Developments in Smart Mobility
A perspective from Rijkswaterstaat

Executive Agency of the Netherlands Ministry of Infrastructure and Water Management
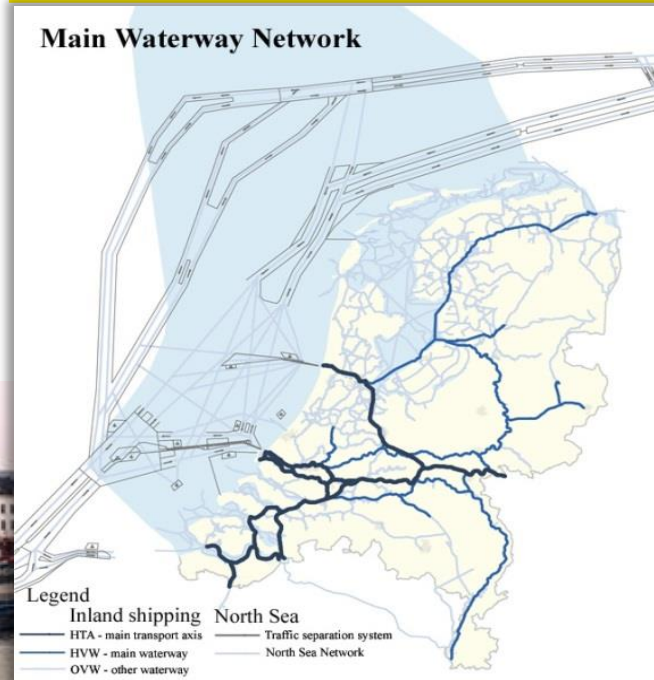
Ronald Adams/projectmanager smart mobility

Rijkswaterstaat is responsible for 3 networks

Highways:
3.100 km

Waterways:
8.000 km

Water systems:
90.000 km2

Rijkswaterstaat

Primary Dutch road network

› Covers 0.7 percent of the Netherlands

› Most intensively-used roads in the world

› 68 bln. vehicle kilometres travelled each year

› 3 mln. road users every day

› Main responsibilities Rijkswaterstaat:

  • building new infra

  • maintenance

  • traffic management and ITS/smart mobility

1.527 km Op- en afritten

2.886 Viaducten

3.065 km snelweg

47 ecoducten

45 Spitsstroken

5 verkeerscentrales

780 bruggen

25 tunnels

Rijkswaterstaat

3

Smart Mobility: goals

› Make our traffic and transport system:

- Sustainable
- Safe
- Smart

› Create new and better services for our road users

› Develop new markets together with our partners

Dutch policy:
'Smart Mobility, Dutch Reality!'

1) **Encouraging** the use of existing products and services

2) Responsible **introduction** of a new generation of vehicles

3) Future-ready **infrastructure** and road management

4) Careful utilisation of **data** exchange and connectivity

5) From trials and pilots to large scale **deployment**
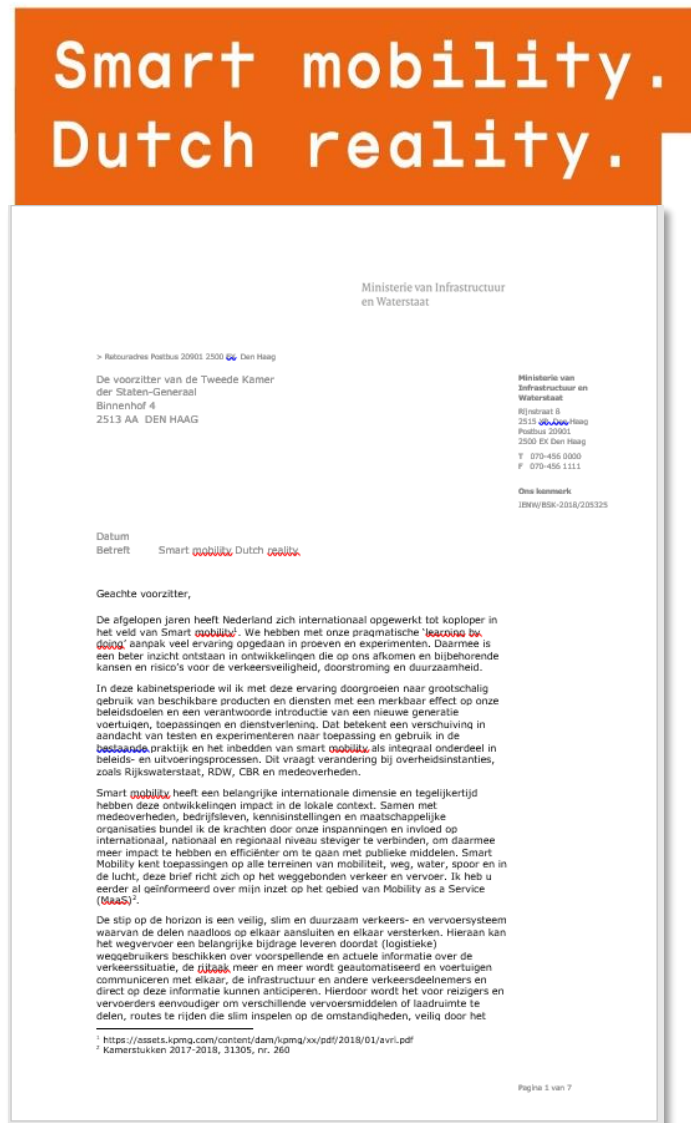
Letter from our Minister to the Dutch Parliament 4 October 2018: 'Smart Mobility, Dutch reality'.

