### BMW at the 82nd Geneva Motor Show 2012.



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### 1. BMW at the 82nd Geneva Motor Show 2012. (short version)



Driving pleasure that arouses emotions, fascinating aesthetic appeal, premium quality and groundbreaking efficiency characterise the model range which keeps the BMW brand on track for success in 2012. At the 2012 Geneva Motor Show, BMW presents numerous new serial production models as well as groundbreaking vehicle concepts whose design and technology pave the way to forms of mobility which are both exciting and sustainable. The innovative strength of the world's most successful premium automobile manufacturer enables the development of vehicles which combine an exceptional level of charisma and continuously increasing driving pleasure with a consistent reduction in fuel consumption and exhaust emission levels. With its current model program, BMW sets the benchmark for technological advancement, groundbreaking design style and sustainability in the automotive sector. The consistent continuation of this development strategy is documented in the studies BMW i3 Concept and BMW i8 Concept, likewise on show in Geneva.

The new models presented at the 2012 Geneva Motor Show reflect the remarkable harmony between exclusive driving culture, challenging athletic flair and exemplary efficiency which makes the BMW range of products the most progressive in the premium segment. A clear sign of the outstanding status of BMW design is the world premiere of the BMW 6 Series Gran Coupe. The brand's first four-door Coupe is the aesthetic highlight of the BMW trade show presentation. The sporty elegance of its appearance suggests a fascinating driving experience defined by powerful engines, superior suspension technology and innovative driver assistance systems.

The current product range of BMW M GmbH, embodies outstanding sporty flair in a particularly contemporary form. The 2012 Geneva Motor Show provides the showcase for the world premiere of the new BMW M6 Coupe. The second generation of this high-performance vehicle combines fascinating dynamic performance with a level of fuel consumption that has been reduced by over 30 per cent as compared to the predecessor model. Hallmark M feeling is also to be found in the BMW M Performance automobiles,

presented to the public for the first time in Geneva. The models BMW M550d xDrive, BMW M550d xDrive Touring, BMW X5 M50d and BMW X6 M50d establish a whole new product category which combines an exclusive range of engines and high performance with unlimited suitability for everyday use and impressive efficiency.

What is more, visitors to the Geneva Motor Show from March 8th to18th will witness a particularly detailed presentation of the new BMW 3 Series Sedan. For this purpose, additional engine versions will be featured for the new edition of the world's most successful premium model, as well as the BMW Active Hybrid 3. The new BMW 1 Series also lines up for the start with new engines - including the BMW 116d EfficientDynamics Edition, the brand's first serial production model with a level of CO<sub>2</sub> emissions of less than 100 grams per kilometre. The series of world premieres is rounded off by the new BMW X6, whose individual profile is honed with modifications in design and innovative equipment features.

#### Aesthetic highlight: the BMW 6 Series Gran Coupe.

With the world premiere of the BMW 6 Series Gran Coupe, BMW provides one of the highlights at the 2012 Geneva Motor Show while at the same time signalling its advance into a new vehicle segment. The design and innovative equipment features of the first 4-door Coupe by BMW is a symbol of exclusive driving pleasure in the luxury class. The hallmark proportions for a Coupe of the BMW brand and the BMW 6 Series shaping form the basis for its aesthetic appearance, defined by dynamic, elegant style. The interior of the BMW 6 Series Gran Coupe offers driver orientation as is typical of the brand, along with a high level of travel comfort in a stylish, luxurious interior.

The BMW 6 Series Gran Coupe is a 4-seater that offers generous travel comfort at the rear, too. A third seat is available as standard which can be used for shorter journeys. Thanks to folding backrests, the 460-litre luggage compartment can be extended to a volume of 1,265 litres.

There are three engines with BMW TwinPower Turbo Technology available for the BMW 6 Series Gran Coupe. The in-line 6-cylinder petrol engine of the BMW 640i Gran Coupe delivers 235 kW/320 bhp, the in-line 6-cylinder diesel of the BMW 640d Gran Coupe has an output of 230 kW/313 bhp. The BMW 650i Gran Coupe is powered by a new V8 engine with 330 kW/450 bhp

whose BMW TwinPower Turbo Technology now also includes the fully variable valve control system VALVETRONIC. All model variants are fitted an 8-speed sports automatic transmission. In addition to the automatic engine start-stop function, the standard ECO PRO mode also helps reduce fuel consumption. The intelligent all-wheel drive system xDrive will be available for the top model, too.

#### High-performance sports car in top form: the new BMW M6 Coupe.

A particularly attractive blend of aesthetic appeal and dynamic performance is all set for launch in the high-performance sports car segment, too. The new BMW M6 Coupe, which sees its world premiere at the 2012 Geneva Motor Show, exercises a fascinating attraction both due to it hallmark M design and its acceleration capacity, largely deriving from its 412 kW/560 bhp V8 engine with M TwinPower Turbo Technology. Its propulsive power enables a figure of 4.2 seconds for the sprint from 0 to 100 km/h, while its exceptional efficiency results in an average fuel consumption of 9.9 litres per 100 kilometres in the EU test cycle. The high-revving 8-cylinder engine, 7-speed M dual transmission, Active M Differential in the rear axle differential, the M-specific chassis and the new optionally available M Carbon ceramic brake guarantee top figures in all the relevant criteria for all-round dynamic performance and ensure the characteristic M feeling.

In the new BMW M6 Coupe, the dynamic and elegant lines are supplemented by characteristic M features which emphasise the athletic character of this high-performance sports car in a way which is derived directly from technological requirements. One hallmark feature is the roof in carbon fibre reinforced plastic, which in the BMW M6 Coupe has striking contours. It contributes to the reduction of vehicle weight as well as shifting the centre of gravity downwards - two ways in which it optimises the agility of the 2-door model. Wide-ranging configuration options for the drivetrain and suspension functions, two M drive buttons on the steering wheel for saving and retrieving a preferred set-up, the typical M cockpit design and the optional Head-Up Display - likewise with M-specific features - provide the ideal basis for enjoyment of this high-performance model in intense, individual style.

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## Exclusive performance, typical M feeling, outstanding efficiency: the BMW M Performance automobiles.

BMW M GmbH is also marking the start of a completely new product category with four premieres at the 2012 Geneva Motor Show. The BMW M Performance automobiles meet the demand for more power, precise handling and highly expressive design while retaining unlimited suitability for everyday use and exemplary efficiency. The models BMW M550d xDrive, BMW M550d xDrive Touring, BMW X5 M50d and BMW X6 M50d will be the first to go on the market. Their main points in common: the most innovative, powerful and efficient in-line 6-cylinder diesel engine in the world, the intelligent all-wheel drive system BMW xDrive, M-specific suspension settings and a characteristic design.

The new diesel engine with triple turbocharger and common rail direct injection delivers 280 kW/381 bhp and mobilises a maximum torque of 740 Newton metres. The 8-speed sports automatic transmission, xDrive, the suspension technology and the aerodynamic balance of the BMW M Performance automobiles are configured specifically to match the performance characteristics of each model with the precision typical of BMW M GmbH. New benchmarks are achieved, especially in terms of agility but also in the area of efficiency. For example, the BMW M550d xDrive accelerates in 4.7 seconds from zero to 100 km/h, while its average fuel consumption in the EU test cycle is 6.3 litres per 100 kilometres.

#### Extended engine range for the new BMW 3 Series Sedan.

Elegant, expressive design, outstanding sporty flair and enhanced driving comfort are the characteristic features of the sixth generation of the BMW 3 Series Sedan. The new epitome of driving pleasure in the midrange premium segment also adds a pioneering touch with its innovative options such as the 8-speed automatic transmission, BMW Head-Up Display and the BMW Lines. The 2012 Geneva Motor Show marks the presentation of additional engines for the new BMW 3 Series Sedan. Each with four cylinders, a capacity of 2.0 litres and BMW TwinPower Turbo Technology, the power units of the models BMW 316d, BMW 318d and BMW 320i provide a level of power delivery which is typical of the brand as well as especially low fuel consumption and emission levels. The engine output of the two additional diesel models is 85 kW/116 bhp in the BMW 316d and 105 kW/143 bhp in

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the BMW 318d. As the new entry-level version among the petrol engine models, the BMW 320i offers an output of 135 kW/184 bhp.

The M Sports package for the new BMW 3 Series Sedan is also presented along with the new engines. There is also a look ahead to further engine versions: BMW will be offering the intelligent all-wheel drive system xDrive for the new generation of the sporty sedan. What is more, the BMW ActiveHybrid 3 will be on shown in Geneva: its market launch is due to follow in just a few months' time.

### New engines for the BMW 1 Series: BMW 116d EfficientDynamics Edition with CO<sub>2</sub> level of 99 grams per kilometre.

Just a few months after the successful market launch of the new BMW 1 Series, the engine range for the compact model will be extended with the addition of three 4-cylinder engines. The status of the most powerful petrol engine variant goes to the BMW 125i, whose 4-cylinder power unit with BMW TwinPower Turbo Technology develops a maximum output of 160 kW/218 bhp and a maximum torque of 310 Newton metres. The most powerful diesel model in future will be the 125d with the same output and a maximum torque of 450 Newton metres. Its BMW TwinPower Turbo Technology includes multi-stage turbocharging and the latest generation of common rail direct injection.

The new front runner of the BMW model range in terms of efficiency will also be in the spotlight at the 2012 International Motor Show in Geneva. The BMW 116d EfficientDynamics Edition is powered by an 85 kW/116 bhp diesel engine with BMW TwinPower Turbo Technology. It accelerates in 10.5 seconds from zero to 100 km/h and its average fuel consumption in the EU test cycle is 3.8 litres per 100 kilometres. With a  $CO_2$  level of 99 grams per kilometre, the BMW 116d EfficientDynamics Edition sets another milestone in the continuous reduction of exhaust emissions in road traffic. For the first time ever, a double digit  $CO_2$  level can be combined with the driving pleasure typical of BMW models.

#### Exclusive perspectives for a unique model: the new BMW X6.

Selective design modifications and attractive new features in the equipment program give the BMW X6 an even more refined profile. Still the world's only Sports Activity Coupe, this gives it a further boost along its route to success.

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More than 150,000 of the BMW X6 have been sold worldwide since its market launch.

In the front view of the new BMW X6, its powerful presence is emphasised even more intensively with a particularly striking design of the BMW radiator grille and a new position for the fog lights. The rear lights, likewise modified, reflect the characteristic night design of the brand even more clearly. What is more, the new BMW X6 is the only vehicle within the competitive field of the BMW X models to be optionally available with adaptive LED headlights as of spring 2012.

## Individual mobility redefined: BMW i3 Concept and BMW i8 Concept.

The consistent continuation of the BMW development strategy for sustainable mobility will be borne out at the 2012 Geneva Motor Show with the presentation by BMW i. The BMW i3 Concept and the BMW i8 Concept provide concrete insights into the models currently undergoing development for serial production. The BMW i3 will come off the production line at the BMW plant in Leipzig as early as 2013 as the first electrically powered premium vehicle in the world. The serial production start of the BMW i8 is due to follow just a short time later. The sports car with plug-in hybrid drive will go on the market at the beginning of 2014.

## More driving pleasure, more individuality: Original BMW Accessories.

Attractive opportunities for customisation geared consistently towards sporty style are provided by the newly structured program in the BMW M Performance product area. As of spring 2012, BMW M Performance products in the areas of drivetrain, suspension, aerodynamics and cockpit will be available for the BMW 5 Series Sedan, the new BMW 3 Series Sedan and the new BMW 1 Series. The retrofit components developed in close collaboration with BMW M GmbH form part of the Original BMW Accessories program. They specifically enhance driving dynamics as well as adding a striking touch of sporty style in the appearance and interior styling of each vehicle.

What is more, more new features will be presented within the range of Original BMW Accessories designed especially for the new BMW 1 Series

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and the new BMW 3 Series Sedan. As of spring 2012 a broad selection of products will be available for particularly selective individualisation, with a design is harmonised to match the characteristics of the BMW Lines available for both of these models. The range for the BMW 1 Series is tailored towards the Sport Line and the Urban Line. The products for the BMW 3 Series Sedan are geared towards the Sport Line, Luxury Line and Modern Line.

#### The latest BMW ConnectedDrive innovations.

The most recent BMW ConnectedDrive innovations provide further optimisation of comfort, safety and infotainment inside the vehicle. The BMW Live service offers a selected range from the existing BMW Online program. The online connection required is made through the customer's own mobile phone. The 2012 Geneva Motor Show presentation will also include the extended range of functions of the Apps option. This enables owners of an Apple iPhone to use such features as a web radio function in the vehicle, as well as services such as Facebook and Twitter. The innovative dazzle-free high beam assistant is also presented in the new BMW 3 Series Sedan.





#### • World premiere: the BMW 6 Series Gran Coupe.

The aesthetic highlight of the BMW trade show presentation at the 2012 International Motor Show is the world premiere of the BMW 6 Series Gran Coupe. The brand's first 4-door Coupe combines the sporty, elegant styling of the BMW 6 Series with an extended range of functions. It offers high-quality interior design with generous space and a high level of seating comfort. Foldable backrests enable the luggage compartment volume to be expanded from 460 to 1,265 litres. Engines with BMW TwinPower Turbo Technology and the 8-speed sports automatic transmission including automatic engine start-stop function ensure pulling power and efficiency. The 6-cylinder petrol engine of the BMW 640i Gran Coupe delivers 235 kW/320 bhp, the 6-cylinder diesel of the BMW 640d Gran Coupe 230 kW/313 bhp. The range is supplemented with the 8-cylinder model BMW 650i Gran Coupe with 330 kW/450 bhp, the latter also available with the all-wheel drive system BMW xDrive. The high-quality suspension technology of the BMW 6 Series Gran Coupe creates an ideal harmony between sporty flair and luxurious travel comfort. The BMW Individual program available for its market launch highlights the model's exclusivity, and its athletic character can also be underscored with the M Sport package available for the sales launch.

#### • World premiere: the new BMW M6 Coupe.

The new BMW M6 Coupe embodies high performance in its purest form. The high revving V8 engine with M TwinPower Turbo Technology and 412 kW/560 bhp, the 7-speed M dual transmission Drivelogic, the Active M Differential, the M-specific suspension technology and extensive body reinforcements as well as the optionally available and globally unique M Carbon ceramic brake represent an advance into a whole new dimension of driving dynamics. The new BMW M6 Coupe accelerates in 4.2 seconds from zero to 100 km/h. Its average fuel consumption in the EU test cycle is 9.9 litres to 100 kilometres, more than 30 per cent below that of its predecessor. The sporty, elegant lines of the 2-door model are supplemented with hallmark M design features. One highlight is the

strikingly contoured lightweight construction roof made of carbon fibre reinforced plastic.

