THE FIRST EVER BMW iX.
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Contents.

All figures relating to output, charging capacity, performonce1 energy consumption1 emissions and range are provisional.

The electric power consumption and operating range figures are determined according to the European Regulation (EC] 715/2007 in the version applicable and as per the WLTP procedure. They refer to vehicles in the German market. Where a range is shown, WLTP figures toke into account the impact of any optional extras.

All values were calculated based on the new WLTP test cycle. WLTP values are taken as the basis for determining vehicle-related taxes or other duties based (at least inter olio] on CO, emissions as well as eligibility for any applicable vehicle-specific subsidies. Further information on the WLTP and NEDC measurement procedures con also be found at www.bmw.de/wltp.

Further information on official fuel consumption figures and specific CO, emission values of new passenger cars is included in the following guideline: 'Leitfoden uber den Kraftstoffverbrauch, die CO,-Emissionen und den Stromverbrauch neuer

Vehicle concept.

The future of premium mobility fueled by sustainable thinking.

The BMW iX is the first model based on a new, modular, scalable toolkit on which the future of the BMW Group will be built. Conceived from the outset for purely electric mobility, the iX sees BMW redefining the successful Sports Activity Vehicle (SAV) concept. The BMW iX combines locally emission-free driving pleasure, sporting agility and a persuasive operating range with lavish spaciousness and a character profile dedicated squarely to sustainability from the ground up. What's more, the BMW Group's new technology flagship brings together the company's latest developments in the strategic innovation fields of Design, Automated Driving, Connectivity, Electrification and Services to give it a product substance that is simply unrivalled by its competitors.

With its novel interior layout, bespoke drive and chassis technology, cutting-edge operating system and advanced driver assistance systems, the BMW iX marks the start of a new era in individual premium mobility. Its driving qualities open up a brand new form of poise and authority.

It shares a number of traits with the large and luxurious BMW X models: their proportions, their versatile character, as well as a raised seating position and the clear overview it affords of what is happening on the road. The body's extremely rigid structure, the spring and damper tuning, the large wheels and the excellent primary ride and acoustic comfort together create an impression of solidity and unwavering propulsive power. Meanwhile, traction, agility and directional stability all reap the benefits of the motors' instantaneous power delivery, electric all-wheel drive, the swift reactions of the near-actuator wheel slip limitation, precise steering and powerful brakes. The sublime cornering dynamics of the BMW iX are further helped by its even weight distribution, a low centre of gravity and the widest tracks of any model in its class. The result is an exceptionally well resolved driving experience underpinned by a premium carmaker's many decades of endeavour in the development and integrated application of highly sophisticated powertrain and chassis components.

The worldwide market launch of the BMW iX will get underway in November 2021. The model range at launch will comprise the BMW iX xDrive40 posting a combined output of 240

kW/326 hp, combined electric power consumption of 19.4-22.5 kWh per 100 kilometres (62 miles), CO2 emissions of 0 g/km and a range of up to 425 kilometres (264 miles) in WLTP test conditions.

Sustainable, flexible production at BMW Group Plant Dingolfing.

The BMW iX will be produced at BMW Group Plant Dingolfing. It is deeply integrated into the existing manufacturing structures there and will be built on a flexible assembly line together with models from the BMW 5 Series, 7 Series and 8 Series ranges. The plant in Lower Bavaria is the first facility in the BMW Group's international production network to manufacture all-electric, plug-in hybrid and combustion-engined models on a single assembly line.

In order to have the necessary flexibility to handle such a variety of drive systems, vehicle assembly at Dingolfing was both expanded and restructured, particularly in the areas of swivel assembly and power unit installation. Zones were created there for delivering and assembling the electrified axles and high-voltage batteries, while the wedding station where the powertrain is installed in the body was reconstructed. This included adding a new highly automated assembly facility for installing the high-voltage batteries.

Around €400 million has been invested in the company's largest manufacturing site in Europe to ready it for production of the BMW iX. A good many of these reconstructions and restructuring measures for the BMW iX will also benefit the forthcoming generations of the BMW 7 Series and BMW 5 Series, which will start to roll off the production line in Dingolfing in the next few years, with purely electric variants already announced for both model ranges. The BMW iX is a major trailblazer on the production side, too, and is paving the way for future technologies to be incorporated into the plant and production system - as is the case with digital methods of employee training, automation of logistics processes, electrical commissioning and validation of driver assistance systems.

Broad-based know-how: on-site vehicle and electric drive manufacturing.

The vast technological expertise built up at the Dingolfing site will be invested in production of the BMW iX. For instance, the car's lightweight body with its intelligent material mix of aluminium, die-cast aluminium, carbon fibre, and high-strength and ultra-high-strength steels doesn't only benefit from the know-how gained from manufacture of the BMW 7 Series - it also draws on the knowledge garnered during small- scale manufacture of bodies for Rolls-

Royce and production of the aluminium chassis for the BMW i3. Dingolfing is home to both.

Key components of the fifth-generation BMW eDrive technology are also made directly on site, including the highly integrated electric drive system and the high-voltage batteries fitted in the BMW iX. Far from serving this facility alone, Dingolfing's component plant 02.20 operates as the BMW Group's global competence centre for battery and electric motor production. It is currently undergoing major expansion to accommodate a workforce of up to 2,000 employees. It will be able to supply electric drive systems for more than half a million electrified vehicles a year as soon as 2022. In the past year alone, the number of employees working in electric drive system production at the site doubled to over 1,200. This expansion went hand in hand with extensive training measures. The Dingolfing site is therefore a prime example of how the BMW Group's plants are being successfully transformed to prepare them for electric mobility and digitalisation.

Sustainable production with locally generated green energy.

The electric energy needed to manufacture the BMW iX comes entirely from renewable sources in the region. This was achieved by concluding an agreement to have electricity supplied directly from two hydroelectric power plants on the Isar and Lech rivers. In addition, the Dingolfing plant will - like all other BMW Group facilities - attain carbon-neutral status in the course of this year by means of appropriate offsetting and certificates. The BMW Group already succeeded in more than halving resource consumption per vehicle produced in the period from 2006 to 2019. The intention is to reduce the production carbon footprint per vehicle by a further 80 per cent by 2030.

Waste prevention, recycling, logistics and water consumption are further areas in which BMW Group Plant Dingolfing is continuously making advances with the aim of improving sustainability. The recycling rate, for example, exceeds 90 per cent. Electric trucks for internal goods transport will enter into service over the course of 2021. And more than 40 per cent of the water needed is sourced from the plant's own wells to reduce the burden on the region's drinking water reserves.

Chassis technology and driving experience.
Assured dynamism, luxurious ride comfort.

The BMW iX body structure is perfectly geared to blending superb ride comfort with sporty handling characteristics, and the same is true of the design principle behind the car's chassis technology and its tuning. The aluminium spaceframe construction features an intelligent material mix for the body that increases rigidity at the same time as minimising weight. This has a similarly beneficial effect on passive safety, driving dynamics and electric power consumption. Sophisticated chassis technology enhances comfort on long journeys, while also lending itself to dynamic performance with high levels of longitudinal and lateral acceleration. Thanks to its well-balanced driving characteristics, the BMW iX feels solid and comfortable out on the road, yet also exudes fleet-footed agility.

The double-wishbone front axle is perfectly equipped to endow the iX with precise steering characteristics and excellent ride comfort. This design principle separates the wheel guidance and damper functions, thereby ensuring optimum road contact over the springs' full range of travel. As a result, high levels of lateral acceleration can be achieved without compromising ride comfort. At the same time, the dampers are unaffected by lateral forces, allowing them to provide very sensitive response on uneven road surfaces. The steering likewise remains largely free of the resulting disruptive forces. The rigid connection of the aluminium front axle subframe to the body is one of the factors in the steering's direct response. An aluminium shear panel combines with the high-voltage battery's casing to further increase rigidity at the front end. This light metal is also used for the suspension strut forks, swivel bearings and control arms, resulting in a further weight saving. The elastic bearing in the front axle subframe for the electric motor that drives the front wheels ensures optimum acoustic isolation from the body.

The car's front and rear axle together form an almost perfect roll axis, resulting in exceptionally harmonious transient and roll behaviour when cornering. The five-link rear axle is a purpose-developed version for all-electric models that promises precise wheel guidance and optimum directional stability. The rear axle subframe's large supporting base has a positive effect on both handling dynamics and acoustic comfort, while the specially tuned elastokinematics primarily benefit ride comfort. The axle control arms are made from aluminium, as is the rear axle subframe, and they have forged and sheet-metal shell constructions respectively. The motor powering the rear wheels has an elastic mounting inside the axle subframe that offers effective acoustic isolation. By bolting the spring struts to the bottom of the camber arms, the

axle's overall height is reduced, thereby improving both the through-loading width and the luggage capacity of the BMW iX.

Lift-related dampers optimise balance between dynamism and comfort.
The chassis technology fitted as standard on the BMW iX includes anti-roll bars at the front and rear, as well as a lift-related damping system that plays a major part in achieving the balance between dynamism and comfort familiar for a BMW. Extra hydraulic damping is incorporated into the damper, which adjusts the damper firmness progressively according to the changing spring travel. This prevents excessive body dive when driving over large bumps, while low damping forces around the centre position ensure high levels of comfort when travelling over minor imperfections in the road surface. The lift-related damper set-up contributes to excellent transient behaviour in corners, too.

The first line of defence against body vibrations is the conventional piston and base valve. Only under more demanding circumstances with a large degree of lift will a second piston drop down into the inner sleeve of the damper to generate an additional damping effect. The lift-related extra damping is provided on rebound at the front axle and during compression at the rear.

The spring struts feature a triple-path strut mount, where the suspension spring and auxiliary spring are connected directly to the body, while the rubber mount only has to absorb the damping forces, allowing the elastokinematics to be tuned independently of vehicle load.

The dampers at the front and rear axles are controlled electronically and individually for each wheel. This increases agility and body stability when taking corners at speed, while also enhancing ride comfort. Damping force is adapted by means of continuously adjustable valves, which are controlled to adjust force as required in just a few milliseconds after factoring in longitudinal and lateral acceleration, vehicle speed, steering angle, body acceleration and wheel acceleration at the front axle. There is a choice of two damper control settings with clearly distinguishable characteristics optimised for sporty driving or a more comfortable ride respectively. The damper setting forms part of the overall vehicle set-up that drivers can activate using the My Modes button on the centre console.

Servotronic steering with variable ratio as standard.
The BMW iX comes with an electric steering system as standard that combines Servotronic

speed-sensitive power assistance with a variable rack ratio. Making its debut in the BMW iX, the new steering gear therefore ensures exceptional directional stability for straight-line driving at high speeds together with excellent precision and clear feedback when powering through corners. Steering comfort when parking and manoeuvring is also improved.

Unrivalled traction and handling stability thanks to electric all-wheel drive and near-actuator wheel slip limitation.

The electric all-wheel-drive system in the BMW iX transmits exactly the right amount of drive torque to the front and rear wheels in all driving situations. Its intelligent control ensures the car will continue to make effortless progress at all times, even in adverse weather and road conditions. Power transmission is fully variable and is matched exactly to current requirements, with the full repertoire available from highly efficient pure rear-wheel drive through to an all-wheel-drive set-up that maximises traction.

With a view to further improving traction and handling stability, the BMW iX also comes equipped with near-actuator wheel slip limitation technology developed specifically for the brand's electrically powered models and now fitted in tandem with all-wheel drive for the first time. This enables the vehicle to accelerate rapidly in a perfectly straight line, even on slippery road surfaces, thanks to extremely quick and precise control responses. Specially designed for the instantaneous power delivery of electric drive units, this traction control system is integrated into the motor management. This eliminates the long signal paths to the control unit for the DSC (Dynamic Stability Control), meaning that the corrective inputs at both the front and rear wheels are applied much faster and with exceptional precision, with coordination between the axles as well.

Precisely controllable driving dynamics right up to the limits of performance.

