

BMW at the 85th Geneva International Motor Show 2015. Contents.



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1. BMW at the 85th Geneva International Motor Show 2015. (Summary)



BMW will take to the stage at the traditional Geneva International Motor Show from 5 – 15 March 2015 with two world premieres: the BMW 2 Series Gran Tourer, which offers seating for up to seven people, and the new compact BMW 1 Series. The BMW M4 MotoGP Safety Car, meanwhile, demonstrates how engine output can be boosted efficiently using an innovative water injection system – leading to lower fuel consumption and exhaust emissions under full load. And then there are a raft of innovative supplementary services connected with every aspect of the BMW i models, as well as “myKIDIO”, a new in-car entertainment concept for children.

The new BMW 1 Series model range: compact driving pleasure – efficient, innovative, unique.

The BMW 1 Series – almost two million units of which have been sold worldwide to date – cuts an even more striking, sporty and efficient figure in its latest incarnation, complete with its extensively modified front- and rear-end design in both 3- and 5-door guise. The new line-up of latest-generation petrol and diesel engines, boasting additional measures designed to reduce fuel consumption and emissions (fuel consumption combined: 8.0 – 3.4 litres per 100 kilometres [35.3 – 83.1 mpg imp]; CO₂ emissions combined: 188 – 89 g/km)*, ensure the new BMW 1 Series can offer customers a fresh, efficient source of power. The BMW 116d EfficientDynamics Edition, powered by a 85 kW/116 hp three-cylinder engine, posts average fuel consumption of 3.4 litres/100 kilometres (83.1 mpg imp) and CO₂ emissions of 89 g/km in the EU test cycle*, making it the efficiency king of the BMW model range.

The new BMW 2 Series Gran Tourer: Unbeatable versatility and space for up to seven people.

The BMW 2 Series Gran Tourer sees BMW once again creating a new vehicle segment. Its signature feature is the impressive amount of space within its compact dimensions. This is the first model in the premium compact class that can accommodate up to seven people across three rows of seats – in addition to a generously sized and variable-use luggage compartment. All of which allows the BMW 2 Series Gran Tourer to meet the mobility requirements of young families and offer – thanks to the five newly developed turbocharged engines producing from 85 kW/116 hp to 141 kW/192 hp (fuel consumption combined: 6.4 – 3.9 l/100 km; CO₂ emissions combined: 149 – 104 g/km)* and the BMW EfficientDynamics package – sporting dynamics

* Fuel consumption figures according to ECE test cycle, may vary depending on the specified tyre format and optional equipment (e.g. third row of seats in the BMW 2 Series Gran Tourer).

combined with outstanding efficiency and the lowest CO₂ emissions in the segment.

BMW M4 MotoGP Safety Car: innovative water injection system boosts power.

The BMW M4 Coupe will once again lead the Safety Car fleet through the 2015 MotoGP season. In so doing, BMW M GmbH's high-performance coupe will also blaze a trail for technology and innovation thanks to an innovative water injection system designed to give the engine a noticeable boost in performance. This pioneering technology also enables excellent levels of efficiency even under full load with real benefits when it comes to fuel economy and exhaust emissions. The water injection system once again underlines the many years of experience BMW M GmbH can look back on in motor racing and its vast well of expertise in the development of powerful engines. At the same time, the car offers a very clear taster of an M Automobile that promises to set a new benchmark in performance, exclusivity and individuality not too far from now.

Mobility of the future: BMW i rolls out additional services for the BMW i3 and BMW i8 as part of its 360° ELECTRIC programme.

Following the successful launch of the electric-powered BMW i3 and the BMW i8 plug-in hybrid sports car, BMW i is now extending its range of services focusing on every aspect of electric mobility and rolling them out internationally. With the BMW i3 and BMW i8, BMW i offers customers not only a choice of electric vehicles but also, as part of its 360° ELECTRIC programme, far-reaching complementary products to ensure the cars provide long-term service. ChargeNow, for example, is a charging and payment service which is enjoying steady expansion – thanks to the addition of new fast-charging stations – and which supports international roaming. BMW i drivers who are reliant on a permanent parking space with a charging facility will find a suitable solution in ParkNow LongTerm, while the ParkNow web- and app-based service helps drivers to find a space as and when they need while out and about. ParkNow offers parking spaces in hundreds of cities across North America and can filter the results of searches according to price, distance and the availability of services such as charging stations and car washes. DriveNow offers car-sharing options for more than 390,000 registered customers in the USA and Europe at the latest count, and another international rollout is now in the pipeline. And finally, “second-life” projects in the USA, Germany and China allow lithium-ion batteries from BMW i vehicles to be used as stationary energy storage devices after their service life on the road has come to an end.

