DAIMLER

Daimler Tru

The Road to Carbon Neutral Transportation

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15 trillion ton-kilometers p.a.

15,000 000 000 000

2,000 000 000

2 billion tons CO_2 p.a.

Our ambition:

All of our new vehicles in Europe to be

CO^2-neutral by 2039

For all who keep...

...the world moving

Three facts are crucial:

1. Attractive vehicle range

2. Costs of CO^2 neutrality H$_2$

3. Government actions

MERCEDES-BENZ eACTROS "INNOVATION FLEET"

- Tough real-world testing already for over a year

- Ten 18- and 25-tonne trucks with customers in Germany and Switzerland

- Evaluation of tens of thousands of driven kilometers as well as exchange with drivers

- Feedback flows directly into development of series production eActros, due to commence in 2021
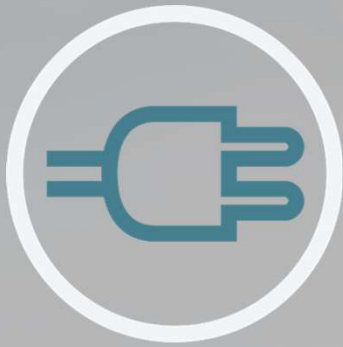
AS of 2021: battery electric vehicles in series production

- eC2 (Jouley) 2020:
  hand-over of 60 vehicles
- eCascadia and eM2:
  innovation fleet of 30 vehicles
  already in customer trials

- eActros start of series production
  in 2021
- eCitaro since 2018 in series production
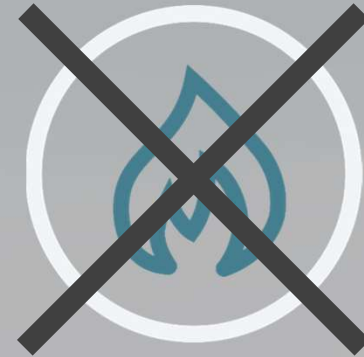- eCanter: more than 150 vehicles in
  operation globally

Only two options to achieve our goals

Battery

Hydrogen

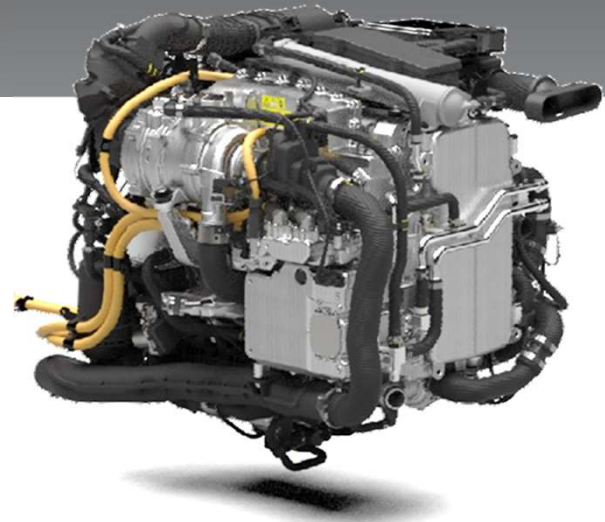Fossil Fuels

25 years experience in fuel cell technology

**Mercedes-Benz
Passenger Cars**

15 million km in Europe and US
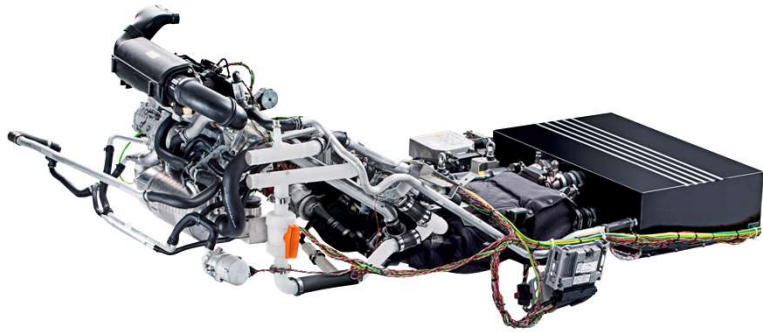350.000 km driven in one single
vehicle

**Mercedes-Benz
Citaro FuelCELL Hybrid**

More than 5 million km in Europe
More than 1 million km by a single
vehicle in customer service

▶ **Stack Development**

▶ **Stack & Fuel Cell System Engineering**

▶ **Operating Strategy & Software Development**

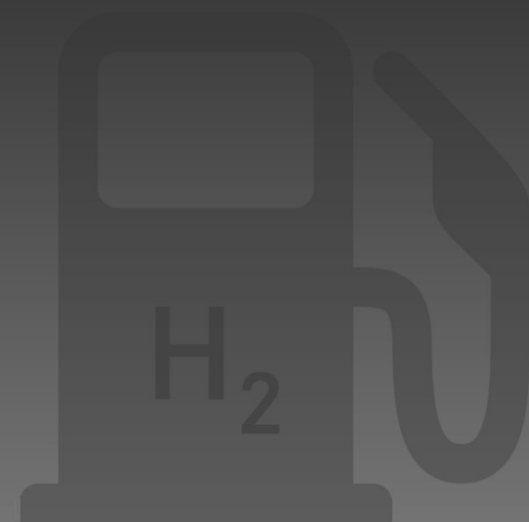# System development

2010

2018

30% reduced installation space required

Three facts are crucial:

