

Decarbonizing Heavy-Duty Transport with Hydrogen

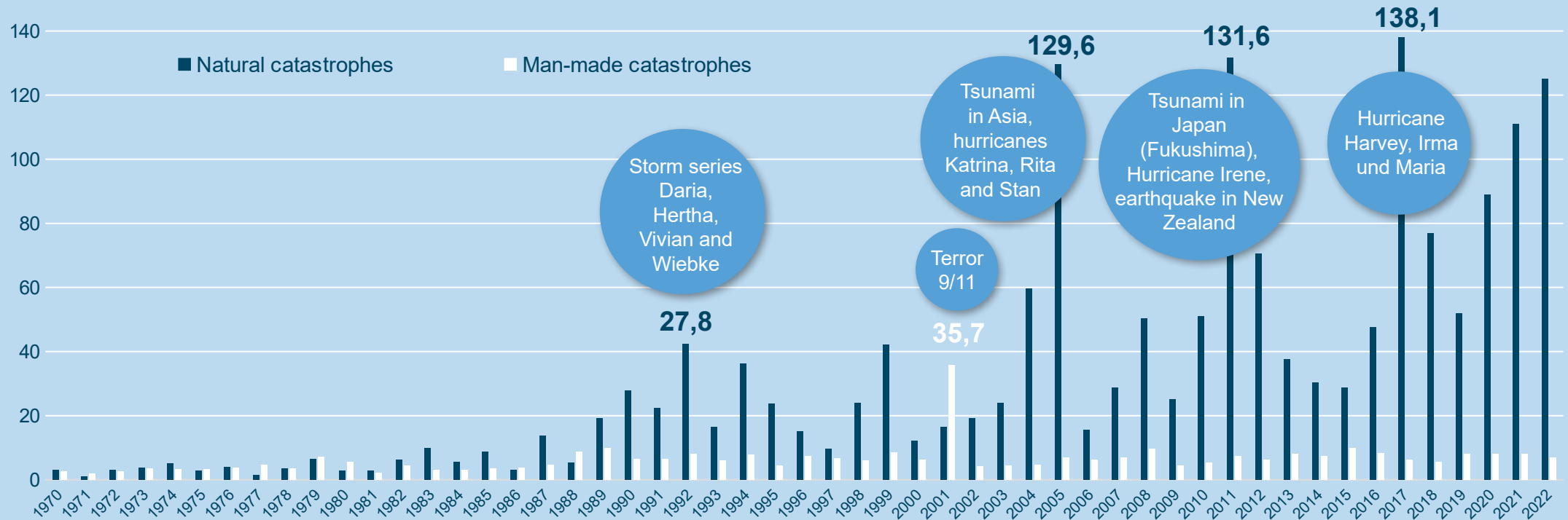
*Tokyo, 15th October 2024
Sara Schiffer*



hylane

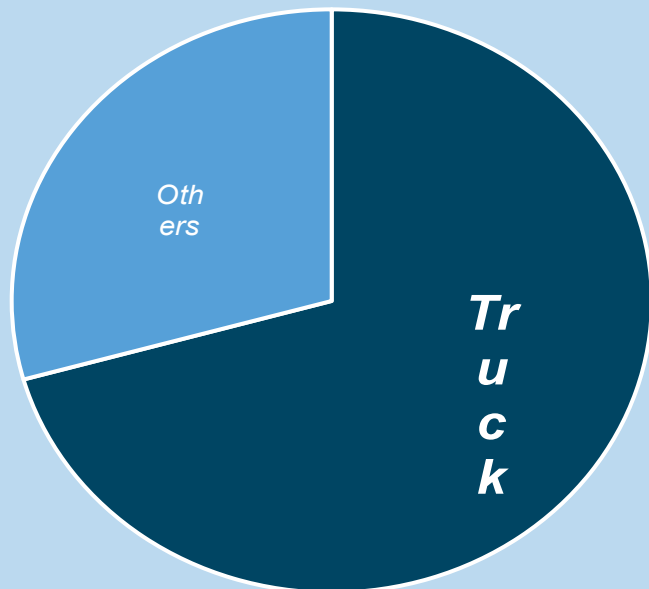
Consequences of the climate crisis: Increasing damage from natural disasters

