INTERNATIONAL MEDIA LAUNCH. THE FIRST EVER BMW i4 AND THE FIRST EVER BMW iX.



BMW iX Product Update.

BMW Gen5 Drivetrain and Charging. BMW iDrive.

Driving Experience.

BMW Plant Dingolfing.

BMW eCompetence Centre.









DELIVERED AS PROMISED: IN 2021 THE BMW GROUP LAUNCHES THE NEXT BIG STEP IN THEIR TRANSFORMATION TOWARDS E-MOBILITY.

BMW iX FOCUS:

- > New technology kit for automated driving, incl. new features.
- >Interior of the future.
- > High end connectivity.
- > Extended sustainability.

BMW i4 / BMW iX SHARED FEATURES:

- Next generation cockpit.
- >BMW Operating System 8.
- >BMW eDrive GEN5. > Wide choice of options for individualization.
 - > Refinement & built quality.
 - > Service & repair quality.

BMW i4 FOCUS:

- > The ultimate driving machine.
- > Long distance driving comfort.
- > Elegance and practicability.
- > First ever BEV from BMW M.



THE FIRST EVER BMW 14.
TECHNICAL MAIN DATA.





Power
Torque
Acceleration (0 - 100 km/h)
Range (WLTP)
Energy consumption (WLTP)
Max. DC charging power
Added range per 10 mins max. DC charging
Automated driving level
Operating system
Base price in EU









THE FIRST EVER BMW i4. E-MOBILITY HAS REACHED THE HEART OF THE BMW BRAND.

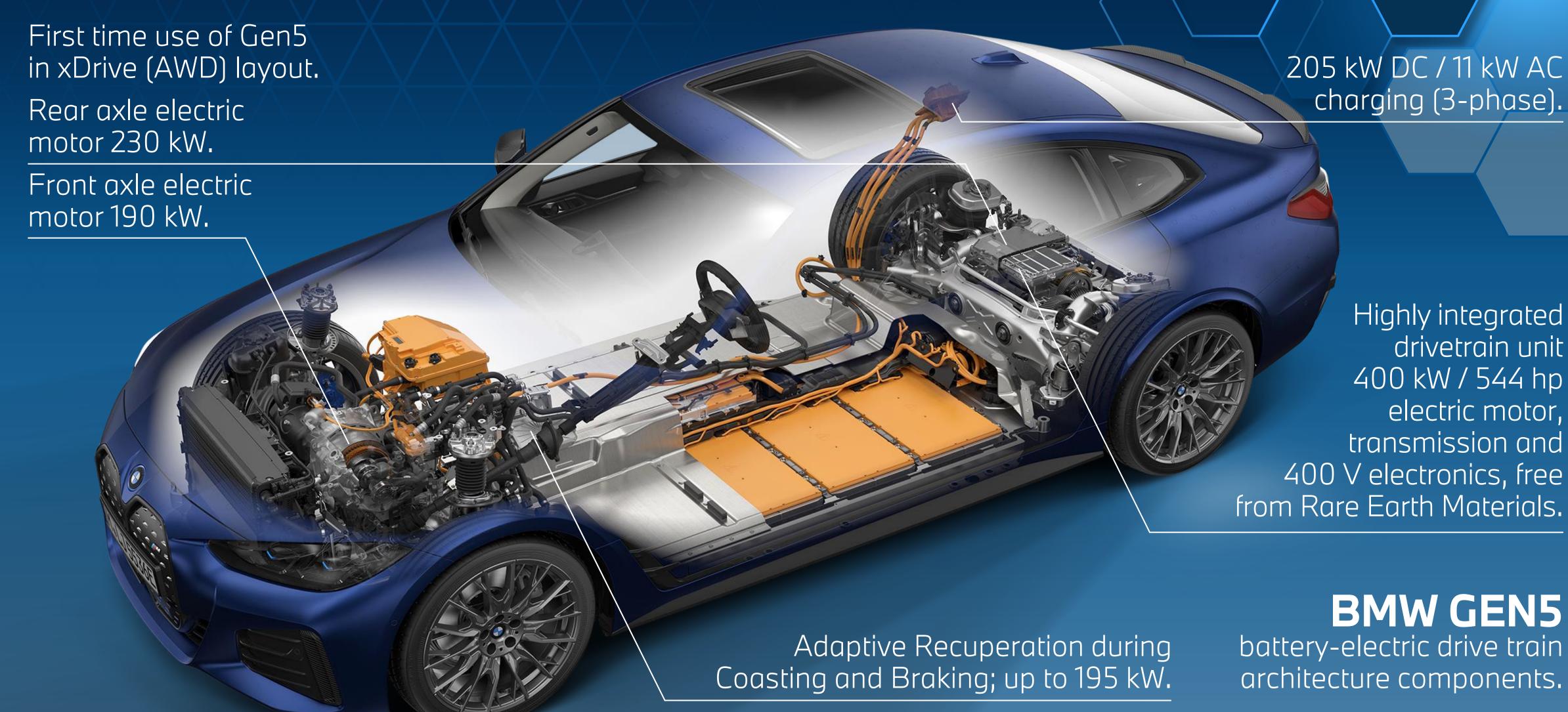
"THE BMW i4 TRANSFERS BMW BRAND DNA AND THE BMW
TYPICAL DRIVING PLEASURE INTO THE ERA OF ELECTROMOBILITY." David Ferrufino, Head of BMW i4 Project.





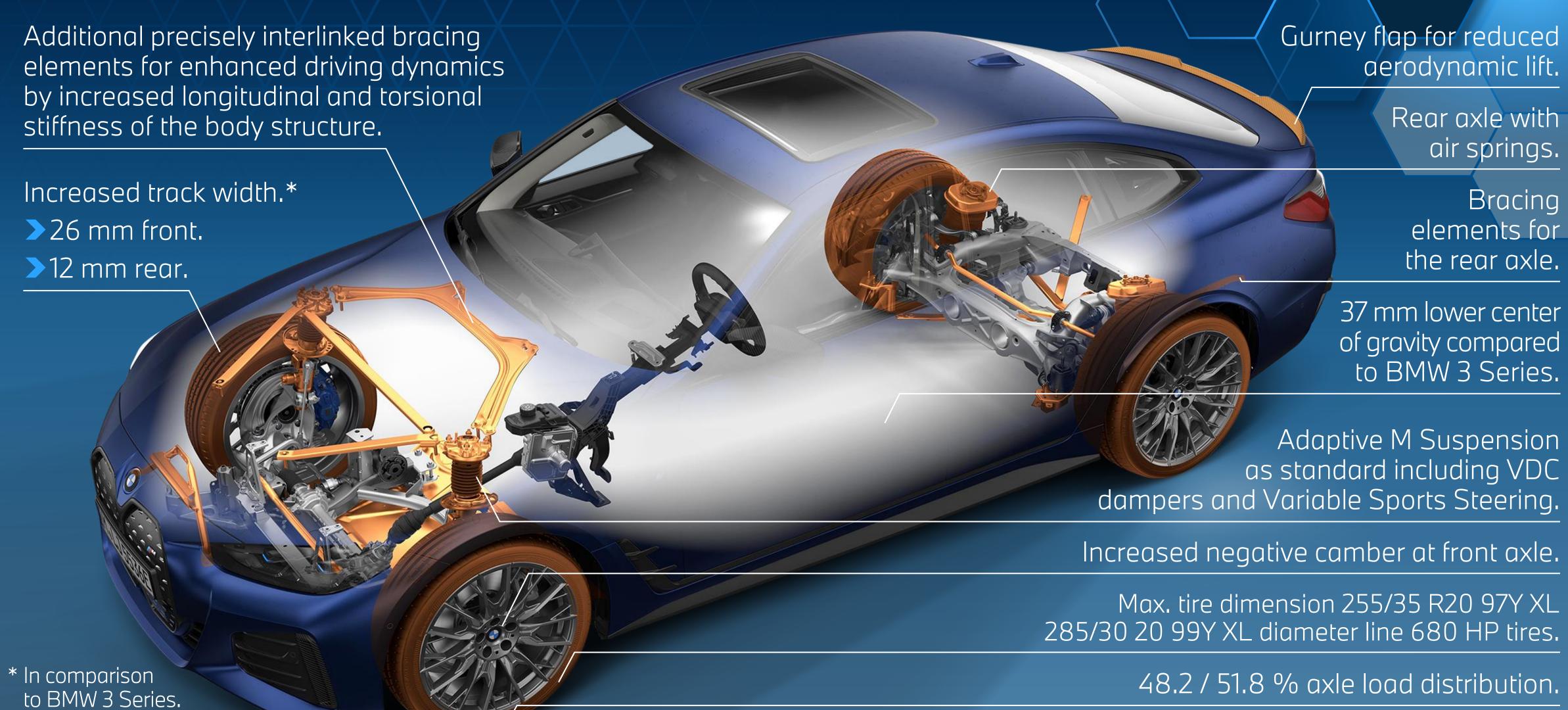
THE FIRST EVER BMW i4 M50. GEN5 E-DRIVETRAIN PERFORMANCE & EFFICIENCY.





THE FIRST EVER BMW i4 M50 CHASSIS.* THE FIRST ELECTRIC BMW M PERFORMANCE MODEL.

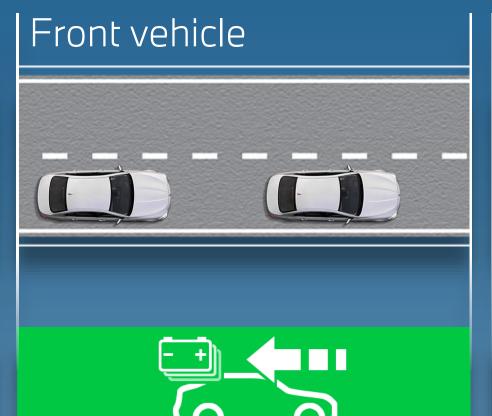




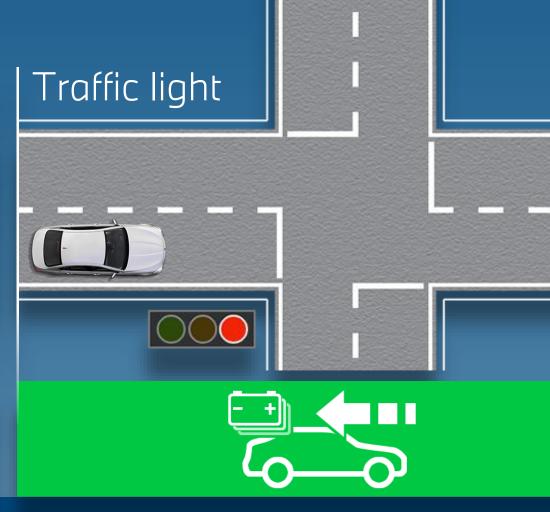
THE FIRST EVER BMW i4. INNOVATION ADAPTIVE RECUPERATION.

- > Innovation: Adaptive Recuperation.
 - > Allows for a new balance between high recuperation and driving comfort.
 - > Artificial Intelligence (AI) judges environment to decide between recuperation and "sailing" - even when navigation is switched off.
 - >> 90% of all "reducing speed situations" can be handled without brake intervention.
 - > Max. 195 kW recuperation power (BMW i4 M50).









- Operation.
 - Easy switch between recuperation modes with gear lever:

 - \rightarrow "D" = Adaptive Recuperation. \rightarrow "B" = "One Pedal Operation" (known from BMW i3).















Maximum system outpu

Maximum system torque

Acceleration (0-100 km/

Range (WLTP)

Top speed (electronically governed)

t		
<u>.</u>		
h)		

BMW iX xDrive40	BMW iX xDrive50		
240 kW / 326 hp	385 kW / 523 hp		
630 Nm	765 Nm		
6.1 sec	4.6 sec		
up to 425 km	up to 630 km		
200 km/h	200 km/h		
Market launch:			

