

Safety

Approach to safety

The automobile has transformed people's lives, bringing mobility, convenience, and the pleasure of driving. In recent years, the automotive industry has made significant advances, particularly in autonomous driving technologies and driver-assist features. The world is also undergoing major structural shifts due to aging populations and the rapid progression of urbanization. Technological innovation in the automotive sector is expected to help realize societies with less urban traffic congestion and more ways for senior citizens to move about safely.

Nissan designs and engineers cars that embody the pleasure and richness of driving while offering a high level of safety. More than 90% of traffic crashes are caused by human error. Our goal is zero fatalities: reducing the number of deaths from crashes involving Nissan vehicles to virtually zero. To this end, we continue working to help reduce traffic crashes.

Safety management

According to the Global status report on road Safety 2023 published by the World Health Organization (WHO), approximately 1.19 million people worldwide die annually as a result of road traffic crashes. This is the 12th leading cause of death worldwide.

Nissan is working to develop technologies aimed at significantly reducing crashes, including the introduction of next-generation LIDAR technology into our vehicles. In parallel, we are working to enhance technologies that help lessen the severity of unavoidable crashes and bolster occupant protection.

While pushing forward with technological advancements on the vehicle side, we are also conducting educational initiatives to help raise safety awareness for the motoring public.

Safety achievements

Enhancements to Nissan's safety technology and external ratings received*1

Intelligent Emergency Braking*2 is available on nearly all vehicle categories sold in Japan, including EVs and commercial vehicles, and standard on all major models. In the U.S., Automatic Emergency Braking is standard equipment on substantially all light duty vehicles and trucks. Otherwise in North America and Europe, Intelligent Emergency Braking is available on key models.

Our vehicles have earned high safety ratings on many public and governmental tests held in various regions. Nissan is actively participating in industry activities such as those organized by the Japan Automobile Manufacturers Association (JAMA) to promote the vehicle safety measures activities and the strategic standardization activities. Nissan contributes to the creation of the international regulations (WP29) and de jure standards (ISO) of "performance evaluation test methods" for various safety technologies such as "intelligent emergency braking".

*1 Click here for more information on major external safety ratings (Based on 2023 assessments) [>>> P160](#)

*2 Automatic Emergency Braking in North America

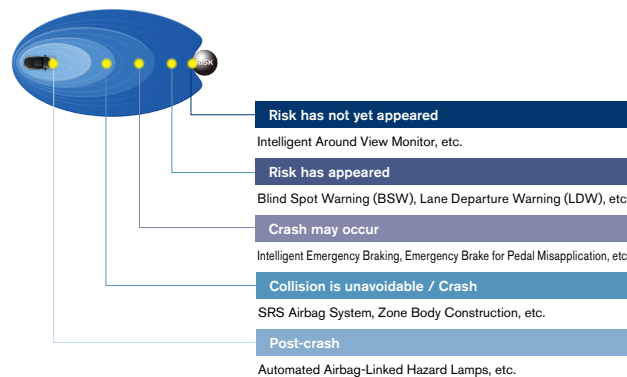
Aiming for Virtually Collision-Free Cars

Our Safety Shield concept helps support the safety of vehicle occupants in a variety of scenarios from a comprehensive perspective, from crash prevention and avoidance to occupant protection.

For example, during normal driving or parking, sensors and cameras can help detect vehicles and pedestrians that may be difficult for drivers to see; this supports drivers and allows them to drive with peace of mind.

We are committed as an automobile manufacturer to widespread availability of our safety technologies.

Safety Shield Concept *1



Driver-Assistance Technology Leading to a Dramatic Enhancement in Collision Avoidance Performance

Nissan believes that driver-assistance technology, by which some conflicts in complex situations can be avoided, will be instrumental in enabling its customers to use their vehicles

with confidence in the upcoming era of autonomous driving. We have therefore announced ground truth perception technology, which is a driver-assistance technology that aims to lead to dramatic enhancements in the collision avoidance performance of vehicles. This technology makes it possible to accurately capture information about the surroundings, make near-instantaneous decisions, and help avoid conflicts in complex situations where it is extremely difficult to make decisions. In June 2023, we published a demonstration that automatically performs emergency avoidance maneuvers in crashes caused by driver inattention, such as head-on collisions at intersections, where the driver missed a traffic light or sign. By supporting drivers, this technology has the potential to make a significant contribution to reducing crashes. Aiming to complete the development of this technology by the mid-2020s, Nissan will first make ground truth perception technology available on selected new models, and on virtually every new model by fiscal 2030.