1. Attractive vehicle range

2. Costs of CO^2 neutrality H_2
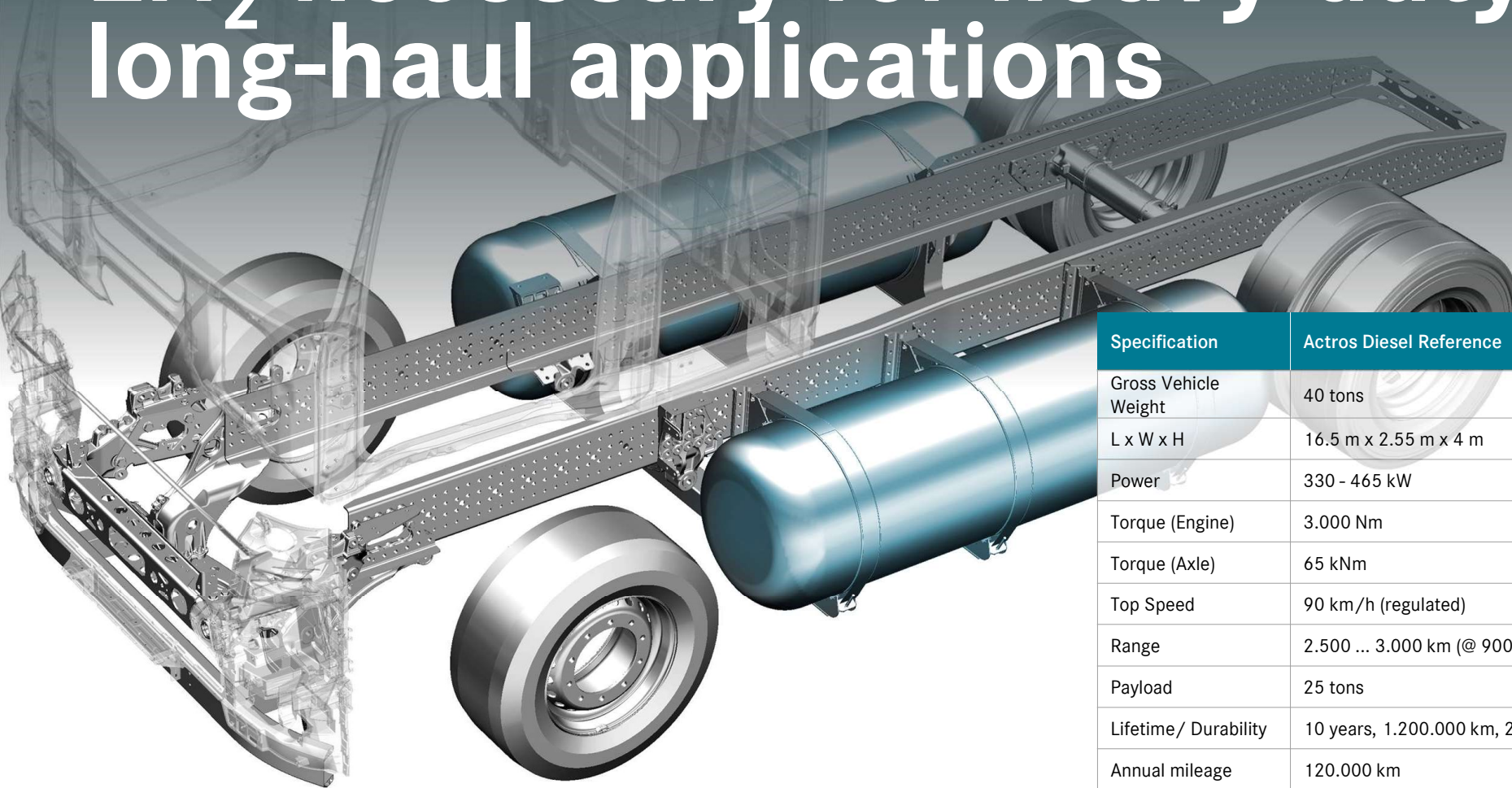
3. Government actions

LH$_2$ as alternative to diesel: benefits and challenges

- Long distance application > 600 km
- LH$_2$ enables TCO parity
- Infrastructure
  - 10 years to develop a complete new infrastructure
  - Partnering

LH$_2$ necessary for heavy-duty long-haul applications

Specification	Actros Diesel Reference
Gross Vehicle Weight	40 tons
L x W x H	16.5 m x 2.55 m x 4 m
Power	330 - 465 kW
Torque (Engine)	3.000 Nm
Torque (Axle)	65 kNm
Top Speed	90 km/h (regulated)
Range	2.500 ... 3.000 km (@ 900l Diesel)
Payload	25 tons
Lifetime/ Durability	10 years, 1.200.000 km, 25.000 hours
Annual mileage	120.000 km

Three facts are crucial:

1. **Attractive vehicle range**

2. **Costs of CO^2 neutrality H$_2$**

3. **Government actions**

- Balance out cost disadvantages of CO^2-neutrality
- Climate protection package of German government - 900 Mio. funding for H$_2$ trucks
- In Europe: link tolls to CO^2 truck emissions
- Develop necessary infrastructure

Let's shape the future of CO²-neutral transportation together

Stay tuned...