

The future of mobility at MBC: Emission-free, connected and autonomous

Prof. Dr. Thomas Weber, Member of the Board of Management of Daimler AG Group Research & Mercedes-Benz Cars Development

Mercedes-Benz Cars Capital Market Day 2015 June 11th, 2015



Key factors that shape the *mobility of the future*



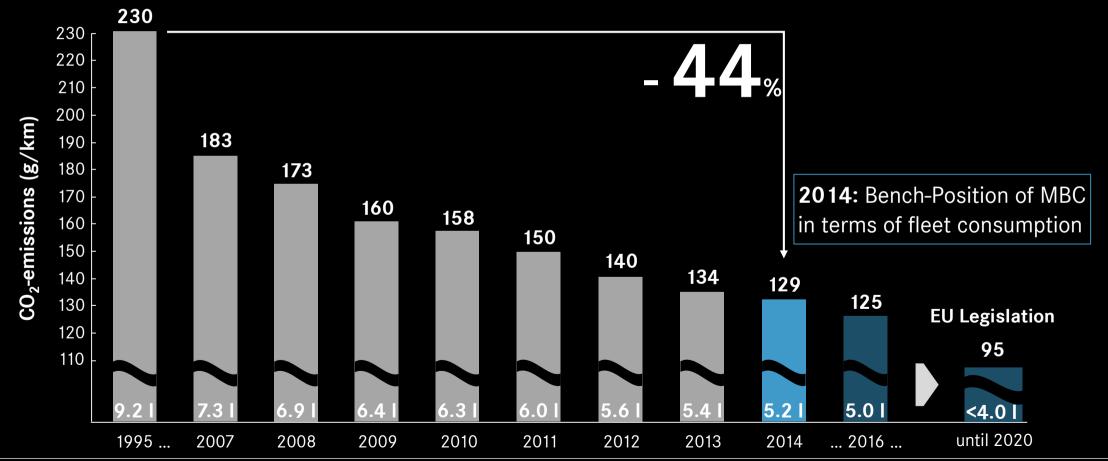
Individual mobility stays important

But: It will be different



We are on our way to *emission-free driving* Example: *Europe*





Success factor: Our roadmap for sustainable mobility



Plug-in hybrid technology – What is our *ambition?* More driving fun and less consumption for our customers

