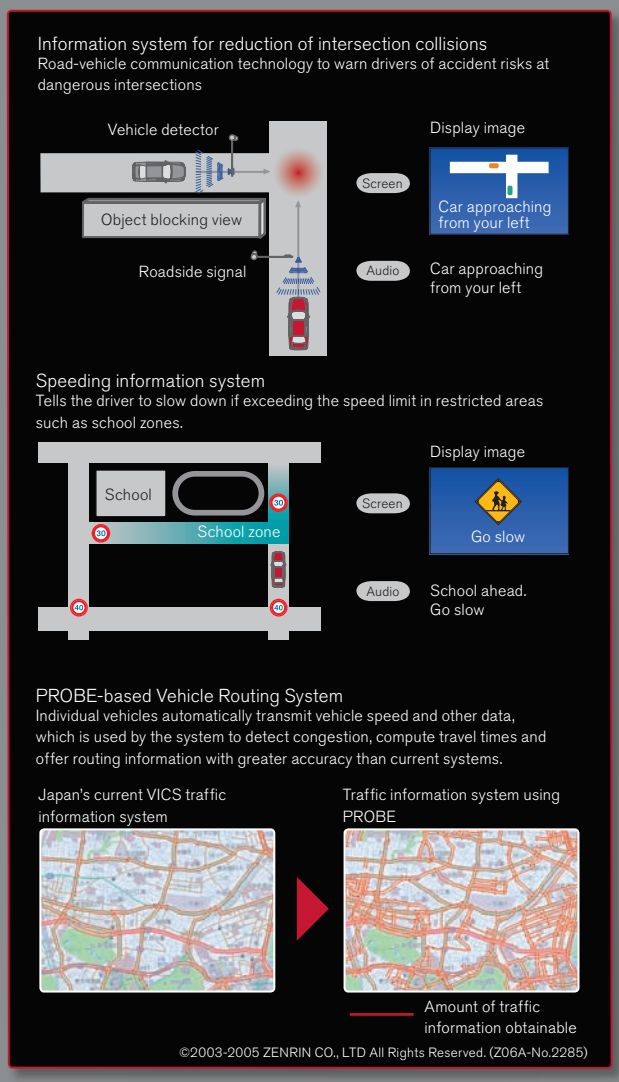
# Improving the road-transport environment

**In addition to enhancing safety of the cars themselves, Nissan is applying ITS (Intelligent Transport Systems) concepts and pursuing research to provide drivers with information about other vehicles and pedestrians beyond the range of sight. Examples are the ITS Project in Kanagawa Prefecture and the Nissan ASV-3.**

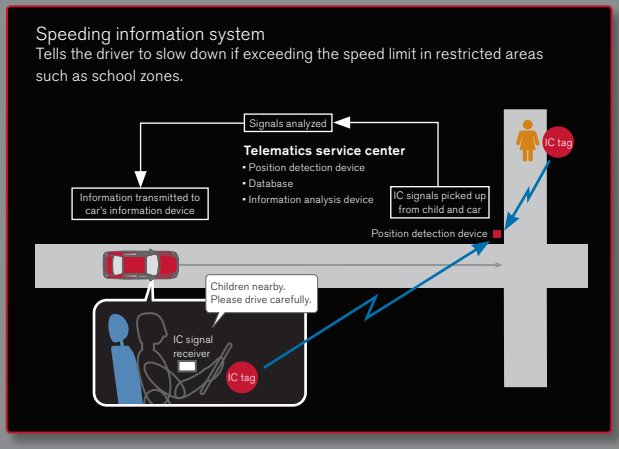
## ITS Project in Kanagawa Prefecture

In 2006, the ITS Project in Kanagawa Prefecture was launched with the aim of reducing traffic accidents and traffic congestion using advanced communication technology through the application of ITS concepts that regard people, roads and vehicles as an integrated system. The project focuses on reducing intersection accidents, improving school zone safety, mitigating traffic congestion and presenting drivers with information on the fastest routes. Nissan has made significant progress in enhancing safety based on vehicle capabilities, including building more crashworthy vehicles and the introduction of our CARWINGS system, which helps predict traffic congestion and suggests optimal routes on the basis of historical data together with realtime traffic information from VICS, the Vehicle Information and Communication System. The ITS Project in Kanagawa Prefecture takes the additional step of linking vehicles with infrastructure that will enhance safety and mitigate congestion by enabling communication of road-traffic conditions and alerting drivers to the presence of other vehicles in the immediate vicinity. After verifying the effectiveness of the ITS Project in Kanagawa Prefecture, coverage is planned to expand nationwide and, eventually, beyond Japan.



