



Technology for Motorcycle Safety

ETSC PIN Conference, 19th June 2024





FIM is the IOC-recognised governing body for motorcycle sport and the global advocate for motorcycling

We were founded in 1904

We currently represent motorcyclists in 121 countries on 6 continents



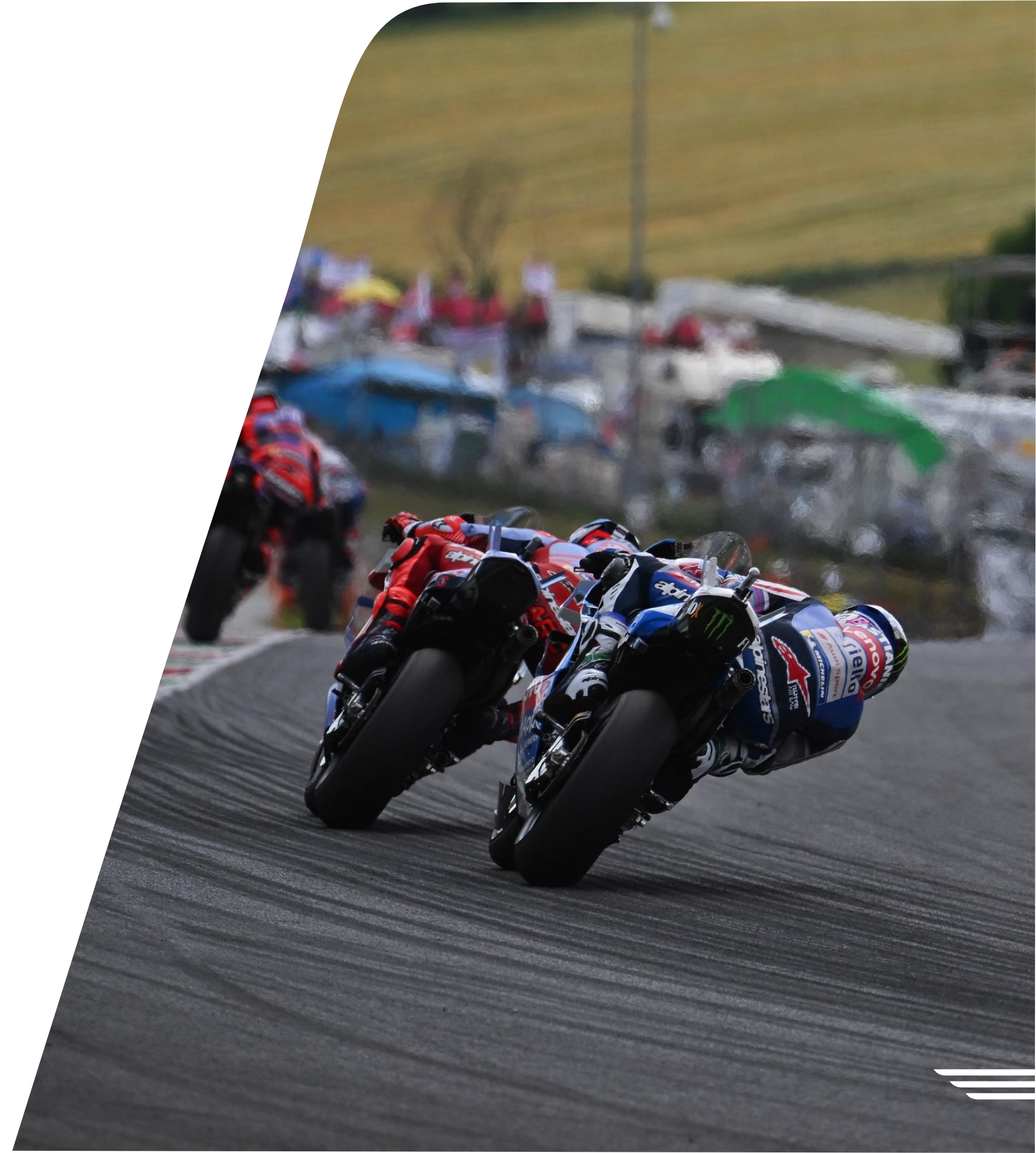


ADAS and motorcycles



Motorcycles are not cars

- Rider is key component of vehicle dynamics
- Components exposed to elements
- Mixed picture on rider acceptance





The Seattle Times Traffic Lab

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Tesla facing federal probe days after fatal Autopilot crash in Monroe

April 29, 2024 at 6:00 am | Updated April 29, 2024 at 6:00 am

TECH

Amazon's Zoox under investigation by NHTSA after two crashes

PUBLISHED MON, MAY 13 2024-10:30 AM EDT | UPDATED MON, MAY 13 2024-1:48 PM EDT

Annie Palmer @IN/ANNIERPALMER/

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KEY POINTS

- The National Highway Traffic Safety Administration is probing two crashes involving Amazon-owned Zoox autonomous vehicles.
- Two Toyota Highlanders equipped with Zoox's automated self-driving technology braked unexpectedly, after which motorcyclists collided with the vehicles.
- The agency's probe covers about 500 vehicles.

