

# *Developments in vehicle safety technology*

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# DEVELOPMENTS IN VEHICLE SAFETY TECHNOLOGY

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PIAB Conference

Dublin, 10<sup>th</sup> April 2019

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European Transport Safety Council

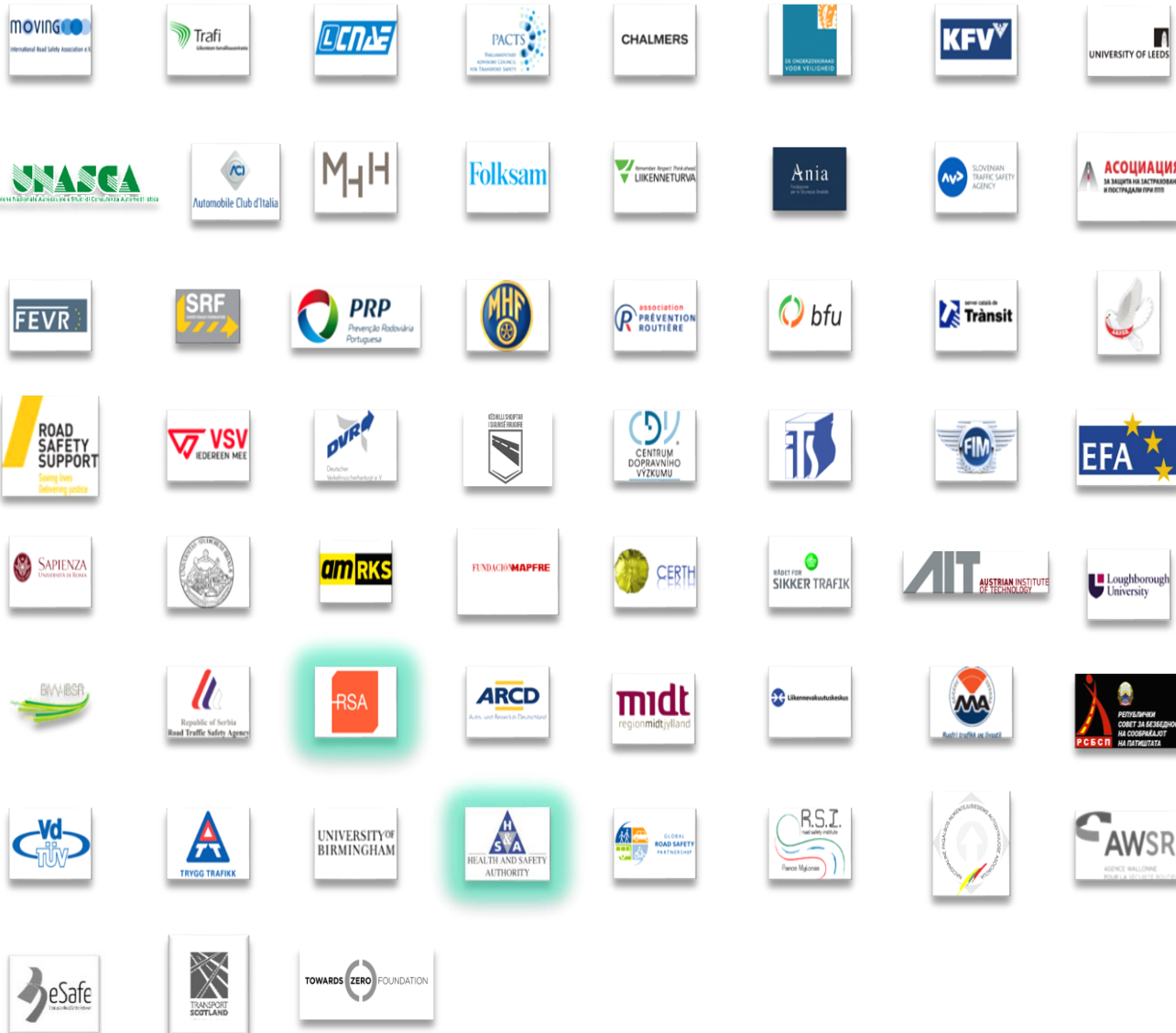
Laurence Atchison

Project Officer



- ✓ **A science based approach to road safety**
- ✓ **Secretariat** in Brussels
- ✓ **60 member organisations** from across Europe
- ✓ More than **200 experts** contributing to ETSC's work
- ✓ The European Commission, Member Organisations, Member States and corporate sponsors are funding our work

# ETSC NETWORK



# ACTIVITIES

## ETSCIES



Monitoring  
EU  
transport  
safety  
policy



Road  
Safety  
Performance Index  
(PIN)

