
**BMW GROUP E-MOBILITY STRATEGY.
20.11.2019**

**DR. NICOLAI MARTIN
VICE PRESIDENT DEVELOPMENT ELECTRIC POWERTRAIN**

OUR CLEAR ROADMAP: AT LEAST 25 ELECTRIFIED MODELS BY 2023, INCLUDING AT LEAST 13 FULLY ELECTRIC CARS.



OUR FUTURE IS ELECTRIC. AMBITIOUS TARGETS FOR SALES OF ELECTRIFIED VEHICLES.

ELECTRIFIED VEHICLES



500,000
BY THE END
OF **2019** ON
THE ROAD

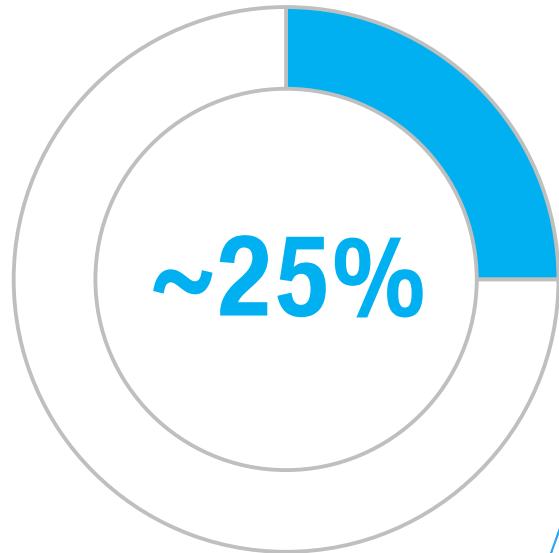
DOUBLE 2019 ELECTRIFIED
VEHICLE SALES
By **2021**

30% ELECTRIFIED
VEHICLE SALES
GROWTH RATE P.A.
Until **2025**

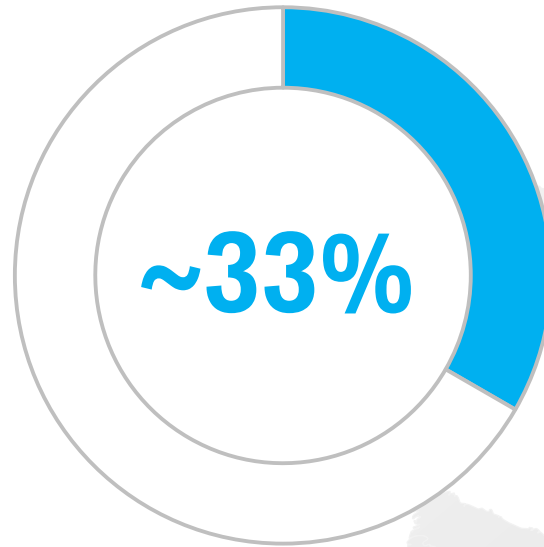


YTD-10/2019
110,734 ELECTRIFIED
VEHICLES SOLD

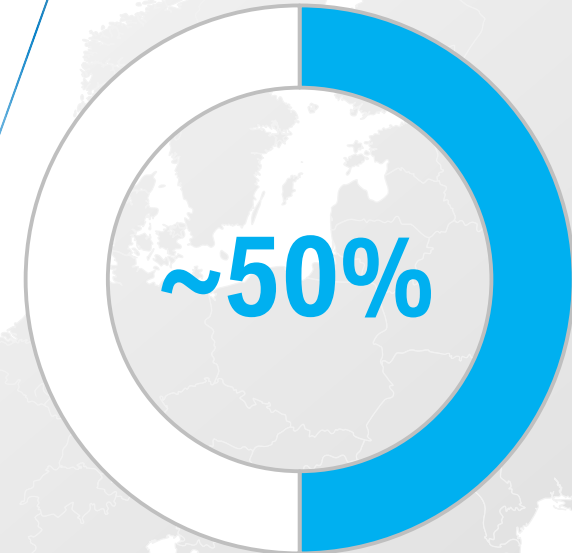
PERCENTAGE OF BMW GROUP ELECTRIFIED VEHICLES IN EUROPE.



2021



2025



2030

THE NEW BMW X3: THE POWER OF CHOICE. ONE MODEL – THREE DRIVETRAINS.



**BMW X3 with highly-efficient
combustion engine.**



**Plug-in hybrid
BMW X3 xDRIVE 30e.**



**Fully-electric
BMW iX3.**

EMISSION-FREE DRIVING PLEASURE.