#### • World premiere: the BMW M Performance automobiles.

A new product category, four new models, a globally unique engine and intensive M feeling: the BMW M Performance automobiles, presented to the general public for the first time at the Geneva Motor Show, offer impressively enhanced performance and a characteristic M set-up of drivetrain, suspension and aerodynamics as well as characteristic design and interior feel. They also provide unlimited suitability for everyday use and a high level of efficiency. The models BMW M550d xDrive, BMW M550d xDrive Touring, BMW X5 M50d and BMW X6 M50d will be offered to mark the start of the new BMW M GmbH product category. They are powered by the in-line 6-cylinder diesel engine with triple turbocharger developed exclusively for the BMW M Performance automobiles, delivering a maximum output of 280 kW/381 bhp and a maximum torgue of 740 Newton metres. Combined with the 8-speed sports automatic transmission, the all-wheel drive system xDrive and modified suspension technology, this creates a driving experience defined by the agility and precision typical of M.

#### • Attraction: the new BMW 3 Series sedan.

The new BMW 3 Series Sedan takes over and extends the status of being the sportiest vehicle in its segment, as established by its predecessor. Furthermore it offers a tangible increase in ride comfort, optimised use of interior space and numerous equipment features which are unique in its category. Further engine variants with BMW TwinPower Turbo Technology will be presented at the Geneva Motor Show: two 4-cylinder diesel engines in the BMW 316d (85 kW/116 bhp) and the BMW 318d (105 kW/143 bhp) and a 4-cylinder petrol engine in the BMW 320i (135 kW/184 bhp). Another new feature is the imminent introduction of the intelligent all-wheel drive system xDrive for the new BMW 3 Series Sedan. The BMW ActiveHybrid 3 will also be presented in Geneva, which is also about to go into serial production.

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# Attraction: BMW 125i, BMW 125d, BMW 116d EfficientDynamics Edition.

99 grams per kilometre: this figure is the level CO<sub>2</sub> emissions of the new BMW 116d EfficientDynamics Edition presented at the 2012 Geneva Motor Show. This version of the new BMW 1 Series powered by an 85 kW/116 bhp diesel engine with BMW TwinPower Turbo Technology and an average fuel consumption of 3.8 litres per 100 kilometres is the most economical automobile in the BMW model program. Also new: the BMW 125d and the BMW 125i, each with 160 kW/218 bhp respectively, are the most powerful diesel and petrol engine versions of the new compact model.

#### • World premiere: the new BMW X6.

The exclusive status of the BMW X6 as the world's sole Sports Activity Coupe is now additionally underscored by specific design modifications and innovative equipment features. Among other things, the new BMW X6 has a particularly strikingly designed radiator grille, higher fog lights and rear lights featuring LED technology. The new BMW X6 is the only vehicle in its segment to be optionally available with adaptive LED headlights. The program of options is also expanded with the addition of the M Sport Edition, 20-inch bi-colour light alloy rims and an engine compartment lid with a striking powerdome.

#### • Innovation: BMW i3 Concept, BMW i8 Concept.

With individually tailored vehicle concepts, sustainability throughout the entire supply chain and supplementary mobility services, BMW i has created a whole new understanding of individual mobility. The central focus is on groundbreaking models which set new milestones along the road to CO<sub>2</sub> -free motoring by means of innovative drivetrain technology and consistent lightweight construction. The BMW i3 Concept and the BMW i8 Concept will be presented at the 2012 International Motor Show. BMW i thereby provides a look ahead to the very first electrically powered premium vehicle, due to go on the market as early as 2013 as the BMW i3. The BMW i8, a new generation of sports car with plug-in hybrid drive concept - is likewise well on the way to serial production readiness.

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### 3. BMW at the 82nd Geneva International Motor Show 2012.



(Long version) 3.1 Elegance that moves: the BMW 6 Series Gran Coupe.

Once again, BMW advances into a new vehicle segment with its presentation of the BMW 6 Series Gran Coupe. The third model of the BMW 6 Series after the Convertible and Coupe is the first ever 4-door Coupe in the history of the brand. The aesthetic elegance of its design makes it especially attractive. Powerful engines and its highly sophisticated suspension technology guarantee a sporty driving experience. The BMW 6 Series Gran Coupe is also characterised by exclusive fittings and a remarkable range of functions for a 4-door Coupe of the luxury-class segment.

#### Design: aesthetic elegance and exclusive flair.

The BMW 6 Series Gran Coupe combines the exceptional aesthetic appeal and dynamic performance of a Coupe, giving it its very own entirely distinctive, fascinating product personality. The hallmark BMW proportions are unusually flat and sporty for a 4-door automobile. They are defined by the novel interpretation of the three-box design, the long and powerfully contoured engine compartment lid, the long wheelbase which elegantly elongates the vehicle and the set-back passenger cell. With its low height and a roof line which flows flatly to the rear, the BMW 6 Series Gran Coupe also sets a new benchmark in terms of the aesthetic effect of a four-door automobile

The design of the interior creates a harmonious link between the front seats and the rear, embodying the ideal combination of elegance and dynamic performance. The driver-oriented cockpit, the passenger seat surrounded by elegantly curved surfaces and the generous provision of space on the rear seats ensure the vehicle's dynamic potential can be fully savoured, as well as providing travel comfort within a stylish, luxurious environment. The wheelbase has been extended by 113 millimetres as compared to the BMW 6 Series Coupe, resulting in a tangible increase in leg space on the rear seats. The BMW 6 Series Gran Coupe gains superb versatility due to its interior concept comprising up to five seats. An additional bonus in terms of functionality is provided by a through-loading facility and folding rear backrests which allows an expansion of the 460-litre luggage compartment to up to 1,265 litres.

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## The driver experience: defined by dynamic performance and comfort.

The engines available for the BMW 6 Series Gran Coupe with BMW TwinPower Turbo Technology offer sporty flair and efficiency. The in-line 6-cylinder petrol engine of the BMW 640i Gran Coupe delivers 235 kW/320 bhp, while the in-line 6-cylinder diesel of the BMW 640d Gran Coupe has an output of 230 kW/313 bhp. The model range is supplemented by the BMW 650i Gran Coupe powered by a 330 kW/450 bhp V8 engine. In the latest generation of 8-cylinder engines, BMW TwinPower Turbo Technology also includes the fully variable valve control system VALVETRONIC. All power units are combined as standard with an 8-speed automatic transmission. Features which contribute to the reduction of fuel consumption include the automatic engine start-stop function and the ECO PRO mode which can be activated using the driving experience switch. The intelligent all-wheel drive system BMW xDrive will also be available for the BMW 650i Gran Coupe

The suspension technology of the BMW 6 Series Gran Coupe comprises a double wishbone front axle and an integral rear axle as well as electromechanical hydraulic steering including Servotronic function and a high-performance brake system. Dynamic Damper Control, integral active steering and the Adaptive Drive system are available as options.

#### Fittings: exclusive features, innovative technology.

In addition to the 8-speed sports automatic transmission, the high-performance and extensive range of standard fittings for the BMW 6 Series Gran Coupe also include electrically adjustable leather seats with memory function, 2-zone automatic air conditioning, xenon light and the Professional radio with hi-fi loudspeaker system. There are also a number of exclusive options which add a touch of individual style. The highlights in the options program include the adaptive LED headlight and the Bang & Olufsen High End Surround Sound System. There will also be a model-specific M Sports package available right away from market launch as well as BMW Individual options developed especially for the BMW 6 Series Gran Coupe.

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The BMW ConnectedDrive program of driver assistance systems and mobility services includes the BMW Park Assistant, Surround View, collision warning with initial brake function in conjunction with active cruise control, lane change warning, lane departure warning, Speed Limit Info, high-beam assistant, BMW Night Vision with person recognition and the BMW Head-Up Display.

## Production at the BMW plant in Dingolfing: quality at the very highest level.

The BMW 6 Series Gran Coupe comes off the assembly line at the BMW plant in Dingolfing, where the Coupe and convertible of the BMW 6 Series are also produced as well as the BMW 5 Series models and the luxury sedans of the BMW 7 Series.

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### Description in brief. The BMW 6 Series Gran Coupe.

- Extension of model diversity, the first 4-door Coupe based on the BMW 6 Series; BMW 6 Series Gran Coupe: aesthetic appeal, emotion and modern style in the premium segment of the luxury class.
- Unique combination of elegant design, sporty driving pleasure and an exclusive interior character, as well as travel comfort and a wide range of functions.
- High-quality interior design with generous space and a high level of seating comfort; driver-oriented cockpit; Control Display in flatscreen design; comfort-oriented rear backrest angle; outstanding versatility due to third seat at rear as well as through-loading facility and folding rear backrests.
- Luggage compartment volume of 460 litres, can be extended to as much as 1,265 litres due to folding rear seat backrests.
- Vehicle length: 5,007 millimetres, wheelbase: 2,968 millimetres.
- Based on the aesthetic styling of the BMW 6 Series, the distinctive character of the BMW 6 Series Gran Coupe is consistently visualised in its design; differentiation in the specific electroplated brackets between the air inlet and fog lights; twin circular headlights with three-dimensionally styled light rings, optional adaptive LED headlights; characteristic silhouette with flowing Coupe roof line and elegantly finished Hofmeister kink including "Gran Coupe" model inscription on the C column; deliberately flat effect; striking rear view with conspicuous emphasis of breadth; L-shaped LED rear lights; third brake light across the entire width at the top of the rear window.
- Unique efficiency: all engine variants fitted with BMW TwinPower Turbo Technology; standard: 8-speed sports automatic transmission, automatic engine start-stop function, driving experience switch and ECO PRO mode.

- Market launch in June 2012 for the BMW 640i Gran Coupe with in-line 6cylinder petrol engine, twin-scroll turbocharger, high precision injection and VALVETRONIC, and the BMW 640d Gran Coupe with in-line 6-cylinder diesel engine, twin turbocharging and common rail direct injection.
- Extension of the range in autumn 2012 with the addition of the top model BMW 650i Gran Coupe featuring the new 8-cylinder engine, two turbochargers, high precision injection and VALVETRONIC.
- State-of-the-art suspension technology including electromechanical hydraulic steering with Servotronic; Dynamic Damper Control, integral active steering and Adaptive Drive optional; intelligent all-wheel drive system xDrive available for the BMW 650i Gran Coupe from market launch.
- Intelligent lightweight construction with selective use of extremely high-strength steel, aluminium and plastic.
- Extensive range of standard fittings including 8-speed sports automatic transmission, automatic engine start-stop function, Servotronic, driving experience switch, xenon light with LED lighting rings, cruise control with brake function, electrically controlled and heated exterior mirrors, Dakota leather trim and seat heating at front, electrical seat adjustment with memory function for driver and front passenger, 2-zone automatic air conditioning with extended functions, electrical steering wheel adjustment, iDrive operating system, Professional radio with hi-fi speaker system and USB interface.
- Exclusive options program including Bang & Olufsen High End Surround Sound System, comfort and sports seats, active seats, active seat ventilation, exclusive Nappa leather, ceramic applications, rear seat heating and 4-zone automatic air conditioning; exclusive model-specific BMW Individual range and M Sports package available immediately from market launch.
- Unique BMW ConnectedDrive range including BMW Park Assistant, Speed Limit Info, camera-based collision warning with initial brake function in conjunction with active cruise control and the latest generation of BMW Head-Up Display.

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#### • Technical specifications:

BMW 640i Gran Coupe: Capacity: 2,979 cc, output: 235 kW/320 bhp at 5,800 - 6,000 rpm, max. torque: 450 Nm at 1,300 - 4,500 rpm, acceleration [0 - 100 km/h]: 5.4 seconds, average fuel consumption\*: 7.7 - 7.9 litres/100 kilometres, CO<sub>2</sub> emissions\*: 179 – 183 g/km, exhaust emissions standard: EU5. BMW 640d Gran Coupe: Capacity: 2,993 cc, output: 230 kW/313 bhp at 4,400 rpm, max. torque: 630 Nm at 1,500 - 2,500 rpm, acceleration [0 - 100 km/h]: 5.4 seconds, average fuel consumption\*: 5.5 – 5.7 litres/100 kilometres, CO<sub>2</sub> emissions\*: 146 – 149 g/km, exhaust emissions standard: EU5. BMW 650i Gran Coupe (BMW 650i xDrive Gran Coupe): Capacity: 4,395 cc, output: 330 kW/450 bhp at 5,500 - 6,000 rpm, max. torgue: 650 Nm at 2,000 - 4,500 rpm, acceleration [0 - 100 km/h]: 4.6 seconds (4.5 seconds), average fuel consumption\*: 8.6 - 8.8 litres (9.2 - 9.4 litres)/100 kilometres, CO<sub>2</sub> emissions\*: 199 – 206 g/km (215 – 219 g/km), exhaust emissions standard: EU5.

\* Figures according to EU test cycle depending on tyre format selected; BMW 650i Gran Coupe: provisional figures.

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### **3.2 Fascinating aesthetic appeal** meets high performance: the new BMW M6 Coupe.

The fascination characteristic of M is derived from a passion for top performance and a sense of exclusive style: this can now be experienced in a particularly concentrated and exclusive form. The new BMW M6 Coupe offers superior performance properties within an ambience characterised by luxury and innovative features. Its supremacy is unique within the luxury-class premium segment and this is reflected in a powerfully expressive design. The 412 kW/560 bhp V8 engine with M TwinPower Turbo Technology, the 7-speed M dual transmission Drivelogic, the Active M Differential in the rear axle differential and model-specific suspension technology, a perfect weight balance and optimised aerodynamic qualities - all this, precisely dovetailed and harmonised, provides unmistakable M feeling in its most intensive form.

The motorsport technology used in the new BMW M6 Coupe paves the way to impressive performance on the race track as well as providing a fascinating experience in day-to-day traffic. The BMW M6 Coupe accelerates in 4.2 seconds from zero to 100 km/h. Its dynamic character is also borne out in agility on short bursts of speed, precision when turning in, traction capacity when accelerating out of bends and precisely controllable handling as well as its deceleration figures. The optional M Carbon ceramic brake system is presented in the BMW M6 Coupe as the latest innovation for optimising handling in highly dynamic driving situations.

## High-revving V8 engine with M TwinPower Turbo Technology: impressive forward thrust and remarkable efficiency.

The new BMW M6 Coupe draws the power required for its captivating performance from a high-revving V8 engine with M TwinPower Turbo Technology, combining engineering features derived directly from motor racing with innovations developed as part of Efficient Dynamics. Its globally unique technology package includes two twin-scroll turbochargers, a cross-bank exhaust manifold, high precision injection, the variable valve control system VALVETRONIC and the continuously variable camshaft adjustment function double VANOS.