While the motor management's integrated near-actuator wheel slip limitation function mainly nips loss of traction in the bud while accelerating, the DSC system is responsible for optimising directional stability and steerability in dynamic situations by selectively applying the brakes at individual wheels. Its primary functions include the Anti- lock Braking System, traction control system and electronic stability control. SPORT mode can be configured to allow a higher degree of wheel slip, helping the driver to explore the car's performance limits.

Judicious oversteer can be used to execute controlled drifts, for instance. Drive-off support can also be activated in the vehicle settings.

Further DSC functions that enhance handling stability, agility and dynamism in the iX include Performance Control, Brake Standby, Brake Assist, fading compensation, Dry Braking and Trailer Stability Control. Meanwhile, comfort is given a further boost by the drive-off assistant and Automatic Hold functions. When braking sharply on road surfaces with varying grip levels, a steering input helps the driver to correct any ensuing vehicle yaw.

Integrated braking system optimises stopping power and pedal feel.
The BMW iX is the only model in its segment to be fitted with an integrated braking system that delivers outstanding stopping power and reliable pedal feel. Thanks to this cutting-edge technology, the brake activation, brake booster and braking control functions are brought together within a compact module. The required brake pressure is triggered using an electric actuator, an operating principle that generates pressure more dynamically and also ensures significantly faster and more precise interventions from the driving stability control system. The integrated braking system generates a degree of stopping power adjusted precisely to the driver's inputs, while also producing consistent pedal feel unimpaired by any annoying pulsing as a result of wet road surfaces, significant lateral acceleration or high brake temperatures.

Unwanted pedal feedback is likewise eliminated when recuperation is being used to slow the car. The integrated braking system enables the recuperation and brake pressure elements of the overall stopping force to be combined with great precision. Consequently, the driver enjoys superb pedal feel in all situations, as applying the same pressure to the pedal will always generate the same stopping power. Balancing the effects of recuperation and friction braking to suit the situation in this way enables drivers to determine how Brake Energy Regeneration is applied at all times. They have a choice of recuperation when the accelerator is released (one-pedal feeling in driving position B), or using the coasting function with purely adaptive recuperation of brake energy or a combination of the two (in driving position D). Each of these settings exploits the full efficiency potential of Brake Energy Regeneration.

Aerodynamically optimised light-alloy wheels and noise-reduced tyres increase both range and driving comfort.
The BMW iX rides as standard on 21-inch light-alloy wheels with an aerodynamically optimised design. There is also the option of light-alloy wheels in a (unique to the class) 22-inch format, whose special design principle reduces weight and enhances aerodynamics.

The light-alloy wheels are fitted with innovative tyres specially designed for the BMW iX and feature integral noise dampening for excellent acoustic comfort. A layer of foam on the tyre's inner surface absorbs the noise produced by vibrations within the tyre's cavity, which is filled with air causing it to act as a resonator. This leads to a substantial reduction in the level of tyre noise reaching the BMW iX cabin.

Driving pleasure, safety, comfort and efficiency are all further enhanced by the standard Tyre Pressure Monitor, a more advanced version of which is making its debut in the BMW iX. The system's sensors relay data on tyre pressure and temperature for each individual wheel, which is then processed to generate corresponding readouts in the control display. The Tyre Pressure Monitor also factors in specific data on the tyres fitted, including manufacturer, dimensions and production date, which can be scanned from a QR code at the factory or service partner. Exclusive to BMW, this system also simplifies use of the tyre pressure indicator in the iDrive menu. In the menu item for tyre selection, the driver has only to indicate whether the vehicle is partially or fully laden to view information on both the ideal and current tyre pressures and decide whether there is any need to adjust them.

The digital tyre diagnosis function making its debut in the BMW iX also serves to minimise the risk of punctures. The only one of its kind in this segment, it works by processing the data from the Tyre Pressure Monitor in the BMW backend together with the pressure, temperature and wheel speed readings to forecast the remaining tyre life. This complements the functionality of the Tyre Pressure Monitor by picking up any indications of tyre damage.

Drive system, aerodynamics and intelligent lightweight design.
A BMW Efficient Dynamics for a new era.

When it introduced the Efficient Dynamics technology package back in 2007, the BMW Group brought out a concept that remains unrivalled in the automotive industry to this day. This strategy has centred on consistently reducing fuel consumption and the accompanying CO2 emissions, while bringing about a steady increase in driving pleasure. BMW Efficient Dynamics involves scrutinising each and every aspect of vehicle development to gauge how it can help to optimise sustainability. This applies in particular to the drive system, of course, but also to energy management, aerodynamic properties and weight reduction rooted in intelligent lightweight design. The BMW iX provides a compelling demonstration of how this all-embracing approach has been carried over into a new era of individual mobility.

Since the programme's inception, the innovations spawned by BMW Efficient Dynamics have been systematically deployed in all new models - as standard and throughout the portfolio. This enabled the BMW Group to bring down fleet consumption and the resulting CO2 emissions by more than 0 per cent in the period between 2007 and 2020. And it laid the foundations for the company to go beyond the carbon targets set out by the European Union and take the market lead in this regard. The measures implemented also make the entire model range more appealing by enhancing both economy and driving pleasure. As a result, BMW models have developed a premium character with a prominently futuristic streak that clearly sets them apart from their rivals.

Electrification injects BMW Efficient Dynamics with added impetus. The shift towards greater sustainability initiated by BMW Efficient Dynamics is gaining pace thanks to the ongoing electrification of the powertrain portfolio. This has encouraged the BMW Group to set itself ambitious sustainability goals for the near future. The aim for 2030 is to achieve a further cut in CO2 emissions during the vehicle use phase of over 40 per cent per kilometre driven compared with 2019.

Ever since it was launched, the BMW i brand has been a pioneering force in the field of electric mobility while championing a holistic focus on sustainability. The brand was born from Project i, which was also launched in 2007 as the first step towards the development of a production

model designed from the ground up for purely electric mobility in urban centres. The BMW i3 arrived on the global market in 2013 and to this day represents the epitome of premium urban mobility with zero tailpipe emissions. The BMW i brand has since acted as a breeding ground for electrified drive systems and numerous other innovations for enhanced sustainability developed under the umbrella of BMW Efficient Dynamics.

Hallmark BMW solutions for sustainable premium mobility.
Two electric motors and four driven wheels deliver a fresh new take on BMW's signature driving pleasure in the BMW iX. The high efficiency of the drive units and cutting-edge battery cell technology give the car a long operating range and, by extension, exceptional everyday usability. And extremely powerful charging technology means that only short mid-journey stops are required to replenish the energy content of the high-voltage battery. Now in its fifth generation, the latest BMW eDrive technology provides an ideal platform for customers to enjoy every aspect of locally emission-free mobility in a premium car.

The car's operating range has been increased - in typically BMW fashion - through a high level of drive system efficiency and the high-voltage batteries' optimised energy density, rather than with disproportionately large batteries. The latter would increase vehicle weight and therefore have an adverse effect on driving dynamics and electric power consumption. The drive system and battery technology in the BMW iX teams up with intelligent lightweight construction and aerodynamically optimised design to create an ideal overall package which delivers the sporting ability, leading-edge sustainability and impressive practicality for which the brand is renowned.

The drive units and high-voltage batteries included in this fifth generation of BMW eDrive technology are flexibly scalable in their power output and energy content, allowing them to be fitted in various different model variants. One such version of the latest BMW eDrive technology will be available from the market launch of the BMW iX. BMW iX has one highly integrated drive unit at the front axle and one at the rear. In the BMW iX xDrive40 their combined maximum output is 240 kW/326 hp (front axle: 190 kW; rear axle: 200 kW; system output: 240 kW).

The drive system: highly integrated and superbly efficient.
The fifth generation of BMW eDrive technology is centred around a drive unit which brings together the electric motor, power electronics and transmission as a highly integrated package

within a single housing. This design approach enables a power density around 40 per cent greater than earlier electric drive systems could offer. The highly integrated electric drive system topology is a key factor in the standout efficiency of the BMW iX. Added to which, it also allows a substantial reduction in the installation space required relative to the power the drive system produces.

The electric motors developed in-house by the BMW Group have an efficiency factor of 93 per cent in their latest version. They therefore not only better the figures achieved by current combustion engines (less than 40 per cent), but also rank among the leading electric drive units in their class. Their exceptional efficiency plays a key role in enabling the BMW iX xDrive40 to record a figure of 19.4-22.5 kWh per 100 kilometres (62 miles) and CO2 emissions of 0 g/km in similar WLTP conditions. The electric motors in the BMW iX also stand apart with their super-fast power development, sporty performance profile and acoustic serenity.

Special motor concept: more dynamic appeal, less reliance on critical materials.
The specific qualities of the electric motors are the result of a design which marks a fundamental departure from the technology normally found in competitor units. They work according to the principle of an electrically excited synchronous motor. The excitation of the rotor in the BMW iX motors is not induced by fixed permanent magnets, but the feed-in of electric energy. This allows the use of rare earths (required for magnetic components) to be avoided altogether in the manufacture of the rotor.

The power development of the drive system also benefits from its purpose-built design. The motor puts all of its peak torque on tap immediately on pulling away and maintains it over an extremely broad rev band. The precisely controlled excitation of the rotor using electricity gives the motor very high power density as well. Combined torque peaks at 630 Nm (464 lb-ft) in the BMW iX xDrive40. The defining trait of the driving experience on board the BMW iX is, then, power development that is not only lightning fast but also remarkably consistent, underscoring the car's brand-typical sporting excellence. The BMW iX xDrive40 hits the 100 kmph mark from rest in just 6.1 seconds. The top speed of BMW iX is an electronically governed 200 km/h (124 mph).

The drive power produced by the motors is in each case channelled via a single-speed transmission - installed in the same housing -

to the front and rear wheels along the shortest possible path. As well as improving the overall efficiency of the drive system, this also enhances the agility, traction and directional stability of the BMW iX to noticeable effect. The centrally controlled electric all-wheel drive links up with the chassis control systems to enable extremely rapid and precise metering of drive power according to the driving situation, the road conditions and the driver's wishes.

Adaptive recuperation of energy during a journey can be adjusted to the situation at hand. Adaptive and individually regulated recuperation of braking energy allows the efficiency of the drive system in the BMW iX to be further increased. Intelligently connected drive management means the intensity of the brake energy recuperation can be adapted to the road situation, as detected by data from the navigation system and the sensors used by the driver assistance systems. When approaching a junction, for example, the degree of recuperation can be increased, while at the same time feeding energy back into the high-voltage battery and strengthening the deceleration effect. This targeted control of deceleration through energy recuperation therefore helps to increase range, too.

On the open road, meanwhile, the coasting function enhances comfort and efficiency, the car "freewheeling" with no drive power whenever the driver takes their foot off the accelerator. Adaptive adjustments according to the driving situation are also carried out when the navigation system's route guidance function is not activated, precise control of the adaptive recuperation enabling instantaneous responses to changes in the driving situation. If the car draws a lot closer to a vehicle ahead while coasting, for example, recuperation will be initiated immediately. Brake Energy Regeneration will be cancelled, on the other hand, when approaching a junction where the traffic lights have turned from red to green.

Adaptive recuperation is one of the standard settings activated when the driving position D is engaged using the selector lever on the centre console. Alternatively, the driver can choose a high, medium or low Brake Energy Regeneration setting for all driving situations in the iDrive menu. In driving position D, the new BMW iX pulls away at minimal speed as soon as the brake pedal is released, increasing comfort when manoeuvring and in stop-start traffic. And activating driving position B with the selector lever generates the one-pedal feeling characteristic of the BMW Group's electric vehicles by driving with the maximum degree of recuperation. In this case, recuperation remains active even when the vehicle comes to a stop, which also provides a comfortable means of keeping the vehicle stationary on both uphill and downhill slopes until it sets off again.

