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Note: The technical specifications stated in this media information are provisional. The equipment described refers to specification for the German market.

1. The BMW i8.
At a glance.

- World premiere for the BMW i8, the second model from new brand BMW i. First plug-in hybrid vehicle from the BMW Group and world's most forward-looking sports car; revolutionary interpretation of BMW's hallmark driving pleasure; groundbreaking premium character clearly defined in terms of sustainability.

- 2+2-seater with LifeDrive architecture developed specifically for BMW i, aerodynamically groundbreaking body design and visionary interior design deliver an intense driving experience; Life module passenger cell made from carbon-fibre-reinforced plastic (CFRP); drive system technology, high-voltage battery, chassis, and crash and structural functions integrated into the aluminium Drive module; kerb weight: 1,490 kilograms; Cd: 0.26; very low centre of gravity (below 460 millimetres); well-balanced weight distribution.

- Emotion-led visual impression based around established BMW i design language; classical sports car proportions and fresh interpretation of BMW design features; doors open upwards like wings; clean lines, plus surface design (external and internal) based on the layering principle; full-LED headlights as standard, innovative laser headlights – unique worldwide – available as an option.

- Plug-in hybrid system developed and produced by the BMW Group represents the latest development stage of Efficient Dynamics; debut for three-cylinder petrol engine with BMW TwinPower Turbo technology, displacement: 1.5 litres, output: 231 hp, maximum torque: 236 lb-ft; power sent to the rear wheels via a six-speed automatic gearbox; model-specific hybrid synchronous electric motor, output: 131 hp, maximum torque:184 lb-ft; power channelled through the front wheels via a two-stage automatic transmission; lithium-ion high-voltage battery with liquid cooling and usable capacity of 5 kWh.

- Combination of BMW TwinPower Turbo and BMW eDrive technology plus intelligent energy management produce system output of 362 hp (max. torque: 420 lb-ft) and give the BMW i8 the performance characteristics of a pure-bred sports car (0 – 100 km/h / in 4.4 seconds) combined with fuel economy and emissions figures more familiar from a

small car (EU fuel consumption: 2.5 litres per 100 km; “glued-to-the-road” AWD driving experience with torque distribution geared towards optimised dynamics.

- Driving Experience Control switch and eDrive button allow driver to choose from five driving modes; range of up to 35 kilometres on electric power alone and a top speed of 120 km/h; COMFORT mode offers optimum balance between dynamics and efficiency; combined range in everyday conditions: over 500 kilometres; SPORT mode with ultra-intense boost function provided by the electric motor; ECO PRO mode can be used in both all-electric mode and hybrid mode.

- Sophisticated chassis technology featuring a double-wishbone front axle and a five-link rear axle; Electric Power Steering; Dynamic Damper Control comes as standard; 20-inch light-alloy wheels are standard, carbon wheels are optional.

- Intelligent lightweight construction with elements including a CFRP passenger cell, doors with a CFRP-aluminium structure, an instrument panel with magnesium support, an aluminium chassis and a partition between the passenger compartment and boot made from thin glass; comprehensive safety concept and an ultra-torsionally stiff passenger cell.

- Extensive standard equipment includes the Navigation system Professional with proactive drive system for all-electric driving, fully-digital instrument display, BMW iDrive with freestanding Control Display and leather sports seats; choice of four exterior paint finishes and four interior equipment variants.

- Wide range of BMW ConnectedDrive features: Park Distance Control, cruise control system with braking function, rain sensor and Intelligent Emergency Call function as standard; optional driver assistance package with High Beam Assistant, a rear view camera, Surround View, Speed Limit Info including No Passing Info display, and Collision Warning with pedestrian recognition and braking function; also available are the Head-Up Display, BMW Online Entertainment, Concierge Services, Real Time Traffic Information and mobility services developed specifically for BMW i, e.g. intermodal route guidance.

- All-embracing sustainability concept running like a thread through the value chain; carbon fibre production and vehicle assembly using 100-per cent renewable electricity; high proportion of recycled materials; use of materials manufactured and treated in an environmentally friendly manner.

2. The sports car of the future: Concept.

BMW i stands for the creation of pure-bred vehicle concepts, sustainability throughout the value chain, complementary mobility services and a fresh understanding of premium defined squarely in terms of sustainability. And now the BMW Group can unveil the BMW i8 – a new, cutting-edge generation of sports car. The second model unveiled by the new BMW i brand combines a plug-in hybrid drive system with a passenger cell made from carbon-fibre-reinforced plastic (CFRP) and an aluminium frame for the combustion engine and electric motor, the battery pack and the suspension. With this revolutionary concept and the emotional appeal of its aerodynamically optimised body design, the 2+2-seater – which was conceived from the outset as a plug-in hybrid – paves the way for an engagingly dynamic and futuristically efficient take on BMW's hallmark driving pleasure. By cementing the brand's new premium character, strongly defined by sustainability, in the sports car segment, the new i8 also demonstrates the broad spread and universal appeal of the BMW i philosophy.

The research and development activities carried out by the BMW Group since 2007 as part of its project i initiative have laid the groundwork for a visionary car conceived with the impact of environmental, economic and social change around the world very much in mind. Alongside its conceptual and technological development work, the company has also conducted field studies looking at the use of pure-electric vehicles in everyday conditions. More than 1,000 people have taken part in the studies, racking up in excess of 32 million kilometres (20 million miles) at the wheel. The knowledge gained as a result has been channelled into the creation of innovative vehicle concepts and mobility solutions.

Breaking new ground: premium cars underpinned by sustainability-led concepts arrive in the sports car segment.
The development of BMW i cars follows a revolutionary approach, a strategy focusing on the creation of premium cars purpose-designed to be powered by purely electric or plug-in hybrid drive systems. This electric drive technology (packaged under the BMW eDrive banner) is therefore a central component of the vehicle concept – in contrast to the "conversion" model, where vehicles are retrofitted with electric drive systems. Characteristic BMW driving pleasure coupled with emission-free mobility, precise energy flow management, pioneering design, intelligent lightweight construction and production

processes that preserve energy and resources come together to mutually complementary effect to form the innovative, sustainability-led premium character of BMW i cars.

The BMW i8 was conceived from the ground up as a plug-in hybrid sports car boasting agile performance attributes and extraordinary efficiency. Its LifeDrive architecture – developed specifically for BMW i – offers the ideal platform for a weight-minimising construction, low centre of gravity and even weight distribution. The combustion engine and electric motor, battery pack, power electronics, chassis components, and structural and crash functions are all arranged within the aluminium Drive module, while the central element of the Life module is the 2+2-seater's CFRP passenger cell. This structure also allows a considerable degree of design freedom, which has been utilised – within the framework of the design language developed for BMW i – to give the BMW i8 its distinctive appearance.

The perfect balance of performance and fuel consumption: the BMW i8 represents an exciting new landmark in Efficient Dynamics.
The BMW i8 offers a revolutionary and future-focused interpretation of BMW's signature driving pleasure – and in so doing, makes its case as the world's most progressive model in the sports car segment. The plug-in hybrid drive system developed and manufactured by the BMW Group specially for the BMW i8 represents a new stage of evolution in the Efficient Dynamics development strategy.

