

Context and vision for vehicle development

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Challenges

**Driver environment and
safety**

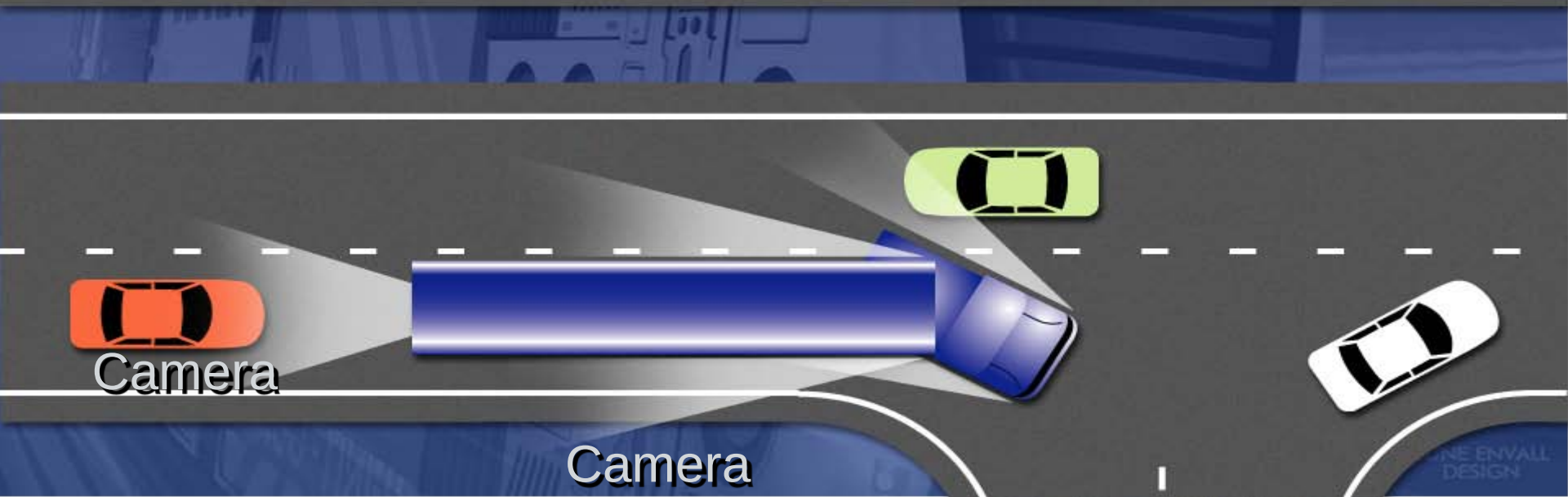


**Transport efficiency and
sustainability**



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Safety



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Driver environment



