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# QUALITY

The rating of a car and the value of an auto manufacturer's brand come entirely from the customer's appraisal of quality. Nissan engages in ongoing activities to provide a high level of quality to customers at every stage of its engagement with them. The "Enhancing Quality" program is one of our strategies in pursuing the goals of Nissan Power 88, our mid-term business plan. Through our efforts in this area we aim to achieve higher quality that inspires lasting trust among our customers, leading them to choose a Nissan and make it part of their lives for a long time. By exceeding customer expectations at every point of contact, we strive to earn the highest satisfaction of our customers.



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OUR PRIORITIES

For "Management Quality," please see the Employees section.

Product Quality	Top-level rankings in the most influential third-party indices in each country
Perceived Quality	Top-group customer ratings for Nissan and Infiniti
Sales and Service Quality	Among the top in the J.D. Power and other major indices

➡ GRI G3 Indicators

**KEY FIGURES** 

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### NISSAN'S APPROACH TO QUALITY

There are many aspects to the single word "quality." We seek to provide a high level of quality at every stage connected to our vehicles, from the condition of a vehicle and the customer's impression of the showroom salespeople's service to even the creation of a working environment in which every single Nissan employee can find fulfillment.

In 2011 we announced our "Enhancing Quality" program, spelling out clear quality-related goals for Nissan and methods to achieve them by 2016. The end target is to achieve the top level in the area of quality from the customers' perspective. There are certain third-party quality indices on which customers around the world place considerable weight, and our aim is to win top-level rankings in these objective benchmarks. In our aim to become the leader in overall quality, we will continue to inspire trust and ensure satisfaction in all situations involving Nissan customers and their vehicles.

Through this comprehensive approach to quality improvement, our goals are to raise the Nissan brand into the top group of global automakers in product quality and to elevate Infiniti to leadership status among luxury brands.

#### A Fair, Prompt Approach to Recalls

It is the primary responsibility of the manufacturer to make every effort to ensure that product incidents do not occur in the first place. It is also our duty to ensure that cars, which are extraordinarily complex industrial products, are manufactured to be as ready as possible for various eventualities. Our approach is to make recalls transparent and to handle them fairly and promptly. The decision to make a recall is based on our compliance with relevant laws and our consideration of how the incident may affect the safety of our customers. When Nissan judges that a recall is necessary, it is carried out swiftly to ensure that top priority is given to customers' safety and to minimizing any disruption.

Our recall decision process has received high praise from the U.S. Department of Transportation as a model for the automotive industry, and has already been implemented at all of our operation sites worldwide.

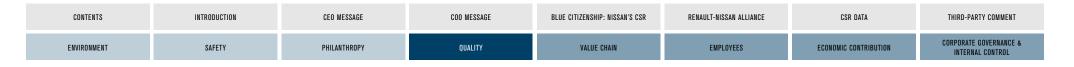
### **FISCAL 2012 PERFORMANCE**

- Four models received the highest-ranking awards in J.D. Power's Initial Quality Study (IQS) in their respective segments: Infiniti EX, Infiniti M, Frontier and Quest.
- Infiniti placed sixth in the nameplate ranking, up two notches from the 2011 study. The Nissan brand improved 12 places to rank twelfth.
- The Versa was the top-rated compact sedan and March was the top-rated compact hatchback in a survey conducted by Brazilian magazine *Quatro Rodas*. This was the first time Nissan vehicles were included in the study.
- In road breakdown statistics issued by the ADAC of Germany, Qashqai and Micra were given the "dark green" (very reliable) rating—the highest of five grades—for four consecutive years in the middle class and compact car categories, respectively, enabling them to meet their "Enhancing Quality" targets ahead of schedule.
- The 2012 J.D. Power study showed that customer satisfaction with Nissan vehicles remained at the top level in Japan and China, and it also indicated dramatic improvements in the United States over the past several years.

# **FUTURE MEASURES**

- Comprehensive efforts to enhance quality will continue to be made toward the goal of elevating the Nissan brand into the top group among global automakers and Infiniti into a leader of luxury brands.
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- CS improvement know-how of successful countries will be shared at Global SSI/CSI (Sales Satisfaction Index/Customer Service Index) meetings.\*

\* Click here for more information on our Global SSI/CSI meetings.



### **COMPANY ORGANIZATION FOR QUALITY**

To further improve overall customer satisfaction, Nissan has revamped its Quality Management System (QMS), headed by the COO, to strengthen its implementation structure. The management system now clarifies responsibility for a broad range of quality items, promoting initiatives that not only address the quality of our products but also enable cross-functional management of our sales and service activities, the distribution phase and the suppliers who provide parts so that we can offer top-level quality to satisfy customers in every way.

