How safer vehicles and technologies can help with managing speeds

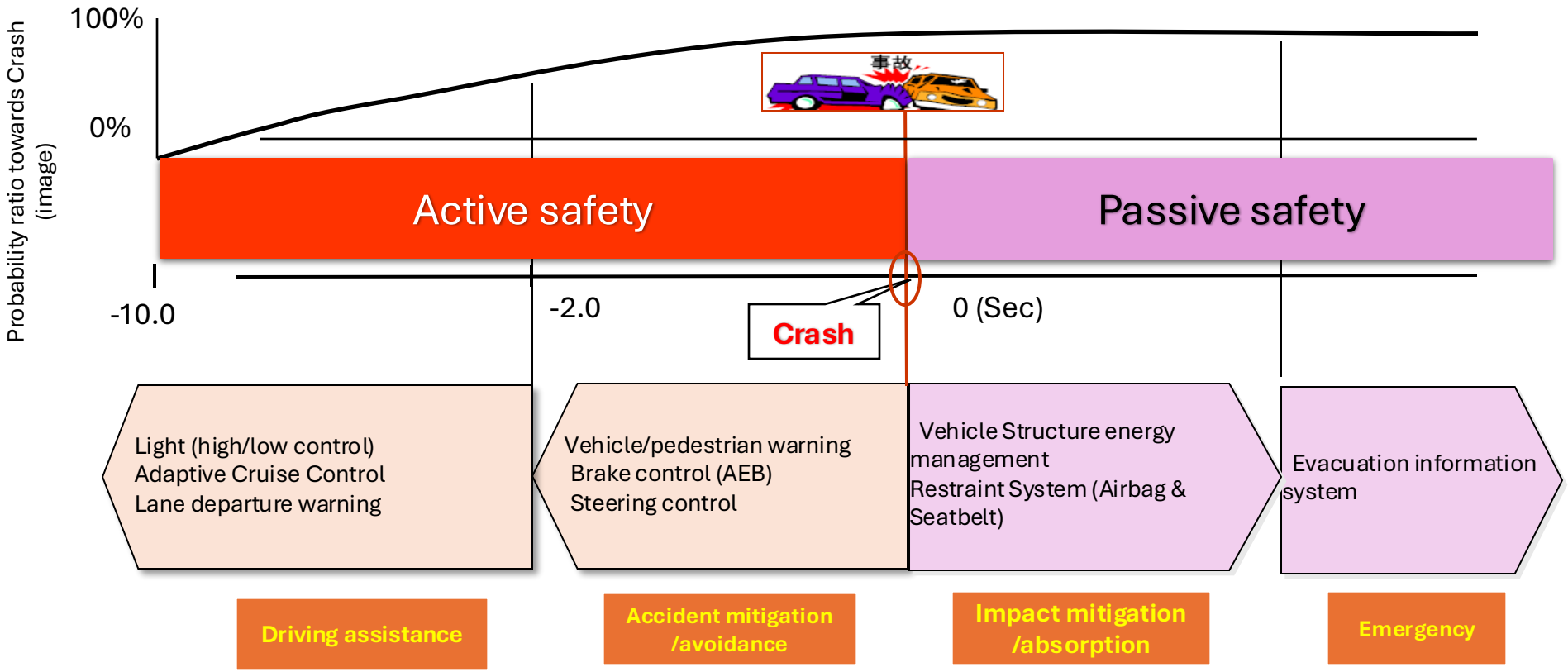
Yahaya Ahmad

Head of Passenger Vehicle & Occupant Safety Unit,

Vehicle Safety & Biomechanics Centre, MIROS

8 July 2025

Introduction to Vehicle Safety Stage



An Example of Traffic Scenario in the City

Technologies help with managing speed

1. Electronic Stability Control (ESC)

- Evolution of ABS designed to assist drivers in maintaining control of the vehicle in high speed or sudden manoeuvre and on slippery roads.
- ASEAN NCAP has promoted ESC fitment since its establishment in 2012.

2. Speed limiter

- A system installed in vehicles to restrict their maximum speed.
- It is designed to enhance road safety by preventing vehicles from exceeding pre-set speed limits.
- It can be achieved through various methods like limiting fuel supply or adjusting engine power.

3. Autonomous Emergency Braking (AEB)

- Braking that is applied automatically by the vehicle in response to the detection of a likely collision
- To reduce the vehicle speed and potentially avoid collision.
- Two types of assessment under ASEAN NCAP:
  - Car-to-Car
  - Car to Motorcycle
  - Car to Pedestrian
  - Car to Bicycle

Technologies help with managing speed (cont.)