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Challenges

**Driver environment and
safety**



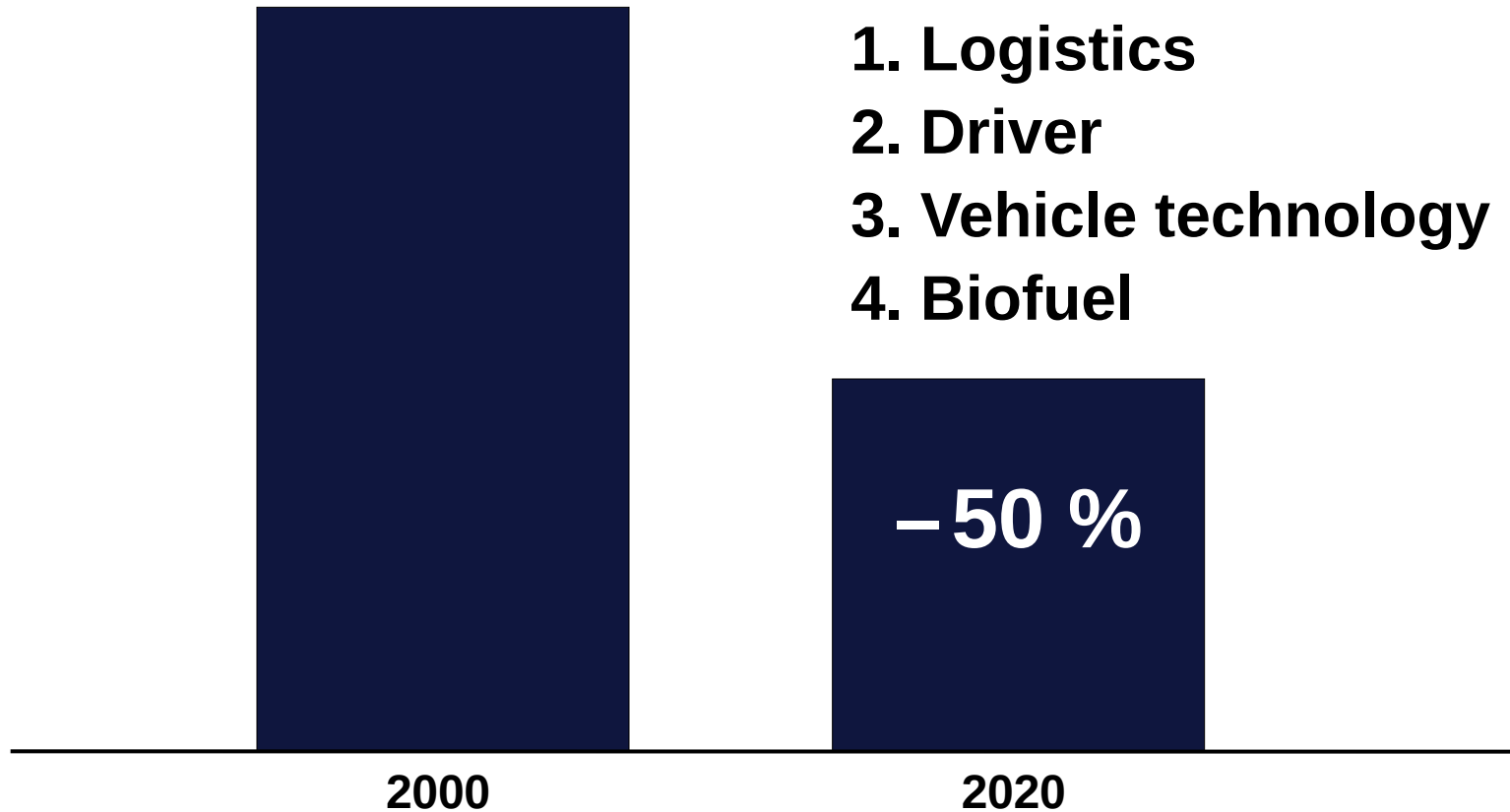
**Transport efficiency and
sustainability**



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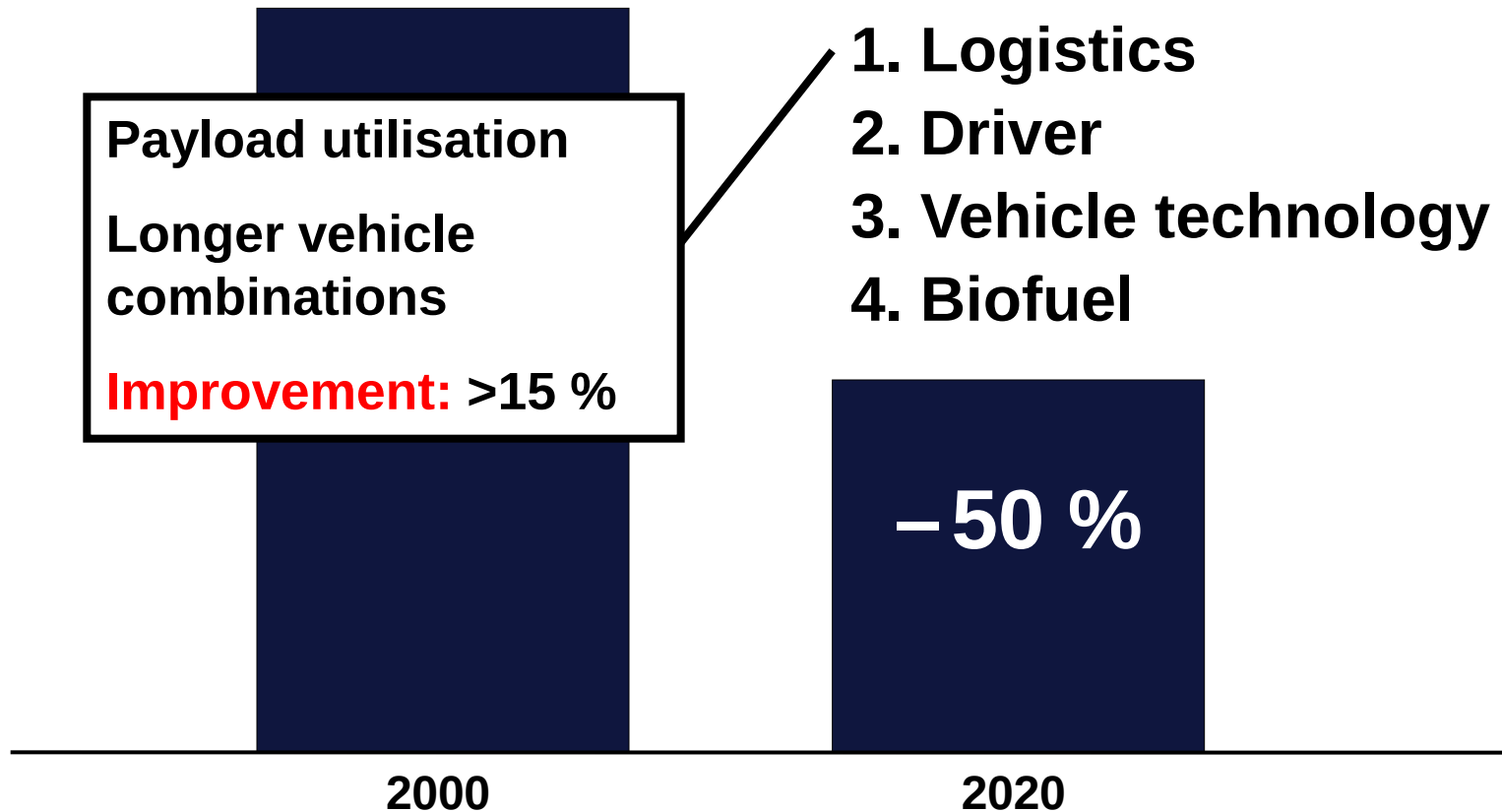
Scania's vision

