

2022-09-05



Hans Säll

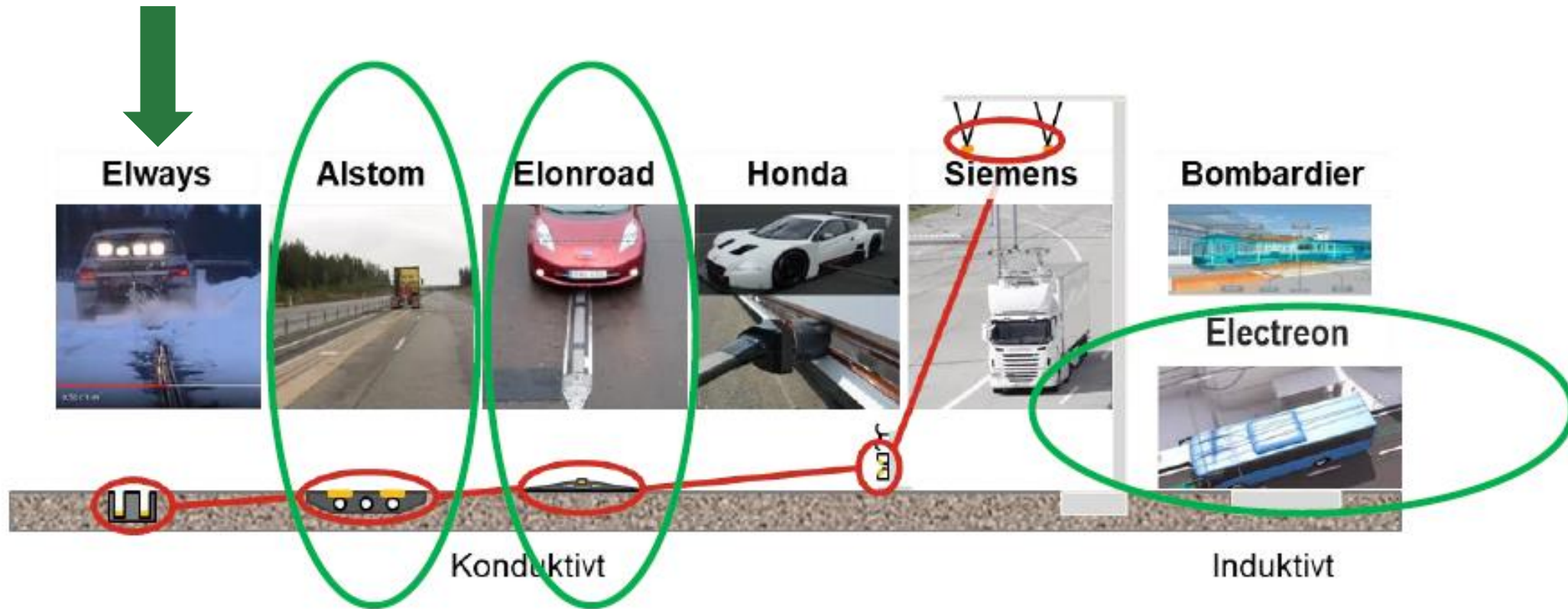
Head of Marketing and Business Development, NCC Infrastructure
CEO and Chairman of the Board, eRoadArlanda