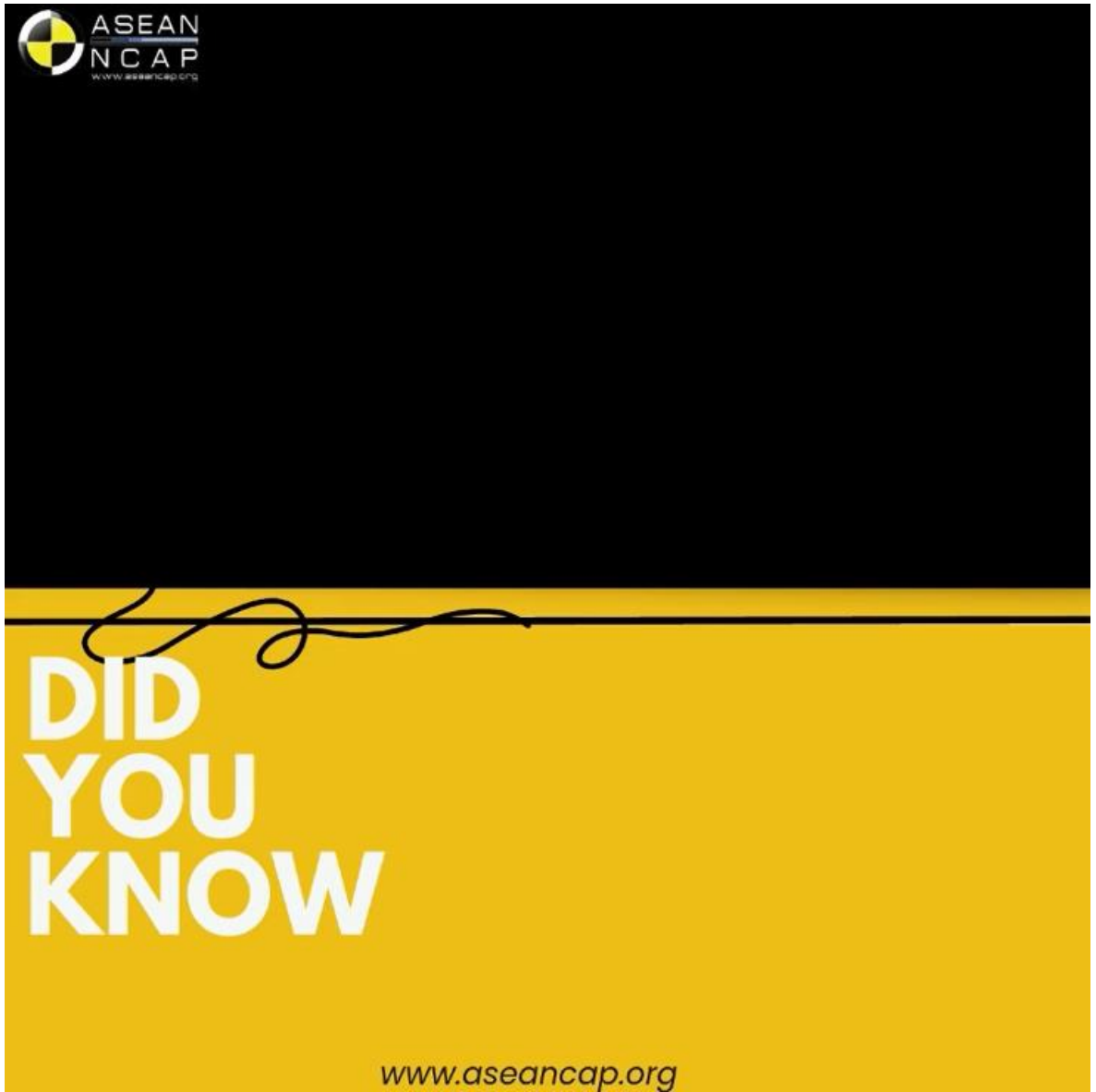
4. Adaptive Cruise Control

- A system designed to help vehicles maintain a safe following distance and stay within the speed limit.
- It adjusts the vehicle's speed automatically without having the driver to do so.
- Different names in the market but similar function i.e., Active cruise control, Dynamic cruise control, Radar cruise control, Automatic cruise control, Intelligent cruise control.

5. Rear Cross Traffic Braking

- An automatic emergency braking system.
- It is designed to help avoid or reduce the severity of rear end collisions when reversing against an oncoming motorist that was detected from either the left or right side of the vehicle.

Rear Cross Traffic Braking (RCTB)



Example of AEB Motorcycle assessment

THANK YOU

FOR YOUR ATTENTION