CO₂ per tonne-km of goods



Scania's vision

CO₂ per tonne-km of goods



**50 % more cargo
with European modular concept**



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Cost of EMC

- The European Modular Concept of directive 96/53/EC was specifically formulated so that existing motor vehicles and (semi-) trailers could be used.
- Added investments are couplings and e.g. dollies

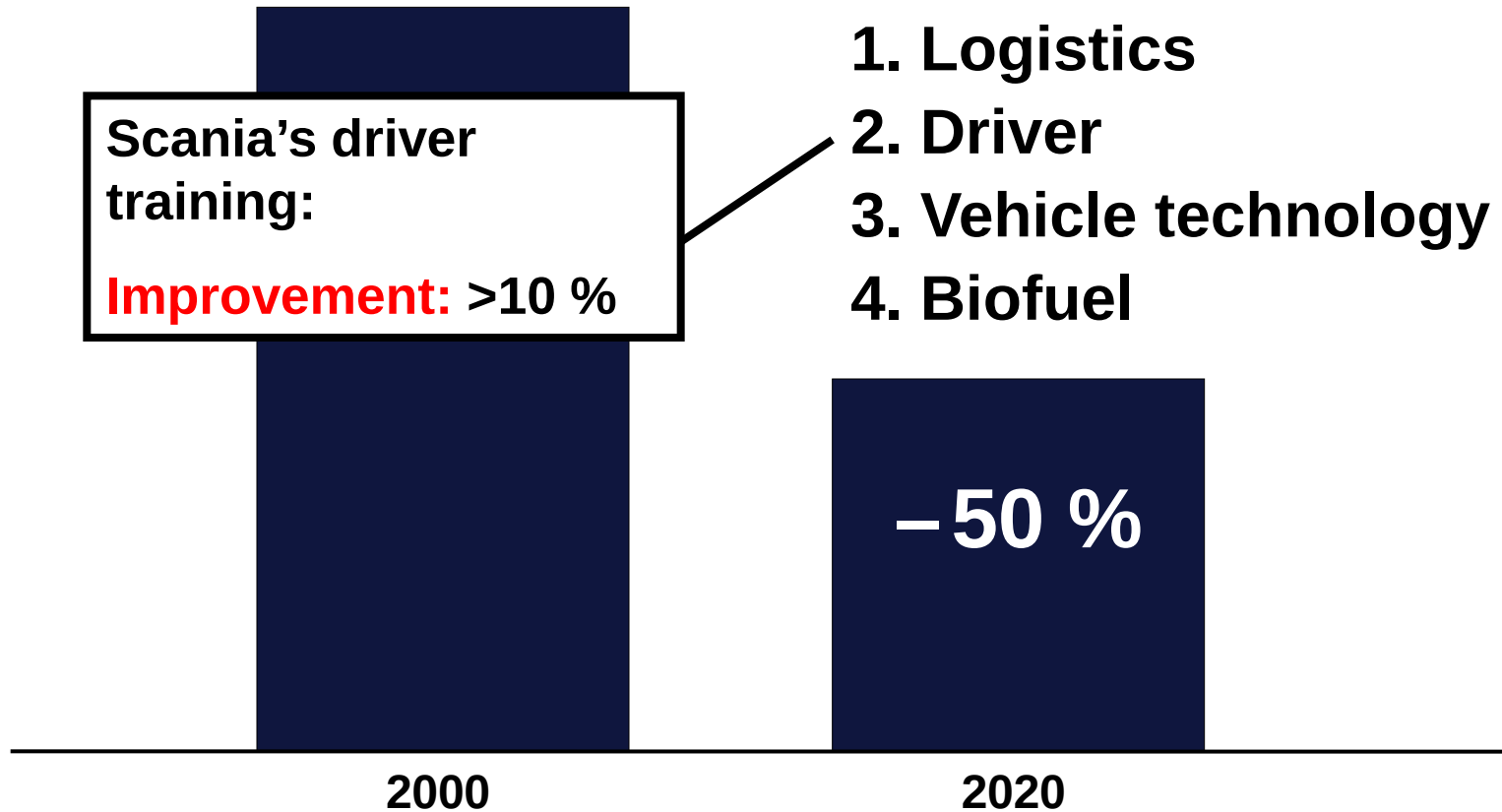
Innovative swap-body system



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Scania's vision

CO₂ per tonne-km of goods



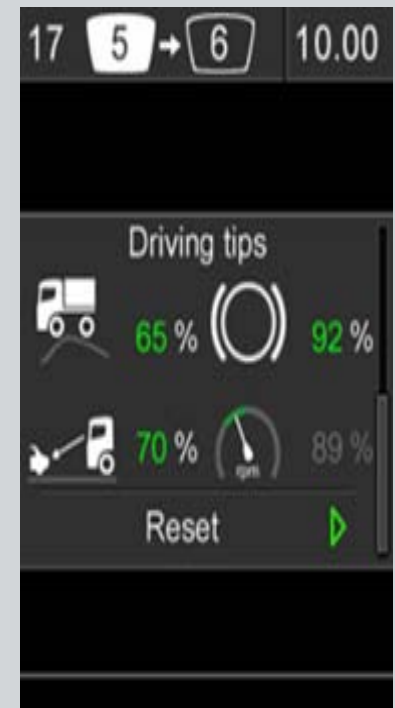
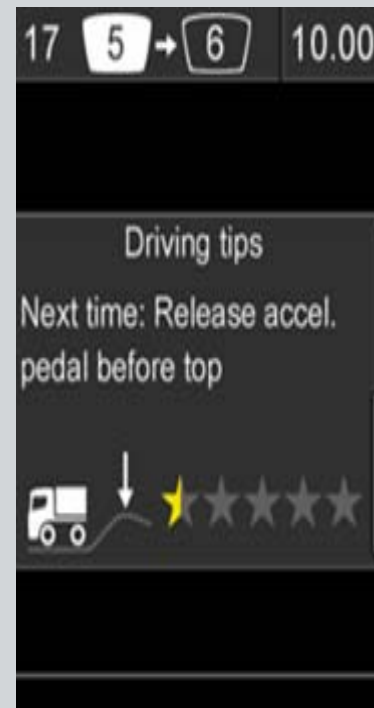
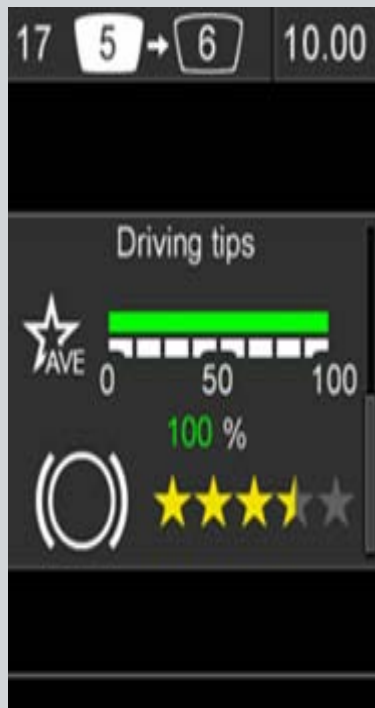
Scania Driver Support



