



KEY CSR AREAS

Safety — Aiming for a Society with No Traffic Accidents

Automobiles are enjoyable, convenient vehicles that provide their users with both comfortable surroundings and a means of self-controlled mobility. Nissan aims to create cars that embody the “pleasure and richness of driving” while prioritizing our customers’ peace of mind through the pursuit of a high level of real-world safety. This of course means a focus on safety features of the vehicles themselves. It also means research and development of Intelligent Transport Systems (ITS) that can help reduce accidents and traffic congestion, as well as educational activities to raise safety awareness among drivers, pedestrians and even passengers in other cars. We are involved with society in a wide range of activities toward the realization of a safer automobile society.

Nissan’s Safety Approach

1. Vehicles: Developing Safety Technologies

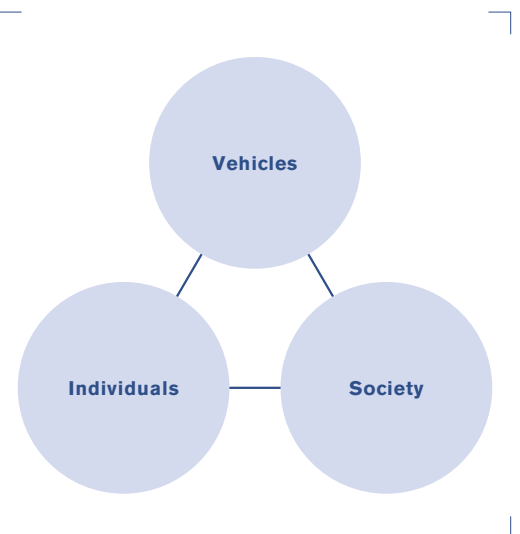
Based on its unique “Safety Shield” concept, Nissan is working to develop automotive technologies from the perspective that people are at the center of the driving experience. Our focus is on solutions that help maintain distance from potentially dangerous conditions. We also provide technologies that aim to activate the vehicle’s onboard systems when a collision is unavoidable, thereby helping to reduce injuries.

2. Individuals: Our Traffic Safety Activities

To help create a better mobility society, it is important to ensure that as many people as possible, including drivers and passengers in vehicles as well as pedestrians outside them, share an understanding of road safety. Nissan takes part in educational activities to boost this safety awareness, measures to improve drivers’ skills behind the wheel and a range of other safety promotions.

3. Society: Working Together with Society

Nissan believes that it is possible to help create an even safer automobile society by using information from the traffic environment surrounding the vehicles on the road. We are working together with a wide range of governmental agencies, universities and companies toward the eventual achievement of a safer, more pleasant mobility society making use of ITS.



■ Improving Safety

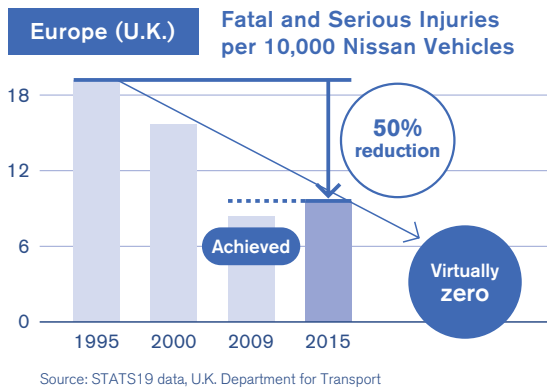
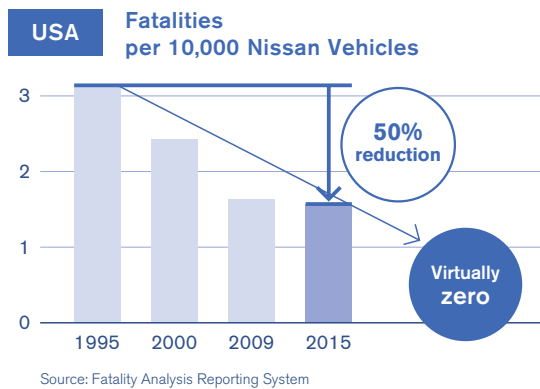
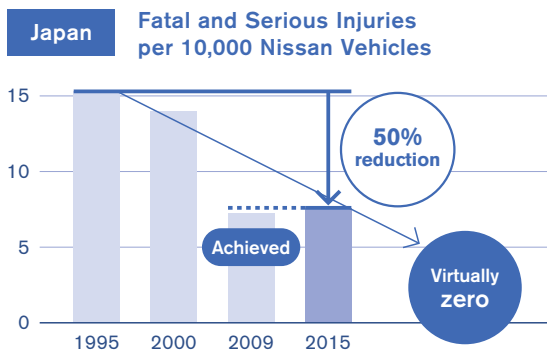
Nissan's Concept of Real-World Safety

Each year around 1 million lives are lost in traffic accidents around the world. In 2010 there were 4,863 deaths resulting from traffic accidents in Japan. This was the tenth straight year for this figure to decline, and the total was under 30% of the number of deaths in 1970, when it peaked at 16,765. The numbers of traffic accidents in Europe and North America are also declining. However, further efforts need to be made to help reduce traffic accidents and the loss of irreplaceable lives.

