



Transport Division of UNECE

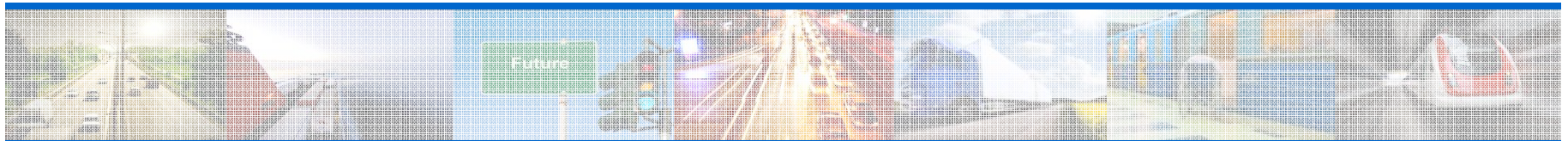
Vehicle Regulations and Transport Innovations Section

World Forum WP.29 Regulatory Development Advanced Emergency Braking System

by Juan Ramos, Chief, Vehicle Regulations
and Transport Innovations Section

at the Working Party on Road Traffic Safety (WP.1)

Geneva, 19 March 2012

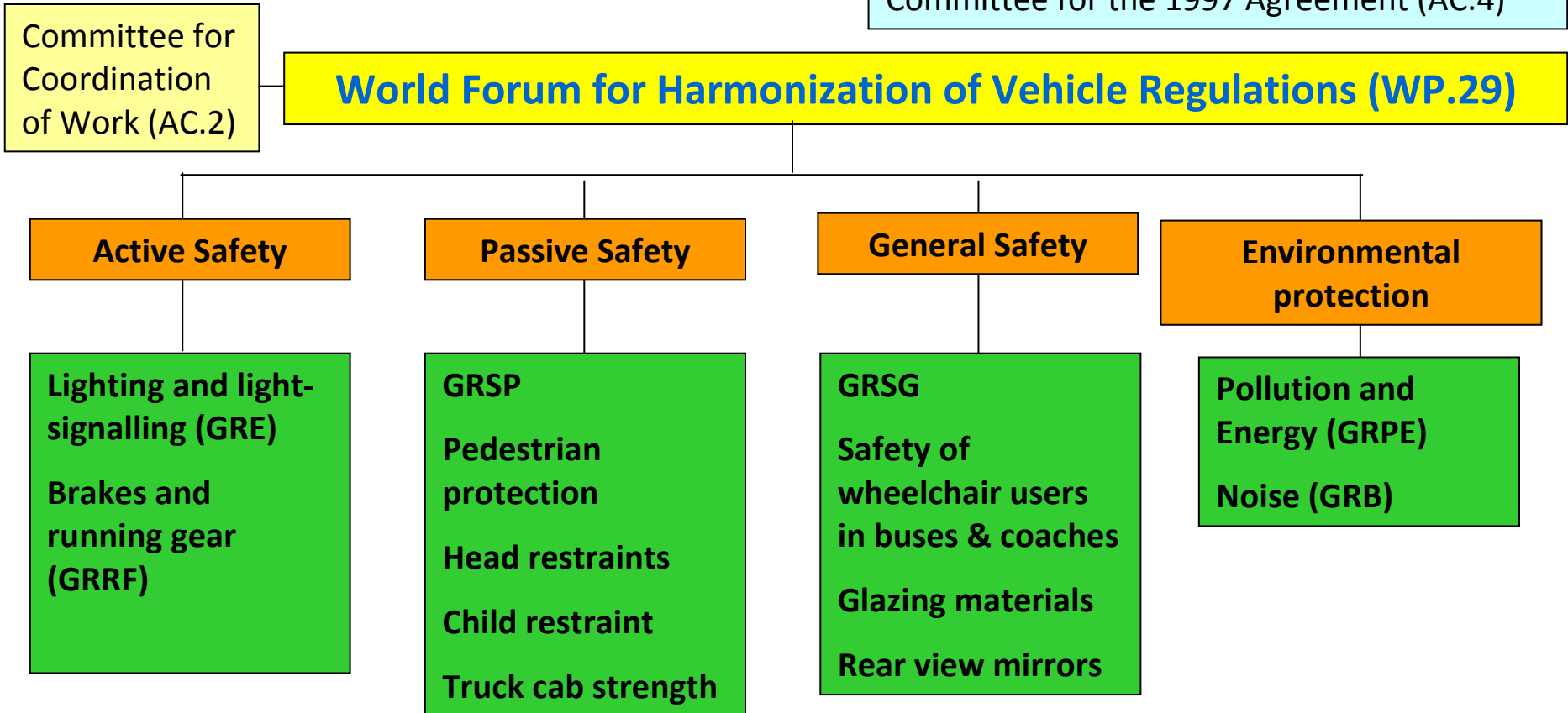




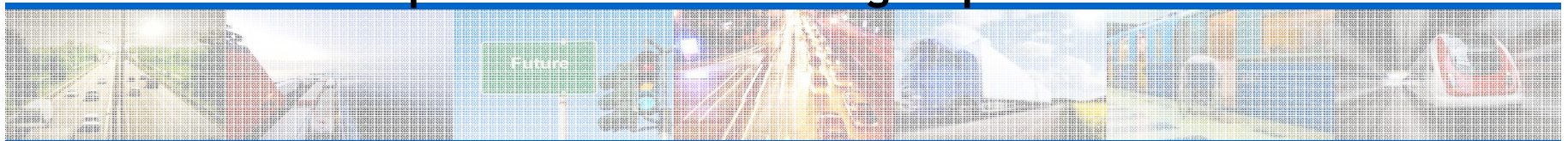
Vehicle Regulations and Transport Innovations Section

The WP.29 structure

Committee for the 1958 Agreement (AC.1)
Committee for the 1998 Agreement (AC.3)
Committee for the 1997 Agreement (AC.4)



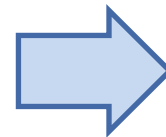
> 40 non-permanent technical groups





Vehicle Regulations and Transport Innovations Section

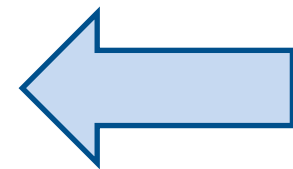
