

RISK

Improving Safety

Aiming for a society with no traffic accidents

A vehicle is a product which not only enables people or goods to move, but which also is a joy and pleasure to drive. The value embodied in our vision, “Enriching People’s Lives,” cannot be delivered without a high level of safety. Nissan continues to pursue safety technology development based on the belief that our ultimate goal will one day be realized: a society without traffic accidents.

Nissan's Commitment and Technology

Aiming for zero traffic accidents

Automobile manufacturers have a responsibility to help create a safer automobile society. Driven by our desire to provide safe products to all our customers around the world, we have created a new, advanced safety philosophy called "Safety Shield". Nissan pursues the challenge of creating a society with no traffic accidents by closely analyzing real world accidents and by studying societal issues that affect traffic safety.

Technologies for a Safer Future

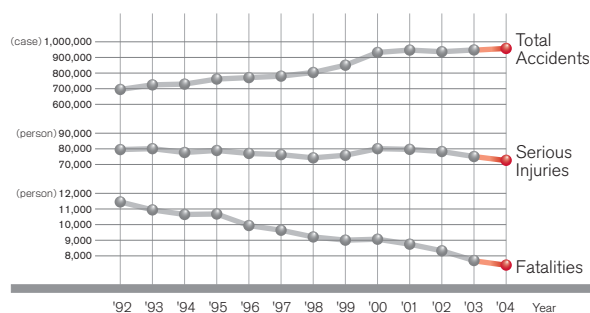
Setting High Goals
Halving the number of fatalities or serious injuries by 2015

According to statistics, as many as one million people worldwide are killed in traffic accidents every year. Nissan has set the goal of halving the number of automobile accident fatalities or serious injuries involving Nissan's vehicles by 2015 as compared to 1995. We continue to pursue the production of safe vehicles based on the analysis of real-world accidents. In Japan, the number of automobile accident fatalities and serious injuries decreased by 22% in 2003 as compared to 1995. This steady progress toward our goal was

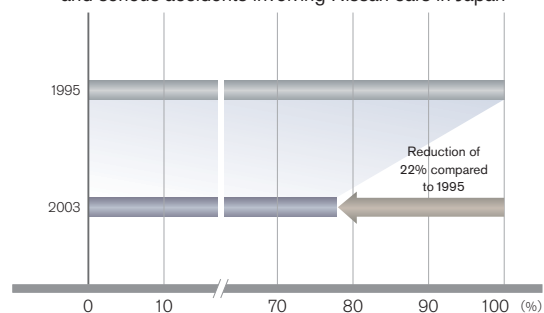
achieved in part by the use of airbags and other safety measures we have implemented. At the same time, the number of accidents in Japan shows an increasing trend. In order to further decrease the number of fatalities and serious injuries, it is necessary to make an effort beyond conventional measures to reduce the total number of accidents. In addition to our existing safety features, we are developing new safety technologies under our "Safety Shield" approach and are striving to ensure that they are widely implemented.

Nissan's desire is to "reduce the fatalities and serious accidents to practically zero in the future." We strongly believe it is possible to achieve this goal and will make every effort towards its realization.

Traffic Accidents in Japan



Change in the annual number of fatalities and serious accidents involving Nissan cars in Japan



(Reference: Center for the Consolidated Analysis of Traffic Accidents)



