

NISSAN MOTOR CORPORATION



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The zero-emission e-NV200

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publish the report exclusively online. It can be downloaded from our website as PDF files.

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INTRODUCTION

# INTRODUCTION

Corporate Vision \* Nissan : Enriching People's Lives

# **Corporate Mission**

Nissan provides unique and innovative automotive products and services that deliver superior measurable values to all stakeholders in alliance with Renault.

Guided by its corporate vision of Enriching People's Lives, Nissan aims to contribute to the sustainable development of society through its full range of global business activities in addition to providing value through its products and services. As a leading global automaker, Nissan is committed to all stakeholders—including customers, shareholders, employees and the communities where the company does business—to deliver engaging, valuable and sustainable mobility for all. Nissan's pioneering efforts to promote electric vehicles, with their low environmental impact during operation, along with efforts to make mobility more affordable for people in emerging countries and the development of Autonomous Drive technologies that contribute to the realization of a society with virtually no traffic accidents are part of the value-creating initiatives rooted in this vision.

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utonomous

This approach to corporate social responsibility is called "Blue Citizenship." Through Blue Citizenship, Nissan aims to be recognized by its stakeholders as a company that lives up to the expectations of society.

To share the company's CSR-related thinking and activities to as broad an audience as possible, each year Nissan publishes a Sustainability Report. By sharing this information, the company increases the level of transparency of its actions while creating opportunities to improve its activities by incorporating feedback from stakeholders, thereby contributing to the development of a sustainable society.



CEO MESSAGE

# **CEO MESSAGE**



#### CEO MESSAGE

**Nissan is on a mission.** We want to be the auto industry's most socially and environmentally responsible manufacturer. We also want to become one of the most sustainable companies on the planet.

This goal is fueling global efforts to conserve resources; improve vehicle safety, quality and fuel-efficiency; develop a highly skilled and diverse workforce; and continue our robust philanthropic activities. To put it simply: sustainability is now integrated into Nissan's corporate strategy, operations and culture. And the impact is clear.

By prioritizing sustainability, Nissan has become more efficient, resilient and competitive. Our company has proven that it is possible to create cutting-edge products that not only strengthen our business and meet customer needs but also help to solve today's most significant mobility, safety and environmental challenges.

We have achieved a great deal through our sustainable activities, and we are eager to further accelerate these efforts. The challenges before us demand nothing less. Whether we are working to address climate change, rapid urbanization, transportation for aging populations or vehicle safety—Nissan is committed to identifying the solutions we need. One key area of focus will be our vision of a "zeroemission, zero-fatality" future for automobile transportation. Nissan pioneered this effort in 2010 with the launch of the Nissan LEAF—the world's first successful mass-marketed, zero-emission vehicle. The LEAF continues to be the bestselling electric vehicle in history and has established Nissan as the auto industry's zero-emission leader. However, our achievement in the electric vehicle segment is just one part of Nissan's groundbreaking efforts to transform the use and impact of automobiles.

Another exciting step is our work to bring Nissan's Autonomous Drive technology to the marketplace. Autonomous driving vehicles have the potential to ultimately lead to "zero fatality" roads—and Nissan is at the forefront of their development. In addition to reducing accidents, these vehicles also conserve energy, enhance traffic management and ease driver stress. As we work to bring vehicles with Autonomous Drive to the market by 2020, we are incorporating this technology into our vehicles and introducing its benefits on a progressive basis. We will continue to search for bold ideas in our quest to enhance mobility and enrich lives. We will collaborate with our suppliers, dealers and partners. And we will find new ways to harness the power of technology.

A new era of safer, more sustainable mobility is on the horizon. And Nissan intends to lead the way forward.

Carlos Ghosn President and Chief Executive Officer Nissan Motor Co., Ltd.

# **Working Toward a Sustainable Mobility Society**

Today's world is changing fast. In this era of rapid economic growth and development, countries worldwide face a diverse range of challenges that will have a long-term, direct impact on the ways in which communities function. Against this backdrop, Nissan is identifying and implementing solutions needed to create a sustainable mobility society.

Urbanization and demographic changes, including rapidly aging populations, are just two of the megatrends that will have a significant global impact. Nissan is responding to these challenges. Our research and development are guided by our long-term goal to eliminate vehicular emissions and end avoidable injuries and deaths on roads and highways. In short, we are guided by a vision of the future where "zero emissions" and "zero fatalities" are a reality.

Larger, urbanized populations need new forms of mobility that result in a smaller carbon footprint. With the number of vehicles on the world's roads projected to reach 2.5 billion by 2050, continuing to rely on current technologies is simply not environmentally sustainable. Increasing the use of electric vehicles (EVs) is just one of the ways in which Nissan is responding to this challenge.

The megatrends also affect the way in which Nissan approaches safety. Although the safety of cars has improved significantly every decade, there are still 6 million accidents annually in the United States alone. Through Autonomous Drive technologies, Nissan seeks to improve the driver's ability to avoid an accident while offering improved mobility for a greater number of people in all age ranges.

In an ever-changing world, Nissan aims to minimize the environmental impact of vehicle transportation and to expand access to safe, sustainable mobility for all.



# **Leading the Way Toward a Zero-Emission Society**



Power-generating wind turbines at Nissan Motor Manufacturing (U.K.).



The Nissan e-NV200.

A growing global population and continuing economic development bring new challenges for society. The increasing pace of industrial activity and resulting increases in CO<sub>2</sub> emissions are among the factors that are contributing to rising average temperatures worldwide. During this century, the rise of megacities is expected to accelerate the impact of global environmental issues, including climate change and atmospheric pollution.

At the same time, there are constraints on the availability of fossil fuels, natural materials and other resources that many nations have traditionally relied upon for economic stability and mobility. Renewable sources are expected to make up an increasing share of the energy mix, a shift that will affect every industry.

The transportation sector currently accounts for approximately 14% of global greenhouse gas emissions. Nissan understands that, as a global automotive manufacturer, our company has to be a part of the solution. Nissan has calculated that "well-to-wheel" CO<sub>2</sub> emissions for new vehicles will need to be reduced by 90% by 2050 compared with levels in 2000 and has also committed to taking a leadership role in promoting the use of zero-emission vehicles.

Nissan aims to continue helping to address global environmental challenges through its advanced vehicle technologies, including our pioneering EVs, the Nissan LEAF and the e-NV200. Nissan's

environmental leadership goes beyond cutting-edge vehicles to include how electricity is generated. In our view, greater reliance on renewable energy sources is necessary, and there are many promising solutions in use today or ready to be deployed soon. Recognizing that electricity can be put to use in homes and businesses, as well as on the roads, Nissan is working with various stakeholders on initiatives such as the "LEAF to Home" power supply system, which is creating a new solution for stakeholders worldwide.

The road to a zero-emission society will be challenging. Nissan is undeterred. We are a leading company in this area with a vision and a commitment to achieving this goal.

#### Greenhouse Gas Emissions by Industrial Sector



Source: IPCC, 2014 Summary for Policymakers. © IPCC, AR5-WG III

# Leading the Way Toward a Zero-Emission Society: Nissan's Approach



The Nissan New Mobility Concept.

In 2010, the Nissan LEAF was launched as a mass-produced EV. The LEAF is not only a zero-emission car but also an EV with unprecedented quietness, acceleration and handling. Since its launch, this electric car has become the best-selling EV in the world, reaching cumulative sales of 172,000 as of March 2015. Collectively, the LEAF has already traveled more than 2.87 billion kilometers, which is equivalent to saving 422,000 tons of CO<sub>2</sub> emissions<sup>10</sup> compared to those of a gas-powered car of the same class.<sup>20</sup>

- Estimate based on: Total distance driven (Global Data Center data) + Number of Carwings registered vehicles x Number of total accumulated sales.
- 🔊 Comparison to Nissan Micra: 120 g/km.

Building on the momentum of the LEAF's top market share, Nissan has developed additional models to expand its EV lineup. The e-NV200 also offers entirely new mobility lifestyle options. In 2014, the e-NV200 joined Barcelona's taxi fleet.

Another innovative zero-emission vehicle is the Nissan New Mobility Concept, an ultracompact, highly maneuverable EV that seats two passengers. This new mobility style is advancing Nissan's efforts not only to offer excitement but also to address the growing needs of elderly drivers and single-person households for short-distance mobility.

Nissan uses cutting-edge ICT (information and communication technology) systems to make its





e-NV200 taxis in Barcelona, Spain.

Nissan has installed the 1,000th CHAdeMO quick charger in Europe.

EVs easier to operate, more efficient and better able to communicate with outside surroundings. Furthermore, the ICT systems can collect, with the vehicle owner's consent, static data such as driving history, charging history and battery status from EVs, which may help to improve the design and development of more energy-efficient societies. Nissan is currently conducting joint projects with multiple stakeholders to study possibilities in this area.

Establishing sufficient infrastructure is also essential in order to realize and maximize the benefits of zero-emission mobility. Nissan is working with partners to promote and roll out CHAdeMO-standard networks of chargers, including quick-charge stations to keep EVs moving toward their destinations without delay. It is expected there will be 6 million EVs on roads by 2020, and more than 200,000 fast chargers installed globally.\*\*

#### ■ Source: CHAdeMO Association.

Beyond vehicles, Nissan is also developing "LEAF to Home" and "Vehicle to Building" solutions. These systems combine an EV and a power control system to charge the car when electricity is inexpensive and to provide electricity to a structure when it is needed. Systems like these will help households and entire communities to use energy more efficiently.

Nissan is creating a future where EVs offer new value, both on the road and off. Zero-emission mobility is foundational to building a sustainable society.

# **Building a Safer Mobility Society**



Nissan's Autonomous Drive vehicle.



Mobility will become even more important as populations age and developing economies see greater numbers of people looking to experience the benefits that vehicle ownership brings. Yet we have to address issues that arise with an increase in the number of vehicles on the road. About 1.24 million deaths<sup>\*</sup> are caused by road accidents every year, with statistics showing that human error is a contributing factor in more than 90% of all accidents. Nissan estimates the global economic losses due to traffic accidents and congestion at ¥104 trillion.

Source: WHO Global Status Report on Road Safety 2013.

Nissan today is conducting intensive

Autonomous Drive testing in the United

States and Japan.

Urbanization means that there will be more congestion and greater accident risk due to more cars on the roads.

To address this, Nissan researchers and engineers are guided by a goal of zero fatalities from avoidable traffic accidents. This is leading to the development of world-class Autonomous Drive technologies.

Nissan seeks to take the drudgery out of driving and to support the driver in avoiding potential accidents. Nissan develops technologies that enable vehicles to communicate with one another and with the driving environment, aiming to reduce accidents in urban areas where they are most frequent. Autonomous Drive technology will also improve mobility for the elderly, allowing them to enjoy personal vehicle mobility much later in life.

**Global Road Traffic Deaths (2010)** 

# 1.24 million

# The number has not increased, but remains unacceptably high.

Source: WHO Global Status Report on Road Safety 2013.

EPORO robots developed to study collision avoidance.

# **Building a Safer Mobility Society: Nissan's Approach**



A workshop at the Nissan Research Center in Silicon Valley.

Nissan's extensive autonomous research has already paid off. The Adaptive Cruise Control system, an early building block, debuted at the end of the 1990s, helping to assist drivers in maintaining a safe distance from the vehicle traveling in front of theirs. This work has continued. Nissan was the first automaker in Japan awarded a special license plate to allow street and highway Autonomous Drive testing, enabling researchers to gather valuable real-world data.

Going forward, by leveraging the benefits of the Renault-Nissan Alliance, Nissan is aiming for a 2016 release of its "traffic jam pilot" technology, which will enable cars to drive autonomously and more safely on congested highways. In 2018, Nissan will introduce new technology that allows a car to autonomously negotiate hazards and change lanes. By 2020, the company will be ready to introduce technology that allows a car to navigate on its own in nearly all situations, including complex city driving. Nissan's goal is to be ready to commercialize all of these technologies and to bring vehicles with comprehensive Autonomous Drive capabilities to the market by the start of the next decade.

Nissan is committed to providing its advanced safety technology to as many customers as possible.





Image of Safety Shield technologies.

Nissan's Autonomous Drive system.

By rolling out solutions across all vehicle categories, Nissan is making broad contributions to improve the quality of life for customers seeking enhanced mobility options.

To accelerate research in this area, Nissan maintains engineering bases in Japan, Russia, India and the United States. The latest addition is the Nissan Research Center in California's Silicon Valley, which opened in early 2013 to enhance Nissan's research capabilities through collaborative partnerships with companies and research institutions in this global technology hub. The company has also introduced a Senior Innovation Researcher program as a new incentive for employees in the R&D division, as well as for researchers from outside the company. This program promotes basic research on cutting-edge automotive technologies for batteries and other core elements essential for future mobility. Nissan also collaborates with several premier technical universities, including Stanford, MIT, Oxford and the University of Tokyo.

By forming a global research network, Nissan is able to more effectively draw on cutting-edge thinking and apply it in creating tomorrow's mobility solutions.

# **Expanding Possibilities Through Collaboration**



In the drive to achieve the twin goals of zero emissions and zero fatalities, Nissan leads the automotive industry in forging cooperative ties with a broad range of partners, including both national and local governments, electric utilities, corporations and other stakeholders. Nissan is fully committed to providing continued support for promising measures and investing its knowledge and other resources to make mobility safer and more environmentally responsible.

The ceaseless advancement of information technology and the expansion of the Internet have created an increasingly connected world. As demand rises for ubiquitous connectivity, Nissan is ensuring that its vehicles are compatible with this networked society and collaborating with a broad spectrum of partners to enhance connections among people, vehicles and society.

The battery technology in EVs and the renewable energy that can be used to power them promises deeper applications in society than in mobility alone. By tackling a comprehensive range of issues, including the use of renewables and the reuse of lithium-ion battery cells, Nissan seeks to provide value by encouraging greater standardization of electrical systems.

Creating a zero-emission society will also require the construction and further development of infrastructure around the world to allow for recharging of EVs. With its partners supporting the CHAdeMO charging standard, Nissan is cooperating with governments and private-sector stakeholders to ensure the installation of charging station networks that give EV owners the geographic coverage they need to make their cars convenient as well as eco-friendly.

The pursuit of a zero-fatality mobility society, meanwhile, will also require advanced intelligent transport systems (ITS) and other infrastructure linking vehicles with the society around them. Here, Nissan is leading the way through partnerships with local governments and corporations aimed at creating systems that can communicate with vehicles on the road, thereby sharing vital safety and congestion information in real time.

# Nissan collaborates with a range of partners to advance its sustainable mobility goals.



# **Collaborating with Stakeholders Beyond Our Industry** to Create a Sustainable Future





#### Creating Advanced Energy Systems in Maui

Nissan is proud to be part of the JUMP Smart Maui project, which was launched in Maui, Hawaii, in 2011. This project incorporates technologies related to renewable energy, smart grids and electric vehicles (EVs) to develop more efficient, cleaner electric systems and transportation options.

Japanese companies, including Hitachi, are leading the project with funding from Japan's New Energy and Industrial Technology Development Organization. The Nissan LEAF was chosen as the initial EV to be used in the experiment.

In the first phase of the project, over 200 Nissan LEAFs were utilized to store excess electricity generated by renewable energy sources such as wind. During the second phase of the project, which started in March 2015, the vehicles were utilized in a LEAF to Home-style arrangement and fed electricity back into the grid when needed.

Through the project, the Nissan LEAF has become an integral part of the Maui community. Over 250 community members, including Maui county government officials, private business leaders and individual citizens, became either owners or lessees of the LEAF vehicles in the first phase, and the number is planned to expand to 500 during the second phase.

The Nissan LEAF has not only contributed to the success of the experiment but also enabled volunteer participants to drive without emitting any CO<sub>2</sub>. This has allowed participants to significantly reduce their fuel expenses by avoiding the costs related to using gas-powered vehicles. Furthermore, the Nissan LEAF is demonstrating its uniqueness as a supply source for mobile energy. Nissan believes this is promoting a greater understanding of the positive impact that a single individual can have in advancing community-wide sustainability goals, just by utilizing the Nissan LEAF for day-to-day transportation needs.



# NASA-Nissan Research Partnership

In the United States, the NASA Ames Research Center and the Nissan Research Center Silicon Valley are working together to advance Autonomous Drive technologies. Nissan is providing component technology while NASA is sharing its experience in operating planetary rovers, accelerating Nissan's development of Autonomous Drive solutions to be rolled out to consumers progressively through 2020.



#### World-Leading Car-Sharing Scheme

In October 2014, Terschelling, one of the Dutch Frisian Islands, became home to the world's largest island-based car-sharing scheme. A pool of 65 Nissan LEAF EVs is now in place, with plans to expand to 100 vehicles. These EVs are expected to handle 10% or more of the islanders' driving needs, producing zero emissions in the process.

#### Vehicle-to-Grid (V2G) project at Los Angeles Air Force Base

Establishment of the Nissan Zero Emission Fund

#### Practical testing of Autonomous Drive tech

#### ▶ website

Click here for more information on the V2G project.

Click here for more information on the Zero Emission Fund.

>> website

Click here for more information on Autonomous Drive.

▶ website

BLUE CITIZENSHIP: NISSAN'S CSR

# NISSAN'S CSR STRATEGIES AND MANAGEMENT

In addition to delivering growth with sustainable profits, Nissan seeks to contribute to the sustainable development of society. To this end, the company pays close attention to its diverse range of stakeholders, working with them as it pursues activities that meet society's needs.

# **NISSAN'S CSR VISION**

Guided by the corporate vision of Enriching People's Lives, Nissan seeks to contribute to the sustainable development of society through all its activities, globally. The company's mission is to provide unique and innovative automotive products and services that deliver superior values to all stakeholders in alliance with Renault.

As a leading global automaker, Nissan also seeks to contribute solutions to humanity. The company is committed to all of its stakeholders—including customers, shareholders, employees and the communities where it does business—in delivering engaging, valuable and sustainable mobility for all. Through its business activities, Nissan aims not only to create economic value but also to actively contribute to the sustainable development of society.