Nissan's fundamental approach is to pursue safety in the real world. Based on this "real-world safety" concept, we are seeking to progress toward the goal of a world with virtually no accidents leading to death or serious injury. In Japan and the United Kingdom, the number of fatalities and serious injuries involving Nissan vehicles has fallen to our target of half of its 1995 level. In emerging countries, however, traffic accidents remain a serious issue, and it can be difficult to obtain meaningful data for analysis.

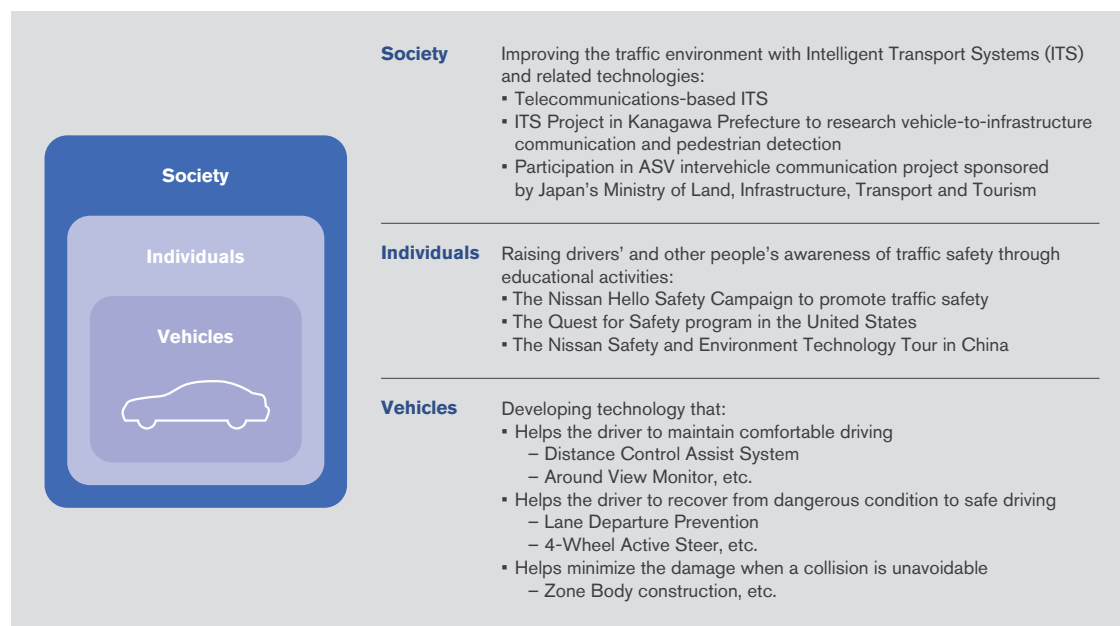


Please see our website for more information on our safety activities.
<http://www.nissan-global.com/EN/SAFETY/>



Triple-Layered Approach

To help reduce traffic accidents, we need a comprehensive approach addressing not just automobiles, but people and the traffic environment too. To help contribute to the realization of a truly safe society, Nissan uses a triple-layered approach with measures taken on the levels of vehicles, individuals and society.



Advanced Technology Briefings

Each year Nissan hosts Advanced Technology Briefings for the media in Japan to inform stakeholders about what the company is developing. New technologies presented at the briefing held in July 2010 included our Moving Object Detection system and Forward Collision Avoidance Assist Concept. Participants had the opportunity to experience these firsthand during test rides at the event.