Graphics showing the driving status and energy flow can be called up in the BMW iDrive system's Live Vehicle menu. When either the PERSONAL or EFFICIENT settings have been selected with the My Modes button, the control display clearly indicates whether the electric motors in the BMW iX are currently providing propulsive power, recuperating brake energy to feed it back into the high-voltage battery or have been de-energised (front axle)/ switched to torque-neutral (rear axle) during a coasting phase. Additional information is also shown to the driver whenever adaptive recuperation is used to slow down the vehicle. The reason for decelerating - such as a turn-off, roundabout or motorway exit ahead - is stated in the control display.

The Efficiency Trainer function is also available in the Live Vehicle menu with EFFICIENT mode activated. Hints for driving in a smoother, fuel- efficient manner - taking into account the current driving situation - appear in the instrument cluster, where they combine to create a total mobility experience. The graphics visualising recommended techniques for accelerating or slowing down as efficiently as possible motivate drivers to collect bonus miles. The driver also receives verbal suggestions and tips for reducing electric power consumption and increasing range from the BMW Virtual Assistant.

The range horizon that can be brought up in the information display also does its bit to create a highly engaging and eye-opening driving experience. It visualises the extent to which the driver can alter the range of the BMW iX should they adopt a very dynamic or extremely economical driving style, for example. This provides a clear and comprehensible illustration of how range changes depending on driving style. The range calculated on the basis of the electric power consumption recorded so far appears in the centre of the graphic together with a prediction of what the likely range will be based on driving style to date. The maximum range achievable with a very efficient driving style is also displayed by way of comparison, together with the minimum range that could be expected if the driver uses the vehicle's power to extremely sporting effect. If route guidance is activated, the distance to the pre-programmed destination will be accompanied by additional information on the high-voltage battery's anticipated charge level upon arrival. This provides the driver with a conclusive guide to the potential range spectrum and helps them plan the remainder of the journey accordingly.

High-voltage battery: optimised energy density, increased range. The fifth-generation BMW eDrive technology also includes a high- voltage battery with state-of-the-art battery cell

technology. Its volumetric energy density on a cell level is around 40 per cent higher than in the high-voltage battery of the BMW i3 from model year 2020. And the latest generation of the high-voltage battery also displays superlative qualities when it comes to performance capability, charging and discharging, durability and safety. Its mass to storage capacity ratio is exceptionally good, too. The high-voltage batteries in the BMW iX are cased in aluminium and positioned low down in the vehicle floor as an integral component of the body.

The latest advances made in the field of battery technology are the result of many years of relentless research and development work.
The BMW Group has been producing modules and batteries for vehicles with electrified drive systems since 2013. The company can call on immense reserves of expertise and experience when it comes to both battery cell technology and the manufacture of model-specific high-voltage batteries. The BMW Group has carried out underlying research in the fields of cell chemistry and cell design, enabling it to give precise specifications - geared to the particular requirements of use in electrified vehicles - to external battery cell producers.

The prismatic battery cells supplied by these companies are used to produce battery modules at the assigned BMW Group production plant. An independently developed modular system enables these modules to be arranged flexibly and turned into model-specific high-voltage batteries. The batteries for the BMW iX are covered by a warranty valid for eight years or up to 160,000 kilometres.

The BMW iX features two high-voltage batteries positioned low in the vehicle floor. In the BMW iX xDrive40 the high-voltage batteries are made up of ten modules, each with 18 cells. Their net energy content is 71 kWh (gross energy content: 76.6 kWh).. This gives the BMW iX xDrive40 a range, as per the WLTP test cycle, of up to 425 kilometres (264 miles).

Integrated heating and cooling system with heat pump function, anticipatory thermal management for the battery.
The BMW iX is equipped as standard with an integrated heating and cooling system for the cabin, together with its high-voltage battery and its drive system that operates using an exceptionally efficient heat pump function. The system comprises three cooling/heating circuits that can be interconnected by means of electric valves with a shared expansion tank. While driving at low outside temperatures, for example, the excess heat generated by the drive units is used to warm up the high-voltage battery. A two-level cooling module, a refrigerant

compressor, two evaporators, a water-cooled condenser and a high-performance control unit together ensure optimum temperature control for both the BMW eDrive components and the vehicle interior in any operating state and in all regular weather conditions.

The latest version of the heat pump achieves a remarkably high efficiency factor by making use of ambient heat and heat from dehumidification - as well as the waste heat from the motors - for energy-efficient operation. This results in a gain in range of some 10 per cent compared with conventional electric heating and cooling systems. And range can be extended by as much as 40 per cent in extreme situations, such as driving in stop-start traffic when a high level of heating is required.

The integrated heating and cooling system also ensures optimal temperature control for the high-voltage battery in highly dynamic driving situations with high power requirements and when rapid- charging from a DC charging station. If the navigation system's route guidance function is active and has scheduled a mid-journey stop for the BMW iX at a fast-charging station, anticipatory thermal management will automatically pre-condition the battery beforehand. Warming up the high-voltage battery or cooling it down as appropriate means it will be at the optimum temperature for quick and efficient charging at maximum capacity upon arrival at the charging station. Thermal management takes a number of factors into account here, including current battery temperature, remaining range, the predicted charging rate and the amount of charging planned as part of the overall route calculation.

Combined Charging Unit for fast charging at up to 150 kW.
Alongside the standalone design principle of the electric motors and the optimised high-voltage batteries, new charging technology is also part of the fifth-generation BMW eDrive toolkit. The Combined Charging Unit (CCU) in the BMW iX enables an extremely high level of flexibility when it comes to using charging stations of different types. It therefore makes recharging the car with electric power a quick and easy process across all international car markets. The CCU also supplies consumers connected to the 12V on-board power supply of the BMW iX - such as the lighting and audio system - with electric energy. It brings together the functions of the voltage transformer, charging electronics and power distribution, plus the management systems for the drive, high-voltage and charging functions of the drive units, into a single package. This highly integrated control unit is therefore a key player in creating the standout electric driving experience in the BMW iX.

Hooking up the high-voltage battery to a conventional domestic power socket or a Wallbox allows it to be topped up with AC power from both single-phase and three-phase mains connections at a charging rate of up to 11 kW. Using this method, the BMW iX xDrive40 requires less than eight hours to charge its battery from empty to full capacity.

A significantly higher charging output and the shorter charging times this enables can be accessed by using a DC fast-charging station.
The maximum charging capacity of the BMW iX xDrive40 is 150 kW, meaning that range can be extended by over 95 kilometres (59 miles) in ten minutes when it is being fed with electricity from a high-power charging station and the battery charge starts at 10 per cent. And it would take around 31 minutes (BMW iX xDrive40) to increase the high-voltage battery's state of charge from 10 to 80 per cent of full capacity.

BMW Charging: for easy charging both at home and away from it.
The BMW Charging portfolio presents BMW iX drivers with a selection of bespoke charging products and charging services. Besides the BMW Wallbox for charging at up to 11 kW, other home charging products will be offered in collaboration with expert partners. The Flexible Fast Charger offering charging rates of up to 11 kW that also comes optionally comprises a charging cable approximately six metres in length that allows the BMW iX to be hooked up to a domestic socket or - using an adapter (also available) - a high-power industrial socket.

Optimised aerodynamics increase range.
Fully capitalising on the benefits provided by the all-electric drive system and meticulously implementing proven measures from the past has served to optimise the aerodynamic properties of the BMW iX, which in turn has a positive impact on both its performance and range. The low aerodynamic drag can be attributed not just to the remarkably streamlined body finished in the new design language, the tapered glasshouse, flush-fitting door openers, extremely slender exterior mirrors and precisely crafted aero edges, but also to a host of other measures besides. As a result, the BMW iX boasts outstanding aerodynamics for its class, with a drag coefficient (Cd) of just 0.25.

The bespoke aerodynamics elements for the front end, rear end, underbody and wheel areas alone add over 65 kilometres (40 miles) to the car's range. Some 25 kilometres (approx. 16 miles) of this can be attributed to the third-generation active air flap control at the front of the vehicle, which directs cooling air to the drive units and brake system as and when required. In

normal driving situations, both the BMW kidney grille and the air intakes at the bottom of the front apron are completely blanked off. This default setting allows the air to flow around the vehicle unhindered, thereby significantly reducing aerodynamic drag. Opening of the electronically controlled air flaps is activated on demand when maximum cooling air is required or during operation of the heat pump for the automatic climate control. The flaps can be adjusted gradually, allowing cooling air to be directed efficiently to the brake air ducts and drive components in carefully metered quantities.

With the Sport package, the largely closed air flaps are complemented by precisely engineered apertures in the outer areas of the front apron that further optimise the airflow along the vehicle. These vertically arranged Air Curtains divert the airstream in such a way that it flows along the faces of the wheels without generating any of the customary turbulence.

Meanwhile, the way in which the glasshouse tapers towards the rear combines with specially designed air deflectors to reduce aerodynamic drag at the rear as well. Here, vertical Air Blades either side of the rear window and the roof spoiler together form a sharp aero edge that minimises the amount of vacuum produced behind the vehicle and its negative impact on aerodynamics. The combined benefits of the Air Curtains and Air Blades extend the car's range by approximately 15 kilometres (9 miles).

Another drag-reducing feature on the BMW iX is the sealing of the underbody to maximum effect. Spanning the largest area between the front and rear axle is the smooth aluminium casing of the high-voltage battery located low down in the vehicle floor. At the front end, streamlined displacement elements purposefully direct the oncoming air past the wheels to prevent adverse turbulence. And airflow along the rear is smoothed by the large rear axle cover and the rear apron's diffuser. Besides this, all other underbody components have also been meticulously optimised in terms of their aerodynamic impact. Overall, the aerodynamics measures for the underbody of the BMW iX account for around 10 kilometres (6 miles) of its long range.

Lower air resistance and weight: Air Performance Wheels.
The BMW iX rides as standard on 21-inch light-alloy wheels with an aerodynamically optimised design. Their mostly enclosed surfaces bring about an effective reduction in the amount of air turbulence produced around the wheels. The Air Performance Wheels - optionally available in 21-inch and 22-inch formats - help to reduce drag in a very innovative

way. The BMW Group is the world's first carmaker to use this groundbreaking wheel design, which unites optimised aerodynamic properties with a sophisticated sense of elegance. They weigh about 15 per cent less than conventional light-alloy wheels with an aerodynamically enhanced design, further adding to the efficiency of the BMW iX.

The Air Performance Wheels comprise an aluminium base wheel with customised inserts between the spokes that give them a flat design, especially on the outside of the wheel, resulting in far smoother airflow. Range is increased by as much as 15 kilometres (9 miles) courtesy of the Air Performance Wheels.

The dimensions of the base wheel ensure it meets all the structural challenges involved in transferring dynamic driving forces to the road. Meanwhile, inserts with a high-class finish are responsible for achieving the necessary aerodynamic impact, while also offering additional scope for customising the wheels. The Air Performance Wheels can be specified as an option for the BMW iX in a choice of three 21-inch and two 22-inch variants.

Intelligent material mix: perfect combination of weight reduction and maximum rigidity.
The aluminium spaceframe construction used for the body structure of the BMW iX is another first for its segment. The materials selected and manufacturing processes employed are both precisely matched to the requirements of each specific component in order to increase body rigidity and crash safety while keeping weight as low as possible. The cutting-edge mix of materials for the bodyshell includes CFRP and high-performance thermoplastics, along with high-strength steels and aluminium. With its targeted use of different materials, sometimes in combination with one another, the innovative design of the supporting structures and the wide array of production techniques used in the process, the BMW iX once again showcases the BMW Group's unrivalled technological expertise in the field of intelligent lightweight design for the automotive sector.

