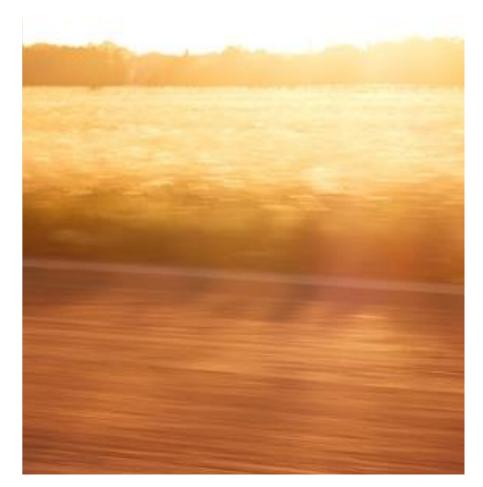
### THE FIRST-EVER BMW iX3. **TEST DRIVES OCTOBER 2020.**





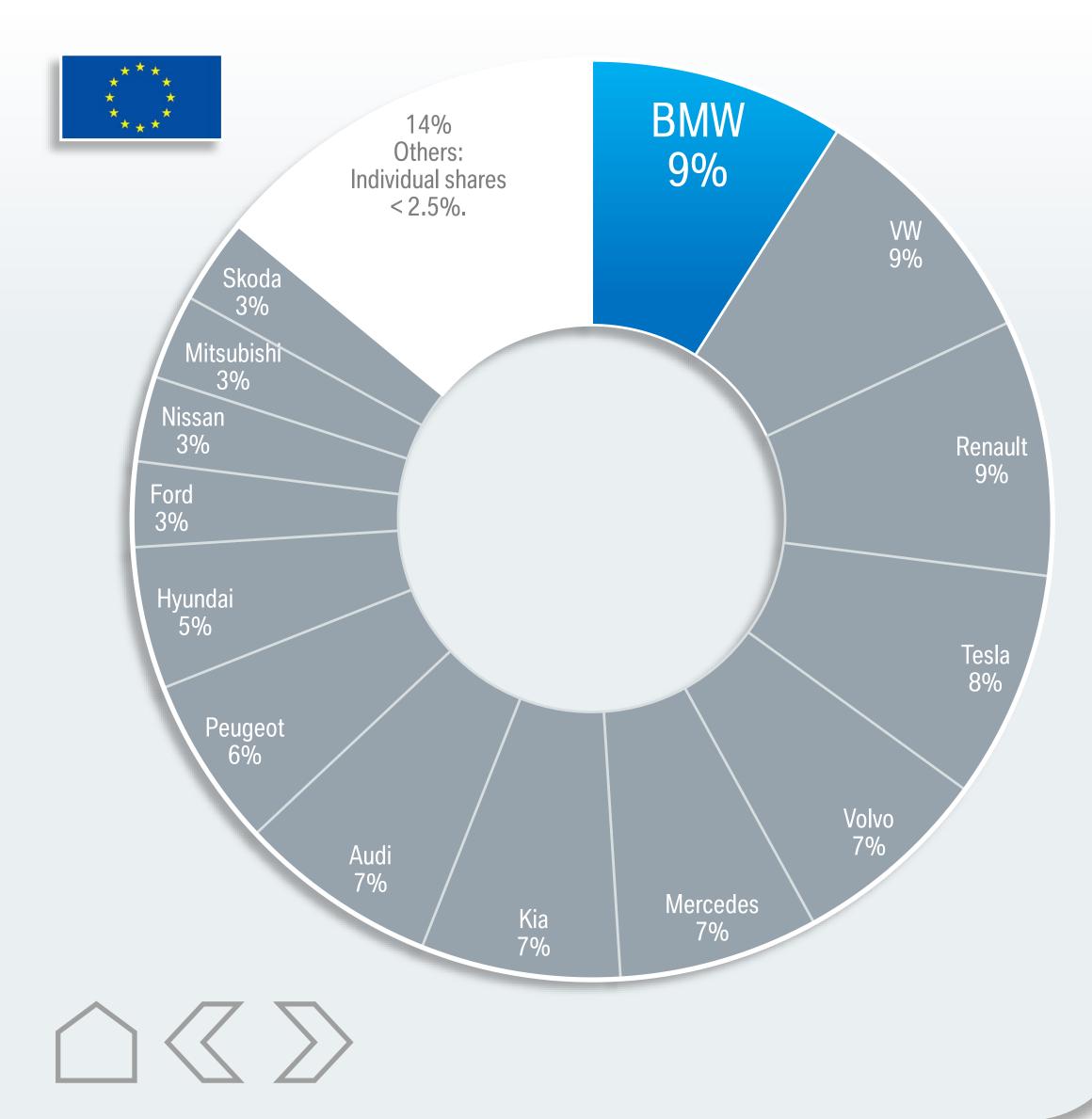


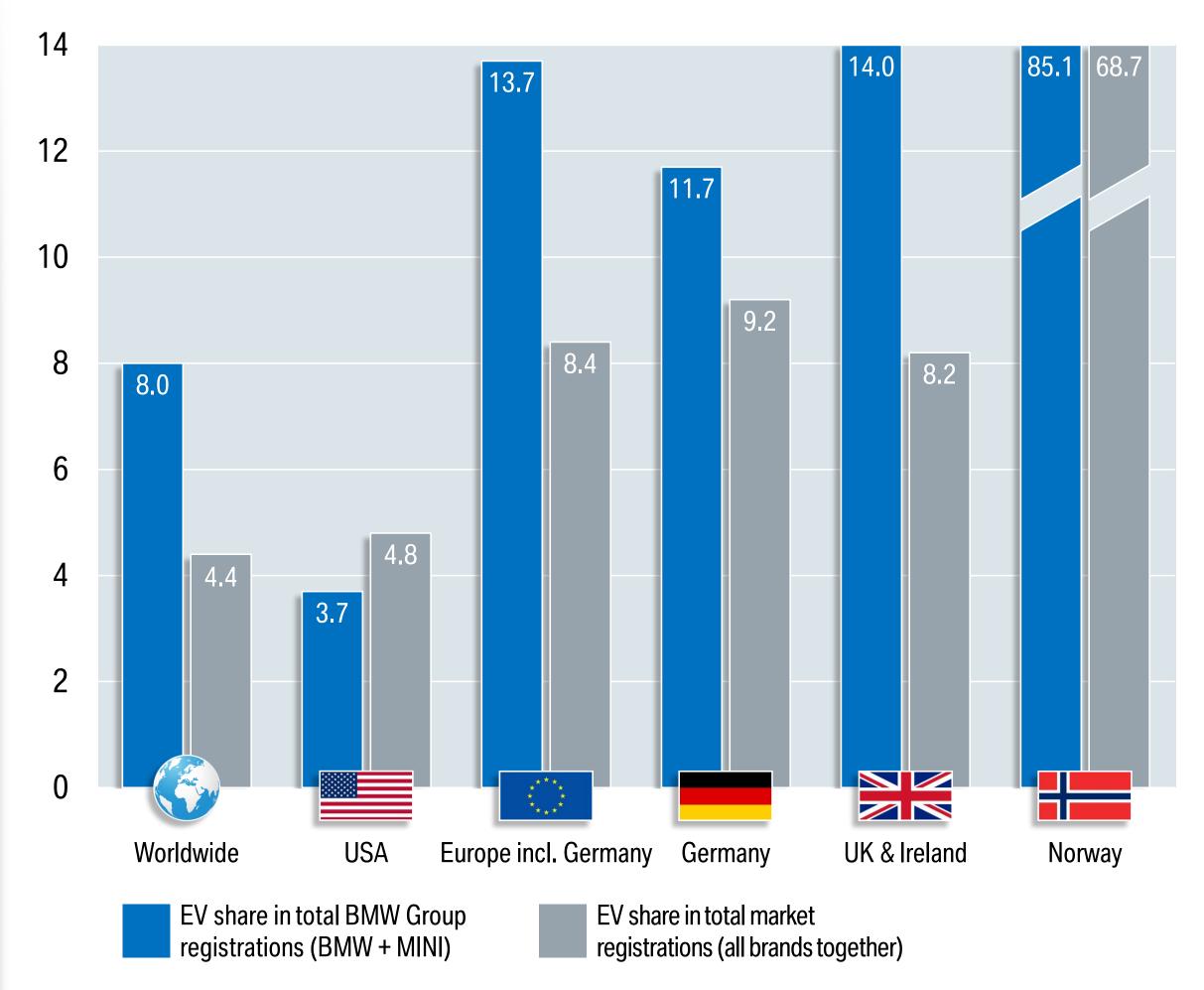