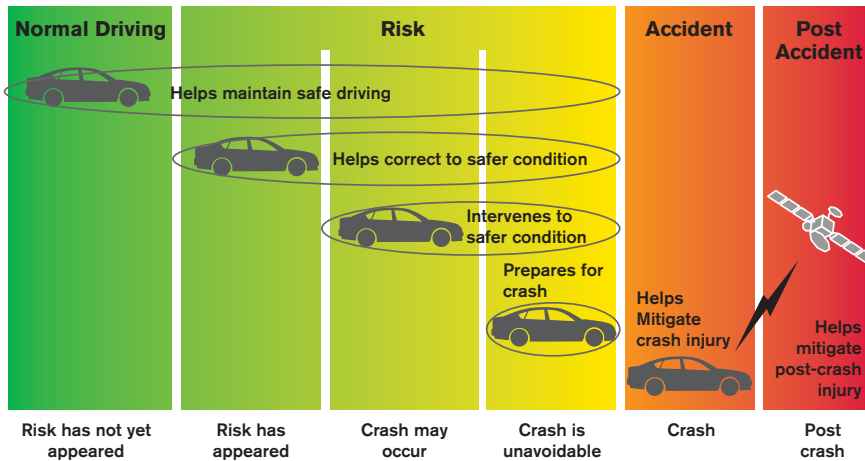
Drive simulator

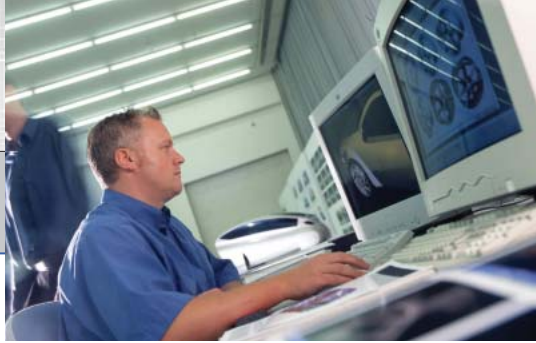
Safety Shield
 A new approach from Nissan towards accident prevention and management

Introduced in fiscal year 2004, "Safety Shield" classifies driving risks and accidents into six areas: "risk has not yet appeared," "risk has appeared," "crash may occur," "crash is unavoidable," "crash," and "post-crash." When it comes to helping to prevent an accident from

occurring, we regard the driver to be the key to improved safety and thus our focus is on how we can support the driver in the best possible way. The aim is to provide the appropriate information to the driver and then to react accurately to his or her intentions. Additionally, in case a crash should become unavoidable, the vehicle may intervene to minimize damage. Based on this Safety Shield approach, we will introduce 10 new safety technologies in the next three years.

Safety Shield – Concept Image





Nissan Technical Centre Europe, Ltd. (UK)

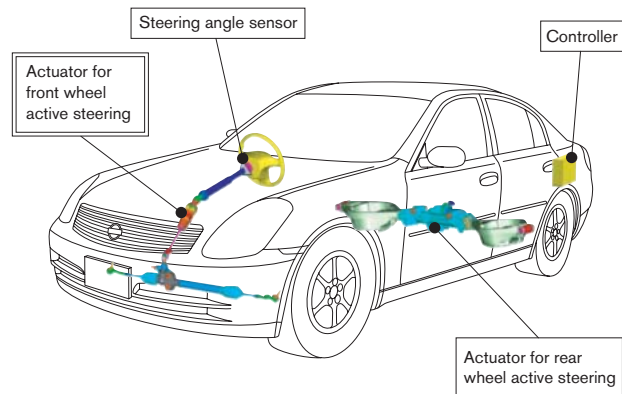
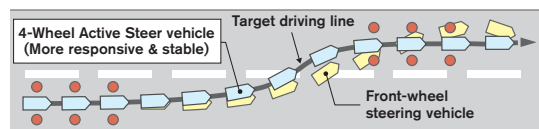


Nissan Technical Centre Europe, Ltd. (UK)

Three new technologies to help avoid danger

4-Wheel Active Steer

This is a system to help improve the stability and response at high speed and reduce the driver's steering workload at low speed by controlling the steering angle of all four wheels. The system not only improves precise vehicle movement in response to the driver's steering input but also reduces the driver's steering workload by varying the steering gear ratio according to the vehicle speed.



Compatibility which improves both self-protection and reduces damage to the other vehicle in a collision

We have adopted this technology to help minimize mutual damage when two vehicles crash. For example, the new Note, released in Japan in January 2005, has adopted a crash-compatible Zone Body construction which helps improve both self-protection and reduces damage to the other vehicle in a

collision. Zone Body has been further enhanced through the construction of a high-strength safety body which helps protect passengers with an Occupant Zone (high-strength cabin) and a Crushable Zone (energy absorbing body).



