

Electrical mobility

Electrified roads in
Sweden - ERS



TRAFIKVERKET
SWEDISH TRANSPORT ADMINISTRATION

Jan Pettersson
Swedish Transport
administration
2019-06-11, Paris



Electric Road System, ERS

“Road supplemented with an electrical installation intended for the transmission of electrical energy to vehicles during travel”

Also known as

- Dynamic transfer
- In motion charging

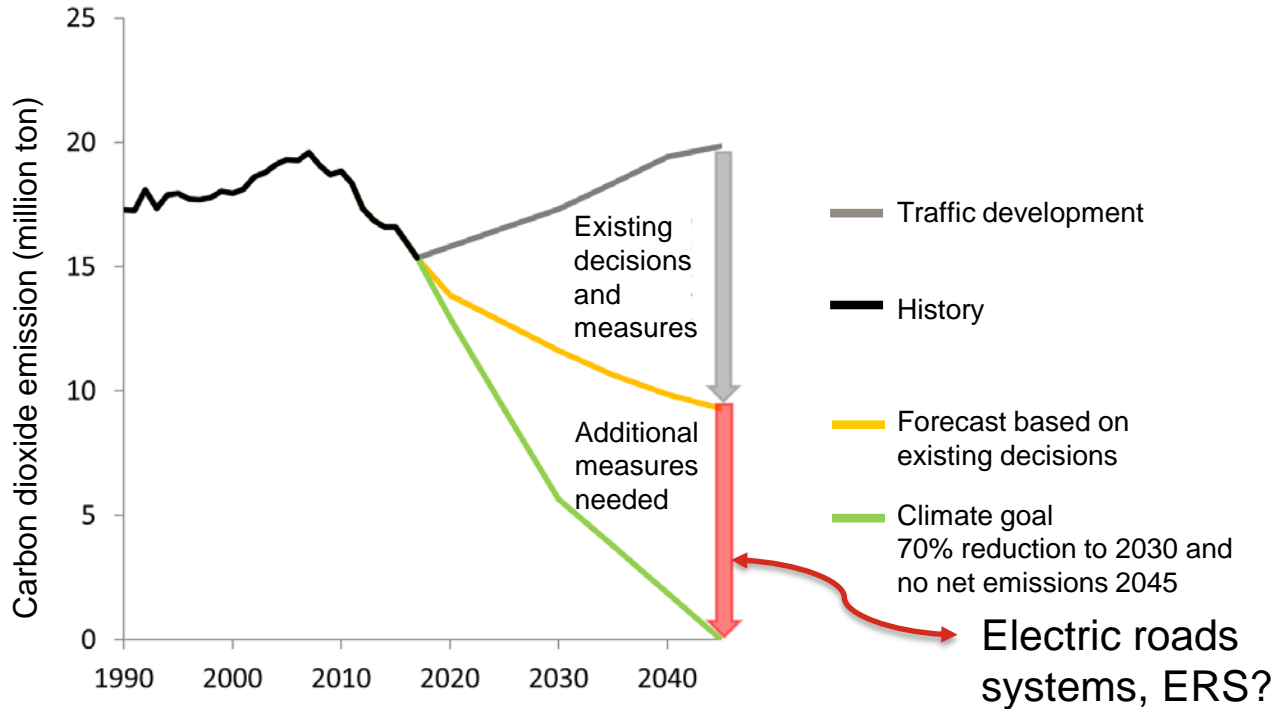


Climate related objectives and visions

- Paris agreement
- Sweden will become one of the world's first fossil-free welfare countries
- Climate law
 - Goal for 2030: Reduction of emission of CO₂ from domestic transport with 70% compared with 2010
 - Goal for 2045: Sweden shall have no net emission of CO₂



Why Electric Road Systems?



Reduction of
greenhouse
gases

Additional benefits

- Air Quality
- Energy Efficiency
- Enable new technology
- Energy diversity
- Energy Security

Global interest

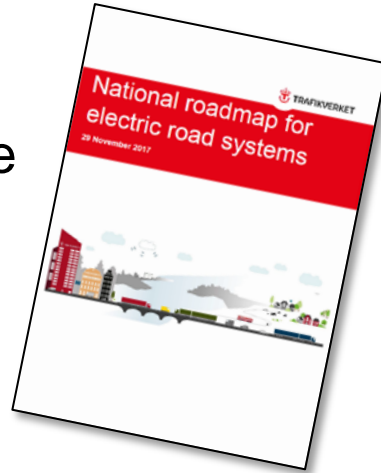


Source: Piarç

Governmental assignment “Electric roads”

