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*Project:* 'Who is in control? Road safety and automation in road traffic'

To: [DG GROW, European Commission]

Cc: [DG MOVE, European Commission]

28 April 2022

**Subject: Strengthening the Regulatory Framework for ADAS to Improve Road Safety**

Dear [European Commission],

The Brussels-based European Transport Safety Council (ETSC) and the Dutch Safety Board in The Hague would like to bring the following to your attention.

The introduction and deployment of certain advanced driver assistance systems (ADAS) create new safety risks, i.e. those systems that primarily aim to improve the comfort of the driver, e.g. continuous lane keeping assistance, including those that are combined with adaptive cruise control.

As you know, ETSC is an independent non-profit organisation dedicated to reducing the numbers of deaths and injuries in transport in Europe, that provides an impartial source of expert advice on transport safety matters to the European Commission, the European Parliament and national governments. The Dutch Safety Board investigates specific incidents as well as broader safety issues, with the purpose to learn from the incidents and to make recommendations in order to improve safety.



The Dutch Safety Board conducted an investigation into the introduction and deployment of those advanced driver assistance systems.<sup>1</sup> The Dutch Safety Board has identified a number of types of new risks that are not yet sufficiently recognised nor managed. These new risks include:

- Human factor problems such as driver overestimation, misunderstanding and misuse as well as driver disengagement from the driving task;
- Systems that can be and are activated in situations that they cannot cope with, such as unseparated highways with roundabouts; and
- A lack of transparency over the design, capabilities and effectiveness of these systems.

In its report, the Dutch Safety Board sets out recommendations to several stakeholders, including the relevant Dutch authorities as well as relevant national and European industry associations. We believe that several of these recommendations are important and highly relevant for the work of the European Commission. With this letter, we therefore call on you to take action, in line with three recommendations by the Dutch Safety Board<sup>2</sup>:

*1. To industry associations OICA and ACEA*

*“Demonstrate that the development and introduction of ADAS is taking place according to the principles of responsible innovation.”*

Ad. 1: The automotive industry, and car manufacturers in particular, can play an important role in improving the safety of ADAS. They are primarily responsible for the safe design of a new technology. As innovators, they have a responsibility to users and road users.

In their responses to the recommendation OICA and ACEA both argue their willingness to work on improving road safety in line with UN resolution 74/299. However, neither organization’s responses describe any initiatives or plans in more detail.<sup>3</sup>

*3. To the Dutch Minister of Infrastructure and Water management*

*“Take the initiative within the UNECE [WP.29] to place human factors and responsible innovation on the agenda.”*

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<sup>1</sup> Dutch Safety Board (2019), Who is in control? Road safety and automation in road traffic. <https://bit.ly/2LESsV2>

<sup>2</sup> The numbering corresponds to the numbers of the recommendations in the report.

<sup>3</sup> Dutch Safety Board (2021), Follow-up to recommendations ‘Who is in control? – Road safety and automation in road traffic.

[https://www.onderzoeksraad.nl/en/media/attachment/2021/12/17/reaction\\_dutch\\_safety\\_board\\_follow\\_up\\_to\\_recommendations\\_who\\_is\\_in\\_control\\_ro.pdf](https://www.onderzoeksraad.nl/en/media/attachment/2021/12/17/reaction_dutch_safety_board_follow_up_to_recommendations_who_is_in_control_ro.pdf)



Ad. 3: Most of UNECE WP.29's work traditionally focuses primarily on ensuring vehicle and system safety from a technical engineering point of view. However, as described above, these novel types of ADAS systems – also referred to as ACSF and DCAS within WP.29 – bring new safety risks which are not related to inappropriate technical designs, but are instead related to the implications of their human factors design aspects.

The Dutch Safety Board concluded in its report that the existing type approval rules are lagging behind when it comes to human factors, as manufacturers and governments have paid little attention to these aspects. This while the interaction between the human driver and the system is paramount for safety, as these systems are taking over parts of the driving task even though at the same time the driver remains responsible for the overall driving task.