### **xEV SHARES. BMW EV STRATEGY PROVES RIGHT WITH A STRONG MARKET POSITION.**





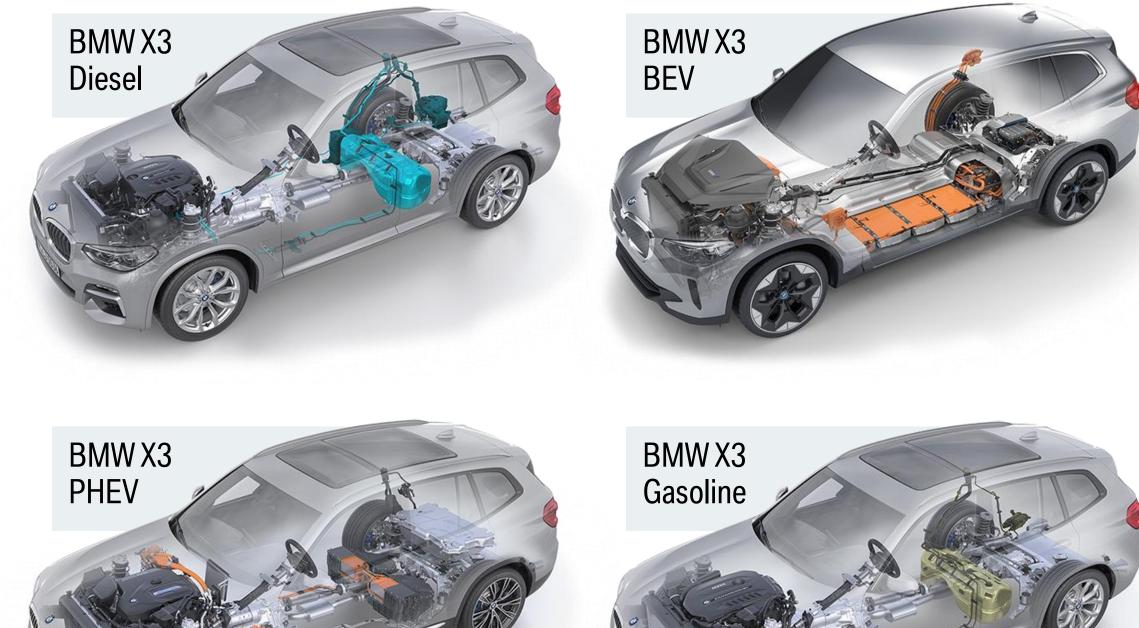
Data source:

IHS Markit New Registrations BEV+PHEV combined. January 2020 - August 2020; September 2020 Report.