ELWAYS

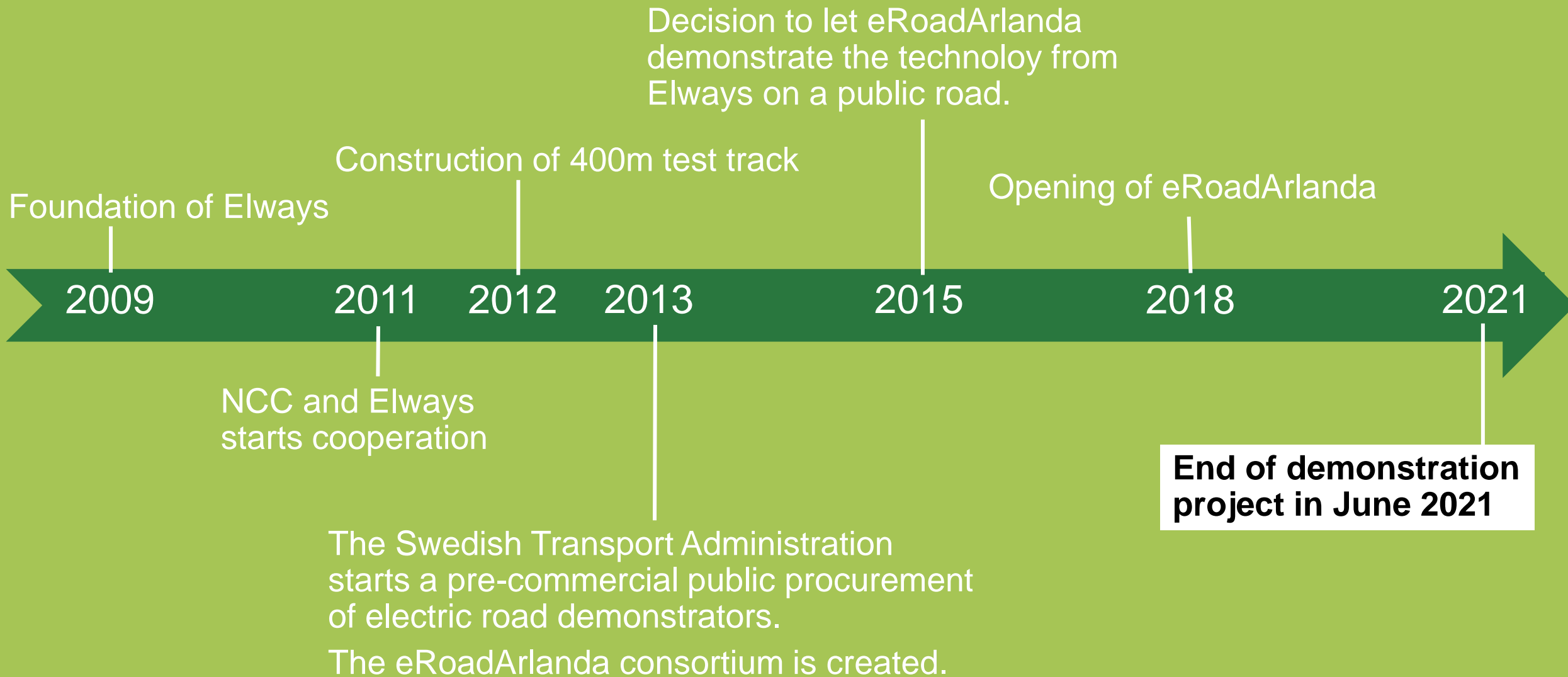
eRoadArlanda

Compeeting ERS technologies

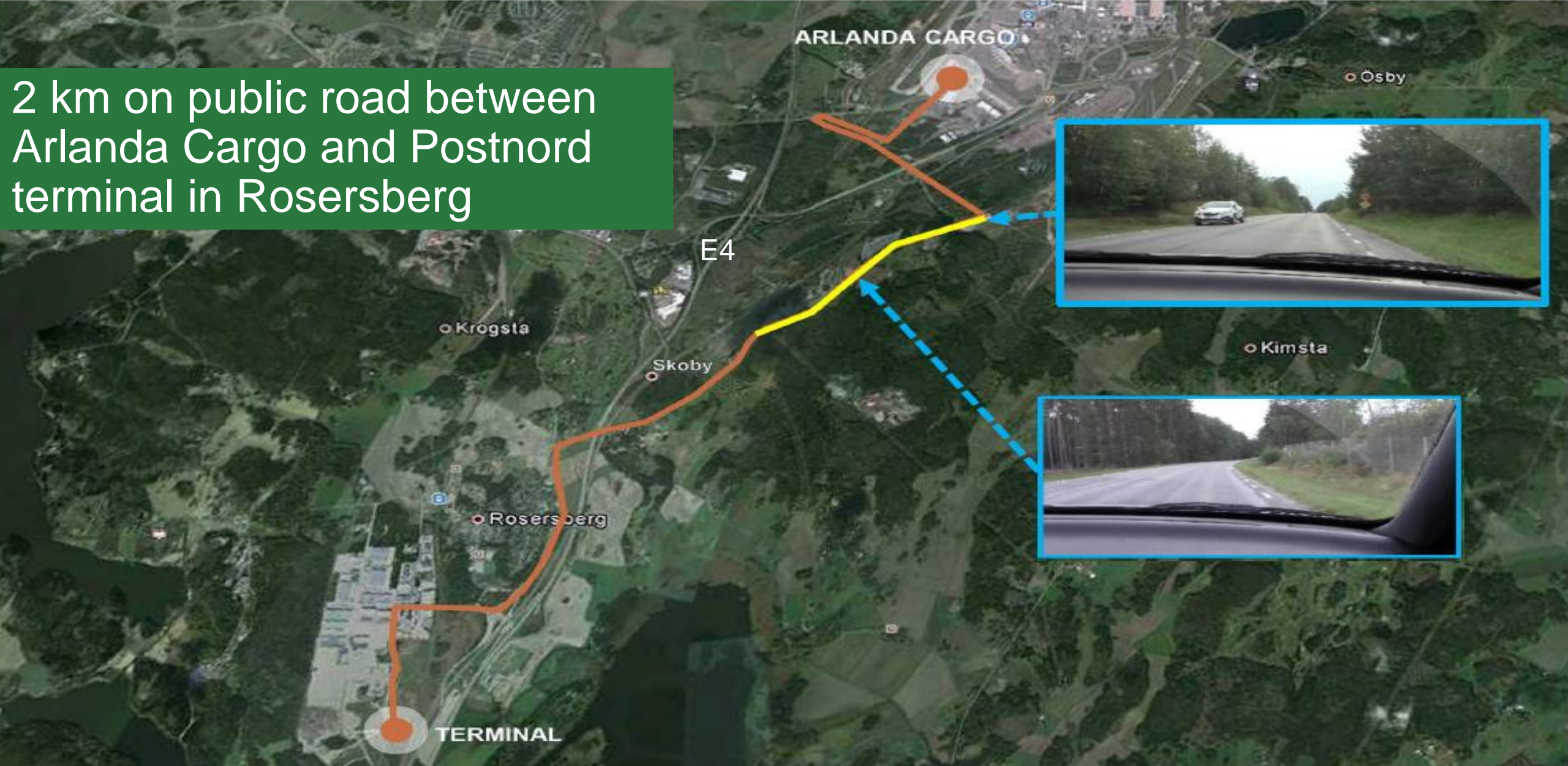


Demonstrators for electric roads



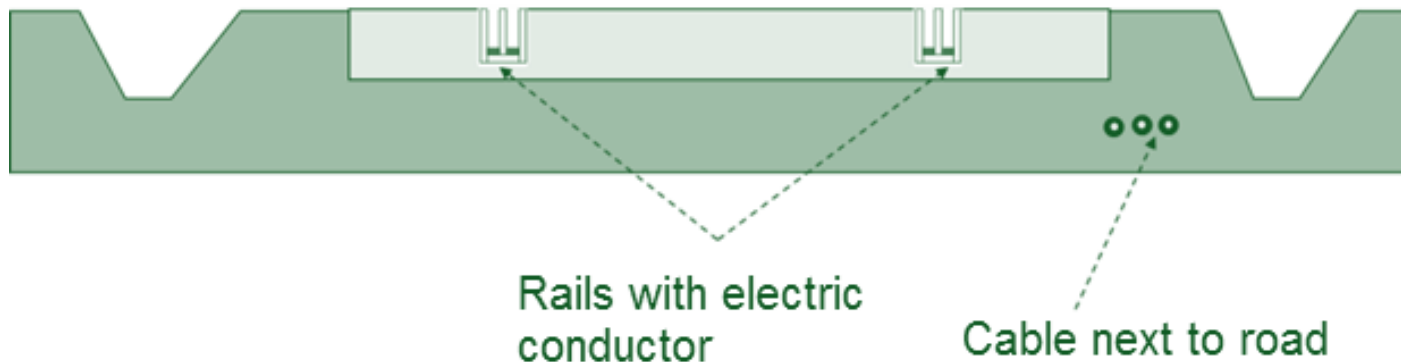


2 km on public road between
Arlanda Cargo and Postnord