13 pure electric vehicles until 2023.

Range up to **600 km (WLTP)**.

Modular System Gen5 for all electrified models.

*partly Gen5

WLTP: Worldwide harmonized Light vehicles Test Procedure

BMW Group E-Mobility Strategy



MINI Electric*

2019



BMW iX3

2020



BMW iNEXT

2021



BMW i4

2021

PHEVS ARE KEY TO REDUCE CO₂ EMISSIONS. NEW PHEV MODELS IN 2019.

Electric range up to **75 km (WLTP)***.

Zero emission driving in urban areas.

Attractive model line-up.

BMW eDrive Zone.

*80 km (NEDC: New European Driving Cycle)

WLTP: Worldwide harmonized Light vehicles Test Procedure

BMW Group E-Mobility Strategy



BMW 330e



BMW 745e/745Le



BMW X5 xDrive45e



BMW X3 xDrive30e

IN-HOUSE DEVELOPMENT & PRODUCTION OF KEY COMPONENTS AT BMW GROUP.

SUCCESS FACTORS OF BMW GROUP E-MOBILITY STRATEGY.

Flexibility in the choice of technologies and suppliers.

In-house know-how in core technologies.

Modular kit: flexible and scalable.

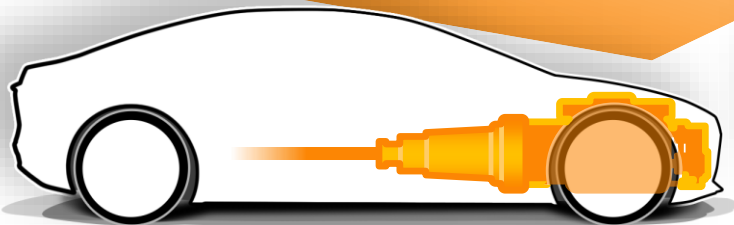
Highly integrated e-mobility value chain
(development, purchasing and production).

BMW i. FROM “BORN ELECTRIC” TO A COMMON ARCHITECTURE FOR ANY TYPE OF POWERTRAIN.

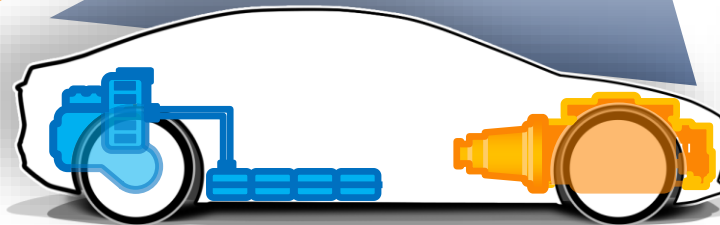
2013
“Born electric”



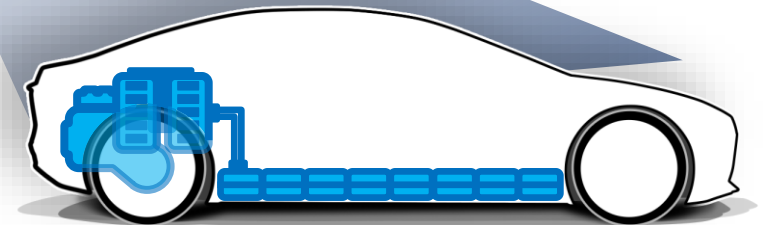
2021
ONWARDS



➤ Combustion engine



➤ Plug-In-Hybrid (PHEV)



➤ Pure electric (BEV)

BMW GROUP BEV AND PHEV E-POWERTRAIN COMPONENTS. CURRENT AND NEXT GENERATION.

TODAY / GENERATION 3 AND 4

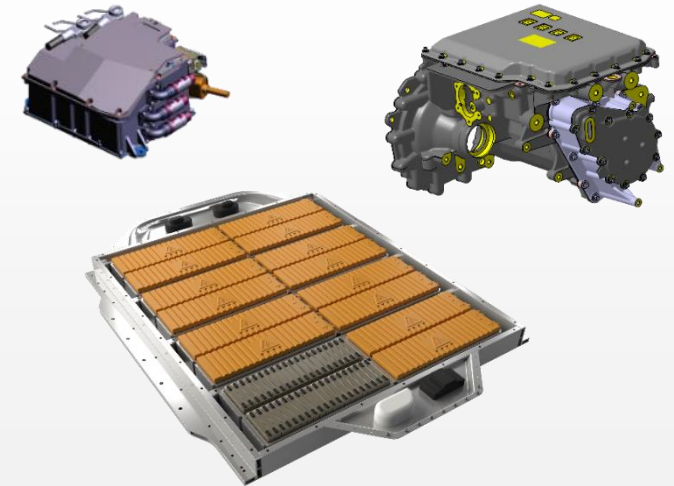
	BMW 330e	BMW 740e, Le, Le xDrive	BMW 530e	BMW X5 xDrive40e	BMW 225xe	MINI SE Countryman ALL4	BMW X1 xDrive 25Le	BMW i8 Coupe / Roadster	BMW i3 / BMW i3s	MINI Electric
Power electronics	Charger		Charger	Charger	Charger	Charger	Charger BMW i3			
E-Machine										
Battery										