9.0_{1/100 km} 7.6 s from 0 - 100 km/h 245 Nm | 235 hp

2015 2.1 1/100 km 5.9 s from 0 - 100 km/h 600 Nm | 279 hp

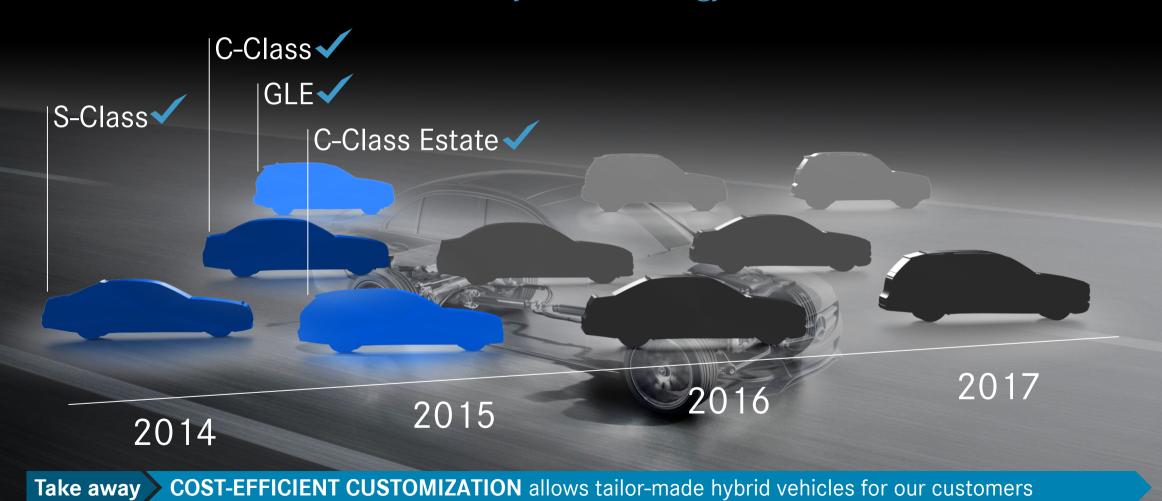






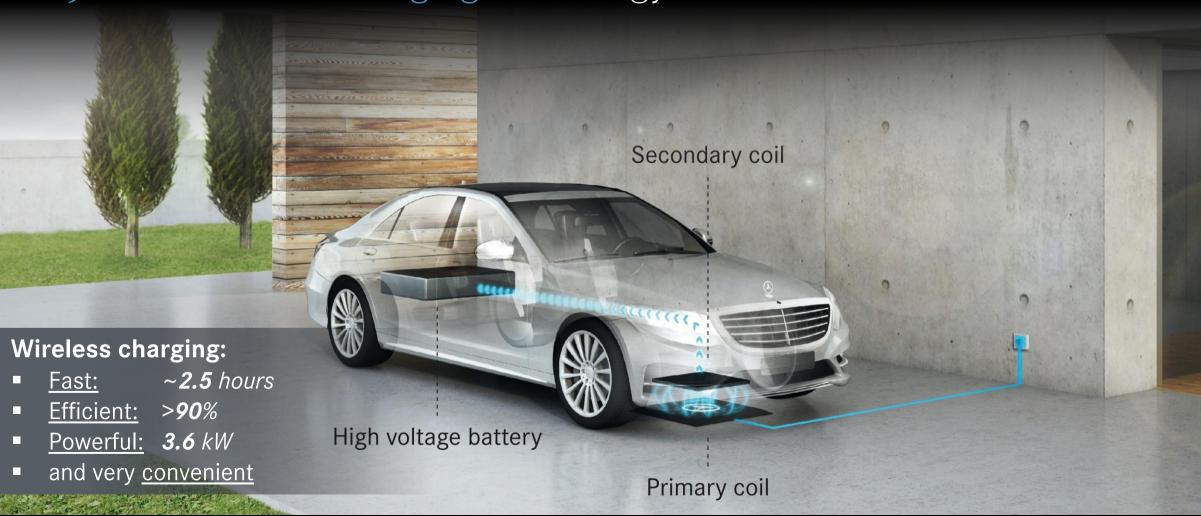
Mercedes-Benz C 350 e

We will offer *10 plug-in hybrids* by 2017 Success factor: Our *modular hybrid strategy*



Is the focus on nowertrain enough?

Future success factors beside the powertrain *Infrastructure* and *charging* technology



Intelligent connected cars offer additional benefits Mercedes connect me



Intelligent EV services for our customers

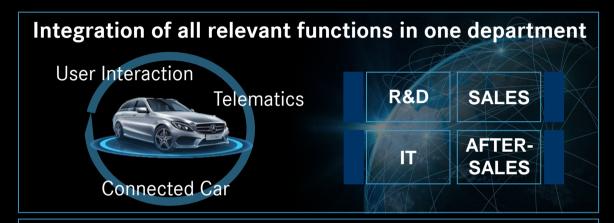


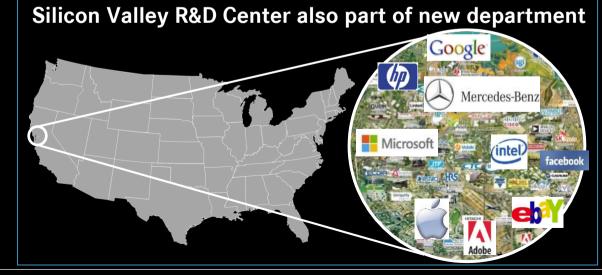
Seamless integration of wearable devices MB Companion App for C- and S-Class starting in September



Structural changes in our R&D organization Bundling of all 'Connected Car' functions in a new department



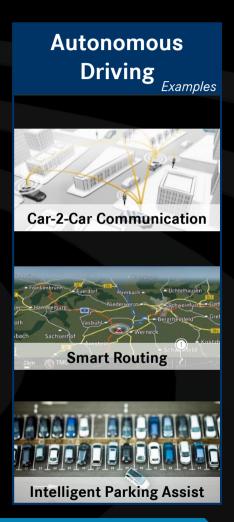




Connectivity as 'enabling technology' is the core of...







