

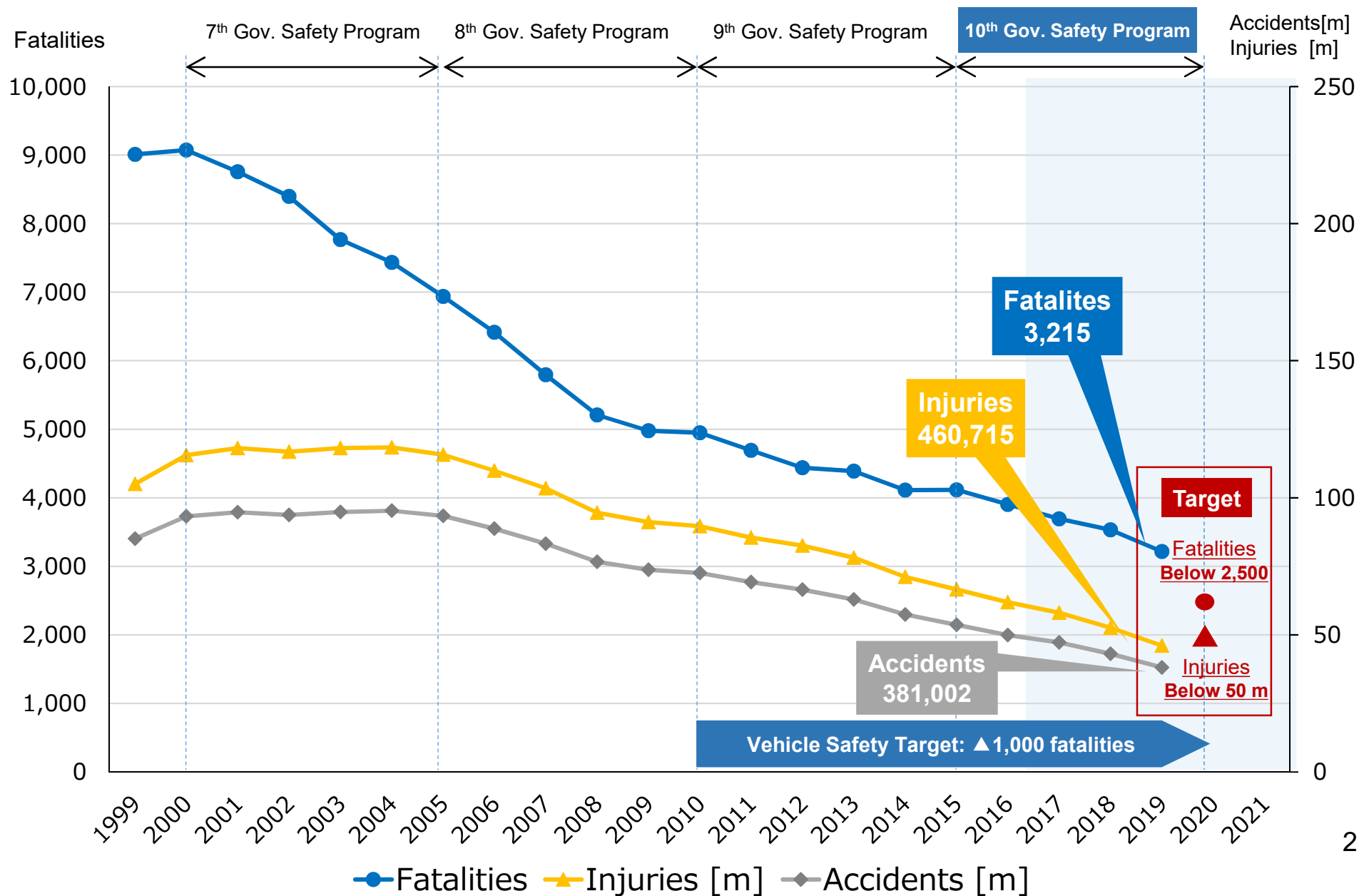
Further improvement for AEBS-HDVs

MLIT, Japan

9th Nov. 2020

1. Background (National Policy)
2. Accidentology
3. Others

Traffic accidents and National Target



Motor Vehicle Safety Policy (June 24th 2016)