Carbon Cage: lightweight design that makes a visible and measurable difference.
Remarkably light yet extremely torsion-resistant CFRP components in the body's side, rear and roof areas form a key element of the safety concept for the BMW iX passenger cell. At the same time, the car's agility is given a further boost by the resulting weight optimisation. The CFRP components for the side frame, rain channels, roof frame, cowl panel and rear window frame together form a 'Carbon Cage' featuring for the first time in the BMW iX body. The

BMW Group has employed its many years of experience in working with this high-tech lightweight material - amassed during production of the BMW i models and the current BMW 7 Series, for example - to use CFRP intelligently to reinforce the body while also saving weight. The Carbon Cage has evolved from the Carbon Core used in the 7 Series and allows the fascinating qualities of this high-tech material to be appreciated visually as well.

Fitting a lightweight CFRP side frame reduces the vehicle's weight while also helping to keep its centre of gravity low. The cowl panel and rear window frame components are manufactured from continuous fibre- reinforced thermoplastics (CFRTP) using an all-new method. Together, they constitute a particularly effective lightweight design measure. The innovative blend of materials forms the basis for an exceptionally slim profile that adds to the sense of spaciousness in the cabin. What is more, brackets for control units, washer fluid lines and wiring harnesses can also be incorporated into these components. The CFRTP construction increases stiffness while also achieving a weight saving of some five kilograms compared to similar elements made of steel.

The CFRP used in the side frame and at the rear end lends an added visual flourish to the BMW iX: the carbon components' striking fibre structures clearly stand out in the entrance area and when the tailgate is open, providing a further reminder of the car's high-tech character. And the multi-layered arrangement of the carbon fibres creates a three-dimensional feel.

The all-new BMW iDrive.
Creating a natural dialogue between user and car.

The new BMW iDrive is an instrumental factor in the user experience on board the BMW iX. The most recent incarnation of the display and operating system takes the interaction between driver and vehicle into the digital future. The new BMW Operating System 8, a new generation of displays, controls and software, plus extremely powerful connectivity and data processing give the BMW iX all the tools needed to serve as an intelligent and proactive partner in any situation. The intuitive, multimodal operation is thereby turned into a natural dialogue between the user and their car that seeks to precisely tailor all the functions controlled via BMW iDrive to the driver's needs and preferences as the situation demands. The new BMW iDrive was designed with a clear focus on dialogue- based interaction using natural language and on touch operation. Consequently, new features available immediately include the expanded capabilities of the BMW Virtual Assistant, which uses a new graphic to communicate with the vehicle's occupants, and the BMW Curved Display - the all-new fully digital display grouping in the BMW iX formed by the information display and control display and angled towards the driver.

My Modes for an all-encompassing driving experience.
The new My Modes use an all-encompassing interplay of various functions to conjure special moments during the journey. Based on a combination of vehicle characteristics and interior ambience suited to the situation at hand, they can be selected very easily by voice command, by touch from the My Modes menu in the control display or using a dedicated button on the centre console. This button replaces the Driving Experience Control switch in the BMW iX and offers an extended range of functions.

There is a choice of three modes in the BMW iX: PERSONAL, SPORT and EFFICIENT. They each activate specific settings for the drive system and chassis, the style of the displays, the ambient lighting's colour scheme, the drive unit's soundtrack and the seat backrest width. EFFICIENT mode is clearly focused on sustainable driving. Here, changes to the accelerator response and tips shown in the information display help the driver to operate the BMW iX using as little electric power as possible. the interior ambience is made as calm as possible: a pleasant blue shade sets the tone for the lighting mood and the drive sound becomes quieter.

In SPORT mode, the focus switches to generating pulse-quickening driving pleasure. This is aided by the direct settings for accelerator and steering response and a chassis set- up geared to sporty driving, while the drive unit's soundtrack with its distinct acoustic feedback, snug-fitting backrests, pared-back displays and interior lighting in Thrilling Orange all add to the effect. PERSONAL mode allows customers to create their own individual My Mode. The vehicle characteristics are set to a balanced configuration. The customer can choose various lighting and colour settings and display layouts, and also select other settings to create their personal ideal driving experience.

The BMW iX bids drivers a warm welcome: “Great Entrance Moments".

"Great Entrance Moments" is the name given to the user experience from the point when the driver first approaches the BMW iX until the journey commences. All steps are orchestrated by the vehicle to optimum effect and blended into an inspiring overall experience. Ultra-wideband (UWB) radio technology allows precision location pinpointing between the vehicle and the key, meaning that the car knows exactly where the driver is approaching from and how far away they are to within a few centimetres.

Once the distance drops below three metres, the vehicle prepares and carries out a perfectly choreographed sequence of steps. It begins with an orchestrated lighting effect using the exterior and interior lights, then proceeds to activate the light carpet, illuminate the door handles and automatically unlock itself. The car then activates the entry assistance features, plays a start-up animation on the BMW Curved Display, establishes a connection with the smartphone, before finishing with a customised welcome window showing a personal greeting as well as handy suggestions and information.

Smartphone and third-party integration

Integrating Apple CarPlay® more deeply into BMW iDrive enables customers to use a great number of functions from their car in just the same way they do on their smartphone. One notable new feature when using Apple CarPlay is that the Apple Maps navigation map is shown not just on the control display but also on the information display in the BMW Curved Display. The corresponding navigation instructions also appear in the BMW Head-Up Display when route guidance is active. A special function for all-electric vehicles will be added to Apple Maps in 2022: if the distance to the destination is greater than the current range, Apple Maps will automatically plan a charging stop and modify the route accordingly.

Google Android Auto™ offers customers access to a wealth of smartphone functions and content while driving. Wirelessly connecting an Android smartphone (with Android 10 or higher) to the BMW iX will be quicker and easier than ever. Assuming Bluetooth is activated on the device, a prompt to connect to the car will be displayed automatically when the user gets in. Following confirmation, the device will be connected in just one step so that it is instantly ready for Bluetooth phone calls or Android Auto. Deep integration into BMW Operating System 8 will allow Android Auto content to be shown in multiple display areas, too. If Google Maps navigation is active, the map will appear in the information display as well as the control display, while navigation instructions can also be viewed in the Head-Up Display.

Driver assistance systems.
Outstanding intelligence underpins comfort and safety.

The BMW iX is the BMW Group's first model to feature driver assistance systems from a new technology toolkit. This toolkit offers considerable potential for driving forward the development of automated driving and parking functions - with, in the medium term, Level 3 functionality. Alongside data-driven development, the utilisation of artificial intelligence in processing complex tasks will also play a role in ensuring consistent progress in this area.

The new technology toolkit also gives the vehicle outstanding intelligence when it comes to monitoring its surroundings and transferring and processing. For example, the tech is designed to be able to process 20 times more data than existing models. And that means many times more sensor data can be processed. The sensors themselves are likewise much more powerful than ever.

The BMW iX is equipped with a wide range of assistance functions which make driving and parking safer and easier. Drivers of vehicles featuring the standard Driving Assistant and Parking Assistant Plus will be offered extended, optimised and new functions during their ownership of the vehicle that are designed to provide them with the best possible assistance with the task of driving. The clearly noticeable improvements carried out in how the various functions work provide considerable added value for customers. At the heart of it all is Sheer Driving Pleasure, in which both the vehicle's model-specific driving characteristics and its assistance systems play a major role.

The BMW iX already offers customers the best of both worlds - they can enjoy dynamic driving pleasure by taking the controls themselves or use the assistance functions to make certain driving situations and parking safer and less stressful.

The BMW iX also creates real added value for customers by grouping together individual automated assistance functions intelligently and according to relevant driving situations. The new BMW Operating System 8 makes the driver assistance functions even more user-

friendly. At the same time, controls have been reduced to the essentials, ensuring that the driver can activate the optimal degree of assistance quickly. The focus here is on overall, intelligent automation, simplification of system status and intuitive operation. This simplification can be clearly seen in the reduced number of buttons on the multifunction steering wheel, for example.

New generation of sensors, powerful computing platform.
The exceptional intelligence of the BMW iX is the product, in particular, of an all-new software stack, coupled with the latest generation of sensors and an extremely powerful computing platform for evaluating and processing data collected about the vehicle's surroundings. The reach and quality of the system of sensors are class-leading: high ranges and recognition rates for pedestrians, other vehicles, traffic signs and other nearby objects are achieved with the 8 MPix front camera making its worldwide automotive debut here. Another global first for a vehicle is a front-mounted radar system, which uses its array of aerials to offer maximum ranges of up to 300 meters and also achieve a vertical resolution in several levels for the first time. In total, five cameras, five radar sensors and 12 ultrasonic sensors team up to map the vehicle's surroundings, the data they gather providing the basis for the BMW environment model on the computing platform.

When creating the systems of sensors for its vehicles, the BMW Group focuses on creating a well-judged combination of different technologies, whose specific abilities and strengths complement each other perfectly to create a precise and reliable picture of the vehicle's surroundings. For example, the data collected by radar sensors on vehicles or other road users ahead of the car is constantly matched against the images supplied by the front cameras. The helps the road situation at hand to be assessed in as much detail as possible and enables the relevant driver assistance functions to respond as required.

The key new features in terms of design include the camera and radar sensor systems fitted out of sight within the BMW kidney grille. The front-mounted radar is integrated seamlessly into the grille. In order to guarantee the greatest possible precision when using the radar sensor, a nanoscale vacuum-based coating process is employed in its manufacture. Here, the two-colour finish and visible 3D effect are produced by vaporisation using laser technology and by a plasma- fired application technique in a high vacuum. The laser-based method developed specially for production of the kidney grille on the iX, together with a precisely defined combination of material and layer thickness, optimise radar performance and ensure

an appearance as classy as it is familiar.

An additional polyurethane coating reduces the kidney grille's susceptibility to damage. The self-healing effect of its surface repairs minor scratches, for example - within 24 hours at room temperature or through a five-minute supply of warm air. The BMW kidney grille of the iX is also an essential component of the highly developed automated driving and parking systems. The camera positioned in the centre of the grille - like the camera integrated into the BMW badge at the rear - has its own cleaning system. Up to two other cameras are positioned near the rear-view mirror on the windscreen. The exterior mirrors on the driver's side and front passenger side each also have a camera. Like the cameras, the ultrasonic and radar sensors of the BMW iX also provide a complete all-round view. Six ultrasonic sensors are located in each of the front and rear aprons. Radar sensors are positioned on either side of the car at both the front and rear.

Far-reaching standard equipment with extended safety-enhancing functions.
The extensive range of standard equipment in place reinforces the considerable potential of the BMW iX when it comes to optimising comfort and safety. The standard front collision warning system can slow the car to a standstill in order to avoid an impact or mitigate its consequences. It is active in situations such as approaching a vehicle in front and in response to oncoming traffic, and interacts with other vehicles, pedestrians and cyclists.

The system also provides additional safety when turning right in urban areas by warning the driver of pedestrians and cyclists approaching the vehicle parallel to the road from the front or rear. This reduces the risk of a collision between the vehicle and pedestrians or cyclists. The front collision warning system now also monitors oncoming traffic when turning left (in countries where vehicles drive on the right). If a vehicle is approaching on the side of the road the driver needs to cross, visible and acoustic warnings are triggered and the braking function is initiated to prevent the driver from continuing with their turn-off manoeuvre.

The standard-fitted Crossroads Warning likewise has a braking function, helping to minimise the danger of a collision with crossing traffic when entering an intersection with restricted visibility. The Evasion Assistant is also included in standard specification for the BMW iX. This helps to avoid collisions with vehicles or pedestrians that appear suddenly. As soon as an evasive manoeuvre corresponding to such a scenario is detected, the system helps the driver direct the vehicle into a clear adjacent lane with steering inputs.

Speed Limit Info including no-overtaking indicator and pre-warning is likewise fitted as standard. The speed limiter allows the driver to set a maximum speed and guards against unintended acceleration beyond that point. When driving with Cruise Control activated and a speed restriction is detected by the front-mounted camera, the Speed Limit Assist function enables the driver to adopt that speed as their desired figure at the touch of a button or automatically. The standard Lane Departure Warning registers road markings and alerts the driver to the danger of an unintended deviation from their current course using the steering wheel vibrations. The system also prompts the driver to guide their vehicle back into the correct lane by initiating a steering impulse.