The BMW Group launched Efficient Dynamics over a decade ago with the aim of significantly enhancing the performance characteristics and efficiency of every new BMW Group model. Efficient Dynamics incorporates both the evolutionary further development of existing technology and revolutionary new drive system concepts. For example, efficient vehicle concepts focusing on lightweight design and aerodynamics, dynamic drive systems featuring both BMW TwinPower Turbo technology and BMW eDrive, and intelligent management of all the energy flows within the vehicle are brought together in different models. BMW i cars benefit from the introduction of revolutionary new technology which subsequently finds its way into the models produced by the core brands of the BMW Group.

As a world-leading supplier of premium cars and, increasingly, also premium services, the BMW Group is playing an active and defining role in the changing face of personal mobility. And awareness of issues such as resource scarcity, climate change and creeping urbanisation is also growing among the public. The BMW Group's commitment to sustainability has long been a key element of its corporate strategy and is one of the fundamental principles enforced

throughout the company's value chain, as independent studies have regularly confirmed. Indeed, the BMW Group has been named the "world's most sustainable automobile manufacturer" in the Dow Jones Sustainability Index for eight consecutive years.

BMW i8: the trailblazer for a new generation of sports car.
The underlying principle of Efficient Dynamics – more driving pleasure, lower fuel consumption – is expressed with particular purity by the BMW i8. With the performance attributes of a pure-bred sports car and the fuel consumption of a small city model, the first BMW plug-in hybrid vehicle hits heights only attainable through the revolutionary BMW i vehicle concept. And that makes the BMW i8 a trailblazer for a new generation of sports cars, defined by not only their performance characteristics but also by intelligent solutions to the challenges personal mobility will encounter over the years ahead.

Thanks to its revolutionary vehicle concept and intelligent drive system management, the BMW i8 strikes the optimum balance between dynamic ability and efficiency in a variety of driving situations. The output of the engine and electric motor, the capacity of the high-voltage battery, intelligent energy management and the vehicle's overall weight are tailored to form a precisely composed package that defines the unique character of the plug-in hybrid sports car. Its all-electric driving range is sufficient to cover most urban driving requirements, and out of town, the BMW i8 offers impressively sporty performance which is also very efficient thanks to the power-boosting support for the petrol engine from the electric motor. Efficiency and driving dynamics alike are optimised by the broad application of lightweight design – from the CFRP passenger cell to the weight-reduced construction of all other components – and mobility services developed specially for BMW i. The all-encompassing approach of the BMW i brand also includes the extensive use of recycled materials, renewable raw materials and naturally treated materials, alongside extremely resource-efficient production methods. This overall concept marks the BMW i8 out as the world's most forward-looking sports car, bringing thrilling performance into line with progressive efficiency and, in the process, boosting driving pleasure and sustainability awareness in equal measure.

Sustainability: the reference point for the entire development process.
As part of the development of BMW i cars, sustainability targets are agreed and then pursued with the same vigour as cost, weight or quality objectives. This all-embracing approach is reflected both in the selection of materials and in the construction and manufacturing processes, which differ substantially from conventional manufacturing methods in the automotive industry. The low overall weight of the BMW i8 (1,490 kilograms) can be credited primarily to a

passenger cell made from CFRP. Although it lends a component at least equal rigidity, this extremely lightweight high-tech material is 50 per cent lighter than steel and 30 per cent lighter than aluminium. The principle of intelligent lightweight design is applied to all the car's components.

The doors are made up of a CFRP inner structure and an aluminium outer skin and weigh 50 per cent less than a conventional construction. The intelligent construction of the magnesium instrument panel support brings a weight saving of around 30 per cent compared with the BMW 6 Series, for example. In addition, the high structural rigidity of the magnesium support structure gives it a strengthening effect which allows the number of components to be reduced, thereby lowering weight by a further 10 per cent. Innovative foam plastic technology used in the air conditioning ducts cuts their weight by 60 per cent compared with a conventional solution, while also improving acoustics thanks to its sound-absorbing properties. The fact that the power electronics and electric motor are directly connected reduces the amount of wiring required, while partial use of aluminium wiring enables a further reduction in weight.

The BMW i8 is also the world's first volume-produced vehicle to be equipped with chemically hardened thin glass. This innovative technology, so far used mainly in smartphone manufacturing, lends the material impressive strength. The partition between the passenger compartment and boot of the BMW i8 consists of two layers of chemically hardened glass, each of which is just 0.7 millimetres thick, with acoustic sheeting sandwiched in between. In addition to excellent acoustic properties, a further advantage of this solution is a weight saving of around 50 per cent compared with conventional laminated glass.

As well as weight, the potential for preserving resources is a decisive factor in the choice of materials. The majority of the aluminium used in the BMW i8 is either gained through recycling or produced using renewable energy. Added to which, the BMW Group has developed a globally unique recycling concept for CFRP components, body components and segregated production waste which sees offcuts from the manufacturing of CFRP components and reusable materials from accident-damaged and end-of-life vehicles either fed back into the production process or used for other applications.

The BMW Group is the world's first carmaker to employ an environmentally friendly process for the treatment of leather. The leather for the surfaces of the seats and the instrument panel is tanned using olive leaf extract. This avoids the creation of environmentally damaging production residue as well as giving the leather a particularly high-quality and natural look. The cattle hide comes exclusively from Germany, Austria and Switzerland, and the natural

treatment process takes place in Germany. This keeps distances to the BMW i8 production facility at BMW Plant Leipzig pleasingly short.

The textile materials used in the interior of the BMW i8 for accent strips on the seats and door trim, the roof liner, the floor mats, the body pillar trim and floor covering are made in an innovative recycling process. The polyester granules that serve as the source material are produced from materials including recyclable PET and are combined with 40 per cent virgin wool in a special process to create a high-grade cover fabric. The manufacture of the key for the BMW i8 involves another innovative form of raw material production; its casing is made from a biopolymer based on castor beans. The oil gained from the beans is mixed with 30 per cent glass fibre to make an extremely high-quality and robust material.

Resource-efficient processes from material production to vehicle assembly.

The extensive use of CFRP is a central element in the revolutionary vehicle concept underpinning the BMW i8, and the BMW Group is also a leader in this area of the production process. The use of CFRP on the scale required for the BMW i models is without parallel in the automotive industry worldwide. The BMW Group has teamed up with its joint venture partner, the SGL Group, to oversee a factory in the USA making carbon fibre. The facility is located in Moses Lake, Washington State, and represents an integral link in the value chain for the production of BMW i cars. Indeed, it secures the BMW Group a supply of the high-quality and sustainably produced basic material required for the manufacture of CFRP components. The carbon fibres produced at Moses Lake are made into lightweight laminates at the Wackersdorf Innovation Park in Germany. These are subsequently turned into CFRP parts and components in the press shops at the BMW plants in Landshut and Leipzig.

