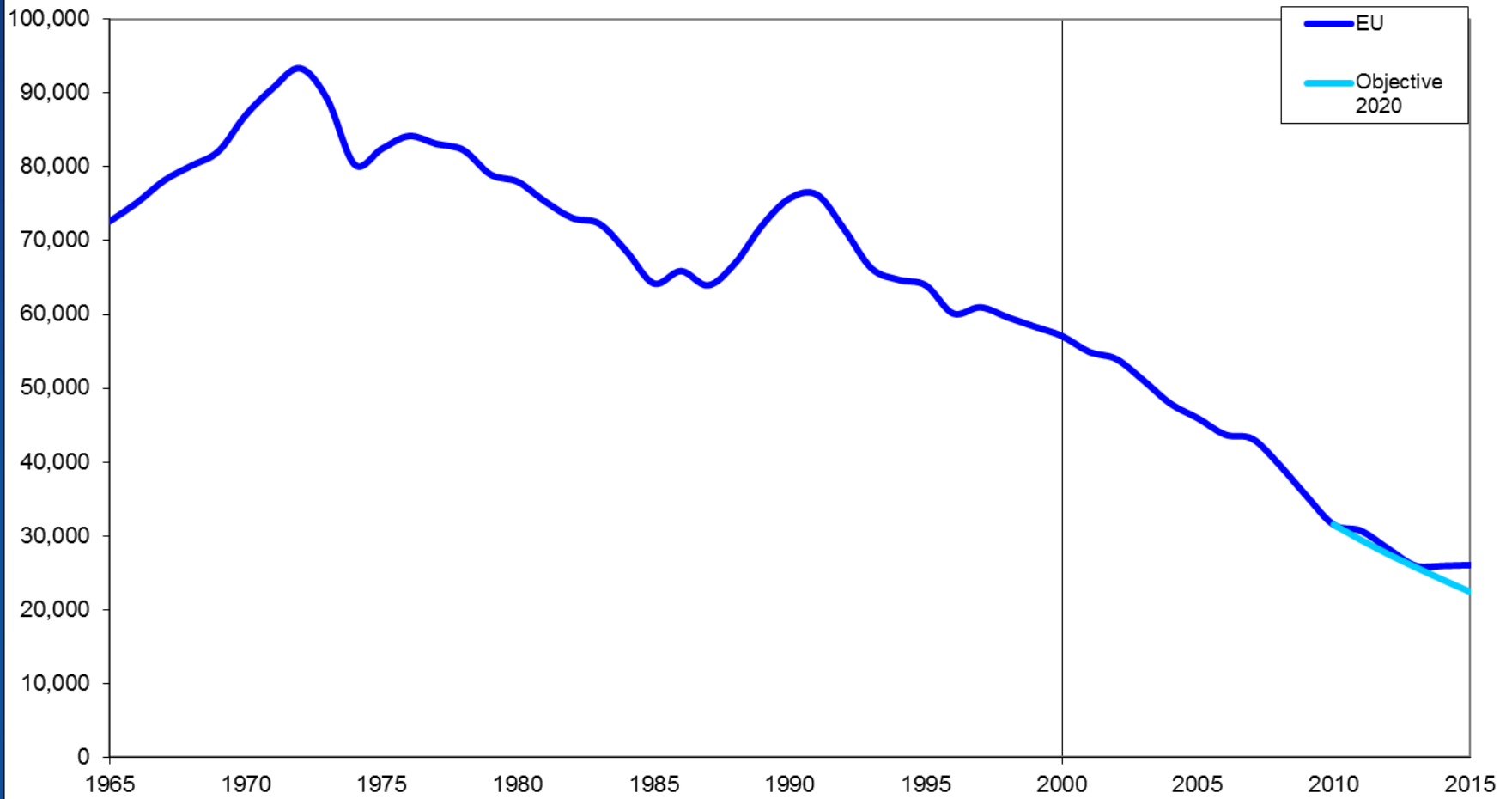




# FACTEURS HUMAINS, TECHNOLOGIES EMBARQUÉES ET NUMÉRIQUES: QUEL RÔLE POUR LES POLITIQUES DE SÉCURITÉ ROUTIÈRE

**María Alfayate**  
**Unité Transport Durable et**  
**Intelligent**  
**Commissionne européenne - DG**  
**MOVE**  
**Lyon 22-23 novembre 2016**

