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Road network for vehicle trains up to 34.5 meters

The Nordic HCT conference 2026

Kenneth Natanaelsson, Swedish Transport Administration

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Background

- Government assignment "In-depth investigation of issues relating to transport with long trucks"
  - Final report Feb 2024
- Road network available since 1 Dec 2023
  - Approximately 450 km of state highway network
  - Approximately 1,400 kilometers of state access roads
  - Municipal access roads in approximately 130 municipalities
  - Coherent road network connecting approximately 550 relevant destination points (the majority of which consist of business areas)
- E-service introduced for requests for new or additional connection routes
  - Resulted in the state road network being expanded to a total of approximately 6750 km (i.e. an additional 850 km of state connection roads)

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Basis for our work to extend the network

- In-depth investigations into road safety and road design
  - Performed by VTI (on behalf of the Swedish Transport Administration)
  - Focus on non-separated roads
- Qualitative interview study
  - Carried out by Origo group in two parts;
    - Benefits and challenges for business
    - Perceived experiences from drivers
- Traffic measurements
  - 12 measurement points (BWIM) in the years 24-25-26
  - Reports flow per vehicle configuration
- Dialogues
  - Posts in various forums

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What have we done

- Define “functional requirements” for road networks for vehicle trains up to 34.5 meters
  - Based on in-depth investigations by VTI
  - Refers to a number of criteria that need to be met in order for a road to be licensed (e.g. road width, overtaking opportunities, visibility distances, road geometry, etc.)

- Based on “functional requirements”
  - Overall analysis of interconnected parts of FPV property that can be leased

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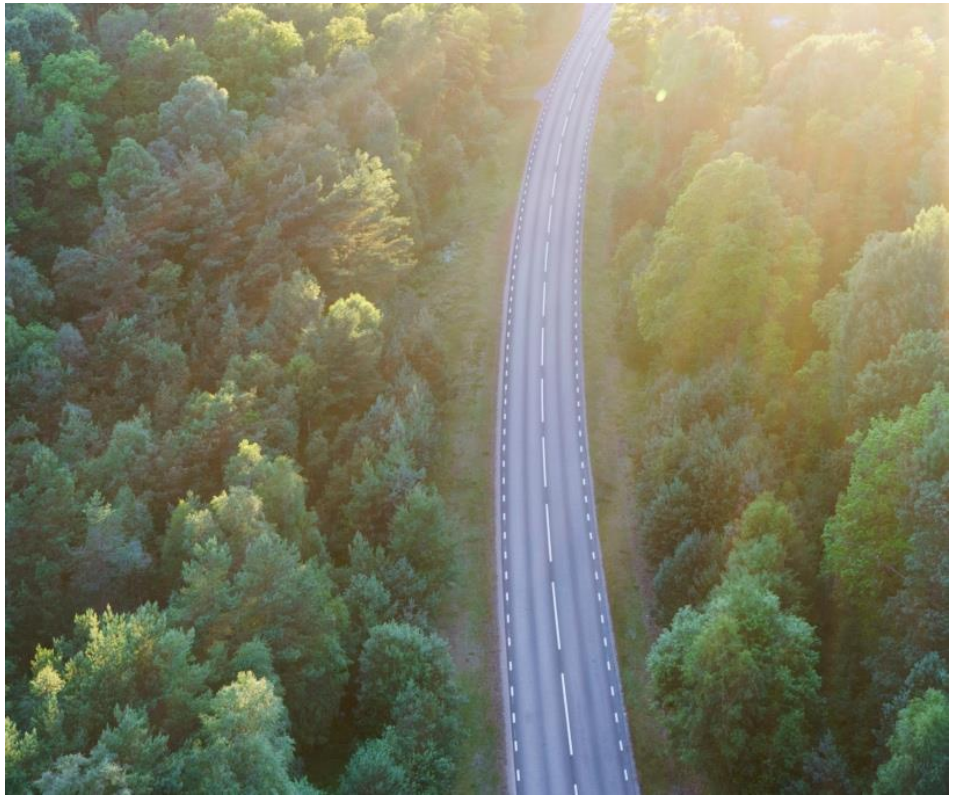
Functional requirements

- Two-lane road with mixed traffic, 80/90km/h;
  - 8.0 m road width
- Two-lane road with mixed traffic, 60/70km/h;
  - 7.5m road width
- Two-lane road with mixed traffic, 40/50km/h;
  - 7.0m road width
- Road geometry
  - Requirements according to VGU for alignment (slopes/radius) must be met (can be compensated with other measures, e.g. graded lanes, overtaking lanes or reduced speed)
  - Overtaking opportunities should be available at regular intervals.