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The unmistakable M specific performance characteristics of the 4.4 litre power unit are defined by an extremely spontaneous response and vehement power delivery which follows a linear pattern right up into the high engine speed range. The maximum torque of 680 Nm is available within an engine speed range of 1,500 to 5,750 rpm. The V8 reaches its peak output of 412 kW/560 bhp between 6,000 and 7,000 rpm. The maximum engine speed is 7,200 rpm. So the engine speed range for maximum performance here is almost three times as broad as that of the engine in the predecessor model.

Another feature which is unique within the competitive environment is the increase in efficiency offered by this new edition of the high-performance sports car. The new BMW M6 Coupe has an average fuel consumption of 9.9 litres per 100 kilometres in the EU test cycle and a CO<sub>2</sub> figure of 232 grams per kilometres - a reduction of around 30 per cent in each case as compared to the predecessor model.

#### Athletic shapes, adaptive LED headlights and a CFRP roof.

The body design combines the classic proportions of a BMW Coupe with powerfully stretched, precise contours that emphasise athletic charisma. In addition there is a model-specific interpretation of typical M design features including radiator grille with paired bars, large air inlets, broadly flared wheel arches with three-dimensionally modelled gill elements, aerodynamically optimised exterior mirrors, 19-inch M light alloy wheels and a powerfully shaped rear apron with a diffuser between the twin exhaust tailpipes positioned on the left and right.

The new BMW M6 Coupe is fitted with a dynamically contoured, weightoptimised roof made of carbon fibre reinforced plastic (CFRP). Its range of standard equipment likewise includes LED headlights.

## Individually configurable set-up, two MDrive buttons on the steering wheel.

The model-specific interior design also adds to the car's characteristic M feeling. Outstanding features include the newly developed M Sports seats, the M specific cockpit and a key panel to adjust the DSC mode, the engine power characteristics, the damper map, the characteristic curve of the M Servotronic and the shift program. Individually configured overall set-ups can

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be saved using the two MDrive buttons on the steering wheel and retrieved as required.

The BMW Head-Up-Display with M specific features is optional, as are numerous other driver assistance systems from the BMW ConnectedDrive program. The selection of options also includes such items as M multifunction seats, the Professional navigation system and the Bang & Olufsen High End Surround Sound System.

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### Description in brief. The BMW M6 Coupe.

- New edition of the BMW M6 Coupe; exceptionally intensive M feeling combined with captivating aesthetic design, luxurious charisma, four seats and innovative equipment features; high-performance sports car with superior performance properties and particularly exclusive character; unique position within the premium segment of the luxury class due to outstanding driving dynamics and typical M concept harmony with high suitability for everyday use; groundbreaking refinement of the vehicle concept with significantly enhanced efficiency, optimised operating structure for customising the vehicle set-up and extended variety in the BMW ConnectedDrive program of driver assistance systems and infotainment functions.
- Powerfully expressive body design with dynamic elegance of styling and hallmark M aesthetic appeal as an authentic visualisation of the car's high-performance properties; continuation of the lightweight construction strategy typical of the BMW M6 Coupe, with strikingly contoured roof made of carbon fibre reinforced plastic.
- High-revving 4.4 litre V8 engine with M TwinPower Turbo Technology consisting of twin-scroll twin turbo charging, cross-bank exhaust manifold, high precision injection and fully variable valve control system VALVETRONIC; typical M power delivery with spontaneous response and lasting thrust; the highest output in the segment; 412 kW/560 bhp at 6,000 7,000 rpm, maximum torque: 680 Nm from 1,500 rpm; maximum engine speed: 7,200 rpm; engine output 10 per cent higher, maximum torque 30 per cent higher than predecessor model.
- Acceleration figures: 0–100 km/h in 4.2 seconds; 0–200 km/h in 12.6 seconds; electronically limited maximum speed: 250 km/h (305 km/h with M Driver's Package).

- Exceptionally favourable relationship between performance figures and fuel consumption, significantly optimised as compared to the predecessor model; average fuel consumption in the EU test cycle: 9.9 litres/100 km; automatic engine start-stop function and other Efficient Dynamics features as standard; fuel consumption reduced by over 30 per cent as compared to the predecessor model.
- 7-speed M Double-clutch transmission with Drivelogic and tractionoptimised automatic gear selection, Launch Control and Low Speed Assistance; M specific gear selector switch; newly developed M leather steering wheel with shift paddles.
- Power transmission to the rear wheels: Active M Differential with fully variable distribution of drive torque between rear wheels so as to optimise traction and driving stability on dynamic lane changes and when accelerating out of bends.
- High-performance characteristics with exceptionally dynamic and precisely controllable driving properties due to typical M harmonisation of powertrain and suspension technology, aerodynamics and weight balance; power-to-weight ratio: 3.3 kg/bhp.
- M specific suspension with separately developed front and rear axle kinematics; M specific Dynamic Damper Control; driving stability control system DSC including M Dynamic Mode; M Servotronic steering; body reinforcements with specific stiffening plates; weight-optimised compound high-performance brake system; newly developed, globally unique M Carbon ceramic brakes as an option with optimised stability and wear resilience as well as reduced weight.
- Engine response, M Servotronic characteristic curve, Drivelogic shift program, DSC mode, damper map and Head-Up Display indicators individually programmable; two MDrive buttons on steering wheel for saving and retrieving individually configured vehicle set-ups.

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- Body design with the classic proportions of a BMW Coupe, sporty and elegant aesthetic appeal of the BMW 6 Series and athletic styling characteristic of M; M specific design features as an authentic expression of the vehicle's technological requirements and performance qualities; triple-section, expressively modelled lower air inlet with aerodynamically optimised flaps; newly styled M radiator grille with black twin bars; broadly flared wheel arches; typical M gill elements with integrated turn indicator bars; aerodynamically optimised exterior mirrors and side sills; BMW Individual high-gloss Shadow Line; exposed reflectors underneath the rear lights; aerodynamically optimised rear apron with diffuser between the twin exhaust tailpipes positioned on the left and right; 19-inch standard and 20-inch optional forged M light alloy wheels, each with their own distinctive interpretation of the typical M double spoke design.
- Luxurious, elegantly curved interior design with M specific controls and design features; newly developed M leather steering wheel in double spoke design; M gear selector switch and control buttons for vehicle set-up on model-specific central console; exclusive M Sports seats with integrated belt system (optional: M multifunction seats); Merino leather trim with extended features; exclusive interior strips in Carbon Fibre; illuminated door sill cover strips with model inscription; M specific instrument panel in Black Panel Technology; 2-zone automatic air conditioning with extended features, ambient light.
- Adaptive LED headlights as standard, extensive BMW ConnectedDrive program featuring some elements which are unique within the competitive field: BMW Head-Up-Display with M specific indicators, high-beam assistant, BMW Night Vision with person detection, lane change warning, lane departure warning, reversing camera, Surround View, Speed Limit Info, internet access, extended integration of smartphones and music players, Real-Time Traffic Information and apps for web radio reception as well as use of Facebook and Twitter.
- Virtually complete range of options for the BMW 6 Series, including Comfort Access, active seats, steering wheel heating, doors with Automatic Soft Close system, Professional navigation system, Bang & Olufsen High End Surround Sound System.

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Performance figures, fuel consumption and exhaust emissions:
BMW M6 Coupe:

Acceleration [0 – 100 km/h]: 4.2 seconds, acceleration [0 – 200 km/h]: 12.6 seconds, top speed: 250 km/h (305 km/h with M Driver's Package), average fuel consumption: 9.9 litres/100 kilometres, CO<sub>2</sub> emissions: 232 g/km, exhaust emissions standard: EU5.

### 3.3 Agility, precision and emotion in M style: the BMW M Performance automobiles.

A new product offer from BMW M GmbH extends the range of possibilities for experiencing sheer driving pleasure in particularly sporty style. The BMW M Performance automobiles are characterised by especially powerful engines, enhanced agility and precision in driving response, highly emotive design, unlimited suitability for everyday use and an outstanding level of efficiency in relation to performance figures. They are based on current BMW models which have been selectively refined in terms of technology and design drawing on the expertise focused at BMW M GmbH.

The start of this new vehicle category is marked by the launch of the four models BMW M550d xDrive Sedan, BMW M550d xDrive Touring, BMW X5 M50d and BMW X6 M50d, whose most important common feature is a newly developed in-line 6-cylinder diesel engine with triple turbocharger, a peak output of 280 kW/381 bhp and a maximum torque of 740 Nm. An 8-speed sports automatic transmission and the intelligent all-wheel drive system BMW xDrive with a model-specific set-up in each case as well as modified details in the suspension components including light alloy wheels developed exclusively for the BMW M Performance automobiles ensure a driving response characterised by agility and precision. Each model's specific body design is derived directly from its requirements in terms of cooling air supply and aerodynamics. The interior design is geared towards creating a sporty driving experience. The unmistakable, innovative character of the BMW M Performance automobiles derives from the coordinated interplay between powertrain, suspension technology and aerodynamic balance which is an M hallmark.

## Premiere for the world's most powerful serial production 6-cylinder diesel.

The market launch of the BMW M Performance automobiles goes hand in hand with the premiere of the world's most powerful 6-cylinder diesel engine used in a serial production vehicle. The unique M Performance TwinPower Turbo Technology of the 3.0-litre power unit comprises two relatively small and one large turbocharger whose interaction is precisely geared towards

performance requirements in each case. Depending on the situation, maximum use is made both of the low moment of inertia of the small turbocharger for a particularly spontaneous response and interaction with the large turbocharger in generating as high a level of turbocharger pressure as possible.

The engine reaches its peak torque at an engine speed of just 2,000 rpm, while its maximum output is available at 4,000 rpm. The engine's high degree of efficiency derives particularly from the new generation of common rail direct injection, in which piezo injectors operate at a maximum pressure of 2,200 bar.

## BMW M550d xDrive: new benchmark for sporty driving pleasure and efficiency in the segment of the BMW 5 Series.

The new diesel engine in the models BMW M550d xDrive and BMW M550d xDrive Touring helps achieve a balance between driving pleasure and economy which is unique in the segment. The BMW M550d xDrive Sedan covers the sprint from zero to 100 km/h in 4.7 seconds, while the acceleration figure for the BMW M550d xDrive Touring is 4.9 seconds. The benefits of diesel technology in terms of efficiency likewise apply. In the EU test cycle the Sedan makes do with 6.3 litres per 100 kilometres while the Touring uses 6.4 litres. The relevant CO<sub>2</sub> figures are 165 grams per kilometre for the BMW M550d xDrive Sedan and 169 grams per kilometre for the BMW M550d xDrive Touring. What is more, both models fulfil the EU6 exhaust emissions standard since BMW BluePerformance Technology is fitted as standard.

## BMW X5 M50d and BMW M6 M50d: impressive supremacy in terms of sprint and efficiency rating.

Superior powertrain and suspension technology combined with the intelligent all-wheel drive system xDrive give the Sports Activity Vehicle BMW X5 and the Sports Activity Coupe BMW X6 exceptional supremacy. The BMW M Performance automobiles based on the two X models raise this characteristic to an even higher level. In these two models, the engine developed for the BMW M Performance automobiles delivers performance figures which no other diesel-powered vehicle in this segment can compare with. The BMW X5 M50d accelerates in 5.4 seconds from zero to 100 km/h,

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while the BMW X6 M50d takes just 5.3 seconds. Average fuel consumption in the EU test cycle is 7.5 litres per 100 kilometres for the Sports Activity Vehicle and 7.7 litres for the Sports Activity Coupe, only negligibly higher than the figures for the previously available diesel variants of these two models. The relevant  $CO_2$  emission levels are 199 grams per kilometres for the BMW X5 M50d and 204 grams per kilometre for the BMW X6 M50d.

### Description in brief. The BMW M Performance automobiles.

- New product offer from BMW M GmbH based on current BMW models; BMW M Performance automobiles as an extension of the model range clearly oriented towards increased sporty flair but retaining unlimited suitability for everyday use and outstanding efficiency; the new product category starts out with four models: the BMW M550d xDrive Sedan, BMW M550d xDrive Touring, BMW X5 M50d and BMW X6 M50d.
- Consistent use of BMW M GmbH development expertise in optimising agility, precision and emotion; BMW M Performance automobiles with hallmark M coherence between powertrain, suspension and design; exclusive, particularly powerful engines; detailed modifications to suspension technology and power transmission; aerodynamically optimised body.
- World premiere for a new in-line 6-cylinder diesel engine developed exclusively for the BMW M Performance automobiles; new globally unique M Performance TwinPower Turbo Technology: three turbochargers, common rail direct injection with piezo injectors and maximum injection pressure of ,2,200 bar; 3.0-litre capacity, 280 kW/381 bhp, maximum torque: 740 Nm; spontaneous response characteristics and outstandingly dynamic power delivery into the high load range; maximum engine speed: 5,400 rpm; exceptional, optimised efficiency and extensive BMW EfficientDynamics technology including automatic engine start-stop function and ECO PRO mode.
- 8-speed sport automatic transmission with enhanced dynamic gearshifts as standard in all BMW M Performance automobiles; intelligent all-wheel drive system BMW xDrive with model-specific set-up optimised for enhanced dynamics; BMW M550d xDrive and BMW X5 M50d with Performance Control, BMW X6 M50d with Dynamic Performance Control.
- M specific set-up of wheel suspension, bodyshell mounting, engine and transmission mounting, suspension and damping, all standard and optional suspension control systems and Servotronic characteristic curve of the hydraulic steering; this results in significantly increased agility and precision

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in dynamic driving situations with the linear build-up of transverse force which is characteristic of M.

- BMW M550d xDrive as standard with driving experience switch including ECO PRO mode, BMW M550d xDrive Touring also with rear axle pneumatic suspension and automatic self-levelling suspension, both models optionally available with Dynamic Damper Control or Adaptive Drive including Dynamic Drive.
- BMW X5 M50d and BMW X6 M50d as standard with rear axle pneumatic suspension and self-levelling suspension, Adaptive Drive as standard in the BMW X6 M50d and optionally available for the BMW X5 M50d.
- Model-specific differentiation and aerodynamic optimisation based on selective design modifications with characteristic M aesthetic appeal; exterior mirrors and air inlet bars with striking paint finish in Ferric Grey metallic; trapeze-shaped exhaust tailpipes; BMW Individual high-gloss Shadow Line; 19-inch M light alloy rims in double spoke design as standard for the BMW M550d xDrive and the BMW M550d xDrive Touring; 19-inch M light alloy rims in V-spoke design as standard in the BMW X5 M50d; 20- inch M light alloy rims in double spoke design as standard in the BMW X6 M50d; exclusive 20-inch M light alloy rims in Ferric Grey optionally available for all models; model inscriptions on the door sill cover strips and tailgate, in the BMW X5 M50d and the BMW X6 M50d also on the instrument cluster; engine cover with "M Performance" inscription.
- Clear emphasis of sporty character with specific interior design features; gear selector switch with M logo; sports seats in exclusive M design featuring Alcantara/nappa leather in black (BMW X5 M50d, BMW X6 M50d) or Alcantara/fabric in Grey Shadow (BMW M550d xDrive) with contrast stitching and embossed M logo; M leather steering wheel with shift paddles; BMW Individual roof liner in anthracite; interior strips in brushed Aluminium Shadow (BMW X5 M50d, BMW X6 M50d) or Aluminium Hexagon (BMW M550d xDrive); emphasis of the characteristic 6-cylinder engine acoustics by means of interior sound design.