EU Fatalities 1965 - 2010



# WHITE PAPER 2011: Towards a 'zero-vision' on road safety



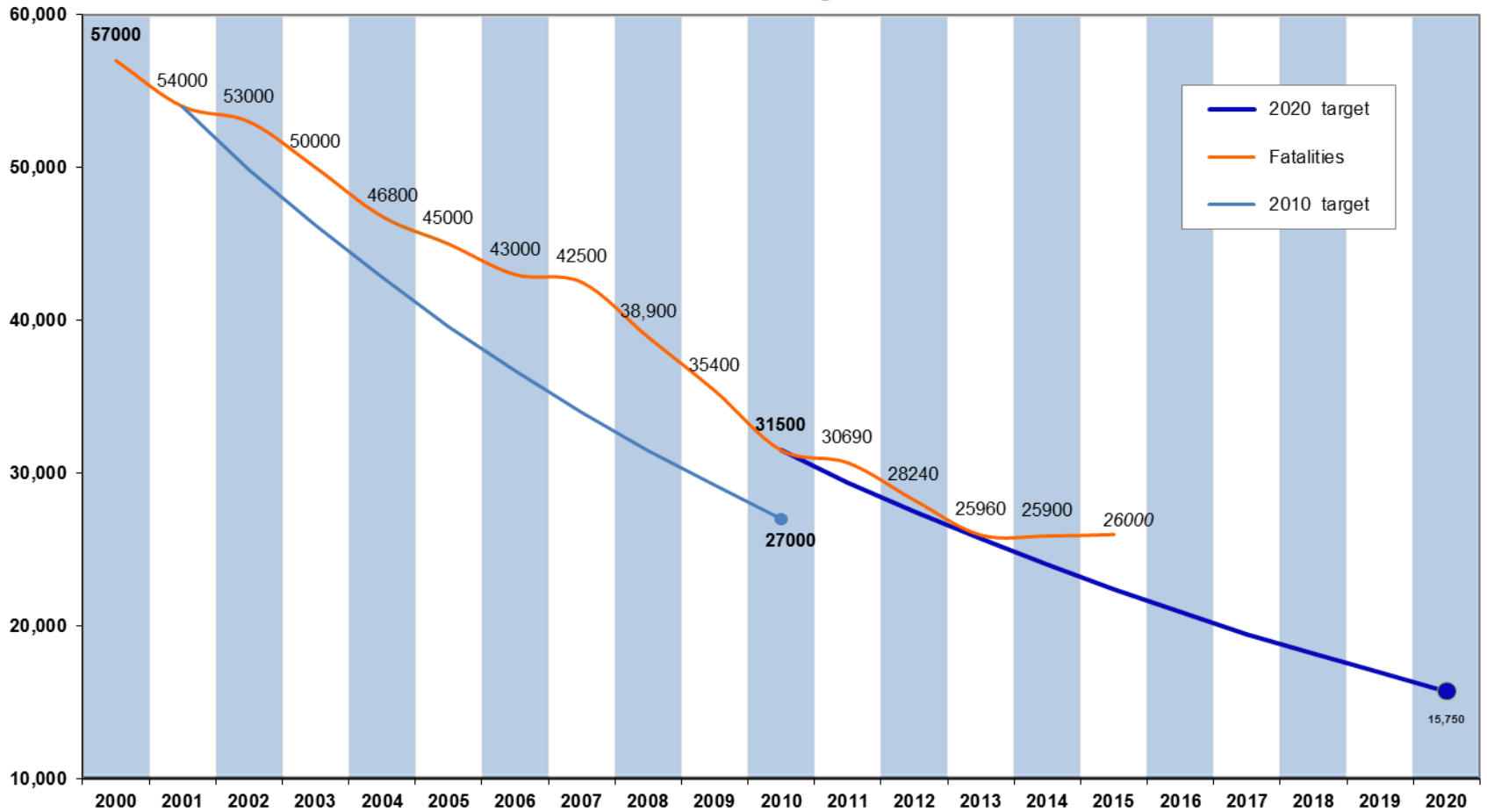
# POLICY ORIENTATIONS ON ROAD SAFETY 2011 - 2020

