

National Transportation Safety Board

Office of the Chair

Washington, DC 20594



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Docket Management Facility
US Department of Transportation
1200 New Jersey Avenue SE
West Building, Ground Level
Room W12-140
Washington, DC 20590-0001

Attention: Docket No. NHTSA-2021-0002

Dear Sir or Madam:

The National Transportation Safety Board (NTSB) has reviewed the National Highway Traffic Safety Administration (NHTSA) request for comments (RFC) titled "New Car Assessment Program," published at 87 *Federal Register* 46 on March 9, 2022. In its request, NHTSA proposes significant upgrades to the New Car Assessment Program (NCAP) by proposing (1) to add four new advanced driver assistance systems (ADAS) technologies (blind spot detection, blind spot intervention, lane keeping support, and pedestrian automatic emergency braking) to those NHTSA currently recommends, (2) changes to the test procedures and performance criteria of the four currently recommended ADAS, and (3) a roadmap for phased implementation of NCAP updates over the next several years. The RFC describes, "but does not propose," how NHTSA might (1) rate vehicles with ADAS technologies, (2) include ADAS ratings on the Monroney label (vehicle's window sticker at the point of sale), and (3) incorporate other safety technologies in the future, particularly those with "potential to help people make safe driving choices."

NHTSA proposes many meaningful changes in this RFC, but these proposals can improve safety only if implemented. The NCAP program will not fulfill its purpose of informing consumers unless NHTSA can keep pace with the emergence and development of safety technologies. NHTSA started the process of expanding NCAP with a 2013 RFC.¹ In 2015, the FAST Act (Section 24322) required NHTSA to promulgate a rule to ensure that crash avoidance information be included on the Monroney (window) label within 1 year. Seven years later, NCAP still does not rate any vehicle safety technologies, the Monroney label has not been modified, nor has NHTSA proposed to do either of these things in the current RFC. Further, some of the technologies described as "emerging" in NHTSA's 10-year roadmap are already

¹ 78 *Federal Register* 20597 (April 5, 2013).

available on vehicles, and ratings of those technologies are being implemented by other NCAPs around the world.

In our response to this RFC, the NTSB discusses the overall state of NCAP in relation to our safety recommendations, mandates in other countries, and vehicle rating programs. We also offer comments on specific questions asked in this RFC.

Prior RFCs and NTSB Safety Recommendations

The current RFC comes almost a decade after the 2013 RFC in which NHTSA sought input to help the agency in “developing a draft 5-year plan for the NCAP program.” Two years later, in 2015, NHTSA issued another RFC in which the agency discussed expanding NCAP to include pedestrian crashworthiness ratings and to rate the performance of crash avoidance technologies as required by the 2015 FAST Act.² Crash avoidance technologies discussed in the 2013 and 2015 RFCs included forward collision warning (FCW), crash imminent braking (CIB) and dynamic brake support (DBS), lane departure warning, blind spot detection, lower beam headlight technologies, semi-automatic headlamp beam switching, amber rear turn signal lamps, rear automatic braking, and pedestrian automatic emergency braking (AEB). In our response to each RFC, the NTSB expressed support for NHTSA’s proposed updates to NCAP and urged NHTSA to continue expanding NCAP based on NTSB findings and recommendations.³ In 2016, NHTSA made a limited change to NCAP by adding AEB to the list of recommended technologies to help prevent or mitigate rear-end crashes, starting with model year 2018 vehicles. This change did not expand NCAP ratings or rate AEB systems. No other changes have been made to NCAP.

The NTSB’s investigations have led to the issuance of multiple safety recommendations, many of them to NHTSA, related to vehicle technologies to assist the driver, such as ADAS. Our very first recommendation related to collision avoidance technology was issued in 1995 to the US Department of Transportation (Safety Recommendation H-95-44, classified “Closed—Unacceptable Action” in 1999). Since then, the NTSB has issued more than 25 recommendations related to this technology. The NTSB repeatedly recommended that NHTSA research, develop, or improve performance standards for the technologies; inform consumers about their benefits; encourage vehicle manufacturers to install them as standard equipment;

² (a) 80 *Federal Register* 78521 (December 16, 2015). (b) The 2015 Fixing America’s Surface Transportation (FAST) Act requires NHTSA to issue a rule to ensure that crash avoidance information is provided along with crashworthiness information on the Monroney label. Pub. L. No. 114-94.