Corporate Vision	Nissan: Enriching People's Lives			
Corporate Mission	Nissan provides unique and innovative automotive products and services that deliver superior measurable values to all stakeholders in alliance with Renault.			
CSR Vision	To be one of the leading sustainable companies in the industry			



▶ page\_14 Click here for more information on Nissan's eight sustainability strategies.

BLUE CITIZENSHIP: NISSAN'S CSR

## **MATERIALITY ASSESSMENT**

Nissan's strategies to realize its CSR vision come from the highest levels of the company. Top management discusses key societal themes to prioritize the issues that Nissan, across all Group companies, must address as a global automobile manufacturer. This process provides the basis for the development of a Materiality Matrix, built on a materiality assessment of sustainability issues relevant to the business and analysis of the company's underlying opportunities and challenges.

In fiscal 2014, Nissan focused on verifying the Materiality Matrix developed in fiscal 2013. This report includes a new section, "Working Toward a Sustainable Mobility Society," which provides information about Nissan's efforts toward the realization of such a society—one of the most material aspects identified in the Materiality Matrix. In fiscal 2014, Nissan also began discussing future management strategies based on the findings of the materiality analysis. Through a robust discussion process, Nissan pursues a balance between the sustainable development of society and its own profitable growth.

► page\_05

#### Materiality Matrix 2015



Potential Business Impacts (Importance to Nissan)

#### SUSTAINABILITY STRATEGIES

Nissan has defined eight sustainability strategies providing the foundation of its approach to CSR. As a leading automaker, it is uniquely positioned to pursue actions under the three strategies of Environment, Safety and Philanthropy. While helping to find solutions to sustainability issues in the automotive sector and contribute to the realization of a truly sustainable mobility society, Nissan aims to be an engine for CSR activities across the entire corporate sector. To remain trusted and needed by society, Nissan must also pursue the other five strategies—Quality, Value Chain, Employees, Economic Contribution, and Corporate Governance & Internal Control. By steadily advancing these eight strategies and by being transparent on its progress and the challenges faced, Nissan is able to fulfill its responsibilities to society and build trust.

# Nissan's Eight Sustainability Strategies



#### 1 ENVIRONMENT

Nissan aims to lead a social transformation aimed at bringing about a sustainable mobility society by reducing vehicles' environmental impact throughout their lifecycle and expanding the lineup of effective green products and technologies.

#### 2 SAFETY

Nissan develops innovative technology and plays an active role in safety promotion, making the automobile society safer for all.

#### **3** PHILANTHROPY

Nissan carries out social contribution activities as a corporate citizen, focusing on the environment, education and humanitarian support. 4 QUALITY Nissan provides top-level quality in its products and services around the world.

# 5 VALUE CHAIN

Nissan promotes ethical, environmentally sound actions in all stages of the supply chain.

#### 6 EMPLOYEES

Nissan aims to form an attractive organization where diverse human resources can achieve personal growth through experience in global business.

7 ECONOMIC CONTRIBUTION Nissan aims for sustainable, profitable growth, contributing to economic development for all of society.

# CORPORATE GOVERNANCE INTERNAL CONTROL Nissan aims to conduct fair, impartial and efficient business activities, havino a high degree of

business activities, having a high degree of transparency and consistency by adhering to the applicable laws and corporate rules.

# CSR MANAGEMENT

#### Company Organization for CSR

Sustainability in Nissan is supported by the CSR Department. In fiscal 2011, the CSR Department came under the direct control of Chief Executive Officer Carlos Ghosn. Within the organization, CSR has become a central aspect of corporate management.

The Executive Committee, Nissan's top decision-making body, is responsible for setting goals and confirming progress across the eight sustainability strategies and for managing CSR activities in a comprehensive way throughout the company. It defines the overall course and the measures to be taken toward achieving the company's sustainability goals. The Executive Committee includes 10 members directly involved in company management, from the executive vice president level up, and meets monthly, enabling it to reach speedy, focused decisions. In July 2014, Nissan raised issues and confirmed future action plans relating to sustainability within the company at an executive-level management meeting. By closely linking CSR actions and business operations, Nissan is pursuing an approach to corporate management that consistently aligns the twin goals of (1) sustainable profit and growth for the company and (2) sustainable development for society.

#### Nissan's CSR Decision-Making Process



BLUE CITIZENSHIP: NISSAN'S CSR

# Nissan's CSR Scorecard

Nissan makes year-round use of the CSR scorecard as a core tool for monitoring and reviewing its progress. The vertical axis of the scorecard lists the eight sustainability strategies to check balances among stakeholders. The horizontal axis represents the points of intersection between the direction of Nissan's growth and that of society's development. The aim is to balance shortand long-term perspectives, achieving equilibrium between the two axes. Each year Nissan publishes the scorecard in this Sustainability Report. In fiscal 2014, the company modified the scorecard to facilitate stakeholder understanding of its sustainability performances.

# PDCA Cycle to Promote CSR

The PDCA (plan, do, check, act) cycle is a fundamental part of Nissan's CSR activities. Following Executive Committee decisions on the overall direction for these activities, the company manages progress using the CSR scorecard. In its actions the company incorporates the views of stakeholders throughout society, as well as analyzing external trends, reflecting these in future plans. In fiscal 2014, Nissan focused on the inputs of CSR actors and external trends, verified its materiality assessment within the company and began applying the findings to management strategies.

#### Nissan's CSR Scorecard





BLUE CITIZENSHIP: NISSAN'S CSR

# **Communicating CSR Activities Internally**

In addition to sharing information with the public via Sustainability Reports and through online resources, Nissan has long been committed to communication inside the company. Ongoing enhancements to this internal communication prompt individual employees to consider their connection to CSR and translate this into concrete actions.

The company includes CSR-related sessions in training for new employees and newly promoted managers with a website titled "Blue Citizenship: Nissan's CSR," part of WIN (Workforce Integration @ Nissan), and the employee intranet system, used to report on Nissan's activities and share a range of general information on CSR.



Nissan defines its stakeholders as those individuals and organizations that affect or are affected by the company's business. Nissan's management approach aims to align corporate activities with societal needs. The company focuses on gathering feedback from stakeholders and building relationships of trust, reflecting this input in its operations. Nissan pays close attention to societal views, works to identify opportunities and risks in their early stages and provides a variety of opportunities for dialogue with stakeholders. This interaction takes place at Global Headquarters and at other business facilities in Japan and overseas. Structures are in place to ensure that feedback is shared within the company.

For specific examples of Nissan's dialogue with stakeholders, see the pages introducing the company's eight sustainability strategies.



Stakeholders	Stakeholder Engagement
Customers	Customer service interaction, contact through dealers, website, showrooms, motor shows, events, safety driving forum, customer surveys, media (TV, magazines, social media), owners' meetings, vehicle maintenance, mailing service
Employees	Direct contact (including whistleblowing system), intranet, internal events, interviews, surveys
Suppliers and Dealers	Suppliers conference, dealer conventions, business meetings, direct contact, briefings, corporate guidelines, website, dedicated portal site
Shareholders and Investors	Direct contact with IR team, shareholders meetings, financial results briefings, IR events, IR meetings, website, Annual Report, mailing service
Governments, Industrial Associations and Business Partners	Direct contact, joint research, studies, automotive and non-automotive organizations (Japan Automobile Manufacturers Association, WBCSD, etc.), roundtables, working groups, conferences, events, assistance via foundations
NGOs and NPOs	Direct contact, philanthropic activities, partnerships, donations, disaster relief activities, events, assistance via foundations
Local Communities	Direct contact to local business facilities, local events, plant visits, conferences, sponsoring, traffic safety awareness campaigns, assistance via foundations
Future Generations	Direct contact, philanthropic programs, plant visits, endowed courses, events, assistance via foundations, website
Media	Contact with PR team, press conferences, PR events, press releases, interviews, mailing service, website

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# **RESPECTING HUMAN RIGHTS**

Nissan conducts its business while respecting the human rights of its stakeholders. The U.N. Global Compact and national laws are guiding principles for the company, which has developed multiple guidelines and other measures to ensure that human rights are managed throughout business operations. Nissan will strengthen its human rights initiatives by continuing dialogue with stakeholders including customers, employees, business partners and local communities.

Click below for more information on examples of human righ	its initiatives.
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# PARTICIPATION IN GLOBAL INITIATIVES

Nissan actively supports a number of international guidelines and agreements, respecting international policies and standards as it conducts its business operations.

# Nissan as a Responsible Global Citizen

Since January 2004, Nissan has participated in the United Nations Global Compact, a corporate responsibility initiative built around 10 universal principles regarding human rights, labor, the environment and anti-corruption. The U.N. Global Compact was originally proposed by U.N. Secretary-General Kofi Annan in an address to the World Economic Forum (Davos forum) in 1999. Businesses may pledge to support its principles of their own free will.

Nissan's CSR management aims to enhance the full range of the company's activities based on these 10 principles.



Website
 Click here for more information on the U.N.
 Global Compact.

# The World Business Council for Sustainable Development

Nissan is a member of the World Business Council for Sustainable Development (WBCSD), an international association of forward-thinking companies that galvanizes the global business community to create a sustainable future for business, society and the environment. The WBCSD provides a forum for its 200 member companies—which represent all business sectors, all continents and a combined revenue of more than \$7 trillion to share best practices on sustainable development issues and to develop innovative tools that change the status quo.

Nissan is also participating in the WBCSD Sustainable Mobility Project 2.0, launched in 2013. Together with 14 other mobility-related companies and in consultation with local authorities in six model cities around the world, Nissan is working to identify the key challenges and constructing a roadmap for achieving sustainable mobility.

Click here for more information on the WBCSD.

▶ website

#### **EXTERNAL ASSESSMENT**

Today companies are assessed on their environmental and social performance as well as their financial performance. An increasing number of investors use these assessments to guide their socially responsible investment (SRI) decisions. To meet these investor needs, Nissan takes a focused approach to CSR activities and proactively discloses information about its business operations. The company's CSR performance has received high praise from external assessors.

# MEMBER OF Dow Jones Sustainability Indices In Collaboration with RobecoSAM (

# Dow Jones Sustainability Asia/Pacific Index

The Dow Jones Sustainability Index (DJSI) is an SRI index developed by S&P Dow Jones Indices LLC (U.S.) and RobecoSAM AG (Switzerland).

Nissan was selected as a member of the DJSI Asia/Pacific Index again in 2014. Nissan has been a member since the Asia/Pacific Index was established in 2009.

Click here for more information on the Dow Jones Sustainability Indices.



➡ website

▶ website

#### RobecoSAM Sustainability Yearbook 2015

RobecoSAM AG (Switzerland) announces its Sustainability Yearbook every January. Nissan was recognized as Silver Class in the Automobiles category.

Click here for more information on the RobecoSAM Sustainability Yearbook 2015.



# FTSE4Good

# FTSE4Good Index Series

Nissan continues to be a constituent of the FTSE4Good Index, an ESG Equity Index Series of FTSE, after its 2014 review.

► website
Click here for more information on the FTSE4Good Index Series.



#### CDP Climate Change Program

In the CDP Climate Change Program survey, announced in October 2014, Nissan achieved a perfect score of 100A. Its successful efforts to reduce exhaust emissions earned it an A rating for performance, as well as being listed in the Climate Performance Leadership Index for the second consecutive year. Nissan was also recognized in the Climate Disclosure Leadership Index for its highly transparent information disclosure and for setting absolute targets for overall greenhouse gas emission reduction by 2050.



#### Morningstar SRI

Nissan has been selected for inclusion in the 2015 MS-SRI (Morningstar Socially Responsible Investment Index), a Japanese SRI index managed by financial information services firm Morningstar Japan K.K.



#### TSE Selection as "Nadeshiko Brand"

The Tokyo Stock Exchange, Inc. selects listed companies as "Nadeshiko Brands" to recognize their active support of women in the workplace. This is the third straight year for Nissan to be named a Nadeshiko Brand, a designation jointly granted by the TSE and Japan's Ministry of Economy, Trade and Industry.

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Click here for more information on awards for diversity.

#### Interbrand's Best Global Green Brands 2014

Nissan ranked fourth in Interbrand's Best Global Green Brands 2014 after placing fifth in 2013. The results were announced in June 2014.

#### Nikkei Environmental Management Survey

Nissan ranked fifth in the manufacturing sector and second among automakers in the 18th Nikkei Environmental Management Survey. Nikkei Inc. announced the results in January 2015, giving Nissan top ratings for its environmentally friendly vehicle initiatives and environmental management systems.

#### Toyo Keizai CSR Ranking

Nissan ranked fifth in Toyo Keizai Inc.'s ninth CSR Ranking, announced in March 2015.

RENAULT-NISSAN ALLIANCE

# **RENAULT-NISSAN ALLIANCE**

Nissan has greatly increased its global footprint and achieved dramatic economies of scale through the Renault-Nissan Alliance, a unique and highly scalable strategic partnership founded in 1999.

In 2014, the Alliance sold nearly a record 8.5 million vehicles, representing about 1 in 10 new cars sold worldwide. Our vehicles are marketed under the following eight brands: Nissan, Infiniti, Datsun, Venucia, Renault, Renault Samsung Motors, Dacia and Lada (AVTOVAZ).

Including sales by Russia's AVTOVAZ.



# The Alliance's Vision

Although it was initially considered a unique arrangement in the late 1990s, the Alliance quickly became a model for similar partnerships in the auto industry. The Alliance itself has entered strategic collaborations with numerous automakers including Germany's Daimler AG, China's Dongfeng Motor Corp. and India's Ashok Leyland Ltd., and it continues to prove itself as the industry's most enduring and successful partnership. The Alliance also has a majority stake in AVTOVAZ, Russia's largest automaker, through a joint venture with Russian state corporation Rostec Corp.

The Alliance is based on the rationale that substantial crossshareholding investments compel each company to act in the financial interest of the other while maintaining individual brand identities and independent corporate cultures. Renault has a 43.4% stake in Nissan while Nissan holds a 15.0% stake in Renault. The cross-shareholding arrangement requires mutual trust and respect, as well as a transparent management system focused on speed, accountability and performance. On April 1, 2014, Renault and Nissan converged four key functions—Engineering, Manufacturing & Supply-chain Management, Purchasing and Human Resources—in order to enhance performance and accelerate synergies. Each unit is headed by a dedicated Alliance Executive Vice President. By converging these units, the Alliance estimates it will be able to generate at least €4.3 billion in synergies in 2016, up from more than €3.8 billion in 2014.

Click here for more information on the Renault-Nissan Alliance.

# Alliance Objectives

The Alliance pursues a strategy of profitable growth with three objectives:

To be among the top three automakers in terms of:

Technology innovation

2 Revenue and operating profit

3 Quality and customer satisfaction

# Technology Leadership

The Alliance technology leadership is built on three key strategic focuses: zero-emission vehicles, connected cars and autonomous driving.

Today, the Alliance is the leader in zero-emission mobility, having sold more than 238,000 electric vehicles globally, more than all major automakers combined. The Nissan LEAF remains the world's best-selling EV ever.

■ As of March 2015.

SAN MOTOR CORPORATION SUSTAINABILITY REPORT 2015

ENVIRONMENT

The increasing global population and the rapid growth of the world economy have complex and diverse connections with the global environment. They also affect the environment in numerous ways. It is essential to protect the world's irreplaceable natural capital—biodiversity and the air, water and soil that sustain it—for future generations. To balance economic growth with environmental preservation, the automotive industry is tackling a range of sustainability issues. These include climate change and energy measures, preservation of air quality and other natural capital, efficient use of mineral resources, management of chemical substances, waste reduction, recycling and health issues. Companies in the industry are also reforming their business structures to move away from dependence on fossil fuels.

As a global automaker, Nissan takes active steps to identify the direct and indirect environmental effects of its activities, as well as those of its business partners throughout the value chain. The company pursues needed technologies and processes to help minimize the impact of its products on people and communities throughout their lifecycle, while also engaging in communication with society. The company provides customers with innovative products and promotes effective use of energy and resources by increasing sourcing diversity, such as with renewable energy and recycled materials. In this way, Nissan is aiming to achieve its environmental philosophy of "a Symbiosis of People, Vehicles and Nature." Improvement in corporate average fuel efficiency (avg. in Japan, U.S., Europe and China, 2016; compared to 2005):



# ENVIRONMENT

# SCORECARD

# FY2014 TARGET ACHIEVEMENT RATE: VV ACHIEVED V MOSTLY ACHIEVED × NOT ACHIEVED

Nissan makes year-round use of the CSR scorecard as a fundamental tool to manage, review and validate its progress in each of the sustainability strategies defined for its CSR activities. The table below shows some of the values behind Nissan's ongoing activities and the indices used in the scorecard to gauge the company's performance.