Examples

CONNECTIVITY, BACKEND and DATA as enabling technologies for various disciplines of the future Take away

Autonomous driving with the S 500 Intelligent Drive We early demonstrated the technical feasibility



AUGUST 2013: Pioneering achievement

- First autonomous drive by a car manufacturer
- About 100 kilometers from Mannheim to Pforzheim



S 500 Intelligent Drive

- Highly complex traffic situations in cities
- Close-to-Production technology

Technology transfer within Daimler The first autonomous driving trucks in the world



JULY 2014: Mercedes-Benz Future Truck 2025

- Highway-pilot at 80 km/h
- More safety, efficiency and connectivity



MAY 2015: Freightliner Inspiration Truck

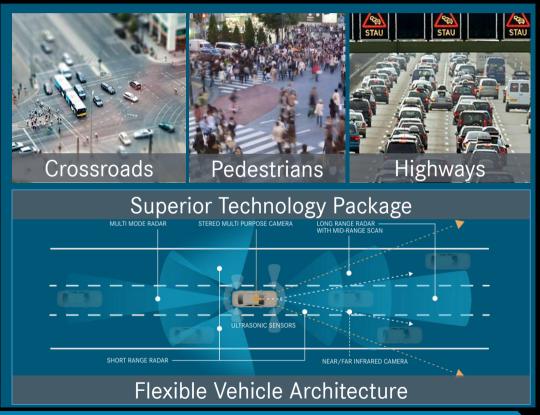
- First licensed autonomous driving truck in the US
- Intelligent sensors and stereo camera

Autonomous driving: We keep the pedal to the metal Further functions in upcoming models

Autonomous driving shown by Mercedes-Benz



Next step: New functions in new E-Class

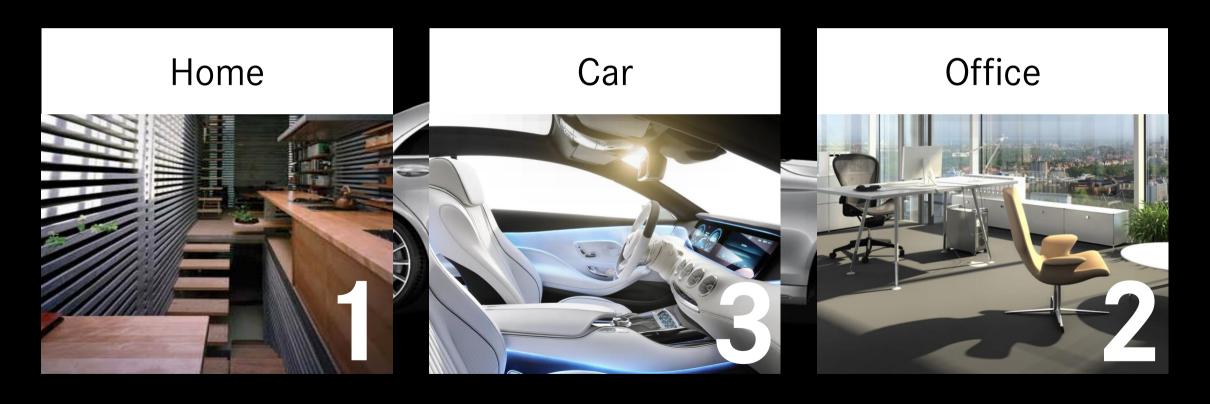


Take away > Once again MERCEDES-BENZ WILL SET THE BAR HIGHER regarding autonomous driving functions

Isthat what our customers Wants

Our vision of future mobility

We expect the car to become the 'third place' for our customers



Our idea of the *autonomous luxury sedan*A revolutionary exterior and interior concept



