Rijkswaterstaat
Ministry of Infrastructure and Water Management

A network access vision for heavy vehicles

EMS2 Mini-Symposium
Helsinki, 21-23 Jan. 2020

Loes Aarts

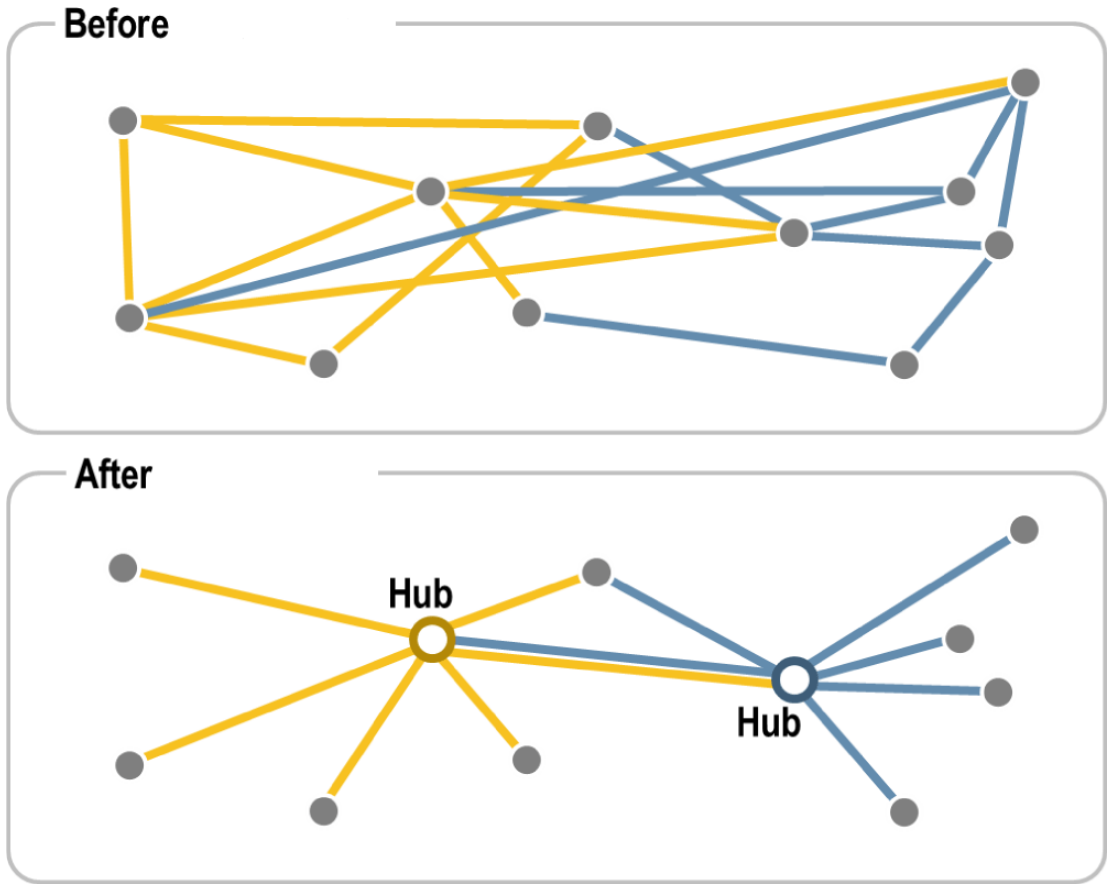
Rijkswaterstaat, The Netherlands

Introduction EMS2 involves a transition, because

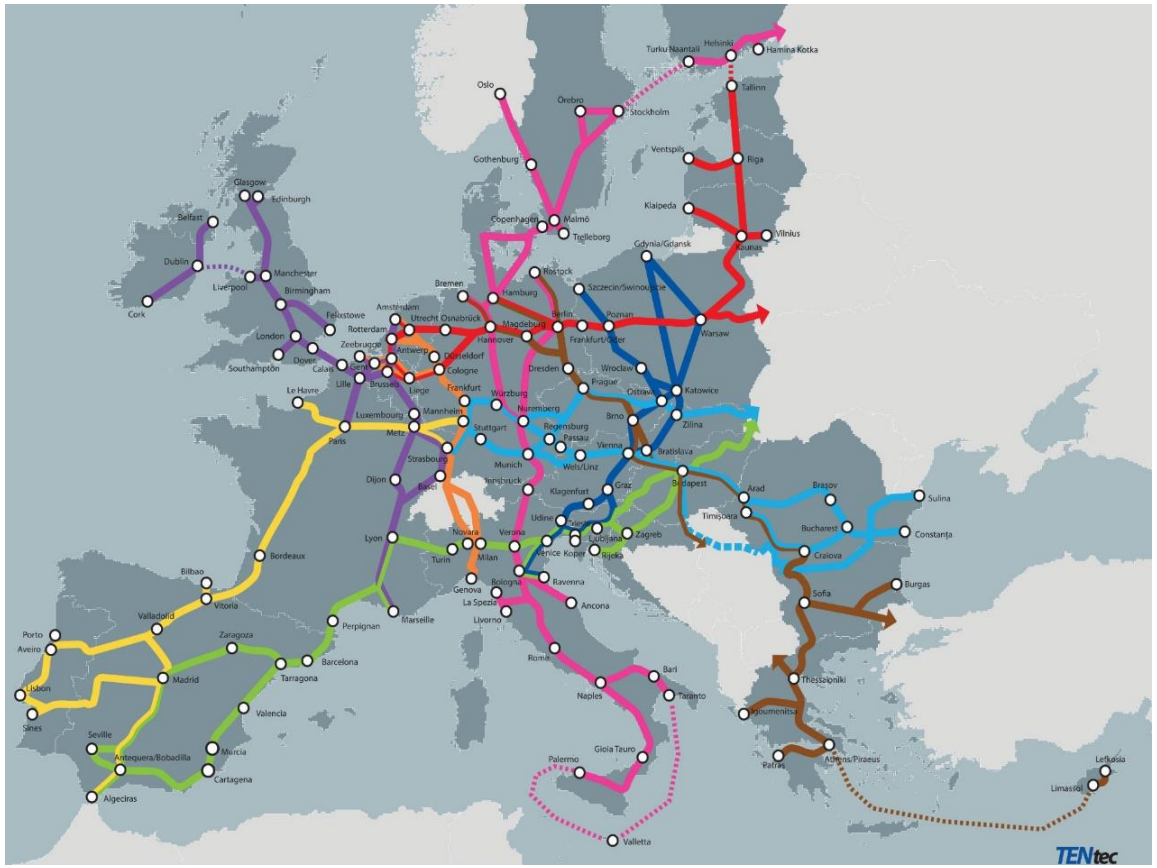
- the road network is not designed for it (both in length and weight)
- conflicts with current exemption framework for abnormal loads
- higher loads require strict control on compliance

If the network is adjusted to an EMS2, then

- road safety is not negotiable (although 100% safe is not possible)
- the CO^2 reduction achieved must legitimize the investments
- the transport system as a whole must become more sustainable and robust



Requires a network vision



The use of the road by trucks will change

- Expected growth of road freight transport 6-30% up to 2040

  Freight transport by road increased by 6-8% in the period 2014-2018, while other modes have not experienced any growth over the same period.

- More restrictions on local level, can lead to inefficiency at the macro level
- Higher average weight of trucks, other freight vehicle concepts