Nissan Priorities	Nissan Objectives	Indicators of Progress	FY2013 Results	FY2014 Results	Assessment	Action Planned for Next Year Onward	Long-Term Vision	
Zero-emission vehicle penetration	Introduce four EVs including Nissan LEAF	Number of models introduced	Announced e-NV200, the second EV model, for European market	Launched e-NV200, the second EV model; launched the Venucia e30 for the Chinese market	~~	Continue development		
	Prepare to introduce fuel-cell electric vehicle (FCEV) into market	Results of initiatives	Development underway	Development underway	$\checkmark\checkmark$	Continue development		
	Take global leadership in supplying batteries for electric-drive	Results of initiatives	Production ongoing	Some processes for battery production started by Nissan Motor Iberica (Spain) and Dongfeng Motor Co., Ltd. (China)	~~	Undertake continuous production of batteries for EVs sold		
	Help create zero-emission society utilizing EVs and their derivative technologies with partners	Results of initiatives	Based on "LEAF to Home," began "Vehicle-to-Building" test using multiple Nissan LEAFs simultaneously	End of the Yokohama Smart City Project, which achieved 25% CO <sub>2</sub> reductions through solar power, "Vehicle to Home" and EVs	~~	With partners, promote commercialization of "Vehicle to Home" and EVs		
	Provide energy storage solution with used EV batteries through "4R" business	Results of initiatives	Developed world's first high- capacity energy storage system built with used batteries (Japan)	Began testing of high-capacity energy storage system built with used Nissan LEAF batteries in Osaka's Konohana Ward	~~	Make preparations for further expansion of reuse business		
	Improve CAFE* by 35% from FY2005 (Japan, U.S., Europe, China) * Corporate average fuel economy; meet or exceed regulatory requirements	CAFE	Improved by 31.5%	Improved by 36.4%	~~	Promote expansion of fuel- efficient vehicles	Achieve 90% reduction	
	Introduce top fuel-efficiency models in various classes	Model introductions	DAYZ (Japan) Infiniti QX60 (U.S.) Note, Qashqai (Europe)	X-Trail (Europe) Murano (U.S.)	~~	Continue development	in CO <sub>2</sub> emissions from new vehicles by 2050 (vs. 2000)	
	Introduce front-wheel-drive hybrid vehicles (HEVs) in C class and above; expand rear-wheel-drive HEV offerings	Model introductions	Skyline (Japan) Infiniti Q50, Pathfinder, Infiniti QX60 (U.S.)	Development underway	~~	X-Trail (Japan)		
	Promote plug-in hybrid vehicle (P-HEV) development	Model introductions	Development underway	Development underway	~~	Continue development		
Fuel-efficient vehicle expansion	Introduce next-generation CVT globally; expand CVT sales to 20 million cumulative units from 1992	Number of CVT-equipped vehicle sales	Annual total: 2.79 million Cumulative total: 16.15 million	Annual total: 2.95 million Cumulative total: 19.10 million	~~	Promote expansion of CVT- equipped vehicles		
	Develop lightweight technologies with structure optimization, new materials and new manufacturing processes	Results of initiatives	6 models launched in FY2012 and FY2013 achieved best-in-class vehicle weight	Increased use of 1.2 gigapascal (GPa) Ultra High Tensile Strength Steel with High Formability in the new Murano, launched in North America, reducing total weight by 66 kg	~~	Continue development		
	Contribute to CO <sub>2</sub> reduction with ITS technologies	Results of initiatives	Announced results of Beijing dynamic route guidance test conducted with Beijing Municipal Commission of Transport: 5.1% decrease in travel time, 7.6% increase in fuel economy	Promoted widespread adoption	~~	Promote widespread adoption		

# ENVIRONMENT

Nissan Priorities	Nissan Objectives	Indicators of Progress	FY2013 Results	FY2014 Results	Assessment	Action Planned for Next Year Onward	Long-Term Vision
Corporate carbon footprint minimization	Reduce $CO_2$ emissions of global corporate activities by 20% (t- $CO_2$ / vehicle, vs. FY2005)	CO <sub>2</sub> emission reduction rate	Reduced by 15.4%	Reduced by 22.6%	~~	Expand Nissan Energy Saving Collaboration (NESCO) diagnoses worldwide	
	Reduce by 27% in all manufacturing sites (t-CO <sub>2</sub> /vehicle, vs. FY2005)	CO <sub>2</sub> emission reduction rate	Reduced by 21.8%	Reduced by 23.9%	~~	Adopt three-wet paint process	Achieve 80%
	Reduce by 6% in logistics (Japan, North America, Europe, China, t-CO <sub>2</sub> /vehicle, vs. FY2005)	CO <sub>2</sub> emission reduction rate	Increased by 2.1%	Reduced by 3.3%	~~	Promote modal shift and increased filling rate	reduction by 2050 (t-CO <sub>2</sub> / vehicle, vs. 2005)
	Reduce by 1%/year in offices (Japan, North America, Europe, China, t-CO <sub>2</sub> /floor area, vs. FY2010)	CO <sub>2</sub> emission reduction rate	Increased by 6.1%	Reduced by 1.8%	~	Expand PPS adoption	
	Reduce by 1%/year in dealers (Japan, t-CO <sub>2</sub> /floor area, vs. FY2010)	CO <sub>2</sub> emission reduction rate	Increased by 7.1%	Increased by 14.4%	~	Introduce energy-saving equipment in new outlets and expand PPS adoption	
New natural resource use minimization	Increase recycled material usage ratio per new vehicle for which production begins in FY2016 by 25% in Japan, U.S. and Europe	Recycled material usage ratio	Promoted activities	Promoted activities	~~	Promote activities	
	Expand closed-loop recycling scheme with business partners	Results of initiatives	Continued to reduce the steel and aluminum scrap generated during production, collecting and reusing it as material for new vehicles	Bolstered cooperation with partners aimed at increasing recovery rate for interior plastic from scrapped vehicles	~~	Promote activities	
	Improve end-of-life vehicle (ELV) recovery rate - Achieve top-level ELV recovery rate (Japan) - Promote proper treatment and resource recovery globally	Recovery rate	99.5% (Japan) Efforts underway globally	99.6% (Japan) Work carried out on system to recover, recycle used lithium-ion batteries globally	~~	Promote activities	Reduce ratio of new natural resources per vehicle by 70% (vs. 2010)
	Reduce scarce resource usage	Results of initiatives	Promoted development aimed at reducing rare earth usage	Introduced magnets for HEV motors with reduced rare earth usage, starting with newly launched North American Pathfinder HEV and Infiniti QX60 HEV	~~	Expand adoption of developed technologies in new HEV models and begin development of magnets with even lower rare earth usage	
	Reduce waste 2%/year in Japan and 1%/year worldwide	Waste reduction rate	Reduced by 10.9% (Japan) Reduced by 5.5% globally	Reduced by 3.5% (Japan) Reduced by 7.0% globally	~~	Expand resource NESCO diagnoses worldwide	
	Promote management and reduction of water usage at all production sites	Results of initiatives	Set global target of water use and promoted activities	Further bolstered usage reduction initiatives at vehicle production plants worldwide	~~	Promote activities	
Environmental management promotion	Enhance and promote environmental management throughout supply chain (consolidated companies, sales companies, suppliers)	Results of initiatives	Continued activities to reduce environmental impact through understanding upstream in the supply chain	Participated in CDP supply chain program and adopted global standards for supplier surveys	~~	Promote understanding of environmental impact and improve its accuracy	Promote comprehensive and effective initiatives for supporting management decisions and achievement of Nissan Green Program goals
	Promote reduction, substitution, and management of environment- impacting substances	Results of initiatives	Continued management of environment- impacting substances, creation of well- planned schedule for their reduction and use of alternative substances	Continued management of environment-impacting substances, creation of well-planned schedule for their reduction and use of alternative substances	~~	Further strengthen management of environment-impacting substances	
	Reduce environmental impact of products with lifecycle assessments (LCAs)	Results of initiatives	Obtained TÜV Rheinland certification for LCA methodology	Continued activities for reducing environmental impact of products under TÜV Rheinland certification for LCA methodology	~~	Promote reduction of environmental impact of products	



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Click here for detailed information on our environmental data.

# NISSAN'S APPROACH TO THE ENVIRONMENT

The United Nations Framework Convention on Climate Change states that to stabilize the climate system it is necessary to keep average temperatures from rising more than 2 degrees Celsius on a global basis. Based on this assumption, Nissan has calculated that "well-to-wheel" CO<sub>2</sub> emissions for new vehicles will need to be reduced by 90% by 2050 compared with levels in 2000. The efficiency of internal combustion engines will need to improve in the short term to help achieve this. Over the long term, Nissan also aims to increase the adoption of zero-emission vehicles—battery electric and fuel-cell electric (EVs and FCEVs)—and to promote the use of renewable energy to power these technologies.

Nissan is advancing technological development on the basis of a zero-emission future scenario. Specifically, it is concentrating its efforts on two pillars: zero emission, which involves widespread use of zero-emission vehicles in a holistic approach to promote a sustainable society, and PURE DRIVE, which reduces CO<sub>2</sub> emissions by developing fuel-efficient internal combustion engine technologies and introduces them to the market.



Nissan has also calculated that it needs to reduce CO<sub>2</sub> emissions from its corporate activities by 80% by 2050 compared with levels in 2005. Accordingly, it plans to continue its energy efficiency measures, leverage the power storage ability of EV batteries and expand its use of renewable energy.

#### Our CO<sub>2</sub> Reduction Scenario



Created by Nissan on basis of Intergovernmental Panel on Climate Change Fourth Assessment Report.

# **NISSAN GREEN PROGRAM 2016**

Nissan's ultimate goal is to limit the environmental impact and resource consumption of its corporate activities, and of its vehicles during their entire lifecycle, to a level at which the planet can naturally sustain itself. To achieve this, Nissan launched its new six-year environmental action plan, Nissan Green Program 2016 (NGP2016), in fiscal 2011. NGP2016 is based on thorough assessments focusing on factors with critical impact. These assessments include input from energy and resource specialists around the world. NGP2016 also takes into account survey results in Japan that help gauge employees' understanding and opinions on environmental issues, Nissan's activities and the company's business priorities.

NGP2016 focuses on reducing the environmental impact of Nissan's corporate activities and pursuing harmony between resource consumption and ecology. The company aims to promote diversity and resource circulation by means of efficient use and recycling of both energy and resources, expanding the application of green technologies that were developed under NGP2010, its previous environmental action plan. NGP2016 has four specific key actions that involve activities in development, manufacturing, sales, service and all other departments: zero-emission vehicle penetration, fuel-efficient vehicle expansion, corporate carbon footprint minimization and new natural resource use minimization.

Thanks to Nissan Green Program activities, the company forecasts that  $CO_2$  emissions from its new vehicles and corporate activities will peak in the 2020s and then subside, even taking into account plans to increase sales globally. The volume of new natural resource use will be maintained at the level of the 2010s.

Click here for more information on Nissan Green Program 2016.

#### Promoting Energy and Resource Diversity, Efficiency and Recycling



# **COMPANY ORGANIZATIONS FOR THE ENVIRONMENT**

To achieve the NGP2016 goals, Nissan has created a global framework for environmental management and is setting targets and implementing closely coordinated action plans across all areas of its activity, from production and technical development, manufacturing, marketing and sales to other divisions.

To carry out its global environmental management, Nissan has established an organizational approach linking its various functions and regions. The Global Environmental Management Committee (G-EMC), including a board member as cochair, meets twice annually to determine with corporate officers chosen based on the issues being discussed the overall policies and the content of reports to be put before the Board of Directors. The Global Environmental Planning Department, part of the Corporate Strategy and Business Development Division, was launched in 2007 to determine which proposals will be forwarded to the G-EMC and to assign specific actions to each division. This department is also responsible for the efficient management and operation of environmental programs based on the PDCA (plan, do, check, act) cycle.

In addition, Nissan has established committees to implement environmental management and activities at a deeper level in each of its regions. The European Environmental Management Committee (E-EMC) was set up in 2012, followed by the Japanese Environmental Management Committee (J-EMC), the North American Environmental Management Committee (NA-EMC) and the Chinese Environmental Management Committee (DFL-EMC) in 2013. These groups report to regional management committees and cooperate with the Global Environmental Planning Department while reporting to the G-EMC.

Nissan's strategy is built on the concept of listening to the views of wider society and identifying potential opportunities and risks. The company takes into account opinions from leading experts and organizations and examines assessments from rating organizations, using this information to analyze its goals and activities and enhance its environmental measures.

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Click here for more information on our environmental management promotion.

#### Nissan's Framework for Global Environmental Management



### Environmental Management Organization



### Stakeholder Engagement

Nissan analyzes its use of resources and energy, the impact on the environment and how it can reduce that impact throughout the value chain. Through the analyses, the company identifies stakeholders at each stage, from the extraction of resources needed to make vehicles to manufacturing, shipping, use and disposal of end-of-life vehicles. Through a broad range of approaches, it gains an understanding of stakeholder views and the diverse needs of society.

As one example, members of Nissan's Board of Directors hold annual Advisory Meetings with the participation of researchers and experts who lead the environmental field in the academic and industrial worlds, as well as leading business people from various sectors. They discuss the direction and appropriateness of Nissan's business strategies; this input is considered in those strategies going forward.

Customers, shareholders, investors, business partners, suppliers, NGOs/ NPOs, local communities, national and local governments, future generations, employees and members of Nissan's Board of Directors.

#### Materiality Analysis

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The automotive industry is subject to environmental regulations and standards around the world, covering areas like CO<sub>2</sub> and other exhaust emissions, energy, fuel efficiency, noise, material resources, water, chemical substances, waste and recycling. These regulations are becoming more stringent year by year. Consumer needs and wishes concerning environmental performance are also changing.

To meet these various social demands, Nissan uses materiality assessments to analyze potential opportunities and risks. The company identifies those priority issues viewed by both Nissan and stakeholders as important, sets necessary policies and targets for tackling them effectively and works them into its environmental strategy.

# ZERO-EMISSION VEHICLE PENETRATION

Electric vehicles (EVs) demonstrate that what is good for drivers and the planet is also good business. Nissan, including in its Alliance with Renault, is engaged in a comprehensive approach that involves boosting the production and sales of EVs and other activities coordinated through a variety of partnerships for popularization of EVs.

#### Zero-Emission Leadership for the Alliance

Nissan's commitment to sustainable mobility addresses concerns over climate change and supports sustainable profits for Nissan while satisfying customers' demands for more environmentally friendly vehicles. Greater use of renewable energy such as solar, wind and hydropower in the future will continue to improve EVs' environmental contribution as electricity generation becomes cleaner. Increased use of batteries as energy storage devices will also boost the market for EV batteries after their initial use for transportation motive power.

In 2010, Nissan began sales of its mass-produced 100% electric vehicle, the Nissan LEAF. In 2014 Nissan expanded its leadership in zero-emission mobility into the LCV segment with the launch of the e-NV200, the company's second all-electric vehicle, in the European and Japanese markets. The e-NV200 is Nissan's first commercial EV; its use as a mobile power source has potential for application in a range of business contexts. Together with Renault, which already offers four EV models, Nissan will maintain its dominant position in the EV market.

# Nissan LEAF Sales Reach 170,000

The Nissan LEAF is powered by a lithium-ion battery pack and an electric motor, and emits no  $CO_2$  or other exhaust emissions during operation. The Nissan LEAF offers excellent, fun-to-drive performance, with smooth, strong acceleration and quiet delivery across a speed range comparable to that of other models, as well as great handling stability realized by well-balanced weight distribution. All of this has earned the Nissan LEAF high marks from drivers since its debut in 2010.

The Nissan LEAF has been introduced in more than 40 markets with sales steadily increasing. In March 2015, total sales worldwide reached 170,000 vehicles, making the Nissan LEAF the best-selling EV in the world. While the vehicles' low environmental impact is attractive, consumer awareness of other characteristics of EVs, such as the low charging and operation costs and their superior acceleration and steering performance, is likely to have been a factor in these strong sales.

The Nissan LEAF has also received praise for its ease of use. Advanced IT systems allow the driver to control some functions remotely, via a smartphone or other device, and they can help the driver find nearby charging stations and identify the most energy-efficient routes.

Nissan has worked with local governments, corporations and other entities to deploy charging infrastructure and encourage the adoption of EVs. The company aims to leverage the valuable experience gained by having Nissan LEAFs in use around the world to stimulate further development and popularization.

The company's calculations show that the Nissan LEAF and other EVs produce considerably less CO<sub>2</sub> emissions over their entire lifecycle, from manufacturing to end-of-life disposal, compared to gasoline-powered vehicles of the same class.

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 Click here for more information on the Nissan LEAF lifecycle assessment.

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EV batteries can do more than just provide power for driving. As energy storage devices, they can play a key role in supporting the rollout of renewable energy with intermittent output, such as solar and wind power. By contributing to the shift to renewable energy, EVs play an essential role beyond transportation to achieve a low-carbon society.



The Nissan LEAF.

Nissan LEAF Launched in Jeju Island, Korea

Jeju Island in Korea has set the goal of becoming a "Carbon-Free Island" by 2030. In the future, it plans to supply all its electricity through wind and solar power. By expanding installation of chargers and offering subsidies to EV purchasers, it is also promoting the adoption of EVs with the aim of ensuring all vehicles on the island are electric by 2030. Nissan decided to launch the Nissan LEAF locally in support of these activities by the Jeju Island government. In December 2014, the company held a delivery ceremony for 15 owners selected by public lottery, and it has also donated quick chargers to the island. In March 2015, it exhibited the Nissan LEAF at the second International Electric Vehicle Expo held on Jeju Island.

# The e-NV200, a Practical, Sustainable City Delivery Vehicle

Based on the Nissan NV200, a multi-purpose commercial van, the e-NV200 combines the interior roominess and versatility of the NV200 with the acceleration performance and refinement of an EV. With its convenient onboard power outlets, the e-NV200 can supply electrical power while on the go, giving it added utility in the field as a mobile power source.

Compared to commercial vehicles using internal combustion engines, the e-NV200 reduces operating costs and contributes to an enhanced environmental image thanks to the vehicle's zero exhaust emissions and reduced noise pollution. Additionally, the vehicle offers smooth, strong acceleration performance while being extremely quiet.

The inclusion of a hydraulic brake system makes the vehicle's regenerative braking more effective, enabling a driving range of 185 km to 190 km on a full charge (in JC08 mode).

The e-NV200 is produced at Nissan's Barcelona Plant in Spain, allowing Japanese and European urban goods delivery and taxi businesses to realize zero-emission operations. With five-seat and seven-seat wagon versions available, the vehicles can also be used for carrying passengers.

#### Power Storage Battery

Two 100V power outlets that can draw a total of a maximum of 1,500 W of power from the battery are installed in the front-seat side and the cargo area (of the Japan model). They provide a convenient and safe electrical power source that comes in handy for offsite jobs or events, or in the case of an emergency.

The driver can also manually set the remaining battery level. By halting the power supply automatically at a predetermined level, the driver ensures that the vehicle has enough energy left in the main battery pack for the ride home.