### **PRODUCT QUALITY**

Nissan has defined "Enhancing Quality" as one of the areas of focus for Nissan Power 88, its mid-term business plan. Until now we have worked to reduce reliability issues in vehicles coming off of the line. Now we are also undertaking additional efforts to reduce customer dissatisfaction even in the absence of breakdowns and durability issues arising during lengthy vehicle use, as well as "quality image breaker" issues that impact people's perception of the cars.

We track our level of product quality with both internal and thirdparty indices. Among the external indices, we have identified 11 "most influential indicators" in eight national markets around the world, and we are aiming to achieve top-level scores in each of them. Since these external scores are only updated once per year, we have set up internal indices along similar lines. We update these more frequently to track our progress and correlate the findings with those of external indices to make quicker improvements as needed.

### Improving Initial Quality

Initial quality issues involve defects that occur within a year of a new-car purchase. At Nissan, we have endeavored to reduce defects by establishing internal indices showing the frequency of defect claims within 3 and 12 months following sales. As a result, we have reduced defects by roughly half from levels prior to the launch of this initiative.

At the end of 2011, we introduced the Quality Connection Survey (QCS) as part of our "Enhancing Quality" activities in the United States. Surveys are taken 75 days after delivery of new car buyers who provided email addresses. These comments that come directly from customers are dealt with very quickly in order to achieve higher levels of customer satisfaction.

#### Improving Durability

Durability issues are those that arise from lengthy vehicle use as molded resin parts change color or deform, as surface materials are abraded, as chrome is stripped away and as material fatigue begins to lead to odd noises from the vehicle. Nissan obtains data on warranty service claims made two to four years after the initial sale and on problems that arise out of the warranty period. We analyze this data with a view to developing technologies that are more resistant to durability issues. We are aiming to reduce durability quality issues by at least 30% by fiscal 2016, compared to the fiscal 2010 level.



#### **Nissan Quality Forum for Employees and Suppliers**

The Nissan Quality Forum was launched in 2003 for employees and suppliers to familiarize them with quality issues, customer comments and progress with meeting improvement targets through presentations featuring panels, videos and exhibits of actual parts and vehicles. The forum is organized continuously and cross-functionally by the Total Customer Satisfaction Function (TCSX) and the R&D, manufacturing and other divisions in order to raise awareness of CS and quality-improvement issues of all employees. During fiscal 2012, forums were held globally in Japan, the United States, the United Kingdom, Russia, China and Thailand.

At the November 2012 forum held at the Nissan Technical Center in Japan, an event was held focusing on durability issues during lengthy vehicle use. In addition to experiencing how vehicles age by seeing, touching and driving cars both new and used for various years, participants also exchanged views on how improvements could be made.



Participants at the Nissan Quality Forum

#### Activities Aimed at Reducing Customer Dissatisfaction

Aside from defects or breakdowns, some of the reasons customers evaluate vehicles negatively include dissatisfaction with the confusing placement of switches or complicated operation of car navigation systems. The June 2011 J.D. Power Initial Quality Study indicated, for instance, that rear wiper switches on Nissan vehicles —because of differences with other manufacturers' models—were difficult to use. The sales and service division thus teamed up with R&D personnel to undertake a cross-functional initiative, resulting in not only a revised instruction manual but also efforts by sales personnel to explain how the switch is used at the time of delivery and consideration by the R&D team of adjusting how rear wipers are operated.

Nissan always has an ear for customers' comments and addresses quality improvements from their perspective.

#### Activities to Reduce Customer Dissatisfaction

# TCSX

Understanding sources of customer dissatisfaction
Setting targets

Examples of TCSX measures: • Identifying points of dissatisfaction through J.D. Power IQS • Using Nissan Quality Connection Survey (QCS) to set

 Using Nissan Quality Connection Survey (QCS) to see new tasks Addressing dissatisfaction issues
Implementing projects to enhance CS

R&D

Examples of R&D measures:

- Classifying and analyzing dissatisfaction based on actual
- customer use patterns and perspectives
- Changing specifications as appropriate to improve safety, CS

· Using checklists to explain complicated functions at time of

Cross-functional approach

to addressing dissatisfaction

delivery

### Sales/Service

Explaining vehicle functions to customers

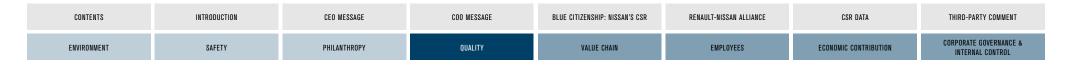
Enhancing problem-prevention activities

Manufacturing

Maintaining product capability

- Examples of manufacturing measures:
- Adjusting factory processes in line with specification changes to address dissatisfaction
- Designing manufacturing lines to handle adjusted processes
- Developing, sharing E-QRGs (electronic quick reference guides)