<Four Pillars>

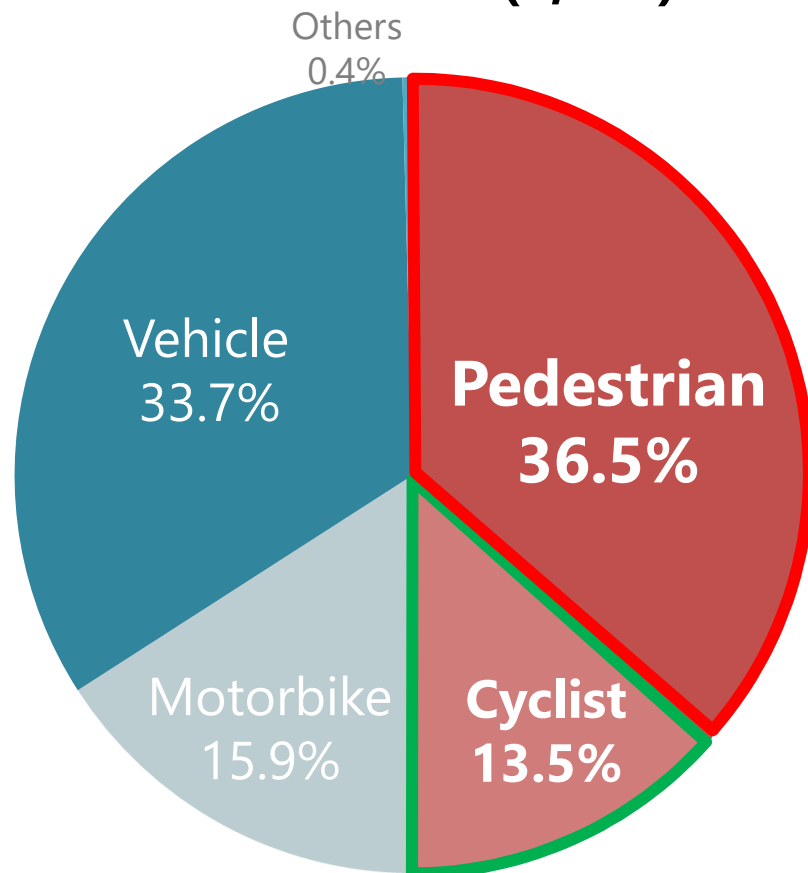
- ◆ **Safety Measures for Child and Elderly Person**
- ◆ **Safety Measures for Pedestrian and Cyclist**
- ◆ **Safety Measures for Serious Accidents related to HDVs**
- ◆ **Utilization of Advanced Technology**

 Necessary to reduce fatalities and injuries (pedestrians and cyclists) caused by HDVs with advanced technology such as AEBS

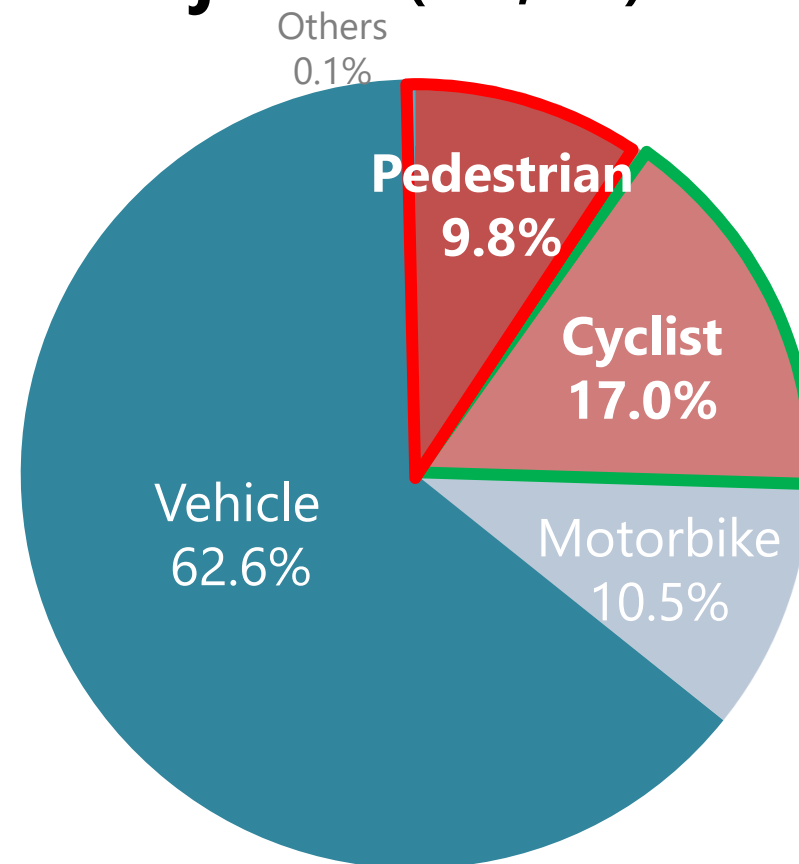
Fatalities and Injuries by road user type

