

MERCEDES-BENZ  
GROUP

**ESG**

CONFERENCE

**2024**

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Tomorrow drives Mercedes-Benz.

# DECARBONISATION & SUSTAINABLE PRODUCTS

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Chief Technology Officer, Development & Procurement

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# KEY DRIVERS OF CHANGE

OUR AMBITION 2039 PUTS A STAKE IN THE GROUND.  
WE ARE STILL FACING A MASSIVELY DYNAMIC ENVIRONMENT.



BEV technology  
is accelerating



OEM ambitions  
are increasing



Technologies  
in steel supply  
are changing



Regulation  
is tightening



Ramp-up in  
customer  
switch is less  
steep



Business case  
is strengthening but  
with challenges  
ahead



Infrastructure  
is expanding



Demanding  
capital market

# BEV LAUNCH SUCCESSFUL IN EVERY MERCEDES-BENZ PASSENGER CAR SEGMENT



EQA



EQB



EQE | EQE AMG



EQE SUV | EQE SUV AMG



EQS | EQS AMG



EQS SUV



Mercedes-Maybach EQS SUV



EQV

Mercedes-Maybach EQS 680 SUV (Energieverbrauch kombiniert: 24,1-22,0 kWh/100 km | CO<sub>2</sub>-Emissionen kombiniert: 0 g/km | CO<sub>2</sub>-Klasse: A)

Mercedes-AMG EQS 53 4MATIC+ (Energieverbrauch kombiniert: 24,3-20,9 kWh/100 km | CO<sub>2</sub>-Emissionen kombiniert: 0 g/km | CO<sub>2</sub>-Klasse: A)

Die angegebenen Werte wurden nach dem vorgeschriebenen Messverfahren WLTP (Worldwide harmonised Light-duty vehicles Test Procedures) ermittelt. Die angegebenen Spannweiten beziehen sich auf den europäischen Markt.

Der Energieverbrauch und der CO<sub>2</sub>-Ausstoß eines Pkw sind nicht nur von der effizienten Ausnutzung des Kraftstoffs bzw. des Energieträgers durch den Pkw, sondern auch vom Fahrstil und anderen nichttechnischen Faktoren abhängig.



# OUR UPCOMING ARCHITECTURES

MMA



MB.EA



AMG.EA



VAN.EA



# MERCEDES-BENZ eCAMPUS UNTERTÜRKHEIM IS THE CENTRE OF GROUP-WIDE ELECTRIC DRIVE EXPERTISE

## eCAMPUS

Development and  
testing of electric drives

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Covering the entire  
field of battery technology

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In-house  
cell-chemistry research