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- All BMW M Performance automobiles with extensive range of standard comfort fittings; diverse customisation options due to the availability of virtually the entire range of options for the BMW 5 Series or for the BMW X5 and BMW X6; including Comfort Access, automatic tailgate activation (standard in the BMW X6 M50d and the BMW M550d xDrive Touring in Germany), contact-free tailgate opening (BMW M550d xDrive, BMW M550d xDrive Touring), electrically operated glass or panorama roof, doors with Automatic Soft Close system, trailer tow hitch, steering wheel heating, active seats, adaptive LED headlights (BMW X6 M50d), navigation systems with hard disk storage, high-quality audio and rear entertainment systems.
- Extensive BMW ConnectedDrive program including driver assistance systems and mobility systems, offering a unique level of diversity within the competitive environment of each vehicle: Head-Up Display, Adaptive Headlight, high-beam assistant, BMW Night Vision with person detection (BMW M550d xDrive), active cruise control with Stop & Go function, lane change warning (BMW M550d xDrive), lane departure warning (BMW M550d xDrive), reversing camera with Top View (BMW X5 M50d, BMW X6 M50d), Surround View (BMW M550d xDrive), Speed Limit Info, internet access, extended integration of smartphones and music players, Real-Time Traffic Information and apps for web radio reception as well as for using Facebook and Twitter.
- Engine:

In-line 6-cylinder diesel engine with M Performance TwinPower Turbo Technology, aluminium crankcase, triple turbocharging, high-pressure exhaust turbocharger with variable turbine geometry common rail direct injection with piezo injectors, maximum injection pressure: 2,200 bar, capacity: 2 993 cc, output: 280 kW/381 bhp at 4,000 – 4,400 rpm, max. torque: 740 Nm at 2,000 – 3,000 rpm, specific output: 93.6 kW/127,3 bhp per litre capacity.

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 The BMW M Performance models: performance figures, fuel consumption, CO<sub>2</sub> emissions:

#### BMW M550d xDrive Sedan:

Acceleration [0 – 100 km/h]: 4.7 seconds,

top speed: 250 km/h,

average fuel consumption: 6.3 litres/100 kilometres,

CO<sub>2</sub> emissions: 165 g/km, exhaust emissions standard: EU6.

#### BMW M550d xDrive Touring:

Acceleration [0 – 100 km/h]: 4.9 seconds, top speed: 250 km/h,

average fuel consumption: 6.4 litres/100 kilometres,

CO<sub>2</sub> emissions: 169 g/km, exhaust emissions standard: EU6.

#### BMW X5 M50d:

Acceleration [0 – 100 km/h]: 5.4 seconds,

top speed: 250 km/h,

average fuel consumption: 7.5 litres/100 kilometres,

CO<sub>2</sub> emissions: 199 g/km, exhaust emissions standard: EU5.

#### BMW X6 M50d:

Acceleration [0 - 100 km/h]: 5.3 seconds,

top speed: 250 km/h,

average fuel consumption: 7.7 litres/100 kilometres,

CO<sub>2</sub> emissions: 204 g/km, exhaust emissions standard: EU5.

### 3.4 Dynamic performance, efficiency and comfort - perfectly showcased: the new BMW 3 Series Sedan

BMW is expanding its range of engines for the new BMW 3 Series Sedan with the addition of three power units which are all characterised by high performance and outstanding efficiency. The BMW 320i is presented as the new entry-level variant among the petrol engine models. The range of diesel models is supplemented with the BMW 318d and the BMW 316d. What is more, the M Sports package developed for the new BMW 3 Series Sedan is also presented at the 2012 Geneva Motor Show. There is also a look ahead to further engine versions: BMW will be offering the intelligent all-wheel drive system xDrive for the new generation of the sporty sedan, as well as launching the BMW ActiveHybrid 3.

# BMW 320i: increased athletic flair with BMW TwinPower Turbo Technology.

After the BMW 328i, the second representative of a new generation of 2.0-litre 4-cylinder petrol engines now sees its debut in the new BMW 320i. In the BMW 320i, the power unit with BMW TwinPower Turbo Technology delivers 135 kW/184 bhp at 5,000 rpm, putting a maximum torque of 270 Nm on stream from 1,250 rpm. This sets it 10 kW above the peak output of its predecessor model, while in terms of pulling power the improvement over the previous engine is as much as 60 Nm. The new BMW 320i with 6-speed manual transmission thus accelerates in just 7.3 seconds from zero to 100 km/h, making it 0.9 seconds faster than its predecessor.

In spite of these improved driving performance figures, the sedan is considerably more fuel-efficient. With an average rate of just 5.9 litres per 100 kilometres in the EU test cycle, the BMW 320i undercuts the fuel consumption level of its predecessor by 0.5 l/100 km or around seven per cent. The technological advance is even more striking in conjunction with the 8-speed automatic transmission: here the reduction as compared to the predecessor model with 6-speed automatic transmission is as much as 12 per cent.

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The new 4-cylinder spark ignition engines are key elements of the BMW EfficientDynamics development strategy, geared consistently towards increasing driving pleasure while cutting back fuel consumption and exhaust emissions. The engine of the BMW 320i is based on a basic frictionoptimised 1,997 cc engine whose performance differentiation primarily derives from its injection and turbocharging technology. The main components of the globally unique BMW TwinPower Turbo Technology include high precision injection, supercharging based on the TwinScroll principle, the variable camshaft control system double VANOS and the variable valve control system VALVETRONIC. Thus equipped, and fitted with an all-aluminium crankcase, these engines move into an output range which would otherwise only be achieved by conventional naturally aspirated engines with a higher number of cylinders and a larger capacity.

#### BMW 318d and 316d: high-torque, smooth-running and efficient.

The diesel power units available for the new BMW 3 Series Sedan also draw on state-of-the-art BMW TwinPower Turbo Technology. The latest generation common rail direct injection, turbocharging and all-aluminium construction ensure a high level of pulling power, running smoothness and unsurpassed efficiency in these modern 4-cylinder engines. A centrifugal pendulum in the dual-mass flywheel compensates for irregular revolutions and supports comfortable driving within low engine speed ranges. All diesel engines can be combined with the new 8-speed automatic transmission if required.

The power units of the models BMW 318d and BMW 316d are familiar from the respective predecessor models and offer the relevant driving performance figures. In the new BMW 318d, the 4-cylinder engine generates a peak output of 105 kW/143 bhp at 4,000 rpm, with the maximum torque of 320 Nm available between 1,750 and 2,500 rpm. Considering its acceleration rate of zero to 100 km/h in 9.1 seconds (automatic transmission: 9.3 seconds) and a top speed of 210 km/h, the new BMW 318d is highly economical. With both transmission variants it achieves an average fuel consumption of 4.5 litres per 100 kilometres. The CO<sub>2</sub> emissions level is 117 grams per kilometre. In spite of enhanced driving performance figures, this means a saving of two and 14 per cent respectively as compared to the predecessor model.

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The entry-level diesel engine of the BMW 316d is particularly geared towards economy. It is able to deliver a maximum output of 85 kW/116 bhp at 4,000 rpm, putting a maximum torque on stream of 260 Nm between 1,750 and 2,500 rpm. This enables the sedan to accelerate from zero to 100 km/h in 10.9 seconds (automatic transmission: 11.3 sec), achieving a top speed of 202 km/h. The average fuel consumption is 4.4 litres per 100 kilometres (automatic transmission: 4.5 litres), with CO<sub>2</sub> emissions at a level of 115 and 116 grams per kilometre respectively.

The progressive BMW BluePerformance Technology is available as an option for the BMW 320d EfficientDynamics Edition as of spring 2012, combining the diesel particulate filter and oxidation catalytic converter with an NOx catalyst storage. The system brings about a significant reduction in nitrogen oxides, remaining comfortably within the threshold stipulated by the EU6 emission standard.

#### Dynamic, efficient, innovative: BMW ActiveHybrid 3.

A particularly innovative concept for optimising the balance between driving pleasure and fuel consumption is the BMW ActiveHybrid 3, which will be added to the model range from autumn 2012. The full-hybrid model can be purely electrically powered, thereby allowing zero-emissions driving in local urban traffic. It makes the most of the efficiency benefits offered by the intelligent combination of an in-line 6-cylinder engine and electric drive. The BMW ActiveHybrid 3 generates a system output of 250 kW/340 bhp and a system torque of up to 450 Nm. Its average fuel consumption in the EU test cycle is expected to be less than 6.4 litres per 100 kilometres. ActiveHybrid Technology thus results in a fuel consumption reduction of some 12 per cent as compared to the most powerful variant of the sports sedan with combustion engine only.

The drive system of the BMW ActiveHybrid 3 has been specially designed to match the sporty character of the new BMW 3 Series. It consists of a 225 kW/306 bhp 6-cylinder petrol engine with BMW TwinPower Turbo Technology and a hybrid-specific 8-speed automatic transmission with integrated electric motor, which can deliver up to 40 kW/54 bhp over short periods of time. In practice, the electric motor provides the 6-cylinder with additional drive torque, generating a boost function if particularly dynamic

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propulsion is required. BMW ActiveHybrid Technology also allows purely electrically powered driving. The zero-emissions and almost noiseless drive system can be used over distances of between three and four kilometres at a maximum speed of 60 km/h. In addition, the intelligent drive management system of the BMW ActiveHybrid 3 allows the use of a so-called coasting mode at speeds of up to 160 km/h. Here the combustion engine is decoupled for particularly economical driving while coasting.

The integration of ActiveHybrid Technology was taken into account from the outset in designing the architecture of the new BMW 3 Series. This has created the basis for a particularly space-saving arrangement of the hybrid system in the vehicle. The high-voltage energy storage device is integrated underneath the luggage compartment floor. With a luggage compartment volume of 390 litres and unlimited through-loading capability, the BMW 3 Series Sedan retains its characteristically high level of comfort and functionality.

#### Intelligent all-wheel drive for the new BMW 3 Series Sedan.

The intelligent all-wheel drive system BMW xDrive will also be available for the new BMW 320d in future as an alternative to the standard rear-wheel drive. In addition to the characteristic benefits of all-wheel drive, BMW xDrive - with its electronic control system and extremely fast power distribution between front and wheels - also guarantees superior traction, maximum safety, excellent handling and optimum application of engine power in all weather and road conditions. A new set-up, enhancing agility and precision on bends too, provides an ideal combination of dynamic performance and comfort and an excellent basis for absolute driving pleasure.

The new BMW 320d xDrive accelerates in 7.5 seconds from stationary to 100 km/h, in conjunction with the optional 8-speed automatic transmission this figure is reduced to 7.4 seconds. Fuel and exhaust emission levels are remarkably low in the all-wheel drive sedan: the BMW 320d xDrive with manual transmission has an average fuel consumption of 4.8 to 4.9 litres per 100 kilometres and a  $CO_2$  emissions level of 127 to 129 grams per kilometre. The average fuel consumption of the automatic version is in fact only 4.7 to 4.8 litres per 100 kilometres, with a  $CO_2$  emissions level of 124 to 126 grams per kilometre (figure depends on the tyre format selected).

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The first all-wheel drive was premiered in a BMW 3 Series model back in 1985. Even then, power transmission to both axles was not solely aimed at optimising traction on critical surfaces but also served to enhance agility and driving dynamics on bends. In the current version of BMW xDrive, the all-wheel drive system is networked with Integrated Chassis Management (ICM), enabling instant identification and analysis of changing driving situations so as to be able to make the appropriate regulatory interventions early on. These can be applied by xDrive either on its own or in combination with Dynamic Stability Control (DSC). This means that data such as steering angle, accelerator pedal position and transverse acceleration are also included in the calculation of driving status. Unlike conventional all-wheel drive systems which respond only to spinning wheels, xDrive detects any tendency towards a lack of traction in advance and is able to proactively counter the risk of oversteering or understeering by means of the appropriate intervention.

Here, power distribution between the front and rear axle is varied in such a way that the handling properties characteristic of the BMW 3 Series Sedan are still preserved even when taking bends in sporty style. In terms of the xDrive set-up, BMW consistently maintains the characteristics typical of rear-wheel drive. This means that in normal driving situations the BMW 320d directs 60 per cent of the drive torque to the rear axle, so that drive steer is largely eliminated in the all-wheel drive model, too. In order to ensure maximum steering precision and directional stability, the intelligent system feeds more drive power to the rear wheels when entering a bend, thereby guaranteeing sheer driving pleasure.

In terms of hardware, too, BMW continues to expand the supremacy of its allwheel drive system. The consistent refinement of axle drive and transfer box results in both optimised efficiency and a reduction in weight. Nowadays the electromechanical actuators in the transfer box make do with fewer components, while the use of a thinner oil in the rear axle differential minimises frictional losses. These features help keep differences in fuel consumption and weight between standard and all-wheel drive to a minimum.

In the new BMW 3 Series, the range of models with BMW xDrive starting out in July 2012 will be continually extended, and other attractive combinations with different engines will follow (BMW 320i xDrive, BMW 328i xDrive, BMW 335i xDrive).

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#### BMW M Sports package for the new BMW 3 Series.

A particularly sporty way to drive the BMW 3 Series is with the BMW M Sports package, available from summer 2012. This allows dynamic driving qualities to be further intensified and demonstrated in striking visual form in the new generation of the BMW 3 Series, too. The BMW M Sports package provides an individually tailored solution here, featuring components in the areas of suspension, aerodynamics and interior ambience which were specially developed for the model.

The completely redesigned M dashboard as well as numerous components on the front, side and rear sections of the body give the new BMW 3 Series Sedan an unmistakably sporty look at first sight. The exclusive body paint finish in Estoril Blue metallic, the BMW radiator grille in high-gloss black, exhaust tailpipes with chrome covers, the diffuser insert in the rear apron in high-gloss Shadow metallic and the BMW Individual high-gloss Shadow Line for the side window surrounds and exterior mirrors round off the high-quality design of the body.