Role of government experts in the decision making process (1958 & 1998 Agreements)



The WG adopt the proposal & send to WP.29. Only CPs have right to vote



Committees adopt the proposal with 2/3 majority/unanimity



The UN Reg/Amend is adopted after 6 months if no disagreement from >1/3 CPs
UN GTR to the Global Registry

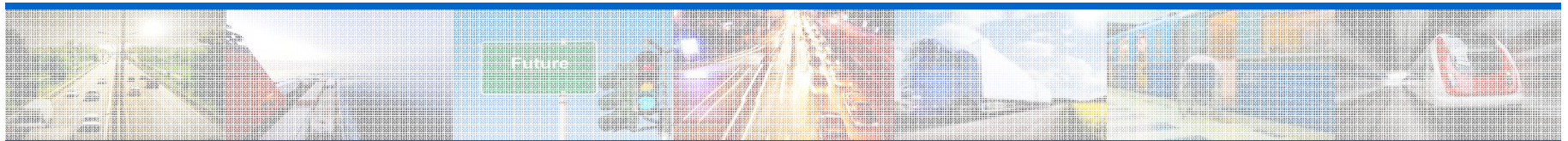
CPs applying: Regulation bound to apply GTRs to adopt them in own law





ADVANCED EMERGENCY BRAKING SYSTEM (AEBS)

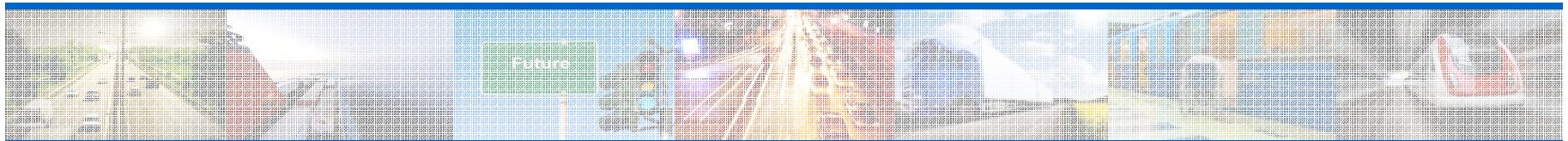
- *Definition:* A system which can automatically detect a potential forward collision and activate the vehicle braking system to decelerate the vehicle with the purpose of avoiding or mitigating a collision
- *Scope:* System to be fitted to trucks and coaches (M_2 , M_3 , N_2 , N_3)
- [UNECE life demonstration \(12 May 2011\)](#)