Rijkswaterstaat

Cooperation crucial to achieve smart mobility goals…

› **Between partners:**

- Public

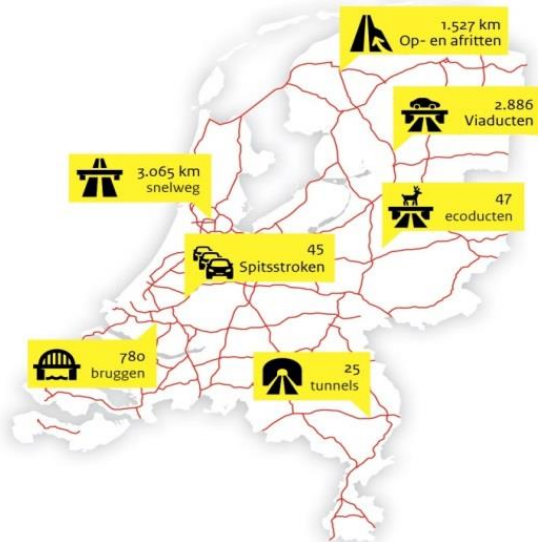- Private

- Science and knowledge

› **On different levels:**

- City/regional

- National

- European

- Worldwide

24-09-19

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... cooperation and interaction on many levels

National Policy

Transboundary coordination

EU Policy

Declaration of Amsterdam

Vienna Convention

InterCor
CONCORDA
SOCRATES 2.0

CEDR   FEHRL

HORIZON 2020

Connecting Europe Facility

ERTICO   Innovation for tomorrow's journey.

INTERREG 2014 2020

National implementation
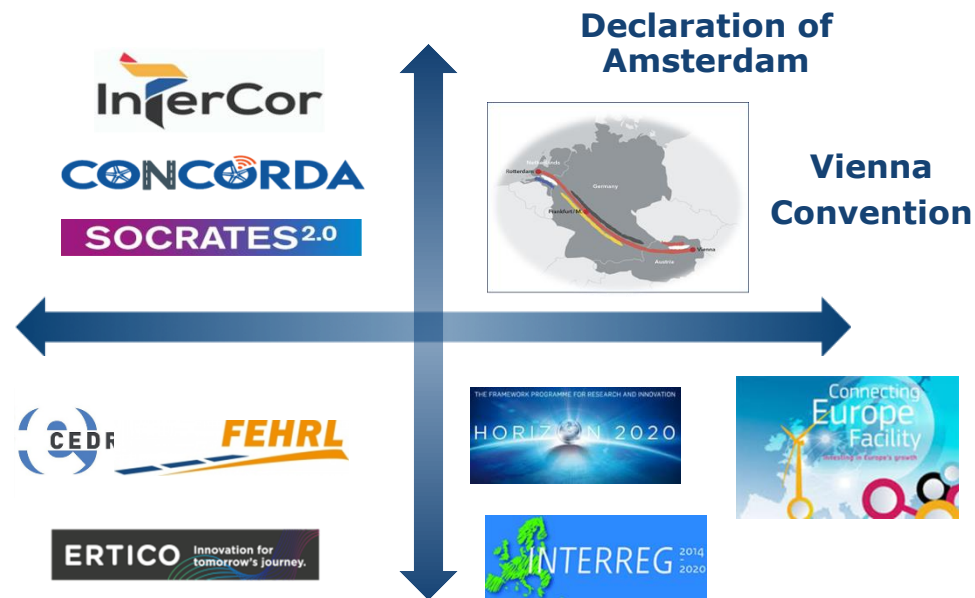
International Projects and platforms
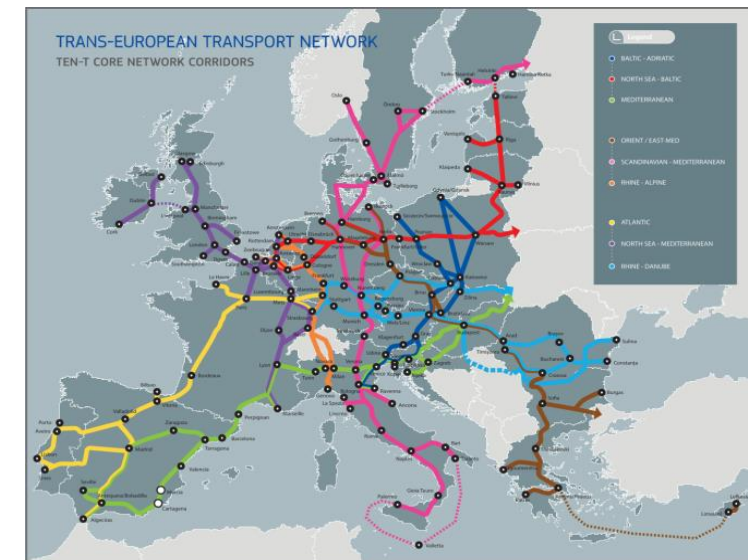
EU grants and implementation framework