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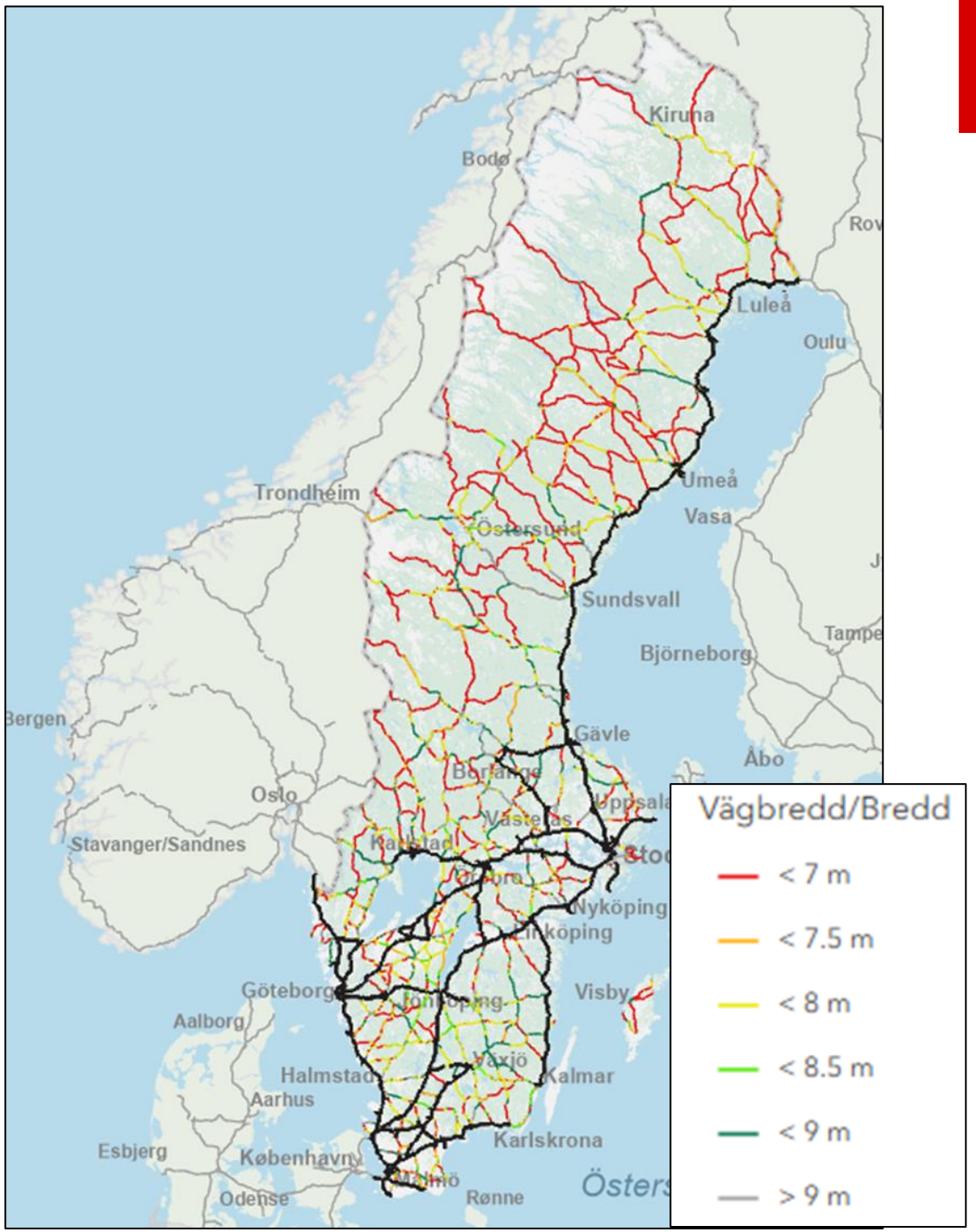
Overall analysis of road networks



- Starting points
  - Black roads refer to roads that have already been opened for longer vehicles.
  - Other colors refer to studied road sections reported per road width.

- Manual quality assurance of assessments based on NVDB data

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Results

- Red marking refers to routes already opened
- Blue marking refers to routes that meet the requirements and can be opened to traffic.
- The new roads are affecting 18 of 21 counties, that is all over Sweden
- Data is available both as a map and a list
  - Detailed start and end points for easy handling in regulatory work

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Southern Sweden

Northern Sweden

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What happens in the near future

- Regulatory work
  - Remittance was send out the 14th od September in 18 of 21 counties
  - We will analyse the respons from these
  - Open new roads in the 1th of January 2027
- The plan is to open up to 3 800 km new state roads for longer vehicles
- We will also continue to evaluate and develop the network in the future

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Important links where parts do not meet the requirements

- Road 56, Katrineholm – Kungsör
- Road 56, Heby – Gävle
- E45, Vanersborg – Karlstad
- Road 50, Örebro – Ludvika
- Road 32, Mjölby – Eksjö
- Road 41, Varberg – Borås
- Roads 27, 28, 29, Blekinge – Småland
- Can be rented after planned renovation;
  - Road 25, Halmstad – Ljungby
  - E22, Kalmar - Karlskrona

Other

- Questions and concerns?

