

# Road safety: driven by innovation

## Active safety technology & automation

**ASECAP ROAD SAFETY CONFERENCE**

EUROPEAN ECONOMIC AND SOCIAL COMMITTEE

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# ACEA MEMBERS

**BMW Group**



**DAIMLER**



**IVECO**



**TOYOTA**

**VOLKSWAGEN**  
AKTIENGESELLSCHAFT

**VOLVO**



# INDUSTRY COMMITMENT

- **Safety remains a key priority**
- **Progress made: EU road fatalities have been reduced from 54,000 in 2001 to 26,000 in 2015**
- **Still too many, plus trend is slowing down**
- **Through innovation, the automotive industry continues to invest in safer, cleaner and smarter mobility solutions**



# A SUCCESSFUL APPROACH

- **We need a fully integrated approach**
- **A successful safety strategy includes:**
  - Innovation in vehicle technology
  - Cooperative intelligent transport systems (C-ITS)
  - Road user behaviour and training
  - Better road design and maintenance
  - Enforcement of existing traffic regulations



# A SUCCESSFUL APPROACH

- **Road safety is a complex combination of many factors and interactions between different players**
- **That's why Europe needs a coherent policy framework**
- **ACEA supports update of the General Safety Regulation**
  - Have to make choices to deliver the biggest impact
  - Focus on the most cost effective solutions

# Safety innovation

What to expect for the future?

- Human error is main cause in 90% of all accidents (eg poor anticipation, distraction and violation of traffic laws)
- Active safety systems can help to avoid accidents or mitigate their impact significantly
- Automated driving: increasing degrees of automation will take over some tasks (or even all, in the long run) from the driver, minimising the impact of human error



- **Objective: to avoid accidents or reduce their impact**

- **Priorities:**

- 1. Autonomous emergency braking system**

- Step 1: moving and stationary obstacles
- Step 2: pedestrians (Euro NCAP 2016)
- Step 3: cyclists (next)



- 2. Lane keeping assistance**

# AUTOMATED DRIVING

- Great potential to further reduce the number of accidents

## TODAY

Synergy of new sensors and functionalities of active systems and partial automation increases traffic safety, also beyond automated driving scenarios



## TOMORROW

Potential to increase traffic safety by replacing the driver in automated driving scenarios



# How do we get there?

## Working together

# HOW DO WE GET THERE?

- **Auto industry is equipping latest vehicles with:**
  - Active safety technologies to prevent accidents from happening
  - Increasing levels of automation to take over (certain) tasks from the driver
- **But vehicles are only one piece of the (complex) puzzle**
  - All stakeholders need to work together before the potential of active safety technologies and automation can come to full fruition
  - Important role for infrastructure and road operators, as well as policymakers
- **Key challenges:**
  - Connectivity (C-ITS)
  - Physical infrastructure

# CONNECTIVITY CHALLENGES

- **C-ITS, communication between:**
  - Vehicles (V2V) – eg emergency braking
  - Vehicle and infrastructure (V2I) – eg speed advice
- **Infrastructure requirements**
  - Networks need to provide full coverage with low latency
  - Cross border: exchange of safety and traffic information should be seamless
  - Investments in 'digital highways' necessary to get connectivity where people drive (so far, investments have mainly occurred in urban areas)
  - **Actions:**
    - European Commission's C-ITS strategy (November 2016) important step
    - Industry dialogue: European Automotive Telecom Alliance



# CONNECTIVITY CHALLENGES

- **Quantity and quality of information made available**

- Information needs to be exhaustive/complete and accurate/up-to-date
- Examples: speed limits, traffic jams, construction sites, obstacles, etc



- **Access to vehicle data for third-party services**

- Manufacturers willing to share data for C-ITS purposes
- But vehicle integrity (safety, security and liability) should always come first
- Direct third-party access would:
  - facilitate hacker attacks (data interfaces increase number of entry points);
  - pose additional safety risks in terms of driver distraction (if external parties get uncontrolled access to on-board systems).



# PHYSICAL INFRASTRUCTURE

- **Road infrastructure**

- Design of infrastructure – eg truck traffic shouldn't cross bike lanes
- Maintenance of roads also key – eg unclear traffic signs



- **Readable roads**

- Tomorrow's cars need to be able to properly 'read' roads, ie poor road surface marking will affect safety



- **'Offline' C-ITS information**

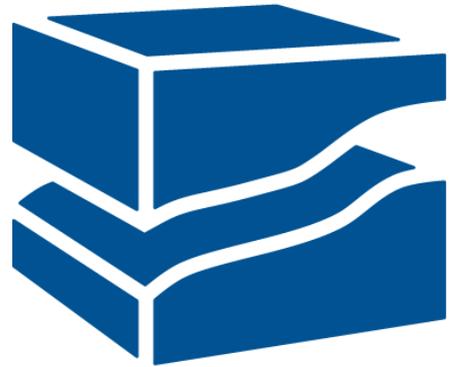
- Need partnership with road operators to provide safety-relevant C-ITS information to non-equipped road users (eg using signs)



# CONCLUSION

- **Safety remains top of mind**
- **Innovation will be key to enhancing safety**
- **Need for a coherent European approach**
- **Call for a partnership approach with road operators**

# THANK YOU FOR YOUR ATTENTION



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