Rijkswaterstaat

Through European:
platforms and…   … projects

CEDR

ERTICO Innovation for tomorrow's journey.

ERTRAC

FEHRL

ectri

CEN/TC 278
ITS standardization

FAST SAFE GREEN SOCRATES2.0

CONCORDA

InterCor

Concorda system overview

Rijkswaterstaat
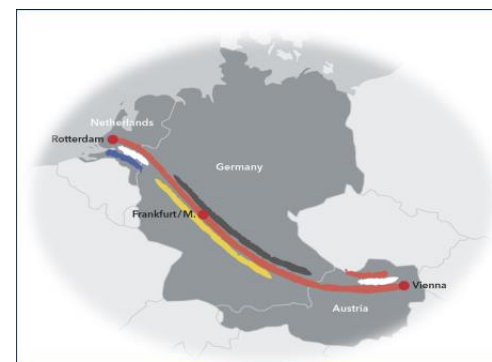
Aim is to test and enhance connected and autonomous driving and hybrid communication (ITS G5 and LTE-V/5G) possibilities in 5 European countries.

Unique selling points of Concorda pilot Amsterdam

- Testing autonomous driving with NXP, KPN, RDW and Fiat Chrysler Automobiles
- Urban Chauffeur use cases
- Interurban test tracks (highway, provincial and urban roads)

Concorda system overview
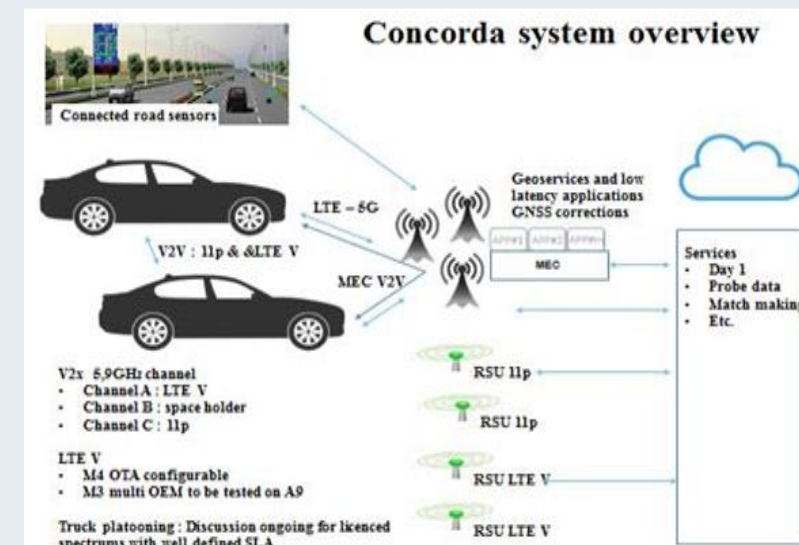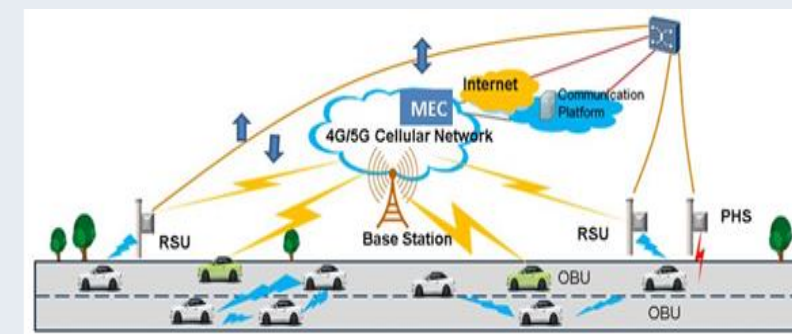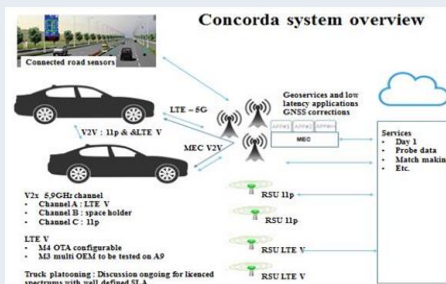
FAST SAFE GREEN **SOCRATES**2.0