Examples of sales/service measures:



#### **Field Quality Centers**

Nissan established its Field Quality Centers (FQCs) with the goal of getting a better understanding of customer demands in each region of the world and providing prompt solutions to the quality issues arising there. There are now eight FQCs in operation in Japan, Europe, the United States (two locations), Brazil, China and India, in addition to a new center in South Africa that opened in fiscal 2013.

The centers conduct market quality research and analysis in five phases. First, they recall problem products from the market to clarify the facts and conduct detailed interviews to replicate the defects. Second, they bring together suppliers along with our R&D and manufacturing personnel to share the information and to decide on areas for further investigation and to assign responsibilities. Based on the findings of the detailed studies, all staff members are brought together again to scientifically pinpoint the cause of the problems and decide on specific countermeasures. These measures are incorporated in future R&D and manufacturing activities and in building new management structures to prevent a recurrence of reliability issues or incidents.

#### **Quick Rollouts of New Vehicle Production Structure**

Nissan introduced 4G Strategies to provide consistent, high-quality products to customers around the world. We have been able to quickly build an optimum production structure for new models at each of our plants worldwide according to these 4G Strategies.

#### Nissan's 4G Strategies (Japan)

### Global Production Engineering Center (GPEC)

The GPEC develops optimized production processes through focused trials and analysis of new vehicles. In addition to dramatically improving quality in the vehicle production preparation stage, it strives to establish quality consistency globally by spreading high quality standards to manufacturing plants in and outside Japan.

### Global Training Centers (GTCs)

Manufacturing quality and productivity depend greatly on the skills of individual workers. To raise these skills to a competitive level in Nissan's plants worldwide, the GTCs carry out training through classroom lectures and skills training activities based on the Nissan Production Way. Graduates of the Master Trainer programs take part in training programs for local staff in regional training centers, effectively passing their skills on to others.

### Global Packaging Design Center (GPDC)

The GPDC functions as a training center for developing logistics specialists to work at our manufacturing bases. Training includes parts packaging design, packaging testing and evaluation methods, CAD and optimum logistics cost management to maintain high quality.

### Global Launching Experts (GLEs)

GLEs provide support in resolving issues related to *monozukuri* (production) that arise in the new vehicle launch phase. We are meeting our QCT (quality, cost, time) targets for each new vehicle launch thanks to the evaluations and advice from GLE core members and the support of GLE registered members.

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#### Most Influential Indicator (MII) Survey 2012 Results

Country	Survey	Results
USA	Consumer Reports	Top reliability rating for Infiniti G Sedan, Nissan LEAF.
	J.D. Power Initial Quality Study (IQS)	Infiniti placed 6/34; Nissan placed 4/22 overall. Infiniti EX in 1st place, Infiniti M 1st, Frontier 1st, Quest 1st.
	J.D. Power Vehicle Dependability Study (VDS)	Nissan Z placed 1st.
China	J.D. Power IQS	Livina placed 3rd.
	J.D. Power VDS	Tiida placed 1st, Qashqai 2nd, Teana 3rd.
South Africa	Synovate Product Satisfaction Index	X-TRAIL placed 1st, NP200 placed 1st, Micra 3rd, Navara 3rd.
Germany	ADAC	Qashqai and Micra ranked "very reliable."
U.K.	What Car?	Qashqai and Note ranked "good."
Brazil	Quatro Rodas	Versa ranked 1st, March 1st.

### PERCEIVED QUALITY

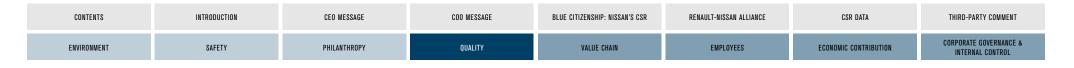
Another pillar of our quality improvement approach is "perceived quality." This is the quality that customers feel when seeing, touching and using a vehicle. For example, when customers come to the showroom they open the vehicle doors, sit in the seats and check things like the texture of interior fittings. Nissan carries out thorough analysis of why customers perceive certain things as good as part of its efforts to improve quality as it appeals to all five senses. We set clear targets and methods for achieving higher levels of quality so that customers will sense attractiveness in Nissan vehicles that cannot be found in other brands.