As a mobile power source, the e-NV200 has potential for application in a range of business contexts.



The e-NV200 gives Japanese and European urban goods delivery and taxi businesses the opportunity for zero-emission operations.

# **Commercial Viability of Fuel-Cell Electric Vehicles**

Fuel-cell electric vehicles (FCEVs) are another type of zeroemission vehicle producing no CO<sub>2</sub> or other harmful emissions. Powered by electricity generated from hydrogen and oxygen, FCEVs emit only water during driving. Nissan believes that in building a sustainable mobility society, both FCEVs and EVs are important from an energy diversity perspective. Nissan's FCEVs make use of proprietary fuel-cell technology, high-power electric systems and control systems refined in its EV development, as well as high-pressure gas storage technologies from its compressed natural gas vehicles (CNGVs).

In 2011, the company announced plans to work with 12 other companies to develop hydrogen supply infrastructure in Japan in preparation for the launch of FCEVs.

In the same year Nissan also unveiled the fuel-cell stack for its FCEVs, featuring dramatically improved power density<sup>\*\*</sup> and reduced use of platinum and variation of parts<sup>\*\*</sup> to achieve major size and cost reductions.<sup>\*\*</sup>

- Power density is 2.5 kW per liter, or 2.5 times more than for the Nissan-developed 2005 model (according to Nissan calculations).
- Platinum usage and number of parts were both reduced to 1/4 of the 2005 levels (according to Nissan calculations).
- Compared to the 2005 model, fuel-stack size is less than 1/2 and cost is 1/6 (according to Nissan calculations).

In 2013, Daimler AG, Ford Motor Company and Nissan, under the Alliance with Renault, signed a unique three-way agreement for the joint development of a common fuel-cell system. In February 2015, Nissan announced an agreement to work together with other Japanese automotive manufacturers to support hydrogen station infrastructure development.

# Pursuing a Zero-Emission Society

The widespread use of zero-emission vehicles, which produce no CO<sub>2</sub> emissions during operation, is an effective way of achieving sustainable mobility. The auto industry must go beyond producing and selling zero-emission vehicles to help put the necessary infrastructure in place to ensure that the vehicles are economical to use. No company can achieve this on its own. The Renault-Nissan Alliance is promoting the development and production of zero-emission vehicles and the construction of infrastructure, forging more than 100 zero-emission partnerships with national and local governments, electric power companies and other organizations.

Nissan is also taking part in a comprehensive range of initiatives focusing on zero-emission mobility, including the production of lithium-ion batteries, secondary use and recycling of batteries, sale of quick-charging equipment, construction of vehicle-charging infrastructure and standardization of charging methods with other manufacturers. Increased uptake of zeroemission vehicles will bring changes to people's lifestyles, laying the groundwork for a sustainable mobility society. Nissan provides more than just EVs themselves; it embraces the new values that they represent as well.

#### Building a Zero-Emission Society with EVs



An organization established with the aim of increasing quick charger installations, indispensable for the further diffusion of electric vehicles and standardization of charging equipment. CHAdeMO is made up of automakers, electric utilities, charger manufacturers, charging service providers and other supporting groups.

**Testing Begins of e-NT400 Truck** 

From April 2014, Nissan conducted testing of its 100% electric truck, the e-NT400 Test Truck, together with the government of Toyama City. For approximately two months, Nissan loaned the e-NT400 to Toyama, which used it for the Toyama Municipal Environmental Center's recyclable collection to gauge its practicality. Nissan is using the data gathered from this real-life experiment to fine-tune future development of the vehicle's driving performance, battery charging and other aspects. In September 2014, Nissan conducted more testing with Sagawa Express Co., Ltd., receiving strong positive feedback from drivers regarding the lowered noise and vibrations and the acceleration performance that represent the strengths of zero-emission vehicles.



Launch of e30 in China, Venucia's First 100% EV

In September 2014, Dongfeng Nissan Passenger Vehicle Company, a division of Nissan's joint venture with Dongfeng Motor Co., Ltd., launched the e30 as local brand Venucia's first 100% electric vehicle. The e30 will bring Chinese consumers a reliable and enjoyable EV experience at affordable running costs.



# Providing Infrastructure to Support Zero-Emission Vehicles

Nissan is encouraging local governments, public and commercial facilities and others in Japan to install quick chargers. It is also enhancing charging infrastructure by continuing to increase the number of Japanese Nissan dealerships with quick chargers, which stood at 1,640 as of March 2015.

Quick chargers, which can charge batteries from zero up to 80% capacity in around 30 minutes, are a key part of the infrastructure needed for the widespread adoption of EVs. Nissan launched its quick chargers in 2011. In the following year, the company improved them to make the chargers quieter and the connector easier to use, as well as enabling on-the-spot payment.

In May 2014, Nissan jointly established a new company, Nippon Charge Service (NCS), with other Japanese automotive manufacturers to promote installation of chargers for electricpowered vehicles (including EVs and plug-in hybrid vehicles). Under NCS management, the companies aim to provide a convenient charging network service letting drivers charge their vehicles anywhere with a single card.

Nissan has also started working with companies that support the spread of EVs by installing EV chargers in their workplaces to make it easier for employees to commute using the Nissan LEAF.

In the United States, Nissan launched its "No Charge to Charge" program, which provides free access to selected charging stations for two years with the purchase or lease of a new Nissan LEAF. As of March 2015, the program is running in 15 cities where Nissan LEAF sales are high, including San Francisco, Los Angeles, Seattle and Portland, and the company plans to expand to more cities in the future.

In Europe, too, Nissan is focusing efforts on infrastructure by working with companies in the energy industry and others to install more than 1,500 quick chargers compliant with the CHAdeMO standard as of February 2015.

# Nissan LEAF: Contributing to Realization of Smart Grids

The Nissan LEAF can provide electricity to households through the Power Control System. The "LEAF to Home" power supply system lets a Nissan LEAF share the electricity stored in its high-capacity lithium-ion batteries with an ordinary home once the car is connected to the home's electricity distribution panel via its quick charging port. In this way EV batteries can provide additional value. The connector conforms to CHAdeMO, a fastcharging protocol in use in global markets where Nissan EVs are sold, and ensures a high level of versatility, stability and reliability.

Nissan is also participating in a "vehicle-to-grid" project at Los Angeles Air Force Base, in collaboration with the U.S. Department of Defense and the California Energy Commission. The project is deploying 13 Nissan LEAFs to supply power to base facilities. By feeding EV battery power back into the grid, it is possible to earn revenue while cutting the total cost of vehicle ownership. There are plans for the Nissan LEAF to be a part of similar projects at other bases. Nissan is building on this experience to explore the potential for making its vehicles part of an even larger-scale electric power management system.

### **Overseas Production of Lithium-Ion Batteries**

In Japan, Nissan and NEC Corporation's joint-venture company Automotive Energy Supply Corporation (AESC) produces lithiumion batteries for the Nissan LEAF at its Zama facility. The facility assembles modules made up of four cells, which are put together into battery packs made up of 48 modules at Nissan's Oppama Plant and then fitted into vehicles.

Nissan also manufactures the Nissan LEAF and EV batteries overseas. In the United States, the company has produced lithium-ion batteries at its Battery Plant and EVs at its Vehicle Assembly Plant in Smyrna, and in Europe, at its Sunderland Plant in the United Kingdom.

# The Nissan New Mobility Concept

The Nissan New Mobility Concept is an ultracompact 100% electric vehicle that was developed in response to rising numbers of senior citizens and single-member households, along with increasing use of automobiles for short-distance trips by up to two people. Even smaller than a "kei" minicar, it gives the driver excellent visibility and a good feel for the dimensions of the vehicle, making it an ideal choice for residential neighborhoods and other areas with narrow streets and poor visibility.

Since fiscal 2011, with cooperation from Japan's Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Nissan has held driving trials together with corporations and local governments to conduct tests and surveys. Following MLIT's January 2013 announcement of an authorization system for use of ultracompact vehicles on public roads, Nissan is currently testing vehicles in 22 areas. Expanding beyond tourism, their main area of application to date, the vehicles are now being used for nursing visits by a care facility for the elderly in Atsugi, Kanagawa Prefecture, and for medical and nursing visits by a service in Takamatsu, Kagawa Prefecture, among others. In October 2013, Nissan launched "Choimobi Yokohama," a one-way car-sharing service using the Nissan New Mobility Concept in Yokohama, Kanagawa Prefecture. The service now has more than 10,000 members able to experience the comfort of EVs. November 2014 saw the start of the second phase of testing, in which Nissan aims to make the service more sustainable through deeper cooperation with local businesses, shopping centers and public transportation in and around Yokohama.

Nissan carries out activities like these with the objective of finding new uses for EVs, as well as to improve traffic flows and to consider alternative visions for the communities of tomorrow.



The "Choimobi Yokohama" service using the Nissan New Mobility Concept.

#### Joint Venture to Promote Second-Life Use for Batteries

The lithium-ion batteries used in Nissan's EVs retain capacity well beyond the useful life of the vehicles themselves. "4R" business models—which reuse, resell, refabricate and recycle lithium-ion batteries—allow their effective use for energy storage solutions in a range of applications, thus creating a much more efficient energy cycle of battery use.

As the EV market expands, Nissan sees a need to utilize reusable lithium-ion batteries more effectively. In 2010, it launched 4R Energy Corporation, a joint venture with Sumitomo Corp. This company is developing and testing to use EV batteries as part of a stationary energy storage system. Japan is expected to see rising demand for such systems as part of energy storage and backup power systems that also feature solar panels on homes or business structures, and 4R Energy has already started sales of them for houses and apartment buildings.

4R Energy has developed the world's first → high-capacity energy storage system built with 16 used Nissan LEAF lithium-ion batteries. With funding from Japan's Ministry of the Environment, the system is being used in an experiment in Osaka's Konohana Ward. In November 2014, Nissan announced another experiment to test application of this system in building power management. The testing will integrate this large-capacity system with the Demand Response Service of Eneres Co., Ltd.—which charges different fees for electricity usage at different times and pays rewards to consumers who limit usage at peak times—with the aim of reducing utility costs while ensuring a stable power supply.

■ As of January 2014, according to 4R Energy Corporation.

# FUEL-EFFICIENT VEHICLE EXPANSION

Demand for motor vehicles is expected to continue to rise. Mature markets are recovering from the global recession. Emerging markets continue to expand. Nissan is pursuing the greatest possible improvements to the fuel efficiency of internal combustion engines and introducing more fuelefficient vehicles to the market.

#### Improved Corporate Average Fuel Efficiency

Nissan strives to develop technologies to maximize the overall energy efficiency of internal combustion engines and improve transmission performance. It is also working to boost the efficiency of hybrid systems that gather and reuse kinetic energy captured from braking. Nissan's core technologies in this area are lithium-ion batteries, Intelligent Dual Clutch Control Hybrid and Xtronic transmission (Continuously Variable Transmission: CVT) systems. Considering space within the vehicle, usage, price and other factors, the company selects the optimum fuel-efficiency technologies for particular vehicles and launches them in the market. The aim is to



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reduce fuel consumption and CO<sub>2</sub> emissions without sacrificing fun and ease of driving. Nissan is steadily launching new products in its line of particularly low-emission, fuel-efficient PURE DRIVE vehicles.

By fiscal 2016, Nissan targets a 35% improvement in corporate average fuel efficiency from the fiscal 2005 level (as measured in average fuel efficiency in the Japanese, U.S., European and Chinese markets). The company's result in fiscal 2014 was 36.4% improvement from the fiscal 2005 level. As a result, the target was achieved ahead of the schedule.



#### Top-Level Efficiency Due to Improved Engines and CVT

Current internal combustion engine vehicles lose approximately 70% of their fuel's energy as waste heat. Nissan aims to minimize energy loss and increase fuel efficiency by improving combustion efficiency, as well as reducing intake and exhaust resistance and friction.

The company is improving the performance of its gasoline and diesel engines. In the new Infiniti Q50, launched in fiscal 2014 and known as the Skyline in Japan, a 2.0-liter directinjection turbo engine has replaced the 2.5-liter gasoline engine in the previous model, giving the vehicle class-leading engine performance and boosting fuel efficiency by around 20%. The Juke's 1.6-liter gasoline direct-injection turbo engine has also undergone major improvement, increasing fuel efficiency by about 10% through the addition of features like the world's first lowpressure cooled exhaust gas recirculation system and mirror bore coating inside cylinders. The Navara has boosted fuel efficiency by some 20% with the replacement of its former 2.5-liter diesel engine with a 2.3-liter direct-injection turbo engine, while the Atlas has added around 10% fuel efficiency by going from a 4.5-liter diesel engine to a 3.0-liter direct-injection turbo engine.

Nissan's Xtronic transmission (CVT) provides "stepless" gear shifting, enabling the optimal RPM level for the vehicle at any speed. This allows for a balance of smooth, powerful driving and fuel efficiency when accelerating. Nissan employs Xtronic transmission in a wide range of vehicles, from "kei" minicars to mid-size cars in the 3.5-liter class. The new-generation Xtronic transmission (for use in cars with 2.0- to 3.5-liter engines) has been installed in products worldwide since 2012. This system's maximum ratio coverage of 7.0 and friction reduction of around 40% improve fuel efficiency by up to 10% (in-house measurement using U.S. Environmental Protection Agency combined mode). In fiscal 2014, Nissan offered the Xtronic in the Qashqai diesel vehicles sold in Europe, and continues to expand its use to further vehicles.

In fiscal 2014, these technologies helped to give the Murano class-leading fuel efficiency at its launch in the U.S. market.

Nissan's goal is to ship 20 million Xtronic-equipped vehicles, with their fuel efficiency benefits, by fiscal 2016 from their first launch in 1992, thereby helping to reduce global  $CO_2$  emissions. Nissan sold 2.95 million Xtronic vehicles in fiscal 2014, bringing the cumulative total to 19.10 million.

 As of time of sale: Murano (both 2WD and 4WD), 24 MPG fuel economy combined city/highway driving.

#### Number of Xtronic-Equipped Units Sold



#### A Broader Lineup of Hybrid Vehicles

Hybrid vehicles, which run on a combination of a gasoline-powered engine and an electric motor, offer improvement of fuel efficiency and considerable reductions in CO<sub>2</sub> emissions. Nissan has developed a unique hybrid system using a high-output lithium-ion battery together with a single motor for both drive and regeneration, as well as an Intelligent Dual Clutch Control system in which two clutches are linked in parallel, one to the motor and one directly to the engine and transmission. Vehicles using the system deliver both fuel efficiency and powerful responsiveness. Nissan introduced the system into rear-wheel-drive vehicles in 2010 and front-wheel-drive vehicles in 2013; as of the end of fiscal 2014, a total of seven models were using it. The company plans to expand the system to further vehicles in the future.

Nissan has also developed a simple, compact hybrid system, which includes an auxiliary motor with enhanced energy regeneration capacity and power output, as well as a sub-battery to boost storage capacity. This system was introduced in the Serena S Hybrid, launched in 2012.

#### Progress in Plug-in Hybrid Vehicles

Plug-in hybrid electric vehicles (PHEVs) feature both an internal combustion engine and one or more electric motors, similar to those of electric vehicles, on which they are capable of running. The motors are powered by a small lithium-ion battery pack. The batteries can be charged from an external source or by a generator driven by the engine. Nissan is developing PHEVs with a view to a future launch.

### **Toward Lighter Vehicles**

Vehicle weight reduction makes important contributions to improve fuel efficiency. Nissan is promoting vehicle weight reduction by optimizing vehicle body structure, developing better forming and joining techniques and substituting materials. For example, to streamline structure, it is reducing component thickness by optimizing layout of support elements. In the manufacturing process, the company is opting for internal component resins that have been foamed to reduce weight.

Nissan is seeking weight reduction in steel parts and promoting the use of Advanced High Tensile Strength Steel (AHSS). Nissan first used its 1.2 gigapascal (GPa) Ultra High Tensile Strength Steel with High Formability in fiscal 2013 in its Infiniti Q50 (known in Japan as the Skyline). In fiscal 2014, this steel appeared in the new Murano, launched in North America, greatly increasing the proportion of high tensile material in the vehicle. In combination with other measures, this achieved a total weight reduction of 66 kg in the vehicle body. This 1.2 GPa steel achieves both robust strength and high formability with its optimized compound of materials. The steel allows the creation of thinner, lighter components, and can be used in vehicle parts with highly complex shapes. Employing 1.2 GPa Ultra High Tensile Strength Steel with High Formability allows usage of less material per vehicle produced, all without requiring major modification to existing production lines. This results in a reduction in total cost per unit. Nissan will expand the use of AHSS up to 25% of the vehicle parts (measured by weight) installed in its new production models starting in 2017.

# Reducing Traffic Congestion with ITS

An automobile's fuel efficiency depends not just on the car's own capabilities but also on the driving environment and the way it is driven. Nissan is actively working to create infrastructure that will help to improve the traffic environment. Intelligent Transport Systems (ITS) are a particularly important part of its efforts, and the company is collaborating with others in a variety of industries to craft solutions to tough problems like road congestion that automakers cannot tackle on their own.

Under commission from Japan's New Energy and Industrial Technology Development Organization (NEDO), Nissan has been working with the Beijing Municipal Commission of Transport since 2010. It is conducting tests with a dynamic route guidance system (DRGS) using IT terminals and eco-driving support to alleviate traffic congestion in the city.

In one experiment, around 12,000 ordinary drivers in Beijing's Wangjing district used Portable Navigation Devices with DRGS and eco-driving support. Results from the experiment, which lasted around one year, showed that DRGS cut travel time by 5.1% and increased fuel economy by 7.6%. Enabling drivers to avoid congested roads led to the dispersion of traffic flow, enhancing overall speed within the area. Furthermore, by helping users cultivate better driving habits, eco-driving support increased fuel economy by 6.8%.