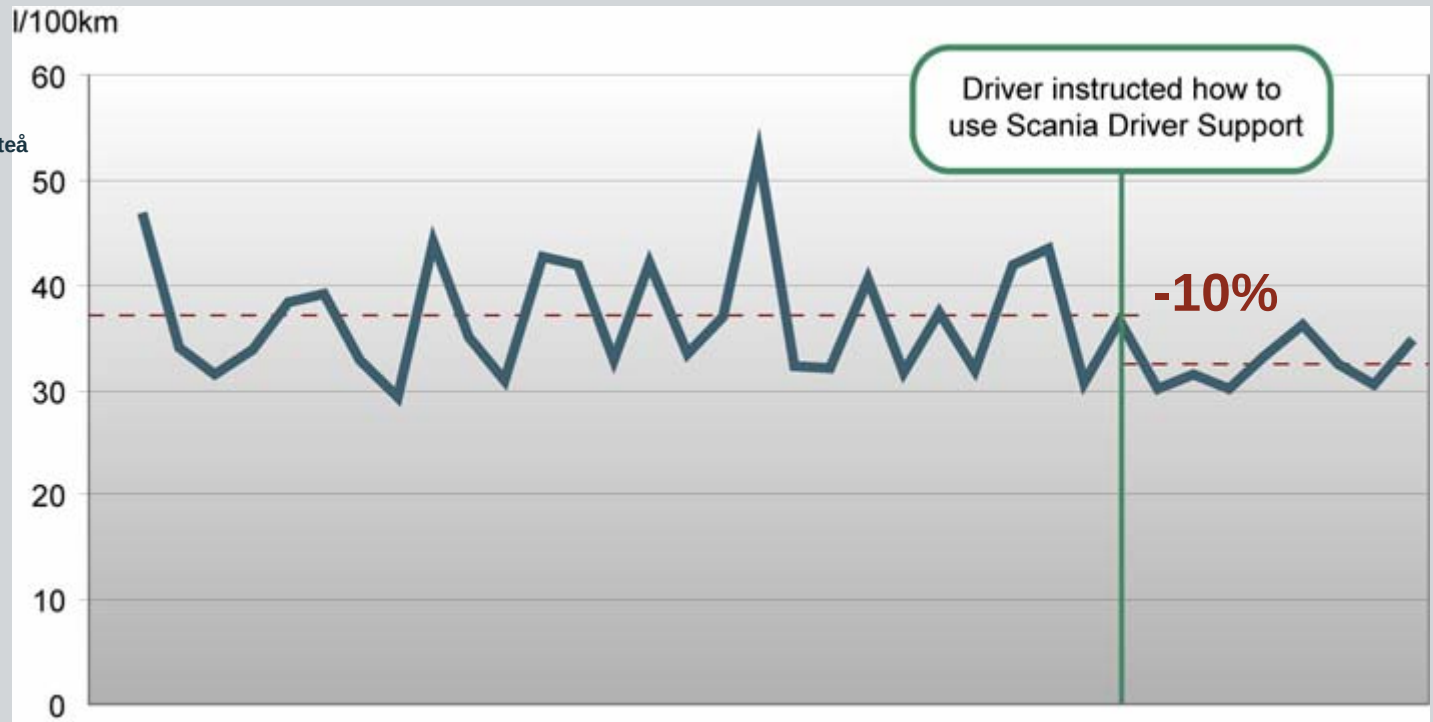
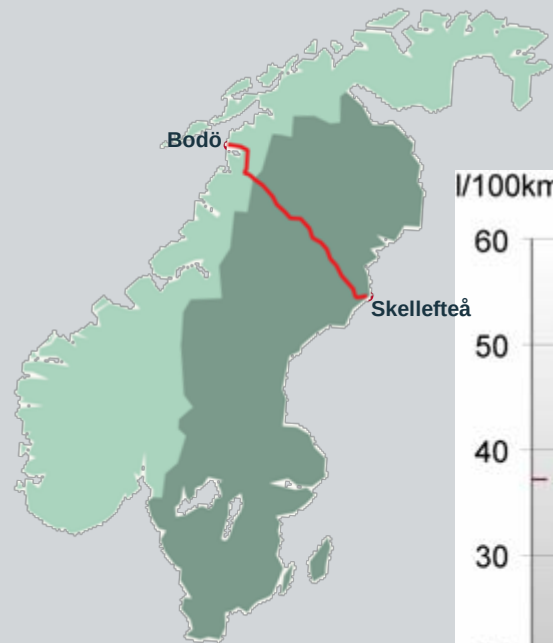
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On the job training

