

DAIMLER TRUCK

Smart Mobility in the Energy Transition Era

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The big picture: how it's all connected



OUR PURPOSE

WHY
are we doing this?

**For all who keep
the world moving**



OUR VISION

WHERE
do we want to go?

**Leading sustainable
transportation**



OUR TARGETS

WHAT
do we want to achieve?

**Reset profitability &
lead transformation**



OUR STRATEGY

HOW
do we get there?

**By adding value
for our customers**

Daimler Truck vision

LEADING SUSTAINABLE TRANSPORTATION



Sustainability at Daimler Truck: We are building the way forward!

Daimler Truck is committed to the principles of sustainability and, in particular, climate protection, and is therefore shaping the future of goods and people transportation and its operations in a CO₂-neutral way.

As part of its sustainable business strategy, Daimler Truck focuses on environmental, social, and governance aspects of its operations.



E ENVIRONMENT

We are clearly committed to the Paris Climate Protection Agreement. We want to make CO₂-neutral transport a success and thus contribute to fight climate change.



- Green Products
- Green Production
- Green Supply Chain



S SOCIAL

We take responsibility toward society and our employees. Where we can make a contribution, change something for the better, we do it.



- Traffic Safety
- Our People
- Human Rights



G GOVERNANCE

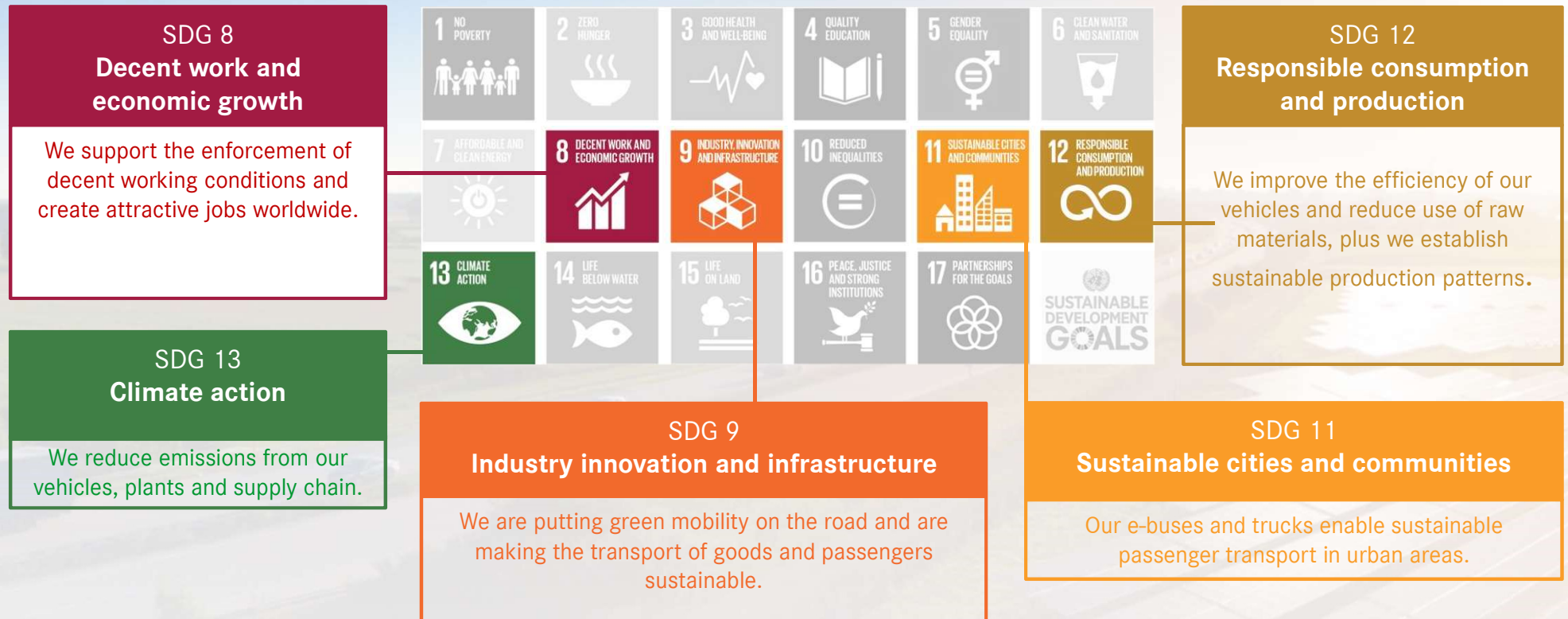
We underline our responsibility to the environment and society with strong, forward-looking corporate governance.



