigation map updates, smart home integration and Remote Control Parking, along with intelligent driver assistance systems designed to increase safety that are making their debut in the new BMW 7 Series.

### Two become one: the new BMW ConnectedDrive App.

BMW remote App into the new central BMW Connected App and BMW Remote App into the new central BMW ConnectedDrive App that is being presented ready for the launch of the new BMW 7 Series. This means that in future there will be a single app covering all functions and all BMW models, including both those with combustion engines and those with hybrid drives. BMW drivers will therefore have a facility for additionally accessing BMW ConnectedDrive Services and apps from outside the vehicle at any time using their Apple iPhone or Android smartphone. There will furthermore be a new, simpler and even more secure registration process in the BMW customer portal as well as faster activation of Remote Services.

One of the key features of the new BMW ConnectedDrive App is the link-up between the smartphone and the BMW navigation system. This means that frequently used destinations and personal contact addresses can be quickly stored as favourites. Destinations can also be sent directly to the vehicle from Google Maps or the iPhone Maps app. At the beginning or end of the journey, the smartphone can additionally be used for pedestrian navigation, e.g. walking to a restaurant or shop in a pedestrian zone and back again to the parked car. This neatly extends the BMW navigation experience outside the vehicle as well. In addition, the BMW ConnectedDrive App indicates whether doors are locked and windows closed and shows the remaining vehicle range. Certified BMW Apps like Spotify, GoPro, Deezer and Napster can also be

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launched directly from the new BMW ConnectedDrive App, allowing BMW drivers to also operate their favourite apps – which have been optimised for in-vehicle use – with the iDrive Controller and view them on the Control Display at any time. For even greater convenience, the new BMW 7 Series will for the first time feature wireless smartphone connection using Bluetooth technology for these functions as well.

## BMW ConnectedDrive customer portal with Remote Cockpit.

As an exclusive feature for the new BMW 7 Series, the newly created Remote Cockpit is available in "My BMW ConnectedDrive", the portal for BMW ConnectedDrive customers. Here the customer will find useful information on their vehicle's current status, such as mileage and remaining range, current servicing requirements, Check Control messages and whether the doors are locked and the windows closed. The vehicle's present location is also displayed, along with the local weather conditions and technical vehicle data. The booked Remote Services can be activated and executed by going to the "Control" section. Depending on the vehicle's specification, the cabin temperature can be preconditioned ready for a set departure time, the driver's door remotely locked or unlocked, or the vehicle's horn or headlight flasher activated.

The car's position is shown on a map together with the current traffic situation. It is also possible to search for points of interest and send them straight to the vehicle. The Remote Cockpit's design and control concept takes its cue from the graphics in the vehicle's Control Display and in the BMW ConnectedDrive Apps. Usability has been optimised for both PCs and mobile use in smartphone and tablet browsers. What's more, the Remote Cockpit is also integrated in the new BMW ConnectedDrive App.

### Super-fast WiFi hotspot in BMW models.

Since July 2015, BMW customers have been able to turn new cars from various model ranges into a WiFi hotspot when fitted with the Navigation system Professional and built-in SIM card. This enables the vehicle's occupants to surf using the high-speed LTE network with up to ten mobile devices and at speeds of up to 100 Mbit/s. The service can be booked online directly with the mobile phone provider. There is an ever-increasing demand for in-car broadband internet for transmitting larger quantities of data, for example for music or video streaming. With the WiFi hotspot, BMW is now providing the necessary technical infrastructure to guarantee high-speed internet access for mobile devices anywhere, anytime.

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### Automatic navigation map updates.

BMW ConnectedDrive now allows select BMW models fitted with the Navigation system Professional to receive regular automatic navigation map updates. The map data is transmitted over the air via the mobile phone network using the vehicle's built-in SIM card and automatically installed. The user does not have to pay either licensing fees or data transmission charges for the first three years.