The exclusive character of the BMW i8 plug-in hybrid sports car will be further highlighted in March 2015 with an extended range of standard equipment and new options for the interior look. Standard specification for the BMW i8 now includes the Pure Impulse Experience programme, comprising exclusive lifestyle options in the areas of culture, design, travel and gastronomy in keeping with the progressive and sustainable “next premium” approach of the BMW i brand.

BMW ConnectedDrive integrates “myKIDIO” app into the car: clever entertainment programme for rear-seat passengers.

Longer journeys now also promise to be a pleasure rather than a chore for children thanks to the new “myKIDIO” app (initially only available in Germany). The application is available in fully integrated form for the first time in the BMW 2 Series Gran Tourer and provides access to content such as TV series, movies, audio books and audio plays on tablet computers (such as the Apple iPad). It can be operated conveniently and safely via the iDrive Controller and Control Display once the mobile device is linked up with the car. Then the “myKIDIO” app allows adult occupants to navigate through age-appropriate programmes, and approve and monitor them on the linked tablet computers. It makes long journeys an entertaining experience for children as well. Adults can see what the kids are tuned into at any one time on the Control Display, while the youngsters in the rear can access information on the journey (such as arrival time, range and outside temperature) at any time in a fun and easy way via the “BMW Kids Cockpit” journey monitor.

Further information on official fuel consumption figures, specific CO₂ emission values and the electric power consumption of new passenger cars is included in the following guideline: “Leitfaden über Kraftstoffverbrauch, die CO₂ emissions und den Stromverbrauch neuer Personenkraftwagen” (Guideline for fuel consumption, CO₂ emissions and electric power consumption of new passenger cars), which can be obtained from all dealerships, from Deutsche Automobil Treuhand GmbH (DAT), Hellmuth-Hirth-Str. 1, 73760 Ostfildern-Scharnhausen and at <http://www.dat.de/en/offers/publications/guideline-for-fuel-consumption.html>. LeitfadenCO₂ (GuidelineCO₂) (PDF – 2.7 MB)



2. BMW at the 85th Geneva International Motor Show 2015.

(Long version)

2.1 The new BMW 1 Series: Compact driving pleasure – efficient, innovative, unique.

An extensively modified front- and rear-end design, a sophisticated premium ambience when you step inside and fresh reserves of power under the bonnet are all part of the even more expressive, sporting and efficiency-focused skillset of the new BMW 1 Series model range (fuel consumption combined: 8.0 – 3.4 litres/100 km [35.3 – 83.1 mpg imp]; CO₂ emissions combined: 188 – 89 g/km)*. Almost two million units of the BMW 1 Series have been sold worldwide over the last ten years, and this latest edition is poised to set another new benchmark in driving pleasure in the premium compact segment. The new 3-door and 5-door BMW 1 Series models come with a comprehensively revised engine line-up, allowing them to lead the way once again in the introduction of new BMW EfficientDynamics technology.

The selection of engines available for the new BMW 1 Series model range has been enhanced by the addition of latest-generation petrol and diesel units with three and four cylinders. The torquey and high-revving engines with BMW TwinPower Turbo technology team up with rear-wheel drive – still a unique selling point in the compact segment – to deliver a suitably intense driving experience. And an even broader spread of standard equipment, an output boost for the six-cylinder in-line engine powering the BMW M135i M Performance Automobile and cutting-edge innovations from BMW ConnectedDrive also imbue the brand's hallmark characteristics with renewed vigour.

Modified exterior and interior design includes familiar BMW styling cues underlining sports performance and premium characteristics.

Carefully considered updates to the exterior design of the new BMW 1 Series shine the spotlight on its sporting elegance and high-end presence. A newly designed BMW kidney grille and larger air intakes help to emphasise the car's dynamic potential in familiar BMW style. Headlights with a significantly flatter geometry play a similar role. They come with LED daytime driving lights as standard and can now be specified in full-LED specification as an option. The rear lights have also been completely remodelled. They now display the "L" shape characteristic of BMW models and reveal LED-powered lights. Elsewhere, the sophisticated design of the upper centre console with the controls for the radio and climate control system is foremost in accentuating the premium ambience on board the new BMW 1 Series.