# AMBITION 2039 — OUR COMMITMENT TO NET CARBON-NEUTRALITY

ALONG THE ENTIRE VALUE CHAIN IN THE NEW VEHICLE FLEET IN 2039

SUPPLY CHAIN



PRODUCTION & LOGISTICS



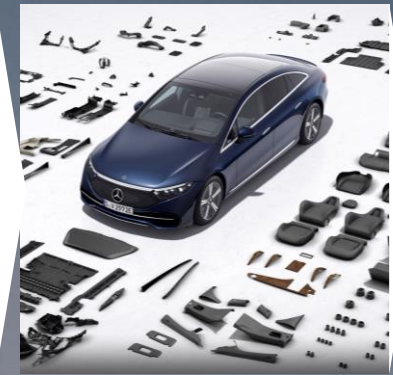
WELL-TO-TANK



TANK-TO-WHEEL



END-OF-LIFE

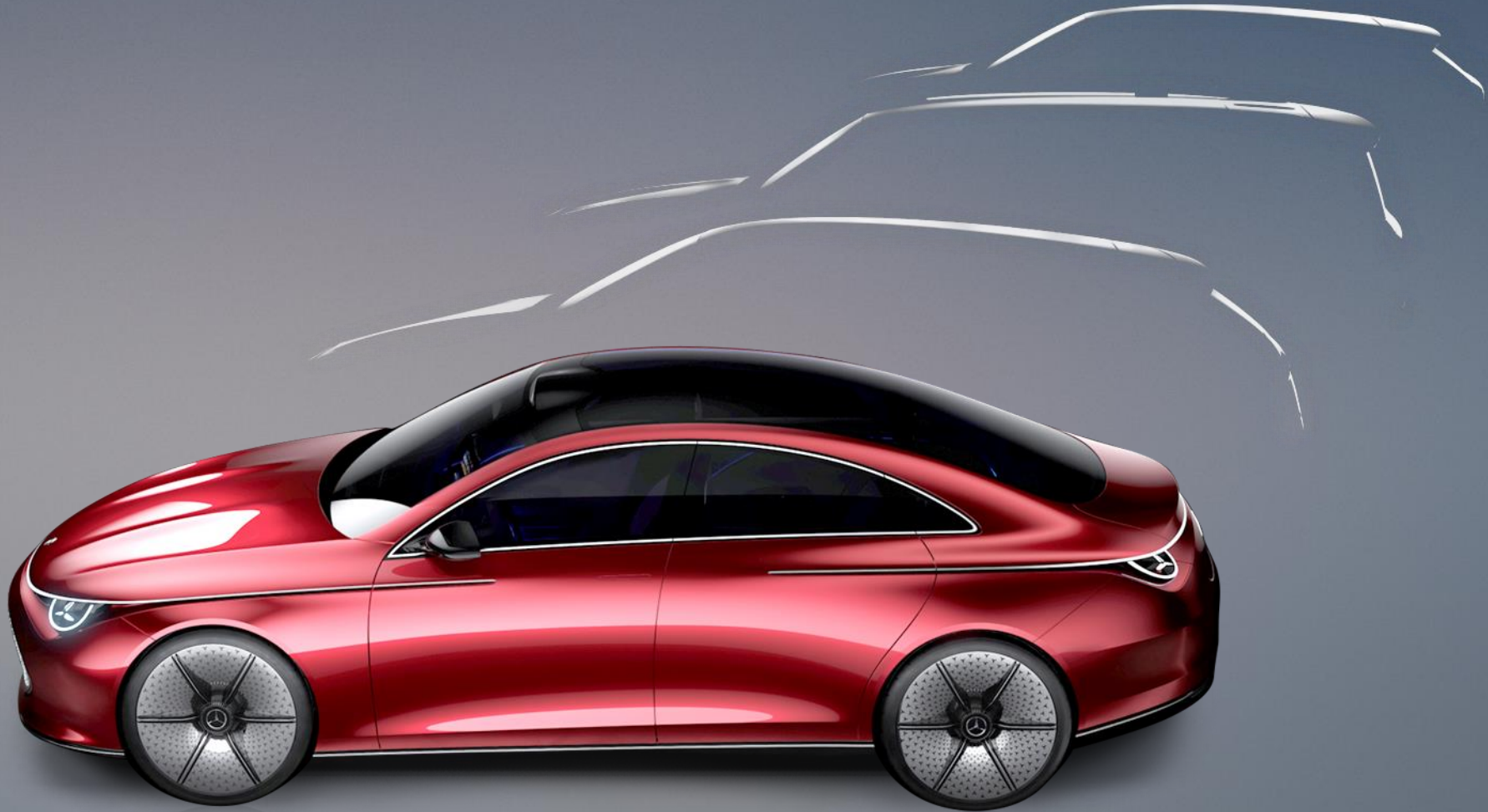


Today's proportional CO<sub>2</sub> impact along the value chain

49.7t CO<sub>2</sub> in 2020\* | 46.3t CO<sub>2</sub> in 2023\* | Targeted reduction by up to 50% by the end of this decade

\*Including scope 1, scope 2 and selected scope 3 CO<sub>2</sub>-emission categories concerning vehicle lifecycle

WITH MMA, THE CARBON FOOTPRINT IN THE ENTRY SEGMENT IS REDUCED





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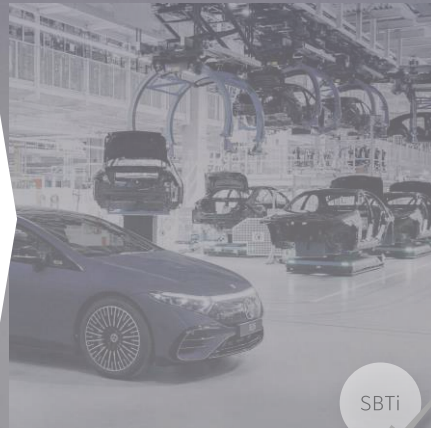