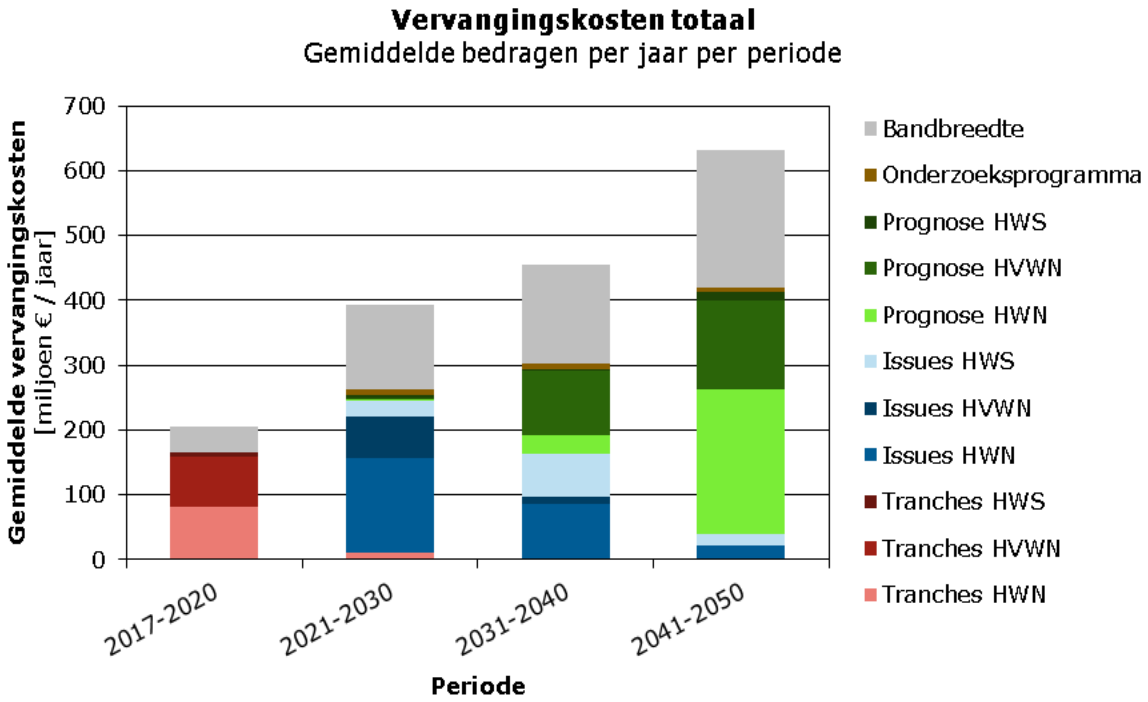



Den Haag
Leiden
Zoetermeer
Utrecht
Rotterdam
Dordrecht
Gouda
Woerden
Bodegraven
Boskoop
Waddinxveen
Oudewater
Leidschendam
Voorburg
Rijswijk
Wateringen
Monster
Voorschoten
's-Gravenzande
Honselersdijk
Naaldwijk
Delft
Pijnacker
Nootdorp
Bleiswijk
Berkel
Hoek van Holland
Maasland
Maassluis
Oostvoorne
Rockanje
Hellevoetsluis
Schiedam
Vlaardingen
Pernis
Poortugaal
Rhoon
Barendrecht
Ridderkerk
Capelle a/d IJssel
Krimpen a/d IJssel
Krimpen a/d Lek
Lekkerkerk
Bergambacht
Nieuwerkerk a/d IJssel
Schoonhoven
Moordrecht
Smitshoek
Oud-Beijerland
Zwijndrecht
Puttershoek
's-Gravendeel
Strijen
Numansdorp
Willemstad
Hardinxveld-Giessendam
Sliedrecht
Papendrecht
Werkendam
Raamsdonksveer
Geertruidenberg

KNOOPPUNT PRINS CLAUSPLEIN
KNOOPPUNT YPENBURG
KNOOPPUNT GOUWE
KNOOPPUNT TERBREGSEPLEIN
KNOOPPUNT KETHELPLEIN
KNOOPPUNT BENELUX
KNOOPPUNT RIDDERKERK-NOORD
KNOOPPUNT VAANPLEIN
KNOOPPUNT RIDDERKERK-ZUID
KNOOPPUNT GORINCHEM
KNOOPPUNT HELLEGATSPLEIN
KNOOPPUNT KLAVERPOLDER

21 Sytwendetunnel
30 A4 Passage Den Haag
25 Rijnlandroute
31 A20 Nieuwerkerk - Gouda
26 A16 Rotterdam
24 Kethelplein (A20 Bijdorp + A20/A4)
27 Blankenburgverbinding
5 Suurhoffbrug
11 Calandbrug
12 Algerabrug
7 Giessenbrug
2 A16 Brienenoordbrug
17 Thomassentunnel
20 Beneluxtunnel
9 Harmsenbrug
19 Noordtunnel
29 A27 Houten - Hooipolder
6 Brug over de Noord
10 Papendrechtse brug
13 A15 Botlekbrug
16 Botlektunnel
3 Spijkenisserbrug
14 1e Heinenoordtunnel
15 2e Heinenoordtunnel
1 Wantijbrug
4 Stadsbrug Dordrecht
23 N3
28 Projecten Drechtsteden
22 A29
18 Drechttunnel
8 Haringvlietbrug

Infrastructure investments under pressure



- Ageing infrastructure, maintenance costs are increasing considerably
- Reliability decreases (structure failures cannot rule out, more road works)

How can we keep the future infrastructure affordable?

Ways of thinking …

- Exemptions or permits?
- Classifications of roads?
- Hubs to support grouping of goods?
- PBS / vehicle enveloppes for all heavy transport?
- Dynamic control (IA)?

Questions network development strategy

1. How to deal with weak links in the road network in relation to EMS2?
2. Have other countries adjusted their network development strategy for HCVs, and if so, how?
3. How does the national network development strategy link the network opened up for HCVs to the spatial planning of logistics (hub and spoke)?
4. Have other countries classified their road network, and if so, based on what criteria?
5. Are there special hubs planned for EMS2 vehicles?
6. What interventions (constructive, functionalities, services) are necessary to make roads suitable for EMS2?
7. What is the expectation in other countries regarding the development of the truck fleet when it comes to the load on the infrastructure (weights)?

Questions road network access

1. Which requirements regarding access to the public highway must be met by the EMS2? Comparing to other HCVs?
2. To what extent is access to the public road dynamic, and if not, is this being considered?
3. To what extent is the type approval performance based?
4. What are the conflicts between abnormal loads and HCVs?
5. How are countries deal with these conflicts?
6. How did the stakeholder process regarding these conflicts look like?

Traffic situations with a possible risk

- Entries and exits, in particular tapers and short entries
- Weaving points
- Rush hour lanes
- Falling lanes on the right
- Dimensioned bridge
- Tunnels
- Road works