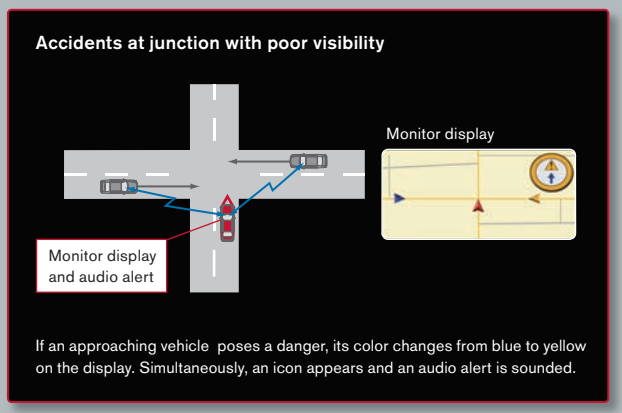

## Pedestrain protection initiative

From December 2005 through March 2006 in Yokohama City, Nissan and telecommunications companies tested a new service designed to help prevent accidents involving children at pedestrian crossings. IC tags were distributed to children and vehicles, and receivers were installed at crossings with poor visibility and near public parks in the experimental zone. Based on signals from the respective IC tags, the system can tell when children are near vehicles and warn drivers to proceed with caution. Nissan is proceeding with this and further initiatives aimed at reducing accidents involving children and pedestrians.



## Nissan ASV-3

The ASV-3, Nissan's third-generation Advanced Safety Vehicle, aims to help reduce accidents by using vehicle-to-vehicle communications and Nissan's human-machine-interface (HMI). The ASV-3 participated in trials sponsored by Japan's Ministry of Land, Infrastructure and Transport promoting research & development and popularization of automotive safety technologies. The system indicates the vehicle's position based on vehicle-to-vehicle communication and supports the driver with icon indication and audio alert in each of five scenarios, including accidents at junctions with poor visibility and collisions with oncoming vehicles when turning across a traffic lane. Feedback from these tests will be incorporated in future Nissan vehicles.




*Technologies featured in the Nissan ASV-3*

## Nissan Safety Milestones

In 1996, Nissan announced an original program called Triple Safey. Together with progress in safety technology, Nissan's safety philosophy has since evolved with the concept of Real-world Safety and now Safety Shield.

| | Safety concepts | Technologies for safety and peace of mind |
|---|---|---|
| **~1995** | | ▪ Nissan NRV-II vehicle<br>▪ Cornering lamps<br>▪ Rear center high-mounted stoplight<br>▪ ABS<br>▪ Auto-dimming rear view mirror<br>▪ Auto-dimming sideview mirrors |
| **1996~2000** | **Triple Safety ('96~)**<br>Approach to safety technology based on dividing safety considerations into information safety, control safety and impact safety. | ▪ **ABS first installed as standard equipment (1996)**<br>▪ Zone Body construction<br>▪ Front seat-mounted side-impact supplemental air bags<br>▪ Long-life water repellent glass<br>▪ Xenon headlamps<br>▪ Rear View Monitor<br>▪ Collision detecting auto door lock release system<br>▪ Extendable sideview mirror<br>▪ Rear seatbelts with a Child Seat Locking Mechanism in the Outboard Positions |
| **2001~** | **Real World Safety ('02~)**<br>Development of safety technology based on analysis of real-world accident data<br><br>**Safety Shield ('05~)**<br>"The vehicle that helps protect people" concept of having various barriers around the vehicle help the driver and passengers avoid dangers from normal driving conditions through post accident conditions. | ▪ Lane-keeping Support System<br>▪ Roof-mounted curtain side-impact supplemental air bags<br>▪ HELPNET (Emergency call service)<br>▪ Side View Monitor<br>▪ **Front-seat Active Head Restraint first installed as standard equipment (2002)**<br>▪ **SRS curtain airbag system installation (2002)**<br>▪ Slide-away brake pedal assembly and energy-absorbing pad |