Steel

Aluminium

Polymers &  
innovative materials

## PRODUCTION & LOGISTICS



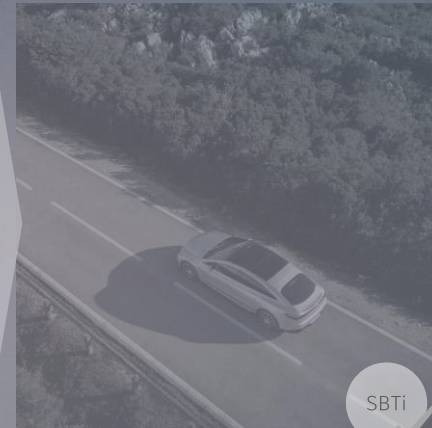
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## WELL-TO-TANK



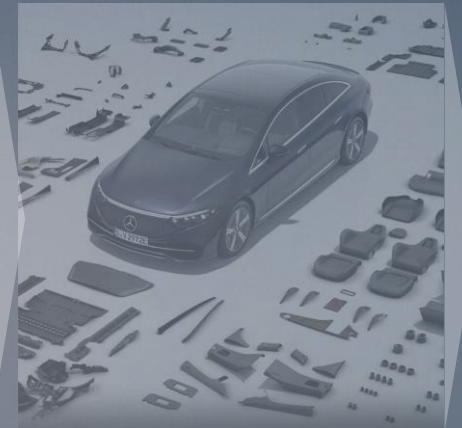
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## TANK-TO-WHEEL



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## END-OF-LIFE



# FURTHER STEPS TO DECARBONISE OUR STEEL SUPPLY CHAIN

## CARBON FOOTPRINT REDUCTION BY 40%

1/3 of body-in-white steel in the  
U.S.-sourced from electric arc furnaces

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## CO<sub>2</sub>-REDUCED STEEL FOR MORE THAN 1/3 OF DEMAND

Annual target for European  
press shops within this decade



# CONTINUOUSLY SCALING UP THE USE OF LOW-CO<sub>2</sub> ALUMINIUM

## 1/3 of primary aluminium

for next BEV models in EU using electricity from renewable sources for electrolysis – goal is to extend to all aluminium sourced for Mettingen



CO<sub>2</sub> reduction per kg/Al of approx.\*

# 40 – 50 %

starting in 2024

Developing further innovations for **very-low-CO<sub>2</sub> aluminium** parts with our partners