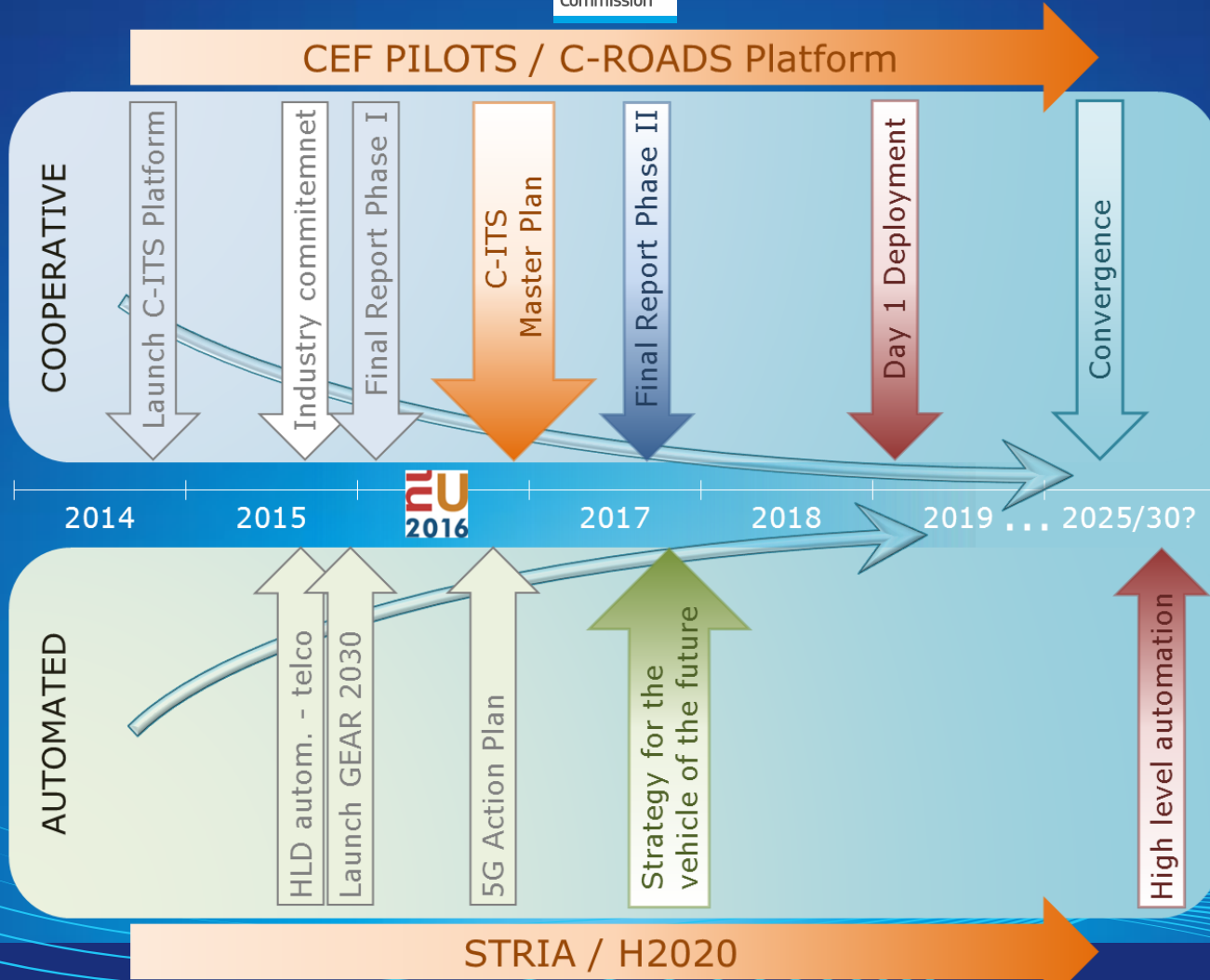


# The “-50%” objective

- *A political & global commitment*
- *- 43% achieved ( 2001 – 2010)*
- *- 17% achieved ( 2010 – 2015)*

## EU fatalities and targets 2010 - 2020





# Setting the scene for the Pan-European Deployment of Connected, Cooperative and Automated Driving



<http://ec.europa.eu/transport/sites/transport/files/themes/its/doc/c-its-platform-final-report-january-2016.pdf>