The 10-millimetre lower slung M suspension works with tighter suspension/damping settings, giving the driver a more direct driving experience. 19-inch light alloy wheels in specific M design and bi-colour look are optionally available, while the M Sports package includes 18-inch light alloy wheels as standard. In addition, driving dynamics potential can be further enhanced with an 18-inch M Sports brake with multi-piston brake caliper in blue contrast finish.

A more intensive driving experience is also guaranteed by the sedan's sporty interior design in M style. Both driver and front seat passenger have exclusive sports seats in fabric-Alcantara with M welt and contrast stitching in Royal Blue. In addition to exclusive details such as the aluminium door sill cover strips with M inscription, the M driver footrest, the M gearshift lever (manual transmission) and the handbrake lever in leather, it is the newly designed M leather steering wheel with multifunction buttons which provides a distinctive touch to emphasise the sporty aspirations of the BMW 3 Sedan.

Interior strips in Aluminium Hexagon with accentuation strip in Estoril Blue metallic matt or high-gloss black and the BMW Individual roof liner in anthracite likewise form part of the M Sports package. The sporty interior

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design is rounded off with a speedometer and tachometer with chrono scaling and red contrast ring, variable interior lighting in orange-red or white, chrome wedges on the controls for the automatic air conditioning and audio system and the driving experience switch.

The M Sports package will be available for order for the new BMW 3 Series Sedan from spring 2012.

### 3.5 More power, more driving pleasure - and even less CO<sub>2</sub>: the extended range of engines for the new BMW 1 Series.

The three state-of-the-art 4-cylinder engines available for the new BMW 1 Series from spring 2012 guarantee more driving fun, top-class performance figures and exemplary levels of fuel consumption. All power units are fitted with the unique BMW TwinPower Turbo Technology, with additional features derived from the BMW EfficientDynamics development strategy ensuring a further reduction in fuel consumption and emission levels. The new 2.0-litre engines in the BMW 125i and BMW 125d are considerably more powerful than their respective predecessors, despite being superior to the latter in terms of fuel consumption and CO<sub>2</sub> emissions.

Another newly developed 1.6-litre diesel engine is provided for the BMW 116d EfficientDynamics Edition. With an average consumption in the EU test cycle of 3.8 litres per 100 kilometres and a CO<sub>2</sub> emissions level of 99 grams per kilometre, the entry-level diesel variant of the compact 5-door model is the automobile with the lowest level of fuel consumption and emissions in the entire BMW model program.

#### BMW 125i: athletic power delivery and supreme efficiency.

As a representative of the latest generation of 4-cylinder petrol engines, the new 2.0-litre power unit makes use of the globally unique BMW TwinPower Turbo Technology which includes supercharging based on the TwinScroll principle, high precision injection, the variable valve control system VALVETRONIC and the variable camshaft control system double VANOS. Thanks to this combination, the engine delivers a peak output of 160 kW/218 bhp at 5,000 rpm, quickly developing a maximum torque of 310 Nm which is available across a broad range of between 1,350 and 4,800 rpm.

As a result it offers sporty driving performance figures: from standing, the BMW 125i with standard 6-speed manual transmissions passes the 100 km/h mark after 6.4 seconds, reaching a top speed of 245 km/h. In combination with the optional 8-speed automatic transmission, the respective figures are 6.5 seconds and 243 km/h. The fuel consumption and exhaust emission

figures are no less impressive. With an average fuel consumption on the EU test cycle of 6.6 litres per 100 kilometres (automatic: 6.4 litres) and CO<sub>2</sub> emissions of 154 grams per kilometre (automatic: 149 g/km), the powerful BMW 125i gives an impressive performance in terms of economy, too.

#### BMW 125d: pulling power and economy at the very highest level.

With a peak output of 160 kW/218 bhp at 4,400 rpm - surpassing its predecessor model BMW 123d by 10 kW - and a powerful maximum torque of 450 Newton metres (plus 50 Nm) available between 1,500 and 2,500 rpm, the new BMW 125d is the most spirited diesel model of the BMW 1 Series. This is not least due to the latest generation of common rail direct injection as well as a turbocharger with variable intake geometry. Both with 6-speed manual transmission and with 8-speed automatic transmission, the compact 5-door model sprints from zero to 100 km/ in just 6.5 seconds if required, reaching a top speed of 240 km/h. What is more, the powerful diesel engine combined with manual transmission enables an average fuel consumption in the EU test cycle of 4.9 litres per 100 kilometres and a  $CO_2$  emissions figure of 129 grams per kilometre. These figures are enhanced even further in combination with the automatic transmission: in this case the BMW 125d has an average fuel consumption of just 4.8 litres per 100 kilometres, with a  $CO_2$ emissions level of 126 grams per kilometre.

## BMW 116d EfficientDynamics Edition: the CO<sub>2</sub> champion with an emissions level of 99 grams per kilometre.

The new BMW 116d EfficientDynamics Edition sets impressive standards in fuel efficiency as well as in terms of the relationship between driving pleasure and CO<sub>2</sub> emissions. With this model BMW further enhances its leading position in the area of efficient diesel technology. The BMW 116d Efficient Dynamics Edition is powered by a 1.6-litre 4-cylinder diesel engine with BMW TwinPower Turbo Technology and features additional measures to reduce fuel consumption and emissions, further optimising such factors as engine efficiency, energy management, aerodynamic properties and rolling resistance.

The newly developed engine is able to deliver a maximum output of 85 kW/116 bhp at 4,000 rpm, putting a torque of 260 Nm on stream between 1,750 and 2,500 rpm. The BMW 116d EfficientDynamics Edition is fitted with

a 6-speed manual transmission and accelerates from zero to 100 km/h in 10.5 seconds. Its top speed is 195 km/h. This model establishes its status as CO<sub>2</sub> champion of the BMW range with a fuel consumption of 3.8 litres per 100 kilometres and an emissions level of 99 grams per kilometre.

### Enhanced dynamic performance, striking charisma: M Sports package for the new BMW 1 Series.

As of spring 2012, the M Sports package is also available for the new BMW 1 Series, providing an especially intense driving experience. High-quality components such as the M Sports suspension lowered by 10 millimetres with tighter spring/shock absorber settings and harder anti-roll bars tangibly emphasise the active driving character of the compact BMW model, with an extended wheelbase as compared to its predecessor and a wider track width providing the perfect basis. The 17 or 18-inch M light alloy wheels in double spoke styling with mixed tyres are among the features which enhance the driving dynamics potential of the compact 5-door model. An M Sports brake is available as an additional option. It consists of aluminium multi-piston fixed calipers finished in dark blue metallic bearing the BMW M logo and 17-inch lightweight construction brake discs. The M Sports brake is available as a single option for the most powerful models, the BMW 125i and the BMW 125d, while for all other variants of the BMW 1 Series it is offered exclusively in conjunction with the M Sports package.

In addition to the M aerodynamic package with numerous body components for the front, side and rear sections and the BMW Individual high-gloss Shadow Line, an unmistakably sporty appearance is ensured by the exterior paint finish in Estoril Blue 2 metallic - an option available exclusively in conjunction with the M Sports package.

Inside the vehicle, components such as aluminium door sill cover strips with M emblem, M leather steering wheel with multifunction buttons, M driver footrest and M gearshift lever go together to create a sporty, elegant feel. The driver and front passenger sit on sports seats available exclusively for the M Sports package in Hexagon Anthracite fabric/Alcantara with contrast stitching in Royal Blue. Furthermore, the driver has the use of a sports-style instrument cluster with red accentuations and chrono scaling. The M Sports package for the new BMW 1 Series is rounded off with interior strips in the

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equally exclusive Aluminium Hexagon finish with accentuation strip either in Estoril Blue matt or high-gloss black and an anthracite-coloured BMW Individual roof liner.

3/2012 Page 43 3.6 Unique - and now more exceptional than ever: the new BMW X6.

The BMW X6 is the world's first ever Sports Activity Coupe, still a unique combination of sporty dynamics and supreme versatility and with further enhanced appeal as of spring 2012. Selective modifications in design and innovative equipment features hone the profile of the new BMW X6 as a distinctive model within the premium segment of all-wheel-drive automobiles. Its exceptional standing and ongoing popularity is due both to its highly expressive design, combining the athletic and elegant lines of a Coupe with the supremacy of a BMW X model, and the fascinating driving experience provided by powerful petrol and diesel engines fitted with BMW TwinPower Turbo Technology as well as the intelligent all-wheel-drive system xDrive including Dynamic Performance Control.

From market launch, more than 150,000 of the BMW X6 were sold worldwide within approximately three and a half years. This far exceeded the original plans. And the continuing high level of demand for the BMW X6 on the worldwide automobile markets is impressive confirmation of the distinctive Sports Activity Coupe vehicle concept.

## Striking accentuations at the front and rear, adaptive LED headlights as a new option.

Precisely modified details in the front view give the new BMW X6 an appearance characterised by exclusive athleticism and supremacy. The fog lights are now set in matt finish surrounds in the upper area of the outer air inlets. Their higher and more lateral positioning emphasises the width of the vehicle. The striking three-dimensional modelling of the frame and newly designed bars, angled in the lower section, make the BMW kidney grille stand out especially conspicuously within the front section of the vehicle. The angle of the grille bars is flush with the bottom of the headlamp units, thereby creating an additional horizontal line which likewise highlights the wide track and stable road-holding of the new BMW X6.

As an alternative to the standard bi-xenon light, the new BMW X6 is the first vehicle in its segment to be fitted optionally with adaptive LED headlamps.

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Their bright white light ensures optimum visibility, while their high-quality appearance represents a new interpretation of the brand's hallmark twin circular headlamps. The three-dimensionally shaped luminous rings of the adaptive LED headlamps are strikingly levelled off both at the top and bottom and are overlaid at the upper edge by an LED-fed positioning light. The light sources for low and high-beam light are LED units centrally mounted on a horizontal bar, feeding their light into the reflectors in front. Adaptive LED headlights are fitted as standard in the new BMW X6 M.

With its newly designed rear lights featuring LED technology, the powerfully shaped rear section of the new BMW X6 is also borne out more strikingly. The rear lights are now two LED-fed light banks which create the brand's hallmark night design as a harmoniously glowing light mass. The fact that they are horizontally aligned and stretch far out to the sides emphasises both the width of the vehicle and the flowing transition between the side section and rear.

### Attractive supplements to the program of external paint finishes, light alloy wheels and leather trim.

The program of external paint finishes for the new BMW X6 consists of two non-metallic and eight metallic colours, including Marrakech Brown metallic, Orion Silver metallic and Midnight Blue metallic. The standard equipment range of the new BMW X6 also includes 19-inch light alloy wheels. In the 8-cylinder model BMW X6 xDrive 50i these now feature a new double spoke design in bi-colour finish. The light alloy wheels option is supplemented with a 20-inch version in Y-spoke bi-colour design. An optional feature for all versions of the BMW X6 is an engine compartment lid with strikingly shaped powerdome which additionally highlights the powerful appearance of the Sports Activity Coupe (not available in Germany).

The standard Nevada leather trim is now also available in the colour Vermilion Red. The exclusive nappa leather option with extended features now includes a choice between the colours Black and Ebony White. The new BMW X6 is offered as standard as a four-seater model. A three-seater rear bench is optionally available. The luggage compartment volume of the Sports Activity Coupe is 570 litres and can be extended to up to 1,450 litres by folding down the rear backrests.

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The M Sports Edition is offered as an additional option for the new BMW X6 in Germany This attractive equipment package includes 20-inch M light alloy wheels in double spoke design and bi-colour finish with mixed tyres, adaptive LED headlights, BMW Individual high-gloss Shadow Line, black surrounds for the fog lights and M door sill cover strips. The striking accentuations for the exterior are supplemented with a sporty interior ambience. Features here include sports seats with electrical adjustment and memory function, M specific Alcantara/nappa leather combination in black with M style welt and contrast stitching, M leather steering wheel with shift paddles, M driver footrest, stainless steel pedals, interior strips in Aluminium Flywheel black and the BMW Individual roof liner in anthracite.

#### The new BMW X6: dynamic, supreme, efficient, innovative.

With the market launch of the new BMW X6, the combination of supreme appearance, agile driving properties and hallmark brand efficiency so characteristic of the Sports Activity Coupe is raised to a new level. The petrol and diesel engines with BMW TwinPower Turbo Technology available for the BMW X6 deliver impressive pulling power and exemplary fuel consumption figures. The V8 engine of the BMW X6 xDrive50i delivers 300 kW/407 bhp, while in the BMW X6 xDrive35i an in-line 6-cylinder petrol engine with 225 kW/306 bhp ensures supreme athletic performance. The in-line 6-cylinder diesel engines of the models BMW X6 xDrive40d and BMW X6 xDrive30d mobilise 225 kW/306 bhp and 180 kW/245 bhp respectively. Both offer not only impressively sporty power delivery but also emission figures based on the EU test cycle of 7.5 litres per 100 kilometres (BMW X6 xDrive40d) and 7.4 litres (BMW X6 xDrive30d).

For further reduction of nitrogen oxide (NOx) in the exhaust gas, the BMW X6 xDrive30d can also be fitted with optional BMW BluePerformance Technology as of spring 2012. Here, in addition to the standard components of diesel particulate filter and oxidation catalytic converter, the AdBlue system is used featuring urea injection. This means that the vehicle already meets the requirements for the EU6 emission standard which comes into effect from 2014.

An additional model version based on the new BMW X6 also lines up for the start at the same time as the latter's market launch. The

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BMW M Performance automobile BMW X6 M50d sets a new benchmark for pulling power and efficiency with a newly developed 280 kW/381 bhp in-line 6-cylinder diesel engine. Its unique triple turbocharging gives the world's most powerful standard in-line 6-cylinder diesel engine a thrust which sets in early on and is maintained right through to the high engine speed range. Its maximum torque is 740 Nm. One of the factors contributing to its exceptional efficiency - especially in relation to output - is the new version of common rail direct injection, whose piezo injectors apply a maximum pressure of 2,200 bar. The BMW X6 M50d even outdoes 8-cylinder models with its acceleration rate of 5.3 seconds for the sprint from zero to 100 km/h, while its average fuel consumption in the EU test cycle is still only 7.7 litres per 100 kilometres. Its powertrain, suspension technology and aerodynamic properties are harmonised with the precision so characteristic of M.

As an additional product offer from BMW M GmbH, the high-performance sports car specialists, the BMW X6 M with its V8 engine delivering 408 kW/555 bhp also benefits from detailed refinements in the area of design and equipment. The BMW X6 M is fitted with a 6-speed M Sports automatic transmission, also highlighting its individual status with such features as separately developed suspension technology.