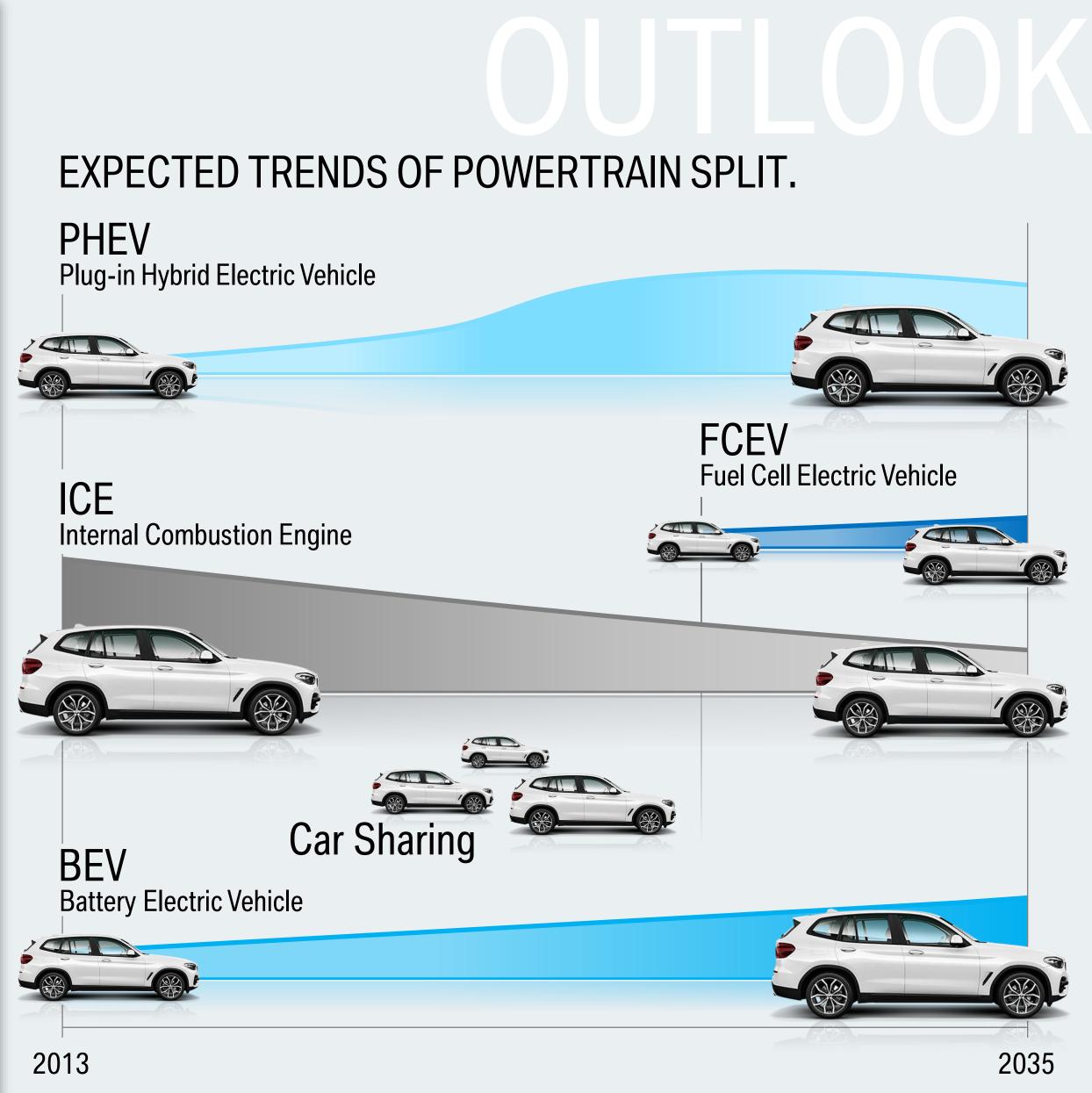




### THE BMW CUSTOMER HAS THE CHOICE.



#### **BMW GROUP FAVORS FLEXIBLE** ARCHITECTURES OVER PURPOSE MADE BEV PLATFORMS.



### THE FIRST-EVER BMW iX3. HIGHLIGHTS.

150 kW DC / 11 kW AC Charging (3-phase).

### >> Innovation:

Adaptive Recuperation.

Max. range WLTP\* 460 km

Economy WLTP\* 19.5 - 18.5 kWh/100 km



>> Innovation:

Highly integrated drivetrain unit 210 kW / 286 hp electric motor, transmission and 400 V electronics, free from Rare Earth Materials, 2/3 less Cobalt.

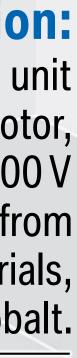
188 prismatic battery cells in 10 modules, produced with CO<sub>2</sub>-free electricity, individually housed and controlled for long life and high safety.

74 kWh (net) / 80 kWh (gross) lithium-ion-battery with modular concept for repair and 2<sup>nd</sup> life.

Max. range NEDC\* 520 km

Economy NEDC\* 17.8 - 17.5 kWh/100 km

\* EU-homologation model.







## THE FIRST-EVER BMW iX3. HIGHLIGHTS.

The Hull

CO<sub>2</sub> footprint from sourcing to recycling 30 - 63% less than BMW X3 20d.

Clean frontend design without many openings, as less cooling is required.

>> Innovation:

20-inch Aerodynamic wheels with low rolling resistance tyres.

M<sub>®</sub>XC 554E

ldeal underbody design.



Blue accents (option) indicate electric drivetrain.

Centre of gravity 74 mm lower than BMW X3 30i.

Uncompromised 1,560 litres cargo space.

Agile RWD experience thanks to 43% front, 57% rear weight distribution + ARB.