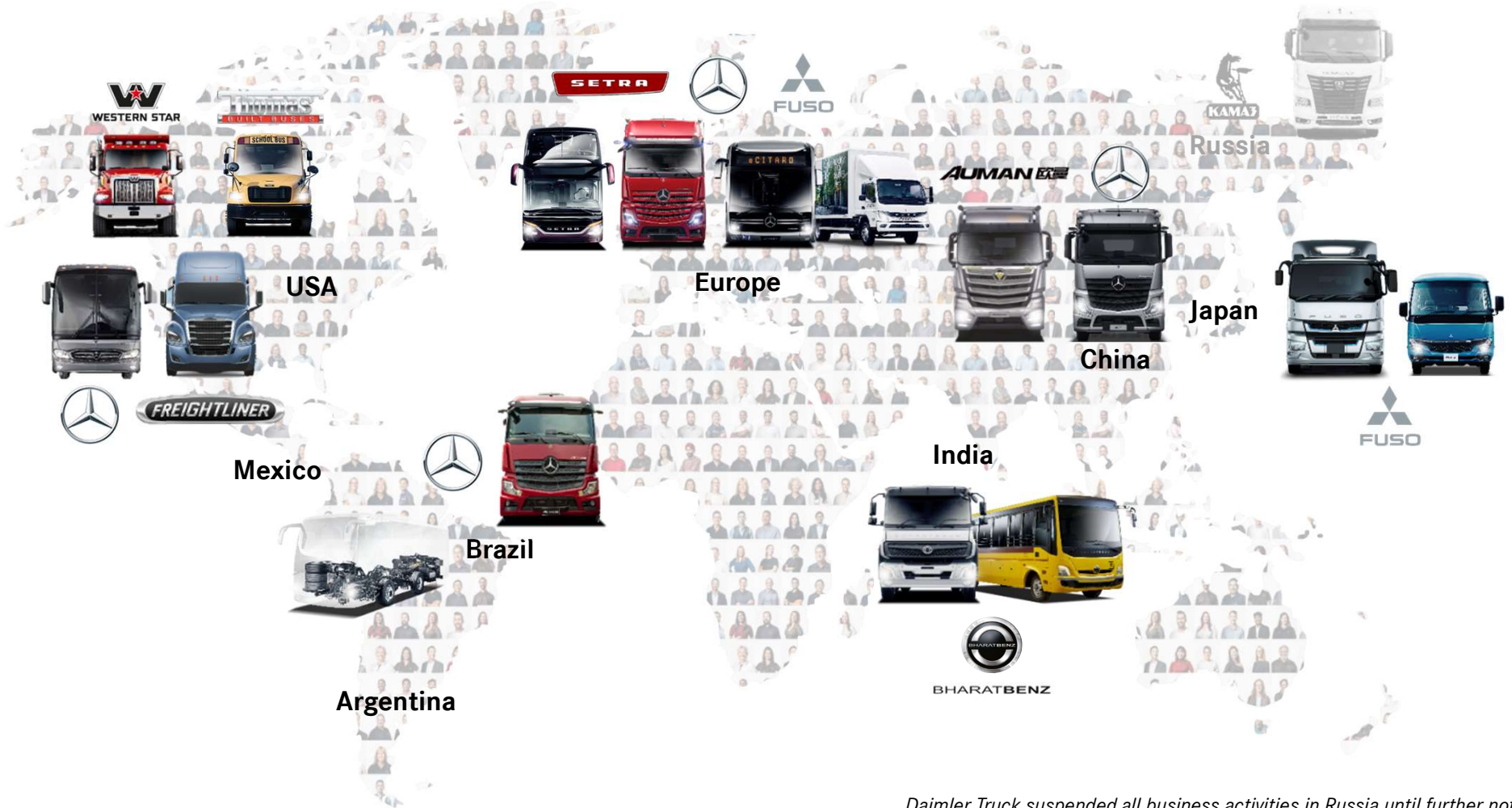
- Responsible Governance
- Compliance & ESG Risk Management
- Reporting & Transparency

We actively contribute to the **international sustainability ecosystem**

Daimler Truck is a signatory of the UN Global Compact. We focus on five Sustainable Development Goals (SDGs) where we can make a significant contribution.