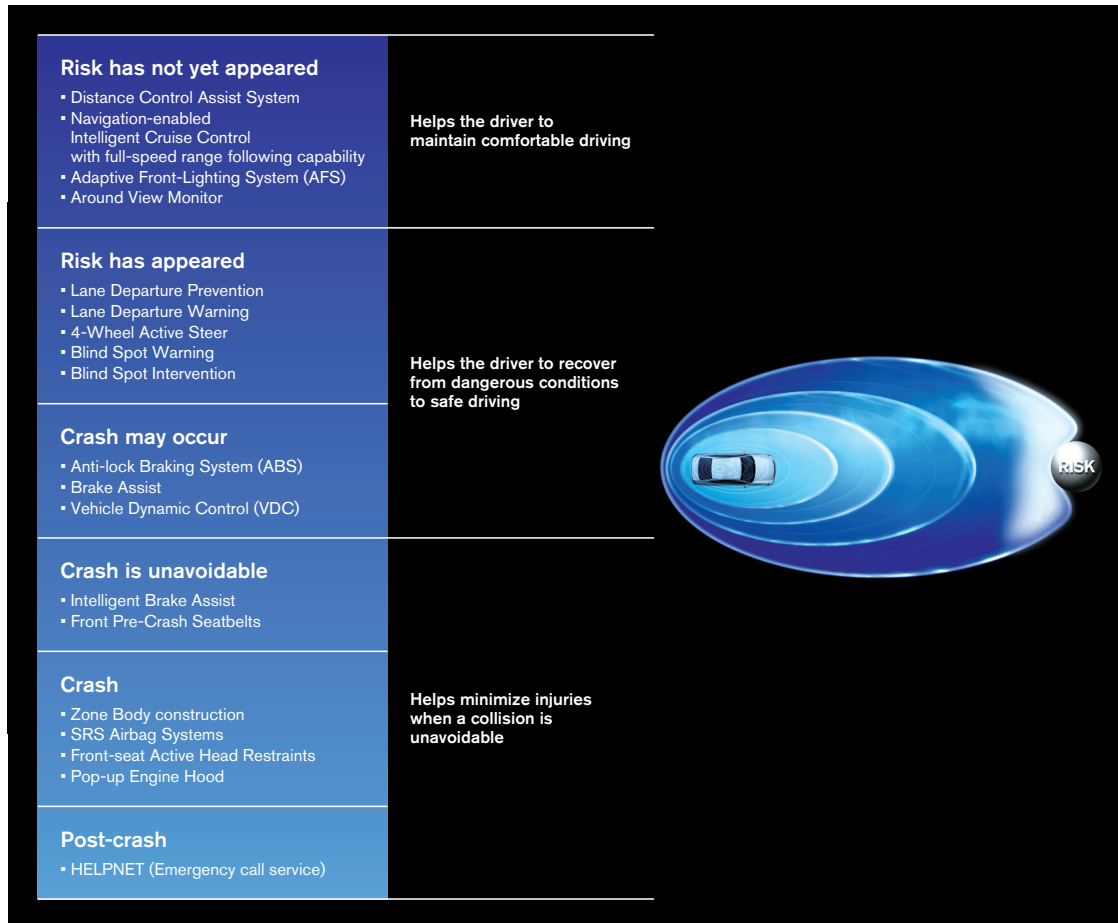
Additionally, Nissan (China) Investment Co., Ltd. holds the Nissan Safety and Environment Technology Tour in different areas around China. In 2010 tour events were held in Beijing, Shanghai and Guangzhou. Attendees were introduced to such safety technologies as our Distance Control Assist, Around View Monitor and Lane Departure Prevention, and also had the opportunity to participate in test rides.

■ Developing Safety Technologies



The “Safety Shield” Concept

In its efforts to create safer automobiles, Nissan relies on its “Safety Shield” concept, which is based on the idea that cars should help protect people. The concept defines the conditions surrounding a vehicle in terms of six phases, from “risk has not yet appeared” through “post-crash,” and guides our development of technologies to address each phase.