A simulation conducted at the same time calculated that if 10% of all traffic in Beijing used DRGS, travel speed throughout the city would increase by approximately 10% and both fuel consumption and CO<sub>2</sub> emissions would decrease by approximately 10%.

 Fuel consumption is calculated by Chinese standards (L/100km). The results calculated by Japanese standards (km/L) are 8.3% by DRGS and 7.4% by EMS.

The Beijing Municipal Commission of Transport presented Nissan with an award for its major contributions to easing congestion, saving energy and improving the environment in Beijing through this successful project. Nissan will actively promote the adoption of these kinds of systems as it strives to improve urban environments and air quality.



# **CORPORATE CARBON FOOTPRINT MINIMIZATION**

In a world often said to be carbon-constrained, reducing  $CO_2$  emissions is a task to be tackled by all companies. Nissan is improving energy efficiency and promoting renewable energy adoption to reduce  $CO_2$  emissions.

# A 20% Emission Reduction in Corporate Activities

By fiscal 2016, Nissan aims to reduce the CO<sub>2</sub> emissions associated with its corporate activities by 20% globally from 2005 levels, as measured by the index of "CO<sub>2</sub> emissions per vehicle" (total emissions generated from Nissan global corporate activities divided by the total Nissan vehicle sales volume). In fiscal 2011, Nissan strengthened its management and broadened the scope of measurable objectives to include logistics, offices and dealerships in addition to production sites. At the same time, the company expanded its emission-related initiatives, introducing high-efficiency equipment, energy-saving measures and the use of renewable energy. The result in fiscal 2014 was a 22.6% reduction from the fiscal 2005 t-CO<sub>2</sub>/vehicle level.

To reach its CO<sub>2</sub> emission goals, Nissan has set a target of raising the usage rate of renewable energy in its global business activities to 9% by fiscal 2016. Nissan is taking three approaches to increasing the adoption of renewable energy, considering the conditions where its production sites are located. These are power generation in company facilities; purchase of power from other companies; and leases of land, facilities and other Nissan assets to power producers.

Nissan leased out approximately 350,000 square meters of unused land in Oita Prefecture for solar power generation in May 2013, and the roof of group company Nissan Kohki Co., Ltd.'s Samukawa Plant for the same purpose in January 2014.

#### Falling Global Emissions from Corporate Activities



#### **Energy Saving in Global Production**

Most of the CO<sub>2</sub> emissions in the manufacturing process come from the consumption of energy generated with fossil fuels. Nissan engages in a variety of energy-saving activities in the manufacturing process in pursuit of the lowest energy consumption and CO<sub>2</sub> emissions of any automobile manufacturer.

In production technology, the company is introducing highly efficient equipment, improving manufacturing techniques and adopting energy-saving lighting. Another key approach is Nissan's three-wet paint process. Approximately 30% of all CO<sub>2</sub> emissions from plants come from the painting process. Shortening or eliminating baking stages within this process brings about a reduction in emissions.

The three-wet paint process adopted by Nissan removes the need to bake in between the primer layers and the topcoat layers. Instead, the layers are applied successively before baking, achieving a reduction in CO<sub>2</sub> emissions of more than 30%, according to Nissan calculations. In 2013, the company introduced this process in Nissan Motor Kyushu Co., Ltd., the Smyrna Plant in the U.S., the second Aguascalientes Plant in Mexico (which started operations in
November 2013) and the Resende Plant in Brazil (which started operations in February 2014). At the Kyushu plants, the company was able to adopt the three-wet process with no shutdown of production lines and successfully shorten total production time.

Nissan plants use finely controlled lighting and air conditioning for low-energy-use, low-loss operations. The company is promoting CO<sub>2</sub> emission reduction activities and introducing cutting-edge energy conservation technology from Japan in its plants worldwide. Meanwhile, Nissan plants in all countries learn and share best practices with each other.

In addition, Nissan Energy Saving Collaboration (NESCO) diagnoses energy loss at the plants and proposes new energysaving countermeasures. These contributed to a reduction in CO<sub>2</sub> emissions of 50,000 tons in fiscal 2014, according to Nissan calculations. A NESCO team was established for Japan in 2003, and teams for Europe, Mexico and China in 2013.

Renewable energy in the form of 10 wind turbines supplies 6,500 kW, or around 5% of the power used by the Sunderland Plant in the United Kingdom. Solar panels also produce approximately 200 kW at Nissan's plant in Spain. The first Aguascalientes Plant in Mexico uses energy generated from biomass gas and wind power, achieving a renewable energy usage rate of 50% in 2014. In addition, at the Zama Operation Center in Japan Nissan is developing small-scale hydropower generators, capable of creating around 0.5 kW of power from a drop of 2.5 meters from drainage pipes, and testing their usage in production plants.

With these activities, Nissan has set a target of reducing  $CO_2$  emissions by 27% below the fiscal 2005 level by fiscal 2016 at all of its production sites, as measured by the index of "CO<sub>2</sub> emissions per vehicle" (total emissions generated from global Nissan vehicle manufacturing sites divided by the total Nissan vehicle production volume). In fiscal 2014, CO<sub>2</sub> emissions per global vehicle were approximately 0.56 tons, a reduction of 23.9% from the fiscal 2005 level.

# Three-Wet Paint Process (Combined Primer and Topcoat Application)



#### Oven process

Reduces CO<sub>2</sub> emissions by applying primer and topcoat (base coat and clear coat) layers in succession, combining two processes (1 and 2 in the upper diagram) into one (1 in the lower diagram).



\* Figures are for the Nissan Group worldwide, including consolidated companies.



\* Figures are for the Nissan Group worldwide, including consolidated companies.

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 Global energy consumption and CO<sub>2</sub> Emissions from manufacturing activities have received third-party certification. For details, please refer to the environmental data at the end of this report.

# More Efficient Logistics and Modal Shifts

In 2000, Nissan began sending chartered trucks for pickup and delivery of parts, an uncommon method among automobile manufacturers in Japan at the time. This approach-adopted widely across the company, including at its overseas manufacturing siteshas been increasing global operational efficiency. Nissan works together with suppliers to optimize the frequency of deliveries and transport routes and to improve packaging specifications for better loading ratios so fewer trucks are required. Through a 2014 expansion of this approach to include cooperative transport of production parts with other OEMs, in addition to complete vehicles and service parts, the company is targeting further efficiency in this area. Nissan engineers devise efficient packaging for the huge number of parts of different shapes and materials that go into automobiles. Through simultaneous-engineering logistics activities, Nissan works from the design stage to create parts and develop new vehicles with consideration for transportation efficiency, as well as to reduce the part shipments per vehicle. The aim is to decrease transport volumes.

In the area of container transport, Nissan has long made use of 40-foot "high cube" containers and runs software-based simulations to reduce wasted container space. As a result of these activities, the container filling rate for parts rose from 89.6% in fiscal 2010 to 94.2% in fiscal 2014.

The company constantly reviews transport methods and is currently undertaking a modal shift to rail and maritime transport. Some 70% of completed vehicles in Japan are now transported by sea. Part shipments from the Kanto area around Tokyo to Nissan Motor Kyushu Co., Ltd. are nearly all by rail and ship. The Japanese Ministry of Land, Infrastructure, Transport and Tourism (MLIT) has recognized Nissan as an outstanding enterprise for this modal shift to sea transport. At Nissan sites outside Japan, transport methods are selected to best match the local geographical conditions. Transport of completed vehicles is increasingly shifting from truck to rail and ship, depending on the destination. In China, the company is increasing the proportion of completed vehicles that are transported domestically by ship or rail.

Since 2010 Nissan has also been promoting the use of energy-efficient vessels for sea shipments of our vehicles. By 2014 the fleet had grown to include five eco-ships.\*\*

# Click here for more information on Nissan's eco-ships. website

While expanding its global logistics operations, Nissan is increasing efficiency and implementing a modal shift in transportation targeting a 6% reduction in CO<sub>2</sub> emissions by fiscal 2016 from the fiscal 2005 level, as measured by the index of "CO<sub>2</sub> emissions per vehicle."<sup>20</sup> In fiscal 2014, CO<sub>2</sub> emissions per global vehicle were approximately 0.39 tons, a decrease of 8.9% from the fiscal 2005 level.

Total emissions generated from transportation to Nissan manufacturing sites and sales outlets in Japan, North America, Europe and China divided by the total number of vehicles transported.

# **Our Efforts at Dealerships and Offices**

Nissan is promoting  $CO_2$  emission management at all business locations and dealerships in Japan, as well as at bases of operations in North America, Europe and China. It aims to reduce total emissions by 1% each year.

At business locations in Japan, Nissan is expanding ecological initiatives including digitization of pay slips. Nissan's sales outlets are also continually working to increase energy efficiency: many have adopted high-efficiency air conditioning, insulation films, ceiling fans and LED lighting. During renovation work, some outlets have installed lighting systems that make use of natural daylight and insulated roofs. In addition, Nissan sources clean energy for which CO<sub>2</sub> emissions and costs have been taken into account through Japan's Power Producers & Suppliers (PPS) system. In 2014, approximately 6,700 kW of energy was supplied to four Japanese business locations including the company's Global Headquarters. Nissan is also broadening supply to dealerships from Nissan and other PPS systems. These systems supply around 870 sales outlets in the Kanto, Chubu, Tohoku, Kansai and Kyushu areas with around 62,000 kW of energy, equivalent to an annual reduction of some 9,900 tons in CO<sub>2</sub> emissions.

The company's efforts go beyond CO<sub>2</sub> management. Nissan is pursuing other environmentally friendly policies, such as improving its video and telephone conference facilities and using Microsoft's Office Live Meeting web conferencing service to bring participants in multiple locations together when they need to share documents. This reduces the number of business trips needed worldwide, improves workplace efficiency and reduces costs.

Global Headquarters, Sagamihara Parts Center, Nissan Education Center and Customer Service Center (all in Kanagawa Prefecture).



Solar panels are on the roofs of some Kanagawa Nissan dealerships. Power from the panels is supplied to dealerships through the PPS system.

# NEW NATURAL RESOURCE USE MINIMIZATION

Nissan is making efforts to use resources more efficiently and to diversify its supplies with renewable resources and recycled materials. The company aims to address the risk of rising costs or depletion of mineral resources caused by growing demand for them and to reduce the environmental impact of their extraction.

#### Increasing Usage of Recycled Material to 25%

Economic development in emerging countries is rapidly increasing demand for mineral and fossil resources. Some predictions forecast that all currently known mineral resources will have been extracted by 2050 if present trends continue. Some mining sites currently in operation and new exploration sites are located in areas where local ecosystems need to be preserved, and there is concern about the environmental effects of topsoil excavation, deforestation and wastewater. To address these issues, Nissan is taking measures to minimize the volume of newly extracted natural resources. As well as using resources more efficiently, it is increasing the proportion of renewable resources and recycled materials and increasing diversification. The company's recycling efforts are based on the policy that once a natural resource is extracted it should continue to be used, while maintaining quality, to minimize environmental impact. Nissan has set a target of increasing the recycled material usage ratio per new vehicle for which production begins in fiscal 2016 by 25% in Japan, the United States and Europe. In the long term, through promotion of activities, the company aims to maintain the total volume of new natural resource usage at the 2010 level.

#### Nissan's Closed-Loop Recycling System

Closed-loop recycling is a way of recycling waste generated during vehicle production and scrap from end-of-life parts into recycled material that has equal quality as new resources, using it as material in the same type of products. With this method, the same material can be used repeatedly, thus greatly reducing CO<sub>2</sub> emissions and the environmental impact over the product lifecycle. The company is focusing its efforts on closed-loop recycling of steel, aluminum and plastic. These materials, which account for a large proportion of the content of a vehicle, have a major environmental impact when they are extracted and require a large amount of energy for production and disposal.

Nissan is working to reduce the steel and aluminum scrap left over in the manufacturing process. The company is also working with business partners to collect and reuse this scrap as material for new vehicles. End-of-life aluminum wheel rims are also collected for recycling. In fiscal 2014, Nissan collected about 2,680 tons of wheel rims.

In Japan, Nissan is collecting plastic in the form of finished bumper scrap generated at its plants and turning it into recycled

plastics in a finished bumper reprocessing line set up in the Oppama Plant. Recycled plastics have already been given new life as bumpers in the Nissan LEAF and many other new vehicles. Exchanged bumpers collected from dealerships are being recycled as materials for under covers and other components. In fiscal 2014, Nissan collected about 181,000 pieces of bumpers.

#### Closed-Loop Recycling



# Recovered Bumpers (parts) 300,000 230,000 200,000 200,000 0 2010 0 2010 2011 2012 2013 2014 (FY)

#### Recyclability Rate and Recovery Rate

Nissan considers the three Rs—reduce, reuse and recycle—starting with the design stage for new vehicles. It takes into account the whole lifecycle when designing and developing vehicles, ensuring ease of dismantling and recycling after they are scrapped. Since fiscal 2005, all new models launched in the Japanese and European markets have achieved a 95% or greater recyclability rate.

Nissan also carries out experimental studies to optimize processing and improve the recovery rate for end-of-life vehicles (ELVs). The studies first aimed to establish methods for processing waste oil, waste liquids, lead and other substances that impact the environment, and now focus on reuse of valuable materials. Feedback from the studies has led to improvements in dismantling techniques and has aided the company's product design division in choosing suitable materials and designing vehicles that are easier to dismantle. Nissan calculates that the recovery rate for its ELVs in Japan has consistently been 95% or greater since fiscal 2006 and the recovery rate for fiscal 2014 was 99.6%.

Calculated based on 1998 Japan Automobile Manufacturers Association definition and calculation guidelines (in Japan) and ISO 22628 (in Europe).

# Reducing Scarce Resource Usage

Hybrid vehicles and electric vehicles (EVs) emit less CO<sub>2</sub> over the lifecycle of the product than gasoline-powered vehicles, but scarce resources called rare earths are a necessary component of their motors. Uneven distribution of rare earth elements and the forces of demand and supply give rise to concern about price changes, making it important to reduce their usage.

In 2012, Nissan developed a new electric motor that requires 40% less dysprosium (Dy) compared to conventional EV motors.

This motor is currently used in the Nissan LEAF. Nissan is successively installing the reduced-Dy motor in its hybrid vehicles, with the ultimate goal of achieving zero usage of Dy in other components as well.

Nissan aims to reduce and optimize the usage of other rare earth elements. The plan is to reduce annual use of rare earth elements by 30% by fiscal 2016 compared to the projected usage if no particular countermeasures had been implemented from fiscal 2011 onward.

#### **Thorough Measures for Waste Materials**

Nissan actively promotes measures based on the three Rs in its production processes whenever possible, striving to minimize the waste generated and maximize recycling efficiency by thoroughly sorting waste. Its efforts have paid off. In Japan, since fiscal 2010 the company has achieved a 100% recovery rate at all of its production sites, including five manufacturing plants, two operations centers and five affiliates. In Mexico, the first Aguascalientes Plant achieved this in 2011. Nissan is working to bring this rate to an industry-leading level in each region of the globe.

Nissan has been making great efforts to reduce the number of wooden pallets and cardboard boxes used in import and export parts shipping. The company began replacing them with units made from steel more than 30 years ago, rolling out plastic substitutes more than 20 years ago as well. These are foldable and can be returned for reuse. Nissan has also been working with its Alliance partner Renault to expand the use of globally standardized, returnable containers. Through design activities carried out concurrently with logistics operations, Nissan has recently been considering ways to optimize the shape of parts from the development stage, thus helping to reduce the packaging materials required.

Through these efforts, Nissan plans to reduce the amount of waste from its production factories by 2% annually in Japan and by 1% annually worldwide compared to waste levels expected if no special steps had been taken from fiscal 2011 onward.

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Image 119
Image 119
Image 119

# Sales of Nissan Green Parts

Parts with the potential for recycling include those reclaimed from ELVs as well as those replaced during repairs. In Japan, Nissan collects and thoroughly checks the quality of these secondhand parts. Those that receive a passing grade are sold through its sales outlets as Nissan Green Parts. Nissan sells these parts in two categories: reusable parts, which are cleaned and tested for quality before sale, and rebuilt parts, which are disassembled and have components replaced as needed.

Click here for more information on Nissan Green Parts.

# Water-Use Management

As the global population grows, water use increases and water scarcity becomes a more serious problem. Climate change also has the potential to bring about reductions in glacial water resources and changes in precipitation patterns, further driving the need for water usage reduction.

Plants producing Nissan vehicles and parts are located all over the world, and they all use water as part of the production process. The company is making efforts to manage and reduce water usage at all of its production plants. It plans to achieve a 15% reduction from fiscal 2010 levels in water usage per vehicle produced by fiscal 2016. To achieve this, Nissan has built a reservoir for rainwater at the Chennai Plant in India and has installed wastewater recycling equipment at the Chennai Plant, the Huadu Plant in China and the Oppama Plant in Japan. The company is implementing best practices globally to reduce water usage.

Nissan is also working to reduce water usage at its Global Headquarters by processing rainwater and wastewater from kitchens and other sources to use for flushing toilets and watering some plants.

For more details, see the CSR data section in this report.
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# **Cleaner Effluent Through Wastewater Treatment**

Nissan thoroughly processes wastewater at its various plants. Wastewater from the company's two plants in Aguascalientes, Mexico, is used to maintain greenery on the sites, with no offsite discharge.

Nissan is also strengthening water pollution measures in its Japanese plants. In preparation for unexpected occurrences, such as the discharge of oil, it has attached water quality sensors to the discharge ports of wastewater treatment facilities. Discharge of water outside the grounds is automatically suspended if water quality problems are detected.

# Wastewater Release



# ENVIRONMENTAL MANAGEMENT PROMOTION

Nissan is introducing environmental management systems at all its operations sites worldwide. It is also working with consolidated affiliates, sales companies and suppliers to reduce environmental impact during all stages of the supply chain.