In all other models, engine power is transferred by means of a standard 8-speed sports transmission including shift paddles at the steering wheel. Dynamic Performance Control is a standard feature in all versions of the BMW X6 as an element of the intelligent all-wheel drive system xDrive. This gives greater precision to the electronically controlled power distribution so as to optimise driving stability, traction and dynamic performance. It particularly comes into play when taking bends in sporty style. Even as the car enters the bend, xDrive feeds additional power to the rear wheels so as to support an agile turn-in response. By means of continuously variable distribution of drive torque between the rear wheels, Dynamic Performance Control also optimises tracking stability under high transverse acceleration forces as well as enhancing traction when accelerating out of a bend. For additional enhancement of agility and supremacy, the systems Active Steering (not available for the BMW X6 M50d and the BMW X6 M) and Adaptive Drive (as standard in the BMW X6 M50d and the BMW X6 M) are offered with electronically controlled dampers and roll stabilisation.

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The progressive character of the new BMW X6 is also underscored by the extensive range of driver assistance systems and mobility services from the BMW ConnectedDrive program. In addition to BMW Head-Up-Display, features available for the Sports Activity Coupe include lane departure warning (not for the BMW X6 M50d and the BMW X6 M) and Speed Limit Info, as well as Side View and reversing camera with Top View. The integration of smartphones and music players and the use of innovative infotainment functions is also optimised in the BMW X6 by means of intelligent networking.

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### 4. BMW i at the 82nd Geneva International Motor Show 2012.

4.1 The future of individual mobility: the BMW i3 Concept and the BMW i8 Concept.

BMW I stands for visionary vehicles and mobility services, inspiring design and a new definition of premium characteristics in automobiles particularly closely geared towards the aspect of sustainability. The BMW Group is pursuing a holistic approach through BMW I, including individually tailored vehicle concepts, sustainability throughout the entire supply chain and supplementary mobility services. The two exceptional vehicle concepts BMW i3 Concept and BMW i8 Concept show what the BMW I approach to individual mobility might look like in the future.

#### BMW i3 Concept - dynamic, urban, zero emissions.

The BMW i3 Concept, known up to now as the Megacity Vehicle, has been designed for the urban environment with a consistent focus on sustainability: purely electrically powered and tailored to meet the demands of zeroemissions mobility. Innovative use of materials and intelligent lightweight construction result in an exceptionally low weight while also optimising crash safety: this not enables a long range but also contributes to the automobile's high level of driving dynamics. With an output of 125 kW/170 bhp and a high torque of 250 Nm, available from standing, the electric drive at the rear axle makes for dynamic performance figures. In conjunction with the vehicle's small turning circle, its acceleration capacity enables fascinating agility in urban traffic. The BMW i3 Concept accelerates from zero to 60 km/h in less than four seconds, reaching the 100 km/h mark in under eight seconds.

The interior of the BMW i3 Concept directly reflects the outstanding importance of sustainability in the use of renewable raw materials. Parts of the dashboard and door trim panel are unmistakably made of natural fibres, while seat surfaces in tanned leather generate a lounge-like atmosphere. The BMW i3 Concept is highly suitable for everyday use, with four seats, wide-opening doors hinged on opposite sides and a luggage compartment offering a volume of 200 litres supplemented with an additional functional compartment at the front of the vehicle. Innovative connectivity functions for use both in the vehicle and via smartphone applications ensure intensive networking of the BMW i3 Concept with the customer's living environment.

When on the road there are intelligent assistance systems to provide support for the everyday situations which typically arise in urban traffic. These help drivers get to their destination more safely and feeling more relaxed.

#### BMW i8 Concept – emotional, dynamic and efficient.

The BMW i8 Concept embodies a new generation of sports car: its unique plug-in hybrid concept combines a combustion engine and an electric motor so as to provide an exceptionally dynamic driving experience - while still maintaining very low levels of fuel consumption and exhaust emissions. The modified electric drive of the BMW i3 Concept at the front axle and a 3-cylinder high-performance combustion engine which feeds its output of 164 kW/223 bhp and maximum torque of 300 Nm to the rear axle allow an acceleration figure of zero to 100 km/h in less than five seconds, with a level of fuel consumption of less than three litres per 100 kilometres in the European test cycle. To date, no other vehicle fitted with a combustion engine has offered such low fuel consumption at this level of performance.

When purely electrically powered, the BMW i8 Concept achieves a range of up to 35 kilometres. Conceived as 2+2 seater sports car, it offers space for four people. The vehicle's design is characterised by a high degree of emotional appeal and instantly conveys the qualities of the BMW i8 Concept. Its proportions reflect dynamic performance, clearly indicating the acceleration capacity of the BMW i8 Concept at first sight. The interior likewise captures the sporty character of the BMW i8 Concept. In the design of the cockpit, the principle of driver orientation has been implemented more intensely than ever before in a vehicle of the BMW Group. In the BMW i8 Concept, the seat behind the wheel becomes the central focus of a fascinating driving experience.

The BMW i8 Concept also points forward to the next logical step in terms of lighting development in the automotive sector. Its headlights illuminate the road using laser light. Unlike sunlight or other artificial light sources, this generates a virtually parallel cluster of light of high luminous density which is thousands of times more intensive than that of conventional LED headlights. These properties allow entirely new functions to be realised while saving energy at the same time: compared to LED headlights, energy consumption is reduced to less than half due to the high level of system efficiency.

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#### Purpose-built design: the LifeDrive concept.

The innovative LifeDrive architecture of the BMW i vehicles specifically takes into account the technical requirements of electric drive. In contrast to the so-called conversion approach, which involves electrical components being subsequently integrated in a vehicle originally designed for a combustion engine, this new method allows electrification to be realised without elaborate revisions and in particular without affecting weight.

LifeDrive architecture is essentially made up of two separate, independent units. In addition to the suspension, the Drive module comprises the energy storage device, the powertrain and the structural and crash functions in a construction largely made of aluminium. Its counterpart, the Life module, mainly consists of a highly rigid and very light passenger cell made of carbon fibre reinforced plastic (CFRP). The extensive use of CFRP makes the Life module very light. This construction contributes significantly to achieving a higher range as well as increasing driving performance.

The BMW i3 Concept and BMW i8 Concept both feature LifeDrive architecture. However, the two vehicles differ in their geometrical implementation of the concept, which is specially adapted to the purpose of each one.

#### The LifeDrive architecture of the BMW i3 Concept.

The BMW i3 Concept presents a version of the LifeDrive concept which is markedly horizontal in structure. The Drive module forms the stable foundation and accommodates the large energy storage device. The battery cells are entirely integrated in the vehicle underbody so as to save space, thereby ensuring optimum axle load distribution and a low centre of gravity. Aluminium profiles surround the energy storage device, protecting it from external impact. In front of and behind it there are two crash-activated structures for absorbing impact energy as required in the event of a head-on or rear-on collision. Since electric drive is much more compact in size than a combustion engine of comparable performance, the electric motor, reduction stage and electronic drive unit can be housed directly above the powered rear axle.

The Life module is simply placed on top of the Drive module. Since all powertrain components are integrated in the Drive module, no central tunnel

is required in the interior as is the case in conventional vehicles to feed the power from the engine at the front to the rear wheels. For this reason, the BMW i3 Concept offers significantly increased interior space as compared to other vehicles with the same wheelbase. What is more, this set-up opens up new ways of adapting the utilisation of the interior to the needs of urban mobility.

#### The LifeDrive architecture of the BMW i8 Concept.

In the BMW i8 Concept, the LifeDrive architecture is specifically designed to match the sports car character of the vehicle. The drive units of the BMW i8 Concept are each installed in their own modules in the front and rear sections, connected with each other by means of the so-called energy keel for the high-voltage storage device. The passenger cell is mounted above this, also made of CFRP in the BMW i8 Concept. Together with the passenger cell and the energy storage device, the front and rear section modules form a unit: this not only performs load-bearing functions but also extensive crash functions.

The energy keel lowers the vehicle's centre of gravity - a favourable aspect from the point of view of driving dynamics. The positioning of the motors above the axles and the space-optimised, balanced housing of all components results in an ideal axle load distribution of 50 per cent at each end. In this way the BMW i8 Concept offers the perfect basis for its special powertrain concept and unique sports car character to be put to full advantage.

#### Two vehicles, two powertrain concepts.

With their highly innovative and efficient drive forms, the BMW i3 Concept and BMW i8 Concept demonstrate the level of sustainability and dynamic performance it is possible to achieve in the mobility of the future. While the BMW i3 Concept is purely electrically powered, the BMW i8 Concept is fitted with a plug-in hybrid drive which ensures highly dynamic propulsion deriving from the interplay between electric motor and combustion engine.

The electric drive of the BMW i3 Concept is designed mainly for use in an urban setting. Its electric motor delivers an output of 125 kW/170 bhp and a torque of 250 Nm. Here, full torque is available from standing. The large engine speed range available also allows very homogeneous power delivery.

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This gives the BMW i3 Concept a particularly high level of agility: it accelerates from zero to 60 km/h in less than four seconds, and it reaches the 100 km/h mark in under eight seconds. Its top speed is limited to 150 km/h for reasons of efficiency.

The electric drive also offers the possibility of braking via the accelerator pedal. If the driver removes his foot from the accelerator, the electric motor becomes a generator which produces electrical power from kinetic energy and feeds it back to the vehicle battery. This also creates a braking torque which effectively decelerates the vehicle. The unique "one pedal feeling" - accelerating and braking with the accelerator pedal - is even more convenient with the option of coasting. This driving mode allows the electric motor to be decoupled as soon as the driver removes his foot from the accelerator pedal. The BMW i3 Concept then uses the kinetic energy thus generated for propulsion purposes and coasts along without consuming virtually any energy at all.

The very compact electric motor is housed above the rear axle, along with the power electronics and transmission including the differential. Specially developed lithium-ion storage cells feed power to the motor and all other vehicle functions. Optimised down to the last detail, they operate virtually independently of any external factors. An intelligent heating/cooling system keeps the energy storage device at the ideal operating temperature at all times, thereby significantly enhancing the performance capacity and lifetime of the battery cells. The energy storage device can be fully charged at a conventional power socket in six hours, while the quick charger facility restores 80 per cent of battery capacity in just one hour.

For the BMW i3 Concept there is also an optional Range Extender (REx). The REx is a small, very smooth running and quiet spark ignition engine. It drives a generator which keeps the battery charge at a constant level, enabling the vehicle to be electrically operated over a longer period of time.

#### The best of both worlds - the BMW i8 Concept.

The BMW i8 Concept comprises two differing drive concepts, each of which is used to full advantage in combination with the other. As a plug-in hybrid vehicle, the sports car combines the qualities of the electric motor and combustion engine, enabling maximum efficiency in conjunction with the very

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highest level of dynamic performance. While the electric drive from the BMW i3 Concept operates on the front axle, modified for the hybrid concept, a turbocharged high-performance 3-cylinder petrol engine with a peak output of 164 kW/223 bhp and a maximum torque of 300 Nm powers the rear axle. Together they accelerate the vehicle to an electronically limited top speed of 250 km/h. Like the electric drive, the high-performance combustion engine with a capacity of 1.5 litres was developed entirely in-house by the BMW Group. An acceleration figure of less than five seconds for the sprint from standing to 100 km/h goes hand in hand with a fuel consumption in the EU test cycle of less than three litres per 100 km.

The hybrid concept allows the BMW i8 Concept to be powered purely electrically. A range of approximately 35 kilometres is possible when the car is run on electrical power only. The energy storage device can be fully charged in less than two hours using a conventional power socket.

Due to the use of both an electric motor and a combustion engine in the BMW i8 Concept, all four wheels can be powered at the same time. This allows the advantages of front-wheel drive, rear-wheel drive and all-wheel drive to be put to flexible use, so the specific drive configuration can be made available which provides optimum driving dynamics in the given situation. In order to achieve maximum recuperation levels, intelligent driving dynamics systems ensure maximum energy regeneration depending on the road surface and driving situation. This does not impact on driving dynamics and stability. This means that high recuperation levels are possible even in rain or snow.

#### Inspiring design.

BMW i stands for visionary automobiles and a new understanding of premium mobility which involves consistent orientation towards sustainability. This is reflected both visibly and tangibly in the inspiring design of the vehicles. In its specially developed formal style it visualises the vehicles' innovative technologies, expressing values such as lightness, safety and efficiency by means of large transparent areas, a stable standing and aerodynamically optimised elements. At the same time the BMW i3 Concept and BMW i8 Concept create a clear link to the BMW parent brand with their distinctive interpretation of BMW design features.

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The LifeDrive architecture of the BMW i vehicles is especially characteristic as a hallmark underlying structure. And the striking duality of this architecture is likewise reflected in the design. Partially concealed by side panels, the two elements of the vehicle are distinguishable, with powerfully expressive surfaces and precise lines creating a harmonious transition between the two modules. This overlapping and dovetailing of surfaces and lines - known as layering - is characteristic of both the exterior and interior design of the two vehicles.

The Life modules of both concept cars have an open, light and bright effect due to their large, transparent surfaces. The large proportion of visible CFRP reflects the lightness and efficiency of the two vehicles. As a key component of efficient mobility, the optimised aerodynamics of the vehicles is also expressed through their exterior design. The dynamic lines in the C column known as "Stream Flow" are one of the most striking design themes of the BMW i vehicles. What is more, the vehicle underbody in both models is entirely overlaid and flat so as to counter any air swirl which would increase energy consumption.

#### BMW i3 Concept - compact, agile, sustainable.

The design of the BMW i3 Concept reveals the qualities of the vehicle at first sight. Its compact proportions visualise agility as well as the dynamic acceleration of the electric drive. Viewed from the side, the window graphics and sills go together to form a wedge shape which gives the vehicle a forward-thrusting look. The large, narrow 19-inch wheels likewise contribute to the dynamic impression conveyed by the side view.

At the same time, the flowing silhouette and long wheelbase are suggestive of the generous interior space viewed from the outside, while short overhangs at the front and rear facilitate parking in small spaces. The functionality of the vehicle is also emphasised by so-called coach doors. Theses open in opposite directions and provide convenient access to the generously designed interior.

The dominating element in the front section is the strikingly elaborated radiator grille. It has a blue background as is typical of BMW i and is completely closed due to the fact that the vehicle is electrically powered. The striking U-shaped LED headlights reinterpret the characteristic BMW light

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design. The rear section reflects the BMW i3 Concept's high degree of functionality. The large rear window can be lifted open wide, providing optimum access to the luggage compartment, while the roof pillars are upright so as to create maximum interior volume. The rear lights, U-shaped like the headlights, are also integrated in the rear window. Their positioning makes them look as if they were hovering within the glass. A wide, silver-coloured diffuser rounds off the bottom of the rear view.