JANUARY 2015: F 015 Luxury in Motion

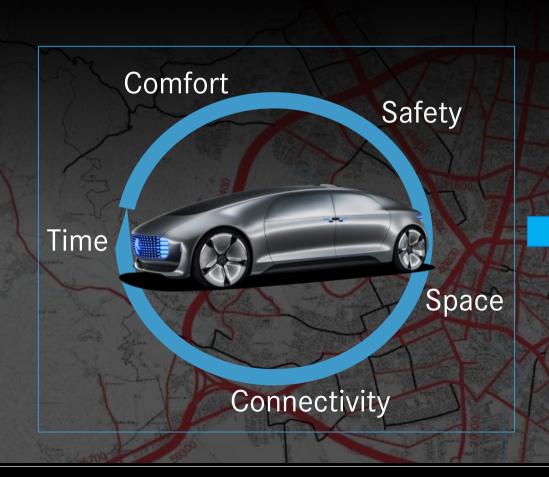
- Large interactive LED fields front and rear
- Communication and interaction with other road users



Revolutionary interior

- High-resolution displays installed throughout
- Gestures, eye-tracking and touch function

Autonomous cars do not only affect *comfort*But also *higher efficiency* and *better traffic flow*

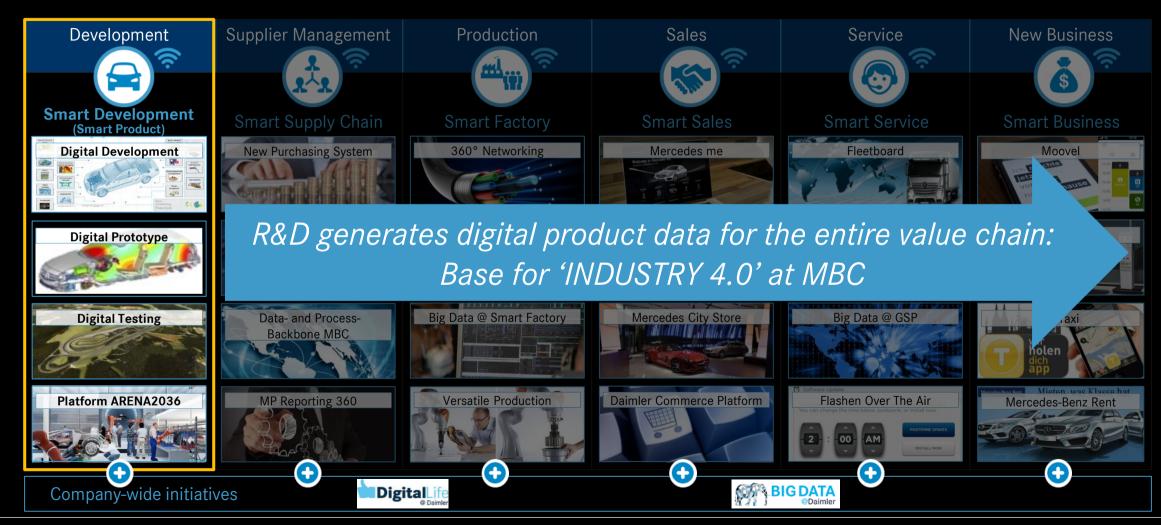


Additional effects on future traffic through intelligence and prediction

- Intelligent connected cars
- More efficiency
- Less fuel consumption
- Higher capacity on given infrastructure possible

How does R&D manage these future challenges:

R&D as an *integral part* of Daimler's 'Industry 4.0' offensive



Continuous and consequent *digitalization*Central enabler for *efficient global development*

'Development 1.0'



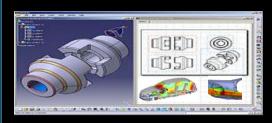
Drawing Board

'Development 2.0'



CAD-Systems (stand alone)

'Development 3.x'



R&D Product Data Management
Digital Mock-Up
CAD/ CAE

'Development 4.0'

- Global & completely connected product/ process data
- MBC-wide
- Incl. connection of key suppliers

'Model Based Systems Engineering'