The energy used to manufacture the carbon fibres at Moses Lake is provided exclusively by locally sourced renewable hydro power, which means it is 100 per cent CO_2-free. Impressively resource-efficient processes have also been put in place for the other stages of production for BMW i brand cars. The result is a reduction of around 50 per cent in energy consumption compared with the already highly economical average figures across the BMW Group's production network and a drop in water consumption of roughly 70 per cent. For example, the energy required for production of BMW i cars at the Leipzig plant comes exclusively from wind power – i.e. it is derived entirely from renewable energy sources. This was the first time that wind turbines had been installed at an automotive manufacturing plant in Germany to provide a directly supply of power to its production halls.

3. A vision becomes reality: Design.

With its ultra-dynamic proportions, elegantly sporty lines, low-slung silhouette and innovative design features, the BMW i8 represents a new generation of sports car. Bringing together hallmark features of the BMW brand with the design language developed specially for BMW i cars creates a progressive aesthetic which faithfully communicates the performance attributes, efficiency and innovative premium character of the plug-in hybrid sports car.

The launch of the BMW i8 sees the world's first sports car to be developed from the ground up under the banner of sustainability complete its journey from vision to reality. Both the exterior and interior of the emotionally-led 2+2-seater embody a revolutionary, pioneering take on the Sheer Driving Pleasure for which BMW is renowned. Clean, minimalist lines and homogeneous surfaces defined by a small number of precise edges and function-focused details underline the status of the BMW i8 as the most forward-looking car in its segment.

As the second series-produced BMW i model on the road, the BMW i8 also reveals the versatility of the design language which is establishing itself as an unmistakable signature of BMW i cars. Its design signals lightness, safety, efficiency and pure driving pleasure – stand-out qualities that the BMW i8 plug-in hybrid sports car shares with the BMW i3, its pure-electric sibling conceived for agile and comfortable urban driving.

The key to this versatility is the innovative LifeDrive architecture, which opens up an exceptional degree of freedom for the design of BMW i cars. The central element of the Life module is the carbon-fibre-reinforced plastic (CFRP) passenger cell. The Life module is fixed to the aluminium Drive module, which houses all the drive and chassis technology. This distinctive two-way split is reflected on both the outside and the inside of the car by the visible layering and intertwining of different surfaces, with three-dimensional and flowing transitions between the Life module and Drive module accentuating the dynamic appearance of the BMW i8.

A length of 4,689 millimetres, width of 1,942 millimetres and height of 1,293 millimetres give the BMW i8 typical sports car proportions. Its dynamic character is also reflected in its long bonnet, clearly visible aerodynamic aids, stretched roofline, short overhangs and long, 2,800-millimetre wheelbase.

The pioneering combination of sporting ability and efficiency is translated into the design of the 2+2-seater with intoxicating élan – and with the signature BMW i design language to the fore. The car's wide track (1,644 millimetres at the front axle, 1,715 millimetres at the rear) completes the powerful dynamic presence generated by the car's proportions.

Exterior design: an aesthetic synthesis of dynamic appeal and pioneering technology.

The design of the BMW i8 body is as groundbreaking as the plug-in hybrid sports car's concept as a whole. Hallmark BMW dynamics, lightweight design and efficiency are all expressed in the car's proportions, lines and surface design. The 2+2-seater is immediately recognisable as a BMW i model and a new-generation sports car.

The structure of overlapping and interlocking surfaces – lent additional emphasis by the car's colour concept – also contributes to the unmistakable appearance of the BMW i8. This layering principle allows aerodynamic forms to be wrapped up in a progressively styled package, while powerfully formed wheel arches draw attention to the wide track of the BMW i8. The compact construction distinguishing both the electric motor and combustion engine allows the front and rear sections of the car to be particularly low-slung and thus accentuate the car's dynamically stretched flanks. The doors, which open forwards and upwards like wings, add extra intrigue to the sports car design of the BMW i8.

A signature feature of BMW i cars is the "black belt". On the BMW i8, it emerges in a "V" shape from the bonnet and extends back over the roof into the rear section of the car, where it frames the centre section of the rear apron. At the front end, the black belt is framed by the body-coloured apron and side panels, while at the rear it is overlapped by the "floating" roof pillars, which extend over the rear lights. Another element of the standalone BMW i design language is the "stream flow" contour of the side window graphic. On the BMW i8 the stream flow also determines the path travelled by the air between the falling roofline and the character line rising through the rear section of the car's flanks towards the rear spoiler lip.

The front view of the BMW i8 exudes sporting ability in its purest form. Large front apron air intakes arranged over several levels generate a powerful feeling of depth. The extremely broad BMW kidney grille stretches over to the slim headlights, accentuating the width of the BMW i8 and its road-focused stance. The car's full-LED headlights adopt the hallmark U-shape of BMW i models. The dipped and high-beam light is emitted by a lens positioned on the far outer edge of the light units. Next to it is the Motorway Light, an

auxiliary headlight which enables a significantly improved light range when driving on motorways and cross-country routes at 120 km/h and above. The three-dimensional design of the light sources lend their appearance a sporty character.

The low-slung stance of the rear end and its horizontal, width-emphasising lines also provide a clear showcase for the dynamic potential of the BMW i8. The rear is bordered by the sculpted rear wheel arches. The sloping rear window opens high, allowing easy access to the storage compartment located underneath. The rear lights, reflectors and rear diffuser form a single visual unit that strengthens the car's already powerful appearance. Like the headlights, the intricately designed rear light clusters also feature the characteristic BMW i U-shaped design. The direction indicators are integrated above the rear lights into the downsweep of the roofline. All of the lights on the BMW i8 are LEDs as standard.

Visible efficiency: aerodynamic optimisation on a detailed level.
The BMW i8 boasts a drag coefficient (Cd) of 0.26 and a fine aerodynamic balance. The low-slung bonnet, almost totally blanked off kidney grille, Air Curtains in the front apron, sealed underbody, contoured side skirts, "stream flow" lines of the car's flanks, and the air ducts between the rear lights and roof frame allow the air to be channelled extremely effectively as it hits the car.

The large, comparatively slim wheels with their bespoke, aerodynamically optimised design also help to quell efficiency-reducing turbulence – and their effect is reinforced by aeroflaps positioned behind the front wheels and ahead of the rear wheels. Precisely defined air flow across all areas of the body provides a balance between air resistance and lift designed to maximise driving dynamics and directional stability.

The paintwork adorning the side body panels and front and rear ends of the BMW i8 can be specified in a choice of four colours, three of which have been created exclusively for BMW i. All the paint finishes provide a striking contrast to the black belt. And, depending on the colour chosen, the accent surfaces on the side skirts, at the rear and on the BMW kidney grille surround come in BMW i Blue or Frozen Grey.

Interior design: customary BMW driver focus in a progressive ambience defined by dynamics and lightness.
Future-focused design also dominates the interior of the BMW i8. The driver orientation typical of BMW cockpit design is complemented by progressive elements which highlight the sports car's dynamic flair and light weight. The driver, front passenger and rear passengers sit low down – in traditional sports

car style – in lightweight seats. The standard leather trim extends beyond the seat surfaces to parts of the centre console, instrument panel and interior door panels. The use of leather treated with natural substances, including olive leaf extract as a tanning agent, underlines the sustainable character of the BMW i8 alongside its exclusivity and sporting allure. Exposed CFRP sections of the passenger cell visible around the entry apertures when the doors are opened provide a reminder of the low weight of the BMW i8.