#### Self-supporting and light - the interior.

The generously designed Life module of the BMW i3 Concept creates an entirely new interior feel. There is no central tunnel dividing the interior, making it seem very free, open and light. Three distinct layers structure the interior: a white beam structure, the black technical level and a comfort layer with a leather surface. The lightness conveyed by this interior is enhanced by a continuous seat at the front and rear, creating a whole new sense of space.

Another characteristic element of the interior is the self-supporting steering column. All controls such as the instrument panel, start/stop button and gear selector lever are positioned near the steering column, so a central console is not required. Behind the steering column the flat, finely wrought dashboard runs across the interior. It comprises the controls for the audio system and air conditioning. Near the front passenger door, the dashboard curves upward in a counterthrust and the connection to the centre ends with the monitor of the central information display (CID) With a soft surface design, almost calligraphic in effect, the CID and operating unit form an attractive contrast to the clear, precise edges of the dashboard.

The BMW i3 Concept also sets standards in terms of the use of sustainable materials. Renewable raw materials are utilised for the visible elements of the doors and dashboard, while the leather of the seat surfaces is tanned by means of a natural process. All in all, up to 25 per cent of the plastic used for the interior is either reusable material or renewable raw material.

The connection to the outside world and data world is essential to the BMW i3 Concept, and there are large screens which provide interfaces between the vehicle and its environment. The free-standing 6.5-inch (16.5-centimetre) instrument cluster emerges from the steering column directly in front of the driver. The 8.8-inch (22.4-centimetre) central

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information display (CID) arches out of the black technology layer of the upper dashboard. Underneath it, the likewise continuously black audio and air conditioning operating unit echoes the shape of the CID.

#### Efficient and dynamic - the BMW i8 Concept.

The design of the BMW i8 Concept embodies the perfect synthesis of technology and aesthetic appeal. Its stretched lines and flat silhouette give the vehicle a particularly dynamic appearance even when stationary. Large, transparent window surfaces create a distinctive lightness on the outside, expressing the exceptional efficiency of the vehicle concept. The swing doors of the BMW i8 Concept open like wings, giving it an emotional, athletic touch. Below the doors, the silver-coloured layer emerging from the sill forms a powerful wedge shape in the side which opens out towards the rear. A blue accentuation emphasises the dynamic movement of the sill.

The front view of the BMW i8 Concept likewise reflects is dynamic sports car character. Many levels interact in the front section design, with the highly expressive surface treatment conveying dynamic performance and indicating the car's sporty potential. A black and slightly transparent V emerges just behind the radiator grille in the engine compartment lid. This contour opens out towards the windscreen, clearing the view to the electric motor below it. The V-contour also forms the visual origin of the CFRP module. Its lines are continued to the rear in the form of a black band, thereby providing a visual connection between the elements of the body.

In the flat rear section of the BMW i8 Concept there are horizontally oriented lines which emphasise the sense of width, as well as three-dimensionally modelled air outlet openings and rear lights with a hovering, streamlined look all of which conveys the vehicle's sporty character. At the centre of the rear section, the rear diffuser framed in silver and blue echoes the shape of the same component in the BMW i3 Concept but in a sporty interpretation. Likewise horizontal in design, the rear lights are integrated into the upper rear layer. In the BMW i8 Concept, too, they are U-shaped as is characteristic of BMW i.

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#### Tailor-made interior.

All in all the various interior elements are very sporty in design. Here, the driver workspace forms an intensive focus of the driving experience. Driving-related functions such as gear selector switch, start/stop button and Automatic Hold brake are arranged on the centre console around the driver, as well as being graphically very heavily oriented towards the driver. In the BMW i8 Concept, the passenger seats are deeply integrated; between them, the energy storage device divides the interior lengthwise. This structure gives interior emphasis to the sporty, forward-oriented character of the BMW i8 Concept.

In addition to the 8.8-inch (22.4-centimetre) free-standing information display in the dashboard, there is an equally large display which acts as an instrument cluster. The design of the central indicator instrument as a display enables three-dimensional, high-resolution depiction of driving-related information in the high-quality, modern and purist style which is typical of BMW i.

#### BMW i sustainability.

Sustainability with its three dimensions is of key importance to BMW i - and this applies along the entire supply chain. For this reason, binding sustainability targets were set and implemented for the first time ever in the early phase of strategy and conception, ranging from purchasing to development, production and sales and taking into account aspects of ecological, economical and social sustainability.

The BMW i3 Concept demonstrates just how successful this has been: across the entire product lifecycle including power generation in Europe (EU 25 Power Grid Mix), the BMW i3 Concept has a global warming potential (CO<sub>2</sub>) of at least a third less than a very efficient vehicle in the same segment fitted with a combustion engine. If the vehicle is run on electric power from a regenerative source, its global warming potential can even be lowered by well over 50 per cent. This is achieved by a range of innovative individual measures throughout the development, production and recycling process, also involving solutions drawn from the supplier network.

With its LifeDrive architecture and its consistent, intelligent lightweight construction the BMW i3 Concept is ideally geared towards meeting the demands of electrical mobility. The vehicle also puts sustainability into practice in the interior. 25 per cent of the weight of thermoplastics used is

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replaced by recyclates and renewable raw materials. And ten per cent of the CFRP in the Life module is also recycled. This use of recycled CFRP is a unique practice.

#### BMW i – visionary mobility and mobility services.

BMW i stands for comprehensive and tailor-made services which facilitate individual mobility above and beyond the vehicles themselves - in fact even for those who do not own a car. This includes not just new driver assistance systems such as "anticipatory front protection", Park Assistant, traffic congestion assistant and the ECO PRO mode + in the BMW i3 Concept, which make city driving much safer, more comfortable and more energyefficient. BMW i also develops solutions for more effective use of existing parking space (e.g. "ParkatmyHouse"), intelligent navigation systems drawing on local information (e.g. "MyCityWay"), an intermodal route planning system and the premium car share program "DriveNow", which is already successfully up and running in a number of cities. The common aim of all these measures it to get users to their destination more quickly, more reliably and more conveniently.

### 5. Original BMW Accessories.



5.1 Driving pleasure made to measure, inspired by motor racing: the new BMW M Performance accessory program.

The newly structured program in the BMW M Performance product area enables selective customisation with a clear focus on a particularly intensive driving experience. As of spring 2012, BMW M Performance products specially developed for the BMW 5 Series Sedan, the new BMW 3 Series Sedan and the new BMW 1 Series are available as part of the Original BMW Accessories range. The retrofit components designed in close collaboration with BMW M GmbH in the areas of powertrain, suspension, aerodynamics and cockpit provide a tangible increase in driving dynamics by enhancing engine power, reducing weight and optimising aerodynamic properties. What is more, they add a striking touch of sporty style in the appearance and interior styling of each vehicle.

At the 2012 International Motor Show, the diversity and harmoniously coordinated qualities of the BMW M Performance accessories program will be demonstrated in the new BMW 125i. The equipment features of the most powerful petrol engine variant of the compact model include a BMW M Performance aerodynamic package, 19-inch BMW M Performance light alloy wheels, a BMW M Performance brake system and BMW M Performance Top Stripes. Additional accentuations are provided by a rear spoiler, rear fins, carbon exterior mirror caps and radiator grille in highgloss black, also from the BMW M Performance accessories program. In the interior, the BMW M Performance steering wheel with Race Display, interior strips in Alcantara/carbon, BMW M Performance stainless steel pedals and the gearshift lever knob and handbrake handle with Alcantara gaiter make for a distinctly sporty atmosphere.

Like the BMW M Performance products already available for the highperformance sports cars BMW M3, BMW 1 Series M Coupe, BMW X5 M and BMW X6 M, the program developed for the models of the BMW 5 Series, BMW 3 Series and BMW 1 Series ensure an authentic transfer of M specific motor racing technology to everyday driving. The BMW M Performance accessory products reflect the excellent standards of the BMW Group in terms of design, quality and safety. They are subject to the comprehensive

BMW warranty terms. And retrofitting these items has no impact whatsoever on the warranty terms as applicable to the vehicle in question. Sales and installation are taken care of by the BMW and BMW M dealer network, BMW subsidiaries and BMW Service authorised workshops.

#### Optimised aerodynamic properties, powerfully expressive design.

With the BMW M Performance accessory products in the area of aerodynamics, not only is air conduction effectively optimised but also the dynamic charisma of the respective vehicle. These products can be installed in vehicles fitted with the M Sports package optionally available ex works or a retrofitted M aerodynamic package. This lends even greater individual emphasis to the dynamic character of a vehicle which already has a sporty design. Selected BMW M Performance accessory products will be available for the new BMW 1 Series and the BMW 5 Series Sedan from March 2012. The BMW M Performance accessory products will be available for the new BMW 1 Series and the BMW 5 Series Sedan from March 2012.

The product portfolio includes aerodynamic components for the front section, diffuser inserts for the rear apron and side sill foliations with M Performance inscription. In addition, the dynamics of the side air ducting is given further emphasis by the use of the BMW M Performance side sill attachments on the new BMW 1 Series and the new BMW 3 Series Sedan. BMW M Performance rear and roof edge spoilers, rear fins, black radiator grille and Top Stripes are also offered in model-specific design. Other products derived from motor racing include BMW M Performance exterior mirror caps in carbon finish and a carbon rear spoiler: these are also available for the new BMW 3 Series and the BMW 5 Series Sedan.

## A tangible increase in dynamic performance: BMW M Performance accessory products in the area of suspension.

A definite bonus in terms of agility and precision in drivability is provided by the BMW M Performance accessory products in the area of suspension. A BMW M Performance suspension with distinctively sporty settings and a particularly large-scale yet weight-optimised BMW M Performance brake system are available for the new BMW 1 Series and the new BMW 3 Series Sedan. The brake system, featuring aluminium fixed

calipers at both front and rear, guarantees a constantly high level of deceleration even under high thermal stress. Its perforated, inner-vented sports brake discs measure 370 x 30 millimetres at the front (diameter x thickness) and 345 x 24 millimetres at the rear. The brake calipers are fitted with four and two pistons each at the front and rear respectively and can be recognised by the four-colour M logo.

The BMW M Performance accessory range also includes exclusive light alloy wheels specifically designed for each model. 20-inch M light alloy wheels in V-spoke design are available for the BMW 5 Series Sedan: these are offered in the colour Liquid Black or in the bi-colour finish characteristic of BMW M Performance and can be used with mixed tyres. The M light alloy wheels in double spoke design developed for the new BMW 3 Series Sedan and for the new BMW 1 Series likewise have a striking bi-colour appearance. The weight-optimised forged wheels effectively contribute to the reduction of unsprung masses, thereby enhancing the agility and steering response of the vehicle. They are available in the 19-inch size for the BMW 1 Series and as 20-inch wheels for the BMW 3 Series Sedan, both with mixed tyres.

#### Pulling power enhanced, efficiency preserved: BMW M Performance Power Kit.

Based on first-hand expertise, the BMW M Performance Power Kit for the 4-cylinder diesel engine with BMW TwinPower Turbo Technology paves the way to an extra portion of driving pleasure drawing on top-class technology and a contemporary philosophy. In selected 4-cylinder diesel models of the BMW 5 Series Sedan and the BMW 5 Series Touring, the new BMW 3 Series Sedan and the new BMW 1 Series, this offer perceptibly increases engine power and torque without affecting these vehicles' low levels of fuel consumption and exhaust emissions based on the EU test cycle. The BMW M Performance Power Kit is available for the BMW 520d, the new BMW 320d Sedan and the new BMW 120d. It comprises software and hardware components which are perfectly dovetailed and specially developed for the 2.0-litre 4-cylinder diesel with all-aluminium crankcase, common rail direct injection and turbocharger. Selective modifications in the area of engine control impact positively on power delivery. A larger charge air cooler enables adaptation to changed thermal conditions.

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In this way, the peak output of the 4-cylinder diesel engine is raised from 135 kW/184 bhp to 147 kW/200 bhp. Maximum torque, available from just 1,750 rpm, is increased to 420 Nm. The most important outcome of this increase in power is an optimisation of acceleration figures in all models. This is something the driver can clearly feel, including an increase in acceleration to 100 km/h of up to 1.0 seconds. However, this enhanced driving pleasure has no effect whatsoever on the exemplary fuel consumption and CO<sub>2</sub> emission figures of the respective models in the EU test cycle. What is more, the high quality standard of the BMW M Performance Power Kit guarantees unlimited reliability of the engine, so the warranty terms for vehicles in which it is installed remain valid as before.

At a later stage the range will be extended to include a BMW M Performance Power Kit for petrol engines. As early as spring 2012, the first petrol engine models will be able to be fitted with an BMW M Performance silencer system. Without impairing the long-distance comfort of the vehicle in question, this system gives the engine acoustics a discreet but audibly sporty touch. The reduction of exhaust counterpressure also results in improved response characteristics. The BMW M Performance silencer system is available for the 6-cylinder models BMW 640i, BMW 535i and BMW 335i, as well as for the BMW 125i, which is new to the portfolio. Both an acoustic and a visual accentuation is added to the most powerful petrol engine variant of the new BMW 1 Series. The BMW M Performance silencer system comprises a twin tailpipe as is typical of 6-cylinder models.

Retrofit of the BMW M Performance Power Kit is now visible from the outside due to an M Performance inscription sticker on the rear section of the side sill. This additional labelling does not apply in conjunction with a BMW M Performance aerodynamic package.

### High-quality materials, innovative technology, characteristic design: cockpit in sports car style.

Owners of a BMW 5 Series Sedan, a new BMW 3 Series Sedan or a new BMW 1 Series will also be able to selectively customise the interior of their vehicle with BMW M Performance accessory products as of spring 2012, allowing especially intensive enjoyment of the driving experience typical of the brand. For example, the BMW M Performance sports steering wheel is available for the current models of these series. It has a rim which is flattened

at the bottom, a carbon trim element and a central marking in red leather at the 12 o'clock position, while its Alcantara covering provides an excellent grip and pleasant haptics in all temperatures. The version of the steering wheel designed for the BMW 5 Series Sedan also features an "M Performance" model inscription on the trim element.

A BMW M Performance sports steering wheel including Race Display will also be available for the new BMW 3 Series Sedan and the new BMW 1 Series from autumn 2012. An OLED display is integrated in the upper section of the steering wheel rim showing a range of technical data such as oil and cooling water temperature as well as the shift point indicator. A number of different display modes can also be activated using the steering wheel's multifunction buttons. In the EfficientDynamics mode, information is provided on optimised fuel efficiency. The Sports mode enables the use of a stopwatch function as well as display of transverse acceleration rates. In the Race mode, time can be measured to the nearest hundredth of a second and there is also a memory function.