³ (a) The NTSB’s response to NHTSA’s request for comments, “New Car Assessment Program,” was published at 78 *Federal Register* 20597 on July 8, 2013. <https://www.regulations.gov/comment/NHTSA-2012-0180-0040>. (b) The NTSB’s response to NHTSA’s request for comments, “New Car Assessment Program,” was published at 80 *Federal Register* 241 on December 16, 2015. <https://www.regulations.gov/document?D=NHTSA-2015-0119-0352>.

and require them on all new vehicles. The safety recommendations relevant to this RFC are described below.⁴

- In 2015, the NTSB published a special investigation report examining collision avoidance technologies for preventing rear-end crashes and determined that the technologies are mature and effective in reducing rear-end crashes. We also found that NCAP can serve as a mechanism to incentivize further improvements of the technology. The NTSB recommended that NHTSA incorporate a rating system into NCAP for forward collision avoidance systems and include those ratings on the Monroney label (Safety Recommendations H-15-6 and -7, both currently classified “Open—Unacceptable Response”).⁵ In the same report, the NTSB recommended that NHTSA develop and apply testing protocols to assess the performance of forward collision avoidance systems in passenger vehicles at various velocities, including high speed and high velocity-differential (Safety Recommendation H-15-4, also classified “Open—Unacceptable Response”).
- In 2017, the NTSB published a safety study titled *Reducing Speeding-Related Crashes Involving Passenger Vehicles* in which, among a variety of potential countermeasures, we determined that vehicle technology solutions could reduce the instances of speed-related crashes. The NTSB issued numerous recommendations, including those to NHTSA to incentivize passenger vehicle manufacturers and consumers to adopt intelligent speed adaptation (ISA) systems by, for example, including ISA in NCAP (Safety Recommendation H-17-24, currently classified “Open—Acceptable Alternate Response”).⁶
- In 2018, the NTSB published a special investigation report on pedestrian safety in which we determined that automated pedestrian safety systems could reduce pedestrian injuries and that NCAP could serve as a mechanism to incentivize incorporation and further improvements of these safety systems. The NTSB issued numerous recommendations to NHTSA, including to develop performance tests for evaluating automatic pedestrian safety systems (Safety Recommendation H-18-42, currently classified “Open—Acceptable Response”) and to incorporate such systems into NCAP (Safety Recommendation H-18-43, currently classified “Open—Unacceptable Response”).⁷

⁴ Use the NTSB’s [CAROL Query](#) to search for additional information on these safety recommendations and investigations.

⁵ *The Use of Forward Collision Avoidance Systems to Prevent and Mitigate Rear-End Crashes*, Special Investigation Report [NTSB/SIR-15/01](#) (Washington, DC: NTSB).

⁶ *Reducing Speeding-Related Crashes Involving Passenger Vehicles*, Safety Study [NTSB/SS-17/01](#) (Washington, DC: NTSB).

⁷ *Pedestrian Safety*, Special Investigation Report [NTSB/SIR-18/03](#) (Washington, DC: NTSB).

- In 2018, the NTSB published a safety report titled *Select Risk Factors Associated with Causes of Motorcycle Crashes* and determined that vehicle collision avoidance technologies could reduce the frequency of crashes with motorcyclists. Among other recommendations, the NTSB recommended that NHTSA incorporate motorcycles in the development of performance standards for passenger vehicle crash warning and prevention systems (Safety Recommendation H-18-29, currently classified “Open—Acceptable Response”).⁸
- In 2019, the NTSB published a safety study on bicyclist safety that found that vehicle collision avoidance technologies could also reduce the frequency of crashes with bicyclists and that NCAP could serve as a mechanism to incentivize incorporation and further improvements of these technologies. Specifically, the NTSB recommended that NHTSA incorporate into its NCAP testing the evaluation of a car’s ability to avoid crashes with bicycles (Safety Recommendation H-19-36, currently classified “Open—Unacceptable Response”).⁹
- In 2020, the NTSB completed a crash investigation concerning a vehicle traveling at highway speeds that veered into a gore area and struck a crash attenuator and a concrete median barrier, resulting in a postcrash fire and fatal impact-related injuries to the driver. Although the vehicle was equipped with collision avoidance systems, they did not detect the concrete median barrier and did not reduce the vehicle speed. The NTSB recommended that NHTSA expand NCAP testing of forward collision avoidance systems to include common obstacles, such as traffic safety hardware, cross-traffic vehicle profiles, and other applicable vehicle shapes or objects found in the highway operating environment (Safety Recommendation H-20-1, currently classified “Open—Acceptable Response”).¹⁰
- Also in 2020, the NTSB published a report addressing electric vehicle fires, in which we identified potential deficiencies in the electric vehicle manufacturers’ guidance to emergency responders. As a result, the NTSB recommended that NHTSA factor in the availability of a manufacturer’s emergency response guide and its adherence to international standards and recommended practice when