* Fuel consumption figures according to ECE test cycle, may vary depending on the tyre format specified.

Automatic air conditioning, BMW Radio Professional and BMW iDrive fitted as standard; new equipment variants.

Standard equipment for the new BMW 1 Series model range now also features automatic air conditioning, a rain sensor, the BMW Radio Professional and the iDrive operating system, complete with a high-resolution 6.5-inch display integrated in the instrument panel as a freestanding monitor. And the Advantage, Sport Line, Urban Line and M Sport packages available as an alternative to standard specification provide scope for targeted individualisation.

New generation of engines, new benchmarks in efficiency.

An extensively updated line-up of engines ensures that the new BMW 1 Series model range once again sets new standards in its class by further reducing fuel consumption and emissions. BMW 1 Series customers will now be offered three- and four-cylinder power units from the BMW Group's new engine family. The new efficiency pacesetter in the brand's model range is the BMW 116d EfficientDynamics Edition with 85 kW/116 hp and average fuel consumption of 3.4 litres/100 kilometres (83.1 mpg imp) combined with CO₂ emissions of 89 g/km in the EU test cycle*.

As an alternative to the standard six-speed manual gearbox, there is the option of an eight-speed Steptronic transmission (standard in the BMW 125d, BMW 120d xDrive and BMW M135i xDrive). The latest version of the automatic unit now also offers navigation-based predictive transmission control.

A 5 kW increase in output (to 240 kW/326 hp) from its six-cylinder in-line engine allows the new BMW M135i (average fuel consumption: 8.0 litres/100 km [35.3 mpg imp]; CO₂ emissions combined: 188 g/km)* to strengthen its position as the top sports performer in the BMW 1 Series line-up. Like the BMW 120d and BMW 118d, the BMW M Performance Automobile can also be specified with the intelligent all-wheel-drive system xDrive which, as well as serving the causes of traction and directional stability, also enhances the car's dynamics. The new BMW M135i xDrive (average fuel consumption: 7.8 litres/100 km [36.2 mpg imp]; CO₂ emissions combined: 182 g/km)* sprints from 0 to 100 km/h (62 mph) in just 4.7 seconds.

Sophisticated chassis technology, Tyre Pressure Indicator fitted as standard.

Advanced chassis technology teams up with rear-wheel drive and an almost perfect (50 : 50) distribution of weight between the front and rear axles to give the new BMW 1 Series unmistakable handling traits headlined by agility and dynamic excellence. Options include adaptive suspension, M Sport suspension, Variable Sports Steering and an M Sport braking system. A Tyre

* Fuel consumption figures according to ECE test cycle, may vary depending on the tyre format specified.

Pressure Indicator showing each individual wheel is now part of the standard specification.

New assistance systems and services from BMW ConnectedDrive.

The selection of optional driver assistance systems from BMW ConnectedDrive available for the BMW 1 Series now also includes the radar-based Active Cruise Control system with Stop & Go function. The latest-generation Parking Assistant now enables parallel parking in tight spaces restricted either by two obstacles or on one side only, as well as automatic transverse parking. Features such as the camera-based Driving Assistant, rear-view camera and Speed Limit Info system with No Passing Info display can also be specified.

All models in the new BMW 1 Series line-up come as standard with an embedded SIM card, which allows use of the likewise standard Intelligent Emergency Call and BMW TeleServices functions, as well as access to optional internet-based mobility services. In addition to BMW Online and Real Time Traffic Information, customers can also enjoy the Online entertainment function. Further online services can be integrated into the car using smartphone apps and operated safely, intuitively and conveniently via the iDrive system. Meanwhile, the new Navigation system Professional also offers automatic map updating by mobile phone via the embedded SIM card, which is free of charge to customers for the first three years following registration of the car.

2.2 The new BMW 2 Series Gran Tourer: Maximum variability and room for up to seven people.



With the new BMW 2 Series Gran Tourer, BMW has carved out yet another new vehicle segment. With its generous space, versatility and groundbreaking flexibility, the BMW 2 Series Gran Tourer is the world's first premium compact model to offer up to seven seats and fully meet the mobility requirements of young families.

Compact yet capacious.