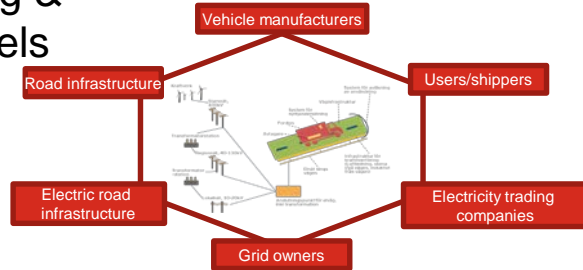
Three parts

- The basis for electric roads to be part of the state owned road network
 - Road map
 - Deployment
- Swedish-German cooperation on e-mobility



Roadmap in brief

1. Market, funding & Business models



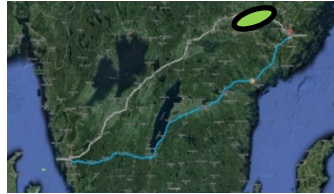
4. Long term plan for deployment of ERS



2. Promote ERS technologies



3. Implement a major ERS pilot



TRL 5-6
2018

TRL 8
2021

TRL 8-9
2022 and beyond

Two demo sites on public roads



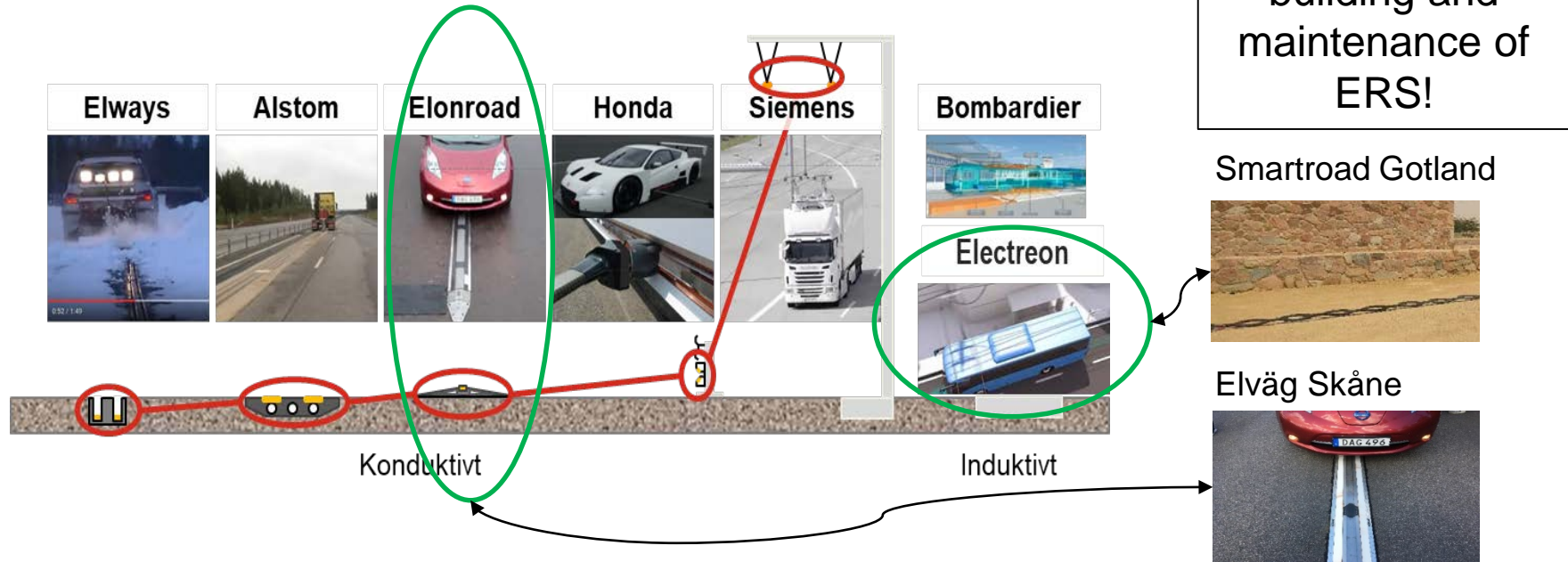
Region Gävleborg
Sandviken

Rosersberg
Utvecklings AB
Arlanda/Stockholm



Create
knowledge
regarding
building and
maintenance of
ERS!