The instrument panel of the BMW i8, with its horizontal lines emphasising the width of the interior and a structure determined by the "layering" principle, creates a light yet powerful impression. The arrangement of the overlapping, three-dimensional segments is complemented by a contrast-rich colour scheme. The layering approach also finds its way, through dynamically curving lines, into the design of the centre console, which is home to the gearshift lever, the Controller for the iDrive operating system, the start/stop button, the eDrive button and the Driving Experience Control switch. The iDrive system's Control Display comes in a freestanding 8.8-inch format. A bespoke sports steering wheel with multifunction buttons and the Navigation system Professional are included as standard in the BMW i8. Also standard is the multifunction instrument display, whose content and presentation formats take their cue from the driving mode selected.

Available as alternatives to the standard Neso trim for the BMW i8 interior are the Carpo and Halo equipment lines. In standard specification, the contrast between black surfaces in the cockpit and light Carum Grey leather surfaces emphasises the lightness and sustainability of this vehicle concept. The leather surfaces of the door and side trim are complemented by functional textile highlights made from recycled material. The optional Carpo equipment line is available in light or dark versions. The naturally treated leather surfaces feature perforated elements and subtle contrast stitching which underline the superior character of the material and workmanship involved. Painted surface elements on the instrument panel, door trim and centre console add the finishing touches to the cutting-edge ambience. The likewise optional Halo equipment line brings a pervasive aura of luxury and sustainability to the interior of the BMW i8. Top-quality leather surfaces combine with textile accents and contrast stitching in BMW i Blue. And when it comes to the colour scheme, dark Dalbergia Brown and light Carum Grey provide attractive contrasts. The Halo line also brings high-class paintwork to selected instrument panel and door trim surfaces. The accent ring for the leather steering wheel comes in BMW i Blue in the Halo equipment line and in Satin Silver in the other variants.

4. The best of both worlds: Powertrain and driving experience.

The BMW i8 embodies a revolutionary, future-focused interpretation of the driving pleasure for which BMW is renowned. It was purpose-designed as a plug-in-hybrid sports car offering agile performance and outstanding efficiency. An exceptionally lightweight and aerodynamically optimised body – including a passenger cell made from carbon-fibre-reinforced plastic (CFRP) – plus advanced BMW eDrive drive system technology, a compact, highly turbocharged 1.5-litre petrol engine with BMW TwinPower Turbo technology and intelligent energy management all come together to create an overall concept that represents a new landmark in the Efficient Dynamics development strategy. The BMW i8 blends the performance of a top-end sports car with fuel economy and emissions more familiar in a small city model. It is based, moreover, around a vehicle architecture that offers the perfect platform for thrillingly agile handling, thanks to an ultra-low centre of gravity and almost exactly 50 : 50 weight distribution.

The three-cylinder combustion engine in the BMW i8 develops 170 kW/231 hp and drives the rear wheels, while the 131 hp electric motor draws its energy from a lithium-ion battery, which can be charged from a conventional domestic power socket, and sends its power to the front axle. This bespoke plug-in hybrid system, developed and produced by the BMW Group, enables a range in everyday driving of up to 35 kilometres and a top speed of 120 km/h on electric power alone, coupled with a “glued-to-the-road” all-wheel driving experience headlined by powerful acceleration and a dynamically-biased distribution of power through enthusiastically taken corners. The more powerful of the two power sources drives the rear wheels and uses the electric boost from the hybrid system to deliver hallmark BMW driving pleasure while at the same time offering groundbreaking levels of efficiency. The sprint from 0 to 100 km/h takes just 4.4 seconds, yet average fuel consumption – as calculated in the EU test cycle for plug-in hybrid vehicles – stands at 2.5 litres per 100 kilometres from launch. CO_2 emissions come in at 59 grams per kilometre.

For maximum driving pleasure and efficiency:
BMW TwinPower Turbo engine and electric motor developed by the BMW Group.

The plug-in hybrid drive system of the BMW i8, which comprises a BMW TwinPower Turbo engine combined with BMW eDrive technology, offers the best of both worlds: excellent potential for improved efficiency and exciting, sporty driving characteristics. The BMW Group has developed not only the internal combustion engine and electric motor in-house but also the power electronics and the battery. This ensures that all these components offer high product and quality standards, based on the outstanding capabilities of the BMW Group in the field of powertrain research and development.

The revolutionary character of the BMW i8 is emphasised by a further innovation: the use of an internal combustion engine which is making its debut in this model. The BMW i8 is the first BMW production model to be powered by a three-cylinder petrol engine. This highly turbocharged unit is equipped with latest-generation BMW TwinPower Turbo technology. It is exceptionally compact and develops maximum power of 231 hp from its 1.5-litre displacement. The resulting specific output of 154 hp per litre of displacement is on a par with high-performance sports car engines and is the highest of any engine produced by the BMW Group.

The new three-cylinder engine derives its typical characteristics from BMW's six-cylinder in-line engines, to which it is closely related and which are noted for their eager power delivery, revving ability and refinement. The three-cylinder's BMW TwinPower Turbo technology comprises a high-performance turbocharging system and direct petrol injection with high-precision injectors positioned between the valves, along with VALVETRONIC throttle-less load control, which improves efficiency and response thanks to seamlessly variable valve lift control. Like a six-cylinder engine, the three-cylinder unit is free of first and second-order inertial forces. The low roll torque, a typical feature of a three-cylinder design, is further reduced by a balancer shaft, while a multi-stage damper integrated in the automatic transmission ensures very smooth and refined running at low rpm. BMW TwinPower Turbo technology and low internal friction improve both fuel consumption and torque characteristics. Accelerator response is sharp and the three-cylinder unit quickly reaches its maximum torque of 236 lb-ft.

The car's second power source is a hybrid synchronous electric motor specially developed and produced by the BMW Group for the BMW i8. The motor develops maximum power of 131 hp and produces its maximum torque of around 184 lb-ft from standstill. Typically for an electric motor, responsive power is instantly available when starting and this continues into the higher

load ranges. Credit for the linear power delivery, which extends right up to the high end of the rpm range, goes to a special motor design principle exclusive to BMW i. BMW eDrive technology refines and improves on the principle of the permanently excited synchronous motor with a special arrangement and dimensions for the torque-producing components. This results in a self-magnetising effect normally confined to reluctance motors. This additional excitation ensures that the electromechanical field generated when current is applied remains stable even at high rpm.

As well as providing a power boost to assist the petrol engine during acceleration, the electric motor can also power the vehicle by itself. Top speed is then 120 km/h. The BMW i8 has a maximum driving range in this emission-free, virtually soundless, all-electric mode of up to 35 kilometres. The motor derives its energy from the lithium-ion battery which is centrally mounted underneath the floor of the vehicle. This model-specific version of the high-voltage battery was developed and produced by the BMW Group. It has a liquid cooling system, offers a maximum usable capacity of five kilowatt hours and can be recharged from a conventional household power socket, at a BMW i Wallbox or at a public charging station.