For further enhancement of the driver workspace in the style of a sports car, there are BMW M Performance stainless steel pedals, the BMW M Performance driver footrest, interior strips in Alcantara and carbon and a carbon handbrake handle with Alcantara gaiter. Depending on the configuration of the vehicle, the gearshift lever or gear selector switch is also available in carbon. In the products developed for the new BMW 3 Series Sedan and the new BMW 1 Series, an open-pore carbon is used for the first time which creates a harmonious, discreet overall impression due to its matt structure combined with the Alcantara surfaces. Selected products are also labelled with the "M Performance" inscription or the M logo so as to emphasise their sporty styling.

Both in terms of style and function, all BMW M Performance products are specifically geared towards further enhanced driving dynamics as well as adding a touch of sporty flair to the outward appearance and interior character of the respective vehicle. All components of the BMW M Performance accessory program are available individually. This allows drivers to add clear sporty accentuations in the areas which are particularly important to them personally. Thanks to their precisely harmonised qualities, BMW M

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Performance accessory products can also be combined to create an integrated package for increased dynamic performance and driving pleasure.

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### 5.2 Individualisation down to the last detail: new accessories to supplement the BMW Lines for the new BMW 3 Series and the new BMW 1 Series.

Available for both the new BMW 1 Series and the new BMW 3 Series Sedan as an alternative to the basic version, the BMW Lines create new opportunities for attractive differentiation and selective customisation. The BMW Lines give each vehicle an instantly recognisable distinctive character by means of exclusive design and equipment features. The Original BMW Accessories program now includes a wide range of products for both models, precisely tailored to the style of each BMW Line in terms of colouring and design.

Both in the new BMW 1 Series and the new BMW 3 Series Sedan, the Sport Line clearly highlights the car's dynamic driving properties in a way which is specifically configured for each model. The new BMW 1 Series is also available in the Urban Line, expressing the progressive character of the premium compact model through striking details for both exterior and interior. The elegance and exclusive appeal of the new BMW 3 Series Sedan are underscored by the Luxury Line features, while the Modern Line lends equally clear emphasis to the progressive, aesthetic appeal of the new 4-door model.

The distinctive characterisation added by the new BMW Lines is now intensified even further with matching products from the Original BMW Accessories program. The products available for the BMW 1 Series can be used to supplement the Sport Line, Urban Line or basic version. The accessory products designed for the Sport Line, Modern Line or basic version of the BMW 3 Series Sedan are new additions to the program.

## A perfect fit and authentic in style: floor mats and luggage compartment mats.

Custom-fit floor mats in two versions are offered for both the front and the rear of the new BMW 3 Series Sedan. The three-dimensionally shaped all-weather floor mats have a surface structure which simulates the flow of water. The textile floor mats are made of a velour material with resilient rubber used for the back, foot protection zones and edges. The most important point which these two versions have in common is that the bordering can be

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selected to match the vehicle interior, with red for the BMW Sport Line, beige for the BMW Modern Line and black for the basic version.

This border colouring is also a feature of the luggage compartment mats with anti-slip surface and side compartments, available for the new BMW 3 Series Sedan. A luggage compartment tray with folding lid and hinges in contrasting colours is also available. With the lid closed it provides a flat load surface.

#### Perfect in colouring and functionality: the new bags.

Winter sports gear can be transported simply and tidily using the ski and snowboard bag designed for the new BMW 3 Series Sedan. It offers space for up to four pairs of skis or three snowboards and is fastened securely to lashing eyes by means of belts. Its practical rollers also make it ideal for transporting skis and snowboards outside the vehicle. The silver version of the bag designed for the Sport Line features red accentuations for the Modern Line, the bag's grey colour is supplemented with beige accentuations. A black version is of the bag is also available.

The storage bag for the rear seat of the new BMW 3 Series Sedan also features either red or beige accentuations: it has a waterproof bottom, additional storage compartments on the inside and outside, and two cup holders integrated at the top. It can also be used as an armrest. The backrest pouch which can be hung on the headrest stalks of the front seats is available in two colour versions. The model-specific range is rounded off with a combined CD and glasses case with red or beige accentuations and a key case made of high-quality leather. A chrome application bearing the BMW inscription acts as a connector between the radio-operated key and the key case. The key case is available in black for the basic version, black with red accentuations for the Sport Line and black with beige accentuations for the Modern Line.

There is also a leather handbrake handle which matches the BMW Lines. It has a centrepiece in either Coral Red (Sport Line) or beige (Modern Line). Like the rest of the Original BMW Accessories program, the new products for the BMW 3 Series Sedan fully meet the exceptional BMW standards in terms of quality and safety. All products are subject to the comprehensive BMW warranty terms. They are sold through BMW dealerships and BMW Service authorised workshops as well as BMW subsidiaries.

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# 6. The latest BMW ConnectedDrive innovations.



6.1 The new diversity of intelligent networking: BMW ConnectedDrive now also with BMW Live and non-dazzle high-beam assistant.

The BMW ConnectedDrive range includes a globally unique portfolio of innovative driver assistance systems and mobility services for comfort, safety and infotainment. BMW ConnectedDrive provides information as needed based on the intelligent networking of driver, vehicle and the outside world. One of the ways in which the diversity of the BMW ConnectedDrive program will be demonstrated at the 2012 International Motor Show in Geneva is in the new BMW 3 Series Sedan. A range of driver assistance systems and mobility services are available for the sixth generation of the sporty premium sedan which are unique in this segment.

The new BMW ConnectedDrive systems include the dazzle-free high-beam assistant, presented in the new BMW 3 Series Sedan for the first time. Additional functions will also be presented in Geneva such as BMW Live, the BMW Connected app, Real-Time Traffic Information, Active Protection, Speed Limit Info including overtaking ban display, lane departure warning and rear collision warning.

#### Unique: the BMW Assist information service.

The BMW Assist information service provides the driver with a personal concierge service round the clock. The driver receives individual support by telephone in selecting driving destinations. Staff at the BMW Call Centre provide access to telephone directories and yellow pages as well as detailed information on points of interest, opening hours of cultural institutions, flight information, addresses of restaurants, hotels, emergency pharmacies, cash dispensers or golf courses.

Telephone numbers and address details for the navigation system can be transferred directly to the vehicle and adopted by the driver at the press of a button. The information service also provides help in booking hotel rooms.

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The BMW personal information service was first set up in 1999 and is still unique in its present form.

#### Networked navigation.

The driver can use Google Local Search via an internet connection to research business addresses as on a computer. The system takes into account the current location of the vehicle and the destination entered in the navigation system and displays search results for the relevant area. Addresses and telephone numbers obtained through Google Local Search can be fed into the navigation system or telephone directory.

Pictures of the destination from Google Panoramio and Street View allow the driver to gain a visual impression of his destination while on the way there. When active route guidance is used in the navigation system, pictures of the destination can be selected and loaded directly into the vehicle by means of BMW Online via an internet connection.

Google Send to Car enables the driver to prepare destination entry in the navigation system prior to setting out on the journey. Addresses found on the Google Maps web page can be transferred directly to the vehicle from the computer.

#### **Real-Time Traffic Information.**

The function Real-Time Traffic Information developed for BMW navigation systems marks the start of a new generation of traffic information in the automotive sector. The transfer of real-time traffic data for route calculation and any potential detour recommendations works with unique reliability and precision. The advantage as compared to radio-supported traffic information lies in the faster and more comprehensive transfer of data via mobile communications using the SIM card integrated in the vehicle.

Traffic analysis is based on a significantly larger volume of data and is also updated more frequently. In addition to motorways and main roads, RTTI also covers country roads as well as inner-city main and secondary roads. So in the event of congestion along the current route, the BMW driver is provided with precise details of a potential redirection. Thanks to the detailed data provided, the navigation system really does find the fastest route to the destination every time.

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## BMW Connected: listen to web radio, receive and send Facebook and Twitter messages.

The app "BMW Connected" allows functions such as web radio, Facebook and Twitter as well as Wiki Local and news to be shown on the vehicle display and operated using the iDrive Controller. In addition to the "Apps" option, the Professional navigation system and the Bluetooth connection option, the requirement for this function is an Apple iPhone running the "BMW Connected" app, which can be obtained free of charge from the Apple app store. If the iPhone is connected to the vehicle via USB or snap-in adapter, the content of the iPhone app "BMW Connected" can be used inside the vehicle.

The web radio function gives vehicle occupants the choice of thousands of internet radio stations from all over the world. The operating system iDrive is used to select a web radio station and use the Facebook and Twitter functions. The driver can simply place the iPhone in the insert and follow his own personal Facebook or Twitter messages on the large vehicle display - both conveniently and safely. Using pre-formulated text modules defined and saved individually in the iPhone app, the application can also access vehicle data such as speed, outside temperature or navigation destination; this makes it possible to respond to new entries and messages at any time from the vehicle. The iPhone app BMW Connected also features a calendar and a text-to-speech function which allows Facebook and Twitter news to be read out aloud, for example.

The BMW Connected app news extension can be used to receive pre-set RSS feeds as well as freely selected news from bookmarked web pages. The Wiki Local function also enables Wikipedia articles to be selected relating to the current location, navigation destination or any desired postcode. What is more, the Wiki Local Tour Guide can guide the driver to the main sights if required. The relevant information can also be transferred to the vehicle by voice output.

#### Additional infotainment pleasure: BMW Live.

With an internet-capable mobile phone and the appropriate data plan it is possible to use selected features of the service BMW Online via Bluetooth - a service which already available in some markets. All available online functions

appear on the vehicle display via a Bluetooth data connection and can be effortlessly and intuitively operated using the iDrive Controller. Here the customer's mobile phone serves as a modem - unlike BMW Online, where all data is accessed through a SIM card permanently installed in the vehicle: so BMW Live offers online-based mobility services throughout the whole of Europe for the first time.

BMW Live provides free news via RSS feeds, weather information and the services Google Local Search, Google Panoramio and Google Street View. In order to activate the preferred news source, the customer simply has to enter the desired domain. The portal automatically searches the relevant RSS feeds on the web page and offers to read the headlines aloud via BMW text-to-speech.

In addition to a report on the current weather, the weather service also provides a four-day forecast. Here the information is displayed in easily readable colour images on the monitor. The Google functions available - Local Search, Panoramio and Street View - work in the same way as for the BMW Online system, with the homepage offering location selection, search term entry, categories and history. In the case of Google Local Search, addresses found can be fed directly into the vehicle navigation system as destinations.

### Premiere in the new BMW 3 Series Sedan: dazzle-free high-beam assistant.

The optional high-beam assistant offers an additional safety bonus when it comes to driving at night. This system switches the high beam on or off depending on the situation. This guarantees that the driver always enjoys optimum visibility without having to actively operate the high beam.

In conjunction with the optional bi-xenon headlights, the new BMW 3 Series Sedan can be fitted with the latest generation of the adaptive headlight including cornering light, variable headlamp light distribution and adaptive headlight beam throw adjustment for driving in the city and on motorways. The adaptive headlight function ensures that the road is fully lit when cornering. For the first time, this equipment package includes a dazzlefree high-beam assistant which allows the high beam to remain active even when there is oncoming traffic. Dazzling of road-users ahead or travelling in

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the opposite direction is prevented by means of a dynamic cover spot inside the headlight.

#### Speed Limit Info including overtaking ban display.

In combination with an optional navigation system, the function Speed Limit Info helps the driver find out about the permitted maximum speed on the current road. For this purpose, a camera mounted on the inside mirror permanently monitors road signs as well as the variable gantry displays on motorways and main roads. The data collected is checked against information stored in the navigation system. The use of the camera means that such things as additional signs and temporary speed limits at construction sites can also be taken into account. As a part of this function, BMW ConnectedDrive provides an overtaking ban display in the new BMW 1 Series and in the new BMW 3 Series Sedan. When an overtaking ban is detected, it is displayed as a speed limit - until altered or cancelled - by means of road sign symbol in the instrument cluster or in the Head-Up Display, which is optionally available for the BMW 3 Series Sedan. The system temporarily saves all data, so if travel is recommenced after a brief stop, the most recent speed limits and bans continue to be displayed.

#### Camera monitoring: lane departure warning and collision warning.

Available for both the new BMW 1 Series and the new BMW 3 Series Sedan, the new generation of the lane departure warning points out unintentional course deviations at speeds above 70 km/h. The system consists of a camera installed in the inside mirror at the windscreen, a control unit for analysing data and a transmitter which triggers vibrations in the steering wheel. The camera monitors the road ahead over a distance of about 50 metres and responds appropriately on bends or narrow lanes. The system even works in the dark, as soon as the headlights are switched on.

The high-tech multifunction camera mounted on the inside mirror is used for a number of driver assistance systems as part of BMW ConnectedDrive. In the new BMW 1 Series and the new BMW 3 Series Sedan, BMW is the first premium manufacturer to apply this camera to the monitoring of vehicles driving ahead, too. The image-processing system constantly has the traffic in its sights and sends out an acoustic signal if there is a risk of collision. An acute warning tone and a visual display in the instrument cluster or Head-Up

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Display - optionally available for the BMW 3 Series Sedan - make the driver aware of tailgating. From speeds of just 50 km/h, the brake system is preconditioned and the trigger threshold of the hydraulic brake assistant is lowered. In this way, the driver is not only given a visual and acoustic warning but also concrete support so as to be able to respond effectively in an emergency. There is no automatic brake intervention, however. The sensitivity of the advance automatic collision warning can be individually configured by the driver at a number of levels.

#### Active Protection: preventive occupant protection.

The safety package Active Protection is now applied in the new BMW 3 Series Sedan as part of BMW ConnectedDrive. Shortly after setting off - from a speed of 18 km/h - the driver assistance system is activated, automatically tightening the seat belts so as to eliminate any slack in the driver and front passenger belts. If a critical situation arises (pre-crash situation), the safety belts on the front seats are tightened and the side windows and sliding roof are closed. Active Protection detects an imminent collision by means of a front-mounted camera or as a result of an emergency brake manoeuvre initiated by the driver or extreme understeering or oversteering.

### Just in case: extended emergency call with automatic position finding.

With the BMW ConnectedDrive extended emergency call, rescue teams can obtain details of the type of collision and risk of injury before they arrive on the scene of an accident. This enables them to make preparations to provide suitable medical care for those involved in the accident. The information transmitted to the BMW Call Centre via the extended emergency call with automatic positioning finding includes not just the exact location of the vehicle but also the vehicle type and all data collected by the sensors inside the vehicle. This allows conclusions to be drawn as to the type and severity of the collision. The triggering of the restraint systems provides information on the number of people potentially sustaining injuries. What is more, it is possible to identify and distinguish between head-on, rear-on and side-on collisions. In addition to automatic triggering, the system also allows manual activation of an emergency call by the driver or front passenger, in which case an immediate connection is provided to the BMW Call Centre.