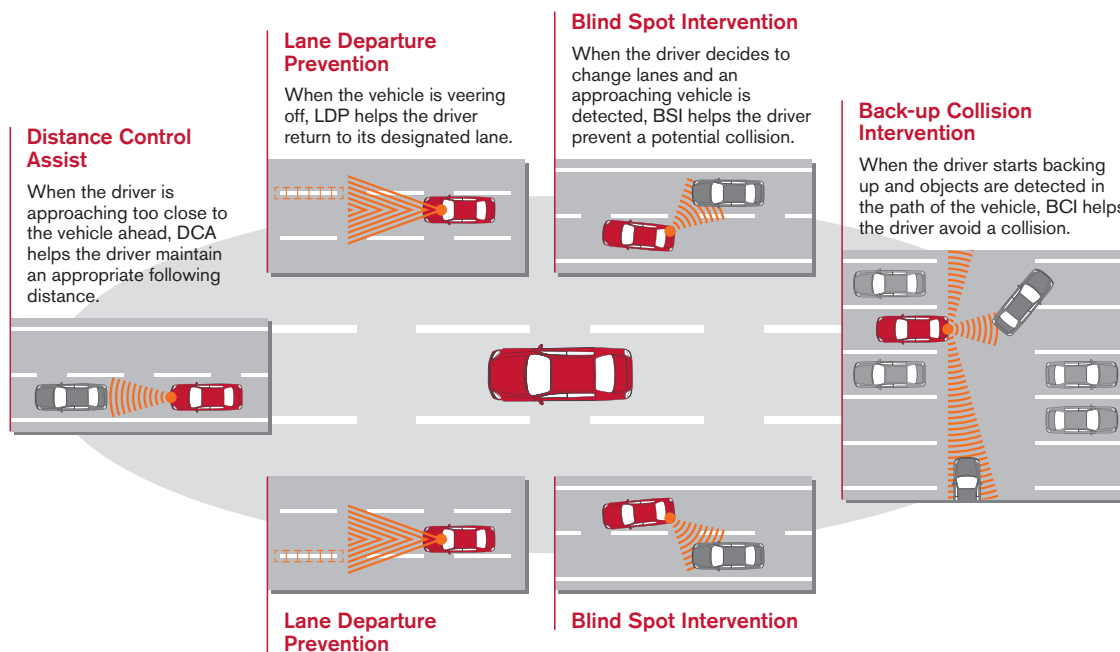


Aiming for "Collision-Free Cars"

Nissan is adding to its existing suite of collision-safety technologies with the development of new technologies that could contribute to the realization of even more "collision-free cars." Working from the perspective that people are at the center of the driving experience, we strive to equip our vehicles with functions that support intuitive operation, thus helping to reduce the burden on the driver.

In our all-around drive-support system we have brought together various safety technologies, including our world-first Back-up Collision Intervention technology, which detects objects in the path of the vehicle when the driver backs up. Other technologies already being utilized in some Nissan vehicles include Distance Control Assist, which helps the driver maintain distance between the car and the vehicle in front; Lane Departure Prevention, which helps the driver return the vehicle to its designated travel lane; and Blind Spot Intervention, which assists in lane changes by alerting the driver to the presence of a vehicle in the blind spot.

Technologies in Nissan's Collision-Free Prototype



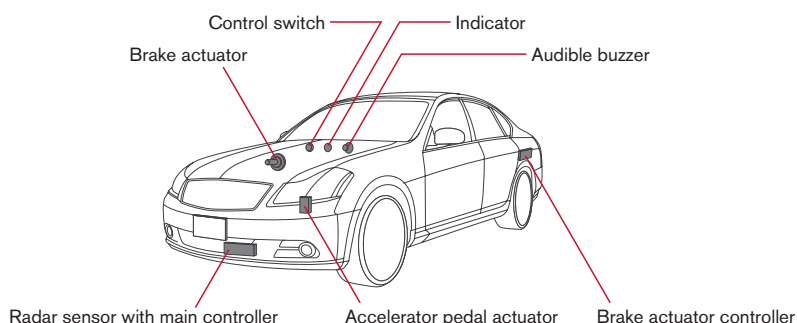
Please see our website for more information on our Adaptive Front-Lighting System (AFS) and other systems.

<http://www.nissan-global.com/EN/SAFETY/INTRODUCTION/COMFORTABLE/>

Distance Control Assist System

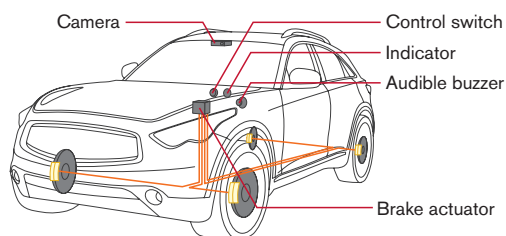
Nissan's Distance Control Assist System uses a radar sensor to calculate the distance between the car and the vehicle in front. Based on the gap and relative speed between the cars, the system then supports the driver's pedal operations when braking, thus helping to maintain a safe space between the vehicles. We first installed this system in the 2007 Fuga marketed in Japan.

We have also developed a world-first technology integrating the car's navigation system with these functions. Our new system can import data from the navigation system on upcoming curves in the road and help to apply the brakes gradually in preparation for them. When the driver continues depressing the accelerator pedal, the system provides support by lifting the pedal to assist the driver in switching to the brakes. The system also implements smooth deceleration when the accelerator pedal is lifted, helping make it easier to navigate curves. This upgraded system made its debut in the Fuga marketed in Japan in November 2009, and is available in the Infiniti M in the United States.