Targeted CO<sub>2</sub> reduction per kg/Al of approx.\*

# >90 %

by 2030

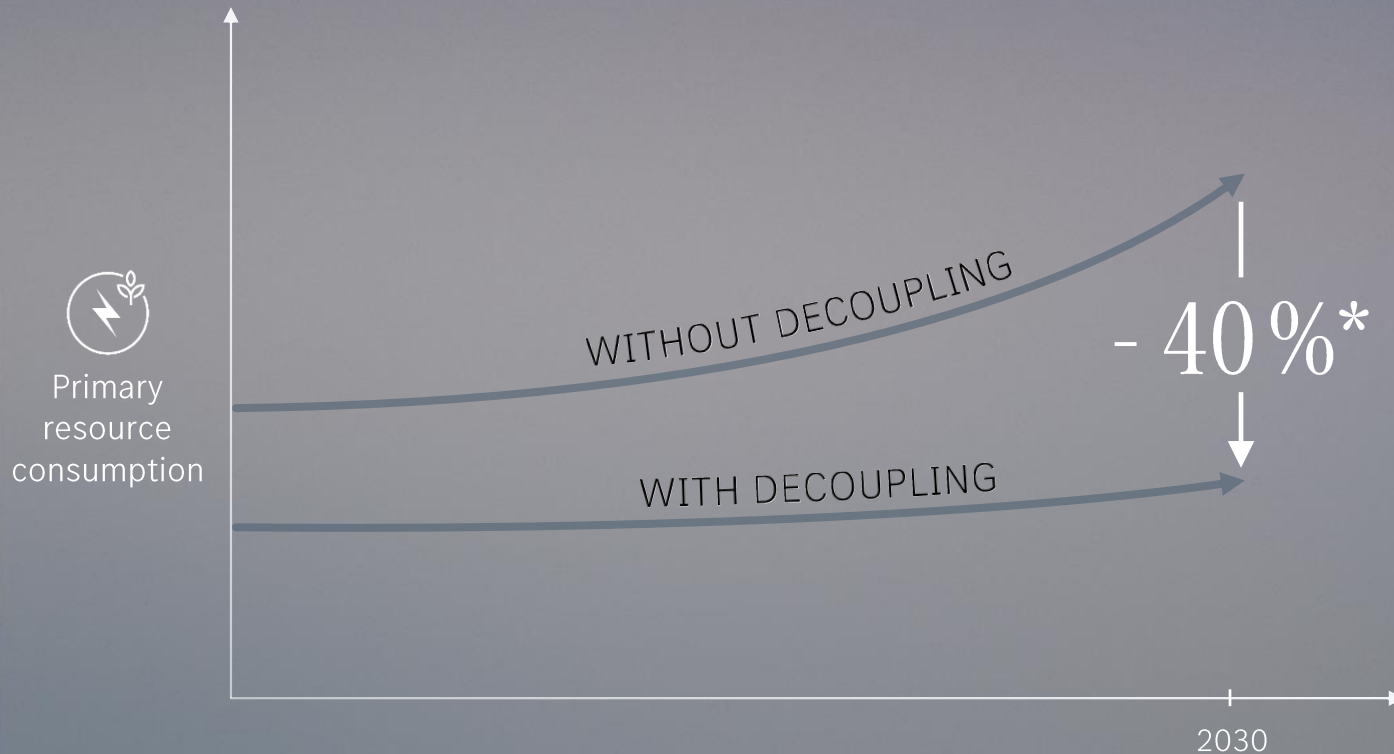
\* compared to European average



# RESOURCE USE & CIRCULARITY

ACCELERATING THE CIRCULAR ECONOMY

## DECOUPLING RESOURCE CONSUMPTION FROM BUSINESS VOLUME GROWTH



\* targeted by 2030

## FOUR STRATEGIC LEVERS FOR RESOURCES REDUCTION

Mechanical recycling

—

Chemical recycling

—

Bio-circular material

—

New recycling innovations, e.g.  
transformation in metal production



# AIMING FOR 40% RECYCLED MATERIALS BY 2030

## RECYCLING TECHNOLOGIES FOR POLYMERS

Post-consumer recycles

Front and rear bumpers starting with MMA

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Chemical recycling with BASF & Pyrum

Crash absorber & bow door handle in S-Class and EQE

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Upcycled UBQ materials

Cable ducting in EQS and EQE





# USE OF RESOURCE-CONSERVING MATERIALS IN THE NEW E-CLASS



## 360° ENVIRONMENTAL CHECK MERCEDES-BENZ E-CLASS

Circular feedstock foam in E-Class seats

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175 components with a total weight of 99kg  
can be manufactured from resource-saving materials