With this system, the navigation maps update automatically up to four times a year, putting an end to the problem of outdated datasets. Updated navigation maps keep the system informed of new roads and modified traffic layouts. This data can then be factored in for effective route planning in the same way as information can be transmitted to the electrical system to assist with anticipatory energy management.

All navigation functions continue to be fully available while the update is in progress. The region for the automatic map updates can furthermore be changed in the BMW ConnectedDrive customer portal, for instance following a move to another European country.

### BMW models perfectly integrated with Smart Home.

The Smart Home smartphone app from Deutsche Telekom allows Smart Home functions to be controlled from the mobile phone. It can be linked in to the operating system of BMW and BMW i models courtesy of the A4A (Apps for Automotive) interface developed in conjunction with BMW ConnectedDrive, which enables third-party apps to be fully integrated in the vehicle's operating system. Besides visualising the smartphone content on the BMW vehicle's monitor, it also makes it possible to control all functions intuitively, easily and safely using the iDrive Controller and the Control Display.

The "Coming Home" scenario ensures the smart home is ideally prepared for the arrival of BMW customers (e.g. by setting the correct room temperature) as soon as the home address is entered as the destination in the BMW navigation system. BMW drivers are additionally able to switch on individual appliances in their smart home during the journey. What's more, it is also possible to call up specific information via the iDrive Controller, such as whether the front door is locked or a window is open. All models fitted with the optional ConnectedDrive Services or BMW Apps now allow in-car use of the Smart Home app.

In parallel with this, BMW also continues to pursue the technological development of the A4A interface. In future, the first third-party apps certified for BMW will also be available for smartphones using the Android operating

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system. The focus will initially be on entertainment apps such as Spotify and iHeart Radio Auto.

## World first: Remote Control Parking, plus further improved BMW Parking Assistant.

The new BMW 7 Series is the first production car in the world that can manoeuvre into enclosed parking spaces or garages and out again without a driver at the wheel. The Remote Control Parking option therefore allows narrow parking spaces to be used with ease. The process of driving forward into the space and reversing out again is triggered by the driver from outside the car by means of another new development, the BMW Display Key, and then performed autonomously by the vehicle. During the parking manoeuvre, the driver must watch out for obstacles and bring the vehicle to a controlled stop if necessary. In order to activate the Remote Control Parking function, the vehicle must be positioned so that it is centred just in front of the selected parking space. The distance covered while moving into and exiting parking spaces without a driver may not exceed 1.5 times the vehicle's length.

Drivers can also receive assistance with parking when they are seated at the wheel. The latest version of the optional Parking Assistant takes all the hard work out of selecting and manoeuvring into spaces that are either parallel or perpendicular to the road. The system takes care of the entire parking procedure, including all the necessary steering, gear selection, acceleration and braking processes. The Active Park Distance Control function additionally comes to the driver's aid during manual reversing manoeuvres. It helps to prevent collisions with obstacles in the vicinity of the vehicle's rear end by applying the brakes in time.

## Driving Assistant and Driving Assistant Plus: new functions for even greater convenience and safety.

The functionality of the optional Driving Assistant safety package has been extended to include the functions Rear collision prevention and Crossing traffic warning for the rear of the vehicle. The data supplied by radar sensors located on the sides of the vehicle's tail end is analysed for both functions. To reduce the risk of a rear-end collision, the hazard lights are flashed at high frequency in relevant situations in order to attract the attention of traffic behind. If a collision can no longer be avoided, the Active Protection system's measures, such as pre-tensioning the seat belts and closing the side windows and sunroof, are automatically activated.

The Crossing traffic warning system helps the driver when reversing out of parking spaces in awkward traffic situations. The driver is warned of cross traffic by means of acoustic alerts and a graphic in the Control Display. In

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conjunction with the optional rear view camera, the wider-angle image of the traffic situation behind the vehicle appears on the Control Display. The Driving Assistant also comprises approach control and person warning with light city braking function, Lane Change and Lane Departure Warning, as well as Speed Limit Info with no-overtaking indicator.

