

European  
Automobile  
Manufacturers  
Association

AEBS/LDWS-01-11

# General Safety Regulation

## ACEA discussion paper

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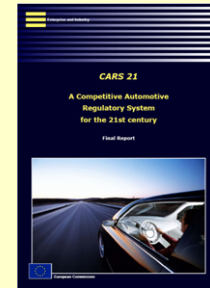
*Director Safety*





# General Safety Regulation – Legislative Framework

- Focus of the EU Road traffic safety policy:  
**Halving the number of road traffic fatalities by 2010** (from 2001)



- **CARS 21**
  - **Vehicle related regulation**
    - concentration of 50 pieces of legislation into one single directive (simplification of type approval regulation)
  - **Technical Requirements** focused on UN-ECE only (replaces the “dual system” EU / UN-ECE)
- **“General Safety Regulation”** for Europe proposes the mandatory equipment of commercial vehicles with safety- and assistance-systems, e.g.:
  - Lane Departure Warning Systems
  - Automated Emergency Braking Systems



# General Safety Regulation – ACEA

## “General Safety Regulation”

### Article 10

#### Advanced vehicle systems

1. Subject to the exemption or derogations established in accordance with Article 15(3)(a), vehicles in categories **M2, M3, N2 and N3** shall be equipped with an **Advanced Emergency Braking System** which shall meet the requirements of this Regulation and its implementing measures .
2. Subject to the exemptions or derogations established in accordance with Article 15(3)(a), vehicles in categories **M2, M3, N2 and N3** shall be equipped with a **Lane Departure Warning System** which shall meet the requirements of this Regulation and its implementing measures .

**ACEA will contribute to define safety aspects and definition of technical requirements**



# Automated Emergency Braking Systems, Lane Departure Warning Systems → EC - directive

Segment	Vehicle	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Comment
Regulation	<p><b>AEBS and LDWS</b> all CV &gt;3,5t and city buses/coaches (N2, N3, M2, M3)</p> <p><b>Scope to be clarified within the framework of a cost-benefit analysis</b></p>							11/13 NT		11/15 FR			

▼ New Type    ▼ First Registration

**Scope to be clarified within the framework of a cost-benefit analysis.**  
**Technical requirements for the systems shall be defined until end 2011.**  
**European Commission started Working Party on GSR.**  
**Legislative process in Geneva will start soon, OICA participating.**



# General Remarks - Database

## Database for cost/benefit analysis of Safety Systems for Trucks and Buses/Coaches

- **eSafety WG Accident Causation** evaluation:
  - Many methodologies.
  - Many data sources needed (each database can make a contribution but no universal solution).
  - Exposure data missing.
  - Near miss data interesting (but collection difficult using current methods).
  - Methodologies not necessarily identified or mature.
  - Much more complex for active safety than passive safety.
- **eSafety HDV WG** results reflects **common position** of all major OEM of Trucks and Buses/Coaches on necessity of AEBS systems for trucks > 12t.

**Assessment of the eSafety HDV WG for vehicles >12t still the most advanced and reliable all over Europe.  
Database weak for all other commercial vehicle categories.**



# General Remarks – Impact Assessment

## 2 step approach for a proper impact assessment

- As the Accidentology database is weak, a proper **impact assessment could be covered by a 2 step (Pareto) approach:**

**Step 1:** evaluate AEBS/LDWS by **use case** (drowsiness-> highway application),  
vehicle category (highway trucks),  
number of vehicles sold, average mileages,

→ vehicle categories to be equipped with priority,

→ exemptions from mandatory installations,

→ system performance level, system constraints → necessary to address use case

**Step 2:** the remaining vehicle categories will be investigated by the Commission (incl. a proper cost/benefit analysis) and can be subject to an amendment to the regulation).

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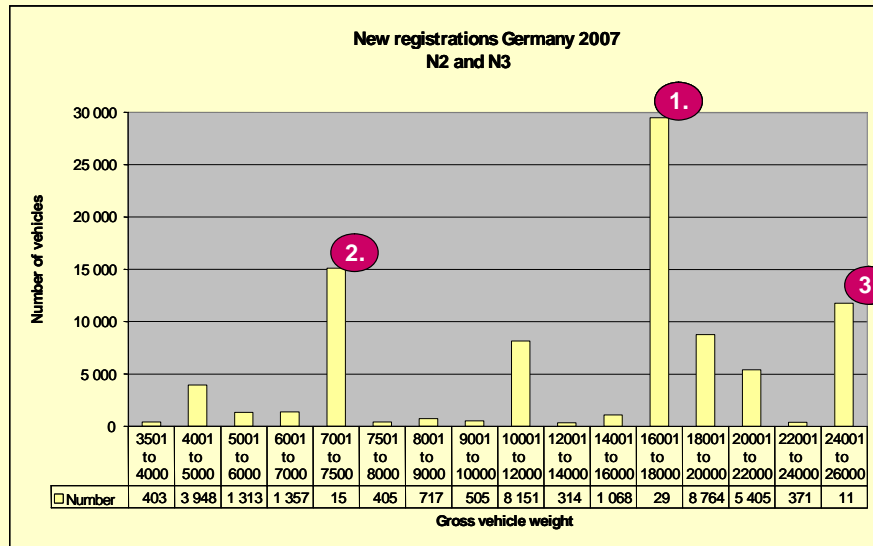