⁸ *Select Risk Factors Associated with Causes of Motorcycle Crashes*, Safety Report [NTSB/SR-18/01](#) (Washington, DC: NTSB).

⁹ *Bicyclist Safety on US Roadways: Crash Risks and Countermeasures*, Safety Study [NTSB/SS-19/01](#) (Washington, DC: NTSB).

¹⁰ *Collision Between a Sport Utility Vehicle Operating with Partial Driving Automation and a Crash Attenuator, Mountain View, California, March 23, 2018*. [NTSB/HAR-20/01](#) (Washington, DC: NTSB).

determining a vehicle's NCAP score (Safety Recommendation H-20-30, currently classified "Open—Unacceptable Response").¹¹

Although the NTSB has made recommendations related to only some ADAS technologies proposed in this RFC, as we stated in 2013 and 2015, we also support including other technologies that show a safety benefit.

In the current response, the NTSB offers comments in the following areas: (1) new ADAS technologies: pedestrian safety, (2) ADAS test procedures and performance criteria, (3) roadmap for phased implementation of NCAP updates, and (4) ADAS ratings systems on the Monroney label.

1. New ADAS Technologies: Pedestrian Safety

We are encouraged to see NHTSA's proposal to increase the vehicle speed for pedestrian AEB (PAEB) to 37.3 mph (up from 24.9 mph in the 2019 PAEB test procedure) and we believe that higher speeds should be part of the NCAP roadmap to future improvements. The NTSB also agrees with NHTSA's proposal to include dark conditions in the testing program. Testing in dark conditions is critical to improving pedestrian safety, because many fatalities occur at night. NHTSA is proposing not to include turning vehicles in the PAEB testing protocols. Although the NTSB recognizes that there may be limitations in current widely adopted technologies to address these types of scenarios, we believe that it is important to provide vehicle manufacturers an opportunity to evaluate the upper limits of system capabilities, incentivizing advancement.

On the topic of pedestrian safety, NHTSA also mentions its plan to upgrade the NCAP crashworthiness program in phases over the next several years, beginning with a proposal of a pedestrian crashworthiness program in NCAP in 2022. In our 2018 pedestrian safety report, we examined how improvements in vehicle design could reduce the extent of injuries to struck pedestrians. In that report, we recommended that NHTSA develop test criteria for vehicle designs that reduce injuries to pedestrians and also that the agency include pedestrian safety systems, including collision avoidance and other more-passive safety systems, into NCAP. These Safety Recommendations H-18-41 and -43 to NHTSA are classified "Open—Unacceptable Response." The NTSB encourages NHTSA to move quickly to include pedestrian crashworthiness in NCAP as well as other improvements to crashworthiness ratings.

2. ADAS Test Procedures and Performance Criteria

The NTSB support for forward collision avoidance systems remains firm, as research and real-use data consistently show significant benefits in reducing the

¹¹ *Safety Risk to Emergency Responders from Lithium-Ion Battery Fires in Electric Vehicles*, Safety Report [NTSB/SR-20/01](#) (Washington, DC: NTSB).

frequency and severity of rear-end crashes.¹² Although our investigations have revealed limitations of some forward collision avoidance systems, we believe that NCAP ratings will assist consumers in understanding the capabilities of the systems. Further, the ratings conducted by NCAPs around the world and by the Insurance Institute for Highway Safety (IIHS) show considerable differences in the performance of forward collision avoidance systems; some systems perform at the top-rated level while other systems struggle.¹³ In this RFC, NHTSA also describes differences in performance and presents data showing that effective performance at “highest speeds may be feasible.”