Early Past

Past

Present

2020 ff



Shortening of development cycles



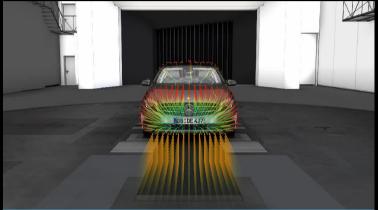
'Industry 4.0' approach in R&D Optimizing safety, aerodynamics, design and maturity

Enhancement and optimization of passive safety



Integration of hardware crash data and CAE-simulation

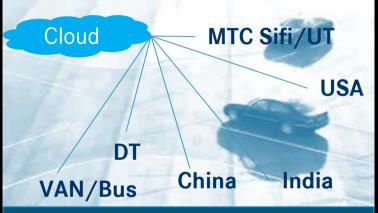
- High forecast quality in crash-testing, CAE is the base for digital approval
- Basis for efficient enhancement of core value 'Saftey'



Use of design and sampling data for optimization of aerodynamics

- Optimal geometry of the car
- MBC represents the benchmark in Aerodynamics

Efficient development for design/aerodynamics Automated testing offers a high level of maturity

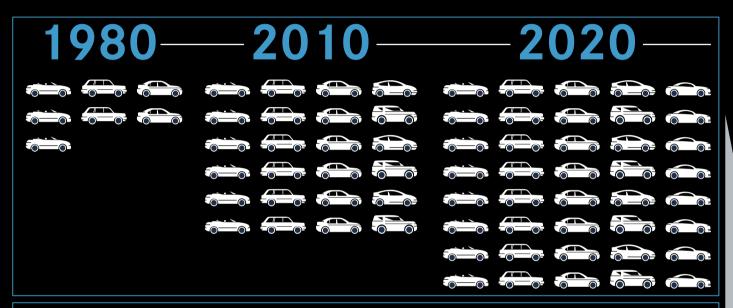


Automated and driverless testing for realistic testing results

- Vision: Online access to experimental results and real-time testing optimization
- Global engineering und testing 24h/7 days

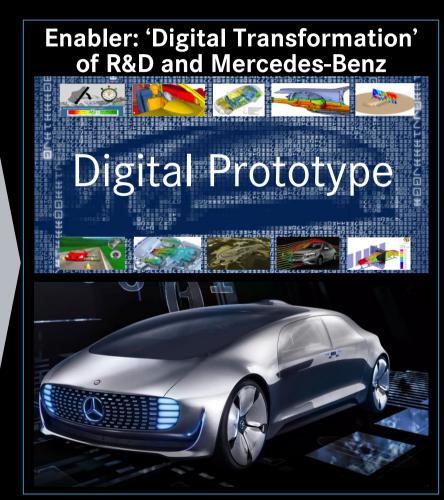
Take away Improvement of EFFICIENCY, QUALITY, SPEED and TIME-TO-MARKET

Fast and efficient product development as key for a successful product- and technology offensive



Offering the best to our customers

- - Variety of models
 - Democratization of technology packages
 - Long-wheel-base as well as left/right hand drive
 - All-wheel drive
 - New HMI and connectivity features



The best time for the automobile is still to come



Emission-free





and even more <u>fascinating</u> and <u>emotional</u> than today!



Take away Our global R&D Team is VERY WELL PREPARED to shape the future of mobility

Our 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 decline of demand in our most important markets; a worsening of the sovereign-debt crisis in the euro zone; an increase in political tension in Eastern Europe; a deterioration of our refinancing possibilities on the credit and financial markets; events of force majeure including natural disasters, epidemics, acts of terrorism, political unrest, industrial accidents and their effects on our sales, purchasing, production or financial services activities; changes in currency exchange rates; a shift in consumer preferences towards smaller, lower-margin vehicles; a possible lack of acceptance of our products or services which limits our ability to achieve prices and adequately utilize our production capacities; price increases for fuel or raw materials; disruption of production due to shortages of materials, labor strikes or supplier insolvencies; 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; changes in laws, regulations and government policies, particularly those relating to vehicle emissions, fuel economy and safety; the resolution of pending official investigations and the conclusion of pending or threatened future legal proceedings; and other risks and uncertainties, some of which we describe 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.