@Transport\_EU

Mobility and  
Transport

**CONNECTING**  
**EUROPE**



# SETTING UP THE C-ITS PLATFORM NOVEMBER 2014



## GAP ANALYSIS: WHAT IS TO BE DONE FOR C-ITS DEPLOYMENT?

WP1 COST BENEFIT ANALYSIS



WP2 BUSINESS CASES FOR DEPLOYMENT

WP3  
LEGAL  
ISSUES

WP4  
SYSTEM'S  
GOVERNANCE &  
PRIVACY

WP5  
SECURITY  
&  
CERTIFICATION

WP6  
TECHNICAL  
ISSUES

WP7  
STANDARDISATION  
ISSUES

WP8  
PUBLIC  
ACCEPTANCE

WP9  
IMPLEMENTATION  
ISSUES

WP10 INTERNATIONAL COOPERATION



WP11 ROADMAP FOR DEPLOYMENT OF C-ITS



# MAIN OUTCOMES OF THE C-ITS PLATFORM



- A Day-1 list of commonly agreed C-ITS services for deployment across the EU
- A common vision to tackle cyber security detailed in an agreed Trust Model
- An assessment of C-ITS benefits across Europe, based on a hybrid communication approach with kick start for road safety related services based on ITS-G5 communication and allowing integration of cellular where and when available and appropriate
- Guiding principles for access to in-vehicle data
- A detailed analysis on privacy and data protection, basis to work on privacy by design, and implementation of new requirements according to new General Data protection Regulation

# MAIN OUTCOMES OF THE C-ITS PLATFORM



## □ List of Day1 services

### *Hazardous location notifications:*

- Slow or stationary vehicle(s) & Traffic ahead warning
- Road works warning
- Weather conditions
- Emergency brake light
- Emergency vehicle approaching
- Other hazardous notifications

### *Signage applications:*

- In-vehicle signage
- In-vehicle speed limits
- Signal violation / Intersection Safety
- Traffic signal priority request by designated vehicles
- Green Light Optimal Speed Advisory (GLOSA)
- Probe vehicle data: CAM Aggregation
- Shockwave Damping

# MAIN OUTCOMES OF THE C-ITS PLATFORM



## □ List of Day1 services (cont) – “Day 1’5 services”

Information on fuelling & charging stations for alternative fuel vehicles

Vulnerable Road user protection

On street parking management & information

Off street parking information

Park & Ride information

Connected & Cooperative navigation into and out of the city (1<sup>st</sup> and last mile, parking, route advice, coordinated traffic lights)

Traffic information & Smart routing



@Transport\_EU

Mobility and  
Transport

**CONNECTING**  
**EUROPE**



## Report WG 9 - Implementation Issues in relation to Road Safety

- HMI (Possibility to update the European Statement of Principles)
- Non-equipped users (How big of a problem and can anything be done?)
- Training and awareness (educate, inform, train new drivers on new technologies)

