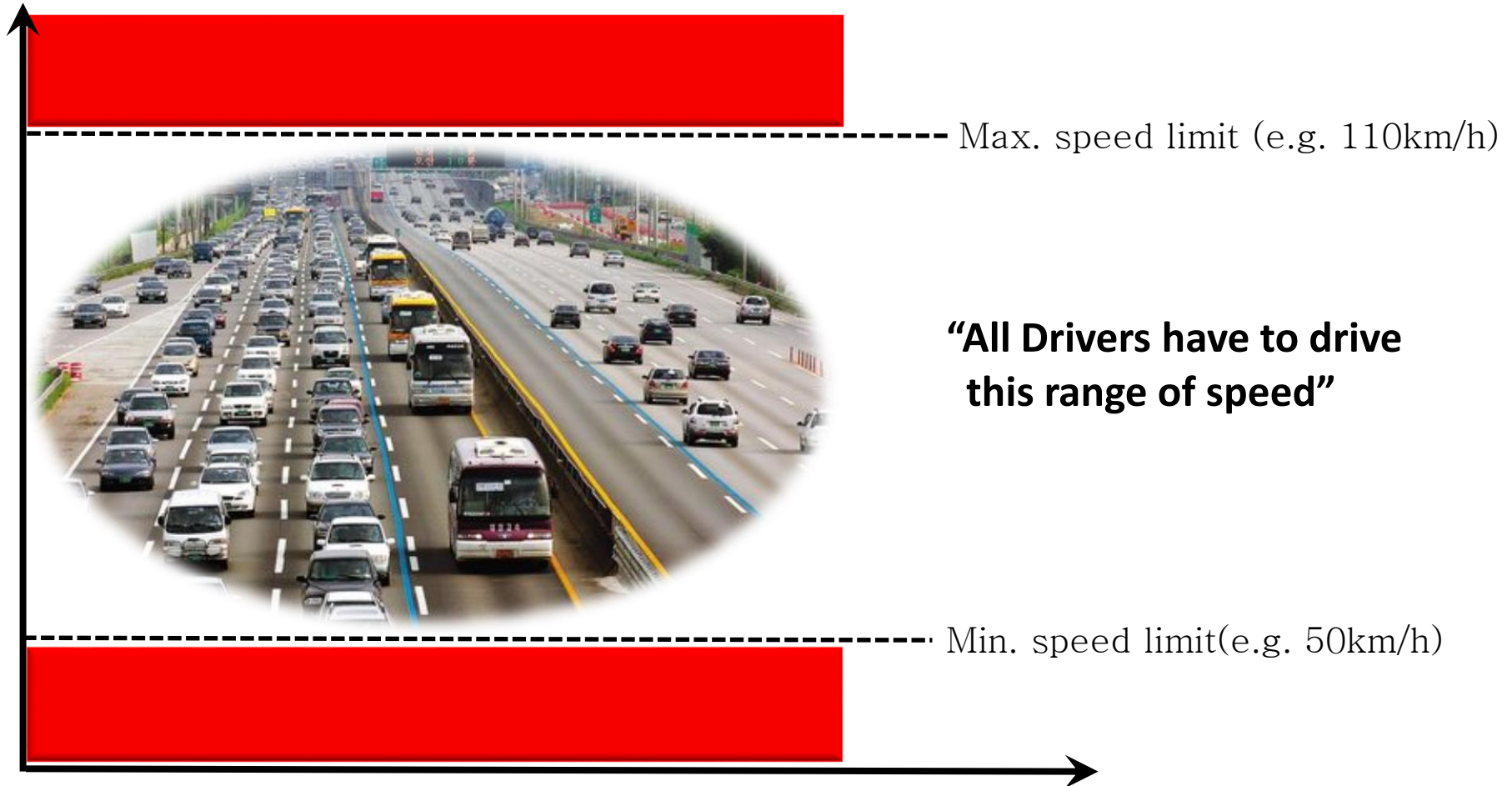


○ Timing to be activated the hazard lights

5.6.1.5.3. The hazard lights shall be activated automatically **not later than 10 s** after the start of the minimal risk manoeuvre. Additionally, an acoustic warning device may be permitted to warn the other road users.

- Road speed limits are used in most countries to set the maximum/minimum speed at which road vehicles may legally travel on particular stretches of road
- All drivers have to drive vehicles at a speed of between the max. speed limit and the min. speed limit by the Road Traffic Act.
- In case of Republic of Korea/Japan, the max. speed limit is 110/100km/h and min. speed limit, 50km/h and in case of Germany, the recommended max. speed limit is 130km/h and the min. speed limit, 60km/h

Road Speed Limit



○ Timing to be activated the hazard lights

- It is too long for the hazard lights to be activated automatically within max. 10 s after the start of MRM(e.g. minimizing risk by braking). This is why ACSF vehicle stops after about 10 s if ACSF vehicle decelerates with 3.7m/s^2 (feasible deceleration under wet conditions of 5.6.1.1.8.1) from 130km/h (specified maximum speed) .
- To be activated the hazard lights after stop of ACSF vehicle is too late to inform an emergency situation to other road user. Eventually, that could cause rear-end collision, etc. due to low driving speed below min. speed limit
- Therefore, the hazard lights are necessary to be activated automatically before reaching min. speed limit by the Road Traffic Act.
- Example is like below
 - ⇒ Germany : $(130 - 60)\text{km/h} @ -3.7\text{m/s}^2 = 5.3 \text{ s}$
 - ⇒ ROK : $(110 - 50)\text{km/h} @ -3.7\text{m/s}^2 = 4.5 \text{ s}$
 - ⇒ Japan : $(100 - 50)\text{km/h} @ -3.7\text{m/s}^2 = 3.6 \text{ s}$

○ Timing to be activated the hazard lights

- In conclusion, Republic of Korea proposes 3 options as below:

5.6.1.5.3. The hazard lights shall be activated automatically

1) not later than 4 s

2) before the speed of vehicle falls below a minimum speed limit on road the vehicle is driving

3) 1) or 2), whichever is later

after the start of the minimal risk manoeuvre.