Further improvement for AEBS–HDVs

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1. Background (National Policy)

2. Accidentology

3. Others
Traffic accidents and National Target

- Fatalities
- Injuries [m]
- Accidents [m]

Vehicle Safety Target: ▲ 1,000 fatalities

Target
- Fatalities
- Injuries Below 2,500
- Injuries Below 50 m

Fatalities
- 7th Gov. Safety Program
- 8th Gov. Safety Program
- 9th Gov. Safety Program
- 10th Gov. Safety Program

Accidents [m]
- Injuries [m]


- 3,215
- 460,715
- 381,002
Motor Vehicle Safety Policy (June 24th 2016)

<Four Pillars>

◆ Safety Measures for Child and Elderly Person
◆ Safety Measures for Pedestrian and Cyclist
◆ Safety Measures for Serious Accidents related to HDVs
◆ Utilization of Advanced Technology

Necessary to reduce fatalities and injuries (pedestrians and cyclists) caused by HDVs with advanced technology such as AEBS
Fatalities and Injuries by road user type

- Fatalities: pedestrians and cyclists account for 50% (70% of them are elderly persons (age 65+))
- Injuries: pedestrians and cyclists account for 27%
Fatality rate by vehicle category

- HDVs have higher fatality rate* over CtP, CtB and CtC, compared with LDVs

  *rate of number of fatality cases divided by number of all injury cases

Source: 2016 Road traffic accident statics (ITARDA)
75% of death-caused accidents are on non-highways related to HDVs (M2, M3, N2 and N3).

Source: 2016 Road traffic accident statics (ITARDA)
Accident analysis (CtP, CtB)

C*tP accidents over speed at hazard perception

C*tB accidents over speed at hazard perception

Source: 2016 Road traffic accident statics (ITARDA)
Accident analysis (CtC)

C*tC (rear-end collision with moving vehicle) accidents over speed at hazard perception

*Cars: M2, M3, N2 and N3

C*tC (rear-end collision with stationary vehicles) accidents over speed at hazard perception

Source: 2016 Road traffic accident statics (ITARDA)
Technical feasibility

- More new HDVs have been equipped with AEBS.
- UNR131-02 will be mandatory for all the new HDVs after Nov 2021.

![Equipment rate of new car sales with AEBS](chart.png)
Detection and brake-control technology is available for CtP, CtB, and further CtC.
Summary

- Immediate kick-off for technical requirements is desired to spread AEBS to the market, which has significant potential for reducing accidents.

- Further VRU (pedestrians and cyclists) protection is necessary for HDVs which may have huge impact on society.

- 75% of fatalities caused by HDVs are on non-highway (city, suburbs). Thus, it is important to take measures for CtP and CtB accidents.

- All the new HDVs will be mandated by UNR131-02 after Nov. 2021. Thus, expansion to city mode, in addition to improvement of highway mode, is necessary for next step.

Japan, as one of the co-chair countries, would like to contribute to technical discussion on AEBS-HDVs, incorporating the experience of UNR152.
Thank you for your attention