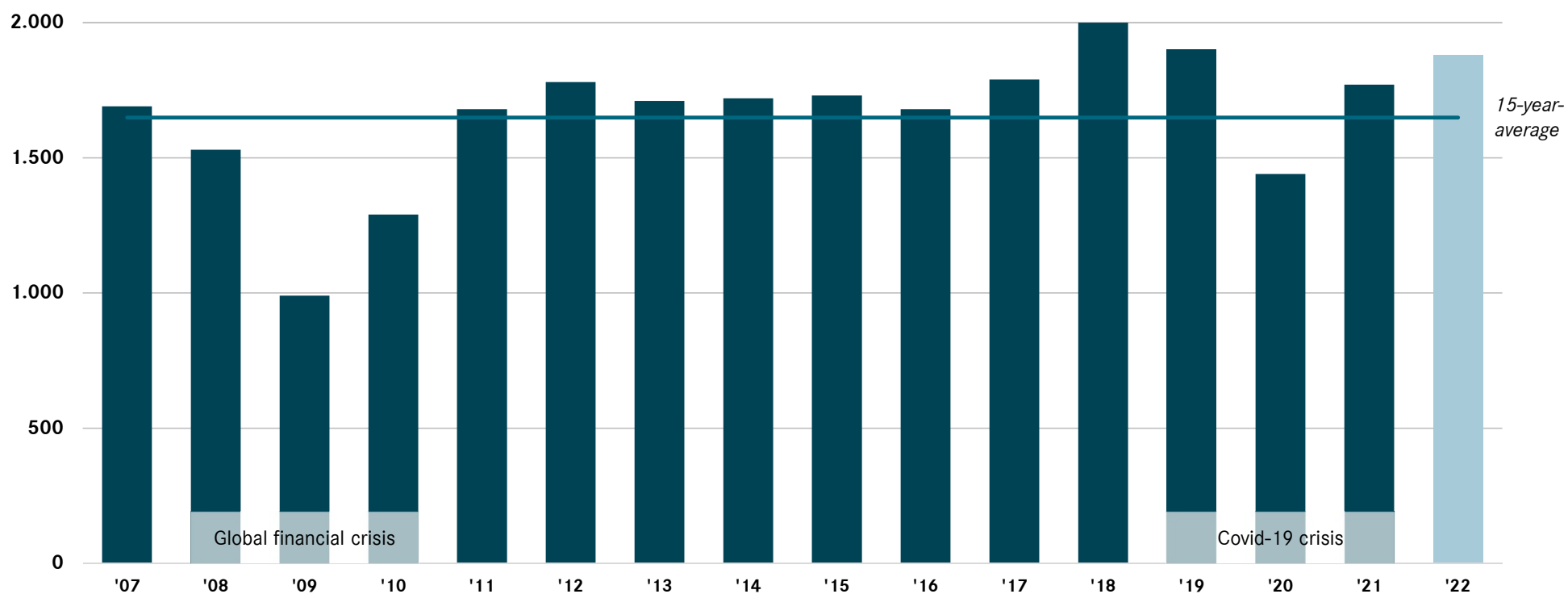


We have strong truck and bus brands across the world



Historically, the **truck market rebounds quickly** after global crisis impacts – **promising outlook for 2022**

Global medium-duty & heavy-duty truck sales in k units, excl. China



Source: Economic & Automotive Intelligence Daimler Truck AG; 2022 figures based on internal forecast

The big picture: our technology strategy

We focus on long-term differentiation with maximum commonality



Our road to CO₂-neutral transportation

- 1** We're committed to the Paris Climate Agreement and to shaping the future of CO₂-neutral road freight transport.
- 2** We'll offer CO₂-neutral series trucks: battery since 2017, hydrogen in second half of this decade. Natural gas is an expensive bridging solution we don't pursue.
- 3** Our ambition: In the triad our complete fleet of new vehicles is to be CO₂-neutral by 2039.
- 4** Even in 2040 the acquisition cost and the total cost of ownership of CO₂-neutral trucks will presumably still exceed the cost of conventional trucks.
- 5** Customers can only invest in CO₂-neutral trucks if these vehicles are economically competitive. The cost disadvantages therefore need to be balanced out – and to do so we need government actions.