 $\bigcirc$ 



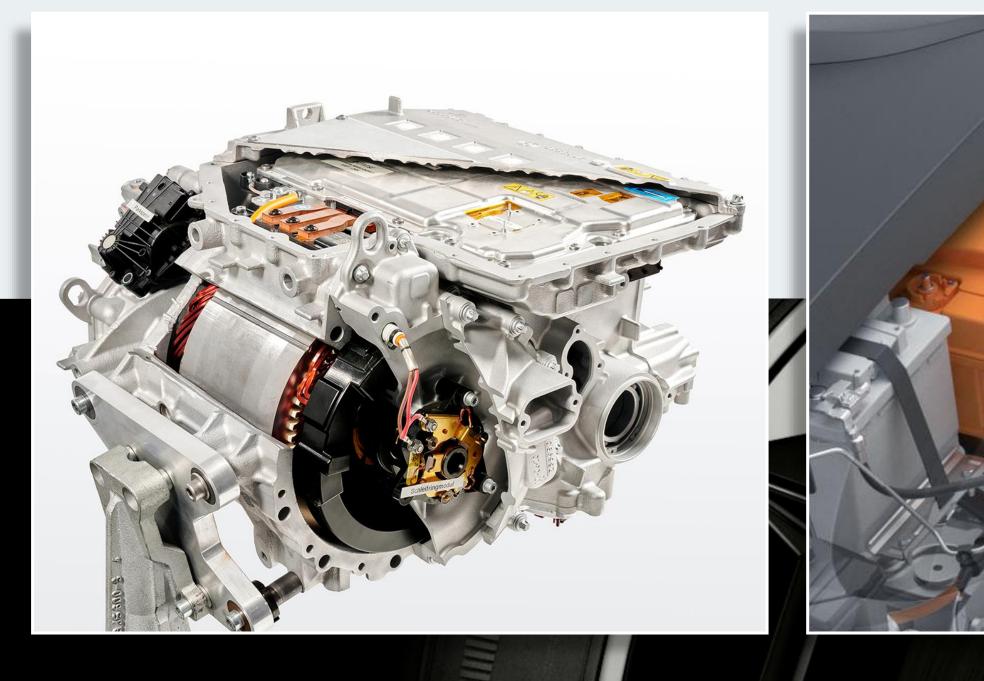
M& XC 554E



### THE FIRST-EVER BMW iX3. **EFFICIENCY INSTEAD OF EVER GROWING BATTERIES.**

# Highly-Integrated Electric Drivetrain.

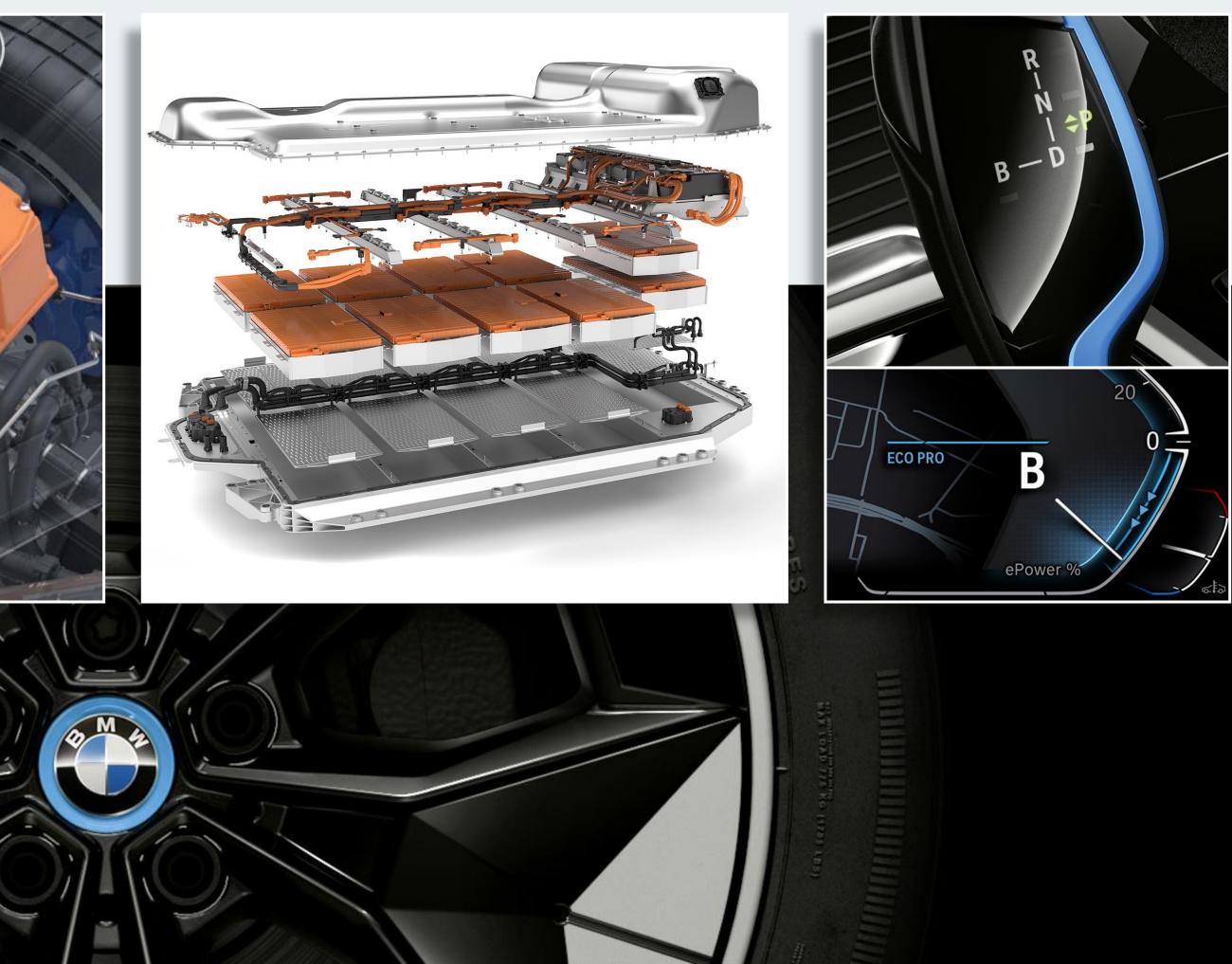
### **Combined Charging** Unit (CCU).



### Aerodynamic Wheels.

### High Voltage Battery.

#### Adaptive Recuperation.



## THE FIRST-EVER BMW iX3. eMotor, transmission, power electronics.

BMW Gen5 eDrive.

- First-ever use of ESM\* Technology in > 100 kW segment:
  - > Avoiding magnets and Rare Earth Materials.
  - Exceptional balance of high peak power and stable torque even at high rpm.
  - > Silent operation.
  - Main contributor to BMW iX3 efficiency (210 kW / < 20 kW/100 km WLTP).</p>
- >> eMotor, power electronics and transmission in a highly integrated, common housing.
- >>> Comparison to BMW i3:
  - > 30% improved power density (based on mass).
  - \* Electrically Excited Synchronous Machine.