As noted above, the NTSB issued several recommendations to NHTSA to expand NCAP testing protocols and to evaluate the performance of forward collision avoidance systems in addressing various crash scenarios.

The table below includes additional comments on specific ADAS testing elements discussed in the RFC.

Topic	NTSB Comments
Forward Collision Warning (FCW)	The NTSB supports, whenever possible, harmonizing testing protocols with those used by NCAPs around the world. We also agree with NHTSA's proposed changes to FCW testing protocols pertaining to the selection of the middle (or next latest) FCW system setting in lieu of the default setting. We are concerned that the RFC does not propose or consider new testing scenarios such as those involving cross traffic, vehicle cut-in situations, or additional targets, such as different types and orientations of a vehicle, and roadway hardware such as crash attenuators. ¹⁴

¹² *The Use of Forward Collision Avoidance Systems to Prevent and Mitigate Rear-End Crashes*, Special Investigation Report, [NTSB/SIR-15/01](#) (Washington, DC: NTSB).

¹³ For examples of forward collision avoidance systems in passenger vehicles failing to respond to different types of forward hazards at varying speeds, see investigation reports *Rear-End Collision Between a Car Operating with Advanced Driver Assistance Systems and a Stationary Fire Truck, Culver City, California, January 22, 2018* (NTSB/[HAB-19/07](#)); *Collision Between Car Operating with Partial Driving Automation and Truck-Tractor Semitrailer, Delray Beach, Florida, March 1, 2019* (NTSB/[HAB-20/01](#)); and *Collision Between a Sport Utility Vehicle Operating With Partial Driving Automation and a Crash Attenuator, Mountain View, California, March 23, 2018* (NTSB/[HAR-20/01](#)). For examples of forward collision avoidance system ineffectiveness in commercial vehicles, see investigation reports *Multivehicle Work Zone Crash on Interstate 95, Cranbury, New Jersey, June 7, 2014* (NTSB/[HAR-15/02](#)) and *Multivehicle Crash Near Mt. Pleasant Township, Pennsylvania, January 5, 2020* (NTSB/[HIR-22/01](#)).

¹⁴ For examples of collisions involving vehicles striking crash attenuators, see investigation reports *Motorcoach Collision With Crash Attenuator in Gore Area, US Highway 101, San Jose, California, January 19, 2016* (NTSB/[HAR-17/01](#)) and *Collision Between a Sport Utility Vehicle Operating With Partial Driving Automation and a Crash Attenuator, Mountain View, California, March 23, 2018* (NTSB/[HAR-20/01](#)). For examples of passenger vehicles equipped with FCW systems striking cross-traffic vehicles, see investigation

Topic	NTSB Comments
FCW (alert modality)	<p>Considering the wealth of research showing the benefits of a bi-modal alert, and, conversely, the relatively low effectiveness of a visual-only alert, the NTSB supports NHTSA's proposal not to give credit for visual-only FCW alerts.¹⁵ Our position is further supported by several investigations pertaining to vehicles operating in partial automation mode at the time of the crash, in which we found visual alerts to be ineffective in capturing drivers' attention.¹⁶ Although this RFC provides an example of an effective haptic alert—General Motor's Safety Alert Seat—the implementation of haptic alerts can vary considerably, through a seat, steering wheel, or a seat belt. Without examining the efficacy of different means of providing haptic alerts and defining appropriate, research-supported implementations, a prudent approach would give credit only for audible unimodal alerts or for bi-modal alerts that include audible alerts.</p>
Automatic emergency braking (AEB), crash imminent braking (CIB), and dynamic brake support (DBS)	<p>We are encouraged by the proposed increase in speed of the subject vehicle (SV) to 49.7 mph (from 25 mph in the current 2015 CIB testing protocols).¹⁷ Because manufacturers typically do not make a sharp distinction between DBS and CIB, and because the public is largely unaware of such nomenclature, we support NHTSA's proposal to provide a single rating for AEB to address rear-end crashes. The NTSB does not support NHTSA's suggestion to remove DBS testing scenarios from NCAP. DBS is typically included as an integral component of an AEB system. Although the evaluation of AEB (or CIB component) should have an expectation of a functioning DBS, that functionality must be verified; the system must provide additional braking force if necessary, and the vehicle must not suppress AEB activation after driver-applied braking. We support NHTSA's alternative proposal to retain DBS testing in NCAP; to conduct testing in two impact scenarios—lead vehicle stopped and lead vehicle moving—at higher speeds only, with SV speeds of 43.5 mph and 49.7 mph.</p>

reports *Collision Between a Car Operating With Automated Vehicle Control Systems and a Tractor-Semitrailer Truck Near Williston, Florida, May 7, 2016* (NTSB/[HAR-17/02](#)) and *Collision Between Car Operating with Partial Driving Automation and Truck-Tractor Semitrailer, Delray Beach, Florida, March 1, 2019* (NTSB/[HAB-20/01](#)).

