ACEA

European
Automobile
Manufacturers
Association

REVISION OF THE GENERAL SAFETY REGULATION

TRUCKS



VULNERABLE ROAD USER DETECTION/WARNING

What is it about? Active safety systems that use cameras and sensors to detect vulnerable road users (such as pedestrians or cyclists) that might not be visible to the driver, eg when they are in the blind spot of a truck.

Effectiveness? Contrary to 'direct vision' low-entry cabs, these safety measures will actively draw the attention of the driver to the critical area / the VRUs.

Supported by ACEA?

Supported for M3 and N3 vehicles.

DROWSINESS AND ATTENTION DETECTION

What is it about? Safety systems to assess the driver's alertness (for example by monitoring how long someone has been driving) and warn the driver to take a break when needed.

Effectiveness? Example of active safety measures that can make a real difference.

Supported by ACEA?

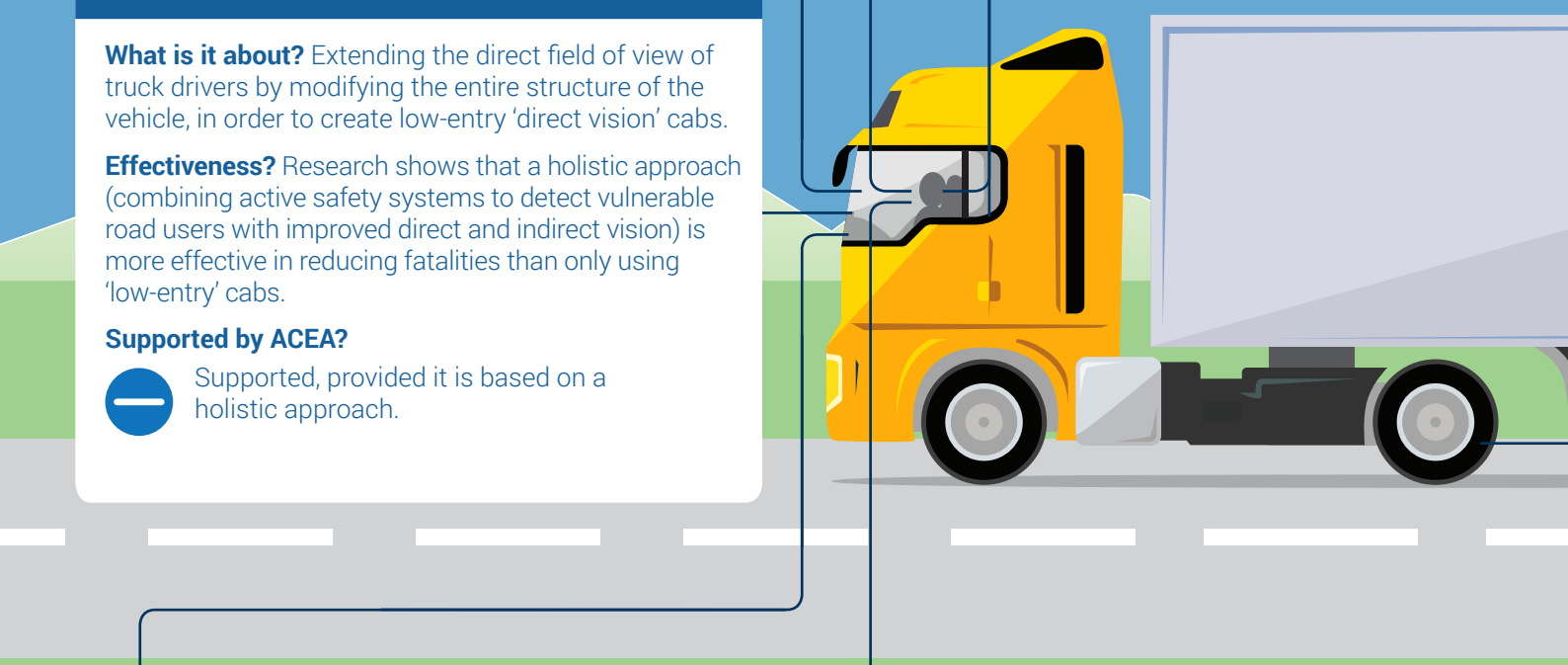
DIRECT VISION

What is it about? Extending the direct field of view of truck drivers by modifying the entire structure of the vehicle, in order to create low-entry 'direct vision' cabs.

Effectiveness? Research shows that a holistic approach (combining active safety systems to detect vulnerable road users with improved direct and indirect vision) is more effective in reducing fatalities than only using 'low-entry' cabs.

Supported by ACEA?

Supported, provided it is based on a holistic approach.



INTELLIGENT SPEED ASSISTANCE (ISA)

What is it about? Systems that actively prevent drivers from exceeding the speed limit using road-sign recognition cameras and GPS-linked speed limit databases.

Effectiveness? In practice, ISA systems still show too many false warnings due to incorrect road signs or outdated information – something that most truck drivers would not accept. Moreover, cameras cannot anticipate all scenarios, eg when traffic signs are covered up.