The BMW i8's vehicle concept and powertrain control system mark it out as a progressive, revolutionary sports car. The BMW i8 always achieves the optimal balance between dynamic performance and efficiency, whatever the driving situation. For example, the battery can also be recharged via the electric motor on the overrun. In addition to this, when power demands allow, the high-voltage battery is recharged by the electric motor. The high-voltage starter-generator, responsible for starting the combustion engine, can also be used as a generator to charge the battery, the necessary power being provided by the BMW TwinPower Turbo engine. These various processes help to ensure that the BMW i8 always has sufficient energy on board to power the electric drive system. The all-electric driving range is sufficient to cover most urban driving requirements. Out of town, the BMW i8 delivers impressively sporty performance extremely efficiently, thanks to the electric motor's power-boosting support for the petrol engine. With such versatility, the BMW i8 belongs to a new generation of sports cars which unites exciting performance with cutting-edge efficiency – to enhance both driving pleasure and the sense for sustainability.

The rear wheels of the BMW i8 are driven by the petrol engine via a six-speed automatic transmission, while the front wheels receive their power from the electric motor via a two-stage automatic transmission. Combined maximum output of 362 hp and combined peak torque of 420 lb-ft provide all-wheel-drive performance which is as dynamic as it is efficient. The BMW i8's

intelligent powertrain control system ensures perfect coordination of both power sources. The variable power-sharing between the internal combustion engine and the electric motor makes the driver aware of the sporty temperament of the BMW i8 at all times, while at the same time maximising the energy efficiency of the overall system. Utilising both power sources enables a 0 – 100 km/h time of 4.4 seconds. The BMW i8 has an electronically controlled top speed of 250 km/h, which can be reached and maintained when the vehicle operates solely on the petrol engine.

Variable front-rear power splitting in line with changing driving conditions makes for excitingly dynamic cornering. On entering the corner, the power split is biased towards the rear wheels to improve turning precision. For more vigorous acceleration out of the corner, the powertrain controller returns to the default split as soon as the steering angle becomes smaller again.

Five driving modes allow drivers to adjust efficiency and dynamic performance as desired – at the touch of a button.

The BMW i8 offers the driver unusual scope to adjust the drive and suspension settings of the vehicle in order to adapt the driving experience to his or her individual preferences. As well as the electronic gear selector for the automatic transmission, the driver can also use the Driving Experience Control switch – a familiar feature of the latest BMW models – or, exclusively to the BMW i8, the eDrive button. It gives the driver five operating modes to choose from: D for automated gear selection in COMFORT and ECO PRO modes, SPORT mode and eDrive for pure-electric driving – likewise with a choice of COMFORT and ECO PRO mode.

The Driving Experience Control switch on the centre console gives drivers a choice of two settings. On starting, COMFORT mode is activated, which offers a balance between sporty performance and fuel efficiency, with unrestricted access to all convenience functions. Alternatively, at the touch of a button, ECO PRO mode can be engaged, which, on the BMW i8 as on other models, supports an efficiency-optimised driving style. The powertrain controller coordinates the cooperation between the petrol engine and the electric motor for maximum fuel economy. On overrun, the intelligent energy management system automatically decides, in line with the driving situation and vehicle status, whether to recuperate braking energy or to coast with the powertrain disengaged. At the same time, ECO PRO mode also programs electrical convenience functions such as the air conditioning, seat heating and heated mirrors to operate at minimum power consumption – but without compromising safety. The everyday driving range of the BMW i8 on a full fuel tank and with a fully charged battery is over 500 kilometres in COMFORT mode.

SPORT mode offers sequential manual gear selection and at the same time switches to very sporty drive and suspension settings. In SPORT mode, the engine and electric motor deliver extra-sharp performance, accelerator response is faster and the power boost from the electric motor is maximised. And to keep the battery topped up, SPORT mode also activates maximum energy recuperation during overrun and braking. If the battery is being recharged using the car's kinetic energy, the electric motor's generator function switches to a more powerful setting. At the same time, gear change times are shortened and an extra-sporty setting is selected for the standard-fitted Dynamic Damper Control and the Electric Power Steering.

The BMW i8's ECO PRO mode can also be used during all-electric operation. The vehicle is then powered solely by the electric motor. Only if the battery charge drops below a given level, or under sudden intense throttle application (kickdown), is the internal combustion engine automatically activated.

Sophisticated chassis technology with Dynamic Damper Control as standard.

The high-end chassis and suspension technology of the BMW i8 is based on a double-wishbone front axle and a five-link rear axle, whose aluminium components and geometry are specially configured for intelligent weight savings. The Electric Power Steering offers easy manoeuvring in town and typical sports car-style high-speed steering precision, combined with particularly low energy consumption. Also standard is Dynamic Damper Control: the electronically operated dampers change their characteristics according to the selected driving mode to deliver the desired vehicle dynamics.

The DSC (Dynamic Stability Control) stability system includes the Anti-lock Braking System (ABS), Cornering Brake Control (CBC), Dynamic Brake Control (DBC), Brake Assist, Brake Standby, Start-Off Assistant, Fading Compensation and the Brake Drying function. The push button-activated Dynamic Traction Control (DTC) system raises the DSC thresholds, allowing some controlled drive wheel slippage for easier start-off on snow or loose ground, or for extra-dynamic cornering.

CFRP wheels reduce weight in critical areas.

The chassis components of the BMW i8 are defined by their weight-minimised construction. The car's standard-fit 20-inch forged aluminium wheels have an aerodynamically optimised, lightweight design. CFRP wheels developed exclusively for the BMW i8 can be specified as an option and allow a further reduction in weight in an area of the car which plays a particularly prominent role when it comes to agility. The use of three-piece wheels made

from this extremely lightweight and high-strength material directly reduces unsprung masses and produces a weight saving of three kilograms per wheel.

5. The lightweight route to maximum occupant protection: Body and safety.

The BMW i8 has its own version of the LifeDrive architecture developed for BMW i that gives it a unique range of tools for combining intelligent lightweight design and safety – to the highest standard in each case. The horizontally split LifeDrive architecture consists of two separate, independent modules. The combustion engine and electric motor, battery pack, power electronics, chassis components, and structure and crash functions are arranged together in the aluminium Drive module, while the central element of the Life module is the 2+2-seater's carbon-fibre-reinforced plastic (CFRP) passenger cell. The vehicle structure and materials employed in the i8 represent a pioneering example of automotive construction and reinforce the position of the BMW i8 as the most progressive model in the sports car segment worldwide.

CFRP is the lightest available material that can be used in the construction of a car body without compromising on safety. One of the stand-out characteristics of this high-tech material is its hugely impressive torsional rigidity, yet it is also carries 50 per cent less weight than steel and is 30 per cent lighter than aluminium. The LifeDrive architecture and high proportion of CFRP and aluminium in the car's construction allow a previously unprecedented dimension in weight optimisation. The kerb weight of the BMW i8 stands at 1,490 kilograms, and the LifeDrive architecture also has a positive effect on how this weight is distributed. The battery unit is positioned low down in a central position, helping to give the car a low centre of gravity and enhance safety accordingly. Indeed, the centre of gravity of the BMW i8 is less than 460 millimetres from the ground, making it lower than any other current BMW Group model. And this, like the car's almost exact 50 : 50 weight distribution, ensures excellent handling properties.