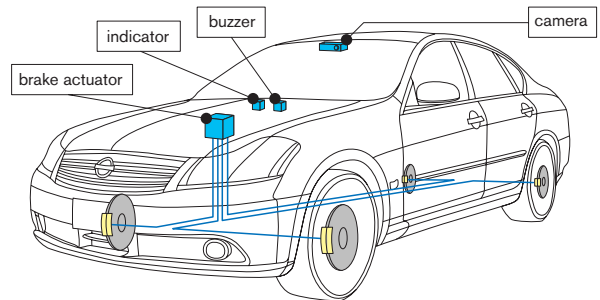
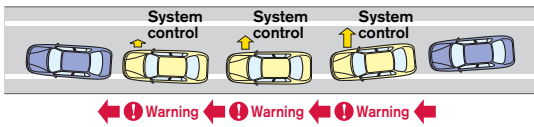
A crash-compatible Zone Body construction (Note)



Side Blind Monitor — a highly sensitive infrared CCD camera is used to display the left front-side of the vehicle on a monitor at night to reduce blind spots (Fuga)

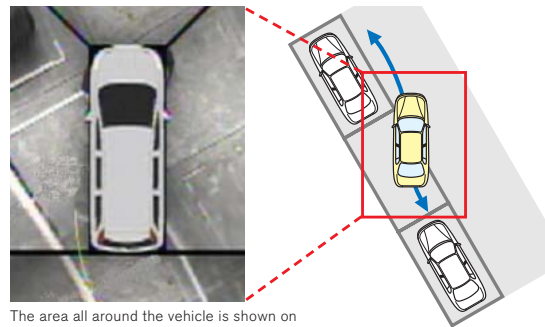
Lane Departure Prevention

When the vehicle is getting close to lane markers as a result of driver inattention, this system warns the driver to pay attention to driving by a display and an audible buzzer. It generates part of the necessary yaw moment to assist the driver to in returning the vehicle to its lane.

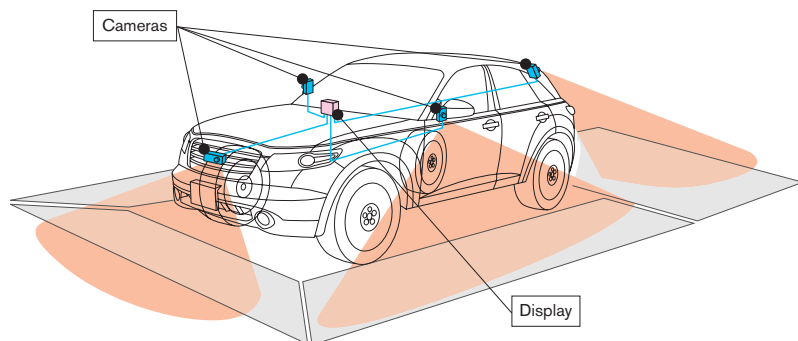


Around View Monitor

This is a system showing the situation all around the vehicle on a dashboard display to significantly help reduce blind spots in driving. The system is especially helpful when parking as it enables the driver to steer easily and precisely into the parking space. This technology is developed from the Rear View Monitor and the Side Blind Spot Monitor which were adopted in Nissan vehicles prior to those of other automobile manufacturers.



The area all around the vehicle is shown on a dashboard display in real time





Using CAD analysis to forecast safety technology performance

Collaboration with Society

Global Safety Activities Utilizing our technology while paying attention to regional differences

In areas such as China with high economic growth, the trend toward motorization is accelerating. The increasing number of vehicles has surely enriched people's lives, but it has also brought an increase in traffic accidents. It is said that more than 100,000 people are killed in traffic accidents every year in China, and Nissan takes this situation very seriously. Under the circumstances and based on the experience of successfully reducing accidents in Japan, Nissan is making an effort to adopt and spread safety technologies according to the conditions of accidents in each region of the world.

