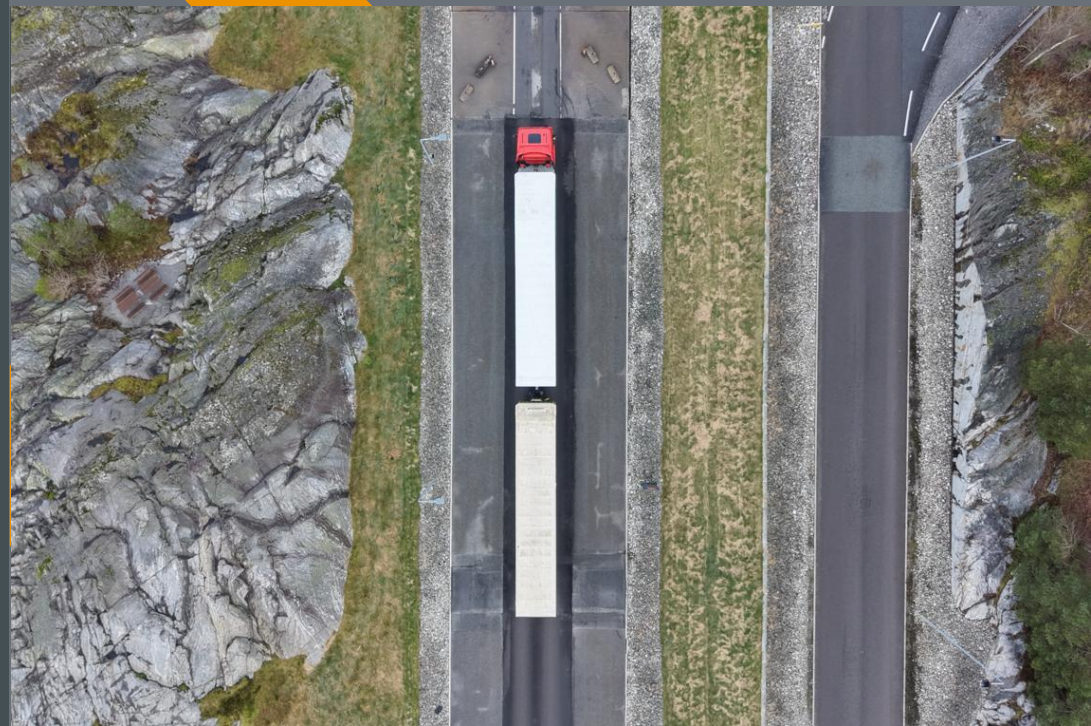
Statens vegvesen

EMS2 in Norway

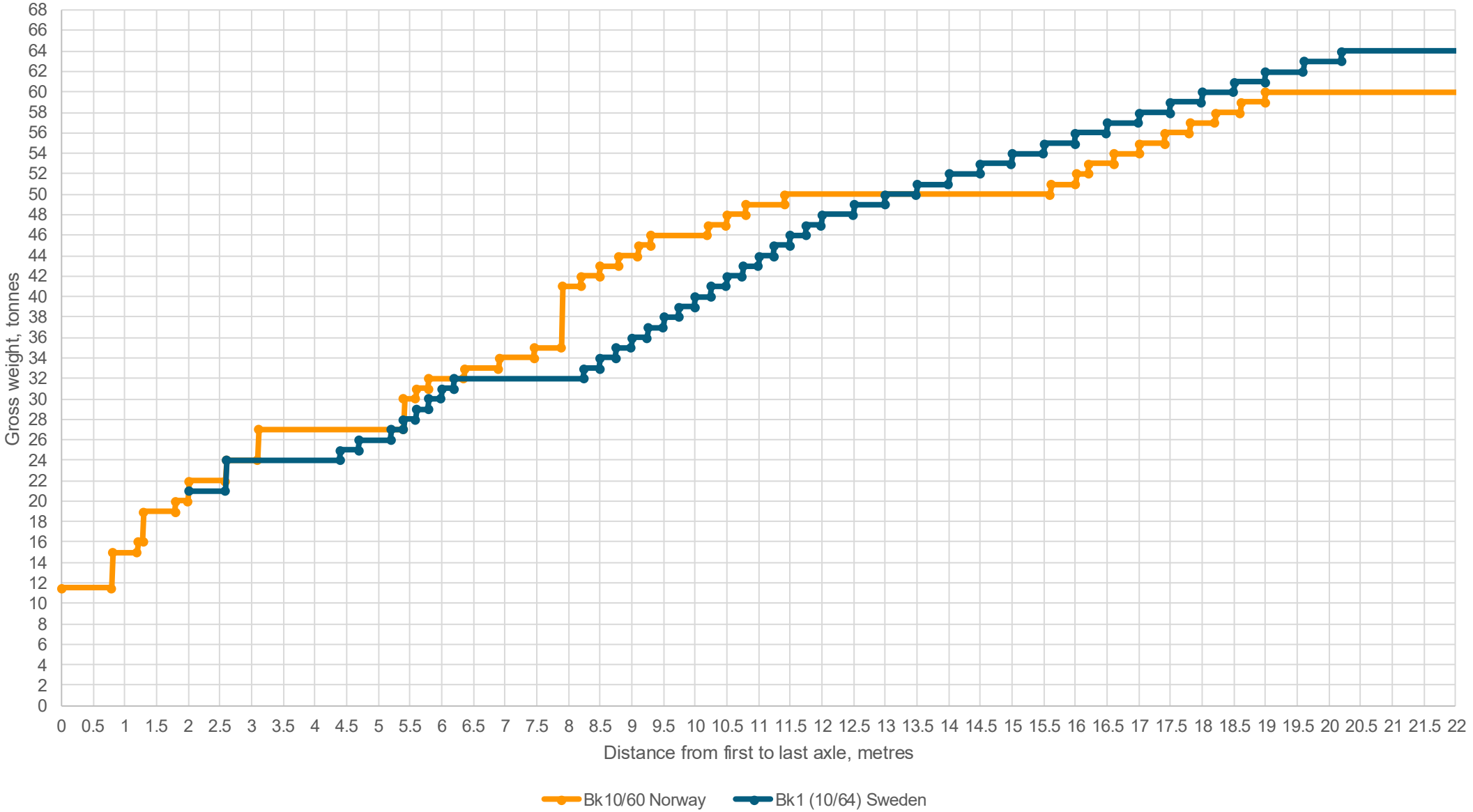
Feasibility study pilot project