November 2021



Details will be communicated in 2022

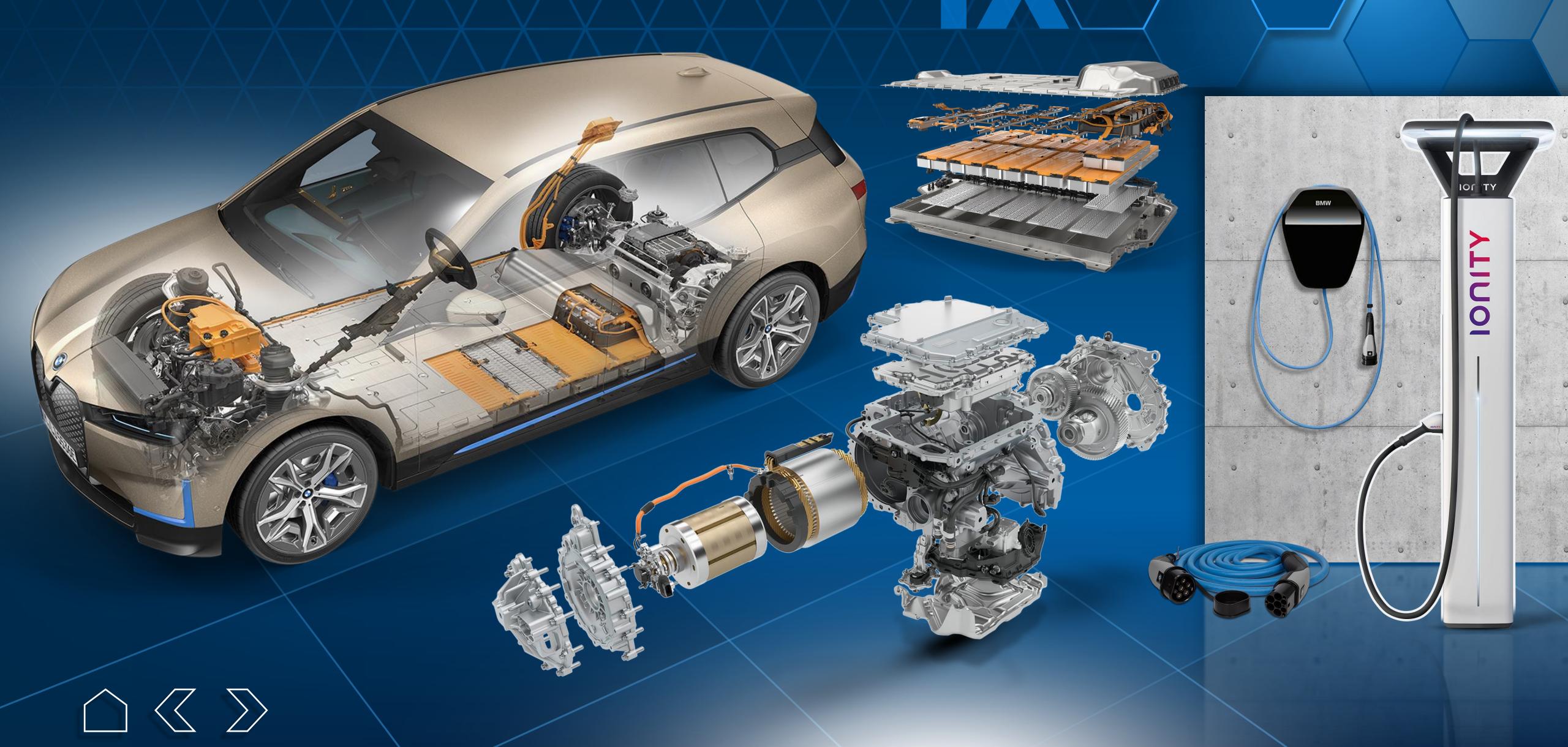




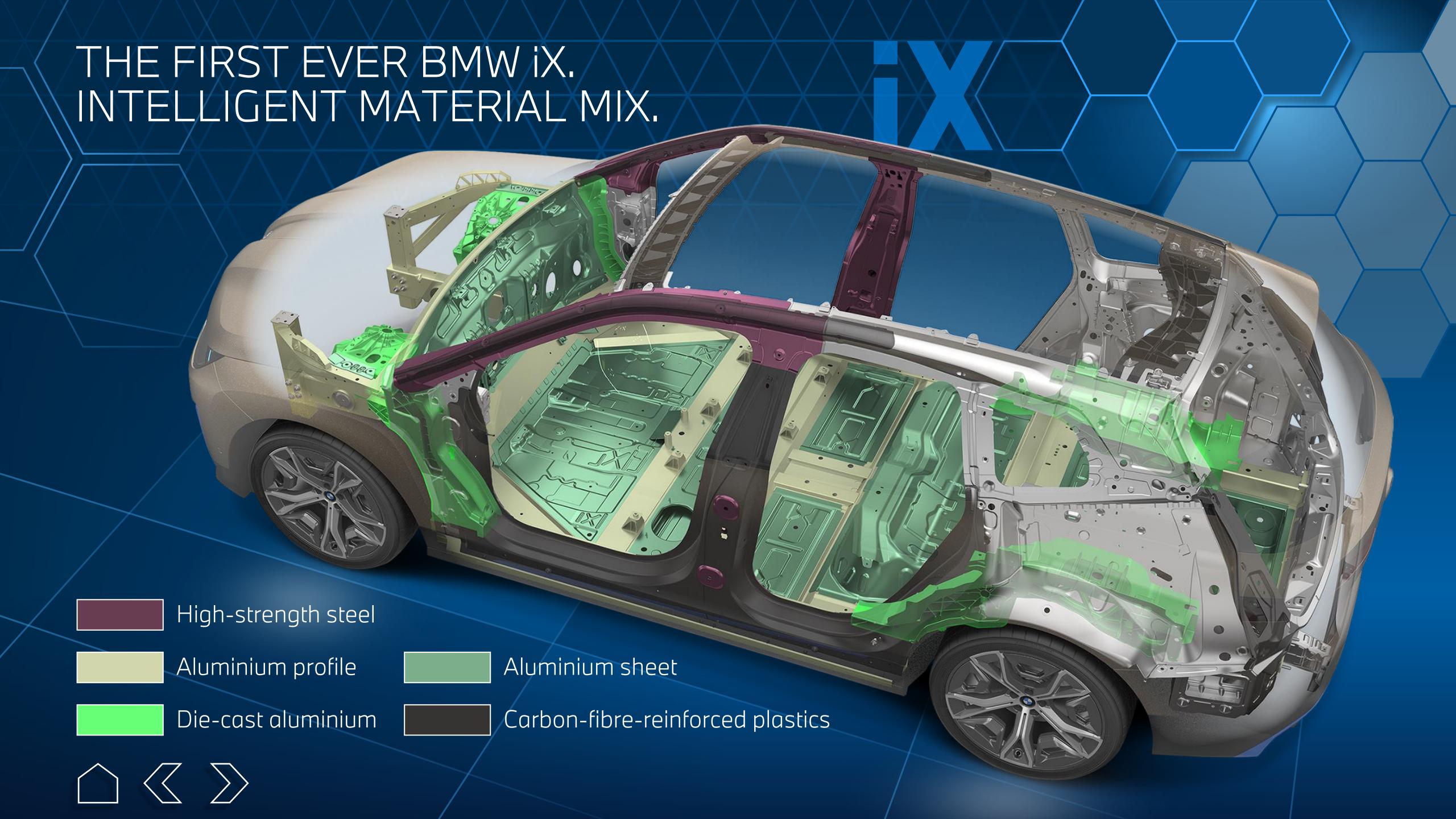




THE FIRST EVER BMW iX. HIGHLY INTEGRATED DRIVE UNIT.







THE FIRST EVER BMW iX – PURPOSE-BUILT BEV WITH A TAILORED CHASSIS.

Focus: Customer added values – Best companion for long distance drives and best in class Driving Comfort.

MyModes & MyCar: Integrating different driving modes into the general experience modes for the driver.

Vehicle-hold using the electric motors - increased comfort by constraining use of the friction brakes.

Digital tire diagnosis.

ARB-X.

NextGen hazard preview. 2-Axle Air Suspension (optional).

Integral Active Steering (optional): variable steering ratio.

Air Performance Wheels & foam tires for 21" and 22" wheels (optional).

Painted brake calipers (optional).

Multi-link rear suspension.

Electronic steering column adjustments.

Integrated Brake.

Electric power steering: sport steering (variable steering ratio) combined with elastic mounts.

Double-wishbone front suspension.

CHASSIS







FUNCTIONS





Multiple conflicting targets during wheel development, especially for electric vehicles.



Crash
Optimum crash performance to avoid battery intrusion.



21" option

Weight
Lightweight construction
to reduce inertia.



Low aerodynamic drag coefficient.



Acoustics

Suppression of acoustic problems through scaled stiffness levels and tailored natural frequencies.



/ Design

Elegant design in the customer's choice of color and finish.



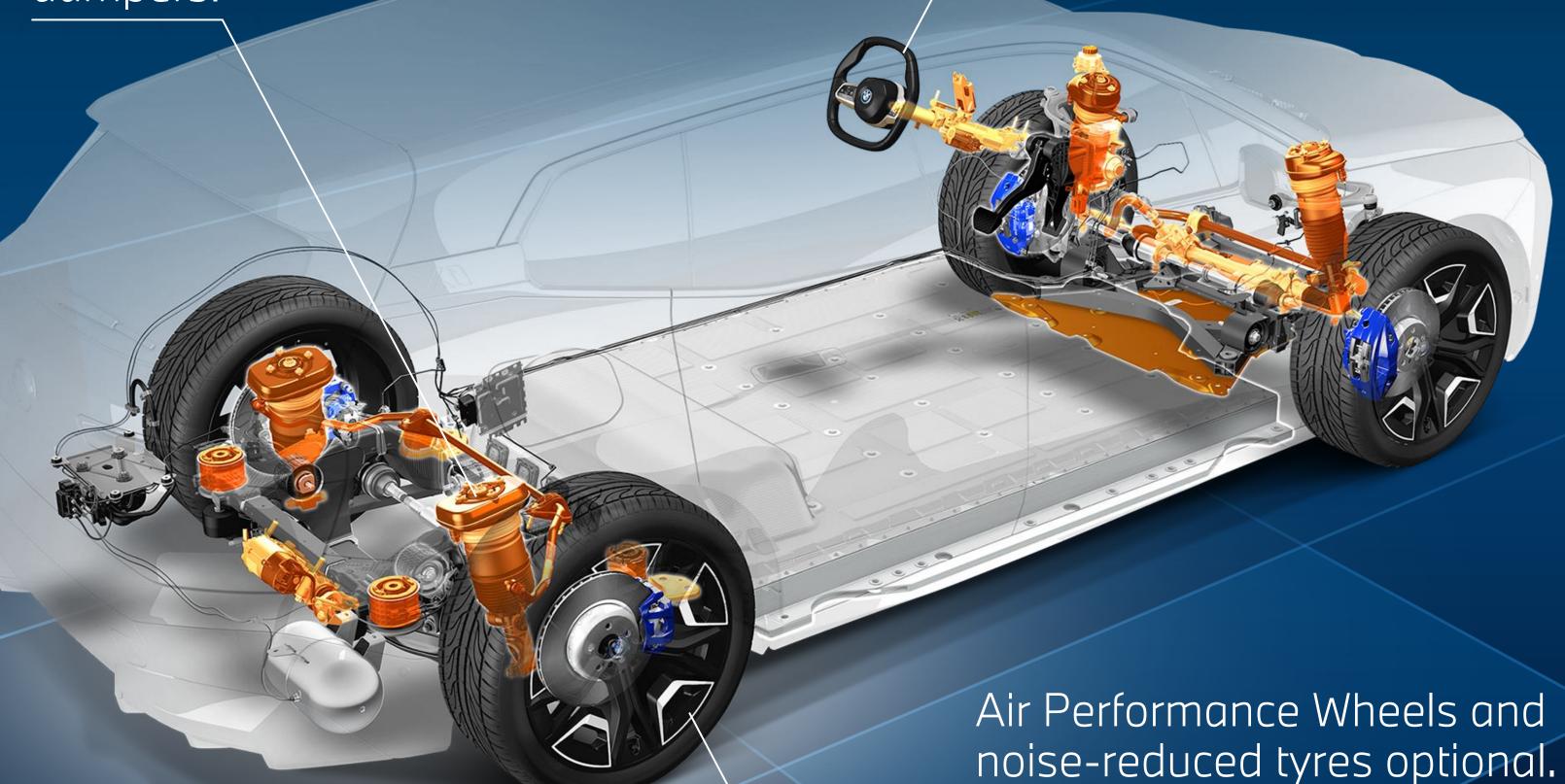




THE FIRST EVER BMW iX. DRIVING DYNAMICS.

Two-axle air suspension and adaptive suspension with electronically controlled dampers.

Integral Active Steering.













THE FIRST EVER BMW IX. SUSTAINABILITY IN PRODUCT DESIGN AND MANUFACTURING.



Validation

TÜV Rheinland Energy GmbH confirms that a critical review of the life cycle assessment (LCA) study of BMW AC

- ISO 14044:2006 + A1:2018 + A2:2020: Environmental management life cycle assessment requi

- 14044:2006 + A1:2018 + A2:2020. The methods used and the modelling of the product system correspond to the state of the art. They are suitable to fulfill the goals stated in the study. The report is comprehensive and provides a transparent description of the framework of the LCA study.
- The assumptions used in the LCA study especially fuel consumption based on the current WLTP (Wo harmonized Light vehicles Test Procedure) were verified and discussed.

- · Check of the applied methods and the product mode
- · Inspection of technical documents (e.g. type approval
- . Check of LCA input data (e.g. weights, materials, fuel consumption, emissions, etc.

Sole liability for the content of the LCA rests with BMW AG, TÜV Rheinland Energy GmbH was commissioned to review said LCA study for

Lower Carbon Footprint.

up to 45% lower global warming potential compared to a conventional SAV.



with locally sourced,

renewable energy.









THE FIRST EVER BMW iX. SUSTAINABILITY IN PRODUCT DESIGN AND MANUFACTURING.



Careful material selection, high proportion of recycled materials.

up to 50% secondary aluminium.

up to 20% recycled thermoplastic.

60kg of recycled plastic.







17%

less CO₂ emissions in the supply chain alone.



THE FIRST EVER BMW iX. SMART SURFACES – KIDNEY GRILLE WITH SELF-HEALING SURFACE.



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.

Overview of surface layer design.

