Traffic Safety

Traffic Safety Policies and Philosophy

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 accidents are caused by human error. Our goal is zero fatalities: reducing the number of deaths from accidents involving Nissan vehicles to virtually zero. To this end, we continue working to help reduce traffic accidents.

Traffic Safety Management

In 2021, there were 2,636 fatalities in Japan caused by traffic accidents. While this is 203 fewer than in 2020, there are still more than 2,000 deaths per year due to traffic accidents. According to the World Health Organization (WHO), approximately 1.35 million people die each year in traffic accidents globally.

Unless significant steps are taken, traffic accidents could become the seventh leading cause of death worldwide by 2030.

Nissan is working to develop vehicle control technologies aimed at significantly reduce accidents by utilizing next-generation LIDAR technology. We are working to enhance technologies that help lessen the severity of unavoidable accidents 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.

Traffic Safety Achievements

Enhancements to Nissan's Safety Technology and External Ratings Received

Intelligent Emergency Braking* is available on nearly all vehicle categories sold in Japan, including EVs and commercial vehicles, and standard on all major models. 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. In particular in Japan, from fiscal 2020 JNCAP (Japan New Car Assessment Program) commenced comprehensive assessments in its "Car Safety Performance" evaluations encompassing the three assessment areas of collision performance ratings, preventative safety performance ratings, and automatic accident emergency call devices. To receive the highest score of five stars, high scores must be achieved in each assessment area (automatic accident emergency call devices are a fitment requirement). Following on from the Nissan DAYZ in fiscal 2020, in "Car Safety Performance 2021" for fiscal 2021 the Nissan ROOX, Note/Note Aura, and Nissan Kicks received five stars, a testament to their overall safety performance. Furthermore, a certification system for advanced safety technology was launched by the Ministry of Land, Infrastructure, Transport and Tourism in fiscal 2018. In fiscal 2020, the scope of devices subject to this system was expanded, and by fiscal 2021 10 models and 29 types equipped with intelligent emergency braking and pedal misapplication prevention devices (Nissan DAYZ, Nissan ROOX, Note, Serena, Nissan LEAF, March, Clipper series, and Elgrand) had been approved.

* Automatic Emergency Braking in North America

Major External Safety Ratings (Based on 2021 Assessments)

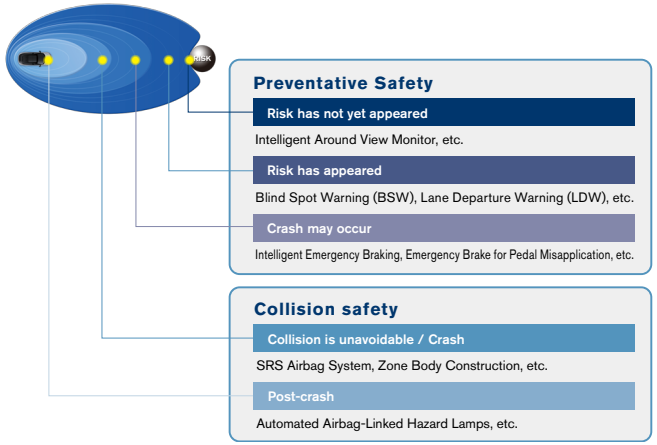
Regions	External Assessments	Models	Rating
Japan	JNCAP*1 Car Safety Performance 2021	Nissan ROOX	5★ (Highest score)
		Note/Note Aura	5★ (Highest score)
		Nissan Kicks	5★ (Highest score)
U.S.	NCAP*2	Nissan LEAF, Nissan LEAF Plus, Murano, Altima, Maxima, Sentra, Versa, INFINITI QX50,	5★ Overall Rating (2022 model year)
		TITAN (Crew Cab), Rogue, Nissan Kicks	4★ Overall Rating (2022 model year)
	IIHS*3	Maxima, Altima, Rogue, Murano	2022 Top Safety Pick+
		Sentra	2022 Top Safety Pick
Europe	Euro NCAP	Qashqai	5★

*1 JNCAP: Japan New Car Assessment Program. An automobile assessment program run by the Ministry of Land, Infrastructure, Transport and Tourism and the National Agency for Automotive Safety and Victims' Aid (NASVA).
*2 NCAP: U.S. National Highway Traffic Safety Administration's New Car Assessment Program.
*3 IIHS: U.S. Insurance Institute for Highway Safety.

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 accident prevention and avoidance to occupant protection.
For example, during normal driving or parking, sensors and cameras can monitor 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



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

Dissemination of Advanced Driver Assistance Technologies: ProPILOT/ProPILOT Assist

ProPILOT/ProPILOT Assist was originally brought to market in 2016. In September 2019, ProPILOT2.0/ProPILOT Assist2.0 was equipped as standard in the all-new Nissan Skyline hybrid. The technology is highly acclaimed, winning Best Innovation Award in the 2019-2020 Japan Car of the Year awards and the RJC Technology of the Year at the RJC Car of the Year awards.
We are progressively deploying ProPILOT/ProPILOT Assist globally in a wider range of vehicle types. In total, more than 1,630,000 vehicles equipped with ProPILOT/ProPILOT Assist have been sold as of the end of March 2022.

ProPILOT/ ProPILOT Assist-equipped vehicles * As of March 31, 2022

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

Nissan believes that driver-assistance technology, by which some highly complex accidents 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 can lead to dramatic enhancements in the collision avoidance performance of vehicles. 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.