E6 Svinesund–Gardermoen business park
E18 Larvik–Gardermoen business park

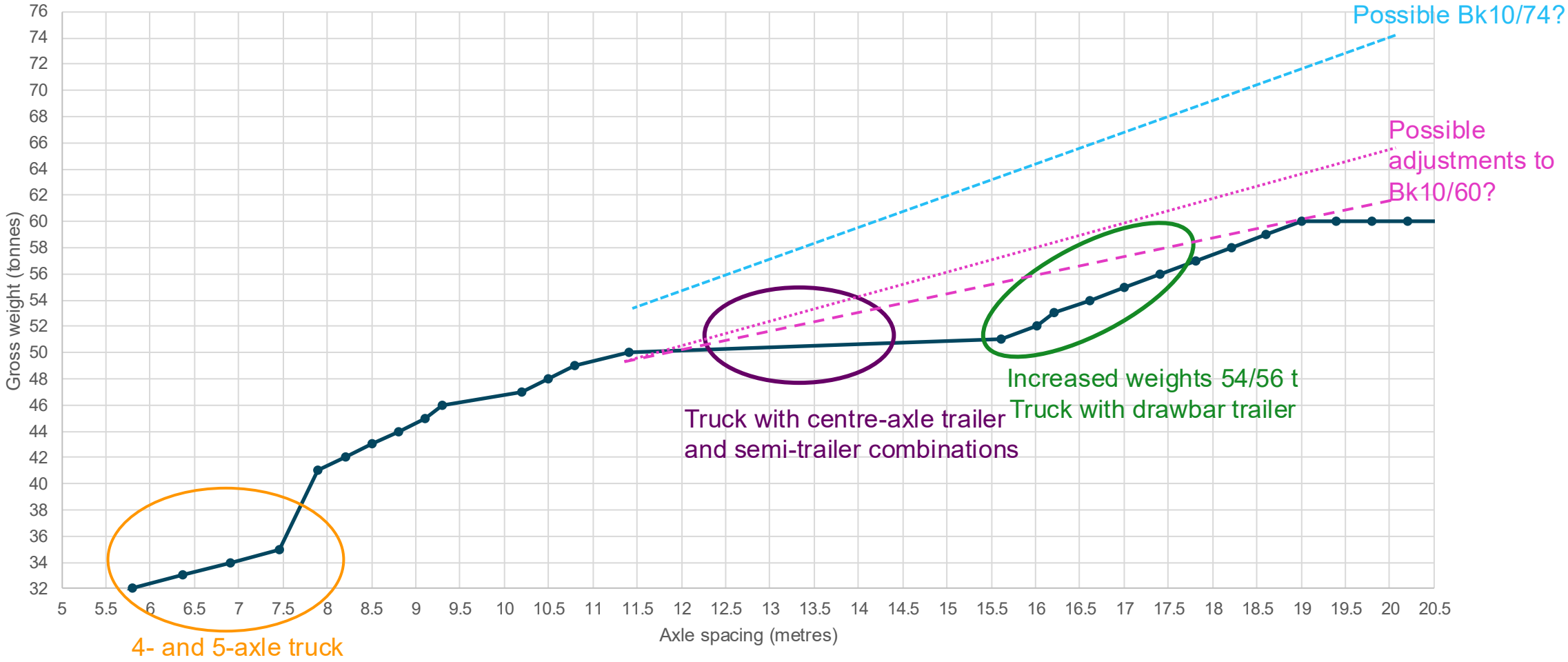
2025/2026



Norwegian Bk10/60 and Swedish BK1 (10/64)