Tool surface

Coating layer

Films

Thermoplast

Injection molding tool



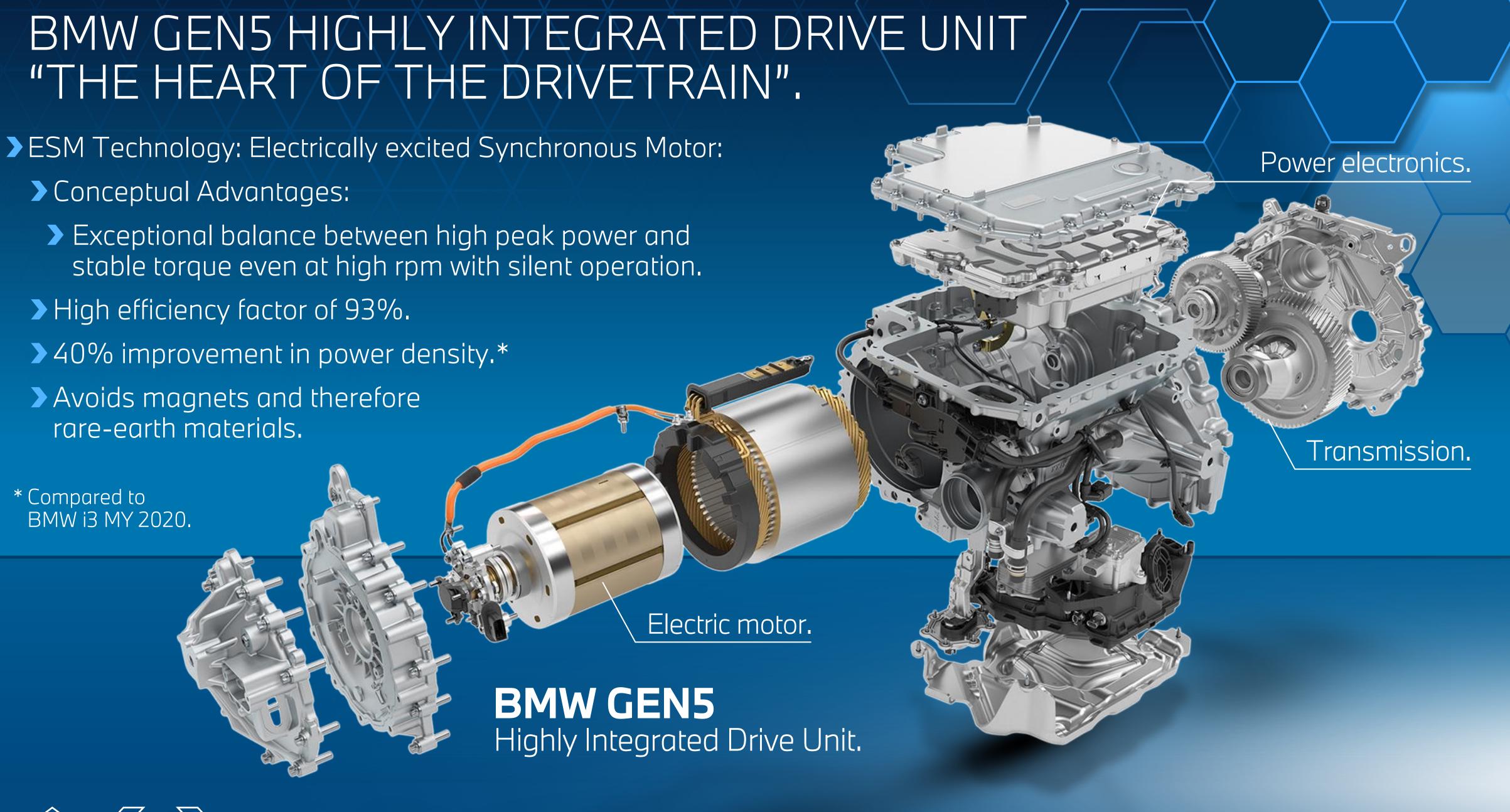




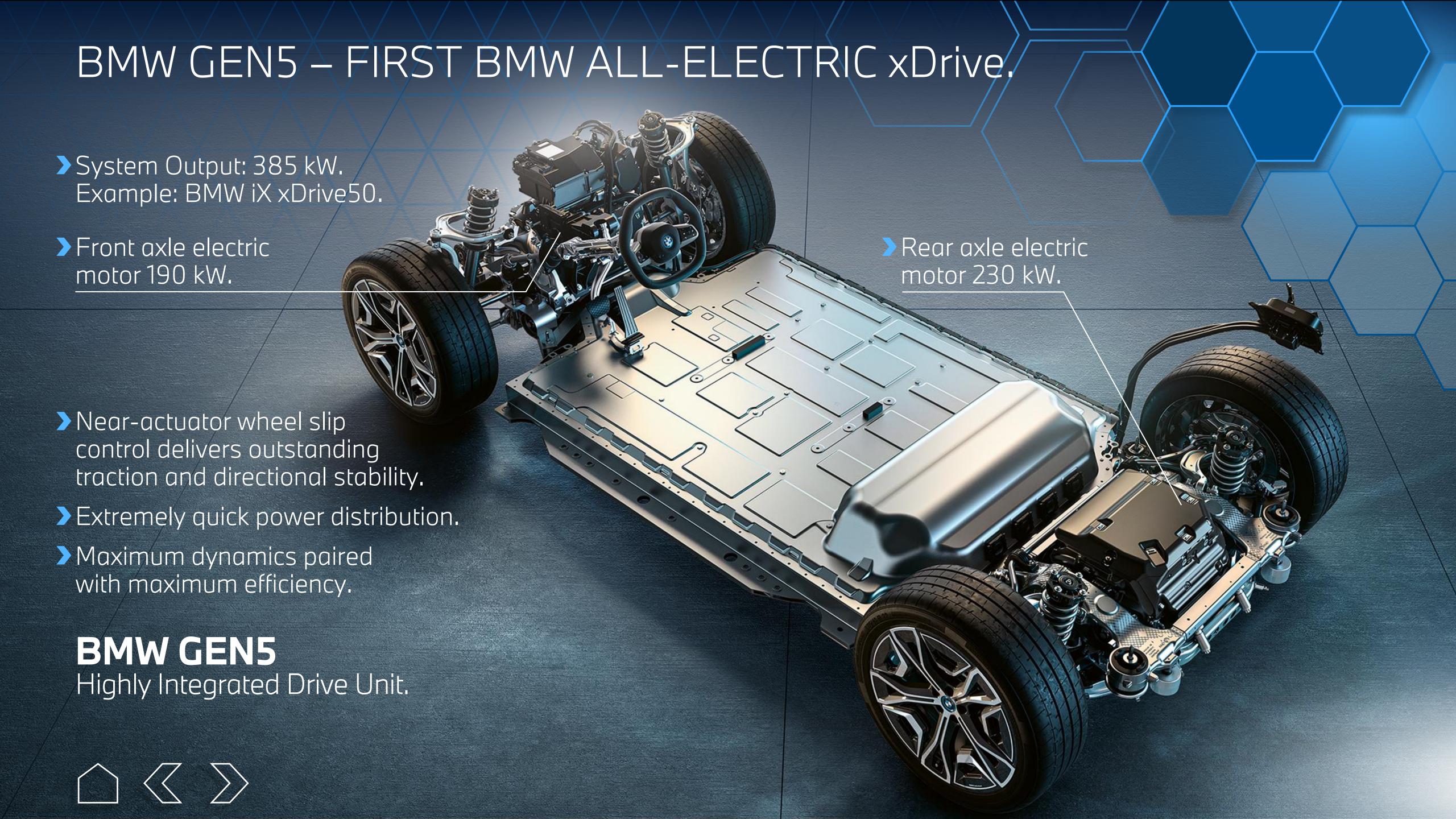
BMW E-DRIVE COMPETENCE SINCE 2008 – IN FOUR GENERATIONS.

- In 2008 BMW Group started building its expertise in electrified drivetrains.
- > Starting with the MINI e up to the current Portfolio of Plug-In Hybrids.
- > Continuous Development of Efficiency, Dynamics and Sustainability.





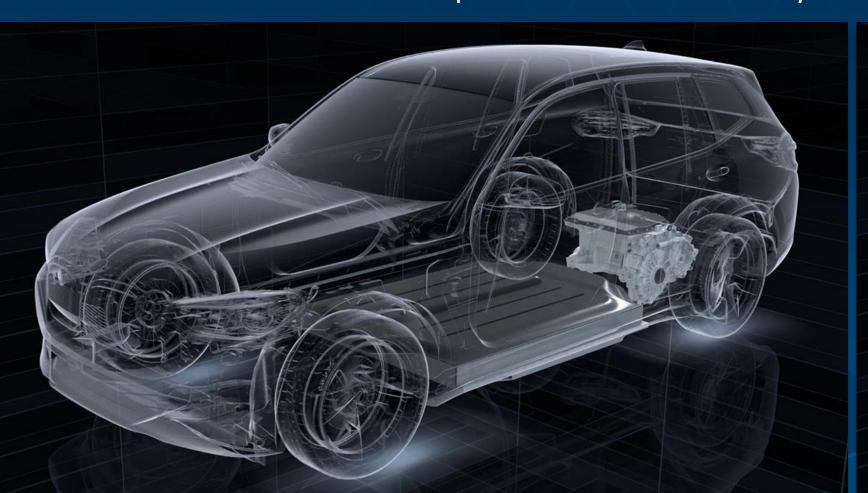




BMW GEN5: A HIGHLY INTEGRATED SCALABLE AND MODULAR SYSTEM.

➤ Example: highly integrated eDrive unit:

Different hardware configurations and different power electronics build the basis for the perfect modular system for all future BMW Group BEV.



Example: BMW iX xDrive50:
eDrive 5.0 M220SF
(190 kW) front unit. (230 kW)

eDrive 5.1 0220SR

(230 kW) rear unit.

➤ Enabling perfect Drivetrain / Vehicle combinations for our Gen5 BEV Portfolio Roll-Out.

BMW GEN5

Highly Integrated Drive Unit.



BMW GEN5: HIGH VOLTAGE BATTERY – MODULAR PERFORMANCE.

- ➤ Modular System: e.g. allowing with a 110mm cell a Gran Coupé silhouette for the BMW i4 or with a 140mm cell a SAV silhouette for the BMW iX.
- ➤ Lithium-ion technology with Prismatic cells with Nickel-rich cell chemistry.
- ➤ Each cell individually controlled and modules easy to exchange.

Cell-survaillance.

Cell modules.

Battery Management Unit.

Cooling plates.



BMW iX xDrive40

76.6 kWh (gross) 71.0 kWh (net)

BMW iX xDrive50 111.5 kWh (gross) 105.2 kWh (net)



BMW i4

Energy capacity

BMW i4 eDrive40

83.9 kWh (gross) 80.7 kWh (net)

BMW i4 M50

83.9 kWh (gross) 80.7 kWh (net)





BMW GEN5: HIGH VOLTAGE BATTERY – SUSTAINABILITY FOCUSED.

- > BMW steered and controlled Cobalt and Lithium sourcing.
- \triangleright CO₂-free production of battery cells only using green power.
- ➤ Our target: use of more than 90% recycled Nickel, Cobalt and Aluminium by 2030.





⊗
»
OECD



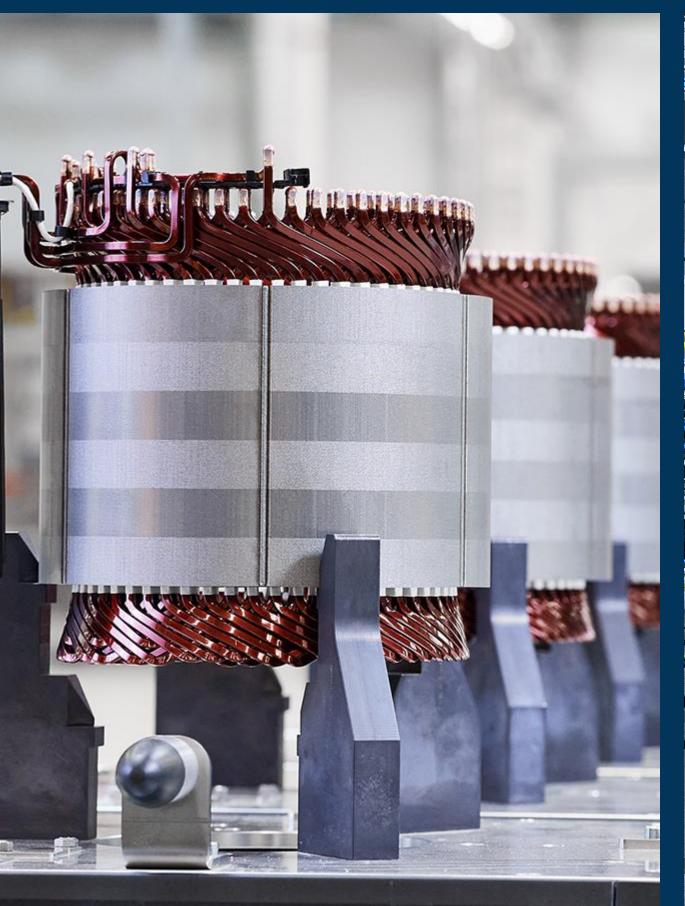


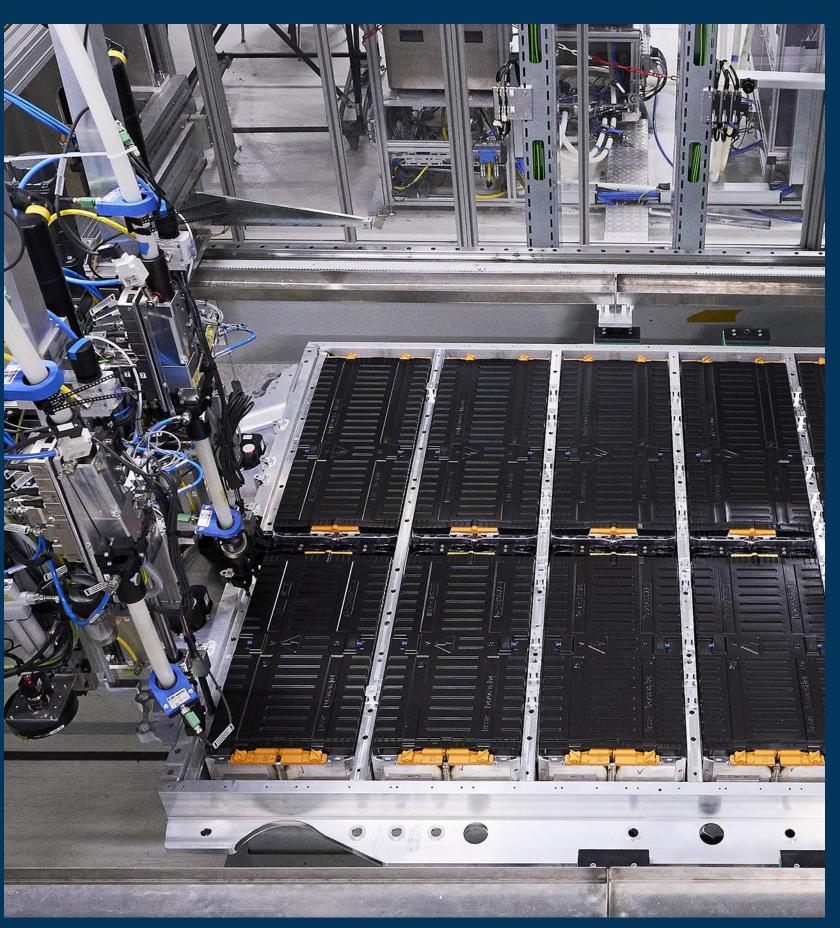






BMW GEN5: DEVELOPED BY BMW AND MADE BY BMW.













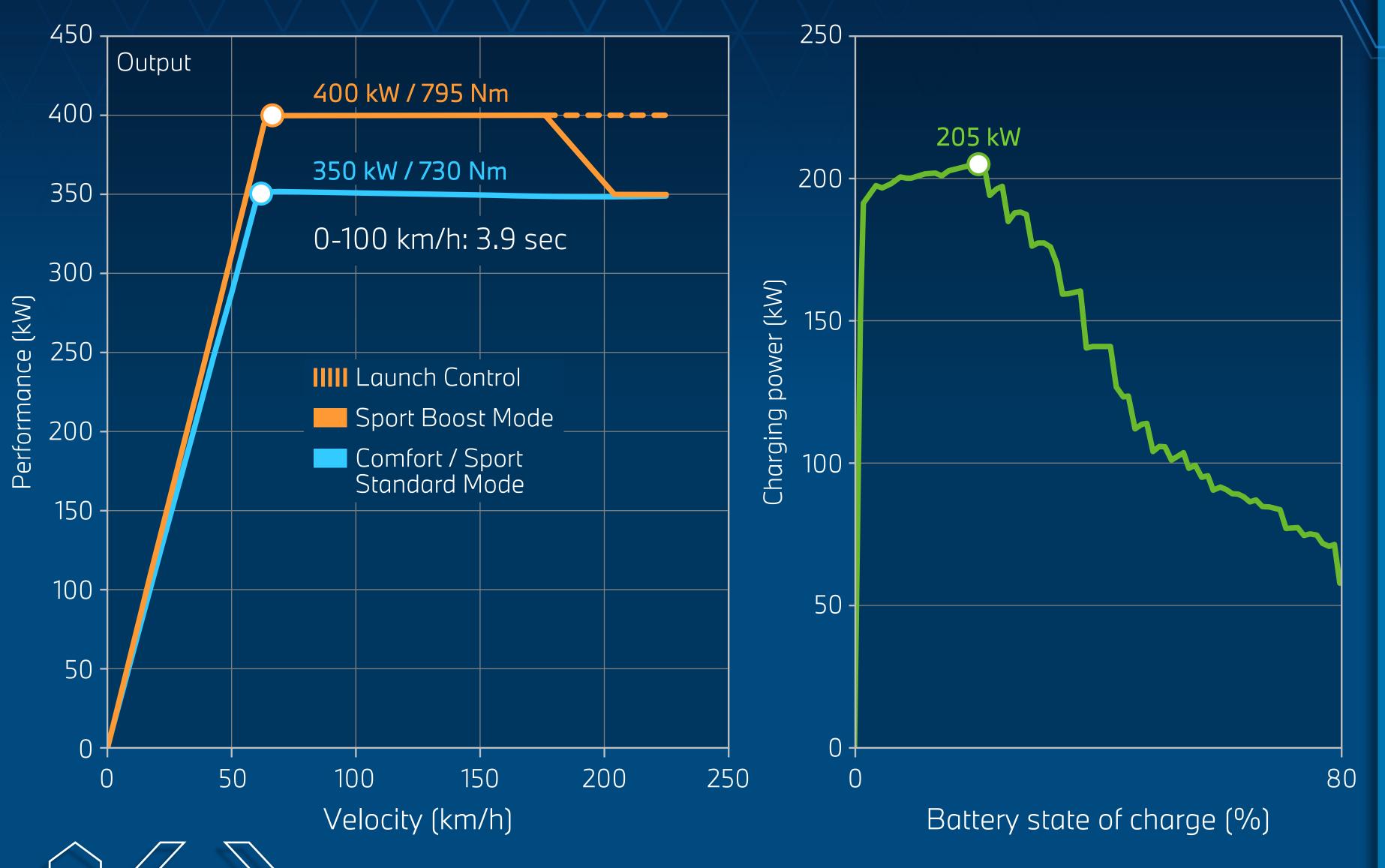
BMW GEN5: SMART DRIVETRAIN.

