vbw Roundtable

Decarbonizing transport logistics is more than a BEV Truck!

eTruck share 2030*
~40%
~350k in total**

PRODUCT

RENEWABLE ENERGY

~36 TWh/a**
=
~3k wind turbines***

~50,000 MCS and CCS****
(DE: 10,000**)

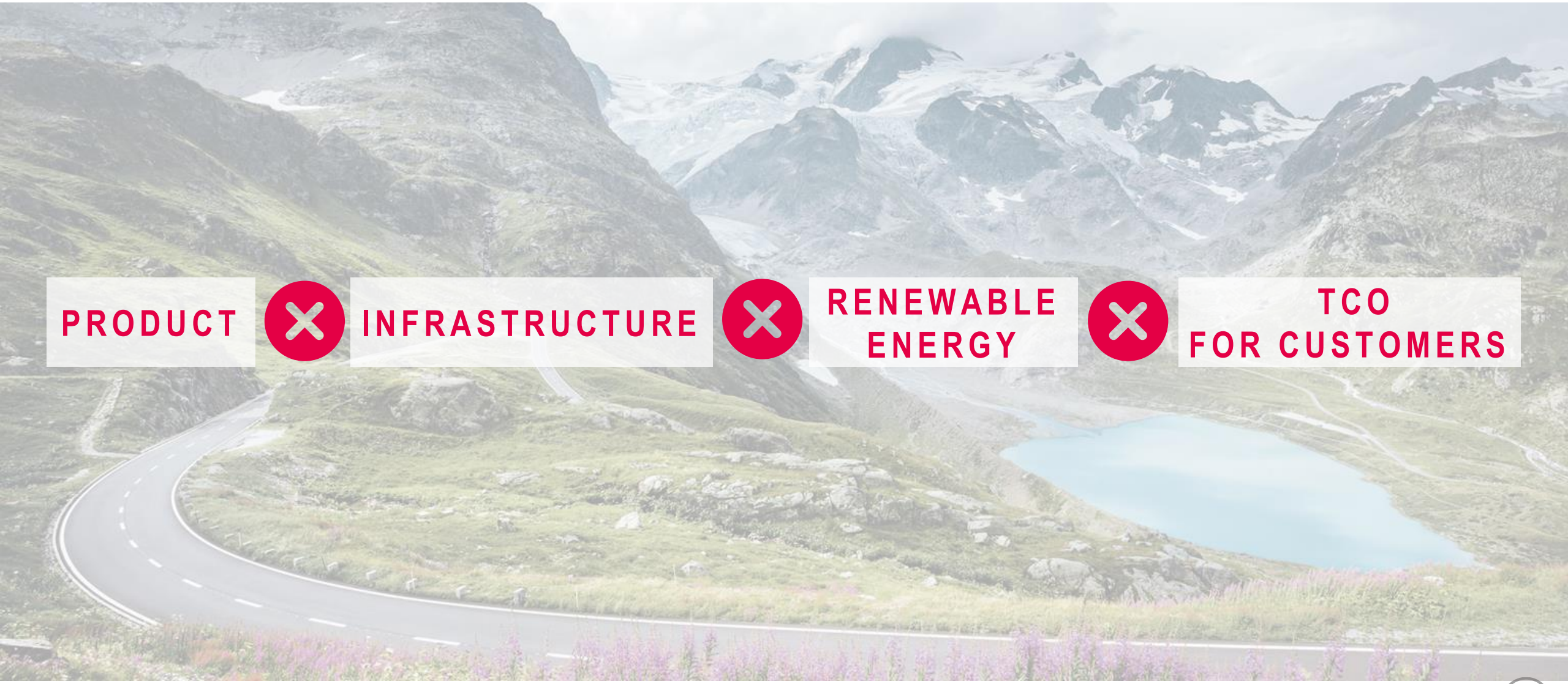
INFRASTRUCTURE

TCO FOR CUSTOMERS

We need a high CO_2 price to reach TCO parity for our customers[1]

* Derived from CO2 fleet targets of the EU (minus 5% expected energy savings of Diesel trucks by 2030) | **TRATON and MAN internal data | *** Assumption per wind turbine: 4.6 MW, 2,608 full load hours per year (data by WindEurope)
**** ACEA (2023), Fact Sheet CO2 Standards For Heavy Duty Vehicles | [1] TCO = Total Cost of Ownership

Success in decarbonization is a **multiplication** of the four factors!