Real-time driving modes and summary mode



Field test results



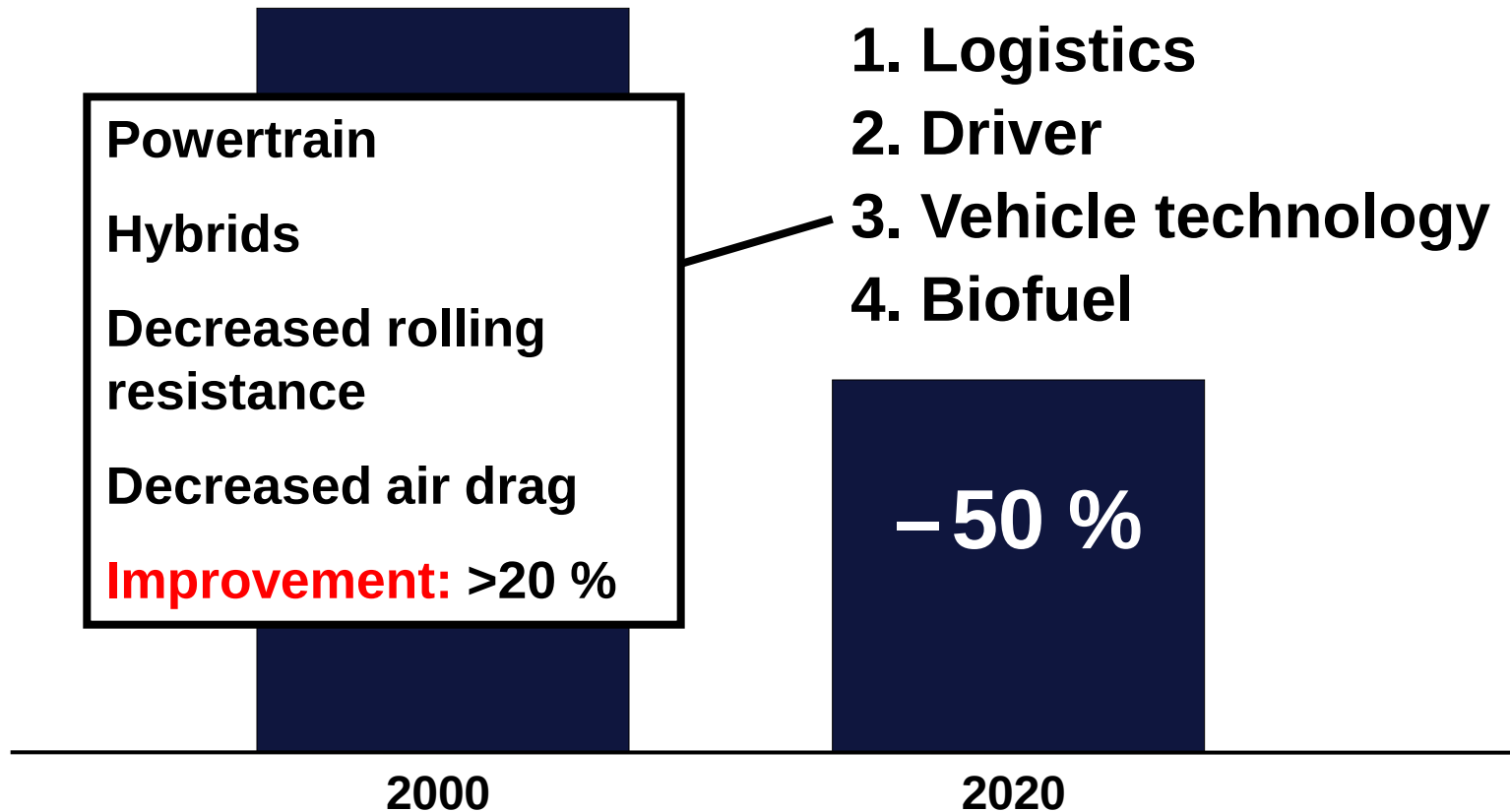
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Cost of driver support system