210 kW @ 6,000 rpm
400 Nm @ 0 - 5,000 rpm





BMW i3 eDrive components.

BMW iX3 eDrive unit.

## THE FIRST-EVER BMW iX3. **HIGH VOLTAGE BATTERY.**

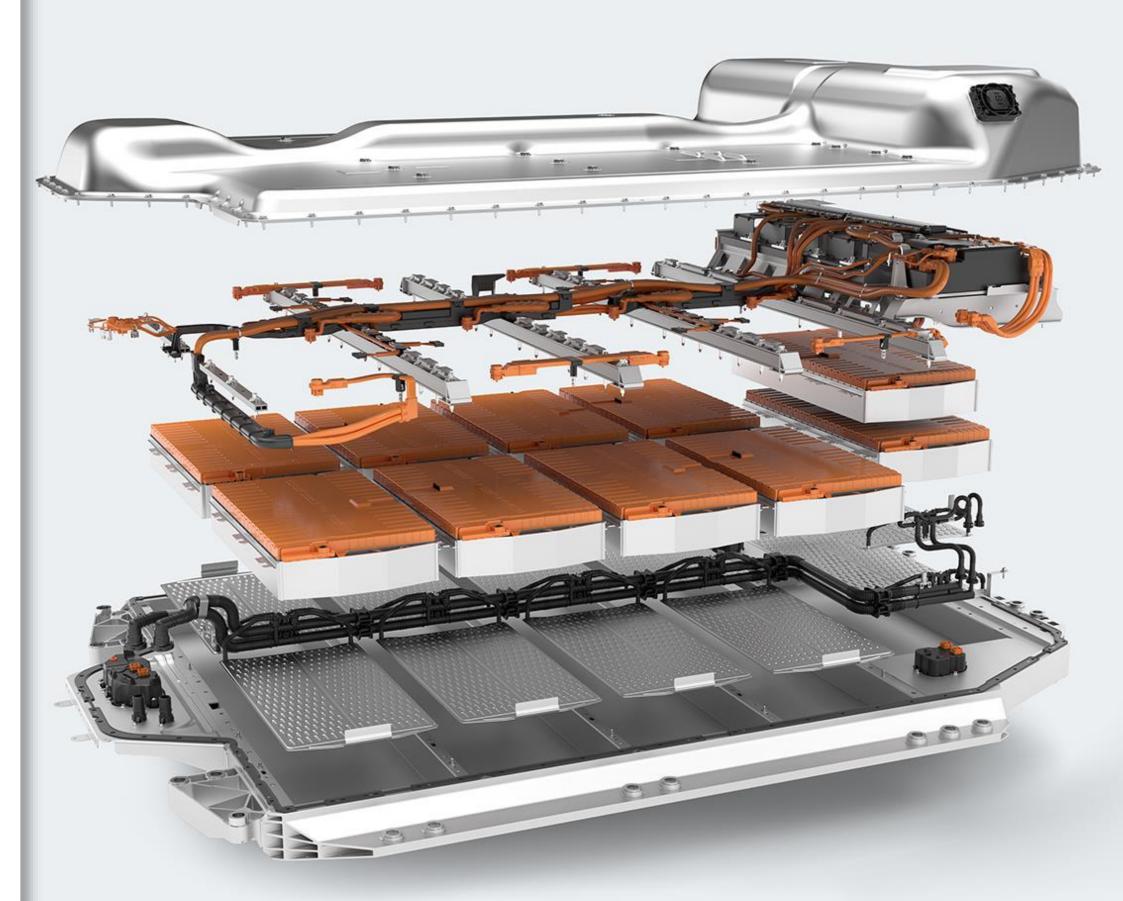
BMW Gen5 eDrive.

### >>> First time use of:

- > BMW-steered Cobalt and Lithium sourcing.
- > CO<sub>2</sub>-free production of battery cells.
- > Each cell individually housed and controlled for longevity and high safety.
- > Enabled for circular economy and 96% cell material recovery.
- > Modular concept for easy exchange of modules in case of repair and for Battery 2<sup>nd</sup> Life.
- >>> Comparison to BMW i3 (MY 2020):
  - > 20% improved energy to density (on cell level, based on mass).

> 62% less Cobalt per kWh.

\* Cell chemistry with 8 shares Nickel, 1 share Manganese, 1 share Cobalt.





GLOBAL BATTERY ALLIANCE

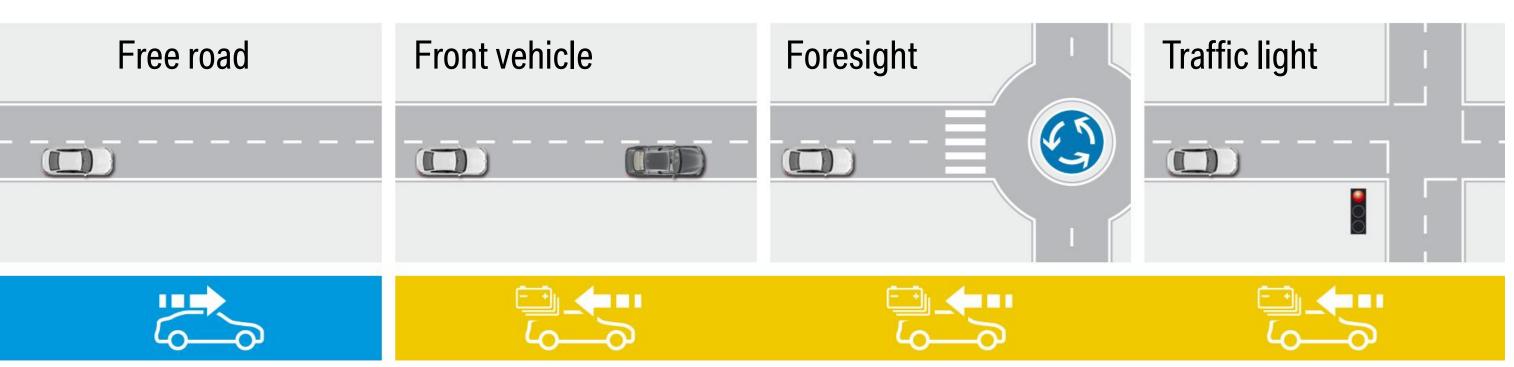
>> NMC 811\* prismatic cells. >>> 80 kWh (gross), 74 kWh (net), 400 Volt.