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

Fatalities (3,215)



Injuries (461,775)

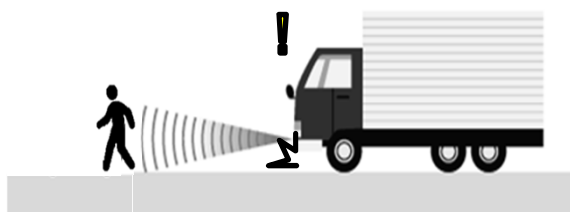


Source: 2019 Road traffic accident statics (National Police Agency)

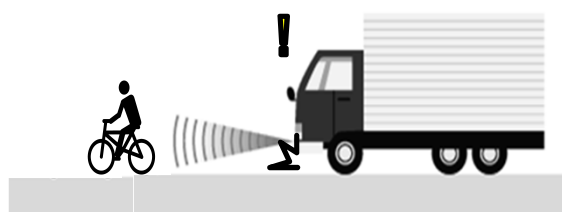
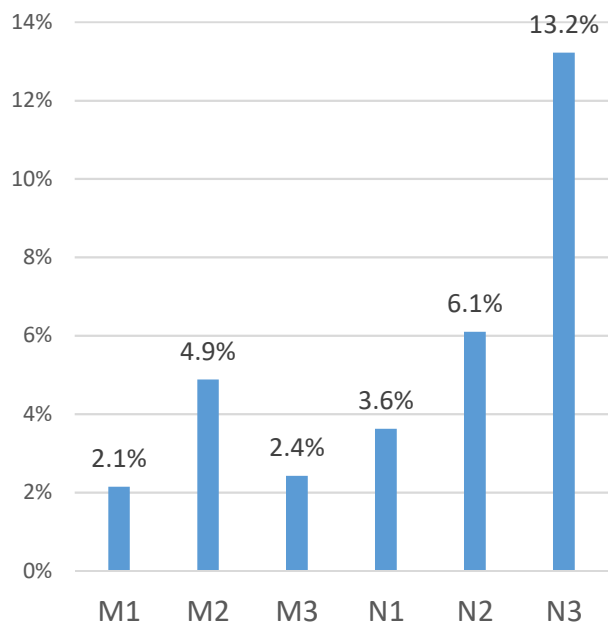
Fatality rate by vehicle category

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

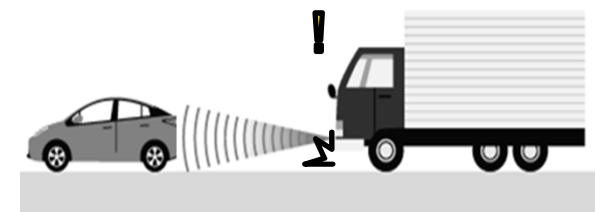
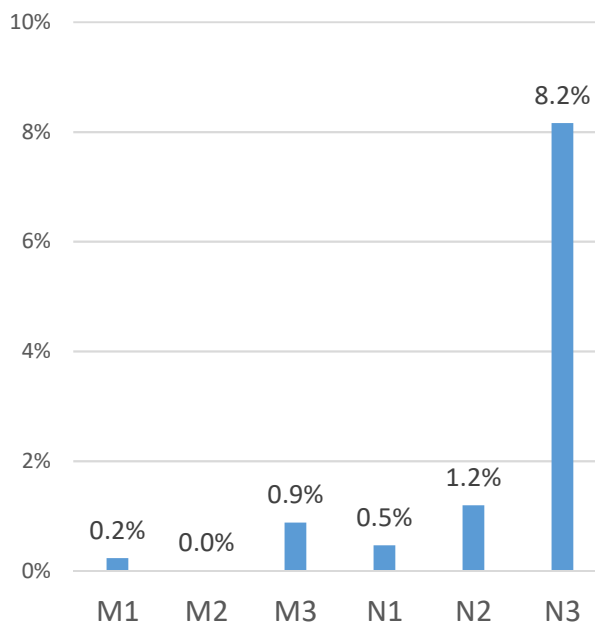
*rate of number of fatality cases divided by number of all injury cases