Needs and opportunities in the new regulations



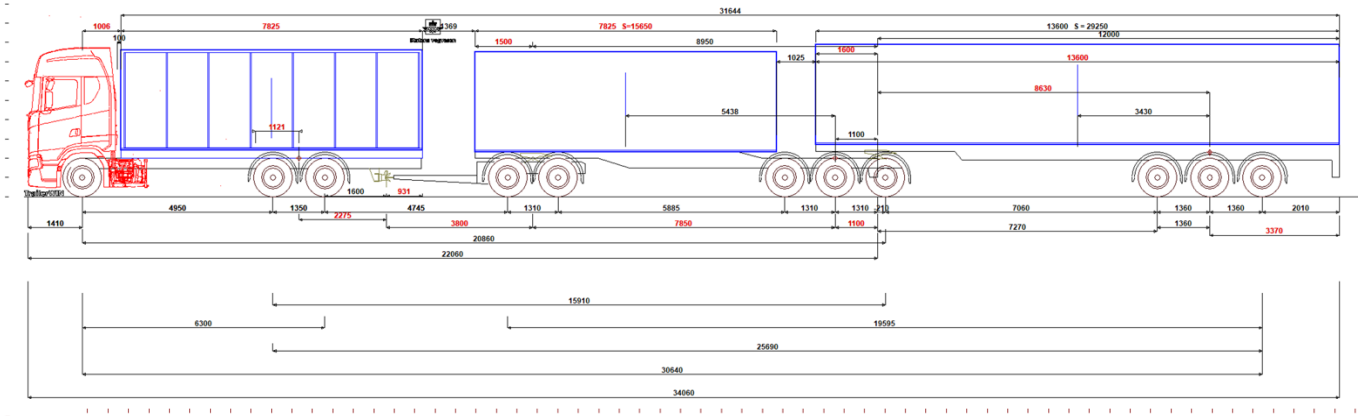
1 Simplification
Regulations that are easy to read and understand