Driving Assistant Plus includes not only Active Cruise Control with Stop & Go function and Crossing traffic warning at the front, but also the Steering and lane control assistant including traffic jam assistant, as well as the Lane keeping assistant with active side collision protection. These functions employ a stereo camera plus radar sensors at the front and sides in order to detect not just the lane boundary markings, but also vehicles ahead, at the side or approaching from behind. They help drivers to stay in the centre of their lane or follow the vehicle ahead at speeds of up to 210 km/h (130 mph) by means of comfortable steering inputs. The Steering and lane control assistant can be used independently of the Active Cruise Control on all types of road. The systems can furthermore help to prevent collisions with other road users approaching from the side or from behind when changing lane. On top of all this, the traffic jam assistant reduces the driver's workload when driving in heavy traffic on any type of road. This semi-automated driving function takes the strain out of driving in such situations by assisting with the steering, provided that the driver keeps at least one hand on the steering wheel.

The functionality of the Active Cruise Control with Stop & Go function has also been extended. In future, whenever the system is active, a push of a button will be all it takes to factor in speed restrictions detected by the Speed Limit Info function and adapt the selected cruising speed accordingly.

## Keeping everything in sight: BMW Night Vision with Dynamic Light Spot, Surround View with 3D View.

Added driving pleasure and safety at night-time are provided by the optional features Adaptive LED Headlights with BMW Selective Beam for making optimum use of the high beam and BMW Night Vision. The latter system comprises a facility for detecting pedestrians and animals ahead as well as the Dynamic Light Spot marker light. It relays a real-time video image to the Control Display showing people, larger animals and other objects that give off heat. The detected objects are furthermore selectively illuminated with the headlights. In this way, the driver is alerted to potential danger in good time and can react accordingly.

The latest generation of the Surround View system now supplements the Top View function with a 3D View in the Control Display as well as the Panorama View function for checking what is happening in the areas to the sides of the

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vehicle, either in front of it or behind. When manoeuvring in awkward situations, meanwhile, the 3D View makes it possible to call up images in the Control Display that show the vehicle and its surroundings from different perspectives, making it easier to manoeuvre safely in tight spaces.

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# 3.9 Breaking new ground in electric driving pleasure: BMW i shapes the future face of mobility.



The BMW i brand stands for visionary mobility concepts, progressive design and an understanding of premium which is strongly defined by sustainability. BMW i products are now available in 34 countries and the range includes tailor-made vehicle concepts and innovative services delivering electric mobility. By introducing the world's first premium cars designed from the outset to provide locally emission-free driving – the pure-electric BMW i3 and pioneering BMW i8 plug-in hybrid sports car – not to mention the services introduced under its 360° ELECTRIC banner, BMW i has built up the largest global market presence of any electric vehicle manufacturer within an extremely short space of time and taken on an active role in shaping the face of personal mobility in the future.

The stand-out features of BMW i cars include the LifeDrive architecture developed specially for the new brand's models, complete with a passenger cell made from carbon-fibre reinforced plastic (CFRP). This architecture combines an intelligent lightweight construction, and the new freedoms in design that this allows, with BMW eDrive drive system technology to deliver groundbreaking efficiency combined with outstanding everyday usability and the driving pleasure for which BMW is renowned. The range of 360° ELECTRIC services is focused on enabling customers to use electric mobility solutions every day.

### Trailblazer and pace-setter in electric driving pleasure.

Together, the models and services from BMW i help to raise awareness of electric mobility as an attractive and practical solution aimed at enhancing sustainability in personal transport and fuelling enthusiasm among new customers for efficient driving pleasure. So far, four out of five drivers choosing a BMW i model have been new to the BMW Group.

The positive reaction to the BMW i range has been expressed not only in demand that has exceeded expectations, but also in numerous international awards for the brand and its models, technologies and services. BMW i has recorded a run of success unparalleled in the automotive sector in terms of the number and variety of distinctions it has gained through jury decisions and public surveys: BMW i has gained more awards during its launch phase than any other brand in automotive history.