CFRP passenger cell: flexible in form, extremely strong in crash tests.
The LifeDrive architecture also allows exceptional levels of freedom when it comes to body design. In the case of the BMW i8, the result is an appearance that faithfully reflects the car's sporting characteristics, its innovative premium character and its groundbreaking technology. The impressive structural strength of the CFRP passenger cell allows particularly large door apertures, which in turn ensure comfortable access to the rear seats of the BMW i8. The structure of the distinctive doors, which open forwards and upwards like wings, is composed of a CFRP inner structure and an aluminium outer skin. This construction is 50 per cent lighter than a conventional equivalent.

In its dry, resin-free state CFRP can be worked almost like a textile, and as such allows a high degree of flexibility in how it is shaped. The composite only gains its rigid, final form after the resin injected into the lattice has hardened. This makes it at least as durable as steel, but it is much more lightweight. The high tear resistance along the length of the fibres also allows CFRP components to be given a high-strength design by following their direction of loading. To this end, the fibres are arranged within the component according to their load characteristics. By overlaying the fibre alignment, components can also be strengthened against load in several different directions. In this way, the components can be given a significantly more efficient and effective design than is possible with any other material that is equally durable in all directions – such as metal. This, in turn, allows further reductions in terms of both material use and weight, leading to another new wave of savings potential. The lower accelerated mass in the event of a crash means that energy-absorbing structures can be scaled back, cutting the weight of the vehicle.

LifeDrive architecture – conceived to maximise occupant protection.
The development of the LifeDrive architecture and the version of it used for the BMW i8 incorporated the latest knowledge from safety and accident research and the requirements of international crash test procedures. The high-strength passenger compartment teams up with the intelligent distribution of forces within the LifeDrive module to provide the cornerstones for optimum occupant protection. Even after the structurally debilitating offset front crash with an impact speed of 64 km/h, the extremely rigid material used for the passenger cell maintains an intact survival space for passengers. The crash-activated aluminium structures at the front and rear end of the Drive module provide additional safety.

Impressive rigidity, combined with its ability to absorb an enormous amount of energy, makes CFRP extremely damage-tolerant. Even at high impact speeds it displays barely any deformation. As in a Formula One cockpit, this exceptionally stiff material provides an extremely strong survival space. Less body deformation occurs compared with comparable steel bodies. Furthermore, the doors can be opened without any problem and the interior remains largely free of intrusions.

Rescue scenarios were worked through and checked as part of the development process. In standard cutting tests, the process of rescuing occupants from a BMW i8 involved in an accident was, in various scenarios, even more straightforward than that for conventional vehicles. That is because body components made from CFRP are lighter and can be more easily cut than high-strength steels, for example.

High safety reserves in a side-on impact.
The impressive safety characteristics of CFRP also come to the fore in side impact scenarios. Despite the heavy, in some cases concentrated forces, the material barely sustains a dent, and passengers enjoy unbeatable protection. All of which makes CFRP perfectly suited for use in a vehicle's flanks, where every centimetre of undamaged interior is invaluable. However, there are limits to what CFRP can endure. If the forces applied go beyond the limits of the material's strength, the composite of fibres breaks up into its individual components in a controlled process.

In the Euro NCAP side impact test, in which a pole strikes the side of the vehicle dead centre at 32 km/h, CFRP again demonstrates its extraordinary energy-absorbing capacity. The Life module absorbs the entire impact with minimal deformation, guaranteeing optimum passenger protection.

The occupant protection concept is rounded off by standard safety equipment – including electronically controlled restraint systems – of the same high standard in terms of scope and effectiveness as that featured in vehicles from all the BMW Group's brands. Front airbags and side airbags integrated into the seat backrests, plus head/curtain airbags for both rows of seats, are all fitted as standard, as are three-point inertia-reel seatbelts including belt stoppers, belt tensioners and belt force limiters for all seats.

Optimum protection for the high-voltage battery.
Crash-active aluminium structures in the front and rear sections of the vehicle provide unbeatable safety for the Drive module. In a front or rear-end collision, these absorb a large proportion of the energy generated. The battery, meanwhile, is mounted centrally in the underbody section of the car to give it the best possible degree of protection. Statistically, this is the area that absorbs the least energy in the event of a crash, and the vehicle shows barely any deformation here as a result.

The high-voltage system is designed to cope with accidents beyond the legal requirements, with the high-voltage battery including features that ensure its safe reaction even in situations such as this. The latest series of tests conducted by the renowned DEKRA E-Mobility Competence Center were extremely extensive – ranging from how a car might catch fire, how the flames might spread and what would be required to extinguish the fire, to the pollution caused by run-off of the water used for fighting the fire. The experts concluded that electric and hybrid cars with lithium-ion drive-system batteries are just as safe as vehicles with conventional drive systems. To ensure maximum safety in such a crash scenario, the high-voltage battery is disconnected from the

high-voltage system and the connected components discharged when the passenger restraint systems are triggered.

Repair costs for the BMW i models are normal for their class.
Tests by vehicle insurers and BMW Accident Research show that accidents primarily result in minor damage. In around 90 per cent of all recorded accidents involving conventional vehicles, the damage sustained is to the outer skin. The BMW i8 takes account of this and is equipped with screw/clip-on plastic plating all around. Minor bumps are absorbed without leaving dents, as usually occurs with metal parts, and damage to the paint does not lead to corrosion.

If a section of the external skin needs to be replaced, this can be carried out quickly and economically. Overall, the accident repair costs are at a comparable level to those for conventional BMW models.

“Cold” repair methods for aluminium parts, time-saving repairs for CFRP components.
Repairs to the aluminium structure of the Drive module (welded as part of the series production process) are carried out using the “cold” methods of bonding and riveting. These methods have been in successful use in BMW workshops since 2003.

The reparability of the Life module’s CFRP structure was already a priority in the development of the vehicle concept; for example, several repair stages were set out for the side frame. If a damaged side sill needs to be replaced after a side impact, the workshop carries out a visual inspection and damage assessment and then removes only the section in need of repair using a patented milling tool. The required side sill component is manufactured to fit and then installed on the damaged vehicle. The new part is bonded to the separation points using repair elements.

Any authorised BMW i dealer can repair the outer skin. However, due to the product-specific features of the LifeDrive module, there will be repair centres in which specialised employees take care of vehicles with damage to the aluminium or CFRP structure.

Full-LED headlights as standard, globally unique laser light available as an innovative option.
The slim headlights of the BMW i8 team up with the BMW kidney grille to form a horizontal unit emphasising the car’s width. The plug-in hybrid sports car is fitted as standard with powerful and energy-efficient full-LED headlights. In their lower section, the light sources are framed by a U-shaped bar into which are integrated the daytime driving lights, sidelights and direction indicators.

The intricately designed rear light clusters also feature the U-shape typical of BMW i cars. All of the lights on the BMW i8 are LEDs as standard.

The BMW i8 is the world's first series-produced vehicle to be available as an option with innovative laser headlights, which generate a pure-white, extremely bright light that is pleasant to the eye. The light is created through the conversion of the beams emitted by tiny laser diodes by means of a fluorescent phosphor material inside the headlight.