Installation of SOS Call (HELPNET)

SOS Call (HELPNET), an advanced automatic accident reporting system that enables data and voice communication to a dedicated operator in case of emergencies such as a traffic accident, sudden illness, risk of an accident, and tailgating and other forms of road rage, is now installed in the Nissan DAYZ, the first in the minicar segment in Japan. We will be gradually expanding the number of models where the system is available. There are two types of notifications: automated notification when the airbag is triggered in a traffic accident, etc., and manual notification using the SOS call switch. After the call is made, a dedicated operator uses the information obtained from the vehicle to quickly contact the fire command center or the police, and supports the driver for example by arranging for ambulances.

Applying NASA Technology to Develop AI for Autonomous Vehicles

To realize fully autonomous city driving, we are developing the Seamless Autonomous Mobility system (SAM). SAM will be able help cars navigate unforeseen situations like accidents, road construction, and other obstacles. When autonomous decision-making is difficult, a remote operator can draw up an ideal route to help manage the situation and sends it to the vehicle for execution.

Promote educational initiatives for traffic safety activities

Traffic accidents 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, Nissan's Omoiyari Light Promotion urges drivers to turn on their headlights earlier in the evening. We have been involved in 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* in 2018 together with a research department in Niigata University. One of the outcomes from these efforts is the "Wheel Spinning (Guru-Guru) Exercise," 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.

We are engaged in a wide range of activities with the aim of realizing a mobile society with virtually zero traffic fatalities. We stand by the members of society who are at a social disadvantage including in the area of transportation, such as small children, the elderly, foreign visitors, and those cut off from public transportation because of depopulation.

* Traffic safety project
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.

Omoiyari Light Promotion

On November 10, designated "Day of Good Lighting," we supported people in 16 regions nationwide in taking the initiative to encourage drivers to turn on their headlights before dark. In addition, the TRY-LIGHT ONLINE forum was held in December 2021 to promote safety in a fun way befitting the Omoiyari Light Promotion. This year, under the theme of "Traffic safety created by women, led by women," an initiative discussed a variety of ideas from the perspectives of called-upon journalists and participants from all over Japan as well as from the side of drivers. This event was also streamed, and we received comments from viewers in support of the movement. Throughout the year, the Global Headquarters Gallery hosts daily presentations at dusk about the Omoiyari Light Promotion during which Nissan's "Miss Fairlady" staff members hold up signboards encouraging drivers to turn on their headlights.
By urging greater awareness of, and action on, safety among corporations, NPOs, car-lovers, and other stakeholders, these activities have helped our Omoiyari Light Promotion steadily gain broad acceptance among the public.

Nationwide voluntary participation in the campaign to turn on headlights

TRY-LIGHT ONLINE forum

Traffic Safety Future Creation Lab

The laboratory will prioritize reducing the number of traffic accidents caused by elderly drivers, which has become a major social problem. This year, we announced the prototype of an "effective field of view* measurement system" developed with Kitasato University. We also made announcements on research study communications: #1 Visibility evaluation (brightness/line-of-sight analyses) based on differences in mask color, #2 Social design research: Elderly driver driving behavior awareness survey, and #3 a survey on colors of pedestrian clothing.
Also, when we conducted an experiment to verify the effects of the "Wheel Spinning (*Guru-Guru*) Exercise," it was proved that this has the effect of improving the flexibility and muscle strength of the body necessary for proper driving operation. For the benefits of the "Wheel Spinning (*Guru-Guru*) Exercise" to become more widely known, we held a hands-on experience at the "NISSAN CROSSING" virtual gallery in the Metaverse and also released a video on YouTube in which influencers in the Metaverse perform the exercise in a variety of settings.

From now on, we will continue to create and disseminate information on traffic safety solutions that will help elderly drivers to drive safely and with greater confidence for many years to come.

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

Effective field of view measurement system

Virtual "Wheel Spinning (*Guru-Guru*) Exercise"

Field Operation Test of Smart City

In January 2022, five companies including Nissan commenced a proof-of-concept experiment for mixed cargo and passenger carrying in Namie Town, Fukushima Prefecture, to match on-demand vehicle dispatch services with the needs for moving people and goods, thereby verifying the efficiency of the flow of people and logistics.
Based on the "Agreement on Collaboration for Community Development Using New Mobility in the Hamadori Region of Fukushima Prefecture," which was signed in February 2021, this proof-of-concept experiment represented the second phase of the "Namie Smart Mobility" proof-of-concept experiment that had started in November 2021. In addition to expanding the target area of the vehicle dispatch service from Namie town center to the entire town, including the area where the evacuation order has been lifted, the companies will also conduct a proof-of-concept demonstration for mixed cargo and passenger carrying that will combine parcel delivery by a shopping support service. Based on the results of last year's demonstration, we will contribute to the creation of a comfortable town in a rural area by improving the convenience of mobile services.
Also in January 2022, three companies including Nissan started the Namie Virtual Shopping Street Service proof-of-concept experiment for a new shopping and home delivery model that will turn the local economy around. The three companies are aiming to revitalize the local economy by combining a system that allows people to select products while watching real-time images of multiple stores using VR technology with the efficient mixed delivery of cargo and the carrying of passengers as well as a simple and convenient shopping and home delivery service.