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## Secrets to success: an integrated concept targeting sustainability and outstanding development expertise.

One of the main factors behind the public perception of BMW i as a pioneering carmaker is the brand's fresh new premium approach based around an integrated commitment to sustainability that extends beyond the cars themselves. The overall concept behind BMW i covers the entire value chain – from the selection of materials and manufacturing processes through a car's working life to its eventual recycling. It is focused on enhancing the environmental profile of BMW i cars, in all areas of development and every technical detail, without comprising on the driving pleasure expected of BMW.

## BMW i as a driver of innovations: BMW eDrive, 360° ELECTRIC, CFRP technology and BMW Laserlight heading for the BMW brand's model line-up.

The trailblazing nature of the technology developed initially for BMW i cars is being showcased to an ever wider audience, thanks in part to its adoption by the latest BMW brand models. For example, BMW eDrive technology is included – in the form of electric motors, power electronics, high-voltage batteries and intelligent energy management – in the BMW X5 xDrive40e, BMW 740e, BMW 330e and BMW 225xe plug-in hybrid models presented by BMW at the 2015 Frankfurt Motor Show. BMW eDrive is therefore developing into an additional pillar of the Efficient Dynamics development strategy aimed at consistently reducing fuel consumption and emissions, while enhancing hallmark BMW driving pleasure. Specific services from 360° ELECTRIC are also available for BMW's plug-in hybrid models to combine the electric driving experience with an exceptionally high level of comfort, reliability and everyday usability.

At the same time, the experience gained in the use of CFRP in the development of BMW i cars has helped to minimise the weight of the BMW 7 Series. The luxury sedan has an innovative Carbon Core body structure, in which industrially produced CFRP has been used for the first time in combination with steel and aluminium. The new BMW 7 Series is also the first model in the luxury sedan segment that comes with the option of BMW Laserlight. These laser headlights, whose benefits include a full beam range double that of LED headlights (at around 600 metres), were first offered in a series-produced car in the BMW i8.

### eCarsharing with DriveNow: BMW i3 is electrifying urban mobility.

The addition of the BMW i3 to the fleet of the premium car sharing service, DriveNow, has increased the ways in which the wider population can experience all-electric driving pleasure. Following the launch of the initiative in the British capital, London, the BMW i3 has also been electrifying urban

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mobility in the German cities of Munich, Hamburg and Berlin as well as the Danish capital Copenhagen this summer. Other cities are set to follow as part of the BMW Group's strategic initiative designed to provide an easy first step into electric mobility for every driver.

Electric mobility is playing an increasingly significant role in other areas as well. BMW i is set to unveil a version of the BMW i3 kitted out as a fire service command vehicle at the 2015 Frankfurt Motor Show. And the range of series-produced BMW i cars is also gaining further in appeal through the introduction of new equipment details. Looking ahead, the BMW i3, for example, will also be available in the new exterior paint finish, Fluid Black.

## Innovations and initiatives for everyday charging.

BMW i is also using the 2015 Frankfurt Motor Show to present its full range of products for everyday battery charging of electric and electrified vehicles. The developments included under the banner of the brand's own 360° ELECTRIC portfolio include methods of connecting electric vehicles to private solar power infrastructure and smart home solutions. Beyond this, the BMW Group is taking a leading role worldwide in a large number of projects that help to optimise public charging infrastructure and its use. Among the most important activities in this field are the joint initiative with ChargePoint in the USA – which is aiming to build up a super-fast charging infrastructure along the east and west coasts of America with around 100 DC fast-charging points – and the creation of 600 AC and DC fast-charging points combined along the main traffic arteries in Germany. BMW i has provided further momentum with its Light and Charge initiative. This innovative street lighting system emanating from the BMW i development sphere includes integrated charging points for electric vehicles and is now available for commercial use by companies and local authorities.