Laser lighting is monochromatic, which means that the light waves all have the same length. They also have a constant phase difference. As a result, laser lighting can produce a near-parallel beam with impressive luminance, which gives it an intensity a thousand times greater than that of conventional LEDs. The beam can also be adjusted extremely precisely. At the same time, the further optimised inherent efficiency of laser lighting means that laser headlights have less than half the energy consumption of even LED headlights, which are already very efficient; laser lighting generates approximately 170 lumens (a photometric unit of light output) per watt, whereas LED lighting generates only around 100 lumens per watt.

6. Intelligent connectivity for efficient driving pleasure: BMW ConnectedDrive and 360° ELECTRIC for the BMW i8.

Innovative driver assistance systems and BMW ConnectedDrive mobility services developed specially for BMW i serve to enhance the driving pleasure available on board the BMW i8 and the car's efficiency in equal measure. Intelligent connectivity optimises comfort, safety and the use of infotainment features while on the move. It also helps the driver to enjoy the performance attributes of the plug-in hybrid sports car to the full, while at the same time keeping energy consumption – in both petrol and electric form – as low as possible. BMW ConnectedDrive therefore effectively becomes an extension of the Efficient Dynamics strategy. The variety of tools it offers to further improve the balance between driving pleasure and energy consumption is unique worldwide and makes an additional contribution to the progressive character of the BMW i8.

Added to this, an extensive range of products and services from 360° ELECTRIC are available for the BMW i brand's second series-produced model. The 360° ELECTRIC portfolio focuses on home charging, charging at public charging stations, keeping drivers on the road and integration into innovative mobility concepts. As such it promotes the comfortable, reliable and flexible utilisation of electric mobility. This package of features also helps to make maximum use of the efficiency potential inherent in the vehicle concept and drive system technology of the BMW i8. Maximising the use of the electric motor and feeding renewably generated electricity into the high-voltage battery significantly improves the CO_2 rating of the plug-in hybrid sports car.

The BMW i8 is equipped as standard with an integrated SIM card which enables the intelligent connectivity required to use the mobility services from BMW ConnectedDrive. It also introduces navigation services specially developed to enhance electric mobility – such as the Range Assistant with dynamic range map – alongside familiar features, including the Concierge Services information facility, the Intelligent Emergency Call function and the Online Entertainment music-on-demand service. Moreover, drivers can use the BMW i Remote app to share information with their car at any time using their smartphone. For example, they can use their phone to control the charging process for the high-voltage battery and, while that is happening, also oversee the advance preparation of the vehicle before a journey.

Proactive drivetrain management ensures maximum efficiency and an optimum electric driving experience.

Like the vehicle concept – which offers an optimum platform for the broad-spread application of lightweight construction and optimised aerodynamic properties – and the BMW i8's drive system technology, intelligent energy management also plays its part in imbuing the car with its outstanding levels of efficiency. This function controls the interplay between the combustion engine and electric motor with the aim of optimising the balance between driving pleasure and fuel consumption in everyday use. This allows the BMW i8 to combine the performance of a pure-bred sports car with small car-like fuel consumption and emissions. A bespoke display and control concept and the link-up between the driver, car and outside world provided by BMW ConnectedDrive bolster the efficiency-enhancing effect of the energy management system. At the same time, they make the targeted management of energy flows in the BMW i8 something the driver can experience in considerable depth.

The specially adapted version of the fully digital instrument display fitted in the BMW i8 shows the car's speed and driving status information in a format and colour selected to suit the driving mode currently engaged. SPORT mode brings traditional circular instruments for speed and rpm readouts. In COMFORT mode a "powermeter" display replaces the rev counter to keep the driver up to speed on what the electric motor is up to, while ECO PRO mode adds an efficiency display, which encourages drivers to maximise fuel efficiency through their use of the accelerator.

The standard-fitted Navigation system Professional links up with a version of the proactive drivetrain management system likewise specially developed for the BMW i8. When the route guidance function is activated, the drivetrain management is configured to ensure the electric motor is employed as extensively as possible and as wisely as possible from an efficiency point of view. The system analyses the route in full and sets up the drivetrain management, including energy recuperation strategy, to run on purely electric power over low-speed sections of the journey in particular. In so doing it ensures, for example, that the battery has sufficient capacity to cover the final stage of a longer journey through a built-up area in all-electric mode.

The performance characteristics of the electric motor and the capacity of the high-voltage battery have been set up to allow BMW i8 drivers to meet their urban mobility needs on electric power alone. Special displays in the instrument cluster keep the driver permanently informed of the remaining range (in kilometres) in all-electric driving mode. The map display function of the Navigation system Professional also contains a dynamic range display

which uses a spidergram (range map) to show the area the car can cover on electric power alone. The map view also displays the location of public charging stations, allowing drivers to plan their journeys to incorporate a stop-off to charge the high-voltage battery. This means that additional battery capacity is then available for the remainder of the journey, which can either be used to continue the journey emission-free or to maximise the car's dynamic performance by using the electric motor and combustion engine in tandem.

An all-round solution providing intelligent connectivity: the driver assistance package from BMW ConnectedDrive.

As well as the Navigation system Professional, standard specification for the BMW i8 also features a cruise control system with braking function, a rain sensor including automatic headlight activation, and Park Distance Control (PDC) with sensors at the front and rear of the car. The BMW ConnectedDrive driver assistance package available as an option comprises High Beam Assistant, a rear view camera, Surround View, Speed Limit Info including No Passing Info display, and Collision Warning with pedestrian recognition and braking function.

The standard full-LED headlights of the BMW i8 also feature daytime driving light and cornering light functions, the latter illuminating the section of road the car is turning into. High Beam Assistant also helps to optimise visibility during the hours of darkness by assisting the driver in making maximum possible use of the high-beam headlights. The system uses a camera positioned on the windscreen near the rear-view mirror to detect oncoming traffic and vehicles travelling ahead to ensure the headlights dip in good time.

Meanwhile, the BMW i8 adds a rear-view camera and the Surround View system to PDC to ensure safe and comfortable manoeuvring. In addition to the rear view camera and the PDC sensors, the Surround View system also uses two cameras in the wing mirrors to go about its work. The data it collects is processed by a central computer which generates an overall view of the car and the area around it. This is then shown in the Control Display from a bird's-eye perspective. The additional Side View system uses a pair of cameras mounted in the front of the car to ensure the driver is able to spot cross-traffic early – for example, when pulling out from tight gateways.

The Speed Limit Info system displays speed and passing restrictions on the car's current route. It also sources the information it requires from the windscreen-mounted camera and checks it against the data from the navigation system. The camera identifies traffic signs at the edge of the road and overhead signs on motorways. Safety in city traffic is further enhanced by Collision Warning with braking function and pedestrian recognition. This

system can be used at speeds of up to 60 km/h and initially generates a visual warning in the instrument cluster if there is a danger of collision. If this is not heeded, an urgent warning then prompts the driver to intervene with a flashing version of the symbol and an audible signal. At the same time, the brakes are applied.