### Anticipating Customers' Quality Perceptions

The feeling of quality is a subjective matter, and fixing quantified criteria calls for very careful investigation. To date Nissan has evaluated cars using the opinions of numerous in-house product monitors and specialists with in-house training and has surveyed customers who have purchased or are considering purchasing a Nissan car in order to fix criteria for quality evaluation from the customer's point of view.

Customer sensibilities and social trends change from day to day. Cutting-edge technologies are constantly in development, and customer needs for these technologies are a moving target. We are working to improve our ability to foresee future social and technological trends in markets around the world, addressing the rapid change seen in the markets and feeding what we have learned into our vehicles, giving them attractiveness not seen in other brands.

We have now begun carrying out actions that reflect our understanding of customers' feelings from the stage of new model development. We are also expanding the geographic range of our surveys to deepen our knowledge of people's emotional approach to vehicles in each global market.



#### **Developing an Attractive Product**

In order to increase perceived quality, it is necessary to objectively understand the feelings customers experience when they look at, touch and use a vehicle. Nissan employs scientific methods to measure and analyze human perception and quantifies feelings of comfort to help create optimal designs.

For the sense of touch, for example, we analyzed the feel of various objects such as clothing, furniture and traditional handicrafts. We found that softness close to that of a finger pad feels best when pushing, and a surface texture with roughness similar to a fingerprint's ridges feels best when stroking. We are now using a new material on the armrest of the Nissan Fuga that has the softness of a finger pad and a surface texture similar to a fingerprint.

Further, the human finger has "moisture sensors" in the valleys of the fingerprint ridges. These trigger a sensation of soft, pleasant moisture when the ridge valleys are stimulated, despite the absence of wetness. Softness, meanwhile, is felt more easily when the finger comes into contact with multiple ridges at the same time. We use a premium textured material called "soft-feel grain" on the interior door handles of the Fuga. We have also applied our findings on human touch perception of moisture and softness to improve the feel of the hard plastic materials used in the vehicle interior.

### SALES AND SERVICE QUALITY

There are many occasions for Nissan to interact with customers: when they purchase a vehicle, of course, but also when they bring it in for servicing, when they finish paying off the loan and when we send them information on special sales campaigns, such as those for new models and test-drive opportunities. As a means of enhancing the Nissan brand, we pursue "sales and service quality" by going beyond customer expectations in all of these areas. Through effective management of our sales and service quality at sales companies in major national markets around the world, we enhance our connections with customers, improve customer satisfaction, earn stronger support for Nissan and strengthen our brand. Our aim is to achieve top-level customer satisfaction in 16 key national markets including Japan, the United States and Europe.

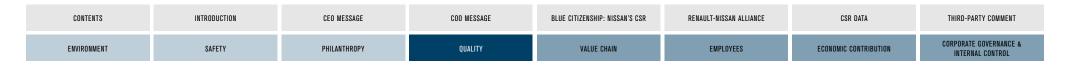
We are currently working on two key initiatives aimed at boosting our sales and service quality: (1) globally sharing the data collection and systematization of the know-how of successful countries, and (2) achieving overall improvement by reducing discrepancies in performance among sales companies and dealerships in various countries.

These two initiatives will be pivotal to our continuous and consistent activities to maximize customer satisfaction.

#### **Customer Evaluation**

To deliver top-level sales and service quality, the purchasing experience of Nissan car owners must be analyzed objectively. Studies are implemented based on third-party surveys in each national market.

Nissan maintained top levels in Japan in J.D. Power's Sales Satisfaction Index (covering such items as delivery process, delivery timing and salesperson) and Customer Service Index (including service, maintenance and repair), while making marked improvements in China thanks to closer coordination between the sales and servicing divisions there. Improved performance in the United States made Nissan the top Asian brand in the CSI (excluding premium brands) as well.



#### The Nissan Sales and Service Way

Nissan has established the Nissan Sales and Service Way (NSSW) as a set of global guidelines helping dealers to better respond to the individual needs of customers, to see things from the customer's point of view and to provide professional, high-value service. We conduct various activities to increase customer satisfaction and to improve our sales and service quality based on these guidelines. These activities include dealer training to improve product knowledge, service skills and customer care, as well as the provision of guidance to improve dealership operations in response to customer satisfaction surveys. We are also developing personnel and systems to put these improvements into place and enhance the customer focus of our job process, with care given to the voices of customers collected through our call centers and other means.

Nissan carries out these initiatives globally while keeping in mind differences in cultural conditions and customs across countries and regions. In this way we seek to provide the best customer service during the purchase and ownership experiences, as well as in other areas.