Despite its compact dimensions – measuring just 4,556 millimetres long, 1,800 mm wide and 1,608 mm high – the new BMW 2 Series Gran Tourer offers ample space and a generous luggage compartment that can be extended in capacity from 645 to 805 litres. With the rear-seat backrests folded down, this rises to an impressive 1,905 litres of load space. Ensuring maximum variability is the standard-fitted fore-aft sliding rear seat bench – with a 40:20:40-split backrest that folds down at the press of a button – which allows three child seats to be fitted. Extending the possibilities even further is an optional third row of seats which can be completely lowered into the loading floor. Maximising the vehicle's everyday practicality is a range of storage options for all three rows of seats, as well as rails on the front-seat backrests with fold-out tables attached. The new BMW 2 Series Gran Tourer is a pioneer in uniting the segment's traditional attributes – such as spatial functionality and comfort – with the hallmark BMW values of dynamics, elegance and premium quality.

Lined up for market launch: five turbo engines and all-wheel drive.

Five newly developed turbo engines with three and four cylinders (85 kW/116 hp to 141 kW/192 hp, fuel consumption combined: 6.4–3.9 l/100 km [44.1–72.4 mpg imp]; CO₂ emissions combined: 149–104 g/km)* team up with the unique BMW EfficientDynamics package of measures to guarantee a unique driving experience that couples sporty dynamics with maximum efficiency and the lowest CO₂ emissions in the segment. The only vehicle in the premium compact class to offer up to seven seats, the BMW 220d xDrive Gran Tourer will be available with all-wheel drive right from market launch.

The assistance systems and information and entertainment options available under the umbrella of BMW ConnectedDrive enhance both driving safety and convenience. Take the Head-Up Display, for example, which projects all

* Fuel consumption figures according to ECE test cycle, may vary depending on the specified tyre format and optional equipment (e.g. third row of seats in the BMW 2 Series Gran Tourer).

relevant information directly into the driver's field of view, or the Traffic Jam Assistant that helps the driver accelerate, brake and stay in lane.

Entertainment on the move for children as well.

The new "myKIDIO" app (initially only available in Germany) will also be integrated in the BMW 2 Series Gran Tourer from launch. To make long journeys entertaining for children, this app provides age-appropriate content – e.g. feature films, series, audio books, audio plays and travel information – on tablets such as the Apple iPad. The app is easily and safely operated via the iDrive Controller and Control Display and can be monitored by parents (see also chapter 2.5 on the "myKIDIO" app).

Four model variants for further individualisation.

In addition to the standard version, the new BMW 2 Series Gran Tourer is available in a further four model variants. The Advantage model offers enhanced functionality over the standard model, including among other features two-zone automatic air conditioning, Park Distance Control at the rear, Cruise Control with Braking function and a multifunctional steering wheel. The Sport Line model accentuates the sporting aspect with exclusive exterior specifications, special light-alloy wheels and sports seats, while the Luxury Line highlights its exclusivity with chrome applications, select light-alloys and leather appointments. Beyond these, the M Sport model comes with a choice of the M Aerodynamics package, BMW Individual high-gloss Shadow Line, M leather steering wheel and M Sport seats, among other features.

2.3 BMW M4 MotoGP Safety Car: More power thanks to an innovative water injection system.



Just as it did last year, the BMW M4 Coupe will once again lead the Safety Car fleet through the MotoGP season in 2015. The high-performance coupe from BMW M GmbH was designed squarely with exceptional driving dynamics and use on the race track in mind. To this end, the high-revving six-cylinder in-line engine with M TwinPower Turbo technology and pronounced motor racing genes plays a key role in the high-performance character of the overall concept behind the car. Its sporting heartbeat produces maximum output of 431 hp (317 kW) even in standard form and sustains peak torque of 550 Nm (405 lb-ft) over a wide rev band (fuel consumption combined: 8.8–8.3 l/100 km [32.1–34.03 mpg imp]; CO₂ emissions combined: 204–194 g/km)*.

Technological showpiece with potential for the future.

In the performance-oriented world of MotoGP, where the world's premier motorcycle racers battle it out for points and positions, the Safety Car also needs to make a convincing case for itself with the right performance attributes for the job at hand. With that in mind, the BMW M GmbH engineers have equipped the BMW M4 Coupe's high-performance engine with an innovative water injection system and, in so doing, handed it a noticeable boost in power. The water injection system allows temperature-related performance thresholds to be raised. As well as an increase in output and torque, this innovative system also endows the BMW M4 MotoGP Safety Car with excellent efficiency, bringing benefits in terms of both fuel economy under full load and exhaust emissions. As a test bed for BMW M technology and innovation, the BMW M4 MotoGP Safety Car paves the way for the potential introduction of this system into series-produced models in the future.