The BMW i8 also offers the driver the services of the BMW Head-Up Display which projects important driving data onto the windscreen. Information including the car's speed, status alerts from the driver assistance systems, Check Control messages, speed limits and overtaking restrictions can all be displayed in the driver's direct field of vision.

The ConnectedDrive Services option opens up an array of internet-based services to the driver. These include access to the BMW Online portal, the Online Entertainment features and the use of apps for further comfort and infotainment functions. The likewise optional Real Time Traffic Information system delivers precise traffic congestion warnings and diversion recommendations in real time.

360° ELECTRIC: emission-free driving in unbeatable comfort.
The BMW i8 plug-in hybrid sports car always achieves top marks for efficiency when it starts a journey with its high-voltage battery fully charged. For customers who have the use of a garage or private parking space, BMW i offers bespoke solutions under 360° ELECTRIC which enable the battery pack to be charged at home or at work safely, simply and extremely quickly.

BMW i provides owners with a charging cable to plug into standard domestic power sockets and a special charging point (the BMW i Wallbox). As well as supplying and assembling the Wallbox, BMW i also checks its installation in customers' homes and provides maintenance, advice and other services. Plugging the car into a domestic power socket returns the empty high-voltage battery to full charge in under three hours, while using the BMW i Wallbox completes the process in under two hours.

The BMW i Wallbox generates output of 3.7 kW and a current strength of 16 amperes to charge the high-voltage battery. The charging process can be monitored on a graphic display in the instrument cluster of the BMW i8, as well as via the BMW i Remote app on a smartphone. The driver can view the current battery charge level and the electric range possible (in kilometres) with the available energy capacity. Charging can be initiated either immediately or at a later time – in order to make use of cheaper electricity tariffs at night, for example. Added to which, charging the battery from the BMW i Wallbox allows the passenger compartment to be prepared in advance for an upcoming

journey so that the driver and passengers are greeted by a pleasant onboard temperature without having to use energy from the high-voltage battery to heat or cool the interior.

Thinking outside the box: innovative mobility services as an integral part of BMW i.

Beyond the vehicles alone, BMW i also specialises in the provision of comprehensive and bespoke mobility services designed to make personal mobility that much easier. These mobility services focus, for example, on solutions that make more efficient use of existing parking capacity and intelligent navigation systems that can also offer location-based information and the intermodal route planning function from BMW i ConnectedDrive. What all these services have in common is that they are designed to help users reach their destination more quickly, reliably and comfortably.

Beyond this, the BMW Group has made strategic investments in innovative mobility service providers. This task is now being handled by the venture capital company BMW i Ventures, which was established in early 2011 in New York. In this way, BMW i provides backing for new, promising start-up companies, ensuring that development work on innovations in the mobility sector continues and that these developments can eventually be put to use. One of the investments made by BMW i Ventures is in MyCityWay. The New York-based company offers a smartphone app which provides users with information on public transport, parking availability and local entertainment for over 70 cities at present. BMW i Ventures also has a stake in ParkatmyHouse, an online marketplace for private parking spaces. This flexible parking capacity management service eases the problem of parking shortages on public roads.

7. Innovative solutions for tomorrow's mobility:

BMW i stands for visionary vehicles featuring inspirational design and a particularly strong focus on sustainability. It also stands for a new approach to premium mobility – personal mobility and flexibility that is geared towards future requirements and user needs.

The high-voltage battery serving the electric motor is a central component in the vehicle concept of the BMW i8, as it is with the BMW i3. The battery was conceived and developed by the BMW Group to last the full life of the vehicle. Customers receive a warranty for the battery spanning eight years or 100,000 kilometres.

The BMW i8 also displays maximum efficiency when it comes to operating costs.
The vehicle concept and drive system technology of the BMW i8 help it earn top marks for efficiency. The low fuel consumption of the plug-in hybrid sports car brings with it not only impressively low emissions but also significantly reduced running costs.

The process for calculating the average fuel consumption of plug-in hybrid vehicles in the EU test cycle also takes into account the use of the available energy capacity in a fully charged battery. All of which allows the BMW i8 to boast unrivalled economy given its performance potential; average fuel consumption is 2.5 litres per 100 kilometres. The most rewarding way – environmentally and economically speaking – to drive the BMW i8 is in pure-electric mode, whereby the BMW i8 has a range of around 35 kilometres. This equates to an energy requirement of roughly 15 kWh per 100 kilometres. Assuming electricity charges of 0.25 euros per kWh, this results in energy costs of some 3.75 euros per 100 kilometres. At current prices in Germany, this is the equivalent of just over two litres of premium unleaded petrol per 100 km.

Comprehensive and flexible: service options from BMW i.
BMW i has a clear focus on providing a network of service outlets in order to maximise customer satisfaction and to cater to the specific needs of BMW i vehicles in terms of driving range. Standard service work can be performed by the existing BMW service network, while work on product-specific features of the carbon-fibre Life module and the high-voltage battery will be handled by expert personnel at the specially appointed BMW i dealers.

With the BMW i8, drivers can enjoy life at the wheel of a reliable vehicle with the added reassurance of being able to call on assistance round the clock should they need it, thanks to a comprehensive servicing system and mobility

guarantees, as well as intelligent comfort and convenience features. To make sure the BMW i8 runs smoothly in everyday operation, the battery and other electrical systems are monitored at all times, even while the vehicle is being driven. In the unlikely event of a malfunction, BMW service workshops can diagnose the problem, pinpoint faulty parts and get the BMW i8 up and running again as quickly as possible. The service provided is of exactly the same scope and standard as offered for conventionally powered BMW cars.

8. Technical specifications.
BMW i8.

			BMW i8
Body			
No. of doors/seats			2 / 4
Length/width/height (unladen)		mm	4689 / 1942 / 1293
Wheelbase		mm	2800
Weight, unladen (DIN)		kg	< 1490
Air resistance		C_d	0.26
Drive system			
Technology combustion engine			BMW TwinPower Turbo technology: turbocharger, High Precision Direct Petrol Injection, VALVETRONIC fully variable valve control
Config/No of cyls/valves			In-line / 3 / 4
Capacity, effective		cm^3	1499
Output		kW/hp	170 / 231
Torque		Nm	320
Technology electric motor			BMW eDrive technology: hybrid synchronous motor with power electronics, integrated charging module and generator mode for recuperation
Output		kW/hp	96 / 131
Torque		Nm	250
Total system output		kW/hp	266 / 362
Torque		Nm	570
High-voltage battery			
Storage technology			Lithium-ion
Driving dynamics			
Drive concept			Hybrid-specific all-wheel drive, combustion engine driving the rear wheels, electric motor driving the front wheels
Tyres front/rear			195/50 R20 / 215/45 R20
Rims front/rear			7J x 20 light-alloy / 7.5J x 20 light-alloy
Transmission			
Type of transmission combustion engine			6-speed automatic
Type of transmission electric motor			Automatic, two-stage
Performance			
Acceleration	0–100 km/h	s	4.4
	80–120 km/h	s	4.5
Top speed		km/h	250
Top speed electric		km/h	120
Range electric		km	approx 35
Consumption in EU cycle			
Combined		ltr/100 km	2.5
CO_2		g/km	59

Technical data are provisional.