2 Better utilisation
More from today's infrastructure and vehicles

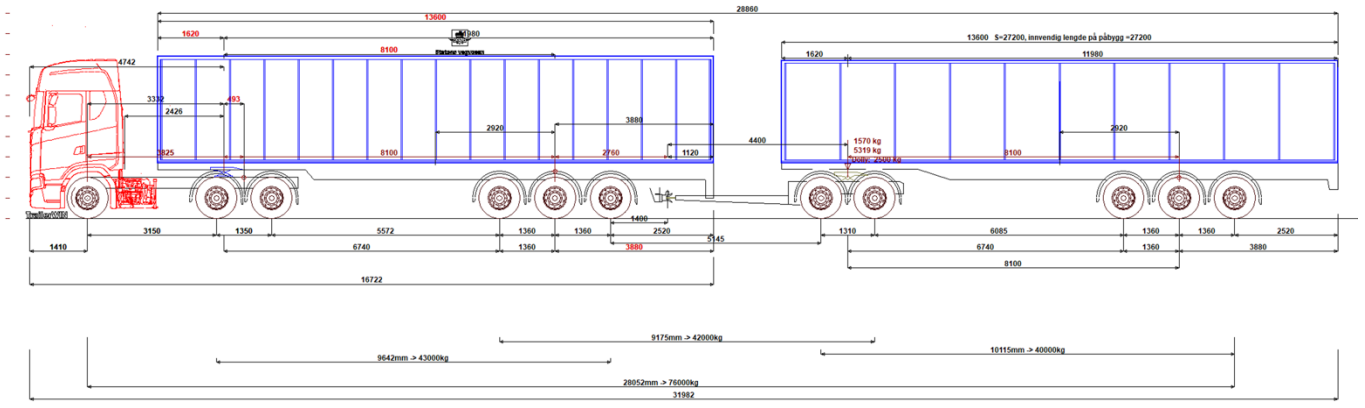
3 Preparedness
Harmonisation with our neighbouring countries