Sophisticated cooling system for maximum performance.

The strong performance potential of the turbocharged six-cylinder in-line engine already demands an exceptionally sophisticated thermal management system for the engine and ancillary units. To ensure optimal operating temperatures in all situations, M GmbH has developed a highly innovative and effective cooling system. It comprises a main radiator plus additional radiators for the high- and low-temperature circuits, transmission and turbocharger in order to keep temperatures stable. The intake air – which is heated up by the turbocharger – is cooled by means of an indirect intercooler, assisted by an additional electric water pump.

* Fuel consumption figures according to ECE test cycle, may vary depending on the tyre format specified.

However, an increase in power of the kind that has been achieved for the BMW M4 MotoGP Safety Car places even more exacting demands on the thermal performance of the turbocharged engine – in particular its charge air cooling. The innovative water injection system has provided an answer to this challenge. As well as its significant increase in power, the high-performance engine also distinguishes itself with impressively low full-load fuel consumption and emissions.

Following intensive testing in the MotoGP World Championship, the water injection system will also be introduced in a series-produced BMW M model in the near future. In this way, BMW M GmbH customers can enjoy the opportunity to sample exclusive high-performance technology originating directly from the race track, but which also excels on the road by significantly boosting performance and allowing everyday use without compromises.

Water injection system: cooling effect enhances efficiency.

The water injection system introduced by BMW M GmbH has succeeded in further improving the performance and fuel economy of the turbocharged six-cylinder in-line engine under full load. The system sees the engineers using the physical effect of water when vaporising to draw the required energy from the ambient medium. The water is injected into the plenums of the intake manifold as a fine spray. When the water vaporises, the intake air cools significantly. As a result, the final compression temperature in the combustion chamber – and therefore the engine's tendency to "knock" – is reduced, enabling the turbocharged engine to use higher boost pressure and earlier injection timing. The lower process temperatures also cut the development of pollutants, in particular nitrogen oxides (NO_x). Ultimately, the water injection system significantly improves the engine's efficiency. The technology increases output and torque while at the same time ensuring outstanding fuel economy and emissions figures. The extra power can thus be generated without increasing the thermal stress on performance-relevant components and, by extension, without any detrimental effect on stability.

Carefully targeted usage potential.

The favourable effects of water injection can be utilised in different ways depending on the engine and vehicle concept. Indeed, in terms of the degree to which they optimise the performance or fuel economy of the engine, the engineers have a free hand across a comparatively broad spectrum.

For example, in a turbocharged engine operating at full load – where the turbocharger reaches its maximum speed at the engine's rated output – additional water injection can provide a power boost and reduction in fuel consumption of around eight per cent in each case. Equally, performance

losses resulting from rising ambient temperatures ($> 20\text{ °C}$) can be made good by increasing the quantity of water injected. And finally, the water injection system can be carefully tweaked to reduce fuel consumption instead of raising power, with even greater savings possible when the engine is operating under full load.

Factoring water injection into the design of a high-performance engine allows the use of turbochargers generating high boost pressure in combination with a high compression ratio. The result is a substantial increase in performance and a reduction in fuel consumption and emissions under full load.

How the water injection system works in detail.

The amount of power that can be generated by a combustion engine is limited not least by the process temperature in the combustion chamber. If this temperature is exceeded, the result is uncontrolled combustion (knock) and therefore power loss or, in the worst-case scenario, major engine damage. This is particularly significant with turbocharged engines, as the intake air already gets very hot in the turbocharger's compressor. An intercooler brings the temperature down as required, but there are also physical limits to what it can do. Depending on the design and dimensions of the cooling system and the vehicle's aerodynamics, the intake air may get very close to its maximum permitted temperature.

Increasing boost pressure would push the temperature beyond the knock threshold and is therefore not an option as a means of increasing power. And this is precisely where BMW M GmbH tackles the issue: injecting water into the plenum as a fine spray provides significant extra cooling for the combustion air. The cooler charge air reduces the likelihood of engine knock, making earlier ignition timing – closer to the optimum – a possibility. That increases the efficiency of the combustion process, and at the same time the final combustion temperature decreases. Cool air, moreover, has a greater density, which increases the proportion of oxygen in the combustion chamber. This results in higher medium pressure during the combustion process, which in turn leads to optimised output and torque. Ultimately, the effective cooling process inside the combustion chamber relieves the thermal stresses on numerous performance-relevant components. That not only alleviates wear on pistons, exhaust valves and catalytic converters, it also makes life easier for turbochargers, which have to deal with lower exhaust temperatures.