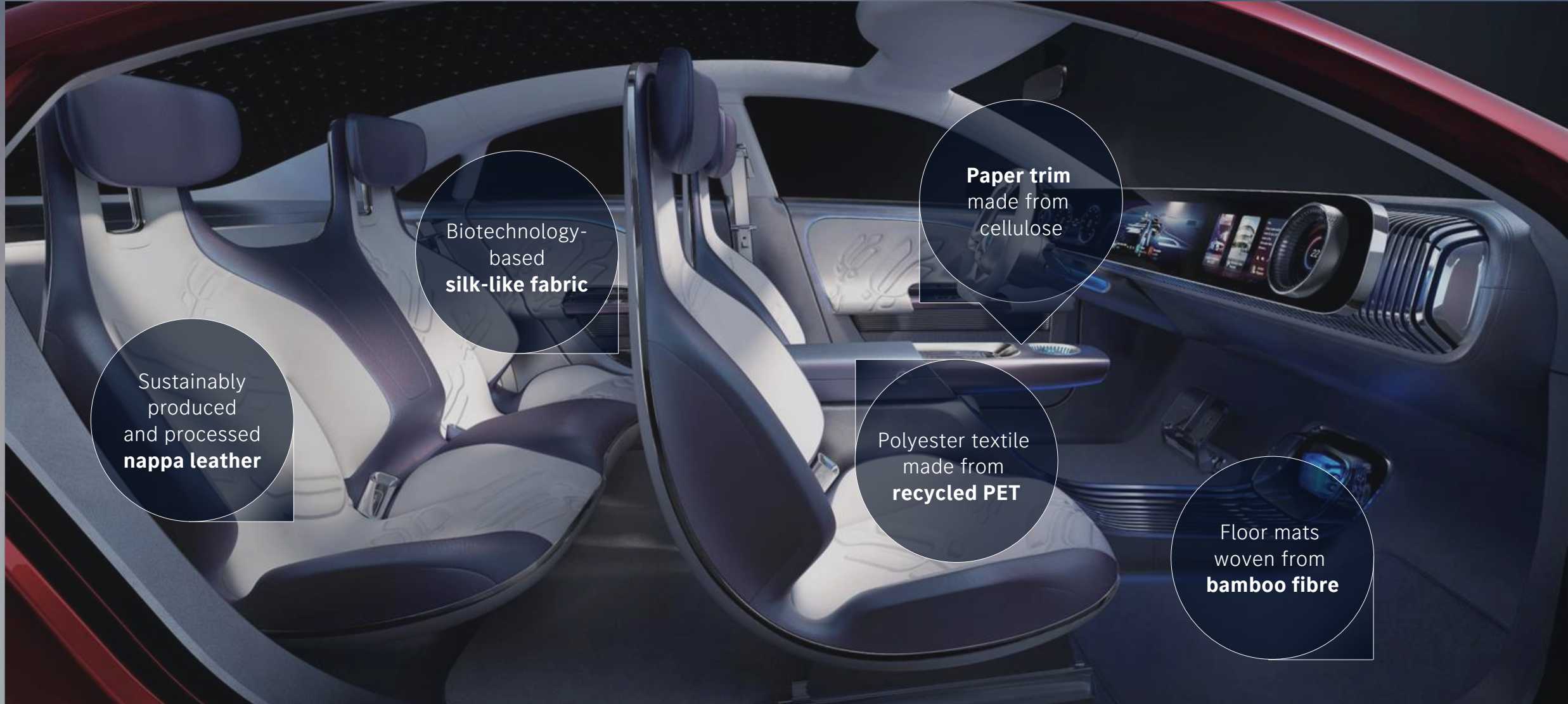
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MICROCUT microfibre consists of  
45% recycled material



# INSIDE THE CONCEPT CLA CLASS

## ALTERNATIVE & RECYCLED MATERIALS



Sustainably  
produced  
and processed  
**nappa leather**

Biotechnology-  
based  
**silk-like fabric**

**Paper trim**  
made from  
cellulose

Polyester textile  
made from  
**recycled PET**

Floor mats  
woven from  
**bamboo fibre**

# INNOVATIVE MATERIAL TRENDS

ELASTOMERS, CIRCULAR ECONOMY, BIOTECH, MARKER SYSTEMS

First elastomer components made with  
recyclates planned for E-Class

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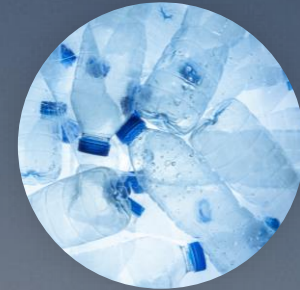
New technology showcases  
for the circular economy

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R&D of luxurious biotech interior  
surface applications

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Investigation of materials digitalisation  
for traceability & transparency using  
marker systems





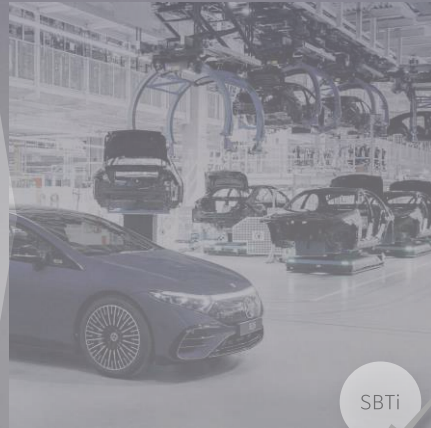
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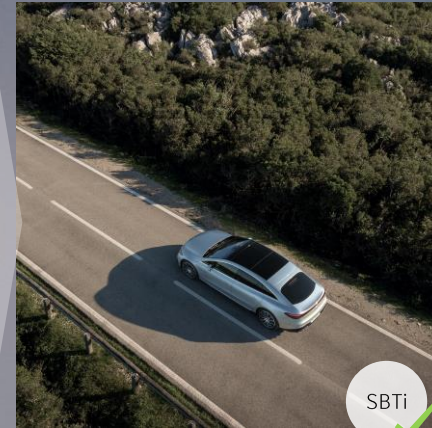
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**TANK-TO-WHEEL**