2020 + / GENERATION 5



Flexible and scalable

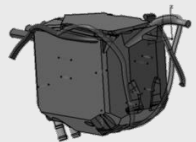
Charger CCU* | E-Machine Unit | Battery



THE GENERATION 5 MODULAR SYSTEM.

The GEN5 modular system ensures the implementation in the different vehicle architectures and drivetrains.

Combined Charging Unit (CCU).

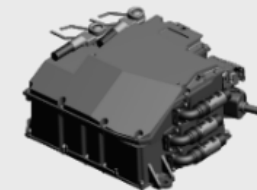


3.7 kW

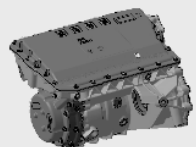
Scalable

11 kW

22 kW

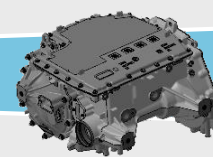
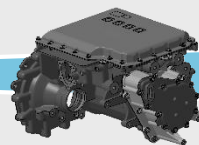


Electric drive unit & hybrid transmission.

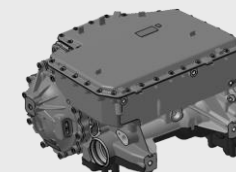


BEV entry
90 kW

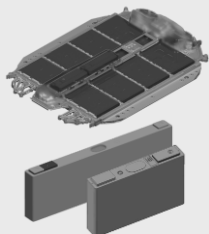
Scalable



BEV
Performance
> 300 kW

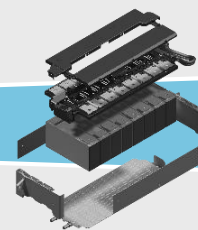


Battery & battery cell.

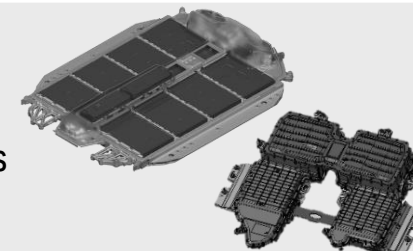


SUV
type cars

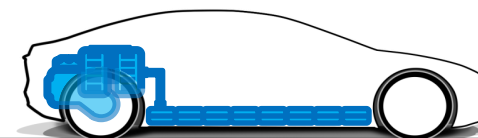
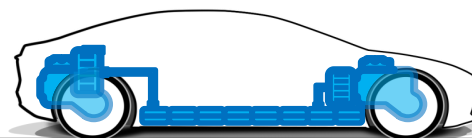
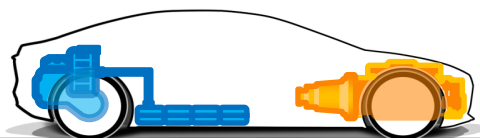
Scalable