Resolving a conflict of interests.

Raising the knock threshold by means of water injection also helps to largely resolve a familiar conflict of interests in the construction of high-performance engines. The issue is that compression ratio is a key factor in determining

output and fuel consumption. This is especially true of turbocharged engines generating high boost pressure like the BMW M TwinPower Turbo six-cylinder in-line unit which, thanks to its high compression ratio – especially under part loads – boasts high efficiency and low fuel consumption. However, the maximum compression ratio is limited by the increased likelihood of knock under full load. As a result, water injection also brings genuine benefits here, by pushing up the knock threshold and therefore allowing higher compression. As a result, the turbocharged engine can be held widely within power-optimised operating points. The potential of this technology increases the lower the octane rating of the fuel used. As there are limitations to the availability of RON 98 petrol around the world, the water injection system helps to draw maximum output and fuel economy from an engine running on E10 (RON 95) unleaded.

Technical implementation in the BMW M4 MotoGP Safety Car.

When it came to the positioning of the water injectors, the engineers at BMW M GmbH opted for a layout with three injection valves in the air plenum, each of which supplies two cylinders of the six-cylinder in-line engine. This solution ensures extremely even distribution and also enabled the engineers to give the system a compact design.

The luggage compartment of the BMW M4 MotoGP Safety Car houses a water tank with a gross capacity of five litres, as well as the water pump, sensors and valves. The pump and all the sensors and actuators are controlled by engine electronics that have been upgraded accordingly. In practice, the pump pushes the water to the injectors with ten bar of pressure. The quantities of water are adjusted as required according to load, rpm and temperature. This ensures that water use is kept to the required minimum. In hard track use, the water supply has to be refreshed whenever fuel also needs topping up. In normal use, the intervals (depending on driving style) are considerably longer. Even in fast motorway driving, you only need to fill up the water at roughly every fifth fuel stop. And, in the interests of maximising practicality, the system requires no additional maintenance.

Maximum system reliability.

For safety reasons, the BMW M water injection technology employs a sophisticated self-diagnosis system. If the water tank is empty or the system malfunctions, processes are initiated to protect the engine. Boost pressure is throttled back and the ignition timing relaxed, with the effect that the engine can continue to work at reduced output but otherwise without restriction. A variety of measures also safeguard the engine's operational capability under normal running conditions. Each time the engine is switched off, the water is drained from the hose system into the tank to prevent the system

components from icing up at sub-zero temperatures. The positioning of the water tank itself keeps it frost-free, too.

Looking ahead to a transfer of technology from race track to road.

The water injection system once again underlines the many years of experience BMW M GmbH can look back on in motor racing and its vast well of expertise in the development of powerful engines. The letter “M” is not just a byword for success on the race track, but more especially for uncompromising road-legal high-performance sports cars. The BMW M4 MotoGP Safety Car sums up the talent of BMW M GmbH for innovation and adheres to the brand’s philosophy of bringing motor sport technology to the road. At the same time, the model offers a clear preview of an M Automobile that promises to set a new benchmark in terms of performance, exclusivity and individuality. As well as higher output combined with outstanding fuel economy and emissions figures, customers stand to benefit from an innovative water injection system which can make a real difference both on the race track and in everyday use.



2.4 Forward-looking mobility: BMW i rolls out supplementary services for the BMW i3 and BMW i8 models as part of its 360° ELECTRIC programme.

Measuring just under four metres in length and suitable for use as a family car, the BMW i3 is available in both an all-electric and the Range Extender version. The lithium-ion battery's storage capacity of 22 kWh gives the practical five-door model a range of up to 160 kilometres (100 miles). In Range Extender guise, the BMW i3 is able to cover even longer distances without having to be charged. Its efficient two-cylinder petrol engine generates electricity to recharge the high-voltage battery while on the move, enabling the vehicle to achieve a range of as much as 300 kilometres (approx. 185 miles) in everyday motoring.