The ramp-up of public charging infrastructure is facing several challenges

General challenges in Europe

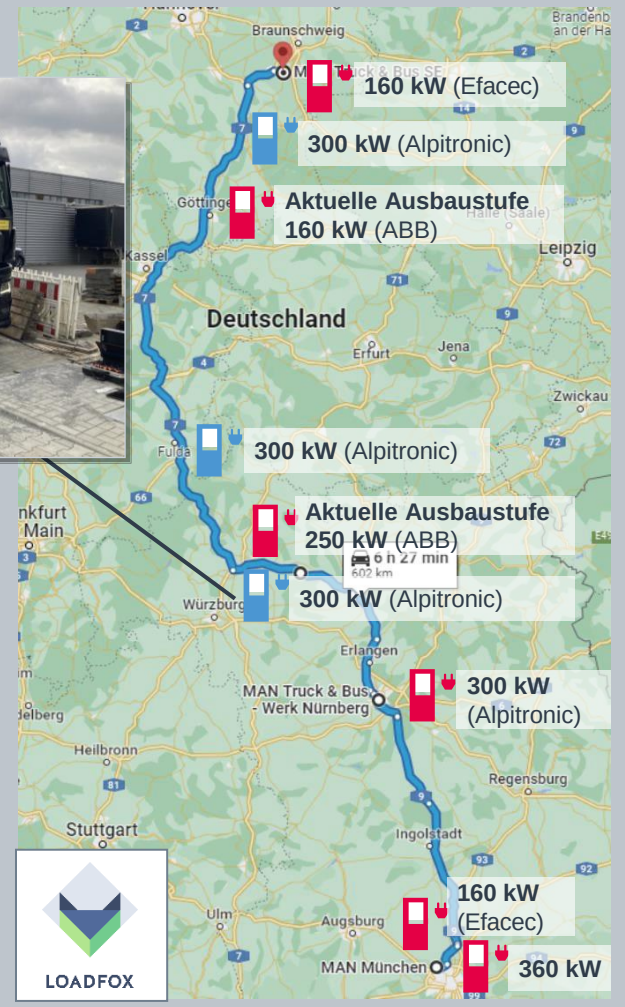
- **Availability of grid capacity** for MW charging not always given

  → time consuming application and provision

- **On-site responsibilities**, especially at interface between grid suppliers, hardware suppliers and infrastructure consulting companies often not specified
- Different maturity level of **responsibility split between federal- and state functions**
- Limited **availability of space** (brown and green field), especially at potential charging hot-spots

Current experiences (DE)

- Testing of charging infrastructure as part of our logistics
- Facing today several challenges
  - Decoupling trailer
  - Grid capacity



The overall ramp-up speed of public available charge points for commercial vehicles is too slow

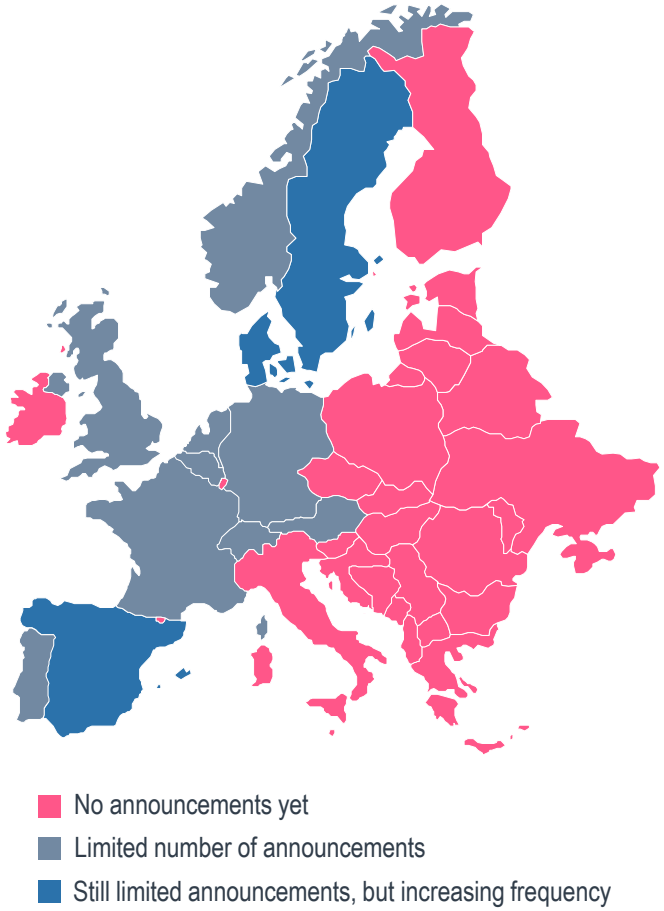
Available and announced public charge points[3]

Already available[1]	Latest public announcements until 2030[1]	Need until 2030[2]	
0	230	≈8.000	
2	34	≈1.000	
32	87	≈3.400	
35	160	≈2.900	
5	12	≈5.700	
3	175	≈900	
19	90	≈1.200	
	300		
27	100	≈10.000	
4	6	≈1.400	
	1700		
127	**2894**		

3021

In total ≈50.000 charge points vs. 3021

Announcement speed



Key takeaways

- Currently available charging infrastructure is **very limited**
- Sum of announced infrastructure ramp-up until 2030 is far **behind overall need** of 50.000 charge points
- Speed of announcements is increasing in some countries – nevertheless, overall **speed is still too slow**

50.000 charge points until 2030 means opening of ca. 30 charge points per day – beginning now!

1) MAN internal
2) ACEA 2021 (MAN internal adapted)
3) CCS + MCS