Vehicles – design cases for vehicle tracking analysis

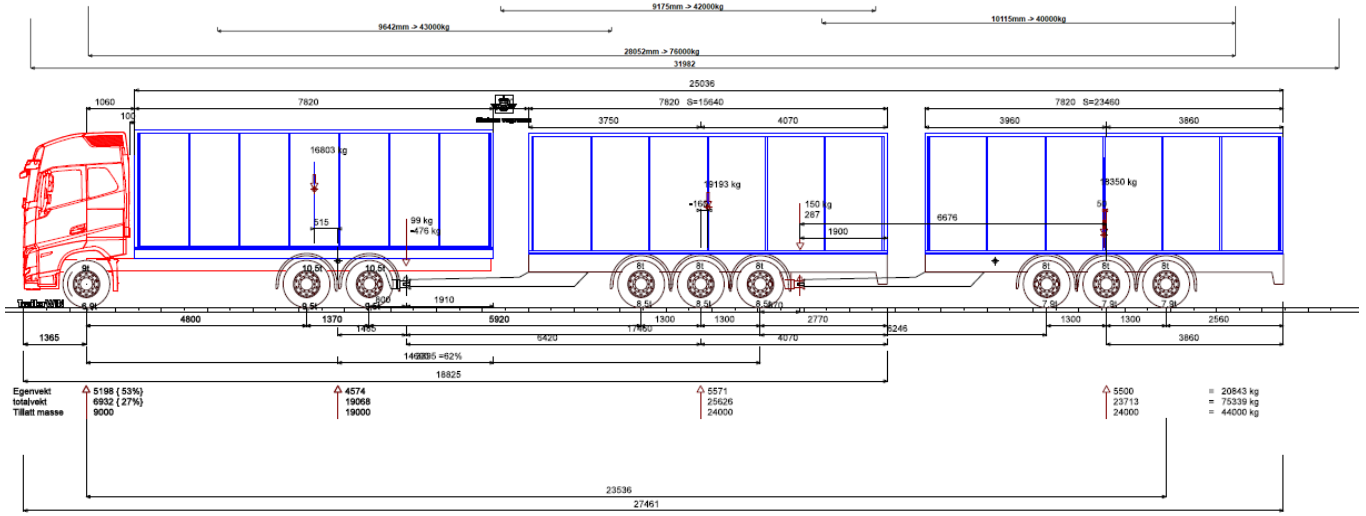
AB-double



A-double



C-double

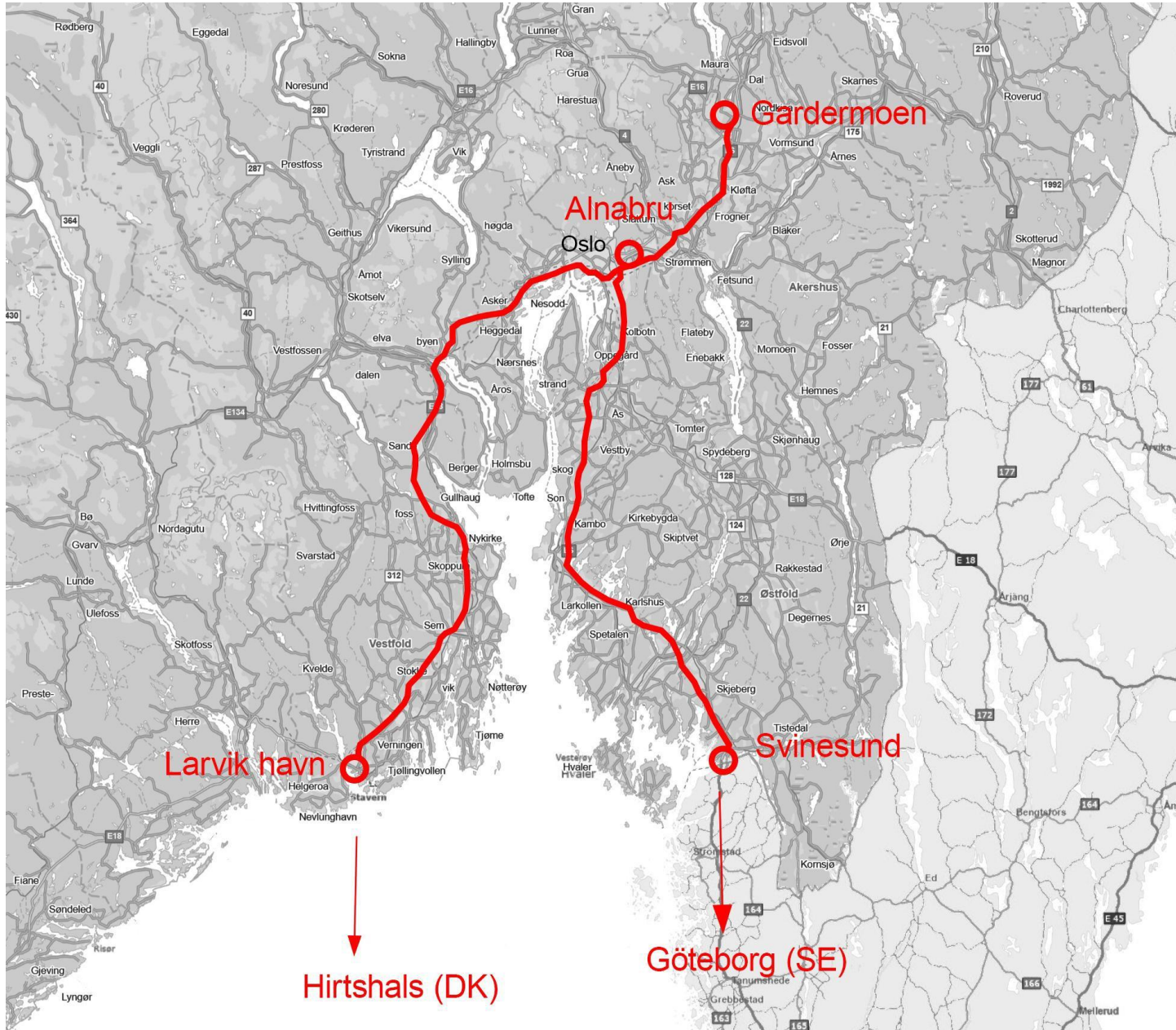


The project

Assess the feasibility of a pilot project with EMS2 on two routes.

E18 Larvik Port – Alnabru terminal (Oslo)

E6 Svinesund – Alnabru terminal (Oslo) – Gardermoen



Test performed with A-double, November 2025

1 **Simulation**
4 test scenarios traced with AutoTURN: roundabout, two types of service openings and 360° turns (15 and 12.5 m radius)

2 **Physical test**
Physical tests with the A-double at locations in central Oslo we suspected would be challenging