# MAIN OUTCOMES OF THE FIRST PHASE OF THE C-ITS PLATFORM



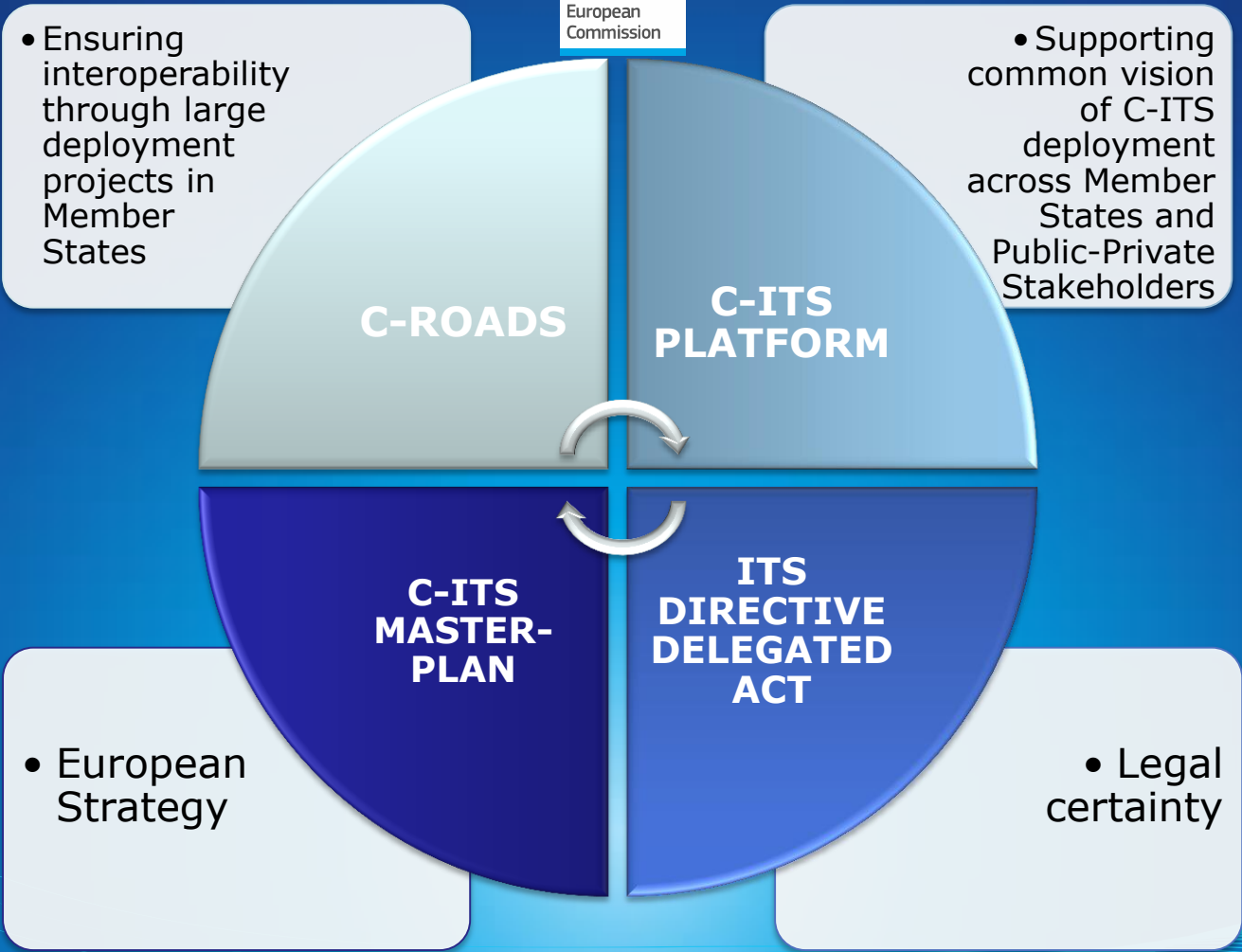
A coordinated action for the deployment of C-ITS in the EU is paramount:

*To ensure interoperability and maximise benefits, deployment in the EU should be based on the agreed list of Day 1 applications. Because of their societal benefits and maturity of technology, these services should be available in the short term*

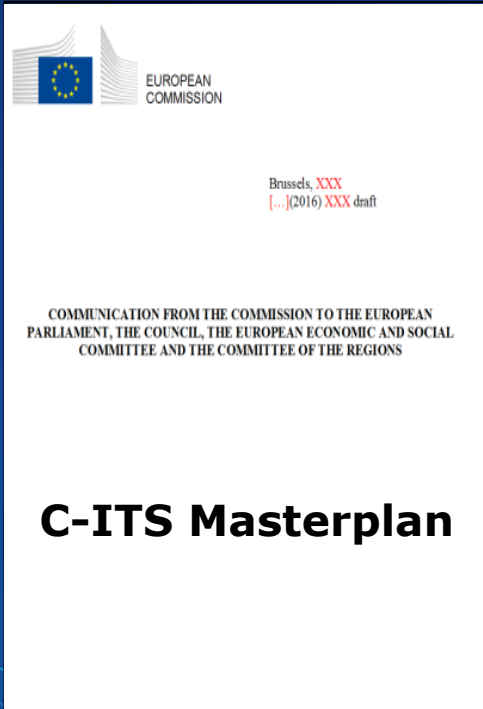
*Unique legal and technical framework is essential. Coordinated efforts to ensure quick uptake of C-ITS are requested*

Framework urgently needed! Technology ready, industry ready to deploy in EU by 2019 if legal certainty is in place sufficiently in time