## THE FIRST-EVER BMW iX3. 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.
- > 25% of the energy needed for the excellent WLTP result come from recuperation.

#### Operation

Easy switch between recuperation modes with gear lever:

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



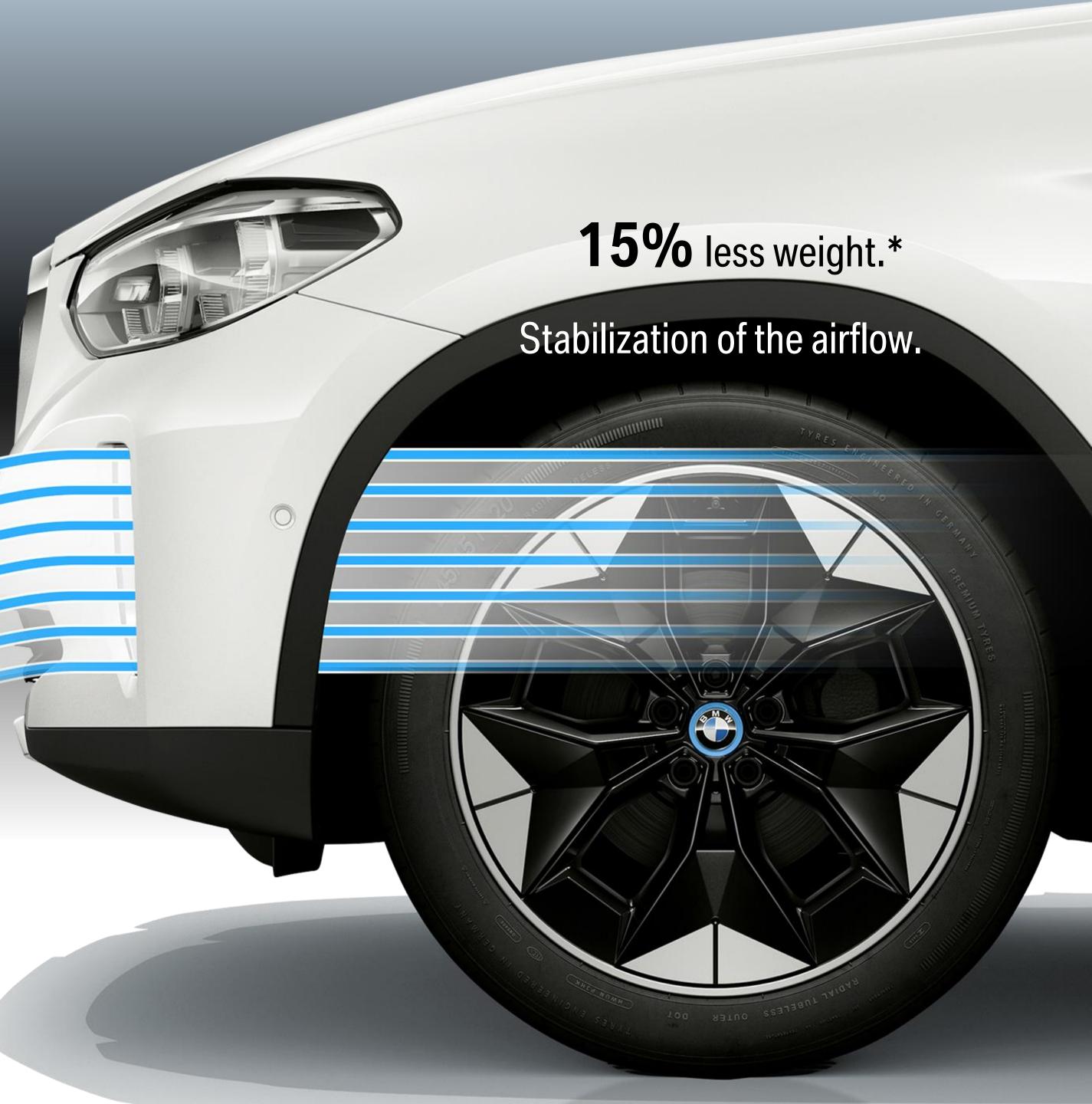
- comfort. recuperation
- t brake intervention. om recuperation.



### THE FIRST-EVER BMW iX3. AERODYNAMIC WHEELS.

**5%** less air drag coefficient.\* + 10 km range (WLTP).\*

\* Compared to BMW models with conventional wheels.



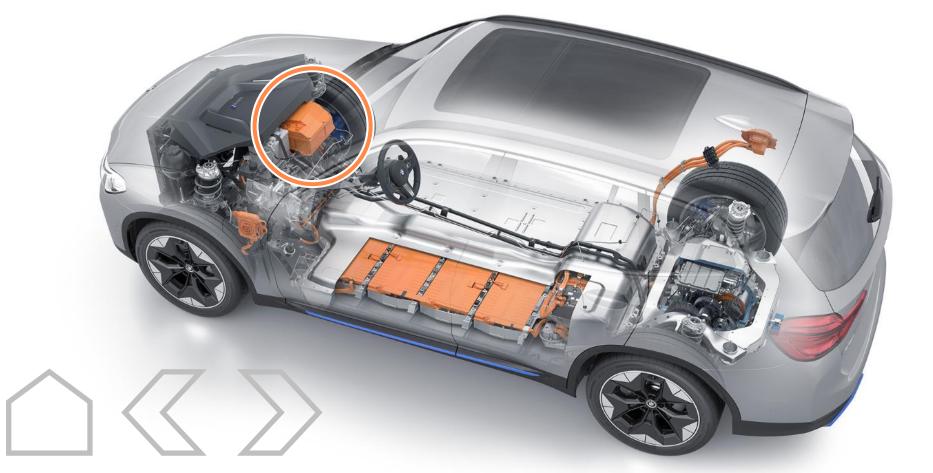
### THE FIRST-EVER BMW iX3. CHARGING.