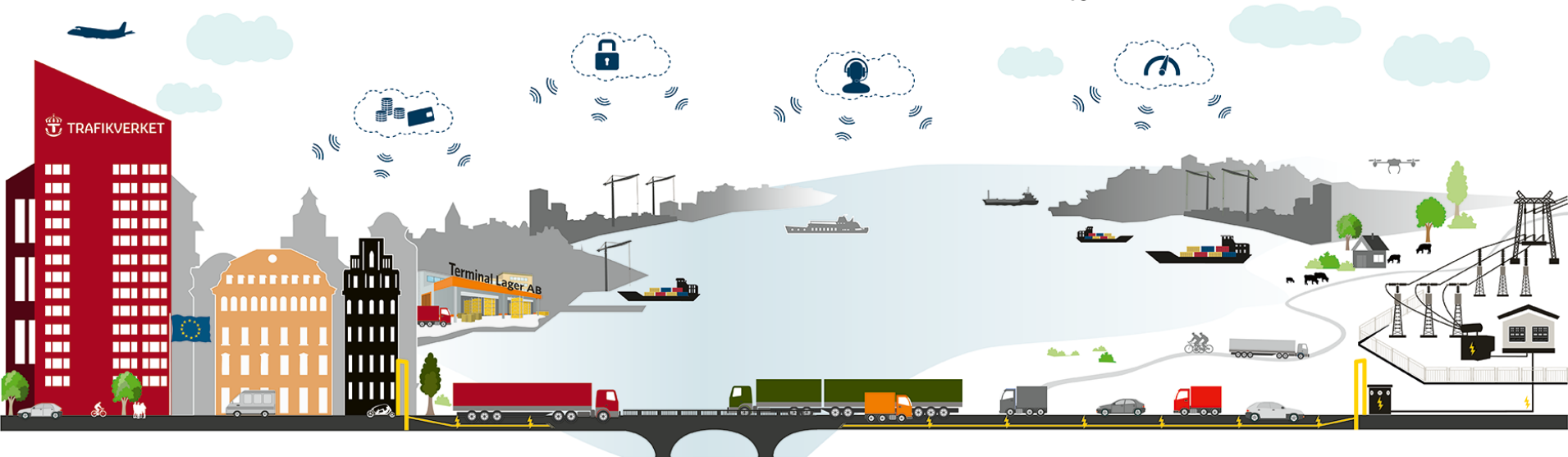
Two more techniques will be tested



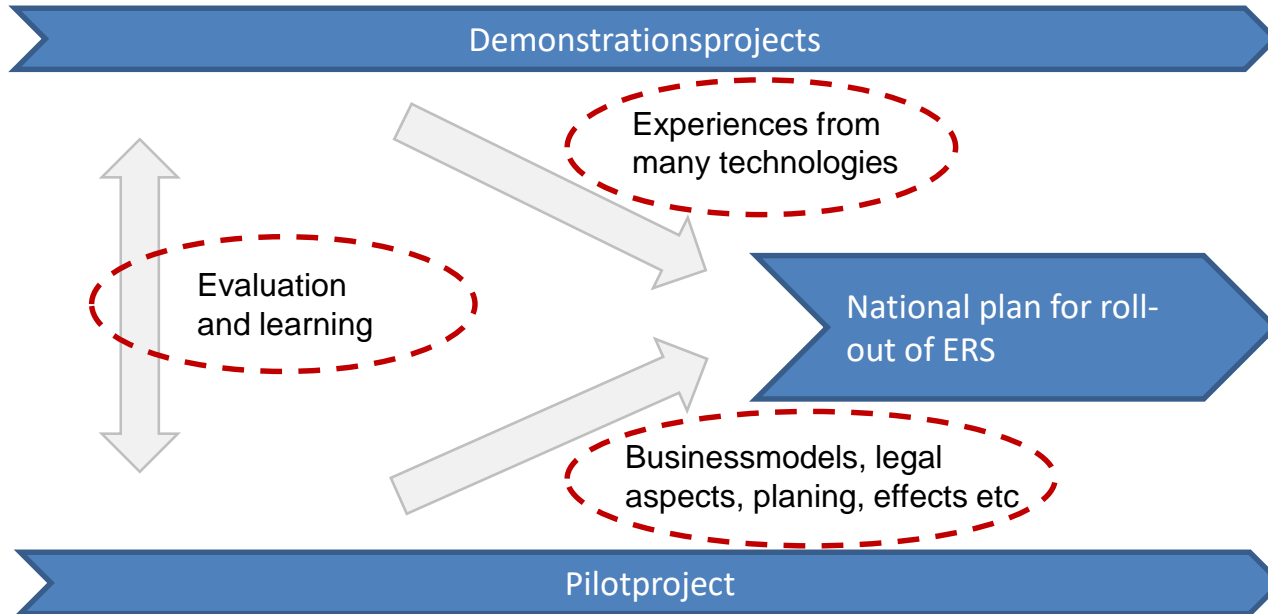
- Projects ongoing until 2022

Every part in an ERS-system must be tested in a pilot.

- Ownership
- Businessmodels
- National economics
- Health, safety & risks
- Nature & landscape
- Planing & selection of roads
- Power supply
- Laws, rules & standards
- Selection of techniques
- Financing & charging
- Market & actors
- Accesscontrol, surveillance
Etc



Trafikverkets working plan for 2018-22



Thanks!

ERS conference in Sweden 12-13 Maj 2020

Contactperson Programme ERS; Jan.pettersson@trafikverket.se

National Roadmap for ERS;

https://www.trafikverket.se/contentassets/4c00abedf6794077a1e2a443cde60349/national_roadmap_for_electric_road_systems_20171129_eng.pdf