SBTi

END-OF-LIFE





# ONCE AGAIN, VISION EQXX DEMONSTRATES EFFICIENCY ON ITS ROAD TRIP THROUGH THE SAUDI ARABIAN DESERT

TECHNOLOGY PROGRAMME ACHIEVES EXCEPTIONAL CONSUMPTION OF 7.4 KWH/100 KM



**1,010 km** to Dubai  
on a single battery charge



Average consumption of  
**7.4 kWh/100 km**  
**8.4 miles/kWh<sup>1</sup>**  
0.9 l/100 km equivalent (282 MPGe)<sup>2</sup>



Total Driving Time  
**12 h 45 min**  
(in motion)



Average speed  
**79.4 km/h**  
**49.3 mph**  
(in motion)

<sup>1</sup> On-board consumption without charging losses

<sup>2</sup> For a petrol-fuelled vehicle

**Road trip to Dubai** 🇦🇪  
Mercedes-Benz Brand Center  
8 March 2024

**Riyadh**  
Mercedes-Benz Center





# MMA FAMILY INTEGRATES TECHNOLOGY FROM VISION EQXX — THE MOST EFFICIENT MERCEDES WE HAVE EVER BUILT



Mercedes-Benz Electric Drive Unit  
(MB.EDU) with up to

**93 %** efficiency



Consumption of

**~12 kWh/100 km**



**15 min**

charging delivers  
up to 400 km range



Range of more than

**750 km\***



800 V system enables up to

**300 kW** DC charging



\*WLTP: In real driving conditions, deviations from the certified standard values may occur. The real values are influenced by a variety of individual factors, e.g. individual driving style, environmental and route conditions.

# BIDIRECTIONAL CHARGING — THE CAR AS A LEVER FOR SMART ENERGY USE

BIDIRECTIONAL CHARGING  
WILL BE INTRODUCED  
WITHIN THE SCOPE OF MMA

Vehicles connected via V2G with the  
power grid will support the energy transition

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Balancing the volatility of renewables generation

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Storing excess energy, e.g. produced  
by PV during the day and fed back  
into the grid at night





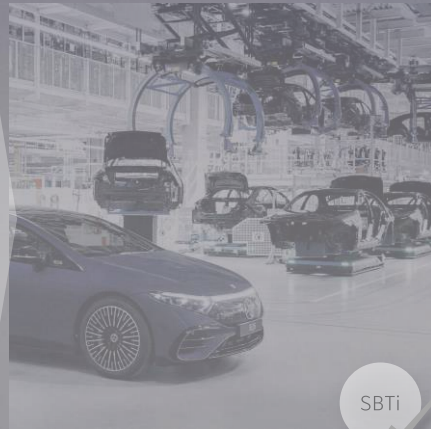
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# CIRCULAR ECONOMY — TAKING RESPONSIBILITY