Adaptive or adjustable recuperation of braking energy increases efficiency enabeling one-pedal feeling and coasting function depending on the traffic situation.





THE BMW i4 M50. PERFORMANCE AND CHARGING.

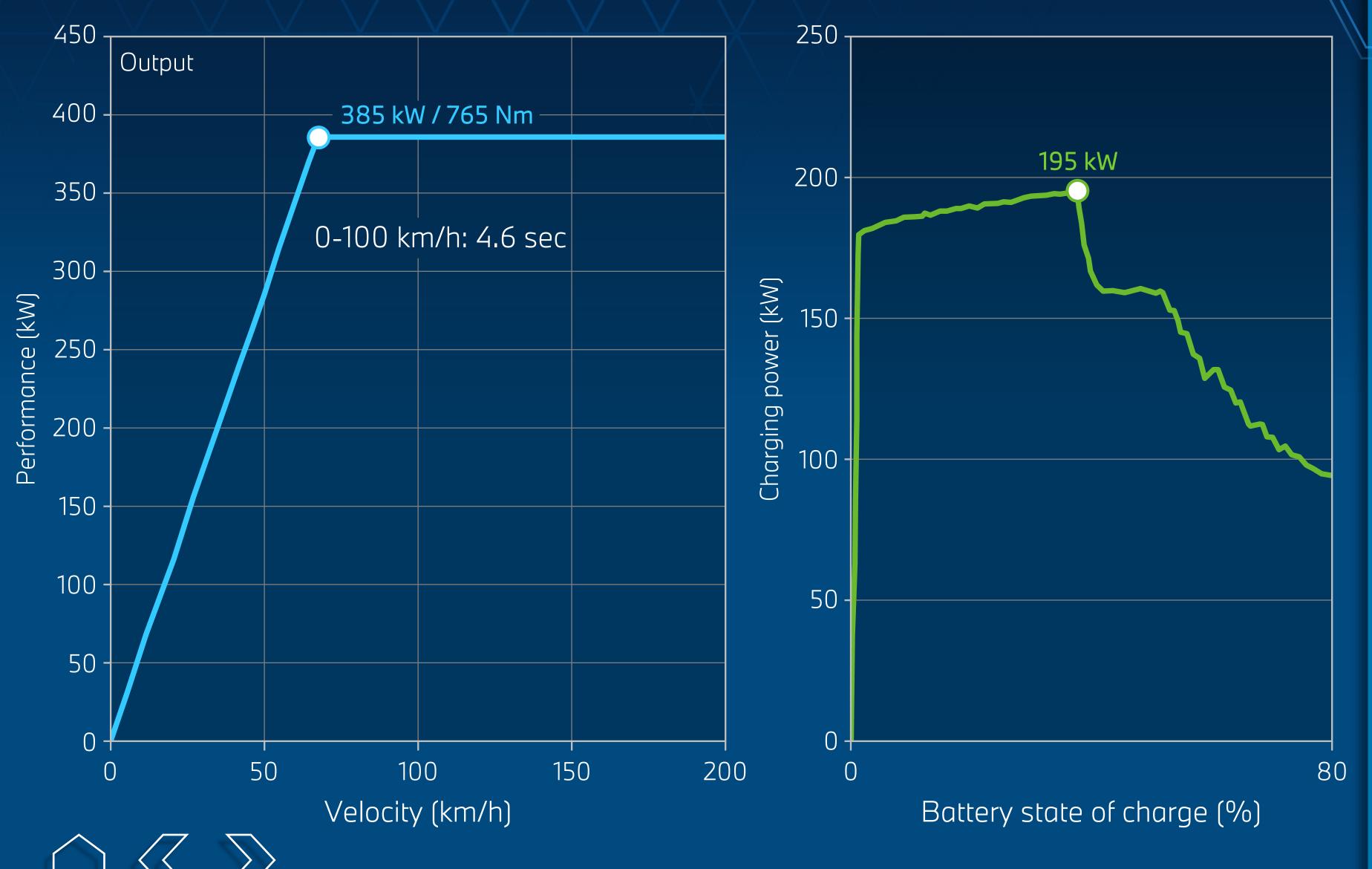


BMW i4 eDrive40 - Charging duration

10 mins high-power charging (DC):
+ 164 km range

10% - 80% highpower charging (DC): 31 mins

THE BMW iX xDrive50. PERFORMANCE AND CHARGING.



BMW iX xDrive50 - Charging duration

10 mins high-power charging (DC):

10% - 80% highpower charging (DC): 35 mins

+ 150 km range







BMW PUBLIC CHARGING ALMOST ANYWHERE AND ANYTIME.



BMW CHARGING – A SEAMLESS CUSTOMER EXPERIENCE. ➤ Control of all Charging features in car and via My BMW App. > Finding the right Charging Point and Timing your Charge. > For the Daily Commute, Weekend Escape or long-distance Trip. Berlin IONITY Lippetal 444 km Deutsch Paris ~ 1000 km





INTERNATIONAL MEDIA LAUNCH BMW IX AND BMW 14. THE ALL-NEW BMW iDrive. 98 -₹ 491 km

INTERNATIONAL MEDIA LAUNCH BMW iX AND BMW i4. THE ALL-NEW BMW iDrive.



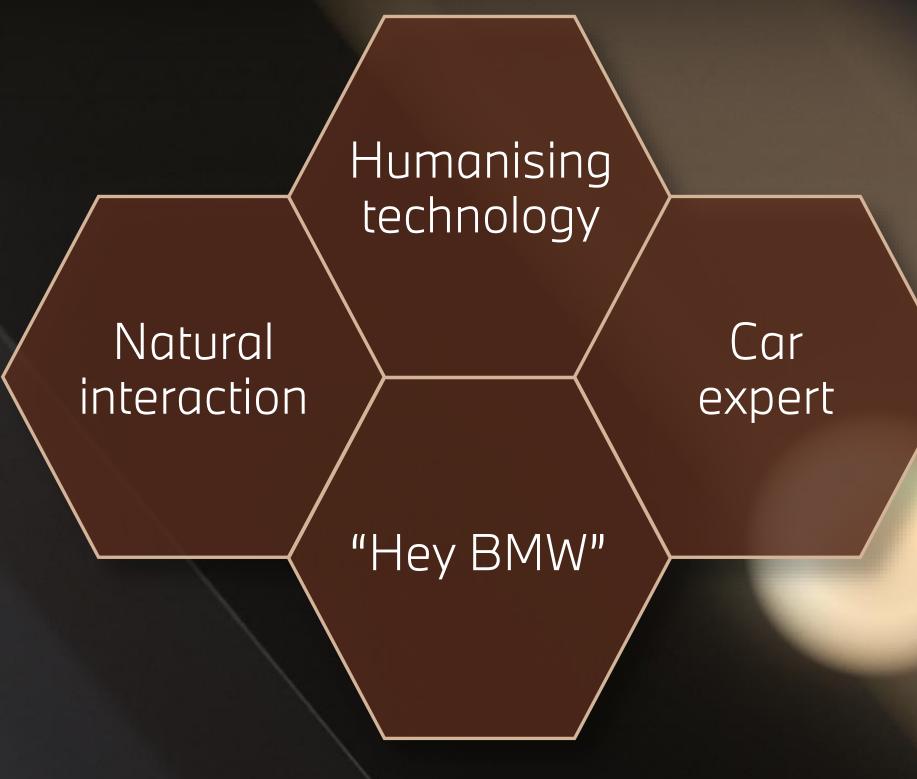


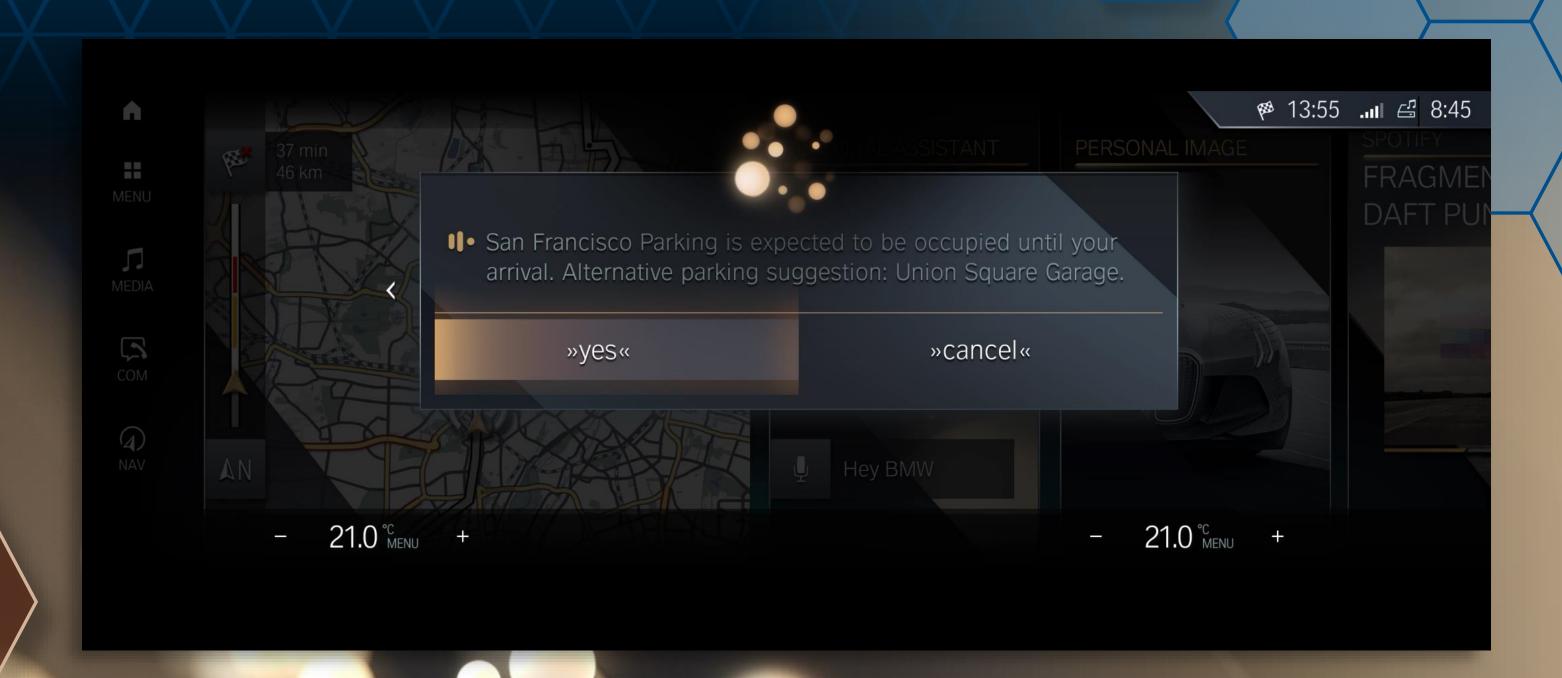


THE ALL-NEW BMW iDrive. A NEW KIND OF DRIVER-VEHICLE RELATIONSHIP.

BMW Intelligent Personal Assistant.

- ➤ Driver- and Co-Driver dialogue.
- ➤ Recognisable states of activity.
- > Proactive suggestions.







THE ALL-NEW BMW iDrive. MY MODES – AN IMMERSIVE EXPERIENCE.

Inspired by
Individuality – suited
for every preference.



Personal Mode

- ➤ Individual options.
- **▶** Balanced driving characteristics.
- > Individual lighting settings.

Inspired by
Racing – colored
in Thrilling Orange.



Sport Mode

- > Dynamic driving.
- > Adjusted engine sound.
- > Focused display layout.

Inspired by
Flowing water – with
reflections of sunlight.