Fatality rate
(Car to Pedestrian)

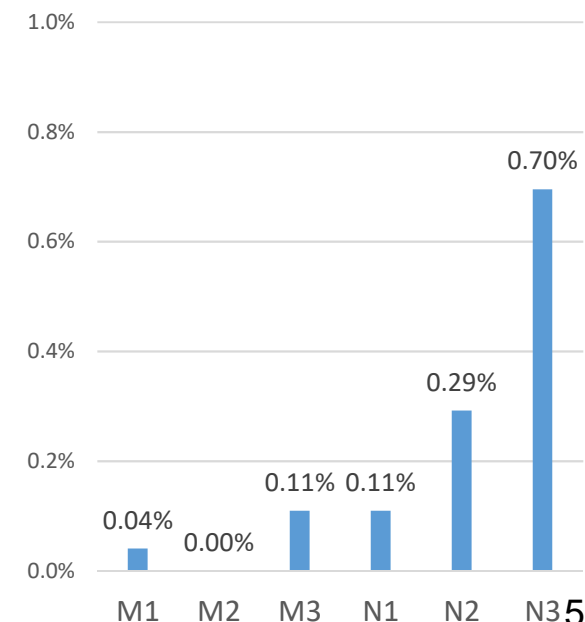


Fatality rate
(Car to Bicycle)



Fatality rate
(Car to Car*)

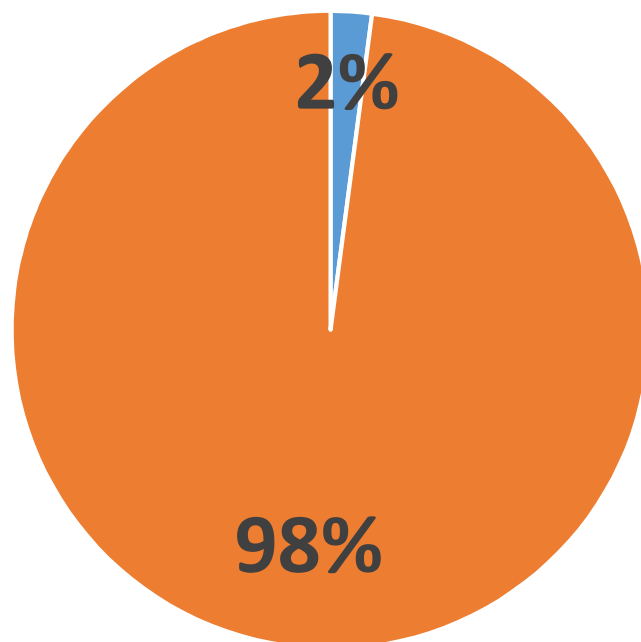
*Including stationary and moving



Fatalities by road type

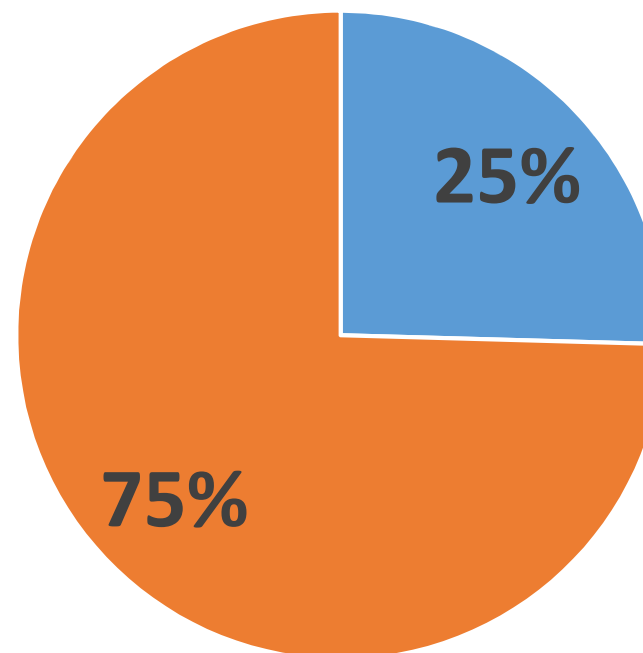
- 75% of death-caused accidents are on non-highways related to HDVs (M2, M3, N2 and N3).