Further developed Driving Assistant also comes as standard.

The functions grouped together as standard in the latest version of Driving Assistant also noticeably improve safety in the BMW iX. Lane Change Warning reduces the risk of a collision when pulling out into the adjacent lane with the turn indicator activated. This system initiates a visual signal in the exterior mirror and a steering wheel vibration to alert the driver to the presence of a vehicle to their side in the adjacent lane or approaching from the rear. At speeds of at least 70 km/h (43 mph), the system also prompts the driver to steer the BMW iX back into their original lane by initiating a steering impulse. In the BMW iX, Lane Change Warning debuts an additional assistance function in turn- off situations. At a speed of up to 20 km/h (12 mph), the system also warns the driver of a risk of collision in a turn-off manoeuvre signalled by activating a turn indicator.

The Driving Assistant also contains rear collision warning and rear crossing-traffic warning, which works using side-mounted radar sensors and employs warning alerts and braking inputs to reduce the danger of a collision when reversing towards roads which are difficult to see into.

Another new feature is the exit warning function, which activates visible and acoustic signals when a vehicle or cyclist is approaching the BMW iX at speed and there is a risk of collision on one or other side of the vehicle. The driver or front passenger is warned about the danger by flashing LEDs in the mirror or the ambient lighting. An acoustic warning is also emitted and opening of the doors on the relevant side of the BMW iX delayed. This delay mechanism can be activated on all four doors - i.e. also the rear doors.

Help with parking and manoeuvring: Parking Assistant Plus and Reversing Assist

Camera fitted as standard

BMW iX drivers also benefit from effective assistance when parking and manoeuvring. The standard-fitted Park Distance Control (PDC) with sensors at the front and rear provides visual and acoustic alerts and automatic brake inputs to avoid collisions with obstacles to the sides and rear of the vehicle. Standard equipment also includes the Parking Assistant, which helps the driver to select and use parking spaces either parallel or perpendicular to the road. Suitable spaces are detected using ultrasonic sensors as the vehicle drives past. A new feature is the system's ability to drive into perpendicular spaces forwards or in reverse. The latest version of the Parking Assistant can be used both to enter and exit spaces. As well as the necessary steering inputs, it now also carries out the acceleration, braking and gear changes required for the manoeuvre.

Standard equipment for the BMW iX also features a Reversing Assist Camera including Panorama View and the Reversing Assistant. The Reversing Assistant offers the highly convenient option of automated reversing in confined spaces or situations where the driver does not have a clear view, such as multi-storey car parks or entrances to courtyards.
To do this, it stores the steering movements for any section the car has just driven forward along at no more than 36 km/h (22 mph). The system is then able to reverse the vehicle for distances of up to 50 metres by steering it along the same line it took when moving forward. All the driver has to do is operate the accelerator and brake pedals and monitor the vehicle's surroundings. The Reversing Assistant can back the car up automatically at a maximum 9 km/h (5.5 mph).

Parking Assistant Plus including 360 degree camera and 3D view.

The functions contained in the standard Parking Assistant Plus provide an excellent overview in many different situations. Assistance, parking and panorama view including 3D View help to create a 360-degree image of the vehicle and its surroundings, which is shown from various angles in the control display.

Exterior design.
Clearly signposting a new era in Sheer Driving Pleasure.

The BMW iX is cut from the mould of a modern SAV but with a new, reduced design language front and centre. The imposing design of its exterior is shaped by a small number of precise lines and gives the car a powerful, robust and clearly defined appearance. It shines the spotlight on the functional attributes of the BMW iX as a locally emission-free model and an experience space delivering comfortable mobility both in day-to-day use and over longer journeys.

Here, the character-rich presence of the BMW iX exudes a new kind of poise and authority - the product of fully electric all-wheel drive, a sustainability-infused feeling of luxury inside the spacious cabin, and innovative technology.

Muscular SAV proportions, reduced surface design.
The exterior dimensions of the BMW iX - length: -4,953 millimetres, width: 1,967 millimetres, height: 1,695 millimetres - allow it to combine the functionality of the BMW X5 with the dynamism of the BMW X6 and the expressive appearance of the BMW X7. The result is a distinctive re-imagining of the powerful proportions of a large BMW SAV.

The BMW iX is comparable with the BMW X5 in length and width, and is almost the same height as the BMW X6 on account of its flowing roofline. The size of its wheels, meanwhile, brings to mind the BMW X7. A wheelbase measuring exactly 3,000 millimetres and wide tracks at both the front and rear axle provide the ideal platform for chassis tuning which reconciles luxurious long-distance comfort and sporty cornering characteristics. The car's standalone design language also optimises aerodynamic efficiency, which has a positive effect on range.

The powerful appearance of the BMW iX is also underscored by the simplified design of its surfaces. The minimalist use of character lines and generously shaped surfaces conjure an aura of supreme assurance. The crisp lines, clear structure and almost rectangular contours

around the wheel arches contribute to an imposing body design. And the reduced design language steers the eye onto precisely constructed details which accentuate the sophisticated character, brand identity and optimised aerodynamics of the BMW iX.

Front end: expressive, vertical kidney grille serves as an intelligence panel.
The front-end design of the BMW iX imbues it with eye-catching presence. The signature BMW visuals - a joint production of distinctive BMW kidney grille and equally familiar twin headlights - have been newly interpreted with a dash of futuristic style. At the centre of the front end stands the prominent, vertically emphasised kidney grille whose surface has a three-dimensional pyramid structure.

Since the electric drive system of the BMW iX requires only a small amount of cooling air, the kidney grille is completely blanked off. Its role has duly turned digital and here it functions as an intelligence panel. Camera technology, radar functions and other sensors are integrated seamlessly into the grille behind a transparent surface. The heating elements and cleaning system for the sensors are also embedded in the grille front.

LED headlights with matrix function.
The slimmest headlight units ever to feature on a series-produced model from BMW provide a fresh and extremely minimalist take on BMW's familiar four-eyed face. The daytime driving lights have a new design as two-dimensional strips along the upper edge of the headlight units - and fit effortlessly into the imposing design language of the exterior. This gives the headlights a totally new appearance in daylight and emphasises the assured presence of the front end. The daytime driving light strips include the turn indicator function.

The BMW iX is fitted as standard with full-LED headlights. The darkened light fixtures are set well back into the inner sections of the headlights and therefore only become visible when switched on. The fixtures in each headlight unit team up to generate both low and high beam. The matrix function of the BMW Selective Beam high beam increases visibility range and, at the same time, avoids dazzling other road users.

The bonnet of the BMW iX, with its pronounced three-dimensional sculpting, extends all the way up to the headlights and BMW kidney grille. All of the bonnet lines converge dynamically on the kidney grille and the BMW logo above it. The roundel has a functional component, serving as the filler neck for the washer fluid sent to the windscreen and rear window wipers. It

opens and closes again - once the fluid has been topped up - with a gentle push. The bonnet does not have an opening mechanism for use by the customer; the drive system technology and power electronics below the surface can only be accessed by workshop technicians.

Side view: clear surface structuring, precise lines.
When the BMW iX is viewed from the side, its reduced design language accentuates the modern and very distinctive styling of the all-electric SAV. The cutting-edge and minimalist surface sculpting creates an athletic body whose uncomplicated appearance is highlighted by its small number of precise lines. The almost rectangular contours of the front and rear wheel arches are a head-turning element of the exterior design. They adopt one of the original design features of the BMW X family and underscore the car's powerful stance.

A hallmark exterior design element of BMW i cars in the side window graphic and transition into the rear end appears here in updated form. The tapering of the window graphic towards the rear and the forward- slanting (-pillar underline the dynamic lines of the car's silhouette. The "stream flow" of converging lines mimics the airflow along the flanks of the car. On the BMW iX, this distinctive graphic takes the form of a black surface connecting the rear side windows and rear window, and carries the inscribed model badge.

Doors with handles integrated flush into their surfaces and frameless windows.
The clear proportions of the BMW iX are showcased particularly effectively when viewing the car from the side. The design of the doors enhances the impression of a muscular vehicle body. A small number of character lines bring structure to their surfaces, increasing their visual size. The door openers are embedded flush into the door surfaces and are finished in a contrasting colour. The electric door openers, which are operated at the press of a button, and the Soft Close function enable easy entry and exit. Indirect illumination of the handle recesses provides them with a high-class backdrop. With the latest generation of the Comfort Access system, the doors lock or unlock automatically as the owner approaches or walks away from the car. Doors with frameless windows are making their debut in a large BMW SAV. Only previously seen on BMW coupes, this construction underlines the sporting character of the BMW iX and brings a flowing appearance to the side window graphic as a whole. The High-gloss Black trim for the B-pillars provides an attractive contrast against the body colour. Three layers of sealing around the doors provide excellent acoustic comfort.

Aerodynamically optimised exterior mirrors, black body edging.

The innovative design of the exterior mirrors on the BMW iX helps to reduce wind noise and optimise aerodynamics and all-round visibility. The super-slim mirror bases attach to the lower edge of the side window surround, removing the need for the classical mirror triangle at the front of the side windows. The mirror caps are painted in body colour and bordered at their lower edge by the mirror base in High-gloss Black, creating an attractive colour contrast. The slim geometry of the mirrors and precisely positioned aero lips enhance aeroacoustics. The turn indicators, which measure only around two millimetres in width and are integrated into the exterior mirrors behind glass covers, produce an extremely consistent light.

Among the design features familiar from classical BMW X models is the black surround at the lower edge of the body. On the BMW iX this extends a long way up and forms a band around the whole of the car, from the front apron along the flanks into the rear. The charging socket is located in the same place as the fuel filler neck on conventionally powered BMW models - i.e. behind a flap on the right-rear wheel arch.

Rear end: modern, minimalist, eye-catching.
The character of the BMW iX is also faithfully reflected in the design of the rear end. The modern and minimalist design of the generously sized surfaces generates an expressive appearance which accentuates the powerful stature and width of the BMW iX particularly keenly. The minimalist design language with a small number of joints and character lines exudes an aura of clarity and sophistication. The aerodynamics of the BMW iX are further enhanced by the flow of air over the roof all the way to its trailing edge, and by a diffuser element in the rear apron.

The tailgate has no separation joints and extends across the whole of the rear, showcasing the expressive surfacing to particularly vivid effect. The rear-view camera is integrated unobtrusively into the black ring of the large BMW logo positioned in the centre of the tailgate. The camera lens is cleaned automatically by a water spray system which extends as required from behind the surface of the roundel.

Extremely slim rear lights with striking design.
The single-piece rear lights are set neatly into the tailgate, which sweeps a long way into the flanks. Like the headlights, the rear lights have a slimmer design than on any previous series-produced

BMW Group vehicle. All of the light functions use LED technology.
The light fixtures are integrated directly into the three-dimensional lens cover mouldings, creating an extremely bold appearance. The L shape familiar from other BMW models is reprised in a modern interpretation within the single light strip housing both the rear lights and brake lights, and also comprising the horizontal turn indicators, which only become visible when active.

The reversing light and rear fog lights are located along with the reflector in a likewise extremely slim strip in the rear apron's diffuser. Secondary light units positioned at the outer edges of the car beyond the tailgate opening include turn indicators, rear lights and brake lights, ensuring that the relevant light signals are still visible when the tailgate is open.

Shy tech for the exterior: subtly integrated technology.
As well as the intelligence panel in the BMW kidney grille, the BMW iX also has an array of other likewise discreetly positioned camera, radar and ultrasonic sensors - used by the driver assistance systems to make life easier for the driver in monotonous or unclear situations on the road - that espouse the principle of "shy tech". For example, the distance measurement radar sensors are integrated inconspicuously into the black body edging at the front and rear of the car.

The flush-fitted door openers and the rear-view camera with cleaning system integrated into the BMW badge on the tailgate are examples of shy tech at work. The underlying principle here is that the technology stays in the background and only becomes apparent as and when the relevant functions are called into action.