terminal in Rosersberg



Technology from Elways at eRoadArlanda

800 V
200 kW



No electricity on road surface!

Electrified in sections of 50m, but only when an authorized vehicle passes.

Civil works in the road - **Milling**



Civil works in the road - Mounting



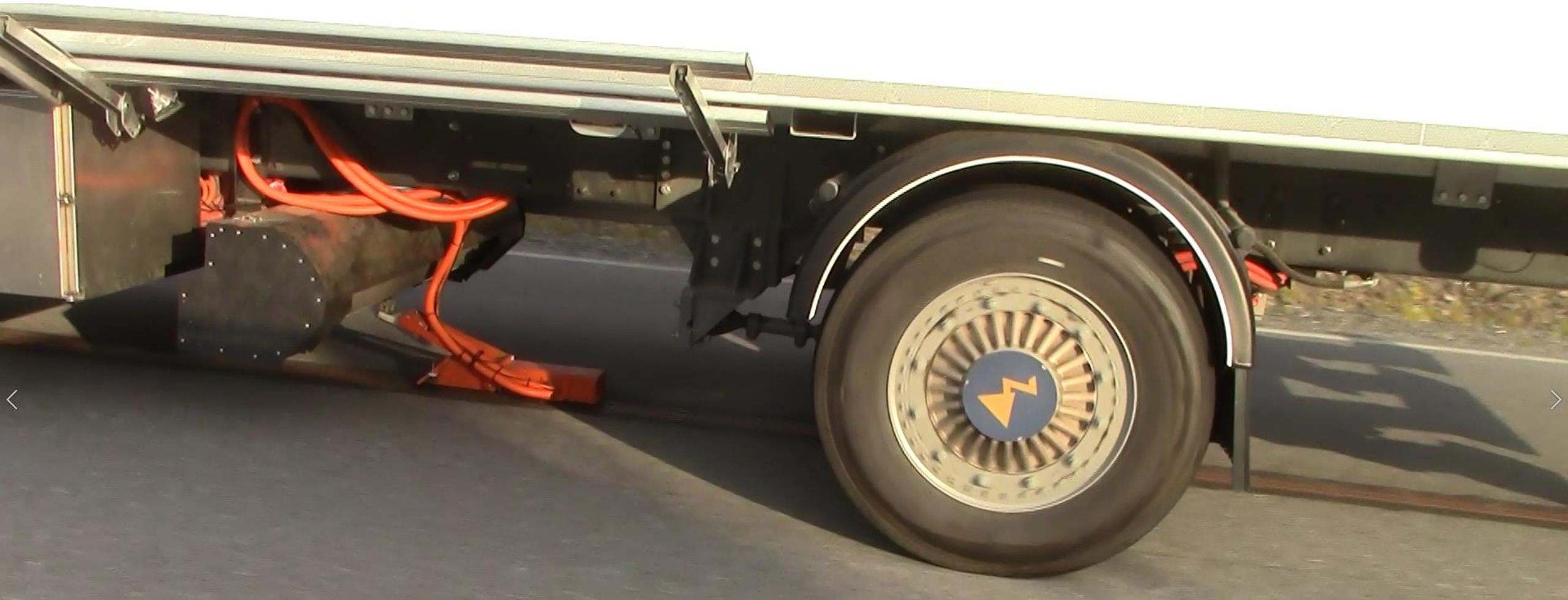
Civil works in the road - Sealing



- Converted within the project
- First 100% electrified truck allowed to go on public road in Sweden
- Range on battery only: 80 km
- Total weight: 18 tons
- Load: 6.5 tons