M1 and N1



■ Highways ■ Non-highway (city, suburb)

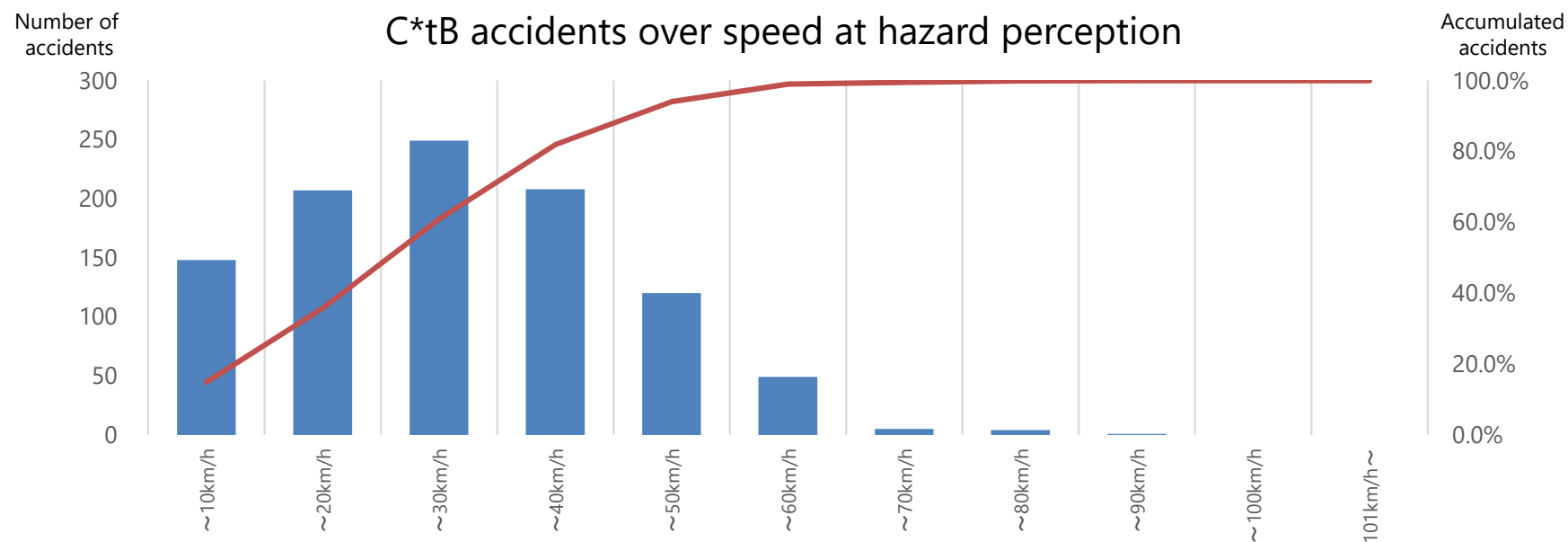
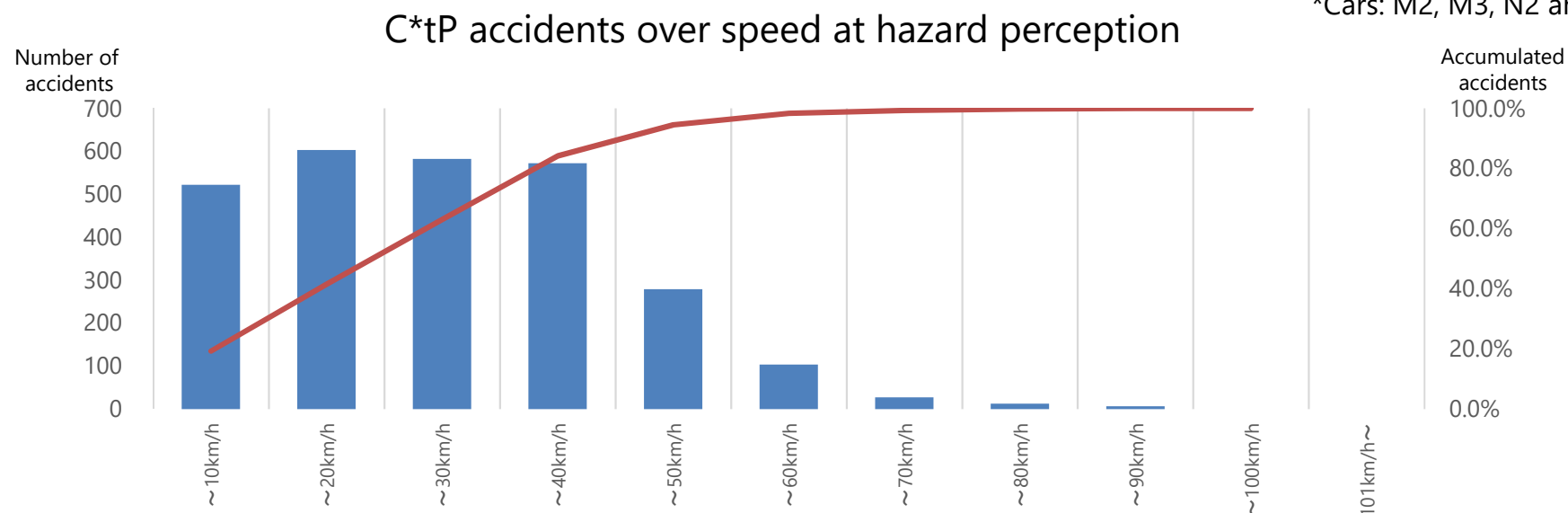
M2, M3, N2 and N3