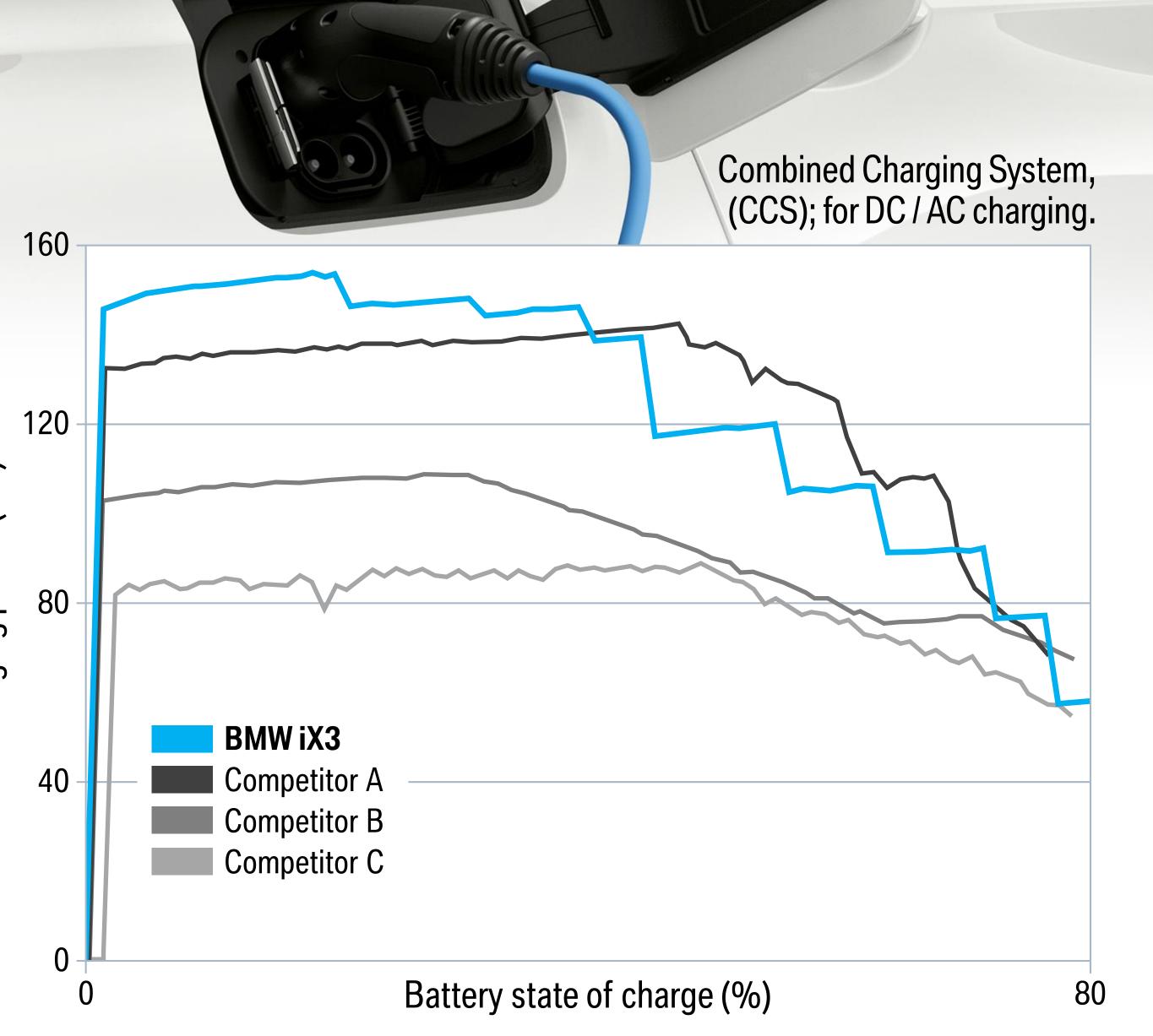
BMW Gen5 eDrive.

- >>> First time use of:
  - > 150kW DC charging power.
  - New DC charging profile for best balance of quick charging time versus longevity.
  - Automatic switch between 1- or 3-phase AC-operation, depending on grid.

>>> Comparison to BMW i3 (MY 2020):

- > Just 1 instead of formerly 4 devices.
- > 10 mins charging for 100 km WLTP range (BMW i3: 10 mins for 55 km WLTP range).





## THE FIRST-EVER BMW iX3. **BMW CHARGING.**

#### **Home** Charging

#### New:

- BMW Flexible and Mobile Fast Charger.
- BMW Wallbox.
- Smart Wallbox (by partner).
- Installation Service.

#### Workplace Charging

#### New:

 Billing & Reimbursement for company car users.



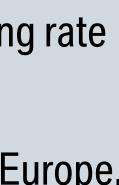
#### New:

- One attractive AC pricing rate per Country.
- Access to > 150,000 AC charging points in Europe.
- Access to > 10,000 DC charging points in Europe.

MOXC 722E

#### New:

- Attractive HPC / Ionity pricing rate per country.
- Access to > 1,150 IONITY
- charging points > 50 kW in Europe.



## THE FIRST-EVER BMW iX3. Long distance driving.

Distance: ~ 1000 km | Example route: Berlin - Paris.

ΙΟΠΙΤΥ

57

Essen

 IONITY High Performance Charging Station.



All calculations based on: 130km/h (= WLTP consumption + 75%), intermediate chargings 0-80% SOC; start with full battery; final charge only to reach destination, 10°C outside temperature. 20°C interior temperature. Total costs based on charging provider recommendations per brand. BMW Charging @ Ionity = 0,33 €/kWh (no monthly fee for 1 year); "Journey time" = Driving time + Charging time.