**SMART**   
SOBER MOBILITY ACROSS ROAD TRANSPORT

 **YEARS**  
— YOUNG ROAD USERS

**REVIVE**  
IMPROVING POST-COLLISION  
RESPONSE AND EMERGENCY  
CARE IN EUROPE

  
**PRAISE**  
Work-Related Road Safety

**SAFE  
SOBER** 

 **iSAFER**  
INTELLIGENT SPEED ASSISTANCE  
FOR EUROPEAN ROADS



**DRUG  
DRIVING**

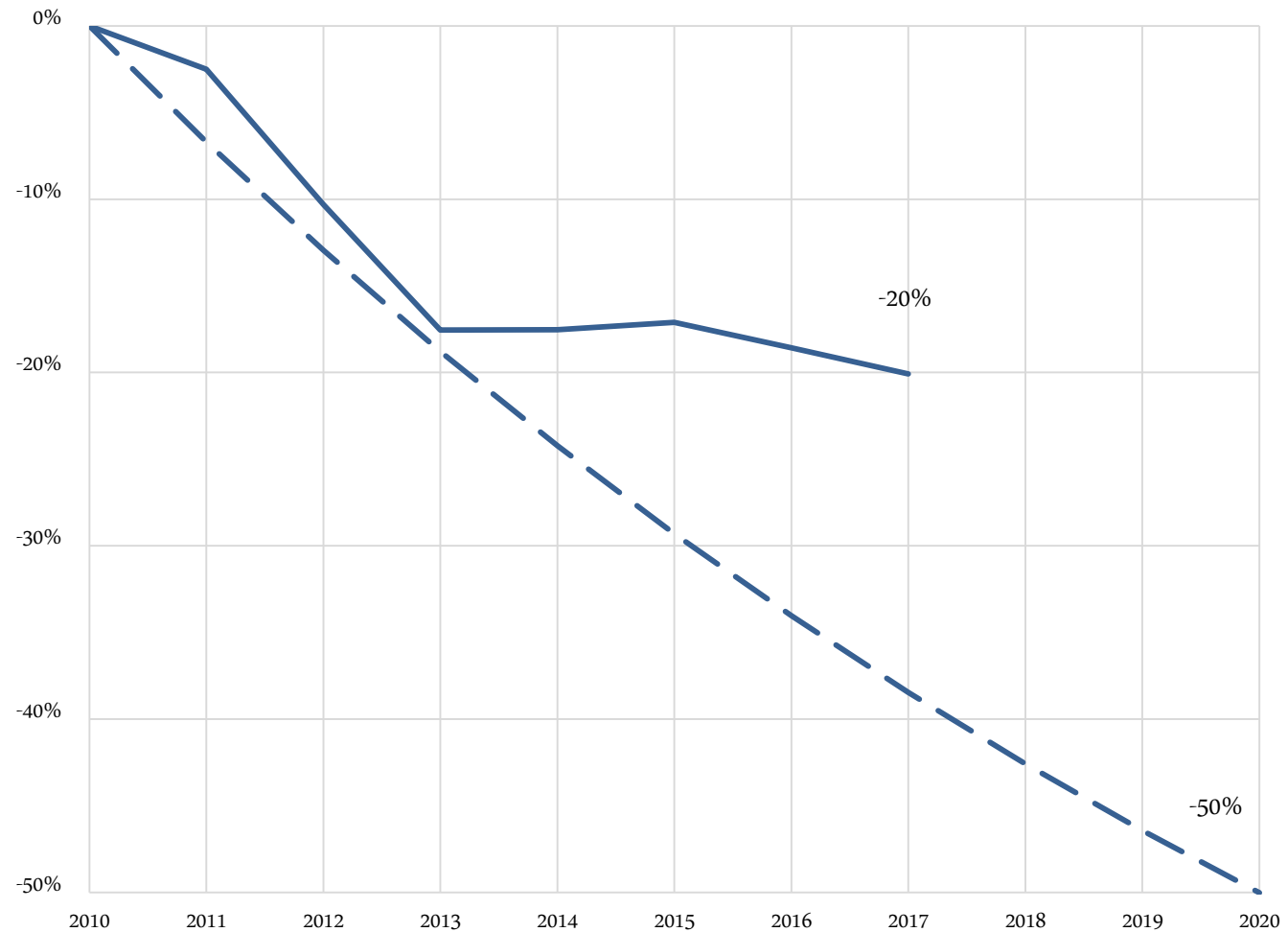
# 25,10

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0 people died in road  
traffic in the EU in  
2018

# CHANGE IN ROAD DEATHS (%)

## 2010-2017



# 135,00

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# 0

seriously injured in road traffic in  
the EU in 2016 according to  
MAIS3+ definition

*\*MAIS3+ estimates by the European Commission*

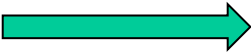


17 MAY 2018: 3<sup>rd</sup> MOBILITY PACKAGE

PUBLISHED BY

THE EUROPEAN COMMISSION

Two legislative proposals:

- 
- Revision of the General Safety 2009/661 (and Pedestrian Safety 2009/78 Regulations)
  - Revision of the Road Infrastructure Safety Management Directive 2008/96

Two communications

- Strategic Action Plan on Road Safety
- Strategy on Automated Driving

[https://ec.europa.eu/transport/modes/road/news/2018-05-17-europe-on-the-move-3\\_en](https://ec.europa.eu/transport/modes/road/news/2018-05-17-europe-on-the-move-3_en)

# GENERAL SAFETY REGULATION

- Type-approval system before vehicle go on the road
- Exclusive competence of the EU
- Significantly improved vehicle safety and road safety
  - International recognition
- Protection of occupants and vulnerable road users

## Proposed Revision

- 17 Measures to improve vehicle safety
- Focus on 'advanced driver assist



# What's included?

INTELLIGENT SPEED ASSISTANCE (ISA) ✓

AUTOMATED EMERGENCY BRAKING (AEB) WITH PED/✓YC  
DETECTION

✓  
IMPROVED DIRECT VISION STANDARD

✓  
ALCOHOL INTERLOCK INTERFACE DEVICE

✓  
EVENT DATA RECORDERS

✓  
IMPROVED PROTECTION FOR PEDESTRIANS AND CYCLISTS

✓  
LANE KEEPING ASSIST

✓  
DRIVER DISTRACTION MONITORING

# Intelligent Speed

## Assistance



### INTELLIGENT SPEED ASSISTANCE (ISA)

- Speed is a primary contributory factor in 1/3 of fatal collisions
- ISA actively helps the driver to keep to the speed limit
- Overridable
- 20% reduction in road deaths, 30% reduction of collisions

How does the system know the speed limit?

- Speed sign recognition and/or
- Digital maps and/or
- Cooperative-ITS



# Event Data Recorders

## Event Data Recorders (EDRs)

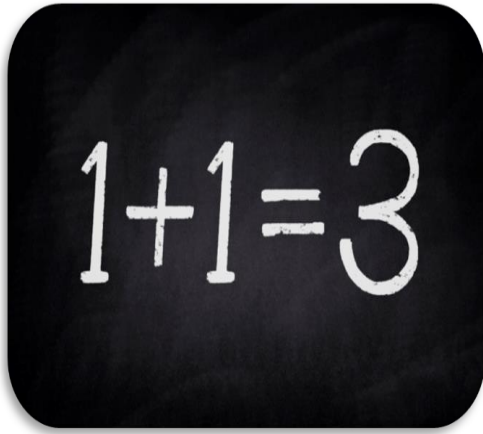
- A few seconds of data before, during and after a collision will be recorded.
- The data will be anonymous
- Accessible only by approved authorities
- Purpose is collision investigation to help prevent future collisions



## Privacy concerns

- Taken into consideration by the European Parliament in particular
- Car data is subject to EU data protection legislation (GDPR)

# Combined Benefits



Expected to:  
Save 25,000 lives  
and 140,000  
serious injuries  
over 15 years

With ISA, top speeds are curtailed. So:

- AEB will have more opportunity to prevent crashes
- When there are crashes, occupant protection systems will have a greater chance of preventing harm

# What next?

- Package of measures was approved by the European Parliament earlier this year
- Provisionally approved in Trilogue negotiations two weeks ago.
- Next steps:
  - Potentially adopted before European Parliament elections this May
  - If not, by the end of 2019.
- Mandatory in 2022/2024
  - Later dates for some measures e.g. Direct Vision.



# TELEMATICS

- Becoming increasingly common
  - Professional vehicle fleets (esp. in UK/IE)
  - Insurance packages for young drivers.
- A useful driver monitoring tool:
  - Safety implications
  - Financial benefits (fuel/repairs/insurance)
  - Research (in-house and external)
  - Collision and incident investigation
- Data and privacy issues abound

*"It is unfortunate that there has been so little evaluation of an intervention that has such potential for research"*





# AUTOMATION AND THE FUTURE

- Automated driving technologies already preventing collisions and deaths on our roads

- This will continue to increase with the new raft c
- But – be wary of overestimates!



- The theoretical safety benefits are huge, but unknown if they will emerge

- Scenario we likely face is one of shared roads (automated/regular)
- Implications for this for safety and “responsibility”



# AUTOMATION AND THE FUTURE

- How will regulators respond?
  - Difficult to keep up with the progress of change
  - A lot of push-back from vehicle manufacturers
    - Happy to innovate, less so to regulate...
- A lot of work is ongoing into the C-ITS required for automation
- Latest vehicle technology measures are a step on the way
- Cautious optimism.... Let's not forget about the present



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# ANY QUESTIONS?



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