Supported by ACEA?

Speed limit information (SLI) systems are an effective alternative

ADVANCED DISTRACTION RECOGNITION

What is it about? Safety systems capable of recognising the level of visual attention of the driver to the traffic situation and warning the driver if needed.

Effectiveness? Technology to identify a 'distracted' driver has strong limitations, as everybody drives differently. Facial recognition is also hampered by practical issues such as reflective glasses. Finally, using cameras to monitor drivers also raises serious privacy concerns.

Supported by ACEA?

Effective alternatives are enforcement, driver education, autonomous emergency braking, lane keeping systems, etc

ALCOHOL INTERLOCK INSTALLATION FACILITATION

What is it about? Providing a standardised interface description to facilitate the fitment of alcohol-interlock devices in motor vehicles; eg to prevent recidivist drunk drivers from operating a vehicle under the influence of alcohol.

Effectiveness? Enables installation of interlock without driving up truck prices.

Supported by ACEA?

EMERGENCY STOP SIGNAL

What is it about? Flashing brake lights (or comparable solutions) to indicate to other road users behind the truck that the driver is breaking heavily / rapidly slowing down.

Effectiveness? Excellent way to alert other road users.

Supported by ACEA?

COMPLEX PROCEDURES TO SWITCH OFF SYSTEMS

What is it about? Proposal to switch off safety systems only one at a time, at standstill and with the parking brake engaged, following a complex sequence of actions.

Effectiveness? Not recommended, there are still specific situations in which systems have to be switched off. Moreover, there is no evidence that safety systems are switched off often.

Supported by ACEA?



TYRE PRESSURE MONITORING

What is it about? Systems that monitor the air pressure of a vehicle's tyres and report this information in real time to the driver.

Effectiveness? Further research into the safety benefits for M2, M3, N2 and N3 vehicles required.

Supported by ACEA?

REVERSING DETECTION

What is it about? Detection technology (eg a camera or sensors) to make the driver aware of people and objects at the rear of the vehicle when reversing.

Effectiveness? In the case of trucks (ie N3 vehicles), reversing detection has proven to be very complex because of the many different truck-trailer combinations.

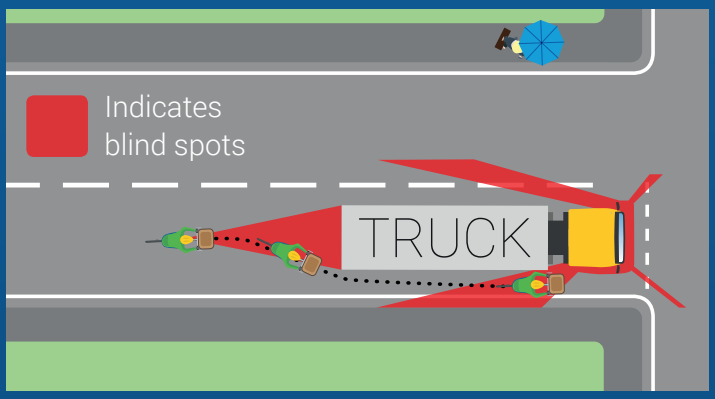
Supported by ACEA?

Detailed cost-benefit analysis required.

TRUCKS AND VISION-RELATED ACCIDENTS, WHAT'S THE BEST WAY FORWARD?

Since 2005, the number of traffic fatalities involving heavy trucks in the EU has declined by nearly 50%. Moreover, trucks are implicated in only about 15% of fatal road accidents in the EU today.

Still, accidents with trucks involving vulnerable road users (VRUs) such as cyclists and pedestrians are often caused by vision-related factors. For instance, when VRUs are in the blind spot of a truck. Everyone agrees that vision-related accidents should be addressed, but not all proposed measures are as effective as others.



DIRECT VISION

Some argue that the direct field of view of truck drivers should be extended by **modifying the entire structure of the vehicle**, in order to create low-entry 'direct vision' cabs for trucks. This entails mounting the cabin in front of the truck's engine instead of on top of it, which puts the driver closer to the road but reduces the available loading capacity, as well as increasing the window surface of the cabin.

ACTIVE SAFETY

However, research shows that active safety measures – using cameras and sensors to increase the driver's field of vision – are some **50% more effective in reducing fatalities than re-designing trucks**. Systems to detect vulnerable road users (such as pedestrians or cyclists), for example, can reduce fatalities by 1.53% compared to only 0.95% in the case of low-entry cabs.





Moreover, contrary to 'direct vision' low-entry cabs, **active safety measures will actively draw the attention of the driver to the critical area or the VRUs concerned**. Even with the widest possible field of view in a low-entry cabin, a truck driver can only look in one direction at a time and still might fail to notice a pedestrian or cyclist on the other side of the vehicle.

Another downside of **'direct vision' low-entry cabs** is their negative impact on the load capacity of trucks, as they require major changes to the layout of a vehicle. The less transport space a truck has, the more vehicles are needed to transport the same amount of freight, which in turn would **lead to an increase in CO2 emissions**.

Visit **www.acea.be** for more information or contact us at **communications@acea.be**