H X H	Osnabrück Biele Münster 463 km	al Nord 328 km	W Wolfsburg 227 km Braunschweig Magdeburg 156 km	eburg
a f In Bonn	Dortmur Dortmur UDOrtmund UDOrtmund UDOrtmund UDOrtmund UDOrtmund			
ו	Charging time	Total costs	Journey time	euth
	<b>1.9 hrs</b>	<b>91 € /</b> 33 ct/kWh	<b>9.6 hrs</b>	Pils
	1.8 hrs	100 € / 30 ct/kWh	9.5 hrs	State 1
	3.0 hrs	252 € / 77 ct/kWh	10.7 hrs	
	3.0 hrs	97 € / 29 ct/kWh	10.7 hrs	Regensburg
2.4		Clutigart	Ingoistad	lt 3



## THE FIRST-EVER BMW iX3. **SUSTAINABILITY-CREDENTIALS.**

Oliver Zipse, Chairman of the Board of Management of BMW AG:

#### Sourcing.

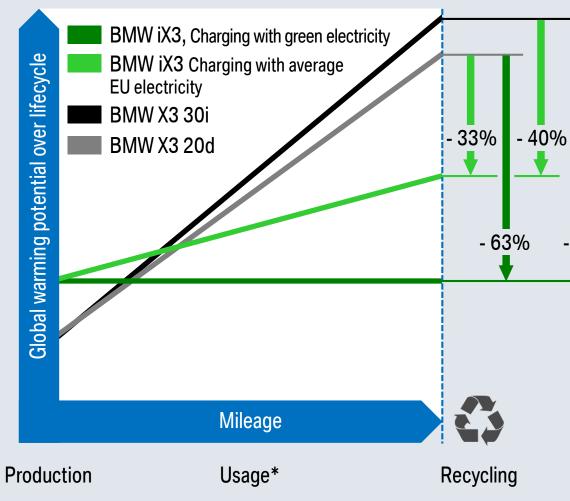


In order to take full control of the supply chain in terms of social and environmental standards, BMW Group is first to purchase Cobalt and Lithium from certified mines in Morocco and Australia, which then is supplied to the battery cell manufacturer.

Beginning with BMW eDrive Gen5 in 2020:

- No use of Rare Earth Materials.
- Cobalt reduction by another 2/3 per kWh.

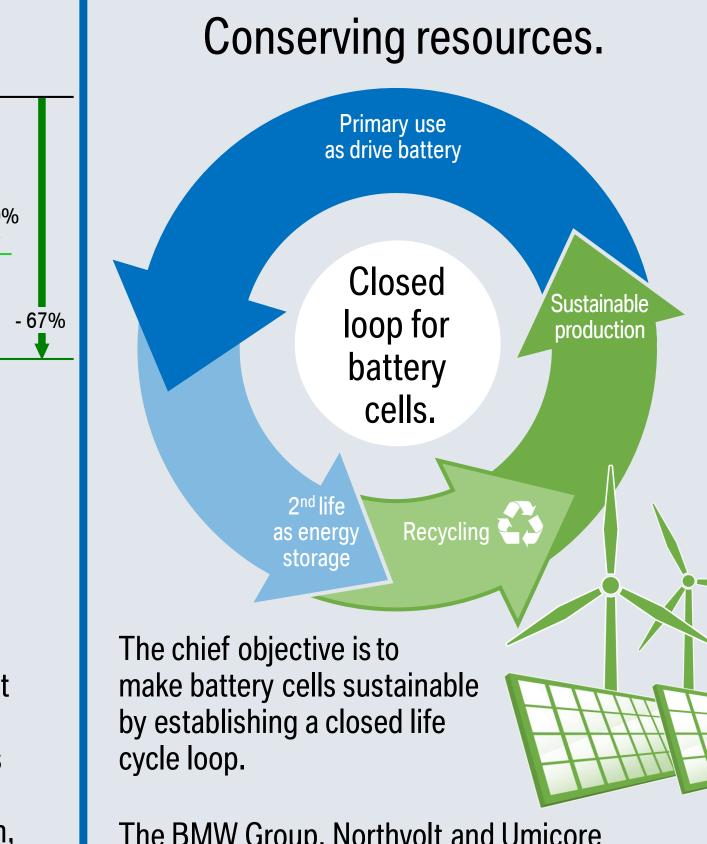
### $CO_2$ - footprint.



\* Consumption figures according to homologation testing WLTP.

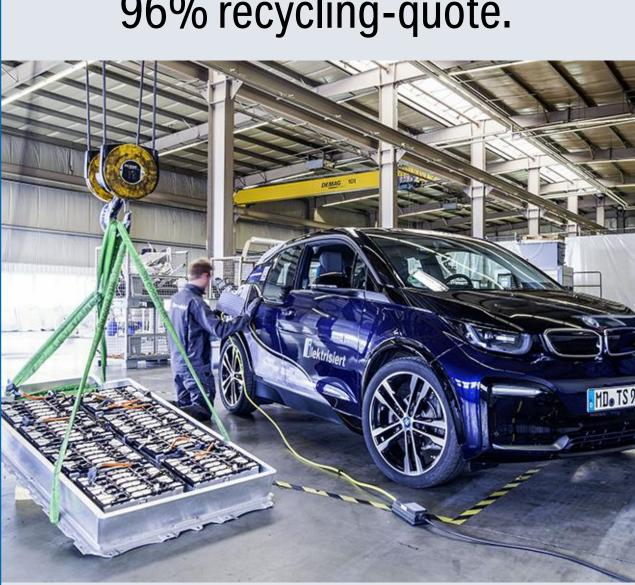
Ever since the BMW i3 in 2013, every BMW Group xEV comes with a CO<sub>2</sub>-footprint which is substantially lower than those of comparable conventionally powered models and which comprises  $CO_2$  emissions from Material Sourcing, Supply Chain, Production, Use-Phase and Recycling.

## "The fight against climate change and how we use resources will decide the future of our society – and of the BMW Group."



The BMW Group, Northvolt and Umicore operate a joint technology consortium for a complete and sustainable value chain for battery cells in Europe.

#### 96% recycling-quote.



BMW Group has partnered with German recycling specialist Duesenfeld to establish a method that can achieve a recycling rate of up to 96% of the materials – including graphite and electrolytes.

# THANKYOU!