CREATING A POSITIVE IMPACT ON PEOPLE AND PLANET

SUCCESS BASED ON STRATEGIC  
PARTNERSHIPS ALONG THE VALUE CHAIN



Access to end-of-life materials



Refining post-consumer scrap for new vehicles



Reintegration of high-quality recycled materials



# OUR AIM: FROM POST-CONSUMER SCRAP TO NEW VEHICLES

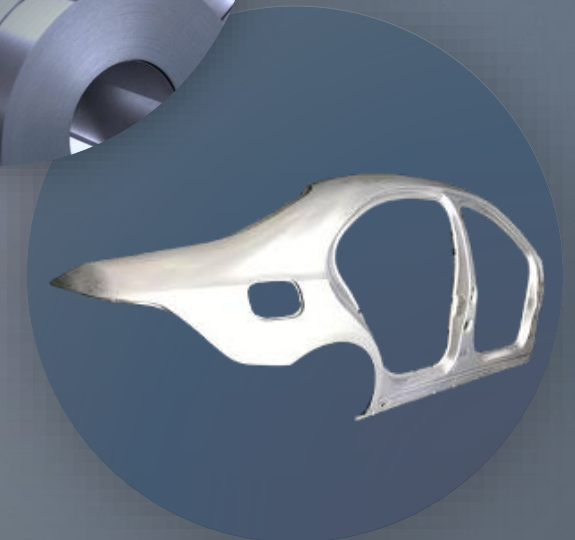
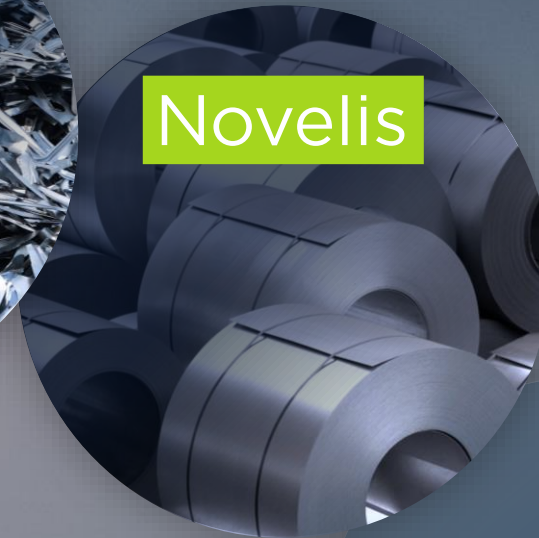
PROTOTYPES WITH LIGHTHOUSE  
MATERIAL SUCCESSFULLY TESTED

Use of recycled and processed  
end-of-life aluminum for body-in-white

 86% share of post-consumer scrap

 73% less CO<sub>2</sub>\*

 Avoidance of material loss by downcycling



\*than current comparable products

# ON OUR WAY TO A SUSTAINABLE VEHICLE LIFECYCLE

Carbon-reducing activities  
along the entire value chain

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Specific contracts with partners & suppliers

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Developing new technologies with partners

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Aiming for 40% recycled materials and  
CO<sub>2</sub> emissions reduction of up to 50 percent  
per passenger car in the new vehicle fleet over  
the lifecycle by the end of this decade  
compared to 2020 levels





# DISCLAIMER

This document contains forward-looking statements that reflect our current views about future events. The words “anticipate”, “assume”, “believe”, “estimate”, “expect”, “intend”, “may”, “can”, “could”, “plan”, “project”, “should” and similar expressions are used to identify forward-looking statements. These statements are subject to many risks and uncertainties, including an adverse development of global economic conditions, in particular a negative change in market conditions in our most important markets; a deterioration of our refinancing possibilities on the credit and financial markets; events of force majeure including natural disasters, pandemics, acts of terrorism, political unrest, armed conflicts, industrial accidents and their effects on our sales, purchasing, production or financial services activities; changes in currency exchange rates, customs and foreign trade provisions; changes in laws, regulations and government policies (or changes in their interpretation), particularly those relating to vehicle emissions, fuel economy and safety or to ESG reporting (environmental, social or governance topics); price increases for fuel, raw materials or energy; disruption of production due to shortages of materials or energy, labour strikes or supplier insolvencies; a shift in consumer preferences towards smaller, lower-margin vehicles; a limited demand for all-electric vehicles; a possible lack of acceptance of our products or services which limits our ability to achieve prices and adequately utilize our production capacities; a decline in resale prices of used vehicles; the effective implementation of cost-reduction and efficiency-optimization measures; the business outlook for companies in which we hold a significant equity interest; the successful implementation of strategic cooperations and joint ventures; the resolution of pending governmental investigations or of investigations requested by governments and the outcome of pending or threatened future legal proceedings; and other risks and uncertainties, some of which are described under the heading “Risk and Opportunity Report” in the current Annual Report. If any of these risks and uncertainties materializes or if the assumptions underlying any of our forward-looking statements prove to be incorrect, the actual results may be materially different from those we express or imply by such statements. We do not intend or assume any obligation to update these forward-looking statements since they are based solely on the circumstances at the date of publication.