#### Improving Environmental Management

As of January 2011, the Nissan Global Headquarters and all other main Nissan facilities in Japan, including those for R&D, production and logistics, along with all product development processes, had acquired integrated ISO 14001 certification for environmental management systems. The company has appointed an environmental manager to oversee Nissan's environmental activities. Through steady application of the PDCA (plan, do, check, act) cycle, the company is improving its environmental performance. The coordinated goals set by the environmental manager for the entire company are cascaded down to the employees working in all facilities through local offices.

Nissan's ISO secretariat oversees companywide efforts, and the local offices in Japan are responsible for activities at each facility and division and for coordinating the proposals from employees. The secretariat and local offices engage in discussions at least once a month to confirm the progress being made toward established goals, share best practices, improve management systems, draw up plans for the next fiscal year and communicate requests from local facilities and divisions. The items discussed are reported to the environmental manager twice a year (once during the management review conference) so that the company can decide on improvements that are needed.

To confirm that this management is functioning properly, Nissan annually undergoes audits by third-party organizations and carries out its own internal audits of its environmental systems and environmental performance to strengthen the company's measures based on the PDCA cycle.

The company has also obtained ISO 14001 certification at its main production plants outside Japan. Nissan's policy is to extend

environmental management systems with these same criteria to regions of new expansion.

# **Product Development Policy**

Nissan aims to become a "sincere eco-innovator," taking steps to help the natural environment by reducing its business impact in real-world terms and providing customers with innovative products that contribute to the development of a sustainable mobility society. In order to achieve this goal, Nissan has introduced "QCT-E," adding an environmental component to the traditional QCT indices of quality, cost and time. The company has also crafted a global environmental management policy, setting targets for environmental performance in all areas of its business.

Under Nissan Green Program 2016 (NGP2016), the company's environmental action plan, Nissan annually invests 70% of its research and advanced engineering budget in environmental technologies. The company is also promoting its Common Module Family concept, sharing platforms and module components with its Alliance partner Renault. Savings from reduced costs are invested in new solutions, including cutting-edge environmental technologies.

#### **Raising Employee Awareness**

Nissan's environmental activities are enabled by the knowledge, awareness and competency of its employees. Based on ISO 14001 activities, the company conducts employee education rooted in NGP2016 regarding reduction of CO<sub>2</sub> emissions, energy and water consumption and waste. In addition, education regarding environmental accident prevention, including the management of hazardous materials, is provided to all employees including those from affiliated companies working in Nissan production facilities. At production plants, ongoing improvements of employee competency to reduce environmental impact are promoted through not only education and training programs but also the quantitative evaluation of each employee. The content of these training programs is updated once a year.

In Japan, Nissan implements its own curriculum for the education provided to new employees during orientation and to mid-ranking and management personnel during the seminars in order to deepen their understanding of environmental issues surrounding the auto industry, as well as the substance of the NGP2016 program. The company also holds "town hall" style meetings that bring executives together with employees. Employees can stay up to date on Nissan's latest environmental initiatives through features in the intranet, internal newsletters. and in-house video broadcasts. All employees also receive an Environmental Policy Card with a pledge to pursue personal environmental activities, which they carry at all times.

Overseas, Nissan shares information and provides education to employees through the intranet, videos, events and various other communication approaches suited to each region.

Nissan publishes a monthly newsletter, printing 30,000 copies that are distributed to retired as well as current employees.

# Employee-Initiated Activities and Evaluation System

In fiscal 2008, Nissan added the "environment" factor to the range of *kaizen* activities carried out by quality control (QC) circles. This creates a mechanism that encourages employees to think proactively and propose ideas to improve environmental aspects of Nissan's business. Managers encourage employees' active participation by communicating how these QC circle activities are linked to achievement of the goals in Nissan Power 88,<sup>∞</sup> the company's mid-term business plan. The ideas proposed by employees go to managers and QC circle secretariats for assessment of their potential contribution to environmental improvement, among other factors, after which Nissan implements them.

The knowledge and skills of the frontline employees on CO<sub>2</sub> emissions reduction, energy management, water conservation, and waste and landfill reduction have been compiled in a best-practices manual and shared among global

Click here for more information on Nissan Power 88.

▶ website

facilities. A system to reduce cooling-tower water use was born from this activity. Nissan also holds contests in some facilities during officially designated months in Japan to keep employees motivated to participate in environmental activities. These include a Water Usage Reduction Idea Contest in environmental month in June, a Waste Reduction Idea Contest in 3R month in October and an Energy Efficiency Contest in energy conservation month in February.

Nissan uses various methods to reward employees for their contributions toward environmental improvement activities. One is inclusion of these activities in the "commit and target" annual performance goals used at some Japanese and overseas locations. This system assesses employees' achievement of goals, reflecting this in performance-related elements of bonuses. Employees are also recognized for environmental improvement through Nissan Prizes presented by the CEO or other executives, awards given by plant heads and "THANKS CARD" from managers for excellent work or achievements.

# Working with Consolidated Production Companies

Nissan encourages its consolidated production companies in a variety of markets to acquire ISO 14001 certification and to undertake other environmental initiatives based on their respective policies. Meetings with major consolidated production companies in Japan are held to exchange views on cooperation toward the goals outlined in NGP2016. The meetings lead to a deeper shared understanding of the details of NGP2016 and the initiatives undertaken by each company.

# Working with Sales Companies

Nissan's sales companies in Japan have introduced an original approach to environmental management based on ISO 14001 certification called the Nissan Green Shop certification system. This system is managed through internal audits conducted by the sales companies every six months, in addition to regular annual reviews and certification renewal audits carried out every three years by Nissan Motor Co., Ltd. As of the end of March 2015, the system has certified 2,700 dealership outlets of 158 sales companies, including parts dealers.

Nissan conducts an annual survey of its sales companies in Japan, collecting comments and requests regarding Nissan's environment-friendly vehicles and other environment-related initiatives. The findings are shared with the presidents of sales companies and incorporated into the PDCA cycle involving Nissan and all sales companies, which is used to guide actions toward improved performance.

# Working with Suppliers

The purchasing divisions of Nissan and Renault ensure full understanding of CSR and compliance with regulations in the supply chain through *The Renault-Nissan Purchasing Way* and the *Renault-Nissan CSR Guidelines for Suppliers.* In the environmental aspect, they carry out supply chain management in line with the Nissan Green Purchasing Guidelines.

Nissan works with its suppliers to understand and reduce the environmental impact of upstream processes in the supply chain.

▶ page\_75
Click here for more information on supply-chain management.

The company conducts surveys to gather information each year from suppliers on their performance and environmental targets like CO<sub>2</sub> emission levels and water use. In fiscal 2014, it gained an understanding of the environmental impact of its suppliers by working together with CDP, an international nonprofit organization that manages a global system for disclosure of companies' environmental impact and strategies. Further, the company institutes mandatory questionnaires concerning handling of environment-impacting substances and environmental management when suppliers are selected for each project. There are also briefing sessions on NGP2016 for suppliers where Nissan fully shares its targets, action plans and understanding of what constitutes environmental impact.

#### **Disclosure of Environment-Related Information**

Companies today are being called upon to disclose a wide range of information about how they are managing risks related to such environmental issues as climate change and natural resources. Nissan makes detailed disclosure of its environmental performance on its website for stakeholders including investors, rating agencies and other specialists in accordance with Global Reporting Initiative (GRI) guidelines. Among the data disclosed are CO<sub>2</sub> emission and waste discharge levels, as well as the amount of energy, water, materials and other resources consumed. Nissan's communication efforts also include briefings to describe its environmental initiatives.

The CDP Climate Change Program, a global survey on climate change initiatives by major corporations, praised Nissan for the high

These international guidelines, published by the NGO Global Reporting Initiative, promote actions by companies to define overall policy direction toward environmental, social and economic development and to disclose information on their overall plans and specific initiatives.

transparency of its environmental information disclosure, selecting the company for the Climate Disclosure Leadership Index with a maximum score of 100. The company was also recognized for its steady efforts to reduce CO<sub>2</sub> emissions in the production process, earning a place in the Climate Performance Leadership Index with the highest ranking of A.

# **Nissan's Tough Voluntary Standards**

Stricter controls on environment-impacting substances are being implemented in countries around the world. Examples include the European ELV Directive, the European Union's Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) Regulation, which went into force in June 2007, and Japan's Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, Etc. To help minimize the potential release of formaldehyde, toluene and other volatile organic compounds (VOCs) in vehicle cabins, the Japan Automobile Manufacturers Association has launched a voluntary program that calls for all new models launched in Japan from April 2007 to meet standards set by the Japanese Ministry of Health, Labor and Welfare for concentration levels of 13 compounds in vehicle interiors.

Nissan is strengthening its management of environmentimpacting substances, adhering to a well-planned schedule for their reduction and advancing the use of alternative substances. In 2005, the company drew up policies regarding the use of substances scientifically recognized as being hazardous or carrying high hazard risks, as well as those identified by NGOs as dangerous. In 2007, these policies became unified global standards for Nissan, restricting environment-impacting substances to a stricter degree than the domestic laws of the countries where it operates.

Based on this policy, the company has developed the Nissan Engineering Standard (NES) for the "Restricted Use of Substances." The standards identify the chemical substances whose use is either prohibited or controlled. Nissan applies them in selecting all materials, components and parts used in its vehicles from initial development onward. For example, four heavy metal compounds (mercury, lead, cadmium and hexavalent chromium) and the polybrominated diphenyl ether (PBDE) flame retardant have been either prohibited or restricted in all new vehicles (excluding OEM vehicles) launched globally since July 2007. To control VOCs in car interiors, Nissan has adopted the voluntary targets of the Japan Automobile Manufacturers Association as its own standards for global operations and is reviewing and reducing their use in materials and adhesives for seats, door trim, floor carpet and other parts.

Every year, Nissan revises the "Restricted Use of Substances" NES to reflect changes in international laws and regulations and to add new substances covered by its voluntary standards. This NES incorporates banned and restricted substances as defined in the Global Automotive Declarable Substances List (GADSL), prepared by a global team made up of auto manufacturers, parts suppliers and materials manufacturers.

Together with its suppliers, Nissan builds and maintains communication and management systems internally and within its supply chain. For example, the company discloses information and is registered with and submits REACH-compliant reports to the relevant authorities about the vehicles and parts produced in or imported to Europe from Japan and other countries (including some from the United States). The company also complies with Classification, Labeling and Packaging of Substances and Mixtures (CLP) regulations.

#### Lifecycle Assessment to Reduce Environmental Impact

Nissan uses the lifecycle assessment (LCA) method to evaluate and comprehensively assess environmental impact in all stages of the vehicle lifecycle, from resource extraction to production, transport, customer use and vehicle disposal. LCAs are also carried out for new technologies as they are introduced with the goal of developing more environmentally friendly vehicles.

The company's calculations show that over its lifecycle the Nissan LEAF produces CO<sub>2</sub> emissions up to 40% lower than gasoline-powered vehicles of the same class. In 2010, this assessment was certified by a third-party LCA organization, the Japan Environmental Management Association for Industry.

In December 2013, TÜV Rheinland in Germany also certified Nissan's LCA methodology. This certification is based on ISO 14040/14044 standards and guarantees the soundness of the environmental impact calculations in Nissan's product LCAs. Nissan bases LCAs for new vehicles on its certified methodology. The company continues to lower its vehicles' environmental impact by adopting new technology and more efficient processes in manufacturing, aiming for further CO<sub>2</sub> emission reductions over the lifecycle of its new vehicles.

 For details on the LCA for the Nissan LEAF, etc., see the CSR data section in this report.

#### TÜV Rheinland certificate



extraction of material resources to vehicle production and operation. Based on the results, the company has identified its three priority areas as an automobile manufacturer: energy sourcing, mineral material sourcing and water usage. Nissan has followed up by positioning the business risks and opportunities, reevaluating and further developing its traditional environmental initiatives. In 2010, Nissan published "Ecosystem Services and the Automotive Sector," a report collating the outcome of this work. Company calculations in June 2013 showed that more than 20 times as much water was used upstream in the supply chain than by Nissan itself.

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Protecting the Air, Water, Soil and Biodiversity

The United Nations Millennium Ecosystem Assessment report issued in 2005 concluded that the ecosystem services evaluated had degraded over the past 50 years. Many scientists believe that humans have changed the Earth's ecosystems more rapidly and extensively than in any comparable period in history. Humankind depends on a number of ecosystem services, including provision of food and fresh water, climate regulation and protection from natural disasters. The automotive industry must recognize both its impact on ecosystems and its dependence on these services. Companies today face the pressing need to balance environmental preservation and economic progress as they pursue their business activities.

Using the methods identified in the Corporate Ecosystem Services Review,<sup>™</sup> Nissan has evaluated its value chain from the

Developed by the World Resources Institute in cooperation with the World Business Council for Sustainable Development and Meridian Institute, based on the U.N. Millennium Ecosystem Assessment.  Website
 Click here for more information on "Ecosystem Services and the Automotive Sector." Forest Conservation Through the Nissan Zero Emission Fund

In 2012, Nissan launched the Nissan Zero Emission Fund, based on CO<sub>2</sub> emissions offset through Nissan LEAF usage. The fund calculates offset CO<sub>2</sub> emissions for participating Nissan LEAF drivers through comparison with gasolinepowered vehicles of the same size. The offsets are then monetized through the J-Credit Scheme, overseen by the Ministry of Economy, Trade and Industry, the Ministry of the Environment and the Ministry of Agriculture, Forestry and Fisheries in Japan. This capital is used to conserve the forests that sustain Japan's clean and abundant water and to expand charging facilities and other infrastructure that supports further adoption of EVs.

In November 2014, Nissan used part of this money to fund conservation activities carried out together with the forest preservation organization More Trees at LEAF Forest in the village of Kosuge, Yamanashi Prefecture.



Conducting thinning to let more light into the undergrowth (LEAF Forest in Kosuge, Yamanashi Prefecture).

#### Cleaner Exhaust Emissions

Nissan proactively sets strict environmental goals and targets, pursuing development of cleaner combustion technologies, catalysts for purifying emissions and other solutions. The ultimate goal is for automotive emissions to be as clean as the atmosphere. The company introduces vehicles that meet emission regulations in each country as quickly as possible. Nissan aims to reduce the environmental impact of society as a whole by offering vehicles with highly efficient, cutting-edge emission-reduction technologies at reasonable prices.\*1

Click here for more information on how Nissan is meeting

▶ page 130

emission regulations in different countries. For more details, see the CSR data section in this report.

Nissan's Sentra CA, released in the United States in January 2000,\*2 was the first gasoline-powered vehicle in the world to receive Partial Zero Emissions Vehicle (PZEV) certification<sup>™</sup> in compliance with the emission requirements of the California Air Resources Board.

The Bluebird Sylphy, released in Japan in August 2000, became the first vehicle to gain certification from the Ministry of Transport (now the Ministry of Land, Infrastructure, Transport and

This vehicle is no longer produced.

89 PZEV vehicles must meet requirements in the areas of Super Ultra-Low Emission Vehicle tailpipe emission level and zero-evaporative emissions, be equipped with an onboard diagnostic system and have an extended warranty of 150.000 miles or 15 years.

Tourism) as an Ultra-Low Emission Vehicle (U-LEV).<sup>™</sup> In addition, this model became Japan's first vehicle to receive Super Ultra-Low Emission Vehicle (SU-LEV) certification<sup>™</sup> in 2003.

- Multiple Solution Contraction Produce 50% less nitrogen oxide (NOx) and nonmethane hydrocarbon (NMHC) than the 2005 emission standards level.
- SU-LEV: Super Ultra-Low Emission Vehicles produce 75% less emissions than the 2005 emission standards level.

Later, the X-Trail 20GT was the first vehicle in the world to meet Japan's 2009 Emission Regulations, among the most stringent in the world; it was launched in 2008, the year before the regulations came into effect.\* The X-Trail 20GT carries a diesel filter that traps and eliminates particulate matter, NOx absorption and oxidation catalysts and an M9R clean diesel engine developed through the Renault-Nissan Alliance. The company has thus overcome the difficult challenges of making diesel vehicle exhaust cleaner, achieving both energy efficiency and reduced CO2 emissions. An X-Trail 20GT with a 6-speed automatic transmission (including manual mode) was introduced in 2010.

The 2009 emission standards stipulate reductions of NOx by 47% and particulate matter by 64% from the levels required by the 2005 emission standards (applicable to vehicles weighing more than 1,265 kg). The regulations went into effect for new models in October 2009 and have been applied to existing models and imported cars since September 2010.

Furthermore, Nissan is working to improve air guality through the use of Intelligent Transport Systems (ITS) that tackle traffic congestion and other urban environmental issues.\*\*

Click here for more information on Nissan's ITS initiatives. ▶ page 34

# **Plant Emission Management**

Nissan thoroughly implements systems and control standards at its production plants to reduce the amount of air pollutants emitted during operations. The company's own air pollution control targets are more stringent than those mandated by the countries in which it operates.

In Japan, Nissan has taken strict measures for emissions of NOx and SOx pollutants from its factories, reducing the amount of these emissions to one quarter of the levels emitted in the 1970s. Painting lines and other processes in vehicle production consume large amounts of heat. Nissan has lowered NOx and SOx emissions by introducing low-NOx burners in the ovens and boilers that provide heat for its painting lines and by switching from heavy oil and kerosene to fuels with low SOx emissions for these ovens and boilers.

A current challenge is the reduction of volatile organic compounds (VOCs), which readily evaporate and become gaseous in the atmosphere. These compounds account for approximately 90% of the chemicals released in Nissan's vehicle production processes. The company is working to increase the recovery of cleaning solvents and other chemicals and to reduce the amounts of these substances emitted from its plants ahead of the implementation of new regulations in each country where it operates.

Nissan is also introducing water-based paint lines that limit VOC emissions to less than 20 grams per square meter of painted surface. The company has adopted these lines in the Nissan Motor Kyushu Co., Ltd. Plant as well as at two plants in Aguascalientes in Mexico, the Resende Plant in Brazil, the Smyrna Plant in the United States and the Huadu Plant in China. Nissan has set a target for fiscal 2016 of a 15% reduction in VOC emissions by painted surface area from fiscal 2010 levels.