- Contact details:

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Heavier vehicles in Sweden

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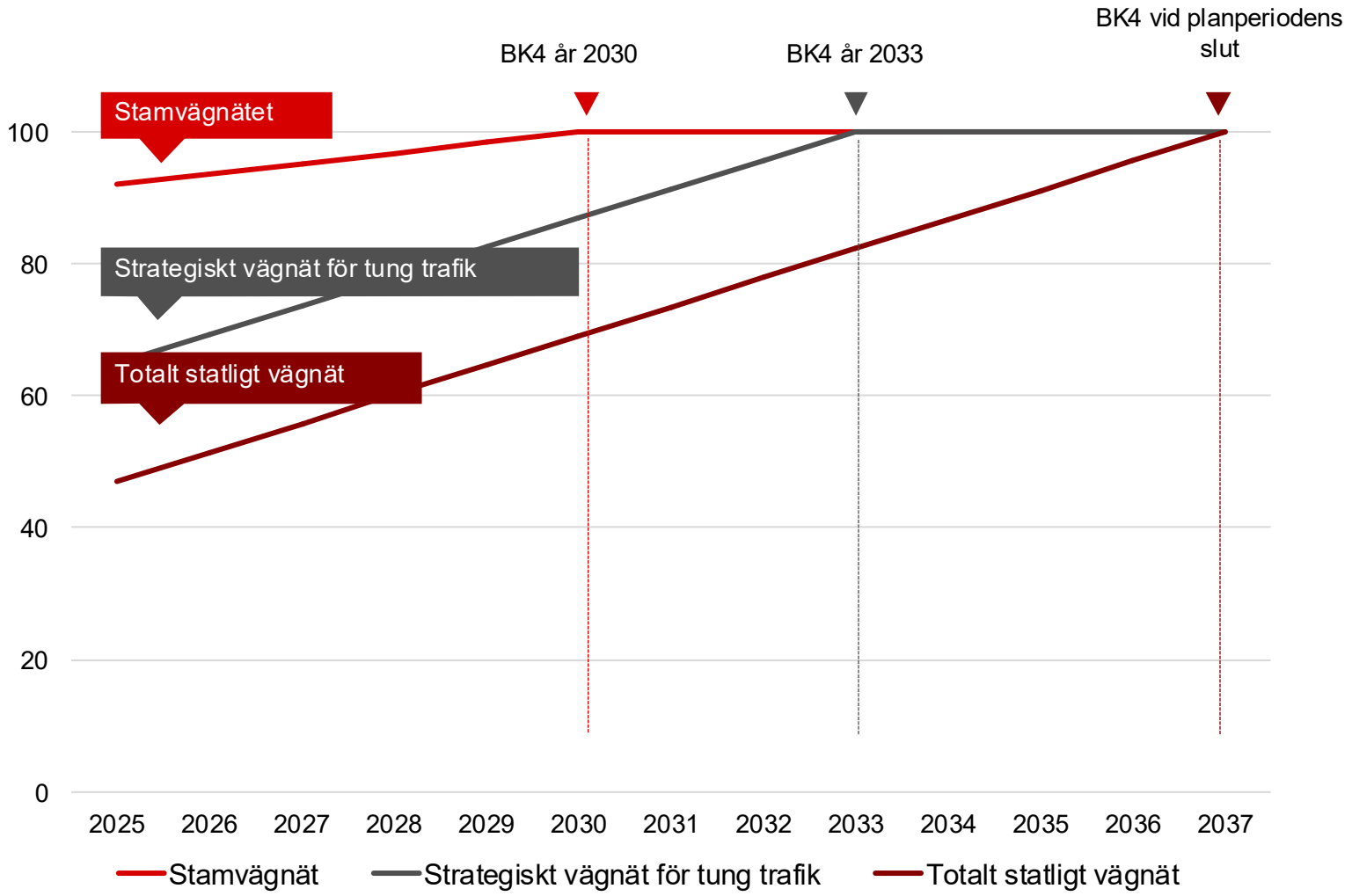
Utveckling av BK4 2018-2026

2018
11 %

2022
36 %

2026
47 %

New goals for BK4 in the national plan for 2026-2037



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Thanks!

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Passenger car overtaking of 25.25 m vs 32 m

DEPARTURE ROUTES AT MEETINGS

191 m (25.25 m) **250m** (32m)

MEETING MARGIN (SECONDS TO ONCOMING CAR)

3.9 s (25.25 m) **2.3 s** (32 m)

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Driver adaptation to vehicle length

Accepted view versus VGU

Drivers accept 493–520 m visibility when overtaking. VGU regulations stipulate at least 800–900 m visibility.

Unchanged overtaking speed

The average speed during overtaking is identical (106–109 km/h) regardless of whether the truck is 25 m or 32 m.