Global insurance claims in billion US dollars



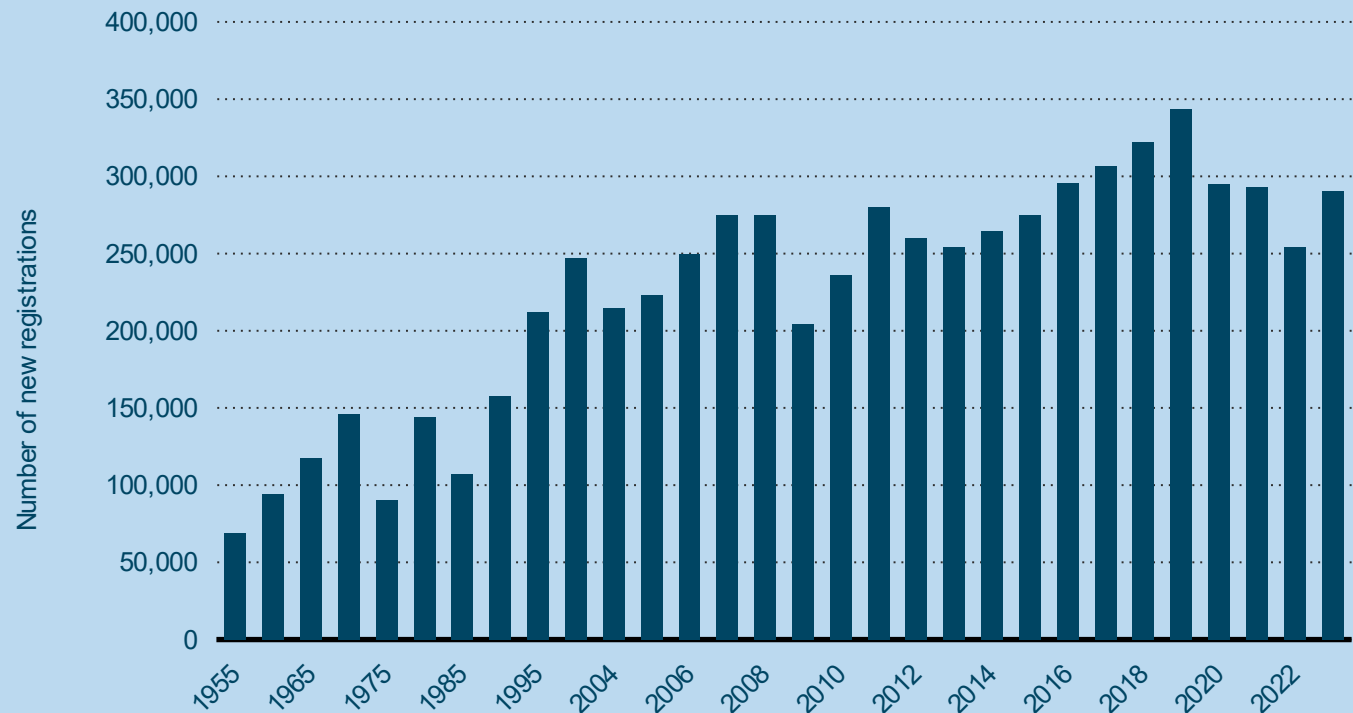
Trucks are responsible for over two-thirds of emissions in German freight transport.

CO2 emissions in freight transport



Source: [Umweltbundesamt](#), 2021

New truck registrations in Germany



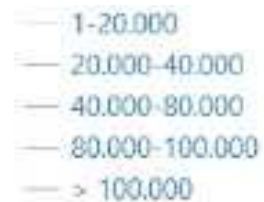
Source: [Kraftfahrt-Bundesamt](#), 2024

A subsidiary of

DEVK

Most heavy-duty trucks in Europe operate in Germany.

Number of heavy-duty trucks on European highways



Challenges in the use of climate-friendly vehicles:



High acquisition costs



High technological uncertainty



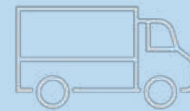
Expansion of the infrastructure

Rent hydrogen truck – pay only for the kilometres driven



1,07 € per km*

- ~~1,97 € per km**~~



Vehicle & Provision



Maintenance & Repair



Insurance

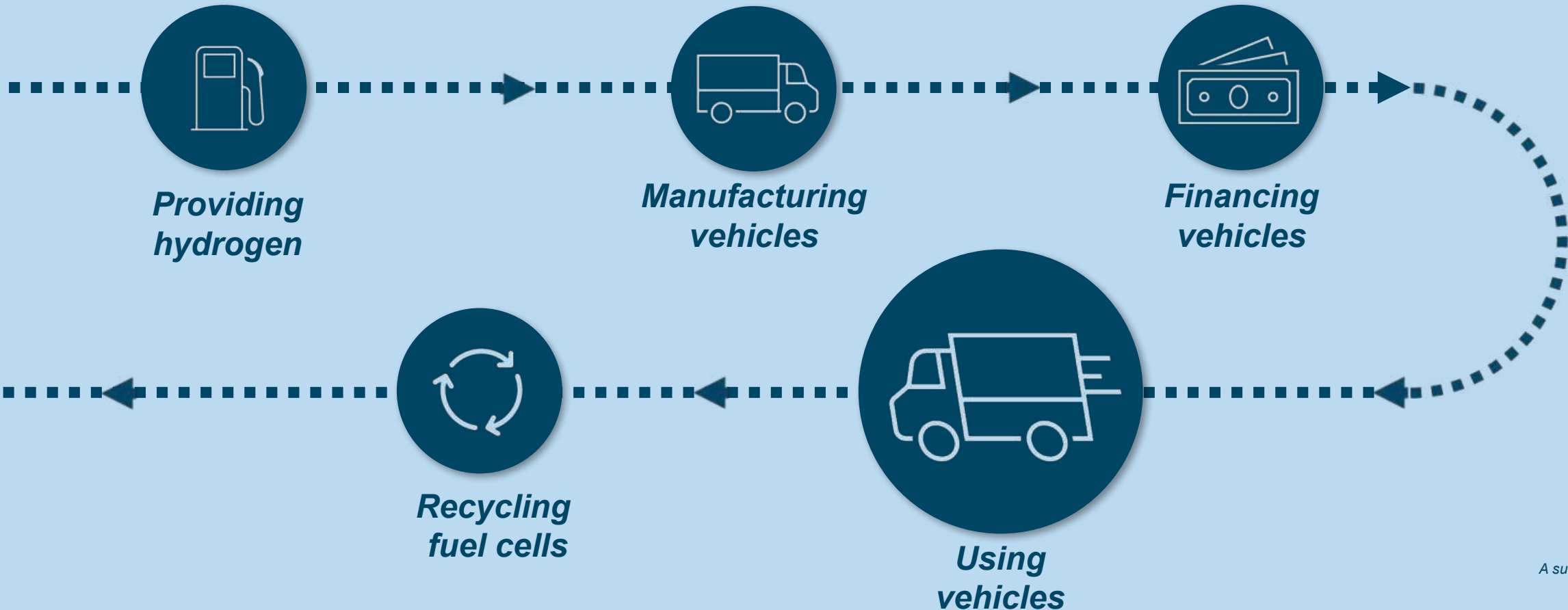


Access to hydrogen

*at 120,000 km p.a. and 48-month contract term.

**Reference rate for a lease without subsidy.

Strong partnerships: Covering the H2 supply chain together



With hydrogen truck – all across Germany: Our partner refueling stations



68 open 75 in realization



One and a half years of hydrogen trucks in Germany: It works.

 **> 1 Mio.**
Kilometres driven

 **> 68 t**
Hydrogen refuelled

	<i>Manufacturer information</i>	<i>Reality check (hylane)</i>	<i>Comparison of e-trucks</i>
Range	400 km	400-450 km	200-300 km (depending on temperature)
Duration of refuelling/recharging	15 min.	14,5 min.	2-8 hours
Payload	16,5 to 31,5 t	16,5 to 31,5 t	ca. 15 to 30 t

Market Leadership in Hydrogen Mobility

#1 H2-truck registered in Germany

#1 H2-truck operator in Europe

#1 H2-purchaser in German mobility sector

Reference customers and users (extract):





**Hyundai Xcient
6x2 box**



**Neumünster -
Hamburg**



**Shuttle transport
ca. 300 km/day**



**3-5 t payload
5,9 kg H2/100 km**



**4 Hyundai Xcient
6x2 box**



**Metropolregion
Nürnberg**



**Distribution
transport
ca. 250 km/day**



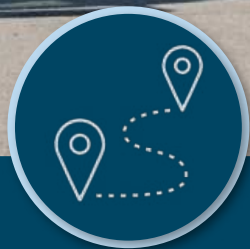
**300-360 t/month load
per truck
5-6 kg H₂/100 km**



**Hyundai Xcient 6x2
refrigerated truck
with trailer**



**Hamburg and
Schleswig-Holstein**



**Distribution transport
up to 750 km/day in
three shift operation**



**20 t payload
8,5 kg H2/100 km**

Growth: Achievements and Future Plans

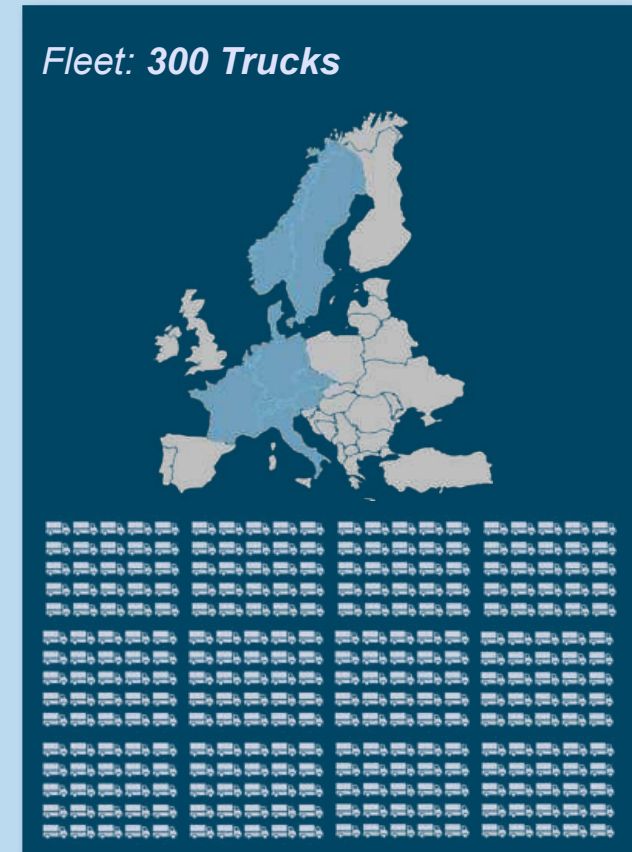
Phase 1: as of Q4 2022



Phase 2: as of Q4 2023



Phase 3: as of 2024



Thanks!



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