Sedan
type cars



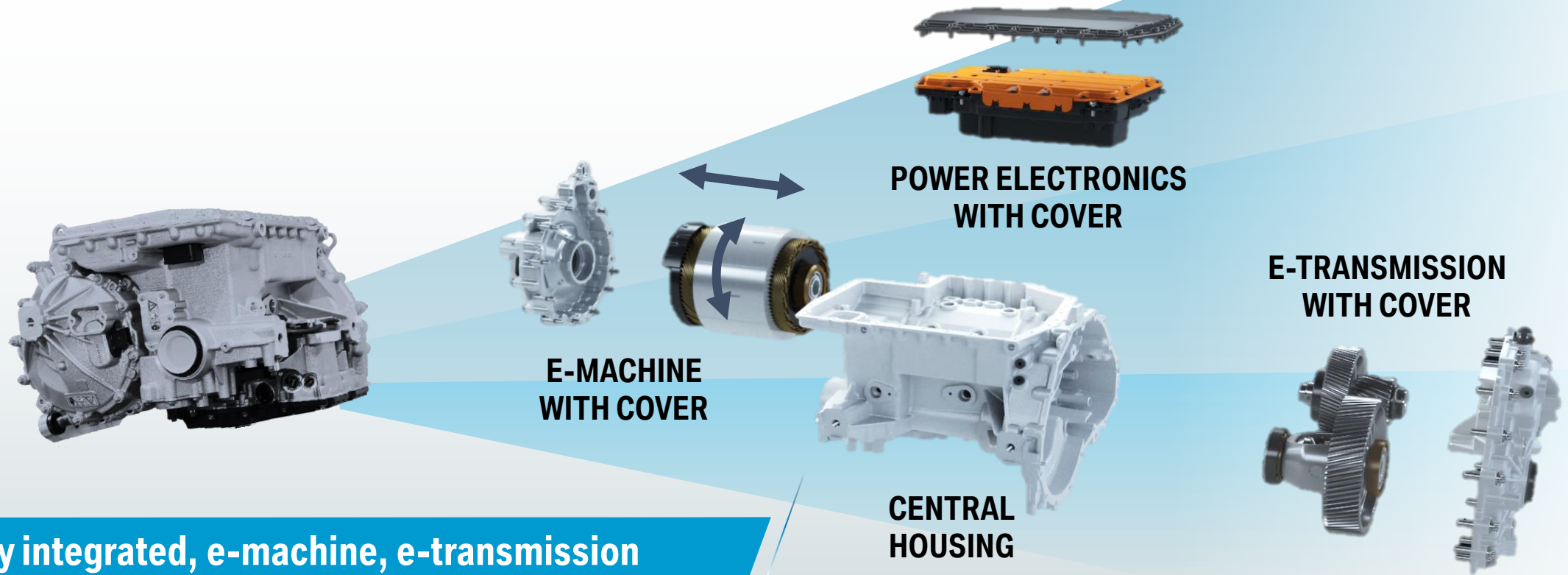
Vehicle architectures



PHEV & BEV

Flexible modular system

THE 5TH GENERATION OF BMW GROUP ELECTRIC DRIVETRAIN UNITS.

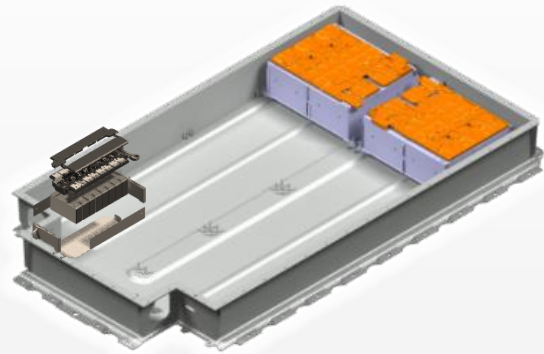


**Highly integrated, e-machine, e-transmission
& power electronics in one central housing
with scalable subcomponents.**

THE 5TH GENERATION OF BMW GROUP BATTERY .

~ **500,000 drives** in the field
by the end of 2019.

Optimization of long-term quality based on many years of field experience.
Focus on scalability, volume capability and exchange flexibility.

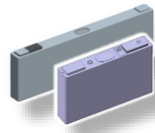


Increase of energy density to achieve
electric range of ~ 600 km WLTP.

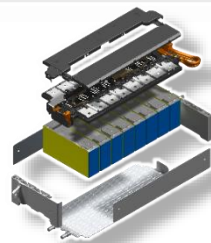
- Maximization of number of cells per module.
- Minimization of the number of components at module level.
- Very high package density in the battery pack.



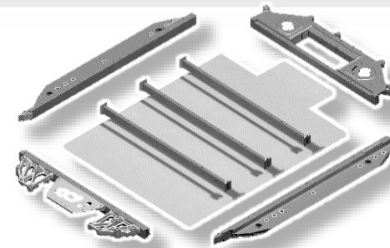
Covers a
broad product
portfolio.



Battery cell



Battery cell



Battery cell

BMW GROUP STRATEGY: KEEPING KEY KNOW-HOW IN OUR OWN HANDS.

11/2017

START OF CONSTRUCTION

200 MIO. €

4 YEARS OVERALL COST

8000 M²

BCCC TECHNICAL CENTER

4000 M²

BCCC OFFICE SPACE

UP TO 200

EMPLOYEES IN THE DEPARTMENTS

1000 M²

DRY ROOM AREA

12/2019

START OF PRODUCTION