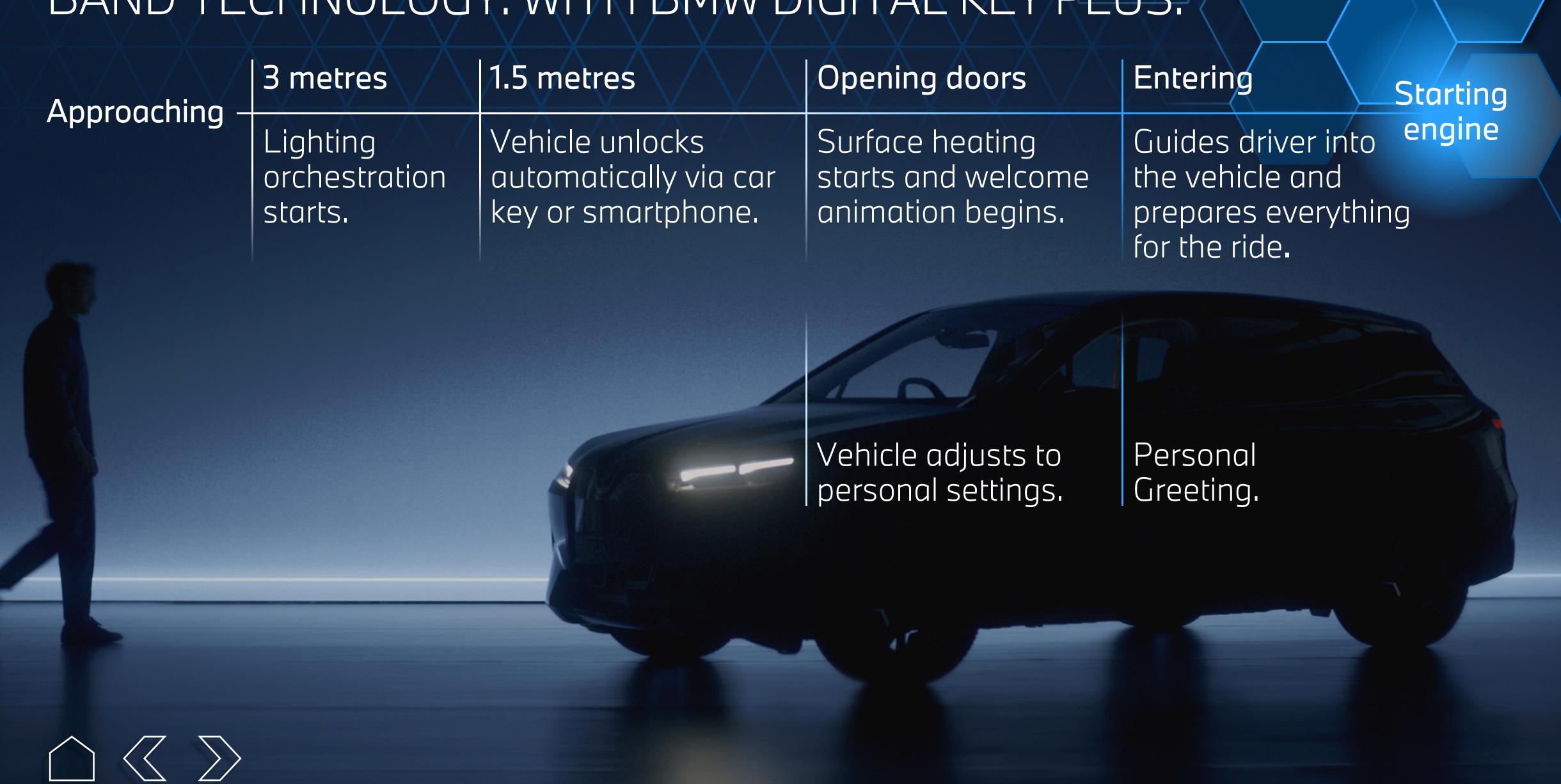


Efficient Mode

- > Efficient driving.
- > Lowest possible energy consumption.
- > Intelligent efficiency trainer.



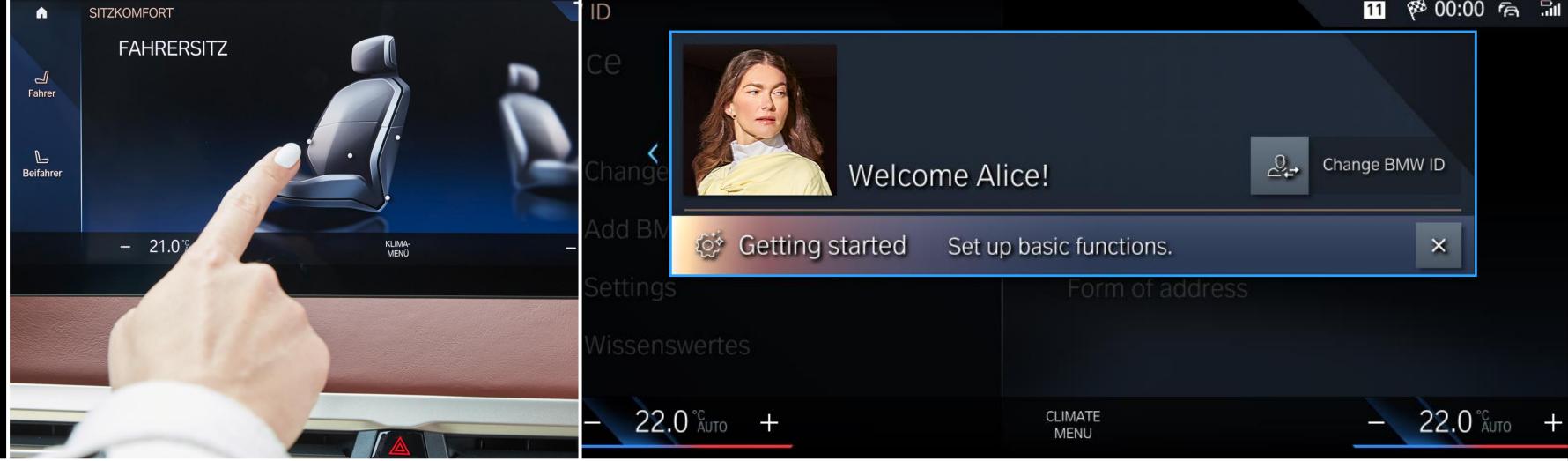
GREAT ENTRANCE MOMENTS ENABLED BY ULTRA-WIDE-BAND TECHNOLOGY. WITH BMW DIGITAL KEY PLUS.





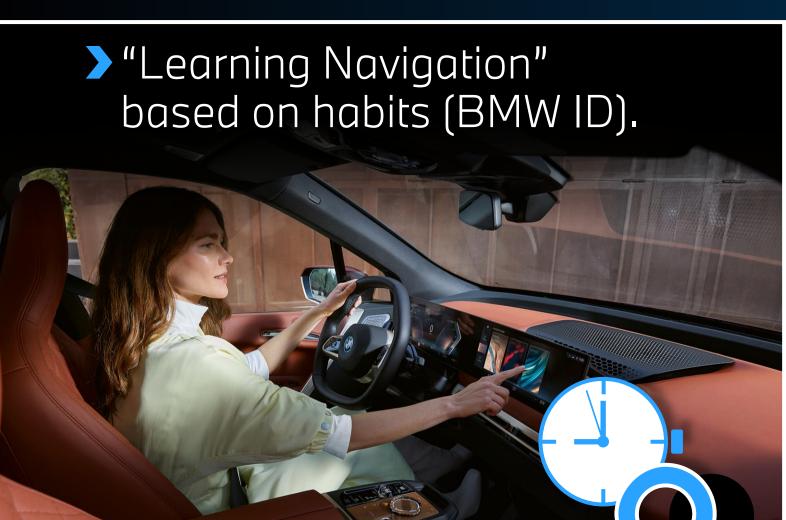
exterior mirrors, navigation system, display layouts, shortcuts, driver assistance functions, etc.

Transferrable between vehicles.

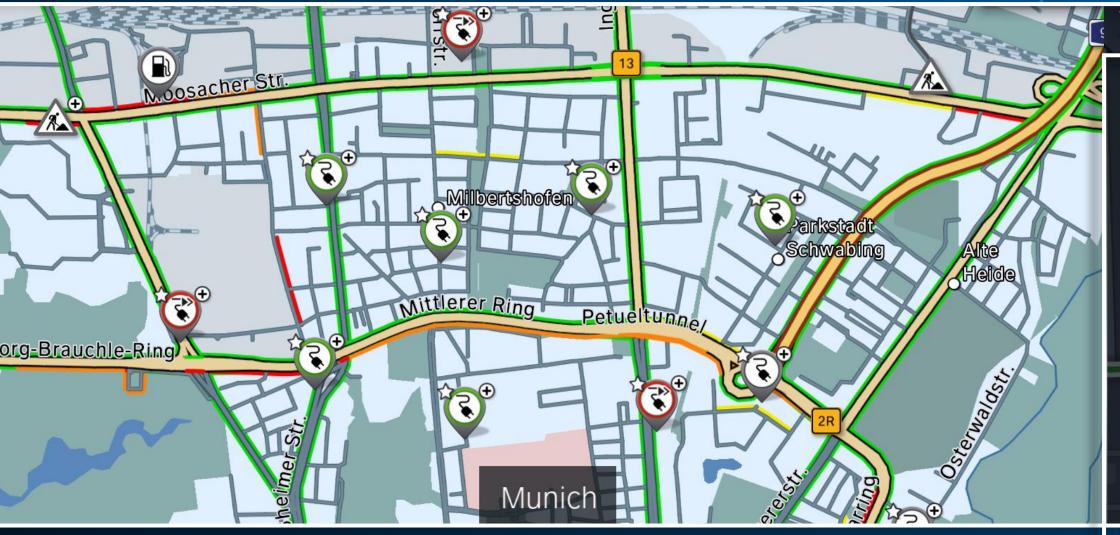




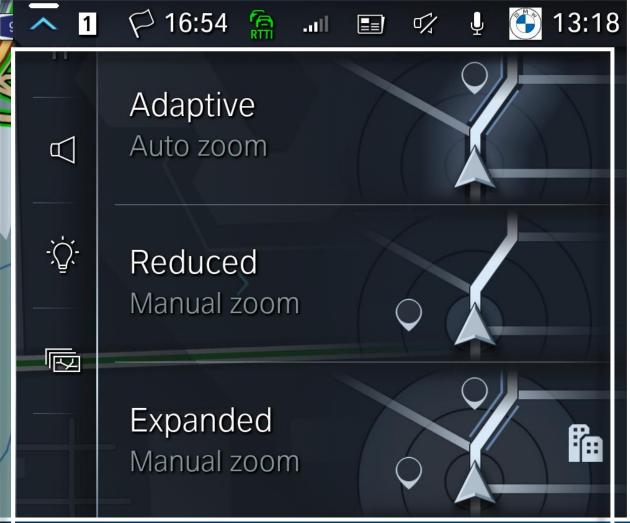
SUPERFAST AND SMART: THE NEW CLOUD-BASED BMW MAPS.



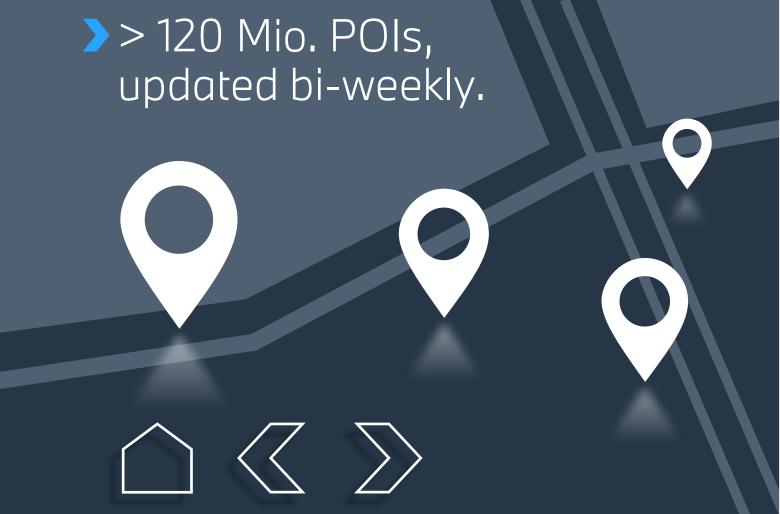
> State-of-the-art accuracy in calculation of ETAs.



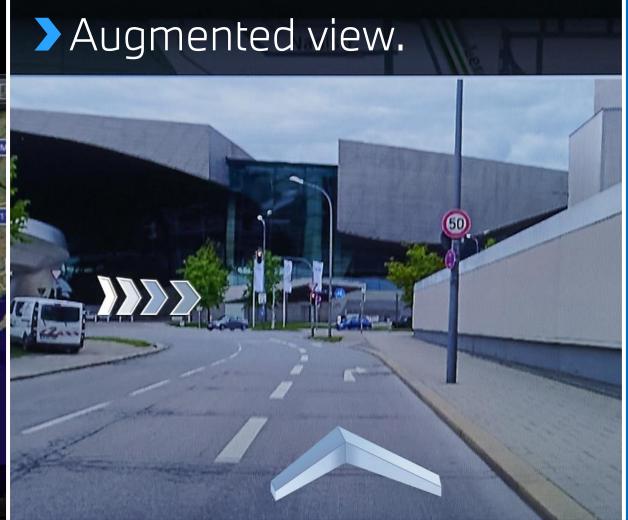
Color-code indication of charging station availability.



Different Map views for optimal personalization.







BMW MAPS. NAVIGATION WITH AUGMENTED VIEW.







The Interior Camera captures precious moments with family and friends and offers peace of mind when the vehicle is parked.

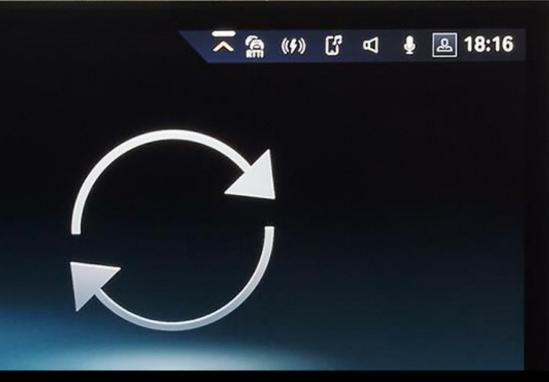
> Remote Inside View.



ALWAYS FRESH. WITH REMOTE SOFTWARE UPGRADE AND FUNCTIONS ON DEMAND.

- > Remote Software Upgrade.
 - > Release of new features and improvements over-the-air.
 - > Preparation in the background. Installation around 20 mins.
 - > Upgrade in 06/2021 for 1.3 Million vehicles with BMW 0S 7.
 - Target end 2021: largest over-the-air upgradeable fleet with > 2.5 million vehicles.





- > Functions on demand.
 - Subscription-based over-the-air activation of optional equipment.
 - ➤ Features in Safety, Comfort, Infotainment, Driver Assistance, and more.







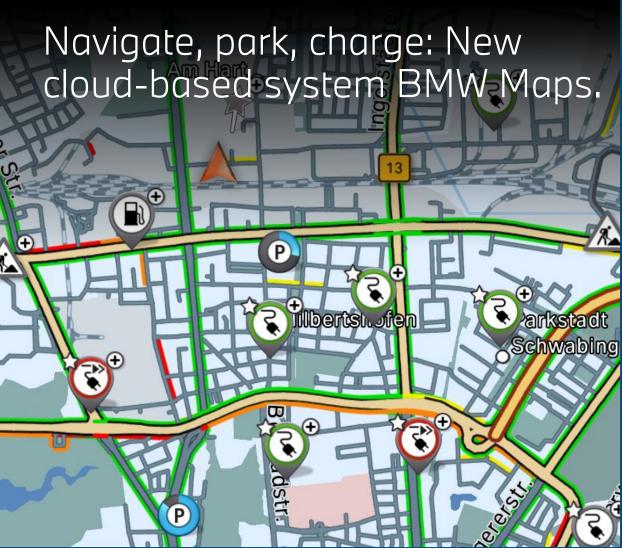




IN A NUTSHELL. DIGITAL PRODUCTS AND SERVICES.