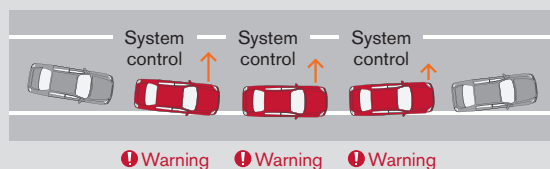


Lane Departure Prevention

This system helps the driver return the vehicle to its designated travel lane when the vehicle is drifting out of the lane. A camera unit installed behind the rear-view mirror detects lane markers in front of the vehicle and calculates its position relative to them. When the system judges that the car may unintentionally leave its lane, it alerts the driver with visual and audible warnings and briefly activates the brakes on one side of the vehicle to assist the driver's efforts to return to the lane center. We rolled out this system in the Skyline Crossover launched in July 2009 in Japan. In the United States, it is available in the Infiniti EX.



The Lane Departure Prevention system in operation



Please see our website for information on our other systems, including Lane Departure Warning.

<http://www.nissan-global.com/EN/SAFETY/INTRODUCTION/RECOVER/>

Blind Spot Intervention

This system supports the driver's operations when initiating a lane change, helping to avoid a collision with another vehicle that may be traveling in the blind spot. Sensors installed in the rear of the car detect a vehicle in the adjacent lane, and the system alerts the driver with audible and visual warnings. Moreover, the braking mechanism of each wheel is controlled separately, and when a vehicle is detected, the system generates a force to help the driver keep the car away from the other vehicle. The Infiniti M models launched in North America in March 2010 were the first to feature this technology.

Back-up Collision Intervention

When the vehicle is in reverse, such as backing out of a parking space, Back-up Collision Intervention goes to work. Sensors mounted on the rear and sides of the vehicle are used to detect vehicles and other obstacles in the car's path. If an object is detected, an alarm sounds and then the brakes are activated to help the driver avoid a collision.

Around View Monitor

This world-first technology uses images from four cameras installed at the front, back and sides of the vehicle, combining them in a composite, overhead view on the car's navigation monitor. This allows the driver to easily grasp the position of the vehicle in relation to the parking space, simplifying tasks like parallel parking or entering a garage. The system made its debut in the Elgrand released in Japan in October 2007, while the first model to carry the system in North America was the Infiniti EX35 launched in December that year.

We later added the following three functions to the system, two of them world firsts, and incorporated the upgraded version in the Skyline Crossover launched in Japan in July 2009.

1. Front/rear wide-view function

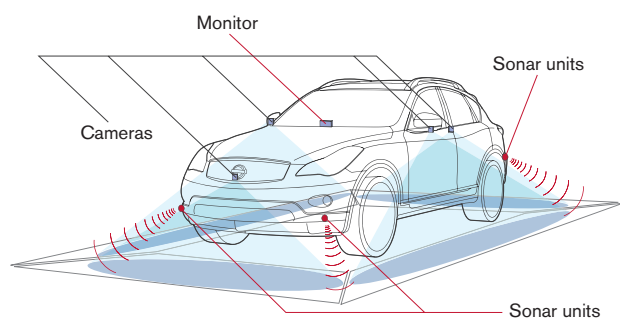
The monitor displays views covering approximately 180 degrees from both the front and rear cameras, helping the driver to check for other vehicles that may be approaching. This helps put the driver at ease when the car travels through blind intersections or exits a parking space. The rear wide-view function in particular is a world first.

2. Front wide-view function linked to the navigation system

After the driver registers a location on the navigation system's map, the monitor will automatically switch to front wide-view mode when the vehicle arrives at that location and comes to a stop. This lets the driver check for approaching vehicles more smoothly, without the need to manually activate the front-view camera. We hope this world-first technology will help to enhance users' peace of mind at intersections with poor visibility.

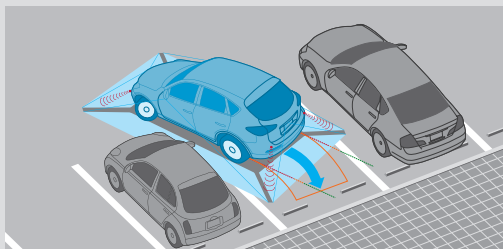
3. Parking Guide function

This new function enhances our Around View Monitor, making it easier than ever to move the car in and out of garages or parking spaces. The driver can use the touch panel on the navigation screen to get an overhead view of the vehicle in relation to its surroundings, along with audio and visual guidance on parking maneuvers.

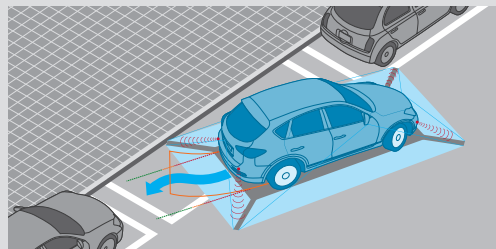


The system gives helpful views when backing into a space.

The Parking Guide system gives the driver an intuitive feel for the vehicle's position while parking.



When parallel parking, the driver can simultaneously check the car's rear, side and curbside front views.