The BMW i8 is a plug-in hybrid sports car that sets new standards for performance, sustainability and design. In June 2014, the first BMW i8 models featuring state-of-the-art laser lighting technology were delivered, a world first in a production vehicle. When driving in electric mode, the battery's 7.1 kWh storage capacity results in a zero-emission range of up to 37 kilometres (23 miles) in the EU driving cycle. The futuristic-looking 2+2-seater is perfectly suitable for everyday use and returns a fuel consumption figure of a mere 2.1 litres for every 100 kilometres (134.5 mpg imp) in ECE testing, equating to CO₂ emissions of 49 grams per kilometre. The intelligent interaction between the electric motor at the front axle and the economical 1.5-litre TwinPower Turbo three-cylinder petrol unit at the rear makes the BMW i8 both fast and efficient out on the road. The combined system output of 266 kW/362 hp catapults it from 0 to 100 km/h (62 mph) in a fleeting 4.4 seconds and on to a top speed of 250 km/h (155 mph).

Following the launch of the BMW i3 and BMW i8 models in Europe, the USA, Japan and China, the associated BMW i services are now being expanded and rolled out internationally. Besides expanding the ChargeNow charging network with the addition of fast charging stations, intermodal vehicle navigation combining different forms of transport to optimum effect and direct marketing continue to be extended at an international level. In parallel to this, projects in Germany, the USA and China are working on the reuse and recycling of the lithium-ion batteries from BMW i cars.

BMW i8 with extended standard specification and new options.

The exclusive character of the BMW i8 plug-in hybrid sports car will be further highlighted in March 2015 with an extended range of standard equipment and

new options for the interior look. Standard specification for the BMW i8 now includes the Pure Impulse Experience programme, comprising exclusive lifestyle options in the areas of culture, design, travel and gastronomy in keeping with the progressive and sustainable “next premium” approach of the BMW i brand.

One of the options available for the BMW i8 from March 2015 is the Carpo Carum Grey interior line, which exemplifies innovative aesthetics in a particularly high-quality manifestation. Natural leather elements are combined with partly perforated leather surfaces in the light shade of Carum Grey and BMW i Blue highlights in the form of seatbelts as well as double-stitching on the seats and floor mats. High-gloss surfaces in Amido metallic for the instrument panel, the centre console and the doors add the finishing touches to this premium ambience. Further special options lined up for the future are an engine cover in leather and brake callipers in high-gloss black.

ChargeNow.

ChargeNow grants the BMW i customer access to some 26,000 charging points in 21 countries around the globe, making it the most extensive charging network in the world. BMW i teamed up with a series of providers to standardise the network’s charging and billing technology, while available charging stations can be shown to the customer in the vehicle’s navigation system, via a smartphone app or online. The ChargeNow card allows the user to access the ChargeNow network and also enjoy the convenience of a single monthly bill with a summary of all charging transactions.

Since 2014, users have been able to use the pan-European ChargeNow network outside their own country. The roaming function is initially available in Germany, Austria and Belgium, and there are plans to extend it to other countries. The aim of ChargeNow is to pool together the greatest possible number of public charging infrastructure providers.

A growing number of fast charging stations are also being incorporated into the ChargeNow network. These provide DC charging, which substantially shortens vehicle charging compared to AC charging. Indeed, it takes less than 30 minutes to charge the battery of the BMW i3 to 80 per cent. This option is, for example, part of the ChargeNow network on the fast-charging axis along the A9 motorway between Munich and Berlin.

ParkNow.

With its premium ParkNow service, BMW i has devised an exceptionally customer-friendly and convenient solution to the problem of parking in urban

centres – for drivers of all makes of car. ParkNow covers both on-street and off-street parking.

The all-encompassing approach optimises all key steps in the process. If the customer is interested in an off-street parking space, for example, it can be easily found, booked and paid for, all with ParkNow. The booking can either be made in advance from a PC or smartphone or, before long, even en route by means of the navigation system. The multistorey car parks in the ParkNow network can be filtered by price, distance or availability of services such as charging stations or car washes. Once the selection has been made in the navigation system, the driver is directed straight to the selected car park and an electronic ticket is generated that grants access to the reserved space. Tedious searching for a free parking space and the pollution caused in the process are therefore a thing of the past.

And if parking on the street, there is no longer any need to hunt around for change, walk to the parking meter and carefully position the ticket. All the customer has to do is enter the number of the parking zone in the ParkNow app or, in future, in the navigation system and the parking process starts. The customer also receives notification before the parking time expires and can extend the parking time while away from their vehicle if necessary. Payment takes place automatically.