#### **Enhancing Frontline Staff Capabilities**

In the area of sales quality, it is critical to improve salespeople's knowledge of the vehicles and their sales skills. We conduct new model training and sales skill training activities for our sales companies on a global basis. Future plans include the codevelopment of training materials by participants in our major markets; these materials will be distributed to other markets to improve the level of our training quality worldwide.

For service quality, one key goal is to provide high-quality repair and maintenance work that only takes one visit and does not require the customer to wait too long. We are working on a global basis to enhance service quality by training our people, providing accurate technical information, delivering parts promptly, improving shop tools and designing cars to be more easily maintained.

### Boosting Service Quality Through Mechanic Competency

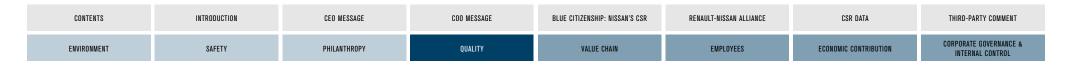
Nissan aims to satisfy customers by always providing highly reliable technical skills. In Japan, we have been developing highly competent technical staff through the establishment of an in-house qualification system that requires even higher certification standards than national programs. We are currently considering ways to allocate the required number of highly certified Nissan technicians depending on dealer size, thereby ensuring consistent shop competency. This practice has already started in the North American and European markets. We aim to provide reliable maintenance and other after-sales services for all our customers.

### Sharing CS Improvement Successes Globally

To improve customer satisfaction levels in markets worldwide, we need to not only enhance sales functions on a global basis but also help sales companies in various national markets meet local needs. Nissan conducts sales satisfaction index (satisfaction with the purchasing experience) and customer service index (satisfaction with maintenance and delivery services) surveys in various markets and periodically organizes the Global SSI/CSI Meeting of major sales companies to globally share regional best practices. Regions with high satisfaction levels invariably possess know-how regarding specific approaches and tools. These best practices are showcased at the meetings so they can be applied in regions that are working particularly hard to enhance customer satisfaction.



Sales company representatives at the Global SSI/CSI Meeting



#### Applying Japan, China Market Know-how to CS in Thailand

Improving customer satisfaction scores in Thailand has been a difficult challenge, so Nissan is comprehensively introducing activities implemented in Japan and China. Specifically, we identified activities to be improved and implemented a thoroughgoing *kaizen* program. The main targets in Thailand were the vehicle delivery process, vehicle quality after repair and customer treatment. Quality improvement efforts are being made by educating sales personnel on the importance of CS and through PDCA cycles for individual dealerships. By introducing such *kaizen* tools as training programs, evaluation systems and incentives, both qualitative and quantitative improvements are being made in the human resources of Nissan dealers in Thailand.



Nissan representatives observe CS improvement activities in Thailand.

#### Improved Service Capabilities

Nissan is making efforts to improve the technical capabilities, including basic diagnostic and repair skills, as well as the customer service skills of its aftersales care service staff. These skills are put to the test in the All-Nissan Service Technical Contest. The event, hosted with assistance from throughout the Nissan Group, focuses on employees working in dealership service departments.

The competition has four categories: Technical Staff and New Technical Staff for those involved in maintenance, diagnostic and repair work, and Technical Advisor and Female Technical Advisor for those involved in frontline service reception. Teams and individual participants who take top honors at the nine regional competitions go on to compete at the national competition. The event brings together service staff with exceptional knowledge and experience from all around the country, giving them a chance to put their day-to-day practices to the test against those of their fellow colleagues. Such events help to increase both the technical skills and motivation of employees in service departments, thus strengthening the service structure of the Nissan Group as a whole.

#### **Prompt Service Support**

Nissan has opened its National Customer Service Center (NCSC) in Japan to make qualitative improvements to the service support it offers to customers and dealerships. The NCSC consolidates dealership vehicle repair support and service technical support functions, as well as our customer call center. It carries out tasks that include providing expertise for maintenance and repair services, giving support to dealers for repairs, carrying out training in body and paint repair, collecting market data on incidents and managing call center issues. Initiatives adopted by the NCSC include collaboration with service technical support teams and digitization of product information including catalogs. This has enabled provision of highly precise technical data and reduced waiting times for customers with telephone inquiries, resulting in an overall improvement in the quality of our response to customer inquiries.

In conjunction with the launch of Nissan LEAF, we introduced a support system for dealers worldwide. Utilizing information technology to exchange image and voice data, as well as data from diagnostic devices, the system links dealers with Nissan's development division to enable prompt, accurate remote servicing.