¹⁵ Lerner, N., Robinson, E., Singer, J., Jenness, J., Huey, R., Baldwin, C., & Fitch, G. (2014, September), *Human factors for connected vehicles: Effective warning interface research findings* (Report No. DOT HS 812 068), Washington, DC: National Highway Traffic Safety Administration.

¹⁶ As noted earlier, see reports NTSB/[HAR-17/02](#) (Williston, Florida) and NTSB/[HAR-20/01](#) (Mountain View, California).

¹⁷ [NCAP's 2015 CIB testing protocols](#) (October 2015).

Topic	NTSB Comments
FCW and AEB	The NTSB supports NHTSA's attempts to combine testing scenarios when evaluating FCW and AEB, but we are concerned about the adequacy of the proposed speed in the FCW testing protocols. The proposed SV speed of 49.7 mph is barely higher than the speed in the current testing protocol (45 mph), which was developed in 2013. ¹⁸

NHTSA states that the upper level of testing protocols proposed in this RFC are based on NHTSA's view of the current capabilities of these systems. However, such an approach does not provide any structure for evaluation of technology advancements in the intermediate future, nor does it do enough to incentivize manufacturers to improve the performance of their systems. The NTSB has previously expressed the need to strive for the performance we want the systems to be able to reach, not merely evaluate the current capabilities of the systems.

For that reason, the NTSB urges NHTSA to create testing protocols—for all currently recommended ADAS—with higher speeds and increased complexities, to provide manufacturers with a standardized platform to evaluate advanced capabilities.

3. Roadmap for Phased Implementation of NCAP Updates

The current RFC contains a section on emerging vehicle technology in which NHTSA describes its 10-year roadmap to conduct research and develop test procedures to help determine whether these technologies merit inclusion in NCAP. The *emerging* technologies that NHTSA discusses in the RFC are: (1) driver monitoring systems, (2) driver distraction, (3) alcohol detection, (4) seat belt interlocks, (5) intelligent speed assist, and (6) rear seat child reminder assist. Our response focuses on several of these emerging technologies. Our safety recommendation history and the current European Union mandates and Euro NCAP requirements indicate that these are far from novel technologies. In fact, most are currently available technologies. Specifically:

- Driver monitoring systems
 - In the Mountain View, California, collision of a vehicle operating in partial automation mode with a crash attenuator, the system designed to determine driver attentiveness was ineffective. The NTSB recommended that NHTSA and SAE International develop performance standards for driver monitoring systems and require them on new vehicles with partial

¹⁸ NHTSA (2013, February). *Forward Collision Warning System Confirmation Test*. [NCAP Lab Procedures 2002 - Frontal \(nhtsa.gov\)](https://www.nhtsa.gov/ncap-lab-procedures-2002-frontal)

automation capabilities (Safety Recommendations H-20-3 and -4, currently classified “Open—Acceptable Response”). The benefits of such systems would extend to all vehicles regardless of any automation capabilities.

- Starting in July 2022, *driver drowsiness and attention warning* and *advanced driver distraction warning* systems will be mandatory in passenger vehicles in the European Union. Additionally, Euro NCAP will start rating *occupant status monitoring* systems in 2023, based on the 2022 testing protocols.¹⁹
- Driver distraction
 - In 2012, NHTSA published a notice of proposed rulemaking (NPRM) titled “Visual-Manual NHTSA Driver Distraction Guidelines for In-Vehicle Electronic Devices.” In response to this NPRM, the NTSB stated that, as soon as the proposed Driver Distraction Guidelines are adopted, NHTSA should immediately add to its NCAP information a notice of whether a new car complies with the guidelines and also note those vehicles that do not comply.²⁰ We further emphasized the need for incorporation into NCAP in our response to NHTSA’s 2013 RFC. Although these guidelines were adopted in 2013, NCAP still does not address these aspects, leaving consumers without key information.
- Alcohol detection
 - Although still in development, alcohol detection systems are far from novel. In 2012, as part of the NTSB’s special investigation of wrong-way driving crashes, we recommended that NHTSA and the Automotive Coalition for Traffic Safety Inc. (ACTS) work together to accelerate widespread implementation of Driver Alcohol Detection System for Safety (DADSS) technology by (1) defining usability testing that will guide driver interface design and (2) implementing a communication program that will direct driver education and promote public acceptance.²¹
 - In 2021, recognizing the lifesaving potential of drunk- and impaired-driving prevention technology, Congress stated that such