3 **Execution**
Driven at night with an escort vehicle and police, including through the Alnabru roundabout

Photo: Norwegian Public Roads Administration

AutoTURN vs. actual driving in a roundabout

- **Red**: road boundary
- **Green**: overhang (body swing-out)
- **Blue**: 30 cm margin for mirrors
- Speed of the vehicle combination: 15 km/h
- Key factors
  - How the driver enters the turn
  - Speed
  - Axle configuration

Photo: Norwegian Public Roads Administration

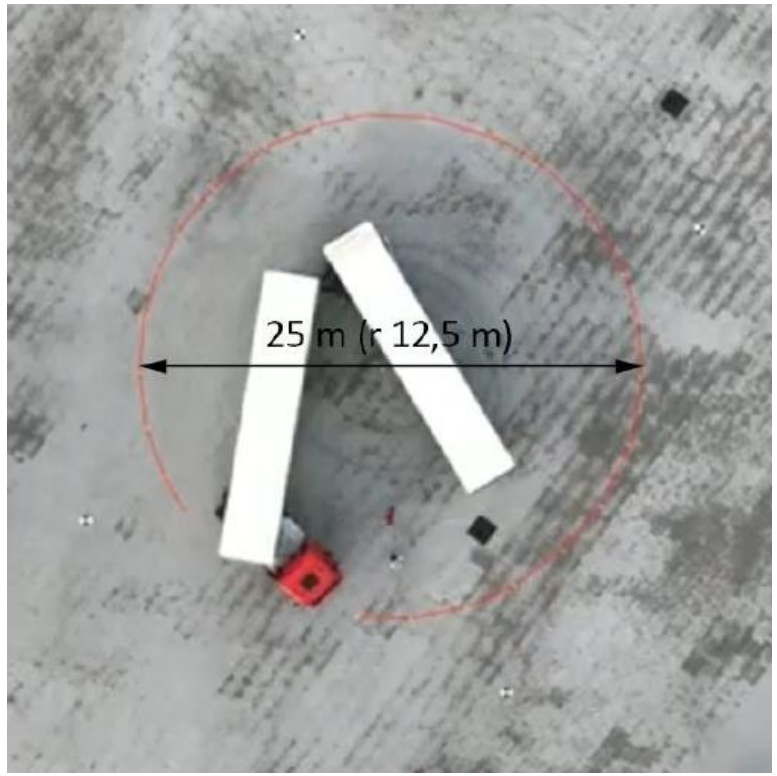
360-degree turn with 12.5 and 15 metre radius