■ Highways ■ Non-highway (city, suburb)

Accident analysis (CtP, CtB)

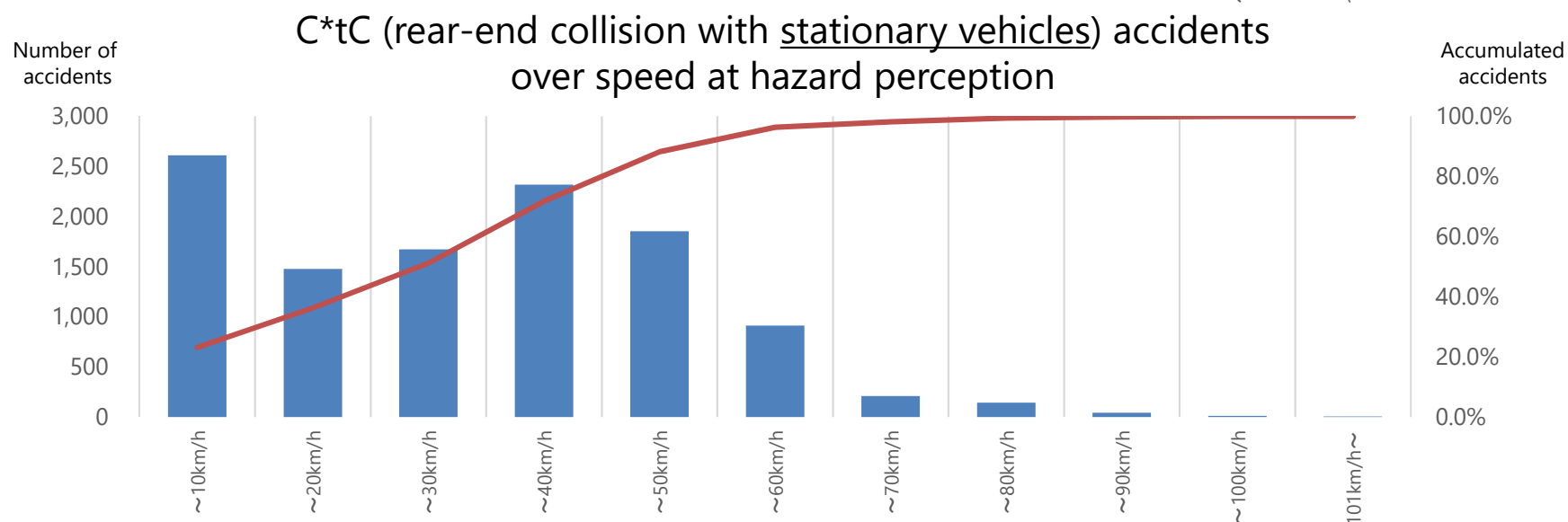
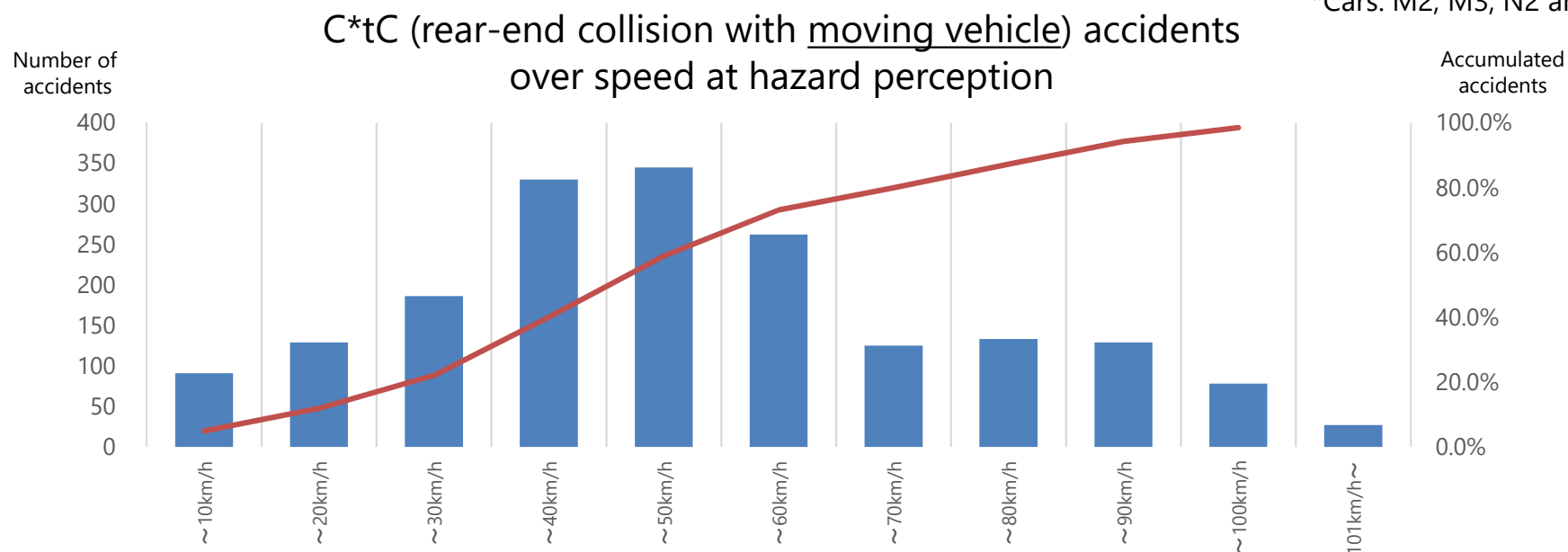
*Cars: M2, M3, N2 and N3