Expressive individuality: Sport package and BMW Individual Exterior Line Titanium Bronze. The BMW iX India profile will be offered as standard with a Sport package. This gives the electrically powered SAV a particularly expressive aura. The classic front-end look of three very large air intakes has been rethought. Large, triangular "shields" at the outer edges of the front apron guide the onrushing air to the Air Curtains, optimising the flow of air around and through the car body.

Added to which, the bordering at the lower edges of the body, the specially moulded side skirts and the integrated door handles are in High-gloss Black. The central section of the

wrap-around trim band is painted in body colour in both the front and rear apron. The inserts framing the diffuser element low down in the rear apron are painted in body colour. Another exclusive feature are the eye-catching rear lights with smoked glass. And the Sport package for the BMW iX also includes aerodynamically optimised 21- inch light-alloy wheels in double-spoke design with Midnight Grey finish, plus Sport brakes with blue-painted callipers.

The BMW Individual Exterior Line Titanium Bronze finish can be ordered as an option. Also available in conjunction with the Sport package, its carefully selected colour accents lend the BMW iX a particularly exclusive aura. The three-dimensional structural elements on the inside of the BMW kidney grille, the door openers, the lower surround for the side windows - which extends into the D-pillars - and the model badge at the rear are all surfaced in Titanium Bronze. On vehicles not specified with the Sport package, the inlays in the outer areas of the front/rear aprons and side skirts also come in this colour. From any angle, this creates a sophisticated impression exuding modern luxury.

Interior design and equipment.
More space for enjoying individuality, quality of life and personal well-being.

The fully digital BMW Curved Display grouping, the latest generation of the operating system iDrive, an innovative architecture for cockpit and centre console (with a hexagonal steering wheel and an around 50 per cent reduction in the number of buttons and switchgear), sustainable materials and new design approaches such as shy tech - those are the dominant features inside the BMW iX. The progressive design of the interior plays a significant role in the innovative driving experience laid on by the iX. Its luxurious premium character also shines through in the extensive and richly varied individualisation options available to customers. High-quality items of standard equipment, such as the BMW Head-Up Display, and panoramic glass sunroof with electrochromic shading not only deliver carefully judged enhancements to comfort and practicality in day-to-day use and on longer trips. This single-piece transparent glass roof spans the entire interior without any cross struts to break it up. It is also the largest glass roof ever fitted in a BMW model. The roof features PDLC (Polymer Dispersed Liquid Crystal) technology for shading the interior. The panoramic glass roof's transparency is altered by applying a voltage to the middle layer of film. It takes less than a second for the crystals to distribute themselves in a disorderly pattern that creates the effect of shade. This electrochromic shading can be activated and deactivated using a button in the roof function centre. The shading mode is activated automatically once the BMW iX has been parked. "We designed the BMW iX from the inside out. "In the process, we took particular care to create a modern, warm and minimalist interior design with a very spacious feel."

Vast amounts of room, a top-quality selection of materials, newly developed seating and the extraordinary expanse of the panoramic glass roof combine to immerse all five seats inside the BMW iX in a luxurious lounge-style ambience. The brand new architecture of the BMW iX cabin underpins the perfectly clear and straightforward functionality that revolves entirely around the needs and emotions of the driver and their fellow occupants. The absence of a centre tunnel resulting from the drive concept adds to the open, airy feel, while also creating extra legroom in the front and rear as well as sufficient space for storage facilities and a centre console that has been crafted to look like a high-quality piece of furniture.

Where people take centre stage and intelligent technology fades into the background. The technology aboard the BMW iX is deployed intelligently, only manifesting itself when it is actually required. This makes it intuitive to use rather than seeming overly complex. The interior design conveys a sense of safety and familiarity and engenders a new type of bond between occupants and vehicle.

All the displays and controls have been reduced to the essentials, with the number of buttons and switches cut by some 50 per cent to further accentuate the impression of an uncluttered, inviting and relaxing interior. The shy tech approach for the interior can be seen in a number of features, including speakers that have been integrated out of sight, delicately styled air vents, heated surfaces and the way the BMW Head- Up Display's projector has been recessed into the instrument panel so discreetly it is almost invisible. The hexagonally shaped steering wheel, a rocker switch for gear selection and the BMW Curved Display - which forms part of the next-generation BMW Operating System - clearly advertise the futuristic form of driving pleasure on offer.

Clearly structured surfaces for a generous sense of space.

An ambience of modern luxury sets the tone for both the front and rear compartments of the BMW iX interior. The minimalistic design language and clearly structured surfaces give the cabin an exceptionally spacious feel. The door panel layout features a distinctive diagonal split using different colours and materials. The door pull handles have been sleekly integrated into the diagonal accent strip that also houses the button for activating the electric door opening function. Buttons for adjusting the seat position are located at the top of the front door shoulders where they are ergonomically arranged in the form of a seat. The passenger- side armrest also incorporates a compartment for holding a mobile phone. Meanwhile, the audio system's midrange speakers embedded beneath the door panels' fabric trim are hidden from sight yet make a very audible impact on the enjoyment of the journey.

Three interior design variants to choose from.

Customers can choose from two shades of Natural Leather upholstery variant Interior Design Suite – Castanea and Amido. These bring specific materials and colour schemes to the surfaces of the seats, door panels, armrest, centre console and the upper section of the instrument panel, creating unique design and colour worlds with their own distinctive characteristics. The surface of the leather used for the seats and instrument panel is treated

with a natural olive leaf extract, thereby avoiding any production residue that is harmful to the environment, while also giving the leather a particularly high-quality yet natural look. This especially gentle process has proven its worth for many years in the treatment of leather surfaces in the BMW i3 and is now giving the interior of the BMW iX an aura of natural quality. The sustainability-focused approach applied when selecting raw materials and production methods has also resulted in the use of FSC-certified wood and a high proportion of recycled plastics in the surfaces of the door panels, seats, centre console and floor coverings, plus floor mats made from recycled nylon waste material.

Newly developed seats with integral head restraints.
The newly developed seats for the driver and front passenger have integral head restraints for a distinctly sporty appearance. For the first time in a model from the BMW Group, there is the option of integrating speakers into the seat structure. The sound sources positioned beneath the surface in the head restraint and lumbar areas further enrich the acoustic experience inside the BMW iX and are yet another example of the principle of shy tech being applied.

Lounge feeling in the rear compartment, surface heating generates feel-good atmosphere. The bench seat in the rear has been designed for three passengers. The outer seats have integral head restraints, which can be specified with built-in speakers. The head restraint of the central seat can be folded down to optimise the view to the rear. The omission of the centre tunnel means that anyone in the second row also enjoys a particularly generous amount of legroom. The open sense of space this creates combines with the broad bench seat extending into the door areas to reinforce the lounge-style feel and increase passenger comfort. A Travel & Comfort system has been integrated into the front seats that can be used by occupants in the rear to attach coat hooks or hold tablet devices. A pair of USB-C ports can also be found in each of the front head restraints.

The rear backrest has a 40:20:40 split, allowing the amply proportioned luggage compartment to be expanded as required by folding down individual sections. With all the seats in use, load capacity is 500 litres. This can be increased to a maximum 1,750 litres, easy access to which is provided by the low loading edge and wide boot opening.

Slim instrument panel, freestanding BMW Curved Display.
The BMW iX interior's modern, spacious feel is further helped by the slim instrument panel, which is covered in Natural leather tanned with olive leaf extracts. The instrument panel's

geometry rises up towards the front, turning it into the perfect stage for the pioneering fully digital screen grouping in the BMW iX. The BMW Curved Display making its production vehicle debut is held in place by a supporting structure that is concealed from the occupants' view, so it appears to be standing freely in the cockpit. It has a magnesium housing and a frameless, single-piece glass surface. The high-quality display technology using anti-reflective glass also makes it possible to dispense with the customary binnacle for shielding the readouts from sunlight, giving the cockpit area a remarkably tidy and airy appearance.

"The BMW iX is the first model from the BMW Group to feature the impressive high-resolution Curved Display, which is far larger and sharper than the displays in our current models," remarks Frank Weber. "As a result, the BMW iX interior points the way ahead for cockpit design in future BMW models." The curving, one-piece display that serves as the central control element reinterprets the traditional driver-centric design of BMW cockpits in visionary form. This has involved bringing together the 12.3-inch information display and the control display with its screen diagonal of 14.9 inches to form a single unit angled towards the driver. The interlinked, driver-focused display ensemble optimises how information is shown and makes the display's intuitive touch control even simpler to use. At the same time, the control display section can still be clearly seen and easily operated by the front passenger.

The Curved Display in the BMW iX teams up with BMW Operating System 8 to deliver a totally new graphics experience. The instrument cluster offers new, completely customisable display options that provide the driver with precise information tailored to the situation at hand. Exceptionally intuitive operation using voice or touch control enables the driver to interact with the additional intelligent functions aboard the BMW iX easily and safely. This takes the renowned user friendliness of BMW display and operating systems to the next level.

Newly designed control panel on the centre console.
The Curved Display's position and technology have been optimised to facilitate very intensive and intuitive use of the touchscreen functionality. All elements of the iDrive menu can nonetheless still be selected and activated with the familiar centre console Controller in the BMW iX too. It forms the main control element on the centre console, whose colour scheme and material selection give it the appearance of a classy piece of furniture between the comfortable front seats.

The Controller is enclosed by a sharply styled control panel with a High-gloss Black frame, a

glass-effect surface and white backlit buttons. The rest of the control panel design is another clear example of the principle of shy tech and reduction to the essentials at work. Instead of conventional buttons, a control surface with active haptic input subdivided by feeler bars is used to select the iDrive menus, My Modes and other functions. The Touch Controller, designed in an extremely smart glass-effect finish for the BMW iX, is encircled by a bezel painted in Gold Bronze. A roller control allows for convenient adjustment of the audio system volume. The Start/Stop button is illuminated in the signature BMW i blue colour, signifying the presence of an all-electric drive system. Nestled between the Start/Stop button and the button for the electromechanical parking brake is a newly devised rocker switch that takes the place of the customary gear selector lever.

The Controller, the rocker switch for gear selection, the audio roller control and the seat adjustment buttons can also be specified in a polished crystal finish as an option. Clear & Bold specification additionally includes a control panel surface made from FSC-certified wood. The open-pore walnut finish again incorporates backlit buttons. The space gained from the absence of a centre tunnel is also used to create additional stowage facilities in the centre console area. As a result, the centre console's lower level houses two cupholders, a smartphone tray with inductive charging, a 12V power connection and two USB-C ports.

The centre console armrest - which is available in a heated version as an option - doubles as a butterfly lid that opens to reveal a roomy, illuminated storage compartment. The rear console terminates in air vents for the rear passenger compartment with a High-gloss Black trim surround.

Receiving its premiere in the BMW iX: the hexagonal steering wheel.
The BMW iX is the first model from the BMW Group to be fitted with a hexagonal steering wheel. Its polygonal geometry means it is ideally suited to switching between automated and active driving. The rim's unique, track-inspired contour has the additional effect of improving ease of access and seating comfort. The hexagonal shape also affords the driver a better view of the section of the Curved Display positioned directly behind the steering wheel. The steering wheel's six-sided outline sets the scene for focused assimilation of all driving-related information.

The new-look multifunction buttons on control pads in a high-quality glass-effect finish optimise intuitive operation of both audio and communications functions and the driver

assistance systems. Steering wheel heating with a new three-stage control system being used for the first time is also available for the BMW iX as an option.

BMW Head-Up Display with frameless projector integration.