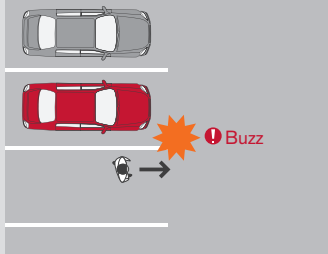
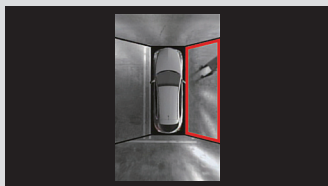
New Safety Technologies for Fiscal 2010

Moving Object Detection

This function alerts the driver when a moving object is detected around the vehicle. If there is a moving object, such as a pedestrian, close to the vehicle while it is stopped or moving at low speed, an alarm sounds and a visual warning is displayed on the monitor. We hope this technology will help contribute to the prevention of accidents resulting from poor visibility, for example by helping drivers to visually confirm their surroundings when traveling through visually restricted intersections or pulling out of a parking space.

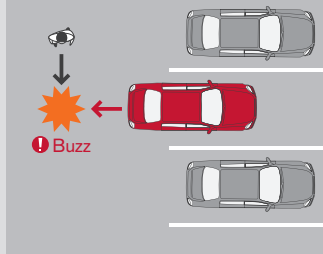
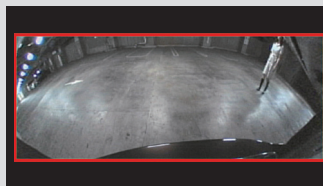
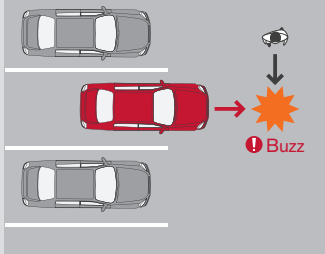
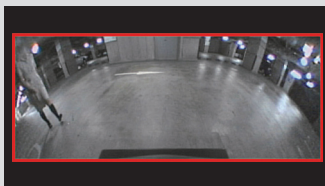
When stopped

A buzzer sounds and a visual warning appears on the monitor when a moving object appears in the field of the top view display.



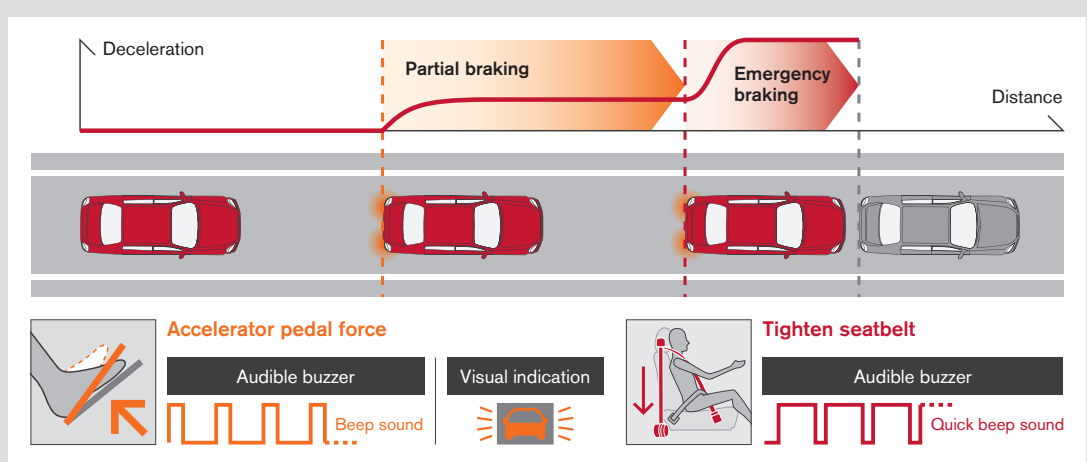
Forward or backward movement

A buzzer sounds and a visual warning appears on the monitor when a moving object cuts across the field of the front or rear view display, depending on the direction in which the vehicle is moving.



Forward Collision Avoidance Assist Concept

This new technology can help the driver avoid a collision even when traveling at a speed of up to 60 km/h. A highly sensitive radar sensor monitors the distance to the vehicle in front and its relative speed, supporting the driver's operations to avoid collisions. When the system detects an object in the vehicle's path, it provides both visual and audible warnings to the driver. At the same time, it helps the driver slow the vehicle down by generating a force that pushes the accelerator pedal up. By assisting the driver with smooth deceleration, we hope to also help reduce the risk of rear-end collisions resulting from sudden braking.