- **The Scania Driver Support is free-of-charge**

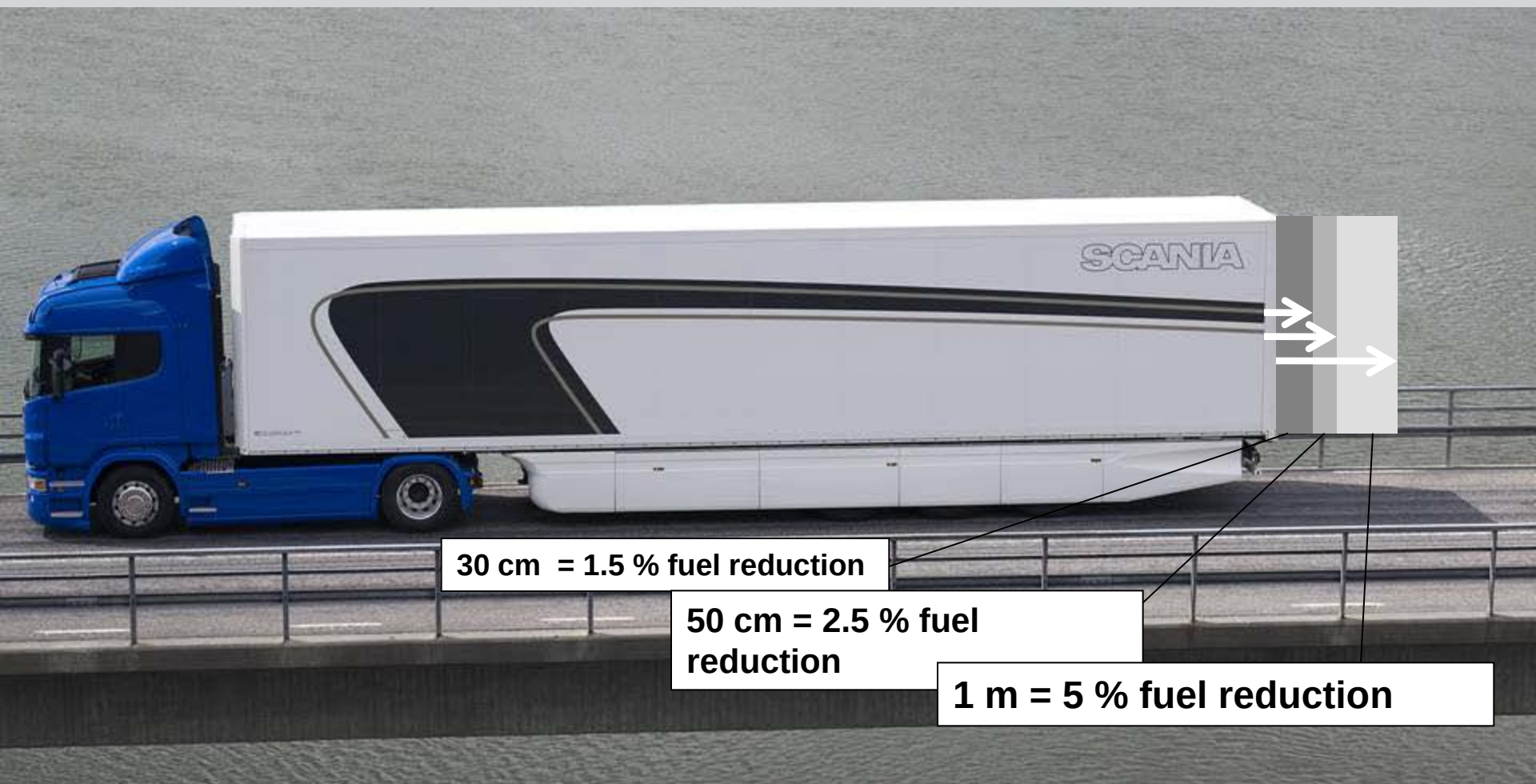
Scania's vision

CO₂ per tonne-km of goods



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Aerodynamic extension



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Cost of "boat-tails"

- **The estimated cost of 30 cm boat-tail for retrofitting on existing fixed bodies and trailers is 1,000 to 2,000 euros**

Engine power minimum requirement

- **EU: Motor vehicles must provide an engine power output of at least 5 kW/tonne of the technical permissible laden weight of the combination.**
- **40 tonne combination: 200 kW or 275 hp**
- **60 tonne combination: 300 kW or 410 hp**

Engine power rule of thumb

- **At marching speeds on fairly flat and paved roads the driveability is good when engine horsepower is 8 to 10 times the gross combination weight.**
 - **40 tonne combination: 320 - 400 hp**
 - **60 tonne combination: 480 - 600 hp**