The latest generation of the BMW Head-Up Display is a further aid to focused driving in the BMW iX. For the first time, the BMW Head-Up Display's projector has been flush fitted into the surface of the instrument panel without a frame, meaning that it is hidden from sight. It projects driving-related information onto the windscreen in the form of graphics that appear directly in the driver's field of vision. This allows the driver to take in all the key data without having to divert their attention from the road. The information projected by the BMW Head-Up Display includes the car's speed, speed limits in force and overtaking restrictions, Check Control messages, status indicators and warnings from the driver assistance systems, detailed route guidance and turn instructions, as well as telephone and entertainment lists. The display's imaging angle, height and brightness can be adjusted individually.

Automatic climate control with new controls and integral nanofibre filter.

The four-zone automatic climate control in the BMW iX allows the driver, the front passenger and the rear-seat passengers to set their desired temperature and ventilation levels individually. The reduced design language of the interior, ease of use and optimised technology at work enhance the sense of wellbeing for those on board. The driver and front passenger can adjust the climate control system to their personal preferences via the control display or by voice command. The desired temperature is the key variable for this automatic system. Depending on the settings selected in the climate control menu, changing the temperature also prompts adjustment of the seat heating and seat ventilation control. This means individual functions no longer have to be operated separately by the user. Moreover, those on board can see immediately if the system is currently cooling or heating the interior and if the seat heating or seat ventilation is activated. As well as the quantity of air emitted and its distribution, the intelligent automatic climate control system also adjusts the steering wheel heating, seat heating and seat ventilation, ensuring the most comfortable interior climate possible. These additional comfort functions are controlled automatically to suit the specific situation and independently for the driver and front passenger. The system also takes into account the number of passengers on board and where they are sitting. This is the first time all of the vehicle's temperature and comfort-enhancing functions have been controlled from a single source.

Cutting-edge nanofibre filter technology is used to purify the air inside the car more effectively. A pre-heating and pre-conditioning function is also included as standard on the BMW iX. Air outlets are located out of sight in the footwells and near the windscreen, while the extremely slender air vents with Gold Bronze surrounds in the instrument panel area form a particularly eye-catching visual highlight. They are arranged horizontally in the middle of the instrument panel and vertically at its outer edges. Additional air vents for climate control in the rear can be found on the back of the centre console and in the B-pillars. The direction and intensity of the airflow can be adjusted manually.

Innovative nanofibre filter technology provides a particularly effective means of helping to keep the air in the BMW iX cabin clean as it prevents ultra-fine particles, certain microbial particles and allergens from entering the vehicle's interior. Nanofibre filter technology is more rigorous than normal filter systems, removing virtually all particles from the air in the interior in a matter of a few minutes when air recirculation mode is switched on.

LED interior lighting.

LED units are used for all of the interior lighting functions in the BMW iX. All controls have white backlighting, making it easy to locate them even at night. The harmonious night design of the Curved Display adds to the laid-back lounge-like feel, as does the coloured interior light, which is clearly visible in daylight too thanks to the large number of LEDs used. The interior light accentuates the expansive surfaces and crisp lines of the door panelling while also providing indirect illumination of the footwells and entrance areas. An additional fibre-optic light guide is integrated into the door shoulders of the BMW iX. Its clearly visible light also has an information and warning function. Green signals provide confirmation of the doors locking and battery charging, while red light takes over when the exit warning is activated.

Panoramic glass roof with electrochromic shading.

The BMW iX is available with a specially developed panoramic glass roof. Its single-piece transparent surface spans the entire interior without any cross struts to break it up, making it the largest glass roof ever fitted in a model from the BMW Group. The panoramic glass roof plays a major role in giving the interior the BMW iX its generous feeling of space and lounge-like ambience, and also offers passengers exceptional levels of headroom thanks to the lack of a roller blind. The glass roof features electrochromic shading instead, which can be activated at the press of a button to shield the interior from direct sunlight. The panoramic roof is composed of a steel frame, two glass panels and three layers of film sandwiched between

them. The laminated glass construction offers both optimum protection against ultraviolet rays and an excellent standard of acoustic comfort. The upper glass panel's triple silver coating is designed to maintain a comfortable climate in the cabin.

Instead of having an interior liner, the roof is the only one of its kind in the automotive industry to employ PDLC (Polymer Dispersed Liquid Crystal) technology for shading the interior. The panoramic glass roof's transparency is altered by applying a voltage to the middle layer of film. The liquid crystals dispersed as droplets in a polymer matrix are aligned so evenly by the electrical energy that they allow rays of light to pass through into the interior unimpeded. When de-energised, it takes less than a second for the crystals to distribute themselves in a disorderly pattern that creates the effect of shade. This electrochromic shading can be activated and deactivated using a button in the roof function centre. The shading mode is activated automatically once the BMW iX has been parked.

Pioneering sound experience: Harman Kardon Surround Sound System.
The audio system fitted as standard in the BMW iX includes a bespoke Harman Kardon Surround Sound System with 18 speakers and 655 watts of audio power. The five midrange and five tweeter speakers are complemented by four built-in speakers in the rear head restraints. Automatic sound adjustment based on the car's dynamic performance level and Logic7® Surround Sound technology provide superb listening pleasure for all occupants. The combination of two central bass speakers and two additional subwoofers located under the rear seat unit has never been seen before in a BMW model and ensures powerful sound performance. The timeless, functional design of the Harman Kardon tweeter grills fits seamlessly into the design of the BMW iX interior, while the midrange speakers are integrated out of sight underneath the fabric door panel trim.

To demonstrate the capabilities of the Harman Kardon, Surround Sound System to customers, the new BMW iDrive system in the BMW iX now offers an audio demo mode. Music recordings specially composed in 5.1 surround sound quality for the system at hand and an HD video provide a first impression of the acoustic performance and sound quality of the system fitted.

Acoustic pedestrian protection and BMW IconicSounds Electric.
The electric drive system powering the BMW iX produces not only zero local emissions but also almost nothing in the way of sound. In order to alert other road users that the iX is

approaching, it therefore comes as standard with an acoustic pedestrian protection system. Developed specially for electrified BMW vehicles, artificially generated and emitted through exterior speakers, the sound is active up to driving speeds of 21 km/h (13 mph) in European markets and 31 km/h (19 mph) in the USA. It gives the vehicle a brand-typical soundtrack, without impinging on the comfort of those on board.

An unmistakable acoustic experience can also be enjoyed in the interior of the BMW iX. Pressing the Start/Stop button sparks an inspiring acoustic accompaniment that builds anticipation for the all-electric driving experience to come. This sound production was created as part of a collaboration between film music composer and Academy Award winner Hans Zimmer and Creative Director Sound at the BMW Group Renzo Vitale. When underway, a drive sound developing a strikingly transparent timbre with spherical components delivers authentic feedback to every movement of the accelerator. The character of the sound alters according to the vehicle setting chosen with the My Modes button. This means that in SPORT mode the car's aural spectrum is more dominant and powerful. Drive system processes are registered within milliseconds and acceleration, load changes or recuperation given a suitable acoustic accompaniment.

Sustainability in product design and manufacturing.

Monitored raw materials extraction, across-the-board green power for manufacturing, extensive use of recycled materials.

Alongside the electrically powered driving pleasure at the driver's fingertips, sustainability has also been an ever-present element of the BMW i brand character from day one. Making responsible use of resources throughout the value chain and minimising a product's carbon footprint at all stages of its life cycle underpin the trailblazing approach to premium mobility championed by BMW i. This all-encompassing concept has been implemented more rigorously than ever in the development and production of the new BMW iX - from the monitored selection and extraction of raw materials, through the sourcing of electricity generated from renewable sources for manufacturing processes, to the use of recycled materials.

The resulting carbon footprint is stated in a validation document endorsed by independent auditors. The certificate for the BMW iX xDrive40, for instance, shows its global warming potential is around 45 per cent lower than that of a comparable Sports Activity Vehicle with a combustion engine. In the supply chain alone, utilising green energy for battery production and making increased use of secondary materials cuts CO2 emissions by 17 per cent compared with vehicle production where these measures are not deployed. The powerful impetus provided by the BMW i brand in leading the way in this field has helped the BMW Group to stake a claim as the world's most successful and sustainable technology company in premium mobility. To achieve this, advances have been made across a wide variety of areas that affect the creation and use of vehicles from all the BMW Group's brands. Measures for optimising sustainability are defined for every model and cover all phases - from the production of raw materials through manufacturing and use to subsequent recycling.

"Rather than simply passing responsibility on to the supplier network, we take responsibility together with our direct suppliers," explains Dr Andreas Wendt, Member of the Board of Management of BMW AG, responsible for Purchasing and Supplier Network. "In so doing, we tap into our many years of experience and create processes for attaining greater transparency

and traceability."

Raw materials production: monitored, transparent, certified.

The sustainability targets for the BMW iX were set at a very early stage of vehicle development. Defining the appropriate measures requires detailed knowledge of the materials used and where they originate from or how they were obtained. This includes the upstream production chains. The focal points on the purchasing side are compliance with environmental and social standards, respect for human rights, conservation of natural resources and reduction of CO2 emissions. Measures for optimising sustainability were therefore established in consultation with suppliers, such as using recycled materials and harnessing renewable energy. Besides an eco-friendly manufacturing process, consideration is also given here to the recyclability of the component in question and to health-related aspects. The material properties of all components are meticulously documented and verified at the BMW Group's materials laboratory. The checks also include ensuring that potentially allergenic materials, such as nickel, are not used in areas where they could be touched by customers.

This holistic approach to improving sustainability also embraces those technological developments that make it possible to reduce the use of critical materials, or even avoid them altogether. For instance, a design principle has been devised for the electric motors in fifth-generation BMW eDrive technology that dispenses with the need for rare-earth metals in the rotor. Instead of the customary magnets for which these raw materials are needed, an electrically excited rotor is used to ensure both instantaneous and precisely controllable actuation of the electric drive. The BMW Group has thereby capitalised on its industry-leading development expertise in the field of drive systems to enable it to produce electric motors irrespective of rare earth availability.

During development of the latest generation of battery cells, the proportion of cobalt contained in the cathode material was reduced to less than ten per cent. In addition, the BMW Group procures the cobalt required for this battery cell generation itself and then makes it available to the battery cell suppliers. The company can therefore ensure that environmental and sustainability standards are observed during the extraction and processing of cobalt and that there are no violations of human rights.

Although no cobalt from the Democratic Republic of the Congo (DRC) is being used in the battery cells for fifth-generation BMW eDrive technology, the BMW Group is involved in a pilot

project there focusing on ecologically and socially sustainable mining of this raw material. The company, together with its supply chain partners, has commissioned the German Agency for International Cooperation (GIZ) to develop measures aimed at improving working and living conditions for both artisanal mine workers and the inhabitants of nearby communities. If the project is successful, having cobalt supplied directly from the DRC could become an option for the BMW Group once more.

Lithium is another raw material that is vital for the production of high- voltage batteries but classified as critical. The BMW Group again sources this raw material directly before supplying it to battery cell manufacturers. This ensures complete transparency regarding the origin of the raw materials required for lithium-ion batteries. The lithium used in the high-voltage battery pack on board the BMW iX is mined from hard-rock deposits in Australia in accordance with the company's environmental and sustainability standards. The BMW Group has also commissioned two prestigious American universities to carry out a study into sustainable lithium extraction in Latin America. The aim of the study is to investigate the impact of lithium extraction on local water supplies.

The BMW Group is making a further commitment to wide-reaching sustainability through its involvement in an initiative to protect deep-sea habitats. The move sees the company supporting the activities of the World Wide Fund for Nature (WWF) Germany. In a joint declaration, the BMW Group and companies in other industries have undertaken, as a precautionary measure, not to use deep-ocean minerals or finance deep-sea mining until comprehensive scientific research into the impact of deep-sea mining can be conducted and sufficient protection for deep- sea environments can be ensured.

Deep-sea deposits of mineral raw materials have recently received greater public attention due to growing demand for raw materials in general. In particular, manganese nodules (polymetallic nodules), cobalt- rich iron and manganese crusts, as well as massive sulphides and ore sludge, could attract the interest of mining companies. Some experts believe this could offer an attractive alternative to minerals from terrestrial mining. However, the majority remain sceptical overall, due to the lack of scientific analysis. Currently, there are not sufficient scientific findings to be able to assess the environmental risks of deep- sea mining, and we are aware that the procurement of raw materials requires particular care. For this reason, the decision has been taken that raw materials from deep-sea mining are not an option for the company at present.