¹⁹ Euro NCAP Assessment [protocol for Safety Assist Safe Driving](#), published in February 2022.

²⁰ “Visual-Manual NHTSA Driver Distraction Guidelines for In-Vehicle Electronic Devices” (proposed guidelines), which was published at 77 *Federal Register* 11200 (February 24, 2012). [Regulations.gov](#).

²¹ *Wrong-Way Driving*, Safety Investigation Report NTSB/SIR-12/01 (Washington, DC: NTSB). Safety Recommendation H-12-43 to NHTSA is classified “Open—Unacceptable Response,” and H-12-48 to ACTS is classified “Open—Acceptable Response.”

technology must be standard equipment in all new passenger vehicles and that NHTSA must issue a rule prescribing a federal motor vehicle safety standard to require such technology within 3 years.²²

- Intelligent speed assist
 - As noted earlier (see p. 3), in 2017, the NTSB recommended that NHTSA incentivize passenger vehicle manufacturers and consumers to adopt ISA systems by, for example, including ISA in NCAP.
 - Starting in July 2022, ISA systems in passenger vehicles will be mandatory in the European Union.²³ Additionally, Euro NCAP will start rating *speed assist* systems in 2023, based on the 2022 testing protocols.

In this RFC, NHTSA states that it is “exploring opportunities to encourage the development and deployment of these technologies.” Technologies that the European Union started to mandate this year, that Euro NCAP is starting to rate next year, and that the NTSB has been recommending be required for years, are only now starting to be considered by NHTSA. NHTSA is a decade behind the progress of these technologies, and the NTSB urges NHTSA to incorporate these technologies much sooner than the planned 5-10 years from now.

4. ADAS Ratings Systems on the Monroney Label

NCAP has the ability to create the market for new safety technologies. The NTSB recognizes the essential role that NCAP has played in advancing the crashworthiness of passenger vehicles. Since its implementation in 1979, the 5-star crashworthiness safety rating has incentivized passenger vehicle manufacturers to continually improve the crashworthiness of their vehicles, such that the majority of today’s vehicles meet the top crashworthiness scores. NCAP could provide that same incentive to manufacturers and consumers through performance testing for ADAS. However, it still does not.

The NTSB considers the slow pace of progress in NCAP expansion as the primary reason for the underutilization of NCAP potential. The NTSB continues to believe in the potential benefits of NCAP to encourage the deployment of advanced vehicle technologies and ensure consumer recognition, demand, and use of these technologies. However, these benefits require an updated and dynamic NCAP.

²² Section 24220, [Infrastructure Investment and Jobs Act](#), enacted on November 15, 2021.

²³ According to 661/2009/ED, new models of light vehicles in the European Union will be required to be equipped with ISA by July 2022. This mandate extends to all passenger vehicle models by July 2024.

In December 2015, Congress mandated that NHTSA require crash avoidance information to be placed alongside crashworthiness information on the Monroney labels of new vehicles.²⁴ In response to this mandate, NHTSA issued the 2015 RFC yet did little else to change NCAP. In November 2021, Congress mandated that NHTSA develop a roadmap for phased implementation of NCAP updates.²⁵ In response, NHTSA issued the current RFC. Instead of taking proactive steps, NHTSA's main activities related to NCAP expansion have been initiated by Congress.

