Truck platooning in Europe

TAC 5 Septembre 2018 Odile Arbeit de Chalendar Ifsttar



EU Context

Move

- Masterplan/ITS Directive
- Research
- C-ITS Plateform
- C-ITS Strategy
- C-Roads
- Connect
- "European
 Automotive –
 Telecom
 Alliance" (EATA)

RTD

- H2020 ART XX Automation
- STRIA Roadmaps
- CSA CARTRE
- Grow
- Gear 2030
- UNECE regulations

UNECE

European Parliament



TIMELINE

TRUCKS & CARS



PUBLIC TRANSPORT • Au



2020s

- Automated mobility at low speed (e.g. urban shuttles, small delivery vehicles in cities)

2030s

- Towards fully autonomous mobility.
- Towards fully autonomous mobility.
 25% of trips in cities covered by shared automated vehicles.

By 2022

ALL NEW VEHICLES



- Connected to the internet
- Many of them able to communicate directly to each other and their environment as of 2019
- Supported by free services high-precision digital mapping thanks to satellite data from Galileo services as of 2019



Political agenda to be aligned with climate and energy targets

R&D

Financial incentives and investment

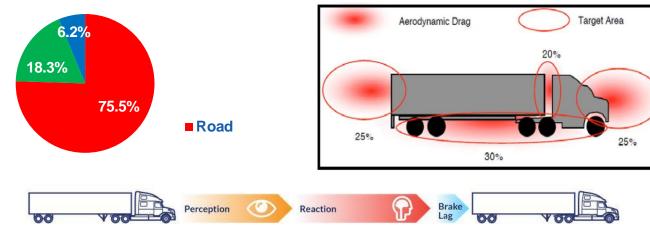
TAC

Large scale testing
Sharing experience
Skills gap
Batteries

Legal

Revised traffic rules systems
Homologation
Privacy
Liability
Data use & exchange

Context and challenges





Context:

- Road transport = 75% of good transport (EU 28 2013)
- Transport responsible for 25 % of CO2 emission
- Driver shortage

How does it work?

- V2V connection radar, lidar wifi
- Emergency braking vs driver
- Reduced distance 50 m vs 10 m

Foreseen benefits:

- Fuel saving 10%/ Less CO2 Safety+Driver efficiency: 2/27 B€
- Impact on traffic
- infrastructure use: 2 to 27 B€
- Optimisation of Logistics 30%
- Driver time legislation?
- Driving regulation?



Pilot TAC countries involve:

- ✓ Adapted transport legislation
- ✓ Existence of Test sides and Real road,
- ✓ Research by Academia and Industry

Message:

- Platooning strong potential benefits
- Addressing next political roadmap for long term innovation, deployment of platooning (Amsterdam declaration)
- Joint effort government & industry

Jointly develop:

- Corridors
- Public road (mutual recognition of exemption



Aim:

- Public authority&Industry common understanding & joint efforts
- Mutual recognition between countries
- Convoys across European on ITS corridors

Message:

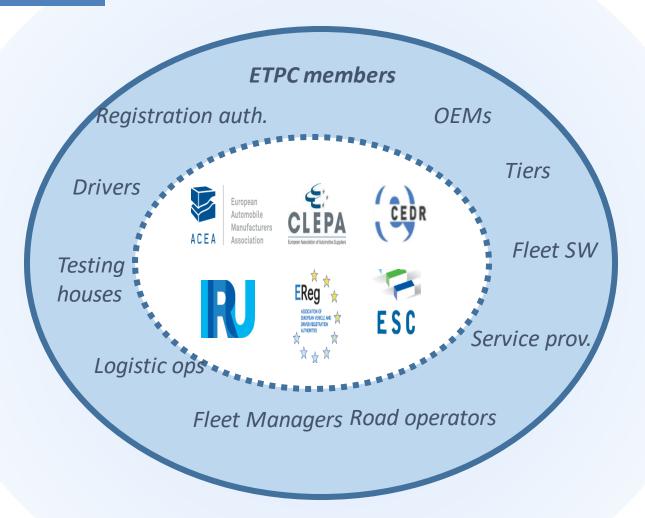
- Platooning has strong potential benefits on European roads
- Addressing next political roadmap for long term innovation, deployment of platooning

Facts:

- April 2016
- Six EU Brands together
- Corridors
- Public road (exemption by several countries)
- Level 2-4



ETPC network (affiliated and supporters)



Networks & Platforms:

- ✓ ETRAC
- ✓ Gear 2030
- ✓ C-ITS
- ✓ Cartre
- ✓ EIP

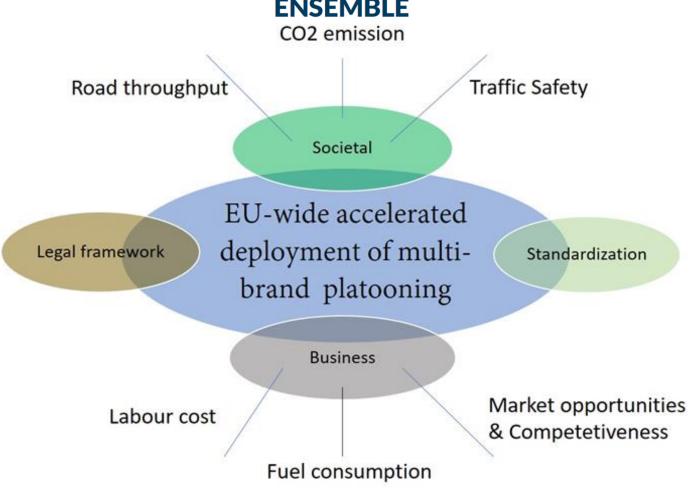
European truck platooning challenge network

ETPC: 150 public & private stakholders in truck platooning

Some Académics: VTT, VTI, TNO, Delft, Eindhoven, Austriatec, DLR, RTWH, TFL, Leeds, ...



ENSEMBLE



Mission:

Inter-operable platooning Ensure correct and safe operation Generic solution for Safe platooning Key aspect to ensure acceptance of platooning

Fail-safe &fault-tolerant Real-life platooning

Testing grounds and real life

Facts:

3 year EU project, starting latest June 1st 2018, 20 millions euro funding EC

17 partners: including 6 truck manufacturers and CLEPA representing automotive suppliers, Ifsttar, Idiada

Demonstration:

Six differently branded trucks in platoons

Under real world traffic conditions Across national borders.

To pave the way for the adoption of multi-brand truck platooning in Europe To access impacts on traffic safety





Thank you for your attention

Odile.arbeit-de-chalendar@ifsttar.fr