CO₂-neutral transport is like a multiplication problem

Factor 1
Product Offering

X

Factor 2
Infra-structure

X

Factor 3
Cost Parity

=

Acceptance

Efficient conventional drivetrains: Our trucks lead in terms of total cost

**FREIGHTLINER
NEW CASCADIA**



TCO leader Freightliner New Cascadia
Fuel reduction up to -5%*

**MERCEDES-BENZ
ACTROS L**



TCO leader Mercedes-Benz Actros L
Fuel reduction up to -4%* on motor-ways with new
engine OM 471

**FUSO
SUPER GREAT**



TCO leader FUSO Super Great Fuel
reduction up to -15%*
Complete efficiency makeover

**Fuel reductions compared to previous model*

Our strategy: We will bring **two technologies** to series production that lead to a CO₂-neutral future – **batteries and fuel cells**

eActros



eActros LongHaul



GenH2 Truck



LIGHTER LOADS
SHORTER DISTANCES

HEAVIER LOADS
LONGER DISTANCES



Our propulsion strategy

Making zero emission drive competitive with two technologies

SYSTEM VIEW

TECHNICAL VIEW

One-technology-approach technically feasible

H₂ or



CUSTOMER VIEW

Depending on specific use cases, BEV or H2 can be the better customer fit

Daily range?



Recharging speed?



Operating Cost?



INFRASTRUCTURE VIEW

The best vehicles are no good without sufficient energy & infrastructure

Scalable and cost-efficient infrastructure?

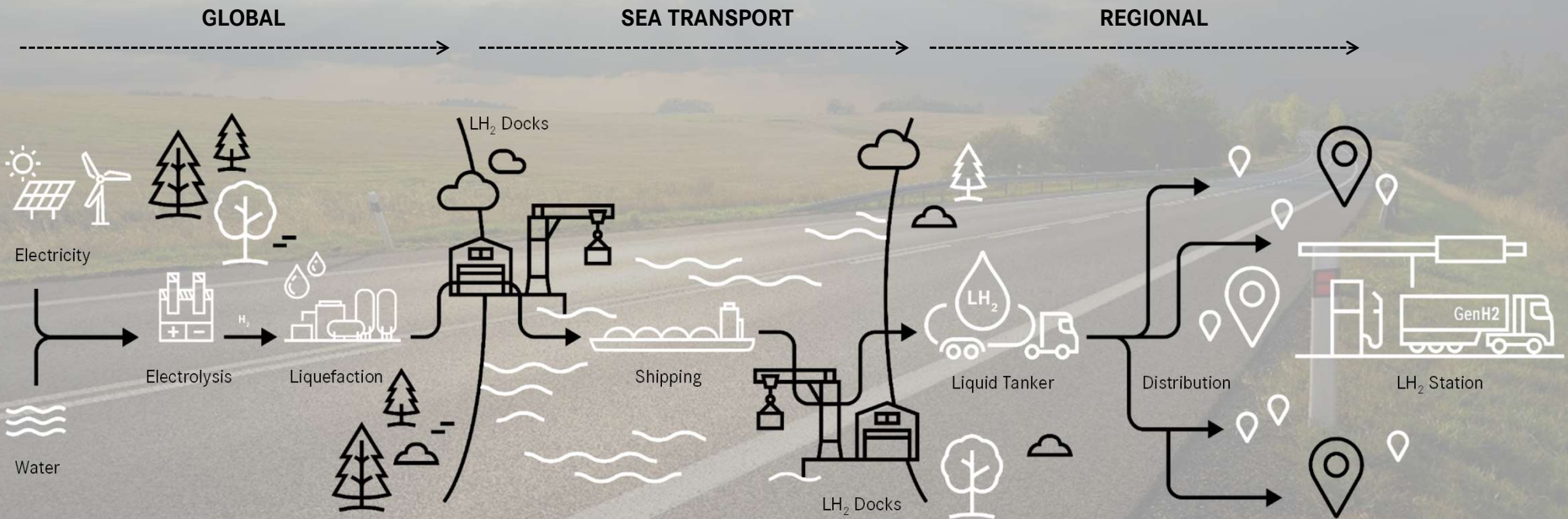


Flexible carrier for global energy trade?