Among other sustainability goals set out by the BMW Group is the increased use of secondary raw materials in vehicle production. Indeed, the company is aiming to significantly increase the proportion of recycled materials it uses by 2030 and to use raw materials multiple times as part of a circular economy approach.

Electricity from renewable resources for component and vehicle manufacture.
Between 2006 and 2019, the BMW Group was able to lower CO2 emissions from vehicle production by over 70 per cent. Compared with 2019 levels, the amount of CO2 per vehicle is set to be reduced by a further 40 per cent by 2025 and 80 per cent by 2030. Since 2020, electricity generated entirely from renewables has been purchased externally for vehicle manufacture at all plants in the BMW Group's global production network. Only green hydroelectric power produced locally at the Isar and Lech rivers is used in the production of the BMW iX at BMW Group Plant Dingolfing and in the upstream component plants.

The manufacture of battery cells is an energy-intensive process. With a view to also minimising the carbon footprint in this area, the BMW Group has secured commitments from all makers of battery cells for fifth- generation BMW eDrive technology to only use electricity from renewable sources.

In order to further reduce the CO2 emissions arising from the production of aluminium components, the BMW Group is exploring new ways of sourcing this lightweight material. Since February 2021, the company has procured aluminium manufactured in the United Arab Emirates with the help of solar power. Electricity generated in a vast solar park located in the desert outside Dubai is used for producing the lightweight metal. The BMW Group plans to continue sourcing aluminium manufactured with green energy over the long term, enabling it to reduce carbon emissions by 2.5 million tonnes by 2030. The quantities of aluminium acquired using solar power cover nearly half the annual requirements of the light metal foundry at BMW Group Plant Landshut, whose output includes the casings for the latest-generation electric motors fitted in the BMW iX.

Careful material selection, high proportion of recycled materials. Besides the switch to green power, the other factor helping to make the manufacture of light-alloy components more sustainable in the BMW Group's production network is the ongoing increase in the proportion of secondary aluminium used. Targeted use of recycling methods for this high-grade

lightweight metal can lead to a substantial reduction in the energy-intensive use of primary aluminium, which also generates high levels of CO2 emissions when conventional manufacturing techniques are employed. The proportion of secondary aluminium used in manufacturing the castings for the BMW iX is up to 50 per cent.

The cabin of the BMW iX features carefully selected materials which are of high quality and also maximise the sustainability factor.
The key elements here are conservation of resources, energy efficiency in manufacture and suitability for recycling. The use of chrome in the exterior and interior of the BMW iX has been reduced by up to 90 per cent compared with vehicles where similar sustainability-enhancing measures have not been applied. For example, in the interior of the BMW iX, chrome is now only used for selected bolted connections, on the head restraint guides and for the seat belt buckles and guide loops.

The Clear & Bold specification includes a control panel on the centre console made from sustainably grown wood with the corresponding FSC certification. The leather upholstery is also notable for the extremely eco-friendly and material- efficient production method employed. An olive leaf extract is used to treat the leather instead of conventional tanning agents. This is obtained from the leaves gathered following the annual pruning of the trees in European olive groves.

The floor coverings and mats in the BMW iX are made from a synthetic yarn that is produced from recycled nylon waste material in a specially developed process. The source material for this includes fishing nets recovered from the sea along with worn flooring and residual waste from plastics manufacturing. These waste products are fed back into the reusable material cycle at a special facility in the Slovenian capital Ljubljana. For this, the material is first broken down into its chemical constituents and then processed to produce nylon granules. The resulting Econyl material forms the basis for making the floor coverings and mats in the BMW iX. As well as helping to preserve resources, the use of Econyl also serves to reduce climate-damaging emissions. The process for manufacturing the recycled plastic emits around 80 per cent less CO2 than conventional production of petroleum-based nylon.

High-quality recycled material is also featured in a multitude of other components in the BMW iX. Recycled material accounts for over 20 per cent of the thermoplastic content in the vehicle as a whole. The substructure of the door panelling, the cowl panel cover, the bumper guides

and the surround for the front apron, for example, are all made entirely from reused plastic. The cable ducts on the BMW iX are manufactured using between 60 and 100 per cent recycled plastic, while the tailgate panelling and the outer surfaces of the door panelling are both made up of around 30 per cent recycled material. Each BMW iX contains some 60 kilograms of recycled plastic in total.

Technical specifications.
BMW iX.
iX xDrive40.

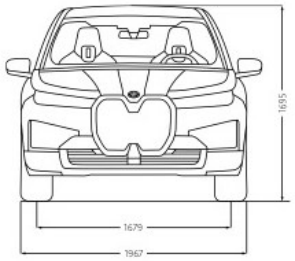
		BMW iX xDrive40
Vehicle Category		
Drive type / body style		Battery electric vehicle (BEV) / Sports Activity Vehicle (SAV)
Body		
No. of doors / seats		5 / 5
Length/width/height (unladen)	mm	4953 / 1967 / 1695
Wheelbase	mm	3000
Track, front/rear	mm	1679 / 1709
Turning circle	m	13.0
Luggage comp. capacity	l	500 – 1750
Air resistance	c_X x A	0.25 x 2.82
Power Unit		
Drive concept		Electric drive, coordinated transmission of the drive torque from two electric motors to the front and rear wheels respectively in accordance with requirements
Max. system output	kW/hp	240 / 326
Max. system torque	Nm	630
Type of transmission		Automatic transmission, single-speed with fixed ratio
Electric Motors		
Motor technology		Fifth-generation BMW eDrive technology: electrically excited synchronous motors each sharing the same housing with the power electronics and single-speed transmission, generator function for recuperating energy
Front electric motor		
Peak output to ECE R 85	kW/hp	190 / 258
Continuous output to ECE R 85	kW/hp	60 / 82
Max. torque	Nm	290
Gear ratio	:1	8.774
Rear electric motor		
Peak output to ECE R 85	kW/hp	200 / 272
Continuous output to ECE R 85	kW/hp	85 / 116
Max. torque	Nm	340
Gear ratio	:1	11.115
High-voltage Battery		
Storage technology		Lithium-ion
Installation		Underfloor
Voltage	V	330.3
Battery capacity	Ah	232
Energy capacity, gross	kWh	76.6
Energy capacity, net	kWh	71.0
Charging time, 0 – 100 % charge		< 8 h at 11 kW (16 A / 380 V, three-phase AC, Wallbox)
Charging time, 10 – 80 % charge		31 min at 150 kW (DC, fast-charging station)
Charging Unit		
Type		Combined Charging Unit (CCU) with built-in 4 kW voltage transformer for supplying power to the 12V electrical system
Max. charging rate AC, single-phase	kW	7.4
Max. charging rate AC, three-phase	kW	11.0
Max. charging rate DC	kW	150

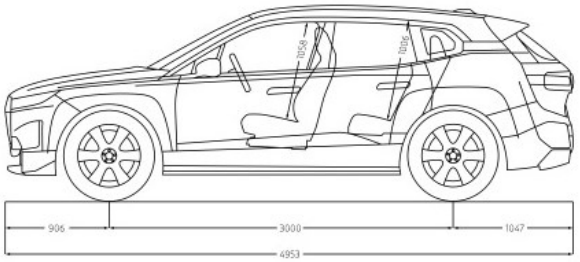
			BMW iX xDrive40
Driving Dynamics and Safety			
Suspension, front			Double-wishbone axle in aluminium construction
Suspension, rear			Five-link axle in lightweight steel construction, steerable
Driving stability systems			Standard: DSC incl. ABS, ASC and DTC (Dynamic Traction Control), ARB technology (near-actuator wheel slip limitation), CBC (Cornering Brake Control), DBC (Dynamic Brake Control), Dry Braking function, fading compensation, drive-off assistant, HDC (Hill Descent Control), trailer stability control, Performance Control
Safety equipment			Standard: airbags for driver and front passenger, side airbags for driver and front passenger, head airbags for front and rear seats, three-point inertia-reel seatbelts on all seats with belt stopper, belt latch tensioner and belt force limiter in the front, crash sensors, tyre pressure indicator
Steering			Electric Power Steering (EPS) with Servotronic function and variable steering ratio
Steering ratio, overall		:1	16.0
Tyres, front/rear			255/50 R21
Rims, front/rear			9.5J x 21 light-alloy
Performance			
Acceleration	0–100 km/h	s	6.1
Top speed		km/h	200 (electronically limited)
Electric Power Consumption / Range			
Electric power consumption combined (WLTP)		kWh/100 km	22.5 – 19.4
Range (WLTP)		km	372 – 425
Environmental Characteristics			
Emission rating			Electric vehicle

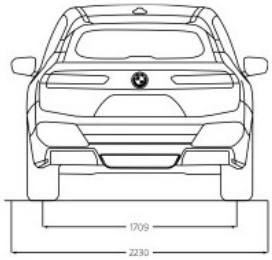
Official fuel consumption, CO_2 emissions, electric power consumption and electric range figures were determined based on the prescribed measurement procedure in accordance with European Regulation (EC) 2007/715 in the version applicable. They refer to vehicles in the German market. Where a range is shown, NEDC figures consider the different sizes of the selected wheels/tyres, while WLTP figures take into account the impact of any optional extras.

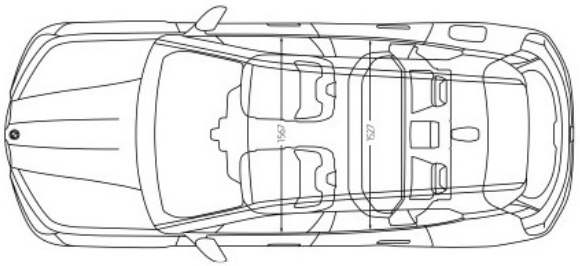
WLTP values are used for determining vehicle-related taxes or other duties based (at least inter alia) on CO_2 emissions as well as eligibility for any applicable vehicle-specific subsidies. Any NEDC values that are shown were calculated based on the new WLTP measurement procedure where appropriate and translated back into equivalent NEDC measurements in order to ensure comparability between the vehicles. Only official figures based on the WLTP procedure are available for new models that have been type tested since 01.01.2021. Further information on the WLTP and NEDC measurement procedures can also be found at www.bmw.de/wltp.

Further information on official fuel consumption figures and specific CO_2 emission values of new passenger cars is included in the following guideline: 'Leitfaden über den Kraftstoffverbrauch, die CO_2-Emissionen und den Stromverbrauch neuer Personenkraftwagen' (Guide to the fuel economy, CO_2 emissions and electric power consumption of new passenger cars), which can be obtained free of charge from all dealerships, from Deutsche Automobil Treuhand GmbH (DAT), Hellmuth-Hirth-Str. 1, 73760 Ostfildern-Scharnhausen and at https://www.dat.de/co2/.









BMW iX		**xDrive40**
Weight and volume		
Unladen weight EC[1]	kg	2440
Maximum permissible weight	kg	3010
Luggage compartment volume behind 2nd SR	l	500
Communication		
System output	kW/[hp]	240 / (326)
System torque	Nm	630
High-voltage battery and charge data		
Net HV battery capacity	kWh	71
Charging time (AC 0-100%)[2]	h	7.25
Charging time (DC 10-80%)[2]	min	31
Basic data		
Type of drive	-	All-wheel
Transmission type	-	Automatic
Performance		
Top speed	km/h	200[7]
0-100 km/h	s	6.1
Consumption and range		
NEFZ[3,5]		
▶ combined electric consumption4[4]	kWh/100 km	-[8]
▶ Electric range[6]	km	-[8]
Wheels/tyres		
Wheels/tyres	-	Front: 235/60 R20 Rear: 235/60 R20