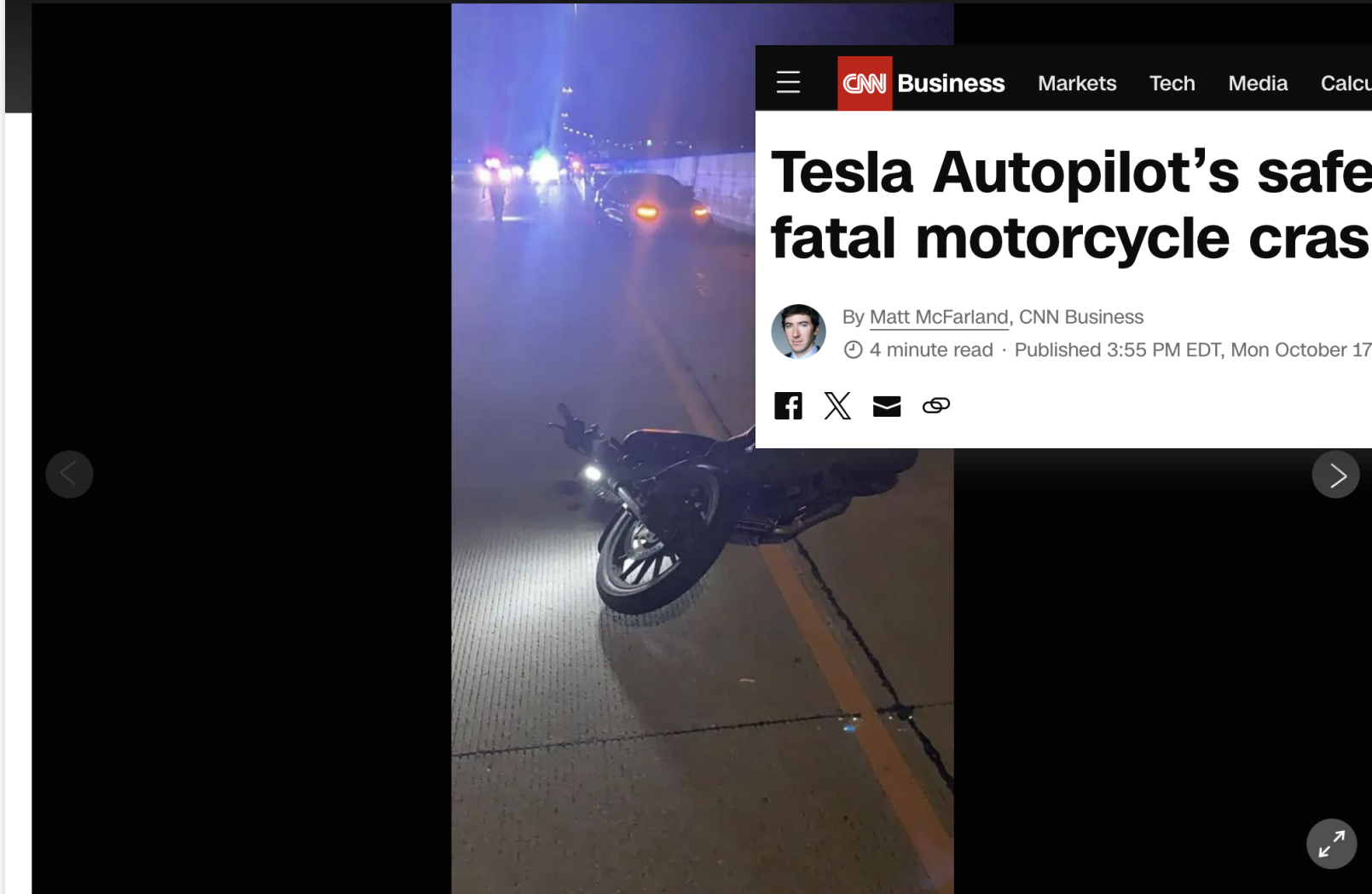
AP

WORLD U.S. ELECTION 2024 POLITICS SPORTS ENTERTAINMENT BUSINESS SCIENCE FACT CHECK ODDITIES BE WELL

Supreme Court and mifepristone G7 Summit Israel-Hamas war Election 2024 NBA Finals