Promote educational initiatives for traffic safety activities

Traffic crashes are statistically more likely to occur during the dusk hours from 4:00 to 6:00 p.m. As part of the Hello Safety Campaign*2, Nissan's Omoiyari Light Promotion*3 urges drivers to turn on their headlights earlier in the evening. We have actively supported this campaign since 2010 and promote civic activities with two-way communication to raise public awareness of traffic safety.

Furthermore, we launched a traffic safety project*4 in 2018 together with a research department in Niigata University. One of the outcomes from these efforts is the "Wheel Spinning (*Guru-Guru*) Exercise," *5 developed in March 2020, which promotes and encourages safe driving among senior

drivers.

Furthermore, in March 2021, in collaboration with Niigata University, Kitasato University, and Sagami Women's University, we established a virtual laboratory called the Traffic Safety Future Creation Lab.*6

Through the laboratory's activities, those universities and recent joiner Toin University of Yokohama in partnership with Nissan are committed to traffic safety with the aim of creating a mobile society with zero traffic fatalities by standing by anyone who has concerns or inconveniences in their life and mobility.

Omoiyari Light Promotion



On and around November 10, designated Day of Good Lighting, we supported people nationwide in taking the initiative to encourage drivers to turn on their headlights. This year, twenty-one locations from Hokkaido to Kagoshima participated in the event, which was named the Thank You for Lighting Activity.

In addition, nationwide debriefing session was held in December 2023 where participants from around Japan shared their ideas and tips to get drivers to turn on their headlights. The participants encouraged each other, and the session gave rise to new insights.

Throughout the year, the Global Headquarters Gallery

*1 Click here for more information on Nissan's Safety Technology Development Concept. https://www.nissan-global.com/EN/INNOVATION/TECHNOLOGY/ARCHIVE/SAFETY_TDC/

*2 Click here for more information on the Hello Safety Campaign. (Japanese only) <https://www.nissan-global.com/JP/SUSTAINABILITY/SOCIAL/SAFETY/HELLOSAFETY/>

*3 Click here for more information on the Omoiyari Light Promotion. (Japanese only) <https://www.omoiyari-light.com>

*4 ToLiTon (Town, Life, and Transportation) Safety Initiative This project was named to promote proposals to town, life, and transportation that are not bound by past conventions.

*5 Click here for more information on the "Wheel Spinning (*Guru-Guru*) Exercise". (Japanese only) <https://www.nissan-global.com/JP/SUSTAINABILITY/SOCIAL/SAFETY/HELLOSAFETY/TAISOU/>

*6 Click here for more information on the Traffic Safety Future Creation Lab. (Japanese only) <https://www.nissan-global.com/JP/SUSTAINABILITY/SOCIAL/SAFETY/HELLOSAFETY/LAB/>



Nationwide voluntary participation in the campaign to turn on headlights

hosts daily presentations at dusk by “Nissan PR specialist” staff members about the Omoiari Light Promotion. These activities have helped our Omoiari Light Promotion steadily gain broad acceptance among the public.



Nationwide debriefing session

Traffic safety future creation lab

This laboratory is prioritizing reduction of the number of traffic crashes caused by elderly drivers, which has been identified as a key societal issue in Japan. Activities this year included training using the “functional field of view^{*1} measurement system” developed in fiscal 2021, which revealed that the functional field of view has expanded, and reaction speed has also improved. In addition, the visibility evaluation experiment of colors of pedestrian clothing using character figures and an actual car conducted in fiscal 2022 was performed using chromatic colors this year. Research results will be published on an ad-hoc basis.



Functional field of view experience in VR world



昼間に目立っていた服装が夜には見えにくくなる??
Visibility evaluation experiment of chromatic colors of pedestrian clothing using character figures and an actual car

We also created a VR world, “NISSAN Heritage Cars & Safe Driving Studio,” where visitors can experience our research on traffic safety in the context of Nissan’s iconic heritage cars of the past and the spirit of their times. Visitors can enjoy learning about what colors of pedestrian clothing are easy to see, the importance of the functional field of vision, and “Wheel Spinning (*Guru-Guru*) Exercise”. From now on, we will continue to implement various initiatives to reduce traffic crashes.

*1 Functional field of view refers to the range at which drivers are able to discern objects that they need to identify.