Source: 2016 Road traffic accident statics (ITARDA)

Accident analysis (CtC)

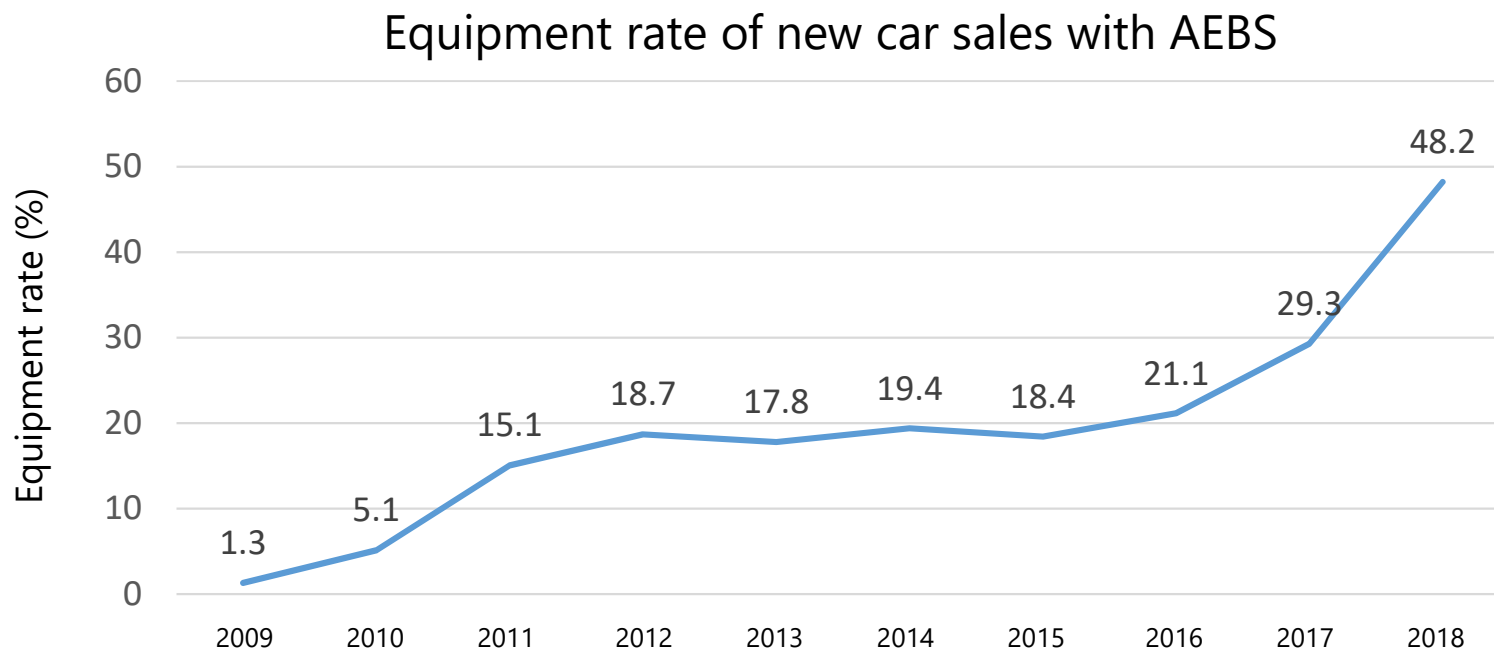
*Cars: M2, M3, N2 and N3



Source: 2016 Road traffic accident statics (ITARDA)

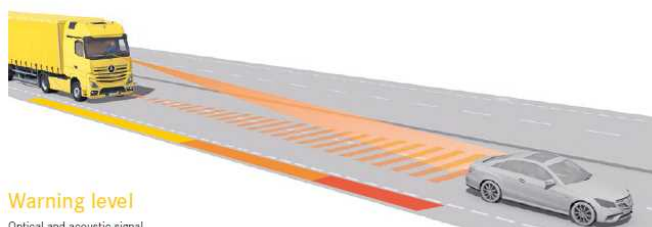
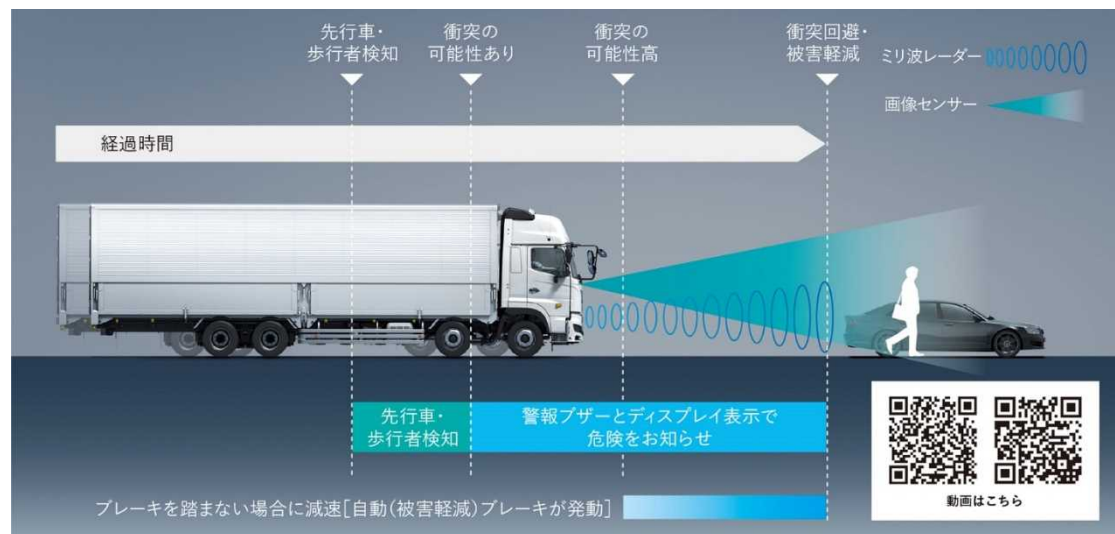
Technical feasibility

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



Technical feasibility

- Detection and brake-control technology is available for CtP, CtB, and further CtC.



Summary

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- 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