With ParkNow LongTerm, meanwhile, BMW i further offers the possibility of renting a long-term parking space with charging facilities close to the driver's home or place of work.

Collaborations with car park operators are spurring on the international expansion of the network. ParkNow has real-time access to 4,200 multistorey car parks offering millions of parking spaces in hundreds of cities all over North America. In addition to this, there are 2.8 million on-street parking spaces in more than 200 cities in the USA alone.

DriveNow expanding internationally.

DriveNow already provides a sophisticated car-sharing service in Munich, Berlin, Düsseldorf, Cologne, Hamburg, Vienna, London and San Francisco, and preparations are under way to extend it to more cities in the USA and Europe.

One of the key characteristics of DriveNow is that the vehicles can be rented and returned anywhere without the need for centralised stations. The DriveNow fleet consists entirely of top-class premium cars from MINI and BMW, and currently features the MINI, MINI Convertible, MINI Clubman and

MINI Countryman models as well as the BMW 1 Series, BMW X1 and BMW ActiveE. The BMW i3 is scheduled to be added to the line-up in 2015. The inclusion of the BMW ActiveE means DriveNow already offers an all-electric, zero-emission mobility option in San Francisco, Berlin and Munich. There are more than 390,000 registered customers worldwide (as at January 2015), who all appreciate the spontaneous and flexible mobility service offered to them by DriveNow that can adapt to their individual requirements.

DriveNow is a car-sharing joint venture between the BMW Group and Sixt SE, with each company holding a 50 per cent stake.

Second Life batteries.

The used batteries from the BMW i models still have a high capacity once they have been finished with and can go on to lead a “second life”, so to speak, by providing capacity reserves for fast charging stations or storing solar energy at the interface between e-mobility and flexible power supply. In future, the electricity market could therefore make use of the battery storage units from electric vehicles as primary energy storage devices. Thanks to pilot projects in Germany, California and Shanghai, the BMW Group has already garnered enough experience to confirm the high potential.

2.5 BMW ConnectedDrive integrates “myKIDIO” app in the car: Smart entertainment programme for rear passengers.



The BMW Group once again proves its leadership position when it comes to linking up driver, vehicle and environment by integrating another app into the car for the first time: the new “myKIDIO” app from Burda News and Deutsche Telekom (initially only available in Germany) makes even long journeys enjoyable for children by offering them high-quality content such as audio books, audio plays, films and TV programmes. Using this app in a BMW also allows access to a journey monitor, the “BMW Kids Cockpit”, which displays data relevant to the journey such as the current speed. Furthermore, the app can be used to control tablet computers in the car (e.g. the Apple iPad), which are frequently used by children in the rear on long journeys, often together with headphones.

Playful involvement of children in the journey.

The driver or front passenger can check information on the Control Display, e.g. the remaining time of an audiobook or film, enabling them to plan breaks that don't interfere with cliffhangers. Or, using the iDrive Controller, they can start or pause a new film, audiobook or the “BMW Kids Cockpit” – a useful function if the kids in the rear are too small to reach the control buttons themselves. When the “myKIDIO” channel is switched on, background uploading of new video content automatically takes place on the home WiFi network, so that all you need to remember for subsequent journeys is to take along your tablet. In conjunction with the BMW LTE hotspot, special requests can also be downloaded during the journey or watched directly as an online stream.

Once the mobile device is connected to the car by a USB cable or a snap-in adapter and the app has been launched, travel information can also be called up on the connected tablets. Adapted for children, these might include the current speed of the car, the remaining range, the remaining journey time or the outside temperature. When driving with the “BMW Kids Cockpit” and a special child-friendly depiction of a BMW car, there is also the opportunity to collect stars for the distance covered – the longer the journey, the more stars are credited. These can then be redeemed against new vehicles in the “BMW Kids Cockpit”.

Debut in the BMW 2 Series Gran Tourer, designed for use in any connected BMW.

So that apps can be used safely and easily in the car as well, the BMW Group pushed ahead with the integration of smartphones early on and has already certified numerous apps for use in BMW vehicles. These apps have been specially tested by BMW to ensure their safe use in the car via the iDrive operating system and the Control Display, and they use the A4A (Apps for Automotive) technology by BMW. The “myKIDIO” app has been fully integrated into the new BMW 2 Series Gran Tourer for the first time, but can also be used in any BMW model featuring the optional ConnectedDrive Services.