Engine power and fuel consumption

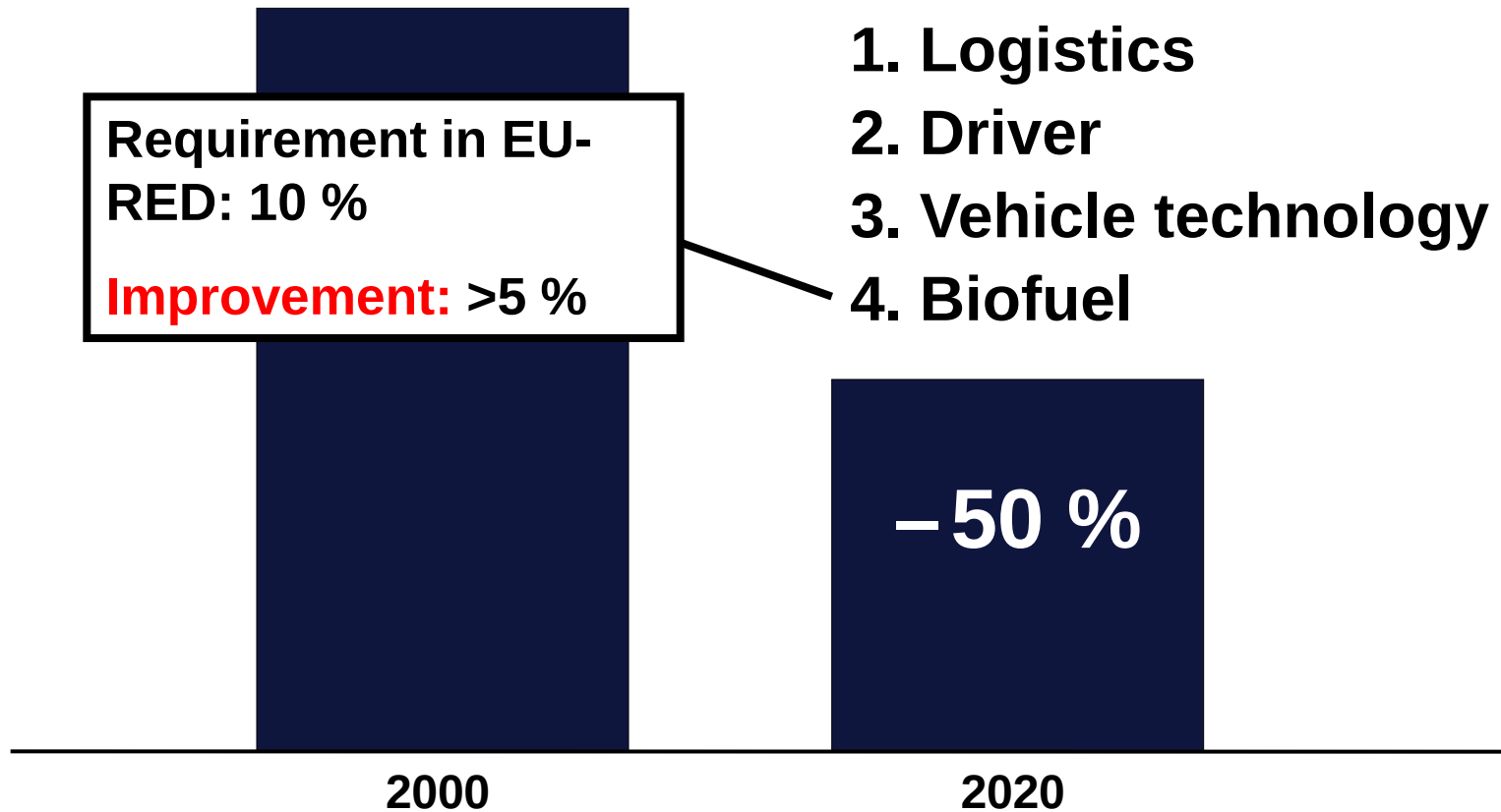
- The rated power of a HDV engine is not an adequate measure of fuel consumption
- The rated power of a HD vehicle primarily describes the maximum speed in hill climbing
- The rated power to total weight ratio of cars is TEN times higher than for HD vehicles
- If you question, say 500 hp, power rated HD vehicles you should ask yourself why you have a car with more than 50 hp

Work done principle

- The most adequate fuel consumption measure for Heavy Duty Vehicles is based on the "work done principle"
- Amount of fuel per tonne-km of goods
- Amount of fuel per m³-km of goods
- Amount of fuel per passenger-km

Scania's vision

CO₂ per tonne-km of goods



Biofuels

- **At 5 % we are very conservative, just calculating on a 10 % level 2020 and an average sustainability index of 50 %**
- **Scania will consider any percentage of biofuel mixing under the condition that it is well specified and standardised with certification**

Summary

- **Substantial reductions of fuel consumption and CO₂ generation are feasible in a relatively short time**
- **All stakeholders must cooperate**
- **All transport modes of the European transport system must become more efficient, they must cooperate rather than work against each other**
- **Focus on what can be done in the near future rather than speculate on what can be achieved by the year 2050**



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