US agency probes Tesla crashes that killed 2 motorcyclists

EVEN WHEN SUPPORT I



1 of 2 | This photo provided by Utah Department of Public Safety shows the scene of an accident involving a Tesla and a motorcycle on July 24, 2022 near Draper, Utah. Two crashes involving Teslas apparently running on Autopilot are drawing scrutiny from federal regulators and point to a potential new hazard on U.S. freeways: The partially automated ve... Read More

CNN Business Markets Tech Media Calculators Videos

Tesla Autopilot's safety questioned after latest fatal motorcycle crash

By Matt McFarland, CNN Business

4 minute read · Published 3:55 PM EDT, Mon October 17, 2022

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A Toyota sport-utility vehicle modified by Zoox, a subsidiary of Amazon.com, which combines radars, lidar, and cameras to test its software, drives on a road ahead of the Consumer Electronics Show (CES) of Las Vegas, Nevada on January 3, 2023. Patrick T. Fallon | AFP | Getty Images

CNBC TV

Fast Money Halftime Report

UP NEXT | The Exchange 01:00 pm

-20%

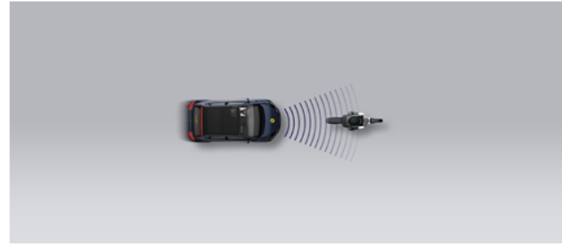
Big Sale on Temu

PRICE D

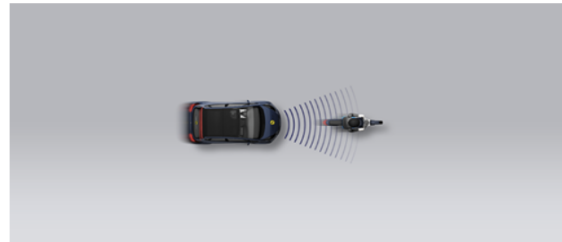
TRENDING NOW

Whole Foods the No. 1 red in employees

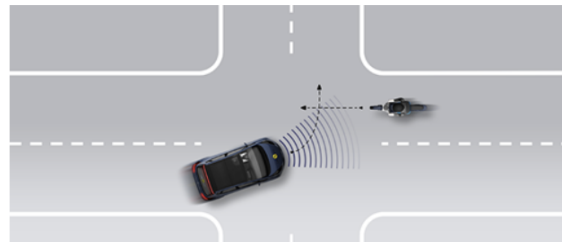
Overview of AEB Motorcyclist tests



Approaching a stationary motorcyclist

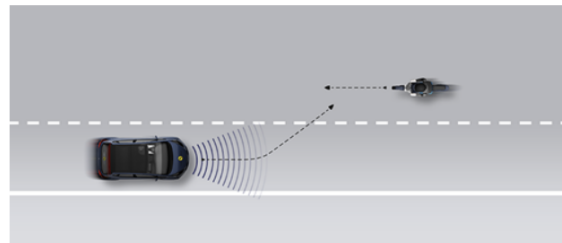


Approaching a braking motorcyclist

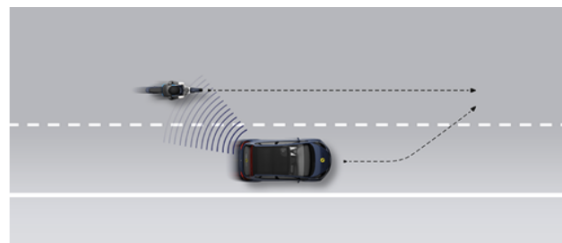


Turning across the path of an oncoming motorcyclist

Overview of Lane Support Motorcyclist tests



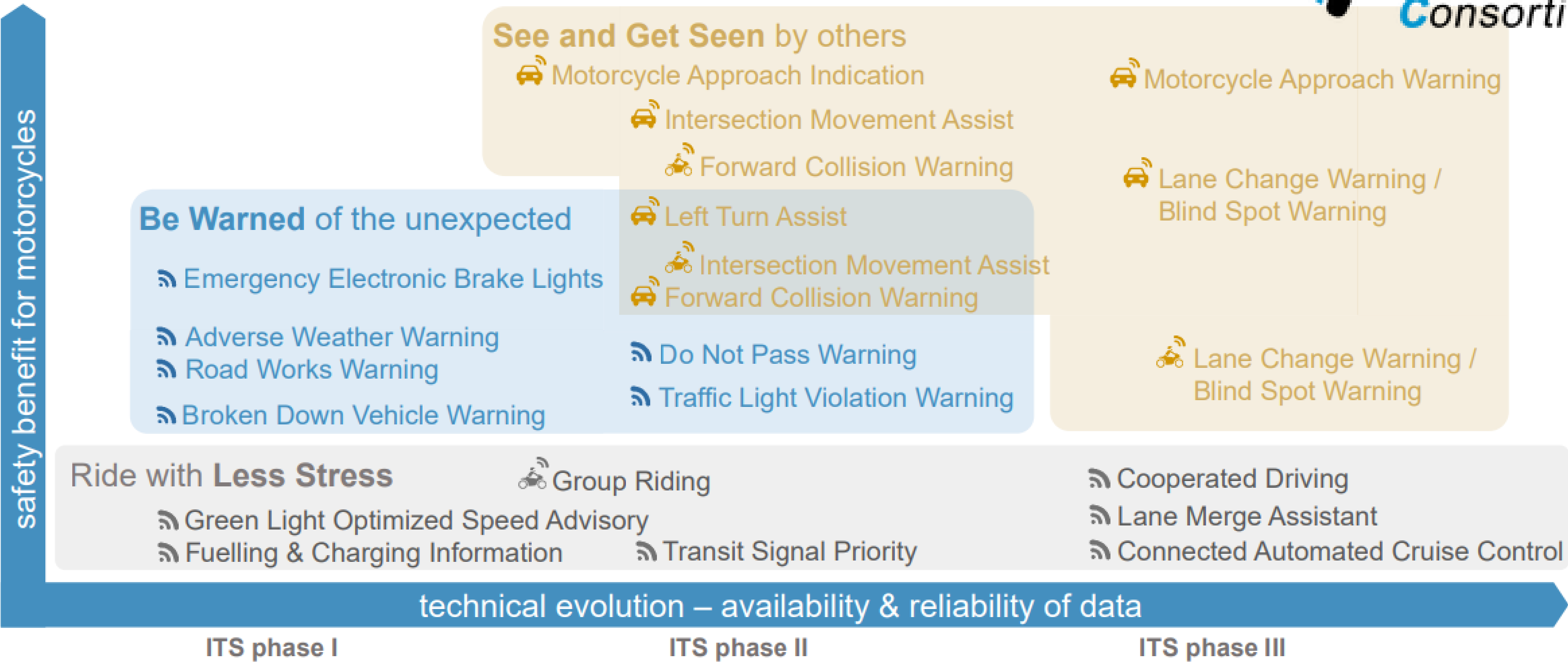
Changing lane across the path of an oncoming motorcyclist