The lack of progress on NCAP expansion becomes evident when comparing NCAP ratings to those of Euro NCAP and the IIHS. Euro NCAP started adding ratings of safety technologies to the overall vehicle safety score in 2009. Since then, Euro NCAP added the following ratings:

- 2009: FCW
- 2014: AEB; lane departure warning and lane keep assist systems
- 2016: pedestrian AEB; child restraint installation/ease/compatibility
- 2018: bicyclist AEB
- 2020: scenarios involving cars turning toward pedestrians as well as reversing into pedestrians; automated driving technologies and driver monitoring

The IIHS crashworthiness rating started expanding with the inclusion of ADAS ratings in 2013. Since then, the IIHS program added the following ratings:

- 2013: front collision avoidance systems (FCW and AEB)
- 2015: ease of LATCH use²⁶
- 2016: headlight performance
- 2018: rear crash prevention systems
- 2019: pedestrian detection systems
- 2022: seat belt reminder systems

For about a decade, a vehicle's overall safety rating, as determined by various NCAP programs around the world and by the IIHS in the United States, has been based on the vehicle's crashworthiness and the presence and effectiveness of its various safety technologies. Yet, a top 5-star safety rating awarded by US NCAP can be achieved by a vehicle that has none of the basic collision prevention and other driver assistance technologies.

It has been more than a decade since NHTSA updated the Monroney label. Further, the only update to the NCAP program has been the addition of certain "recommended technologies" on the agency website. In practice, this means that on

²⁴ [Fixing America's Surface Transportation \(FAST\) Act](#), enacted on December 4, 2015.

²⁵ [Infrastructure Investment and Jobs Act](#), enacted on November 15, 2021.

²⁶ Lower anchors and tethers for children (LATCH) is a restraint hardware support intended to make child restraint installation easier.

the NHTSA.gov/ratings website, the presence or absence of four crash avoidance technologies is noted with an icon. Neither the website nor the Monroney label includes information about differences in the performance of those technologies on specific vehicles. Consumers looking at the Monroney label for a new vehicle may assume that they are seeing the best and most up-to-date data about the safety of that vehicle, but they would be mistaken.

Performance ratings are essential to give manufacturers an incentive for improving performance and for driving public demand for crash avoidance technologies and driver assistance systems with the highest levels of performance. A rating system should regularly advance the criteria for achieving a top score. The NTSB is disappointed by the lack of specific proposals on how NHTSA might rate vehicles with ADAS technologies, include ADAS ratings on the Monroney label, and incorporate other safety technologies in the future.

Summary

To conclude, it has been more than 25 years since the NTSB first issued a recommendation to NHTSA regarding FCW technology. The US NCAP is 13 years behind Euro NCAP's rating of collision avoidance and driver assistance technologies. Further, nearly 10 years have passed since NHTSA issued its 2013 RFC identifying crash avoidance technologies for NCAP, and 7 years have passed since the NTSB recommended that NHTSA expand NCAP to include forward collision avoidance system ratings and Congress mandated that NHTSA include crash avoidance information on the Monroney label. Today, ADAS ratings are still not part of the NCAP safety rating, and the Monroney label does not provide consumers with information about vehicles' crash avoidance technologies. Further, this RFC only notes the potential for future research to address vulnerable road users such as bicyclists and motorcyclists, despite NTSB recommendations, and the fact that other countries are currently incorporating the safety of these road users into their existing NCAPs.

NHTSA's vision statement says, "NHTSA aims to be the global leader in motor vehicle and highway safety."²⁷ Although the US NCAP was once the global leader in rating vehicle safety, NHTSA's inaction in the last decade continues to fail consumers and threatens to reduce the US NCAP to near irrelevance. Even though the Monroney label, which contains only crashworthiness information, can easily be seen by consumers purchasing new vehicles, 63 percent of the public is unaware of NHTSA's NCAP website, where basic safety technology information is located.²⁸ Although 64 percent of consumers who purchase new vehicles are extremely/likely interested in vehicle safety technologies, those consumers must still seek non-government

²⁷ NHTSA mission [webpage](#).

²⁸ Team Stratacomm. (January 2020). [NCAP 5-Star Safety Ratings Communications Quantitative Research](#).

sources, such as the IIHS, to obtain valuable rated vehicle safety information.²⁹ The NTSB urges NHTSA to again become a global leader and incorporate ADAS, other advanced safety technologies, and pedestrian protection into its overall NCAP rating.

Sincerely,

Jennifer Homendy
Chair

cc: darren.hall1@dot.gov

²⁹ Team Stratacomm.