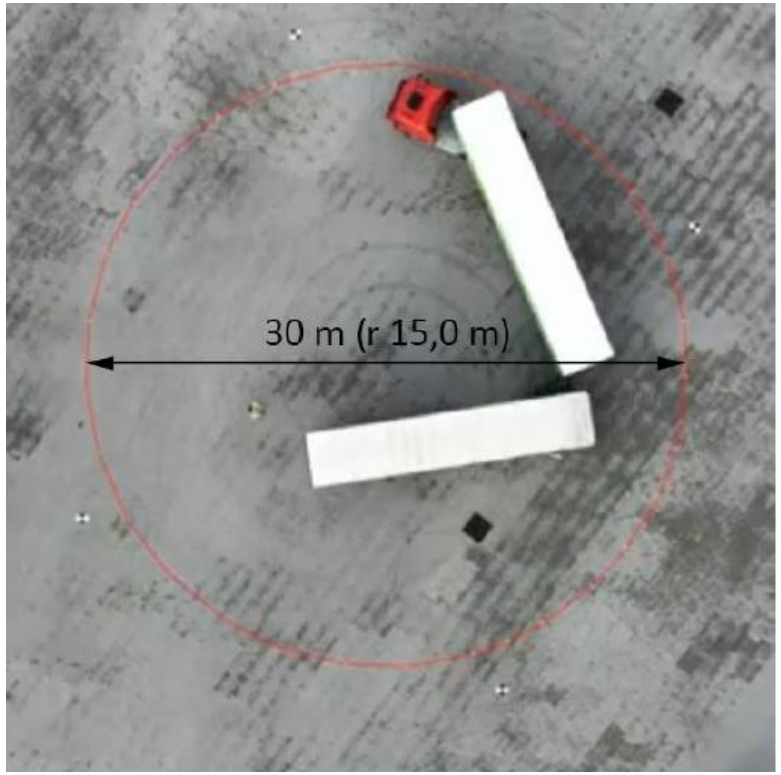
12.5 metre radius

15 metre radius

Photo: Norwegian Public Roads Administration

Drone footage from the 360-degree turning test





Modular vehicle combination (requirement): 180° turn within a 12.5 m outer radius and 2 m inner radius

A-double (measured): turn within a 15.5 m outer radius and 2 m inner radius

Photo: Norwegian Public Roads Administration

Road network – upgrade costs

1

Approx. 60 measures

The upgrade needs are assessed as one combined project

2

~NOK 350 million (~EUR 32 million)

Expected total cost incl. VAT and uncertainty

3

Additional costs

Stopping bays ~NOK 0.6 million (~EUR 55,000) each and service openings ~NOK 2 million (~EUR 185,000) each