ONLY COMBINATION OF BATTERY-ELECTRIC AND HYDROGEN-BASED DRIVE TECHNOLOGIES ENSURES THE FUTURE OF TRANSPORTATION AND OPTIMAL CUSTOMER SOLUTIONS

On our way to a hydrogen future: from energy generation to propulsion



Our ambition: All new vehicles in Europe, North-America and Japan are CO₂-neutral by 2039



Hundreds of customers have already covered tens of millions of kilometers with our electric trucks and buses.

Years after 2022 indicate planned start of production

Mercedes-Benz GenH2 Truck:

Hydrogen-powered long-haul transport



Range of up to 1,000 km and more

LH₂

Two liquid hydrogen tanks, each 40kg



Powerful and efficient fuel-cell system with 300 kW power and high-voltage battery able to provide up to 400 kW on top



Intensive internal testing since April 2021, expanded to public roads since October 2021



Ambition for series production in second half of the decade



We are **kick-starting battery charging and hydrogen-based fuel cell technology** with key initiatives and strategic partners



Develop dedicated **truck battery cells**



Offer Industry-leading **depot charging technology**



Initiate pan-European high performance **public charging network**



Start **public charging infrastructure** across the U.S. for battery electric & hydrogen fuel cell vehicles



Develop, produce and commercialize **fuel cell systems** in joint venture with Volvo Group



Develop technology for **liquid hydrogen refueling**



Accelerate **mass market adoption of fuel cell trucks** in Europe



Establish **hydrogen infrastructure** in Europe and an open standard for refueling

Connectivity solutions for trucks: Hundreds of thousands of our trucks are online worldwide

Using one common piece of hardware:
Truck Data Center

Enabling **flash over the air**, starting with our new Freightliner Cascadia

Tech & Data Hub
in Lisbon






Mercedes-Benz
Uptime

**FLEET
BOARD**

TRUCKCONNECT

Detroit Connect boosts logistics performance

Analytics	Virtual Technician	Remote Updates
<p data-bbox="191 678 590 760">Improves fuel consumption and safety</p> <ul data-bbox="191 776 590 1101" style="list-style-type: none"><li data-bbox="191 776 590 906">• Detects changes in fuel consumption and offers recommendations<li data-bbox="191 922 590 1003">• Reports safety-related events<li data-bbox="191 1019 590 1101">• Analysis on the basis of trip, vehicle, and fleet 	<p data-bbox="590 678 989 760">Reduces service-related downtime</p> <ul data-bbox="590 776 989 1052" style="list-style-type: none"><li data-bbox="590 776 989 857">• Alerts customers to vehicle faults<li data-bbox="590 873 989 954">• Provides immediate steps for action<li data-bbox="590 971 989 1052">• Analysis of entire fleet history 	<p data-bbox="989 678 1388 760">Updates firmware “over-the-air”</p> <ul data-bbox="989 776 1388 1036" style="list-style-type: none"><li data-bbox="989 776 1388 938">• Installs firmware for engine, transmission and aftertreatment without workshop visit<li data-bbox="989 954 1388 1036">• Remote access to truck from customer office 