#### **Messages from Our Stakeholders**

# Aiming to Be an Advanced Environmental and Transportation City

Atsugi is a hub city for logistics and business in the Tokyo metropolitan area and is also home to two of Nissan's vehicle development centers. These sites apply some of the world's most advanced technologies to R&D activities, and in 2010 created the world's first mass-produced EV, the Nissan LEAF. Embodying Nissan's knowledge, experience and superb cutting-edge technology, the LEAF, developed in Atsugi, has won fans around the world. I personally feel a strong attachment to the car as well as a powerful sense of pride that it was created in Atsugi.

In November 2013, Atsugi and Nissan concluded the Green Mobility Project Agreement to boost community development through civil, corporate and administrative cooperation. Based on this agreement, citizens, Nissan and Atsugi representatives work together toward the construction of a new community, promote the development and adoption of next-generation vehicles and encourage environmentally friendly activities. They also implement various initiatives targeting the realization of an advanced environmental and transportation city, such as installing charging infrastructure and conducting practical experiments on ultracompact mobility, a concept that is currently receiving much attention as a new way of getting around local areas. I am also extremely grateful that Nissan is striving to improve the education of the children of Atsugi. For example, it holds Nissan Waku-Waku Eco School classes at all of the city's elementary schools, providing environmental education through study of the structure of an eco-car.

Nissan is a valuable asset to Atsugi and a source of pride to the city on the global stage. I look forward to next-generation vehicle R&D making further strides in Atsugi in the future. I would like to continue to expand activities involving citizens into a range of fields and collaborate to pursue advanced possibilities, such as proposals for new ways of living and business models.

Tsuneyoshi Kobayashi Mayor of Atsugi Kanagawa Prefecture



The era of mass automobile ownership has helped transform people's lives, offering them mobility, convenience and the pleasure of driving. Today, as society undergoes major structural shifts including urbanization and the aging of populations, cars can help solve some of the issues these changes present.

Nissan designs and engineers cars that embody the "pleasure and richness of driving" while prioritizing a high level of real-world safety. More than 90% of

accidents that occur are a result of human error, and the company's goal is to achieve virtually zero avoidable traffic accidents involving Nissan vehicles that result in serious or fatal injuries. This means, of course, working to improve passenger safety in its vehicles. It also means promoting educational activities to raise safety awareness among drivers, pedestrians and the community. Number of fatalities/serious injuries from accidents involving Nissan vehicles compared to 1995 level (Japan, 2013):



# SCORECARD

# FY2014 TARGET ACHIEVEMENT RATE: VV ACHIEVED V MOSTLY ACHIEVED × NOT ACHIEVED

Nissan makes year-round use of the CSR scorecard as a fundamental tool to manage, review and validate its progress in each of the sustainability strategies defined for its CSR activities. The table below shows some of the values behind Nissan's ongoing activities and the indices used in the scorecard to gauge the company's performance.

Nissan Priorities	Nissan Objectives	Indicators of Progress	FY2013 Results	FY2014 Results	Assessment	Action Planned for Next Year Onward	Long-Term Vision
Innovative technology development and active promotion of safety toward a safer mobility society	Establishment of quantitative reduction targets for Nissan-related traffic fatalities, etc., real-world analysis of accidents to build safer cars and implementation of driver-education programs	Reduction from 1995 levels in fatalities and serious injuries involving Nissan vehicles (figures available approx. two years later due to calculation based on publicly released data)	Japan: 61% reduction U.S.: 54% reduction Europe (U.K.): 63% reduction (All as of the end of December 2013)	Figures to be calculated once data is released	_	Continue development of safety technologies	Aim for ultimate goal of virtually zero fatalities and serious injuries involving Nissan vehicles



# **NISSAN'S APPROACH TO SAFETY**

Nissan takes the fundamental approach of pursuing "real-world safety" and aims to help create a society with virtually no avoidable traffic accidents. There were 4,113 deaths resulting from traffic accidents in Japan in 2014, the 14th successive year for this figure to decline. The World Health Organization (WHO) notes that approximately 1.24 million people lose their lives each year in automobile accidents around the globe and warns that if urgent steps are not taken, accidents could become the fifth leading cause of death worldwide by 2030.

Nissan set a target of reducing the number of fatalities and serious injuries involving Nissan vehicles to half of the 1995 level by 2015. In Japan, the United States and Europe (the United Kingdom), this target has already been reached. Today Nissan is engaged in activities aimed at halving this number once again in these markets by 2020. The ultimate goal is a world with virtually no accidents leading to death or serious injury.

Nissan uses a triple-layered approach, taking measures in the areas of vehicles, individuals and society to help reduce accidents and meet its targets. Nissan is developing and deploying vehicle safety technologies in its vehicles and implementing a comprehensive approach that includes people and the traffic environment.

# Nissan's ultimate goal:

To reduce the number of fatalities and serious injuries involving Nissan vehicles to virtually zero.

# Nissan's approach:

A triple-layered approach, taking measures in the areas of vehicles, individuals and society.





Fatalities per 10,000 Nissan Vehicles



Source: Institute for Traffic Accident

Research and Data Analysis



Source: Fatality Analysis Reporting System



# 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. The company focuses on solutions that help minimize potentially dangerous conditions. It also provides technologies that aim to activate vehicle systems (for example, the brakes) when a collision is unavoidable, thereby helping to reduce injuries.

# The Safety Shield Concept

Nissan bases its efforts to help create safer automobiles on its original Safety Shield concept. This defines the conditions surrounding a vehicle in terms of six phases, from "risk has not yet appeared" through "post-crash," and guides development of technologies to help address each phase.

<ul> <li>Risk has not yet appeared</li> <li>Distance Control Assist System</li> <li>Navigation-enabled Intelligent Cruise Control with full-speed range following capability</li> <li>Adaptive Front-Lighting System (AFS)</li> <li>Around View Monitor</li> </ul>	Helps the driver to maintain comfortable driving	
Risk has appeared Predictive Forward Collision Warning Lane Departure Warning Lane Departure Prevention Blind Spot Warning Blind Spot Intervention Back-up Collision Intervention	Helps the driver to recover from dangerous conditions to safe driving	
Crash may occur • Forward Emergency Braking • Anti-lock Braking System (ABS) • Vehicle Dynamic Control (VDC)		
Crash is unavoidable Intelligent Brake Assist Front Pre-Crash Seatbelts		
Crash • Zone Body construction • SRS Airbag Systems • Pop-up Engine Hood	Helps minimize injuries when a collision is unavoidable	
Post-crash ■ Automated Airbag-Linked Hazard Lamps		

# High Marks in Fiscal 2014 for Nissan Safety Technology

- In January 2015, Nissan expanded Forward Emergency Braking to more models and announced that the technology would become standard in nearly all categories sold in Japan, including electric vehicles and commercial vehicles, by the end of fiscal 2015.
- In Japan, the Skyline, X-Trail and Note received the highest Japan New Car Assessment Program (JNCAP) preventive safety performance assessment rating, Advanced Safety Vehicle Plus (ASV+).
- In the United States, the U.S. New Car Assessment Program (US-NCAP) gave its highest rating to the Infiniti Q50 and the Nissan Altima, and the Insurance Institute for Highway Safety (IIHS) gave its top rating to the Infiniti Q50, the Infiniti Q70 and the Nissan Rogue.
- In Europe, the European New Car Assessment Program (Euro NCAP) gave its highest rating to the Nissan X-Trail, the Nissan Qashqai and the Nissan Pulsar.

# Aiming for Virtually "Collision-Free Cars"

Risks are present in every driving condition. Nissan supports safer driving through the development of preventive safety technologies that help detect risks in advance, provide a warning to the driver and, in emergency situations, intervene to help prevent accidents. Nissan's Safety Shield is a 360-degree driver assistant system designed to prevent collisions at the rear and side as well as the front of the vehicle.

Nissan has set a goal of providing worldwide optimal mobility and is committed as an automobile manufacturer to the application and popularization of its safety technologies.

# All-Around Drive-Support System in the Infiniti Q50 Forward Emergency Braking

When the Forward Emergency Braking system judges that deceleration is required, it alerts the driver using both a screen display and sound and then generates a force that pushes the accelerator pedal up and smoothly applies partial braking to assist the driver in slowing the vehicle down.

When the system judges that there is the possibility of a collision, it will automatically apply harder braking to help avoid a collision.

# Predictive Forward Collision Warning

This system, a world first, warns the driver of risks that may be obscured from the driver's view. It can sense the relative velocity and distance not only of a vehicle directly ahead but also of a vehicle traveling in front of the preceding one.



Predictive Forward Collision Warning.

# Blind Spot Warning and Blind Spot Intervention

The Blind Spot Intervention system helps alert the driver, when attempting to change lanes, to the presence of a detected vehicle in the blind-spot area. It also assists the driver in returning the vehicle toward the center of the lane.



Blind Spot Warning and Blind Spot Intervention.

# Lane Departure Warning and Lane Departure Prevention

The Lane Departure Prevention system senses unintended lane drift and automatically assists the driver to return to the center of the lane.

#### **Back-up Collision Intervention**

The Back-up Collision Intervention system is another significant evolution of driving confidence. Radar and sonar sensors on the side and back of the vehicle help alert the driver to a potential collision with a crossing object while backing up. Should the driver continue moving in reverse, the brakes will automatically engage.



World's first Back-up Collision Intervention.

# Around View Monitor (with Moving Object Detection)

The Around View® Monitor with Moving Object Detection provides a virtual 360° view of the parking environment and provides visual and audible warnings for moving objects within the display image.

#### From Preventive Safety to Autonomous Drive

Nissan is enhancing its preventive safety technologies to support the three basic steps in avoiding accidents: cognition, judgment and action. The company is now developing autonomous driving technologies as one next step in its safety approach. The company believes that Autonomous Drive could help to reduce traffic accidents—more than 90% of which have human error as a contributing factor—and could prove effective in contributing to the realization of a society with virtually no traffic accidents.

Autonomous Drive vehicles equipped with laser scanners and cameras continually monitor their surroundings in every direction. If they come close to other vehicles or other objects, artificial intelligence selects the appropriate action based on the information stored in its knowledge database. The goal is an Autonomous Drive vehicle that can correctly assess the situation, make decisions and drive safely even in complex traffic environments, such as at crossroads with no traffic lights or when passing parked vehicles.

In a society facing issues including aging populations and urban congestion, Autonomous Drive technologies may one day be able to help reduce traffic accidents, thus providing peace of mind to drivers and increasing opportunities for mobility in the daily lives of the rapidly growing number of senior citizens. Nissan believes that Autonomous Drive technologies are a major breakthrough offering new mobility value. The company is proactively developing these technologies and working to bring them to market. By the end of 2016, the goal is to release "traffic-jam pilot" technology helping to enable safe autonomous driving on congested expressways; this will be followed in 2018 by Autonomous Drive features for operation on multiple-lane roads, including risk-avoidance and lane-changing functions. By 2020, Nissan aims to introduce Autonomous Drive technologies allowing vehicles to navigate crossroads and intersections without driver involvement in operations.



Nissan Autonomous Drive test vehicle.

# INDIVIDUALS: NISSAN'S TRAFFIC SAFETY ACTIVITIES

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

#### **Educational Programs in Japan**

Traffic accidents are statistically more likely to occur during the dusk hours from 4:00 to 6:00 p.m. each day. As part of its Hello Safety Campaign, 
<sup>■</sup> Nissan began urging drivers to turn on their headlights earlier in the evening in the Omoiyari Light Promotion, <sup>∞</sup> launched in 2010.

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    Click here for more information on the Hello Safety Campaign
(Japanese only).
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Website
 Website



In fiscal 2014, Nissan further enhanced its activities undertaken to date.

- Headlamp Early Lighting Research Lab (website): Nissan added a wealth of new information to this website, including reports on experiments to check how easy it is to see others on the road, from both pedestrians' and vehicles' perspectives, and on surveys of how many vehicles drove with their headlights on.
- 2 Creative Ideas for Twilight-Time Safety Meetings: To bring together people involved in similar traffic safety activities, Nissan held meetings once again, following their launch in 2013. The meetings this year saw a fuller schedule, including presentations on new forms of corporate activities contributing to society.



3 Nationwide call for early headlamp lighting: Each year since 2012, Nissan has held a Day of Good Lighting (based on a Japanese play on words) on November 10, working with partners throughout the country to urge drivers to turn on headlights earlier.



Lighting Girl Project: To increase safety awareness among car fans, "lighting girls" were dispatched to auto-related events around Japan, where they engaged in dialogue to deepen understanding of Nissan's public safety efforts.

In fiscal 2014, the results of these continued activities brought Nissan's Omoiyari Light Promotion a Good Design Award in the "activities/solutions for public, social contribution activities" category. In deciding this award, the Japan Institute of Design Promotion noted that while this was a campaign spearheaded by Nissan, it also brought more than 80 civic and other organizations onboard as part of broad measures to reduce traffic accidents.



# Safety Education in the United States

Since 2002, Nissan North America (NNA) has voluntarily provided parents and caregivers with peace of mind by offering valuable tools and resources to help determine which child safety seats fit properly in Nissan and Infiniti vehicles sold in the United States through its Snug Kids program. Snug Kids, the automotive industry's first-ever child safety seat fit initiative, provides consumers with tips on how to achieve a secure fit when installing a rear- or forward-facing child seat or booster.

Nissan recently updated its Snug Kids fit guides for 2015 model year vehicles offered in the U.S. market. Every year, different child seats that are currently available on the market are installed in many of the Nissan and Infiniti vehicles to check for fit. A list of recommended child seats for each vehicle is made available to consumers on the company's website.

Since 2012, Nissan has sponsored ThinkFast, an interactive awareness program that educates students about the importance of safe driving practices. The program is set up like a game show, complete with a full production set, mainstream music, an entertaining host, and informative and engaging trivia that appeal to teens. Nissan currently sponsors more than 125 programs at middle schools and high schools across Tennessee, Michigan, Mississippi and Texas. The company is looking for opportunities to expand the program to additional states where the company has operations.

# 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-tounderstand 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 cars on the road. In 2005 Nissan (China) Investment Co., Ltd. (NCIC) hosted its first safety program to improve drivers' skills and safety awareness in cooperation with the China Road Traffic Safety Association. 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 improved understanding of traffic safety. Programs for eco-driving skills were also included. Today these activities are implemented by the passenger automobile division of Dongfeng Motor Co., Ltd., as part of the Nissan Technology and Safety Driving Forum, a program of activities in which dealerships also participate.

In August 2014, NCIC helped put on the 2014 China Road Traffic Safety Forum in Beijing. Nissan presented its Safety Shield approach and other fundamental concepts of its work on road safety, helping to deepen the discussion among many participants on issues related to people, vehicles and traffic-safety-minded road construction. Debate also focused on the theme of "a deep look at traffic accidents in China and the triple-layered concept,"

producing ideas for feasible safety initiatives based on Nissan's triple-layered safety approach.

NCIC has also held the Nissan Cup event each year since 2006. Taking an online quiz format, this contest aims to increase traffic safety awareness and promote knowledge of safety and environmental protection issues among students aged 8–16. In 2014 a total of 2,809 young people took part.

In Indonesia, the company 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 Safety Driving Forum in Emerging Markets

Nissan has launched the Nissan Safety Driving Forum program in emerging markets as part of its efforts to promote safer mobility. The aim is to enhance road safety awareness among as many of its customers as possible.

In fiscal 2014, the forum took place in India for the third straight year, expanding to include events in eight midsized and large cities (a steady increase from three cities in fiscal 2012 and five in fiscal 2013). Through instruction in the proper wearing of seatbelts and simulations of the safety equipment Nissan provides in its vehicles, the company worked to enhance participants' safety awareness. Even customers who were unable to participate in the forum gave high marks to this program for its use of social media channels to share event content with a broader audience. The Nissan Safety Driving Forum will remain a part of the company's outreach going forward.

In fiscal 2014, the Nissan Safety Driving Forum was also introduced to Russia. Nissan advocated the importance of safe driving through driving exams using simulators and hands-on activities with safety technologies.

# Nissan Europe Safety Event for Employees

In October 2014, the CSR team at Nissan Europe S.A.S. (NESAS), with cooperation from the French Red Cross and its local bureau

in Saint-Quentin-en-Yvelines, held safety activities for employees titled "Blue Citizenship—Solidarity and Information Event." Some 20 employees took part in this event, which aimed to increase awareness of emergency lifesaving techniques. Following demonstrations by Red Cross staff of cardiopulmonary resuscitation (CPR) and automated external defibrillator (AED) use, the participants tried the techniques themselves using training dummies.

In France, around 50,000 people annually go into cardiopulmonary arrest. NESAS has placed AEDs in its business locations since 2012; if employees know how to use them, they will be ready to save lives when the time comes. The CSR team is planning further cooperation with NPOs and other external partners to increase traffic safety knowledge as well.

The October 2014 event also saw NESAS present to the French Red Cross a donation of around €900 collected from employees in the form of small change.

#### Partnership with the FIA for Greater Safety

Nissan and the Federation Internationale de l'Automobile (FIA) jointly announced at the Mondial de l'Automobile (Paris Motor Show) that the two organizations will form a partnership to make the world's roads safer through the FIA Action for Road Safety campaign. Nissan is an official supporter of the FIA's innovative awareness-raising campaign, which was launched in 2011 in support of the United Nations Decade of Action for Road Safety.

The new partnership will see Nissan support and promote awareness campaigns worldwide—in particular, Action for Road Safety's Golden Rules for Safer Motoring 2 —with the

 Dick here for more information on the FIA Action for Road Safety campaign.

 Click here for more information on the Golden Rules for Safer Motoring.
 website aim of combating a global scourge that results in the deaths of approximately 1.24 million people annually, with 50 million more being injured each year.