1. When the system determines that deceleration is required, it alerts the driver using both audible and visual warnings. It then generates a force that pushes the accelerator pedal up and smoothly applies partial braking to assist the driver in slowing the vehicle down.
2. In case the system calculates the possibility of a collision, it automatically applies emergency braking, while the seatbelts are tightened to help restrain passenger movement.



Safety Technologies for Electric Vehicles

Electric vehicles are a completely new kind of car, and Nissan sees the need to approach EV safety from a new perspective.

The Nissan LEAF, released in December 2010, uses high-strength body construction that protects its lithium-ion battery in the event of a collision. The Nissan LEAF also features insulation around its high-voltage parts used in such areas as the battery and the motor. Moreover, the vehicle is designed so that the high-voltage electrical system automatically shuts down in the event of a collision. The Nissan LEAF is further equipped with a lithium-ion battery controller system that continuously monitors battery conditions to prevent overcharging, excessive discharging or overheating, which could lead to severely reduced capacity or malfunction. These features developed specifically for EVs, along with our safety technologies created for gasoline-powered vehicles over the years, have earned Nissan high safety marks around the world, including the top five-star rating from the European New Car Assessment Programme (Euro NCAP) and the "Top Safety Pick" rating from the U.S. Insurance Institute for Highway Safety.

Since EVs are extremely quiet when running, the Nissan LEAF is equipped with the Approaching Vehicle Sound for Pedestrians system. The car begins emitting a sound when the driver puts the car into drive gear and releases the brake. This sound fades out when the vehicle tops 30 km/h and starts up again when the vehicle decelerates, at speeds below 25 km/h. Another warning sound is generated when the car is put in reverse.



Please see our website for detailed information on our Euro NCAP five-star rating.

http://www.nissan-global.com/EN/NEWS/2011/_STORY/110525-01-e.html



For more information on our "Top Safety Pick" rating from the IIHS, please see our website.

http://www.nissan-global.com/EN/NEWS/2011/_STORY/110426-02-e.html

■ Traffic Safety Activities

Our Hello Safety Campaign

Each year since 1972, Nissan has carried out its Hello Safety Campaign activities as part of nationwide traffic safety campaigns in Japan. The spring campaign in April 2010, intended for children and their guardians as well as senior citizens, focused on the themes of “proper use of seatbelts and child safety seats in all seating positions of a vehicle” and “traffic safety education to raise awareness of dangers in daily life and ways to avoid them.” As part of the activities, we created storytelling picture cards and delivered them to traffic safety instructors around Japan.

The September 2010 fall campaign drew on data from real-life accidents to focus on the important subject of preventing traffic accidents when walking or cycling at dusk and after dark. During the campaign we launched the Omoiyari Light Campaign, named with the Japanese word for “kind consideration,” encouraging drivers to turn on their headlights early so pedestrians and cyclists can more easily notice an approaching vehicle. In addition to creating posters and participating in radio promotion activities, we carried out a trial public campaign to make our traffic safety education activities more tangible. We set up a special website, accessible from computers and smartphones, for people who had heard about the movement to learn more about the importance of turning on headlights early. The Omoiyari Light Campaign is attracting attention thanks to the efforts of runner’s clubs to encourage this movement, beginning with a September 2010 fun run around the Imperial Palace in central Tokyo.



Omoiyari Light Campaign Logo

Messages from Our Stakeholders

Working Together to Prevent Road Accidents

Shigeki Kato

Activities Chief, Promotional Activities Division
Japan Traffic Safety Education Association



For over 40 years, the Japan Traffic Safety Education Association has worked to improve traffic safety awareness throughout society by providing road safety education for people at all stages of life, from young children to the elderly. The number of fatal road accidents has fallen in recent years for a number of reasons, including lower vehicle speeds and fewer accidents caused by poor or dangerous driving. We believe that these factors result from enhanced awareness and conduct among road users, and that public education and awareness activities have contributed significantly to bringing about these improvements.

Since 2004, we have worked closely with Nissan to develop effective education materials and promotional goods, distributing the fruits of these efforts to kindergartens, local government agencies and driving schools throughout the country. We are confident that these activities have made a considerable contribution to road safety in local communities.

We trust that Nissan will continue to research and develop safer vehicles and to make further contributions to reducing and preventing traffic accidents by providing information and education to drivers and other road users. It is our hope that Nissan will in this way help the Japanese people realize their desire for safer roads.

Safety Education in Korea and the Middle East

Nissan Middle East FZE educates children about traffic safety through a dedicated website. Launched in October 2009, the site uses puzzles, pictures for coloring and other features to make learning online fun as well. The website shares easy-to-understand information with elementary school students in Arabic, English and French.

Nissan Korea Co., Ltd. launched its Nissan Kids Safety Campaign in April 2009. This campaign features similar content to that of the Middle East project and uses a website and booklets to educate children on traffic safety.