| 2017 – 2020 | EU grant: **€1,65 mln** | Leadpartner: **Rijkswaterstaat** |

Main goal: network optimisation and better services for road users based on public-private data exchange.

International public-private cooperation (car industry, navigation industry, service providers, and road authorities).

Testing next generation of Interactive Traffic Management in 4 European cities and in cooperation with Ertico TM 2.0 Innovation Platform.

SOCRATES2.0 pilots

Amsterdam
6000 drivers
3 VC's
6 SP's

Copenhagen
1000 drivers
1 VC's
6 SP's

Munich
1000 drivers
1 VC's
5 SP's

Antwerp
1000 drivers
1 VC's
6 SP's

AMSTERDAM
COPENHAGEN
ANTWERP
MUNICH

Vision

BETTER SERVICES

Controlled by traffic lights
Warnings e.g. VMS, etc.

ROAD USER
SELF DRIVING
VEHICLES

Advices on:
trip choices, route choices,
lane choices, speed choices,
warnings, info, etc.

TLC's, VMS's,
TM measures, ...

Cooperation Coordination

PC, smart phones,
navigation,

Traffic management information

Traffic centres

Traffic status information

Back offices

Loops, CCTV, radar,
ANPR, notifications,....

NEW
FRAMEWORK

FCD, social media

InterCor

2016 – 2020	EU grant: **€1,65 mln**	Leadpartner:

Rijkswaterstaat and since 31-8-2019 France. Both supported by Ertico

Service	The Netherlands	France	Belgium	UK
In Vehicle Signage	x	x	(x)	x
Probe Data	x	x		x
Road Works Warning	x	x	x	x
GLOSA	x	x	x	x
Multimodal cargo transport optimisation	x	x		x (freight slots for ports)
Truck Parking	x	x		x
Tunnel logistics	x		x	x

European cooperation between four Member States and private industry on the standardisation and interoperability of 7 C-ITS services:
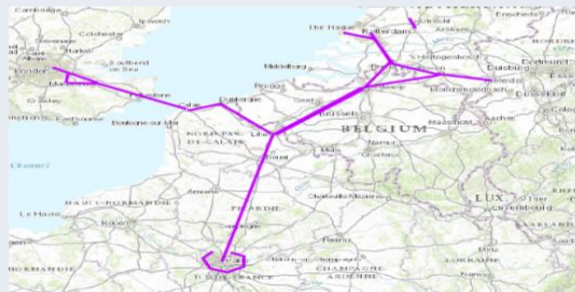
- Road Works Warning (RWW)
- In-Vehicle Signage (IVS)
- Probe Vehicle Data (PVD)
- Collision Risk Warning (CRW)
- Truck Parking
- Multi-modal Cargo Transport Optimization (MCTO)
- Tunnel logistics

Rijkswaterstaat

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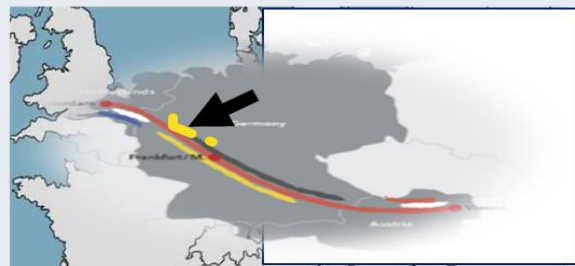
Conclusions and possible topics for discussion

Smart Mobility = Serving several goals

Interesting and important question is on which goals the *focus* will be for the coming years and what the possibilities on an European level are to maximise the contributions to realise those goals.

Smart Mobility = (multimodal) integration and cooperation on different levels

Smart Mobility is complex and will have effects on the complete mobility system. That means that *large scale deployment* needs a long term (public and private) vision, time and consistency on European, national, regional and urban levels.

Smart Mobility = Based on Data

Everything we do in the area of ITS and Smart Mobility is based on *data*. So this is definitely an interesting topic for further discussion and a possible game changer. For public and private partners. And on different levels. Also think about privacy and security. A European vision on data is important.

Thank you for your attention.

Questions?

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