Truck-ID and Truck Wallet: Teaching trucks how to pay



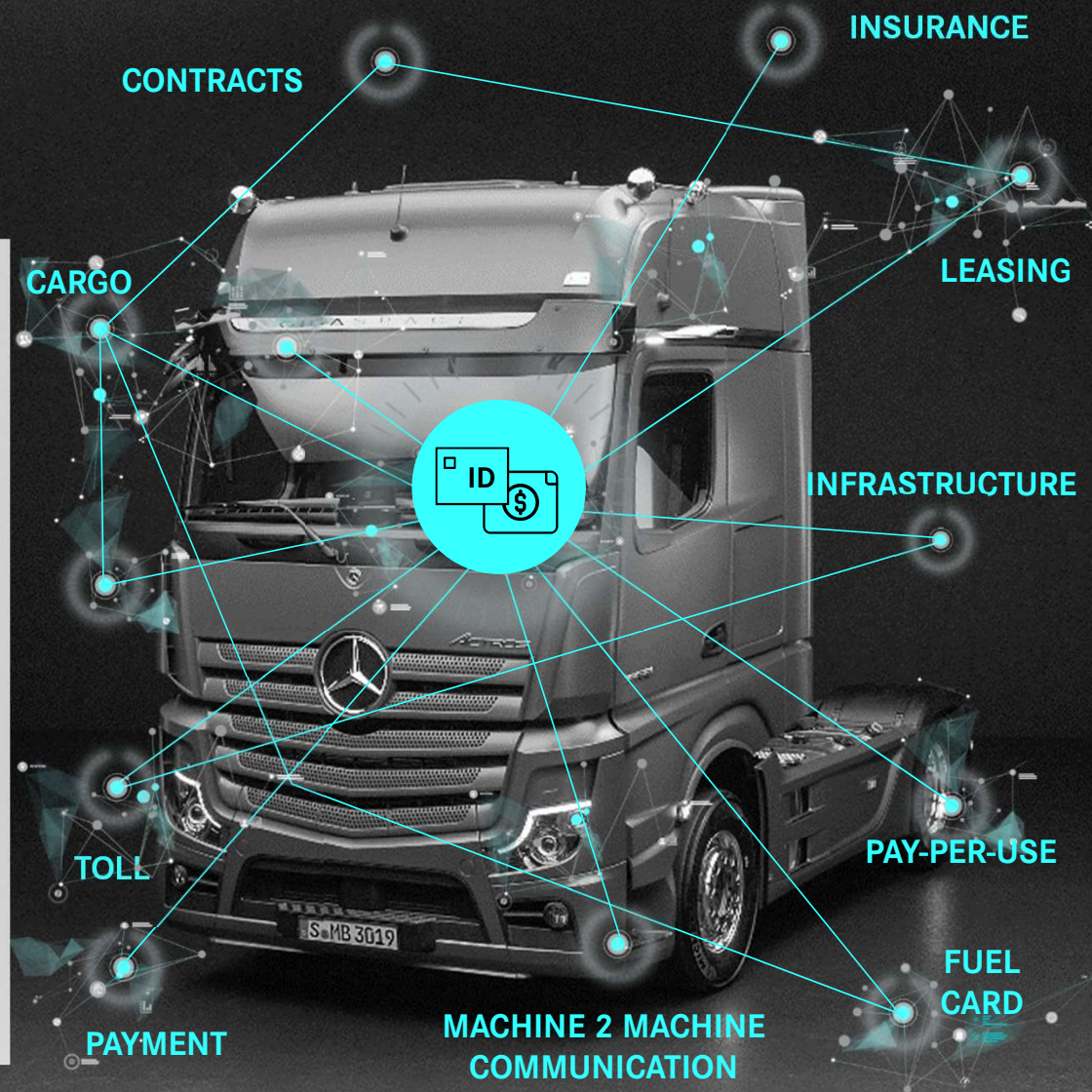
Successful pilot project:
autonomous payment at electric
charging station



With **Truck-ID**, a Truck identifies
itself to other machines and signs
legally-binding transactions – **Truck
Wallet** holds cash for payments and
additional items like fuel cards



Basis: Truck Data Center, machine-to-
machine communication and blockchain
transaction technology



Intelligence to drive

Two examples for today's active safety systems



We aim to develop our own **Truck Operating System**: Next level software architecture for next generation trucks and service offerings

HARDWARE-BASED

SOFTWARE-BASED

NEXT EVOLUTION MECHATRONICS
in implementation

TRUCK OPERATING SYSTEM
planned

2020

2027+



WHAT WE DO

- ▶ Fewer computing units and layers, delinked software cycles
- ▶ >600 software engineers in our Bangalore innovation hub

BENEFITS FOR CUSTOMERS

- ▶ Uptime: fewer and more efficient workshop visits over-the-air
- ▶ Tailored digital service offering with seamless end-to-end integration

BENEFITS FOR US

- ▶ Drive service revenues and customer loyalty
- ▶ Increase development speed

Software-driven architecture is also a decisive enabler to put **highly automated trucks on the road** – we are pursuing a **dual strategy**

Software:

Virtual driver
technology from
software pioneers

3rd Party



In-House



Hardware:

Best in class L4 chassis
from Daimler Truck



Autonomous Technology Group:

Bundling our global activities in autonomous trucking



Founded in Summer 2019, teaming up with Torc Robotics, partnering with Waymo



Integral part of Daimler Truck's global R&D network with locations in Stuttgart, Portland and Blacksburg



Aim to commercialize autonomous trucks (SAE Level 4) in the U.S. within this decade - intense public road tests ongoing



Stay up to date, follow us!

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Transportation Matters

Daimler Truck