Promoting Traffic Safety in China and Indonesia

Traffic safety has become an increasingly important issue in China, which is seeing a rapid increase in the number of automobiles on the road. In 2005 Nissan (China) Investment Co. hosted its first safety program to improve drivers' skills and safety awareness in cooperation with the China Road Traffic Safety Association. In fiscal 2010 forums were held in September and October. Many customers, government officials and media representatives attended the forums, which featured programs for learning braking, cornering and other driving techniques from qualified instructors, contributing to deeper understanding of traffic safety. Programs for eco-driving skills were also included.

The company also designed a contest to test Chinese high school students' knowledge of traffic safety and environmental protection issues. The year 2010 was the fifth for the event, which aims to increase interest and awareness of safety issues among young people, the drivers of tomorrow. In addition to taking simple quizzes on basic traffic rules, automotive safety devices and environmental issues, participating students made their own presentations on automotive and traffic safety.

In Indonesia, we started the Nissan Smart Driving program as a way to emphasize the importance of traffic safety. The program started out as a cooperative project with a lifestyle magazine designed to promote safe driving habits, but the scope of activities has since broadened to include hands-on safety workshops led by driving instructors for university students.

Nissan will continue its efforts to help prevent traffic accidents.

■ Working Together with Society

Helping Reduce Accidents and Congestion with ITS

In 2006, Nissan launched the ITS Project in Japan's Kanagawa Prefecture. This project seeks to use Intelligent Transport Systems to create integrated networks of people, roads and vehicles, thereby helping to reduce traffic accidents and ease road congestion. The ITS Project gathers and uses information on nearby vehicles and the traffic environment in order to help reduce accidents involving other parties that can be difficult for a driver to see and react to.

We are building on the results of the ITS Project with our development of the Driving Safety Support System (DSSS). This will be an ongoing project promoted by Japan's National Police Agency and the Universal Traffic Management Society of Japan, an organization operating under its aegis. It uses the latest ITS technologies, such as optical-beacon communication tools to connect vehicles and the network of roads, with the aim of reducing traffic accidents. At intersections with reduced visibility, roadside infrastructure communicates with vehicles to deliver information to drivers via onboard navigation systems, warning them of potential dangers like crossing collisions and helping make sure they notice stop signs, signals and vehicles stopped at lights.

Helping Reduce Wrong-Way Accidents

Recently Japan has seen a number of serious accidents caused by vehicles traveling in the wrong direction on expressways. Working together with West Nippon Expressway Company (NEXCO), Nissan has developed a navigation program that uses GPS to notify drivers of vehicles driving the wrong way on an expressway. The system detects wrong-way vehicles based on GPS coordinates, maps, traveling speeds and other data. The driver of a vehicle going the wrong way receives audible and visual warnings. The Nissan Fuga Hybrid released in October 2010 is the first vehicle in the world to employ this system.

Combating Drunk Driving

Nissan is taking active steps to help do away with traffic accidents caused by drunk driving, a serious social issue of deep concern. In August 2007, working with the city of Kitakyushu, Fukuoka Prefecture, the Tochigi prefectural government, the town of Kaminokawa in Tochigi and the city of Atsugi in Kanagawa Prefecture, we began trials of a system to help prevent drunk driving.

Nissan has also carried out joint research with the University of Occupational and Environmental Health in Kitakyushu on the physiological, psychological and behavioral effects of alcohol on the human body. This research is aiding our development of technologies to quickly and accurately detect the errors and abnormalities in vehicle operation under the influence of alcohol. Other Nissan approaches to help reduce drunk driving include a function added to our Carwings navigation system in Japan that displays warnings against driving under the influence during the most common hours for such behavior, with the aim of increasing driver awareness of the danger of getting behind the wheel after consuming alcohol.

Area Leaders' Messages

Toshimi Yamanoi

General Manager
Technology Planning Department
Planning and Advanced Engineering
Development Division



Striving to Reduce Serious Accidents

A major goal of our efforts has been to halve the number of fatalities and serious injuries involving Nissan vehicles by 2015 compared to 1995 levels. In fiscal 2010, analyzing data on automobile accidents in Japan in the previous year showed that we had succeeded in achieving this goal six years ahead of our target date. In addition to the widespread use of Nissan's safety technologies, greater traffic safety awareness among drivers and an improvement in the standard of conduct on the roads were other likely reasons why we were able to achieve this target ahead of schedule.

We will not rest now that we have met this goal. Our work to improve safety standards will continue as long as automobile accidents cause even a single fatality or serious injury. In fiscal 2010 our efforts included the introduction of a high quality tire pressure sensor. We will continue to work to make effective safety technology more widely available in the future.