In line with the recommendation, we therefore call on you to ensure that human factors are a central point of focus during the development of technical rules for motor vehicles and their systems, and that sufficient safeguards are provided for in the final texts of such rules, at both EU and UNECE level.

In this regard, we call in particular on the members of your team, in their capacity as co-chair of the UNECE's task force on ADAS, to ensure that future international rules on these systems, and in particular the rules on DCAS, address the concerns related to human factors. The highest safety standards, for both the system's safety as well as their design aspects related to human factors, should be ensured.

*6. To the Dutch Minister of Infrastructure and Water management*

*“Within the European Commission, argue that*

- a. vehicle regulations must tie in with the current generation of ADAS systems (SAE level 2 and lower).*
- b. Responsibility for demonstrating that new ADAS systems improve safety must be placed clearly in the hands of the manufacturers.*
- c. Moreover, in particular, focus attention on the introduction of requirements relating to human factors,*
- d. user training,*
- e. access to data from ADAS systems following accidents, and accident investigation by manufacturers.”*

*Ad. 6: Responsibility for demonstrating that new ADAS systems improve safety*

We call on you to ensure that the forthcoming UNECE rules on DCAS include a requirement for the manufacturer to demonstrate that systems submitted for type approval would indeed be contributing to improving road safety. Such requirement should also be included in other UNECE and EU rules on ADAS systems that do not have collision avoidance as their primary purpose, and should ensure that systems



focusing on enhancing the comfort of the driver do not inadvertently pose or increase risks to road safety – which the currently allowed systems regrettably have demonstrated to do.

### *Human factors*

The Dutch Safety Board's report clearly shows that the existing rules are not appropriate for today's systems that assist or support the driver. As mentioned previously, they pointed out that regulators have until now paid little attention to human factors aspects.

We therefore call on you to initiate a review of the current rules with a view of updating requirements on human factors, taking into account the latest scientific knowledge on the subject.

Looking towards the future, we emphasize that the regulatory framework should ensure that it is crystal clear for drivers whether their vehicle is (capable of) operating in an assisted driving or an automated driving mode.

Drivers have already overestimated the ADAS' capabilities, while being not sufficiently aware of the limitations of their systems. This has resulted in drivers relying too much on their systems as well as resulted in mode confusion, which regrettably resulted in collisions involving deaths and serious injuries. ADAS systems that blur the line between assisted and automated driving should therefore not be allowed on European roads.

### *Learning from road traffic accidents*

The report by the Dutch Safety Board concludes that both manufacturers and governments learn insufficiently from collisions involving vehicles equipped with such types of ADAS systems, amongst others because:

- Collisions involving ADAS are not monitored;
- Collision registration by the police is incomplete, and fatal collisions are not analysed;
- The necessary data cannot be retrieved from a vehicle, at least not without considerable difficulties;
- There is no structured evaluation into the reduction of collision numbers that should be achieved thanks to the deployment of ADAS.

ETSC has on previous occasions called for an EU agency to oversee or conduct investigations into crashes involving automated driving systems and to publish all findings in order to help prevent future collisions.<sup>4</sup> In the context of this letter, ETSC would like to reiterate the call as well as underline that such an agency should also oversee investigations into crashes involving active driver assistance systems and similarly present the findings in order for EU and UNECE rules to be improved based on the lessons learned.

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<sup>4</sup> ETSC (2022), As Mercedes launches Europe's first Level-3 automated vehicle system, it's time for an EU crash investigation authority. <https://bit.ly/3M3Qus7>



Manufacturers should moreover be required to report to such EU agency all collisions involving active assisted or automated driving systems on public roads in the EU that they are aware of.

We are at your disposal to discuss the recommendations set out in this letter.

Yours sincerely,

Antonio Avenoso  
Executive Director  
European Transport Safety Council

Jeroen Dijsselbloem  
Chairman  
Dutch Safety Board