Interior Camera: Snapshot, Remote Inside View and Theft recorder.



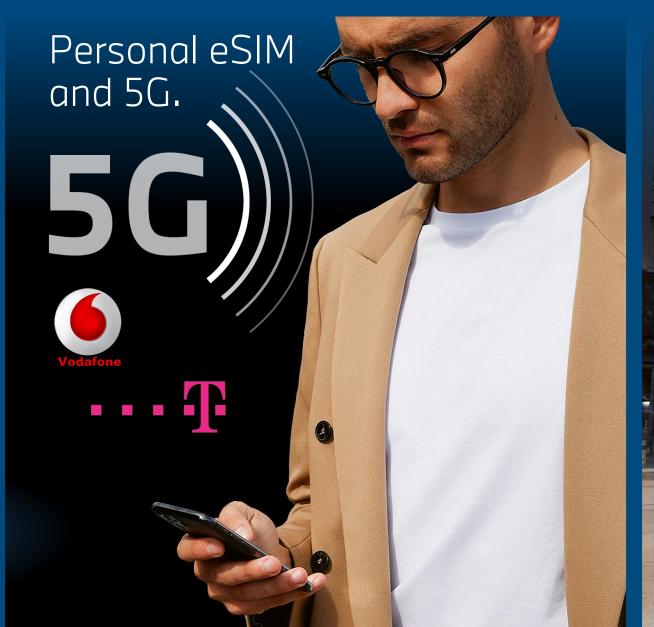
3rd party integration: Seamless connection with Apple Car Play, Android Auto, Spotify, Alexa, etc.





Always Fresh with remote software upgrade and Functions on Demand.







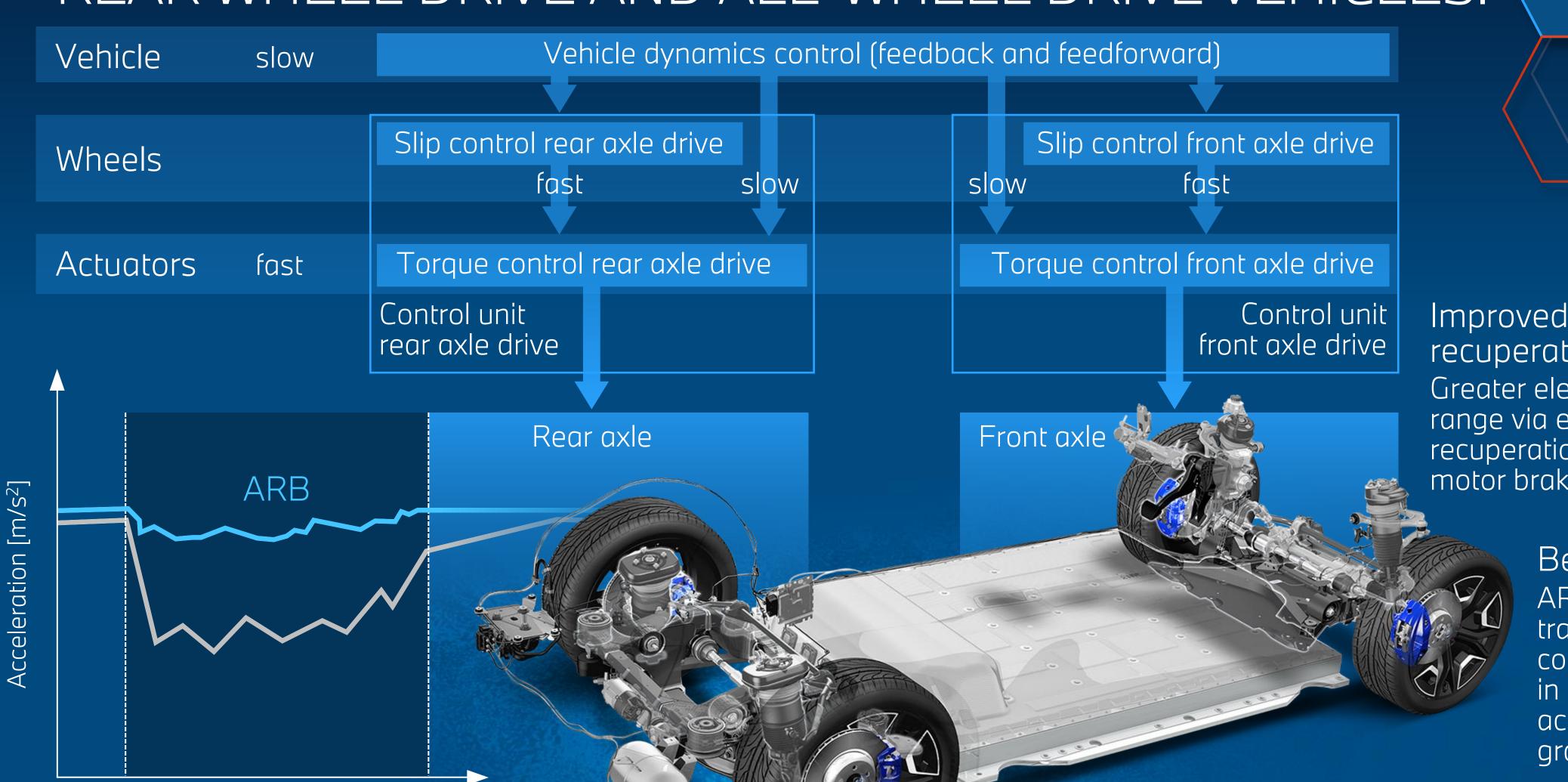
THE ALL-NEW BMW iDrive. BMW iDrive THE INTELLIGENT FUSION OF SENSING





ACTUATOR CONTIGUOUS WHEEL SLIP LIMITATION FOR REAR WHEEL DRIVE AND ALL-WHEEL DRIVE VEHICLES.

BOOST



Time [s]

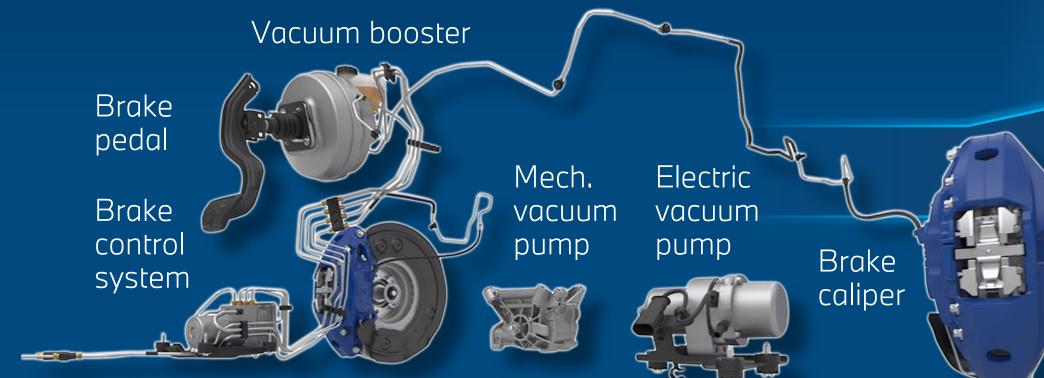
Improved recuperation: Greater electric range via enhanced recuperation during motor braking.

> Better traction: ARB-X improves tire traction for all road conditions, resulting in better vehicle acceleration and gradeability.

THE FIRST EVER BMW IX AND THE FIRST EVER BMW I4 – INTEGRATED BRAKE.

Integration of the braking interface, force amplification and the brake control system (DSC) in one compact, light-weight brake module.





Functional integration





Advantages:

- Improved sportiness and sense of safety due to the short, direct pedal feel.
- > Fast balancing between regenerative braking and friction braking -> optimal recuperation and maximized driving stability.
- > Higher levels of driving dynamics and controllability through swift and precise control of the brakes for vehicle stabilization.
- > Shorter stopping distances during active driver-assistance functions, improving active safety.
- ➤ A consistent brake pedal feel is guaranteed. Regardless of recuperation.







THE FIRST EVER BMW 14 - AIR PERFORMANCE WHEELS. TECHNOLOGY & PORTFOLIO.

Advantages:

Effective reduction of air turbulence in the area of the wheels.

> Compared to conventional alloy wheels, the weight reduced by around 15 percent.

The innovative design combines optimized aerodynamic properties with the elegance of an aluminium rim in a V-spoke design.

BMW i4 M50 wheels.



18" standard

option

option







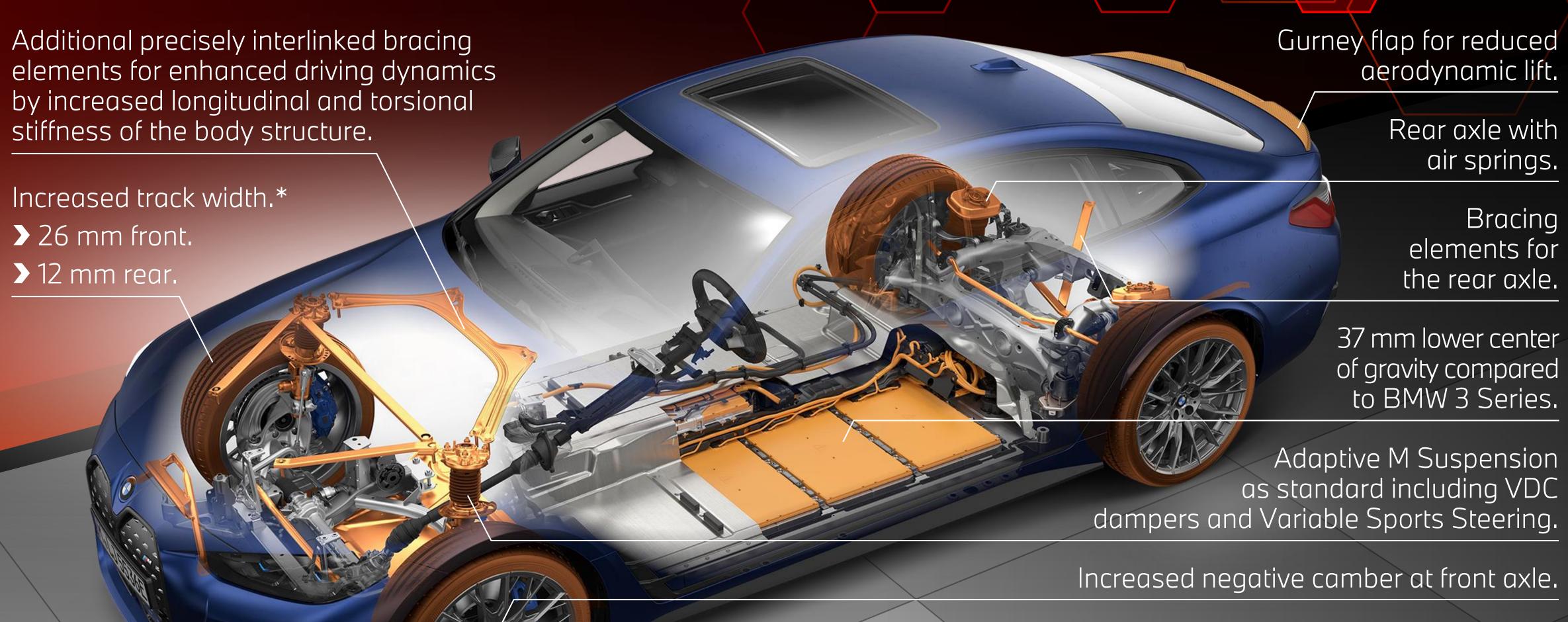












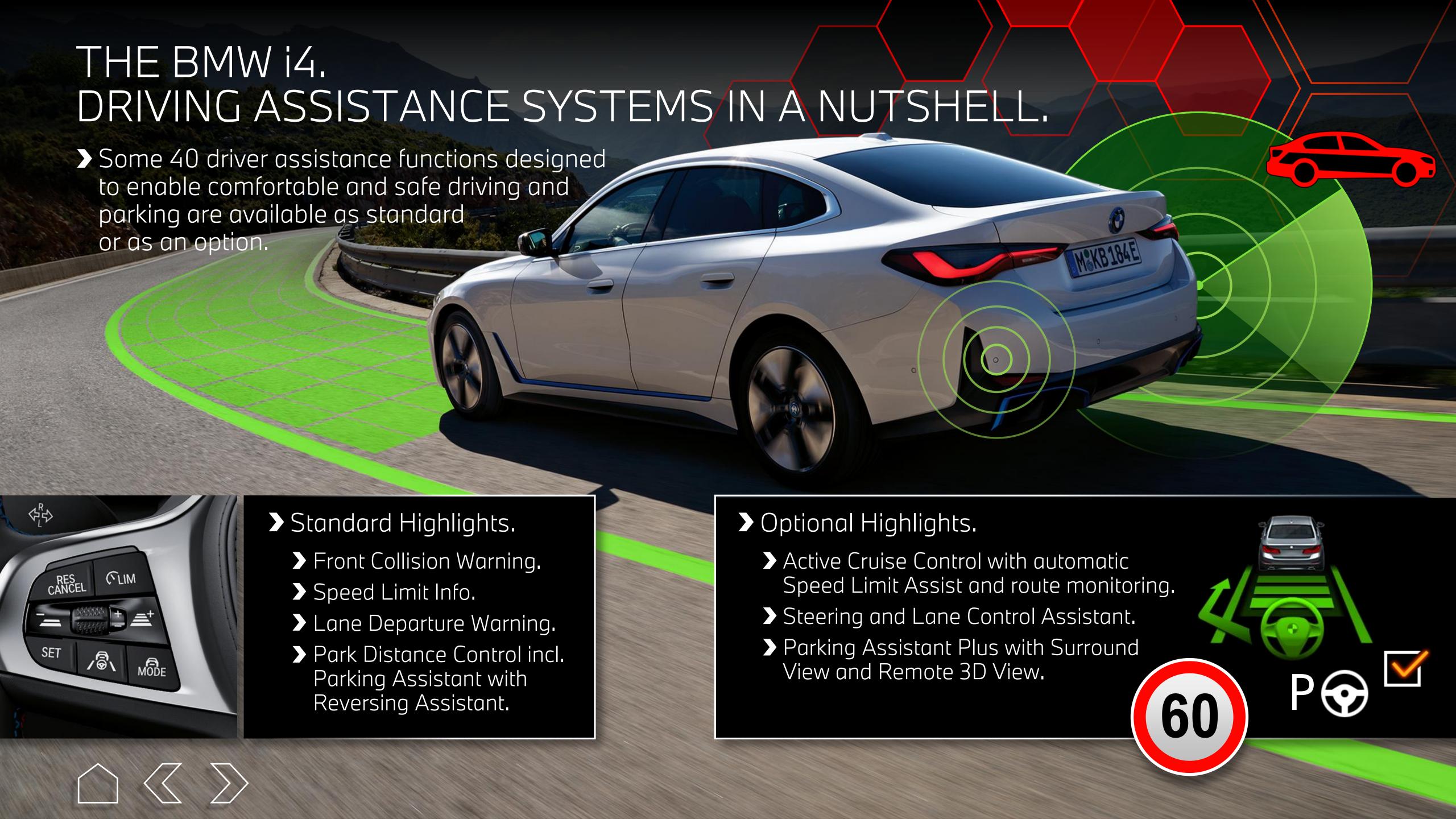
48.2 / 51.8 % axle load distribution.

