

June 7, 2022

Dr. Steve Cliff
Deputy Administrator
National Highway Traffic Safety Administration
Department of Transportation
1200 New Jersey Avenue S.E., West Building
Washington, D.C. 20590-0001

Dear Deputy Administrator Cliff,

On behalf of [Trillium Solutions an Optibus Company](#), a transit data software and consulting company based out of Portland, Oregon, I am pleased to offer the following comments in response to NHTSA's proposed updates to the New Car Assessment Program (NCAP).

Trillium is committed to making transportation alternatives to the automobile more accessible through digital rider information solutions. A major factor that also determines the viability of mobility options like walking, biking, or transit is how safe the cars sharing the public right-of-way are for non-passenger travelers. We believe a coherent and complete vehicle safety rating system must include safety information relative to people outside the vehicle, a critical category missing from past iterations of the NCAP. Equipping consumers with more representative safety scores will influence market demand which will in turn incentivize the automobile industry to pursue safer design, specifically in relation to people outside the vehicle.

Fatalities and serious injuries among pedestrians and cyclists have skyrocketed by more than 50 percent over the past ten years, dramatically outpacing overall roadway fatalities. Newly released estimates from NHTSA show that nearly 43,000 people died in crashes in 2021, a 10.8% jump from 2020. Data confirms the role of vehicle design in exacerbating the safety crisis unfolding on our nation's streets, with studies from the [Insurance Institute for Highway Safety](#) (IIHS) and [Consumer Reports](#) documenting direct links from vehicle size, speed, and weight to increasing traffic fatalities. Updates to NCAP have not kept pace with these realities, and international equivalents have surpassed the U.S. program. Current vehicle standards and rating systems have failed to protect people outside of cars, especially in multimodal urban environments.

Trillium is encouraged to see NHTSA take the crucial step of incorporating safety features that protect people outside of vehicles into NCAP. However, the proposed changes to the Program can go further. In addition to incorporating several long-overdue technological changes, the rating system must address the outsized roles that vehicle speed, size, weight, and visibility from the driver's seat play in determining safety outcomes. To help alleviate the national traffic

safety crisis, **NHTSA should ensure no vehicle receives a five star rating without scoring highly in the following categories:**

- **ADAS features capable of sensing and protecting people outside vehicles:** This RFC incorporates important technologies into NCAP, including blind spot detection and intervention (BSI/BSW), lane keeping support (LKS), and pedestrian automatic emergency braking (PAEB). To maximize safety benefits to people outside vehicles, NHTSA's testing protocols for these systems must account for documented shortcomings of ADAS features. These technologies are known to be less reliable in [dark lighting, inclement weather, while turning, traveling at higher speeds](#), or at detecting [people of color](#), and [people carrying objects](#)¹. NHTSA can significantly improve vehicle safety not only by reserving five-star ratings for vehicles equipped with ADAS, but ensuring these systems perform to a high standard.
- **Intelligent speed assistance systems that automatically limit unsafe speeds:** Vehicle speed plays a critical role in determining the likelihood and severity of traffic crashes, injuries, and fatalities. Crashes are more likely to occur as a driver's speed increases, as does the likelihood of a crash being fatal. Intelligent speed assistance (ISA) is a tool [proven to reduce](#) speed-related crashes and fatalities. This technology is already widely deployed across Europe and Euro NCAP's rating system provides a [model](#) for NHTSA to follow in considering ISA. NCAP can act as an incentive for automakers to make ISA standard in all vehicles, by reserving full credit only where it is available.
- **Pedestrian protection and crashworthiness/survivability for people outside the vehicle:** Since 2010, NHTSA has documented that large high-front vehicles present increased risks to people walking and biking. With very large SUVs and light trucks making up an ever-increasing share of vehicular traffic and driving a large share of fatalities and serious injuries among pedestrians and cyclists, federal action to address vehicle size is long overdue. NHTSA's proposal to include a crashworthiness pedestrian protection testing program in NCAP in 2022 is an opportunity to update vehicle test criteria to ensure safety for the widest possible range of people. NHTSA can do so by following the [example of Transport For London](#) and select, as their default "test case," a significantly smaller than average person, to ensure that all people are properly considered in the crashworthiness testing. Designing test criteria built around the smaller-than-average person will result in increased safety for everyone.
- **Direct visibility from the driver's seat ("direct vision"):** Cameras, mirrors, sensors and other ADAS features cannot replace the need for direct sight. Large vehicles, such as SUVs, light trucks, and heavy trucks, have large blind spots and visibility problems, which are directly connected to decreased safety and increases in fatalities. A recent [IIHS study](#) found that pick-up trucks are 4 times more likely, and SUVs are 3 times more likely, to cause a fatal crash when making a left turn because of limited visibility from the driver's seat. Data from the USDOT Volpe Center shows that when drivers are operating

¹ See p. 344 of Manual.

trucks with low visibility from the driver's seat they are able to detect pedestrians in a crosswalk in front of them only 13% of the time, versus 100% in vehicles that offer better visibility from the driver's seat. NHTSA should use existing tools, such as [USDOT's Blind Zone Calculator](#) and [international direct vision standards](#), to evaluate and address the safety impacts of blind spots on large vehicles. Vehicles with low direct visibility from the driver's seat should not receive 5-star ratings.

Trillium greatly appreciates NHTSA's consideration of these comments. Safer vehicles are a pillar of USDOT's National Roadway Safety Strategy, and NHTSA can do more to leverage NCAP and ensure consumers have a comprehensive understanding of vehicle safety. We welcome further opportunities to guide the continued development of the NCAP program as NHTSA takes important steps towards incorporating the safety of people traveling outside personal vehicles into the program.

Sincerely,

Weston Shippy, on behalf of Trillium Solutions an Optibus Company