Safety Education for Children Safety promotion activities in Japan and the US

Vehicle safety technology alone is not enough to realize a reduction in car accidents. As a measure to help prevent accidents from occurring, it is important to teach the right information and the rules of traffic safety, especially to children.

Since 1972, Nissan has been running the Nissan Hello Safety Campaign in Japan. In 2004, we also initiated a program for aged people regarding traffic safety, in addition to safety education for children. These activities were well received and Nissan, as a result, was awarded the cooperative company award for traffic safety at the 45th traffic safety national campaign central meeting.

Nissan North America, Inc. has continued its Quest for Safety program, which includes a series of public child passenger safety seminars, since 1998. This is a program to educate parents and caregivers at the grassroots level about child passenger safety, such as the importance of using child safety seats. Additionally for the North American market, Nissan's industry first program called Snug Kids™ has provided valuable child safety seat fit information to aid in child seat selection for Nissan vehicles.

What lies behind the program is the reality that up to 80% of the child restraints are not used properly, and automobile accidents are the leading cause of death for young children in the US with 7 children killed and another 800 children injured (14 years of age or younger) every day in motor vehicle crashes in 2003. We have prepared and continued these two programs with our wish, as an automobile manufacturer, to decrease such casualties. In order to ensure that the participants at the seminars can use what they learned, we distributed educational materials written in English and Spanish and our safety engineers gave demonstrations and answered specific questions.



Safety education seminar Quest for Safety (USA)



Specially designed dummies are used to confirm the safety performances of vehicles

Creating Safe Automobile Society through Collaborative Efforts
 Conducting joint research with universities and government in the US on ITS

To create a safer automobile society, Nissan cooperates with numerous other companies to exchange information. In addition, Nissan promotes joint research with university researchers and supports safety technology research through Nissan's foundations. All of

these are our partners striving for a common objective: the elimination of traffic accidents.

In the US, for example, we collaborate with universities and government to do joint research on technologies for Intelligent Transportation Systems (ITS). ITS is a field where rapid technological development is occurring, and Nissan through these joint research efforts aims to develop regionally adapted, highly effective technological systems that can be put on the market.

Wishing to contribute to safety, Nissan participated in the verification project of the revolving door accident.

A vehicle is a machine transporting people. It is a machine to which human life is entrusted. Strongly recognizing that the pursuit of safety is one of the most important responsibilities of automobile manufacturers, Nissan continues research, technological development and evaluation in order to create vehicles with the capability to help avoid accidents and to minimize the damage in case an accident occurs.

In 2004, at Roppongi Hills, an office complex in Tokyo, a tragic accident occurred in which a 6 year-old boy had his head trapped in a revolving door and died. People requested investigations of the cause of this accident to confirm whether the revolving doors, which had been taken for granted in the city, are really safe. To respond to the request, Professor Yotaro Hatamura of Kogakuin University organized a project team to verify potential dangers in such doors and to create clear safety guidelines.

Nissan volunteered to participate in the project because we believe that the accumulated experience as an automobile manufacturer, especially the technological know-how we have to help minimize damage to passengers in a crash, would be helpful in effectively investigating the cause of the accident. Our staff joined the project team bringing with them their know-how and equipment and carried out safety

verification experiments using dummies from vehicle crash simulations.

Take, for example, the production of a dummy for testing in a revolving door. With an elaborate dummy, it is possible to measure the impact of accidents consequently enabling safety measures to be taken. Nissan previously contributed to the establishment of an international standard for dummies used in crash experiments. Based on this experience, we produced a dummy with the cooperation of a dummy manufacturer in the US to imitate the boy who lost his life. We used equipment from vehicle crash simulations such as a high-speed cameras and were able to conduct evaluation experiments which reproduced the actual phenomenon with high precision.

As technology progresses, various new products are released into the market. It is true that vehicles are increasingly equipped with new mechanisms and functions, but it is important and should not be forgotten that humans play the decisive role no matter how advanced technology becomes. The revolving door accident was a great tragedy, and at the same time it posed a big problem for engineers designing and manufacturing machinery. Nissan will use the knowledge gained from the participation in this joint project to help realize a safer society.