Max. tire dimension 255/35 R20 97Y XL

285/30 20 99Y XL diameter line 680 HP tires.

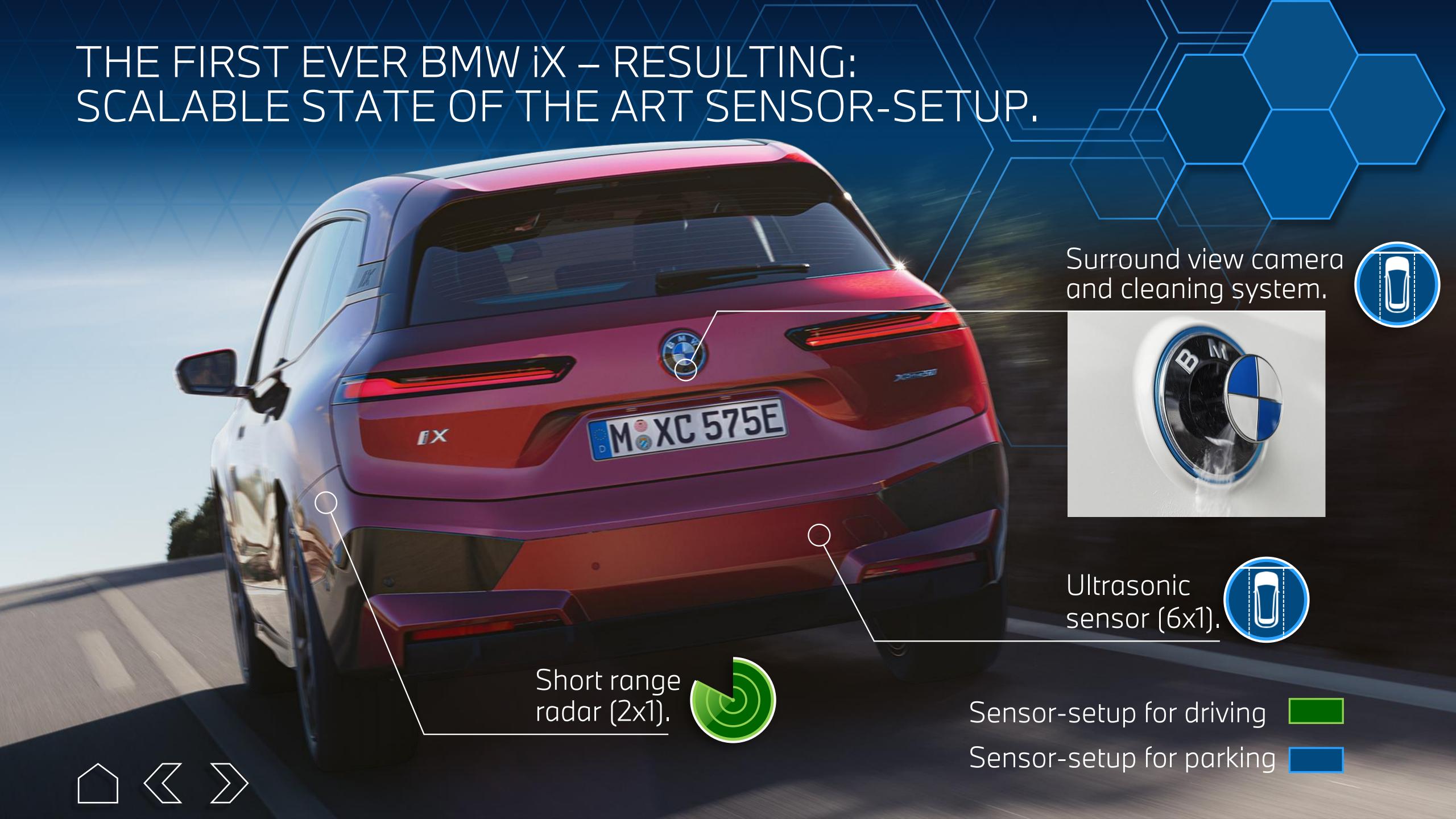
* In comparison to BMW 3 Series.











THE FIRST EVER BMW iX. COMING NEXT.





Coming in 2022

From 03/22

- > Parking Assist Professional.
- Maneuver Assistant.

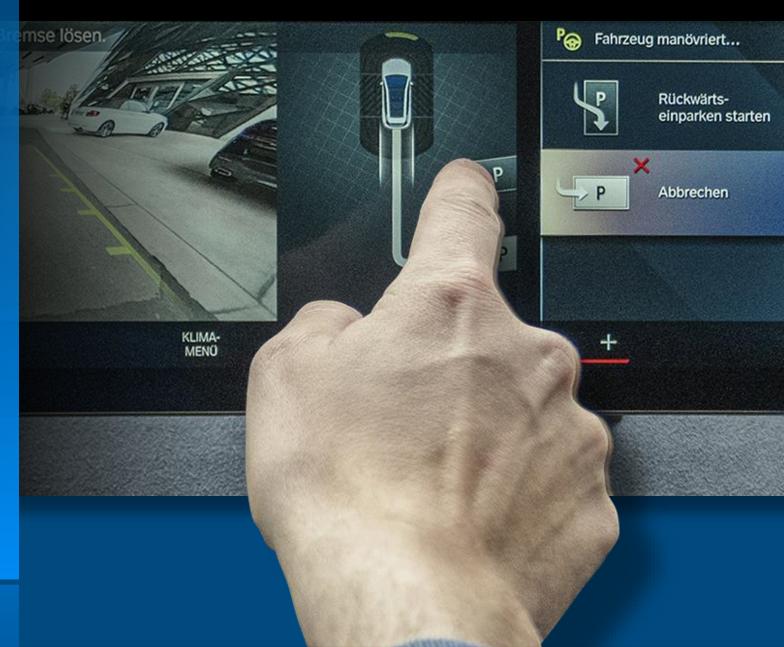
From 07/22

> Remote Control via Smartphone.

Via Functions on Demand:

- > Active Cruise Control Stop & Go.
- Steering and Lane Control Assistant (hands-on).

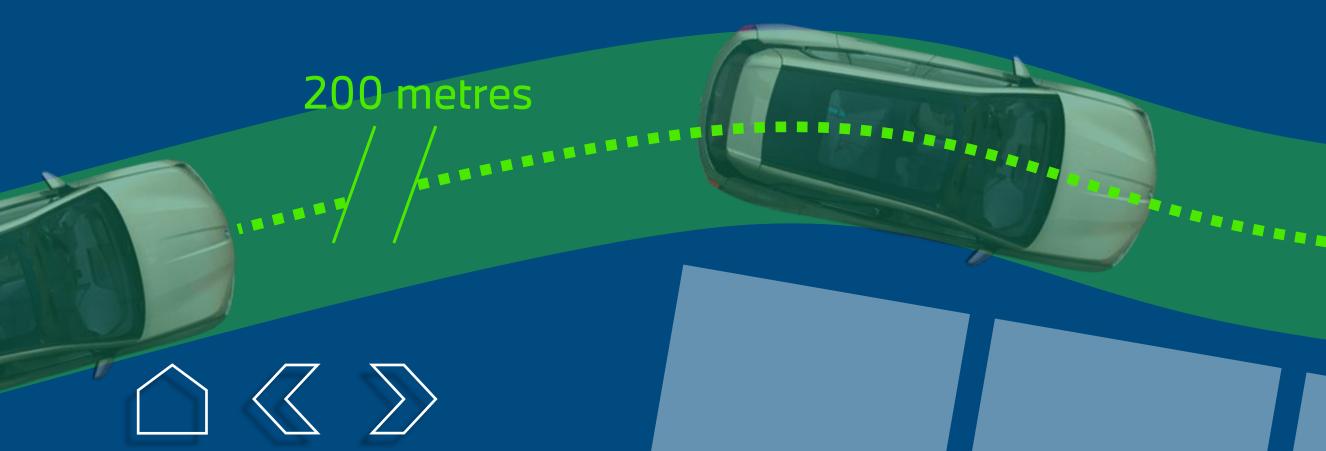
➤ Parking Assist Professional.



THE FIRST EVER BMW iX. COMING NEXT- MANEUVER ASSISTANT.



- ➤ 200 metres recording function.
- > Increased and constant precision over the total distance due to localisation by surround view camera.
- > Optimised obstacle detection versus previous generation tool kit.
- > Path to be driven is shown in the "Assist View" and as overlay in the camera view.
- > Up to 10 maneuvers can be recorded and stored per car/profile.
- ➤ Maneuver Assistant different from Park Maneuver Assistant.





INTERNATIONAL MEDIA LAUNCH. BMW GROUP PLANT DINGOLFING.







BMW GROUP PLANT DINGOLFING. OVERVIEW OF THE SITE.



BMW GROUP PLANT DINGOLFING. FACTS & FIGURES.



17,000 employees.

> 850 apprentices in 15 different professions.

> 2.8 million sq. m (Dingolfing site in total).

Hundreds of millions of euros invested annually in new models and technologies.

HIGH FLEXIBILITY.



BMW 5 Series Sedan, Touring,





BMW 7 Series Sedan, LWB version,



BMW 8 Series Coupé, Convertible, Gran Coupé



ROLLS-ROYCE

Ghost Phantom Cullinan Wraith Dawn



BMW i

BMWiX BEV versions of BMW 7 and 5 Series already announced





BMW M8 Coupé, Convertible, Gran Coupé

BMW M4 Coupé, Convertible

BMW M5 Sedan



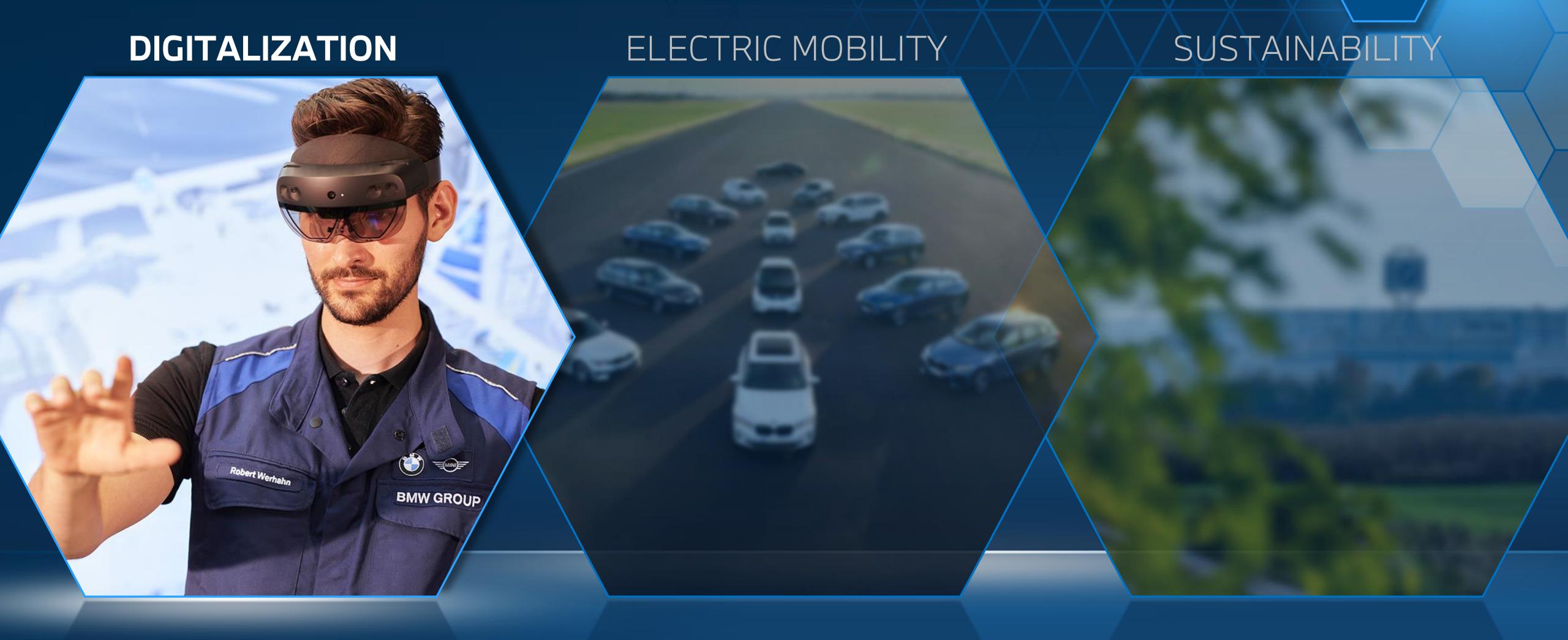














DIGITALIZATION AS A TWOFOLD CHALLENGE.



Production Digitalization of production processes for greater efficiency, better ergonomics and higher quality.



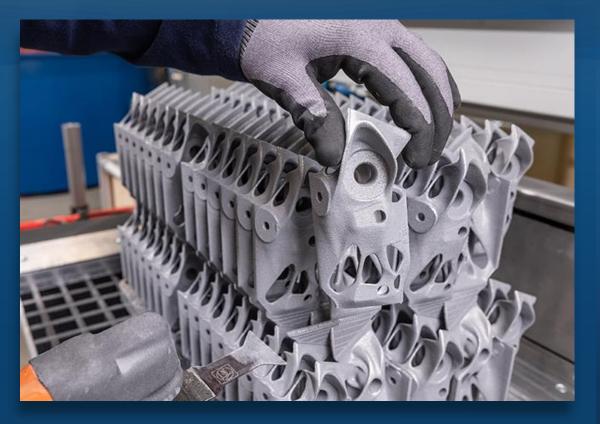
Innovative automation



Data analytics



Smart logistics



Additive manufacturing







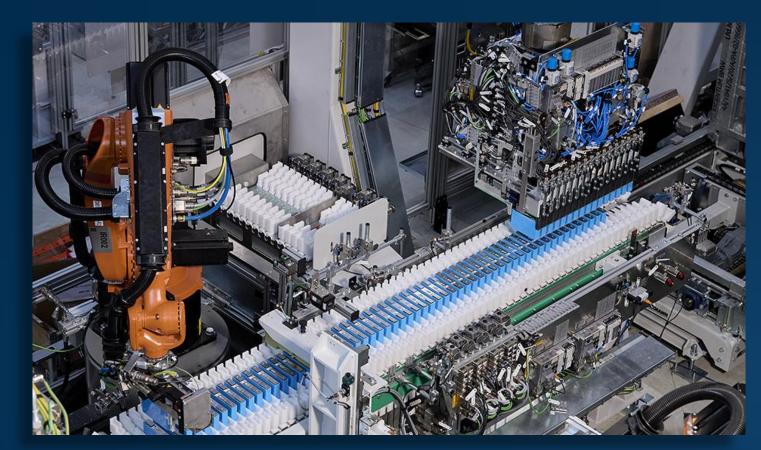




DINGOLFING PLANT - BMW'S ELECTRIC MOBILITY PIONEER.