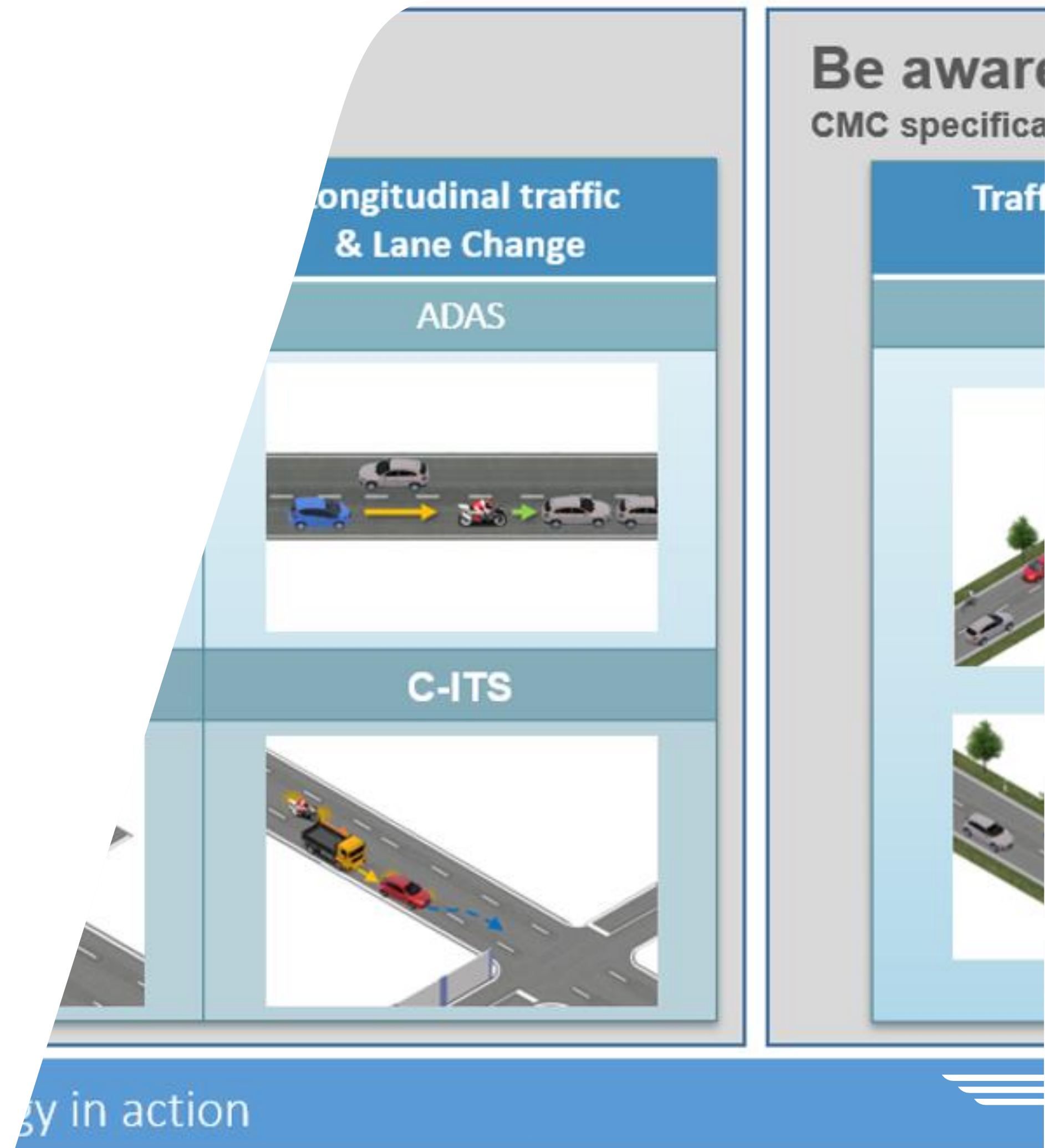
Changing lane across the path of an overtaking motorcyclist

 Introduced in 2023.

- 4.5. Stationary obstacle after lane change of the lead vehicle
- 4.5.1. The test shall demonstrate that the ALKS is capable of avoiding a collision with a stationary vehicle, road user or blocked lane that becomes visible after a preceding vehicle avoided a collision by an evasive manoeuvre.
- 4.5.2. The test shall be executed at least:
 - (a) With a stationary passenger car target centred in lane
 - (b) With a powered two-wheeler target centred in lane
 - (c) With a stationary pedestrian target centred in lane
 - (d) With a target representing a blocked lane centred in lane
 - (e) With multiple consecutive obstacles blocking the lane (e.g. in the following order: ego-vehicle – lane change vehicle – **motorcycle** – car)
- 4.6. Field of View test
- 4.6.1. The test shall demonstrate that the ALKS is capable of detecting another road user within the forward detection area up to the declared forward detection range and a vehicle beside within the lateral detection area up to at least the full width of the adjacent lane.
- 4.6.2. The test for the forward detection range shall be executed at least:
 - (a) When approaching a **motorcycle** target positioned at the outer edge of each adjacent lane;
 - (b) When approaching a stationary pedestrian target positioned at the outer edge of each adjacent lane;
 - (c) When approaching a stationary **motorcycle** target positioned within the ego lane;
 - (d) When approaching a stationary pedestrian target positioned within the ego lane.
- 4.6.3. The test for the lateral detection range shall be executed at least:
 - (a) With a **motorcycle** target approaching the ALKS vehicle from the left adjacent lane;
 - (b) With a **motorcycle** target approaching the ALKS vehicle from the right adjacent lane.



- Technology that warns riders
- Technology that warns car drivers
- Technology that automates car driver response
- Research, standards, specifications





Rider training





- FIM with ACEM and DVR quality assures post-test riding training
- 36 courses in 11 countries
- Self-assessment tool for promotion *in progress*





Thanks!