Main characteristics of AEBS

- *Collision warning phase*: Directly preceding the emergency braking phase, the system provides as a minimum an acoustic and haptic warning, so that an inattentive driver is made aware of the critical situation
- *Emergency braking phase*: Starting when the AEBS emits a braking demand for at least **4 m/s²** deceleration to the service braking system of the vehicle
- During both phases, the driver can at any time take control and override the system



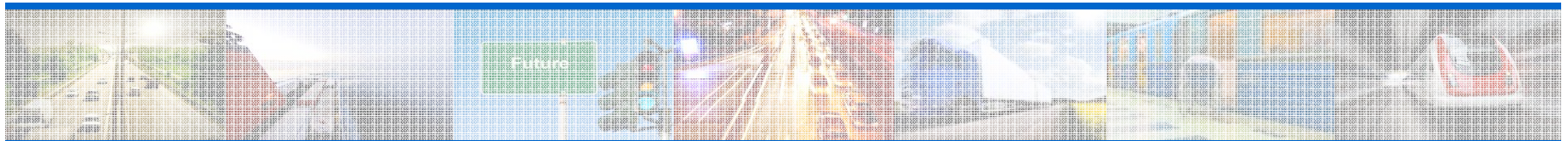


New UN Regulation on AEBS annexed to the 1958 Agreement

Two-Step Approach (different stringency):

- Original version of the new Regulation (mitigation): AEBS with the purpose of mitigating a collision
- 01 series of amendments (avoidance): AEBS with the purpose of avoiding a collision

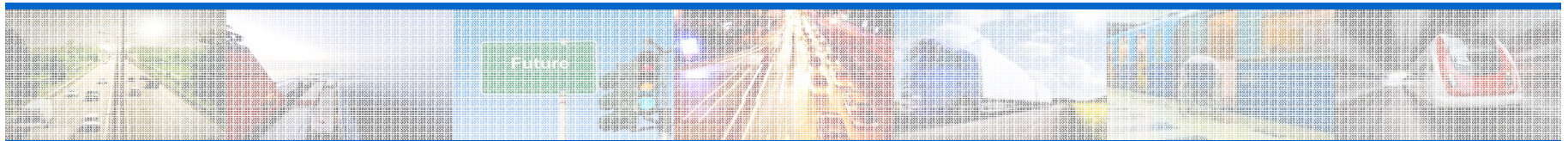
Both proposals are expected to be voted by WP.29
(June or November 2012 session)





Performance requirements for new vehicles:

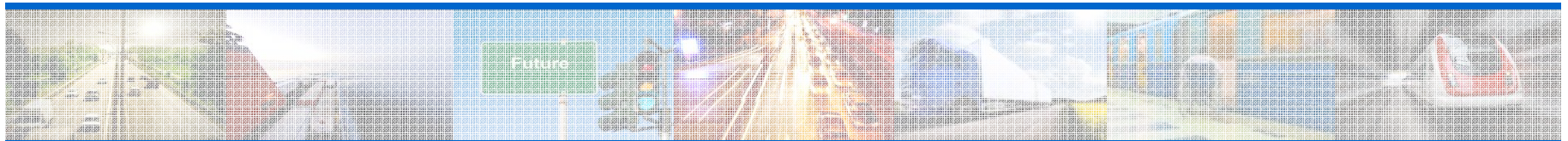
- *Warning and activation test with a stationary target:*
The vehicle approaches the stationary target in a straight line at a specified initial speed and distance
- *Warning and activation test with a moving target:*
Same as above, but the target is moving at a specified speed
- Performance requirements with respect to timing of warning modes and to total speed reduction have to be fulfilled





Impact

According to a European study, the fitting of AEBS on trucks and coaches could save up to 1,000 lives per year and 4,000 serious injuries in the European Union alone, and many more worldwide since it will encourage manufacturers to fit AEBS as standard on trucks and coaches for a wider range of markets





Thank you for your attention



More information at: <http://www.unece.org/trans/main/welcwp29.html>