Competence Centre for E-drive Production.

Annual capacity of E-Drive components for > 500,000 cars from 2022 onwards.





Growing number of employees in e-mobility.

Increase to over 2,000 employees in e-drive production in the long term.



>4,000
people with new future-focused assignments since 2012.

>1,400
people have moved to e-drive production areas.

>1,900 by the end of 2021.

Share of electrified models at Dingolfing to more than double in 2021. In 2020 about 8% of the BMW Dingolfing production was electrified.

> 100% increase in

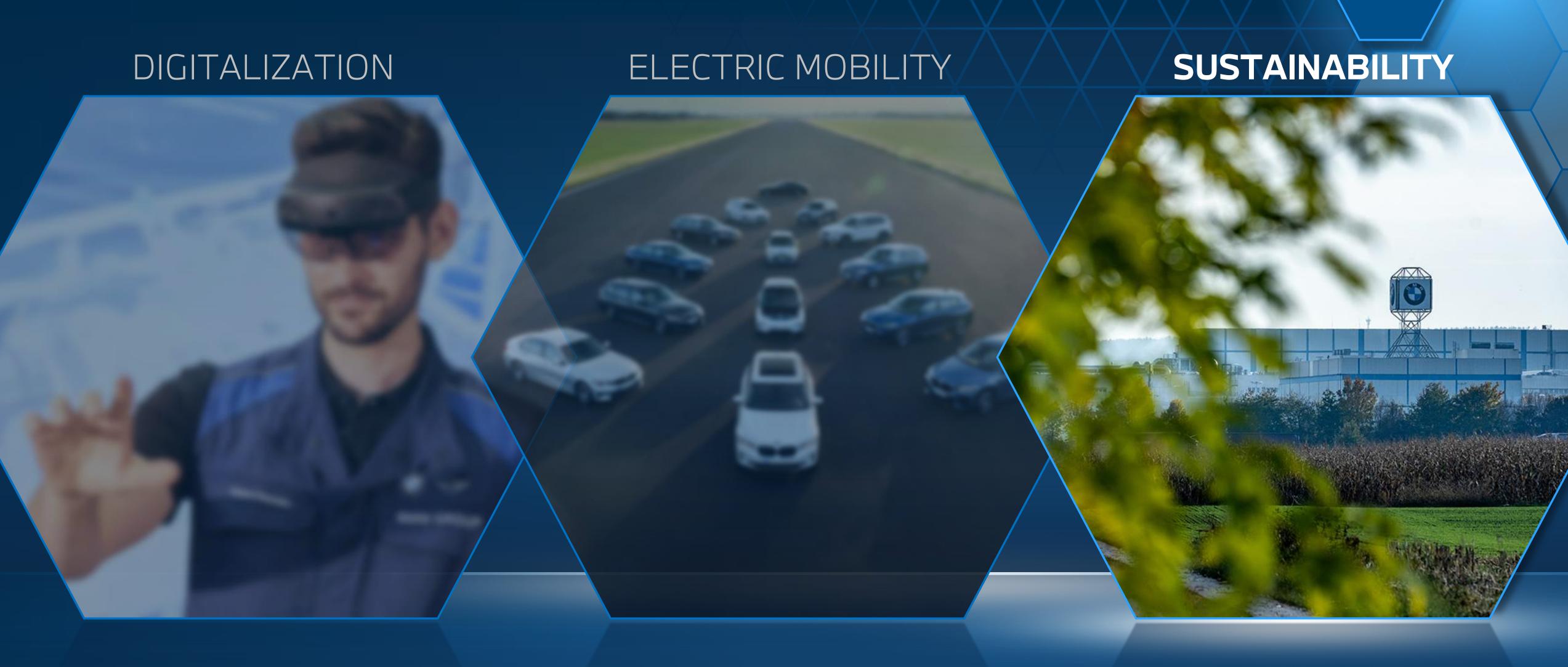
production volume of electrified cars in 2021.



Production of Plug-in-Hybrids since 2016.









WE CONTINUE TO SIGNIFICANTLY REDUCE CO2 THROUGHOUT THE VALUE CHAIN AND FOLLOW A CIRCULAR ECONOMY APPROACH.

Resource consumption in BMW Group production reduced by > 50% in the period 2006 - 2020.

- 50% resources



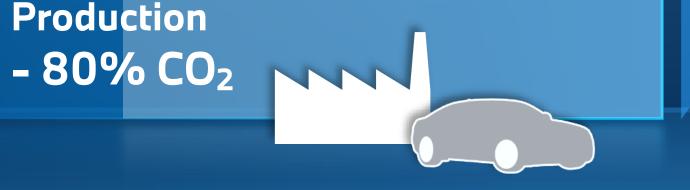
Environmental sustainability is deeply rooted in the Plant's strategy and has many facets at the Dingolfing site.

CO₂ reduction targets per vehicle 2019 - 2030.

Supply chain - 20% CO₂



Production







Use phase - 50% CO₂









BMW iX: THE ALL-ELECTRIC BMW FROM PLANT DINGOLFING. OVERVIEW.







Integration into the

Over 400 million Euro invested in vehicle factory.



(02.20 and 02.10).



INTERNATIONAL MEDIA LAUNCH. BMW COMPETENCE CENTRE ELECTRIC DRIVETRAIN.



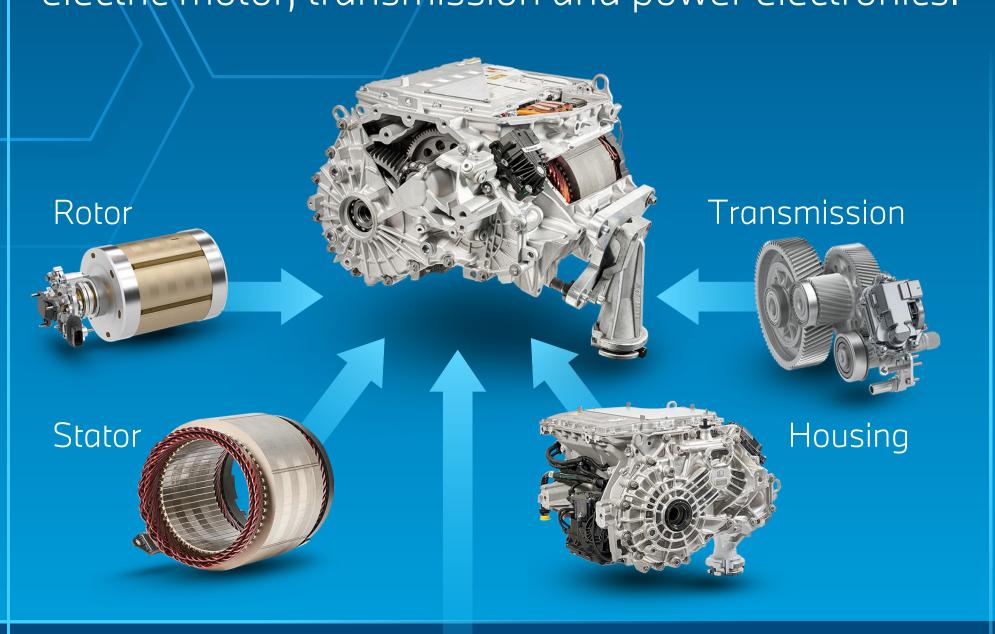




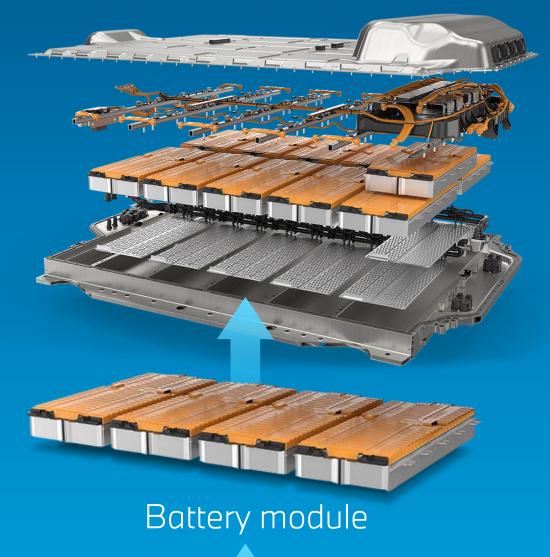


PRODUCTION OF ELECTRIC DRIVETRAINS: HIGH LEVEL OF IN-HOUSE COMPETENCE.

Electric Drivetrain (BMW Gen5) Highly integrated drivetrain unit: electric motor, transmission and power electronics.



Lithium-ion high voltage battery.









Assembling

Cylinder

head

Crankcase

Crankshaft

Con-rods

Cardan shaft

> Rear-axle transmission



Engine components Main transmission Exhaust system

Tank

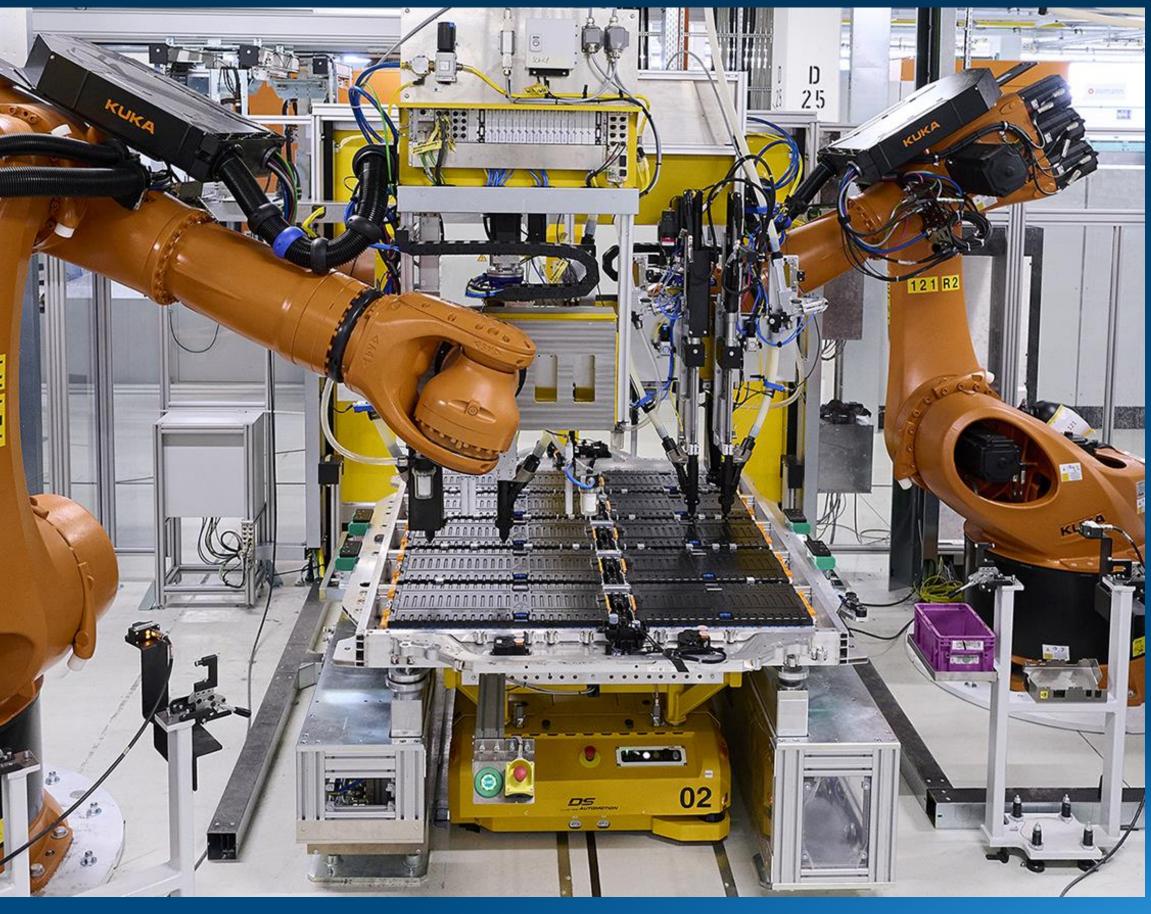


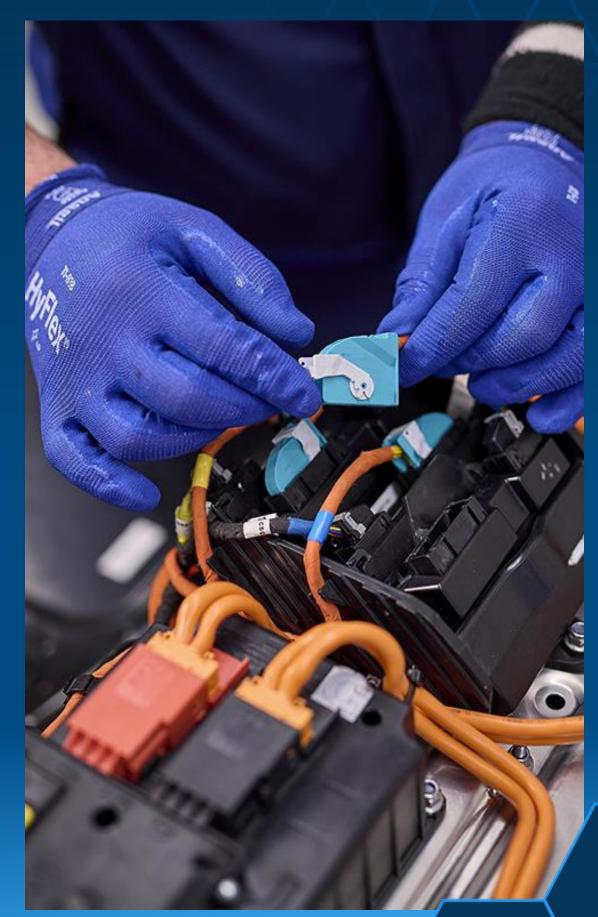




INTERNATIONAL MEDIA LAUNCH. BMW COMPETENCE CENTRE ELECTRIC DRIVETRAIN.













INTERNATIONAL MEDIA LAUNCH. THE FIRST EVER BMW i4 AND THE FIRST EVER BMW iX.