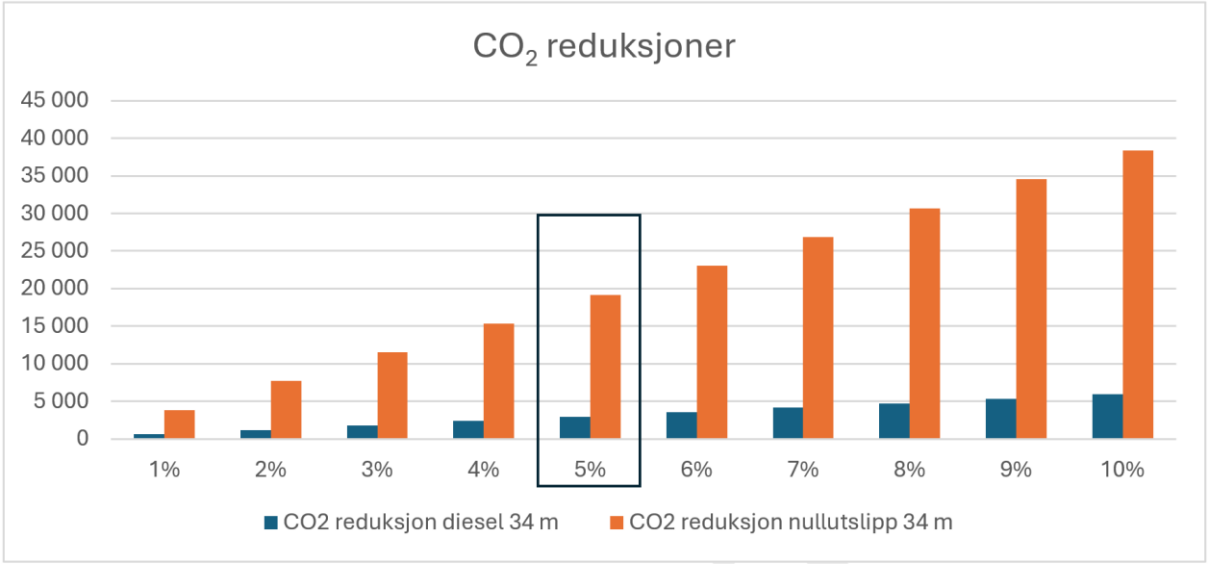
Overview of upgrade locations

Climate and economy

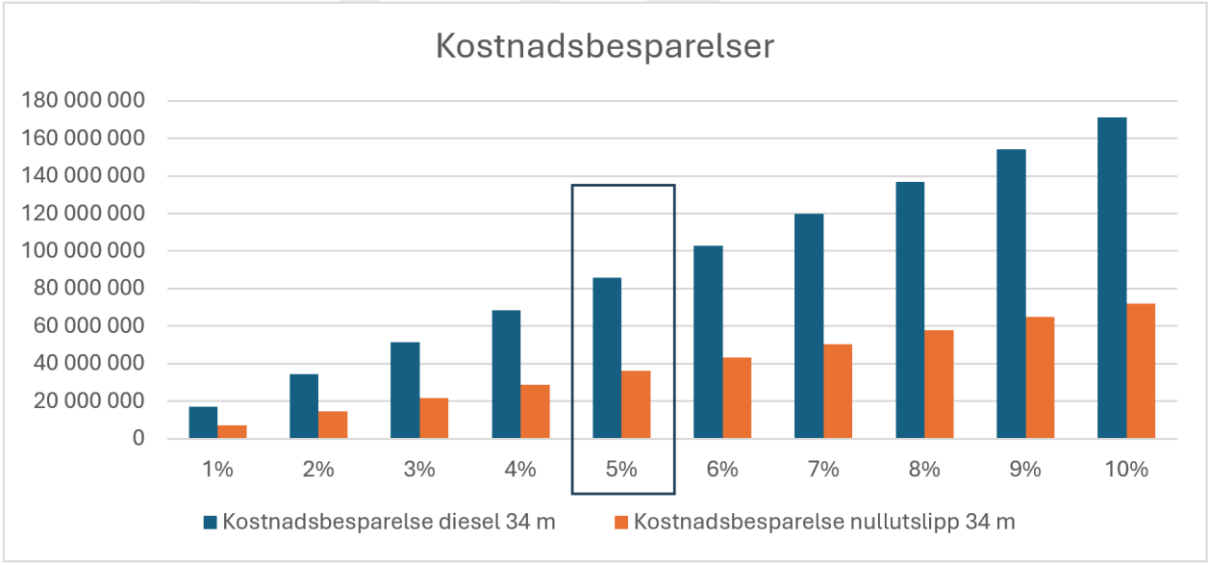
1 More freight per trip
Longer vehicle combinations mean lower emissions per tonne of freight transported

2 Greatest climate effect with zero emissions
Direct emission cuts, plus faster electrification and roll-out of charging infrastructure

3 Worked example
Approx. 4,000 trips across Svinesund, of which about 5% could be suitable for 34 m combinations
CO_2 reduction (zero-emission): ~19,000 t/year
Cost savings (diesel): NOK 85m (approx. EUR 7.8m)



Annual CO2 emissions using a low estimate for CO2 intensity per litre of diesel (2.29 kg/litre), depending on the share of transport that can use 34-metre vehicle combinations (1 to 10%).



Cost estimate per year for diesel and zero-emission 34-metre combinations, depending on the share of transport that can use 34 metres.

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