# Learning by doing approach!







# Establishing the Pan-European Strategy for the Deployment of Connected and Cooperative Driving December 2016





# C-ITS PLATFORM PHASE II: SUPPORTING COMMON VISION OF C-ITS DEPLOYMENT ACROSS MEMBER STATES & STAKEHOLDERS

CONTINUING WORK ON KEY  
BUILDING BLOCKS

BUILDING BRIDGE CONNECTIVITY –  
AUTOMATION INFRASTRUCTURE ISSUES

WG SECURITY

WG  
COMPLIANCE  
ASSESSMENT

WG  
DATA  
PROTECTION

WG PHYSICAL  
& DIGITAL  
INFRASTRUCTURE

WG  
ENHANCED  
TRAFFIC  
MANAGEMENT

WG ROAD  
SAFETY  
ISSUES

WG PUBLIC  
TRANSPORT,  
C-ITS &  
AUTOMATION  
IN URBAN  
AREAS

WG HORIZONTAL ISSUES



@Transport\_EU

Mobility and  
Transport

CONNECTING  
EUROPE



## WG C-ITS, AUTOMATION AND ROAD SAFETY

### ● Behaviour:

- Legal instruments: International Conventions on Traffic Rules (Vienna 1968, Geneva 1949) & National Highways codes
- Discussion fora: UNECE WP1, High Level Group on Road Safety (MS representatives)

### ● Vehicles:

- Legal instruments: European type approval, UNECE Regulations
- Discussion for a: GEAR 2030, Working Group 2, Project Team Regulatory & Policy Issues

### ● Infrastructure:

- Legal instruments: EU law (Infrastructure directive, Tunnel Directive E-Call) & UNECE Convention Road Signs and Signals

### ● Horizontal topics:

- Standardisation, data, research





## WG C-ITS, AUTOMATION AND ROAD SAFETY

Automation and connectivity ...

... **influence/change** road user **behaviour**:

- The way humans interact with the vehicle they drive
- The way humans interact with automated vehicles they encounter (as drivers, pedestrians, cyclists ...)
- The way humans choose how to move about in traffic

... imply '**behaviour**' and '**vehicle technology**' will be intertwined:

- Rules of behaviour (traffic rules) will be coded into the vehicle systems.





## WG C-ITS, AUTOMATION AND ROAD SAFETY

Automation and connectivity have a big potential to increase safety but pose new safety challenges:

- For drivers of connected and automated vehicles
  - e.g.: partially automated driving may induce unsafe distraction (driver should be attentive/ready but is not)
- For drivers in relation to automated vehicles
  - e.g.: they may have to change behaviour toward automated vehicle like for example avoid pulling in between two 'platooned' trucks
- For other road users
  - e.g.: pedestrians may wish/need to know whether an approaching vehicle is driving in fully automated 'mode'



## WG C-ITS, AUTOMATION AND ROAD SAFETY

### Objectives of the work

- Identify **opportunities and challenges** for road **safety** resulting from the of partially of fully automated vehicles and/or C-ITS
- Identify **adaptations to traffic rules** needed to address them
- Contribute to the **coordination** between '**traffic rules authorities**' and '**vehicle regulations authorities**'



## WG C-ITS, AUTOMATION AND ROAD SAFETY

### WG TASKS :

Identify road safety topics not addressed (linked to C-ITS deployment)

Day 1 and Day 1,5 technologies - Road safety effects

Mitigates risk – Creates safety considerations?

Concerns and considerations if scaling up, replicating?

### Examples:

Safety concerns if applied in a large number of vehicles?

Safety concerns if there is a mix of users/those that don't have?

One road user may be exposed to sometimes having the technology while not having it other times – is that a concern?