# General Safety Regulation – Potential Benefit (example N2, N3)

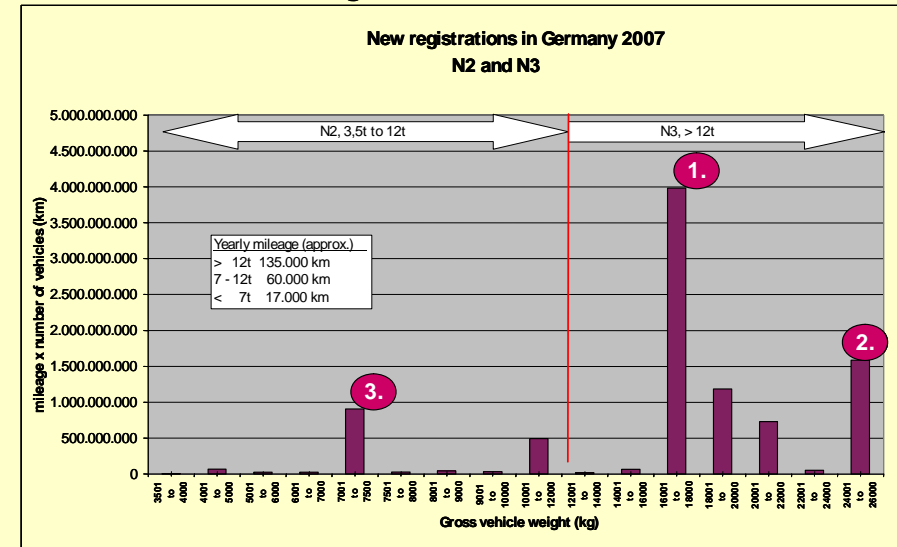
If the Accidentology database is weak, the **risk of an accident** can be derived from vehicle categories, the number of vehicles in that categories in the market and the mileage these vehicles are covering and taking **typical use cases** into account:

→ priorities for equipment

**Absolute numbers**



**Relative numbers to mileage**

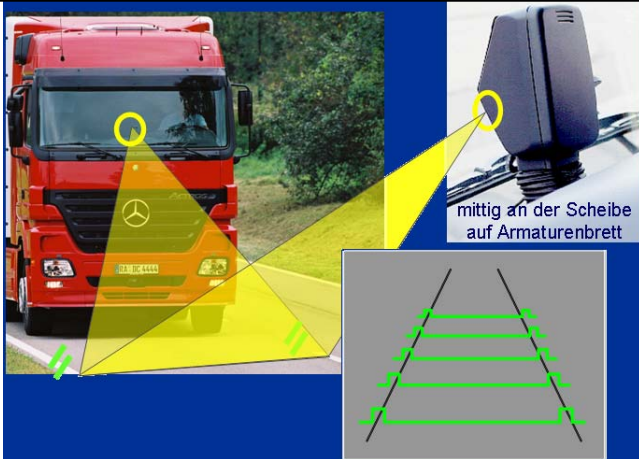


**High potential for the improvement of safety for N3 14-16t.  
Indication for N2 as well.  
Consideration of typical uses cases crucial.**



# Lane Guard systems

## Available for Trucks and Coaches



## Scope of application

- LDWS could be widespread available for trucks and buses/coaches by 2013
  - Some vehicles are operated in a complex urban traffic environment that is not covered by existing LDWS by now and/or the benefit is limited
- potential exemptions for  
city buses,  
vehicles for public services  
(e.g. garbage trucks),  
special vehicles (e.g. fire brigade)

**Mandatory fitment as from end 2013 desirable from safety point of view  
for highway traffic**





# Automated Emergency Braking

## Scope of application

- Introduction after 7 years of intensive development
  - AEBS currently only available for Mercedes vehicles
  - AEBS currently only available for tractor/semitrailer combination and coach
- Target: system performance: accident reduction for use case highway traffic
- Additional research required stationary obstacles

## Available for Trucks and Coaches



**Accident reduction desirable for traffic scenarios with huge potential. Widespread mandatory fitment not justifiable and not feasible from end 2013. Premature mandatory fitment could probably lead to more severe accidents.**



# The different steps – discussions to be started

## Step 1 (example):

**Mandatory equipment (LDWS) for N3, M3 but only long distance  
(delay necessary for AEBS)**

## Step 2 (example):

**In depth cost/benefit analysis for M3 city bus, M2, N2**

## Exemptions (examples:

**Off-Roader, 8x4 vehicles...**

**UN/ECE vehicle categories may not be sole criteria for classification.  
A proper cost/benefit analysis must also be based on use cases.  
System performance levels and definition of technical requirements integral  
part of a cost/benefit analysis.**



**Thank you!**



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