100 % automatic eRoad-connector

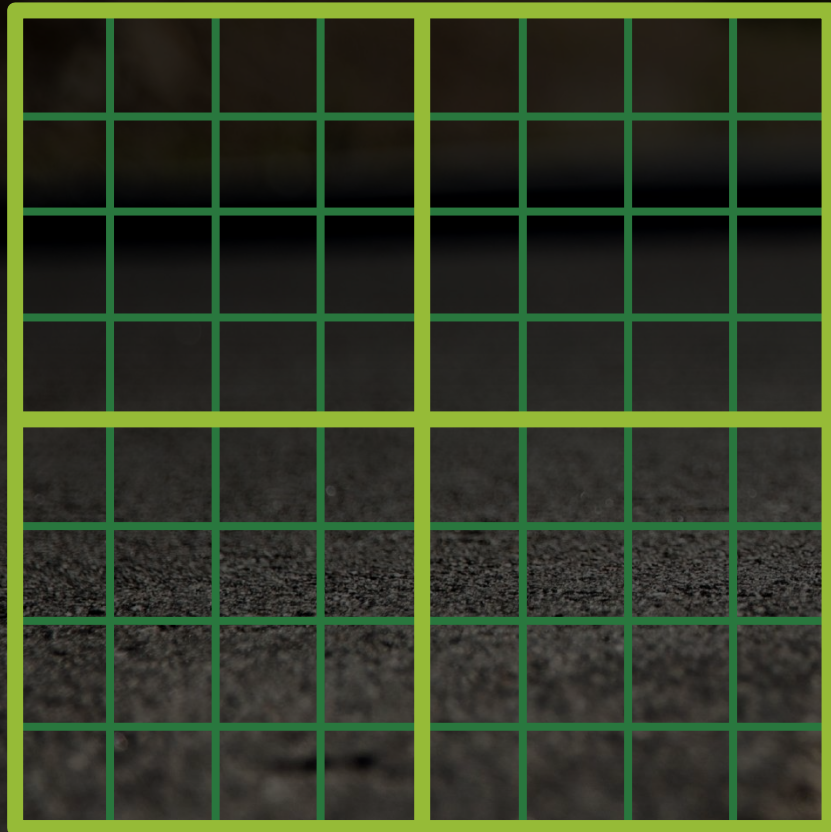


How to handle snow, ice, water, gravel, leaves etc?

1. The design of the eRoad-connector
2. Built in heating cable
3. Drainage every 50 m
4. Ordinary plowing equipment can be used
5. Modified standard maintenance equipment



We need smaller batteries - not bigger



- Direct feed and bio fuels – Outside urban areas, long distance
- Battery and stationary feeding – Urban areas, short distance

- With electrified roads it's possible to have much smaller batteries.
- Possible to have up to 750 kW charging (200 kW today)
- Only 20 % of the actual road has to be electrified

- Bicycle road 0,2 MEUR/KM
- Electrified road < 1 MEUR/km
- Highway > 3 MEUR/km
- City street > 4 MEUR/km
- City tram > 60 MEUR/km
- Subway > 100 MEUR/km

- Sweden has about 500 000 km of roadways.
- Electrifying 5 000 km of the main roads can reduce CO²-emissions from the total heavy vehicles by 50%.

Swedish Transport Administration's electric road pilot

30 km between the cities of Örebro and Hallsberg

Sweden's first permanent electric road

Establishment of road plan

What: Two road plans for the construction of one (1) electric road

Technology choices and production

What: Procurement of consultants for tender documents and construction site follow up and procurement of contractor for the supply of technology and production.



Thank's for listening!



<https://bransch.trafikverket.se/en/startpage/projects/Road-construction-projects/electric-road-e20-hallsbergorebro/>

<https://www.ncc.com/our-offer/infrastructure/eroads-charging-infrastructure/>

<https://evias.se/en/>