**IN PARALLEL AND IN COORDINATION,  
WE WORK ON AUTOMATION**



**Gear 2030:** Support Public and Private stakeholders on vehicle automation

**EU Strategy:** Vehicles of the future (including roadmap for automation)

**Industry led dialogue**  
with telecom/automotive  
sectors and Alliance



@Transport\_EU

Mobility and  
Transport

**CONNECTING  
EUROPE**





## The GEAR 2030 roadmap on highly automated and connected vehicles

**Three pillars for highly automated and connected vehicles:**

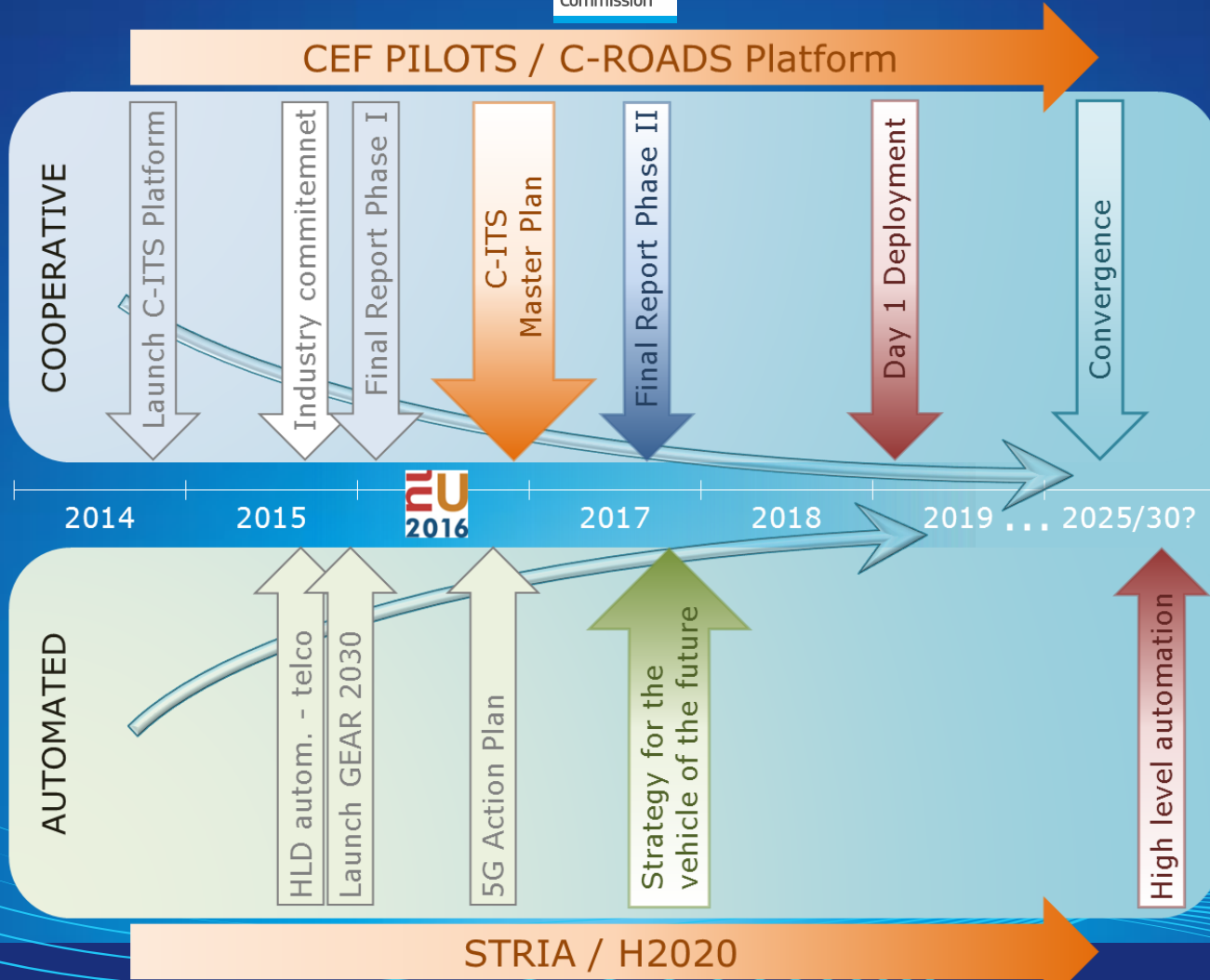
- **Legal and policy issues. (WG2/PT1)**
- **Coordination of financing support Issues (WG2/PT2)**
- **Competitiveness/International aspects (WG1/PT3 and WG3)+UNECE**



## ***Road safety for upcoming systems (Preliminary Recommendations in relation to Road Safety)***

- Human Machine Interface (HMI) important for partially/highly automated vehicle. Tasks of the vehicles and the driver to be clarified/regulated. To be discussed in WP1/WP29 ASAP:
  - The car shall ensure that the driver is active when it is needed by the system
  - The driver shall be aware of the limits of the system
- Vienna convention OK up to SAE Level 4 of automation provided that there is a driver/operator to be confirmed by Member States in UNECE.





## *More information*



- **Directorate-General for Mobility and Transport**  
[http://ec.europa.eu/transport/index\\_en.htm](http://ec.europa.eu/transport/index_en.htm)
- **ITS Action Plan and Directive**  
[http://ec.europa.eu/transport/its/road/action\\_plan\\_en.htm](http://ec.europa.eu/transport/its/road/action_plan_en.htm)
- **White Paper 2011**  
[http://ec.europa.eu/transport/strategies/2011\\_white\\_paper\\_en.htm](http://ec.europa.eu/transport/strategies/2011_white_paper_en.htm)

*Thank you for your attention !*