# SOCIETY: WORKING TOGETHER WITH SOCIETY

Nissan believes it is possible to help create an even safer mobility society by using information from the traffic environment surrounding the vehicles on the road. Together with a wide range of governmental agencies, universities and companies, it is participating in various projects intended to promote the eventual achievement of a safer, more pleasant mobility society utilizing intelligent transportation systems (ITS).

# 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.

Nissan is building on the results of the ITS Project with its development of the Driving Safety Support System (DSSS). This will be an ongoing project promoted by Japan's National Police Agency and the UTMS Society of Japan, an organization operating under its aegis.

The DSSS uses the latest ITS technologies, such as opticalbeacon 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 Ltd. (NEXCO-West), 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.

#### **Messages from Our Stakeholders**

# FIA Action for Road Safety

The FIA Action for Road Safety campaign was launched in 2011 to support the United Nations Decade of Action for Road Safety. The campaign involves advocacy at the highest levels to push leaders to commit to road safety both nationally and globally, as well as worldwide road safety campaigns and programs. It is supported by the 237 FIA Member Clubs in 142 countries and by partners, both institutional and private.

Road crashes are a global crisis, with approximately 1.24 million people losing their lives and 50 million others seriously injured every year.

In October 2014, Nissan Motor Co., Ltd. and the FIA formed a partnership in order to work together to promote road safety. Since then, Nissan has promoted the campaign at its road safety educational event, the Nissan Safety Driving Forum in Russia.

As the new motor sport season is starting, the FIA is looking forward to further collaboration with Nissan on road safety.

We believe that together we can make our roads safer.



Jean Todt President Federation Internationale de l'Automobile (FIA)

# PHILANTHROPY

The world faces many issues, ranging from climate change and energy security to overpopulation and poverty. These issues will require societywide efforts to ensure that future generations can continue to enjoy prosperity.

When a company provides a range of resources to communities, supporting their development and proactively tackling issues, it is, in part, fulfilling its social responsibility as a good corporate citizen. Such actions also benefit the company's own operations, fostering a better business environment and creating new markets that can grow sustainably. Nissan works with a variety of stakeholders, including governmental bodies and nonprofit and nongovernmental organizations, to maximize the success of such initiatives. In line with Nissan's corporate philanthropy policy, regional offices and affiliates work on initiatives that address issues relevant to their operations and the communities in which they operate. Global social contributions (including donations and monetary contributions):

¥18 billion



# SCORECARD

# FY2014 TARGET ACHIEVEMENT RATE: VV ACHIEVED V MOSTLY ACHIEVED × NOT ACHIEVED

Nissan makes year-round use of the CSR scorecard as a fundamental tool to manage, review and validate its progress in each of the sustainability strategies defined for its CSR activities. The table below shows some of the values behind Nissan's ongoing activities and the indices used in the scorecard to gauge the company's performance.

Nissan Priorities	Nissan Objectives	Indicators of Progress	FY2013 Results	FY2014 Results	Assessment	Action Planned for Next Year Onward	Long-Term Vision
Environment	Increase future generations' understanding of environmental issues through education programs	Ongoing program implementation and regional expansion	Expanded school-visit program in Japan     Held pilot school-visit program in the U.K.	Continued program in Japan     Conducted program in China and     Europe	~~	<ul> <li>Continual improvement of program in Japan</li> <li>Work together with different regions to steadily expand countries and areas where program is held</li> </ul>	<ul> <li>Contribute to development of both business and society as a global corporation</li> <li>Centered on "environment," "education" and "humanitarian support," conduct activities that</li> </ul>
Education	With focus on investment in future generations, implement education programs centered on children and young people		Expanded school-visit program to Mexico and the U.K.	Expanded Nissan Monozukuri Caravan to China and the U.K.     Introduced new education program in the U.K. and Indonesia	44	<ul> <li>Work together with different regions to steadily expand countries and areas where program is held</li> <li>Research and implement initiatives for tackling social issues in different countries</li> </ul>	make maximum use of Nissan's strengths and resources Balance global perspectives with the most appropriate activities for each region
Humanitarian support	Provide rapid support for areas affected by natural disasters	In-depth understanding of local needs and provision of timely support	Established disaster-response processes and communicated them to responsible managers in Japan/ U.S./Europe     Continued supporting areas affected by the Great East Japan Earthquake (voluntary activities by employees, Nissan President Fund)	<ul> <li>Supported those affected by earthquake in Yunnan, torrential rain in Hiroshima and Ebola in Liberia</li> <li>Continued supporting areas affected by the Great East Japan Earthquake (voluntary activities by employees, the Nissan President Fund, vehicle donation)</li> </ul>	~~	<ul> <li>Further increase decision-making and response speed</li> <li>Strengthen cooperation between regions and functions</li> <li>After the 2015 deadline passes for Millennium Development Goals adopted in 2000, discuss initiatives with reference to post-2015 development goals</li> </ul>	
	Conduct activities in partnership with Habitat for Humanity	Continued cooperation of projects and geographic expansion	• Began five-year project in Myanmar	<ul> <li>Supported projects in Myanmar, Vietnam, Thailand, Indonesia and Japan</li> </ul>	~~		



## **NISSAN'S APPROACH TO PHILANTHROPY**

Nissan's social contribution activities focus mainly on the areas of the environment, education and humanitarian support. The company not only provides financial assistance but also pursues activities that are "distinctly Nissan," making full use of its automotive heritage, expertise, products and facilities.

Nissan emphasizes working with specialized nonprofit and nongovernmental organizations that have great expertise in their fields to ensure that its social contributions are effective.

Nissan's local companies support employee involvement in social contribution activities.

# Contributions to Communities Where Nissan Conducts Business



# **COMPANY ORGANIZATION FOR PHILANTHROPY**

The CSR Department at Nissan's Global Headquarters in Japan is responsible for developing Nissan's corporate philanthropy policy. The policy is discussed and approved by the Executive Committee and shared throughout Nissan's global operations. The corporate policy provides the basis on which initiatives are implemented across the company worldwide.

Click here for more information on the Executive Committee.
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# ENVIRONMENT

Nissan's environmental philosophy is "a Symbiosis of People, Vehicles and Nature." Nissan actively engages in efforts to reduce the environmental burden on the planet and prioritizes the environment in its philanthropic activities. Central to its approach are educational programs that cultivate a deeper understanding of environmental issues and the promotion of research toward reaching a low-carbon society.

#### School-Visit Programs (Japan)

Since 2007, Nissan has put its manufacturing know-how to work by carrying out three types of school-visit programs. The programs target older elementary school students and are delivered by Nissan employees.

One educational program is the Nissan Waku-Waku Eco School, which helps participants to deepen their understanding

 Click here for more information on the Nissan Waku-Waku Eco School (Japanese only). of global environmental issues. Participants also learn about Nissan's environmental efforts and experience the latest in environmental technology, including test rides in the Nissan LEAF electric vehicle. Classes are developed in cooperation with the NPO Weather Caster Network (WCN), whose staff members support delivery of the lessons.

This program has been so well received that Nissan has increased the number of Eco School classes in Japan. In fiscal 2014, about 6,000 pupils from 60 schools, mainly in Kanagawa Prefecture, attended the program (including visitors to program exhibitions). Since the launch of the Nissan Waku-Waku Eco School, a total of 31,000 children have participated as of the end of March 2015. Classes have also begun outside Japan. In fiscal 2013, Nissan Motor Manufacturing (UK) Ltd. (NMUK) launched a successful pilot activity with children from local primary schools.

# Support for Environmental Projects (U.S.)

The Harpeth River in central Tennessee features a varied and unique ecosystem and is a state-designated scenic river. In September 2014, to help preserve the aquatic life in the river and its tributaries, Nissan donated \$50,000 to the Harpeth River Water Association (HRWA), an organization that provides scientific and other specialized knowledge supporting water policy at a regional and state level. Nissan funding supports the HRWA's programs to continuously improve water quality in the Harpeth River, contributing to environmental protection in its 1,600 kilometers of tributaries.

# EDUCATION

No wobsite

▶ website

Nissan believes that supporting young people is an investment in the future. To help realize a meritocratic society where a better future is possible for anyone, the company has established several educational initiatives that utilize its knowledge and technology base, in addition to working to provide elementary school education opportunities in emerging countries.

# Youth Literacy Efforts (Japan, Portugal, U.S. and Indonesia)

Nissan has organized the Nissan Children's Storybook and Picture Book Grand Prix each year since 1984. Through March 2015, more than 200,000 copies of published winning works have been donated to public libraries across Japan and kindergarten classrooms near Nissan offices.

In 2012, Nissan's office in Portugal, Nissan Iberia, S.A. (NIBSA), established a similar program in which the company identifies talented, young writers in schools within the country and provides opportunities for book publication in cooperation with local governments.

In Tennessee, the site of the company's North American headquarters, Nissan supports the Governor's Books from Birth Foundation literacy program in collaboration with the Dolly Parton Imagination Library. The program aims to foster a love of reading among preschool children, resulting in improved long-term educational outcomes.

Nissan Motor Indonesia has launched "Datsun Rising Hope" as the first Datsun-initiated CSR campaign. In its initial phase, the company deployed Datsun GO+ Panca units as mobile library cars

> Click here for more information on the Nissan Children's Storybook and Picture Book Grand Prix (Japanese only).

Click here for more information on Nissan's support for the Dolly Parton Imagination Library. for four months beginning in January 2015. A social campaign has also been initiated to encourage the public to donate used children's books and educational toys to local children in Greater Jakarta and Purwakarta in West Java.

# Outreach to Pupils to Talk About *Monozukuri* (Japan, U.K., U.S., South Africa, Indonesia and Other Countries)

Through engaging and fun activities, Nissan works to instill in younger generations the importance of *monozukuri*, Japan's tradition of careful craftsmanship.

In Japan, the message of *monozukuri* is shared through schoolvisit programs, the Nissan Monozukuri Caravan and the Nissan Design Waku-Waku Studio, which take Nissan employees to visit elementary schools.<sup>20</sup> Some 20,000 children participate in the programs every year. The Nissan Monozukuri Caravan also operates in the United Kingdom, where the Sunderland Plant welcomes groups from local elementary schools.

Other programs with students, such as the U.K. Annual University Engineering Summit with Nissan's R&D Center (NTC-E Cranfield) or contributions to "See Inside Manufacturing" with Nissan Motor Manufacturing (UK) (NMUK) entities, enable Nissan to engage with the next generation of automotive professionals. The company has also expanded its U.K. educational programs by launching the Nissan Skills Foundation<sup>20</sup> to inspire the next generation of design engineering and manufacturing talent. Over two years, more than 15,000 students will experience the latest automotive design, cutting-edge engineering and innovative manufacturing through a range of workshops, competitions, practical activities and plant tours. The educational program will involve activities based on Formula One racing, which is supported by Nissan.

 Click here for more information on the Nissan Monozukuri Caravan and the Nissan Design Waku-Waku Studio (Japanese only).

Click here for more information on the Nissan Skills Foundation.
 website

In addition, the company donates vehicles and engines to universities and vocational schools to be used for instructional purposes in many countries, including the United States, South Africa and Indonesia. Access to real-world vehicles helps students build their skills and practical knowledge.



In the United Kingdom, the Nissan Monozukuri Caravan is operated as part of the Nissan Skills Foundation.

# Education Support for Children in Need (Brazil, China and South Africa)

In Brazil, where Nissan's new plant started operations in 2014, the company has established Instituto Nissan. This foundation for the education of children and young people aims to promote development of the communities where Nissan operates. The foundation supports a wide range of educational programs in Rio de Janeiro, where Nissan do Brazil Automoveis Ltda.'s head office is based; in Resende, where the new plant is located; and in Sao Paulo and other locations where Nissan has offices. These programs focus

on a range of areas including raising awareness of environmental issues, improving health and promoting exercise and sport. In addition, future career guidance and training are provided.

Nissan has also worked together with the public sector in the state of Rio de Janeiro to construct a daycare facility in Resende for 170 children between three months and six years of age. This is the first such effort by the automotive industry. Since its foundation in 2013, Instituto Nissan has supported 23,905 people with a financial contribution totaling \$465,000 (as of December 2014).

Since 2010, Nissan (China) Investment Co., Ltd. (NCIC) has operated the "Nissan Caring for Migrant Children" program in China. To further enhance this program, in 2013 NCIC launched the "Dream Classroom" program, which helps elementary and middle school pupils in economically disadvantaged districts. Through these activities, NCIC supported 4,428 pupils during fiscal 2014.

In fiscal 2014, Nissan South Africa (NSA) provided the Mobile Eye Clinic, screening 5,900 schoolchildren, providing 1,200 pairs of glasses and introducing medical facilities for those children who needed treatment. This child eye health project, which has been operating for five years, helps children from disadvantaged backgrounds gain access to eye care, enhancing their ability to see and learn.



The Mobile Eye Clinic (South Africa).

# Improving Education

#### Nissan Global Foundation (Japan)

The need to create a sustainable society is a global challenge. Recognizing this, the Nissan Global Foundation pursues the vision of helping to achieve a society whose members can look to the future with hope while creating opportunities to foster human resources. Working toward this goal, the Foundation provides financial support for training programs.

A key part of this outreach is a concerted effort to enhance science education. Support recipients include elementary and junior high schools, as well as research groups, that are implementing educational programs to foster scientific thinking skills among children and training programs to improve the science teaching skills of instructors, for example. In fiscal 2013, the Foundation launched the Science Education Awards in Japan. The Foundation aims to spark fresh interest in science education by presenting awards to schools with the best performance in the course of the two-year program, whose activities are expected to have beneficial ripple effects on broader society.

Since fiscal 2014, the Foundation has also run the Exciting Science Navigation program with the aim of fostering a high level of scientific thinking in as many children as possible. The hands-on program for elementary and junior high school teachers combines tours of cutting-edge research facilities, opportunities for direct communication with researchers and workshops that enable teachers' discoveries to be practically applied in the classroom. Program activities take place at the Institute of Physical and Chemical Research (Riken), the University of Tokyo's Institute of Industrial Science and the Waseda University Center for Advanced Biomedical Sciences.

 Website
 Click here for more information on the Nissan Global Foundation (Japanese only).

# Nissan Institute of Japanese Studies, Oxford (U.K.)

Founded at the University of Oxford, the Nissan Institute of Japanese Studies is a well-known European center for research on modern Japan that contributes to the promotion of mutual understanding between Japan and Europe.

Click here for more information on the Nissan Institute.

# **HUMANITARIAN SUPPORT**

Nissan has provided assistance around the world to people who have been affected by large-scale natural disasters. The company has expanded its humanitarian efforts to include new initiatives in emerging countries through a global partnership with Habitat for Humanity.

#### Partnership with Habitat for Humanity

Nissan started collaborating with Habitat for Humanity in the wake of Hurricane Katrina, which struck the American Gulf Coast in 2005. Habitat for Humanity carries out its activities around the globe, building or repairing houses to aid people in need of safe, affordable housing.

Nissan expanded this partnership in 2012 and fully endorses the vision behind these activities, which are in accordance with the company's vision of Enriching People's Lives. The area of operations has broadened beyond North America and Japan to other areas, with Nissan's regional companies and their employees contributing their time by volunteering for construction and other related activities.

In Myanmar, where a plant manufacturing Nissan vehicles will be completed in 2015, the company is working together with the international NGO World Concern on a five-year project with the goal of creating hygienic, disaster-resistant communities. In South Africa,



Nissan Vietnam employees helping to build homes (Vietnam).

fiscal 2014 saw a ceremony to hand over 50 newly completed homes to local residents. Activities are also ongoing in Vietnam, Thailand and Indonesia, where Nissan employees volunteer to build and repair houses and develop communities with higher levels of resilience, helping residents to be better prepared in the event of a disaster.

 Website
 Click here for more information on Nissan's partnership with Habitat for Humanity.

# Addressing the 3/11 Disaster (Japan)

## Employee Volunteer Activities in Tohoku (Japan)

In areas affected by the Great East Japan Earthquake, there are still households that are unable to repair their damaged homes due to their economic circumstances. Through the voluntary efforts of company employees, Nissan has twice participated in joint projects with Habitat for Humanity to repair the houses of people living in unsafe conditions.

# Bringing Smiles to Children in Tohoku (Japan)

The Nissan President Fund, launched by CEO Carlos Ghosn in 2011, implements programs to bring smiles back to the faces of children in areas affected by the Great East Japan Earthquake. For example, in the Asobi (Play) Plus One program, NPOs with a range of specialties provide unique programs in local children's centers in Iwate, Miyagi and Fukushima Prefectures. Another initiative, the Odekake (Take a Trip) program, provides students with hands-on learning experiences and fun excursions during school breaks.

Click here for more information on the Nissan President Fund (Japanese only).

#### Donation of NV200 Vanettes in Fukushima Prefecture

▶ website

The company donated one NV200 Vanette each to a total of eight towns and villages in the Futaba district of Fukushima Prefecture to

support reconstruction efforts after the Great East Japan Earthquake. These vehicles are contributing in operations to provide administrative services to residents who have evacuated their communities and currently live elsewhere in Fukushima or outside the prefecture.

# Addressing Other Natural Disasters Relief Activities in Yunnan and Sichuan Provinces (China)

On August 3, 2014, a powerful earthquake hit Yunnan Province in China. Nissan made a donation of 2 million yuan (approximately ¥33 million) through the China Foundation for Poverty Alleviation, a Chinese NPO, to support people affected by the disaster. The money was used to repair schools, help children in the area return to normal daily life and provide an environment where they could resume studying.

A new school building for Xiangyang Primary School in Ya'an, Sichuan Province, was completed using funds from an earlier donation by Nissan to the foundation to support those affected by the April 2013 earthquake in the province. This made a significant beneficial impact for the children who had been studying in a temporary facility. At the opening ceremony, they also took part in the Nissan Monozukuri Caravan.



The completion ceremony for the new school building at Xiangyang Primary School in Ya'an (China).

# Donation of Vehicles for Anti-Ebola Support (Liberia)

Nissan donated vehicles to the Liberian government to be used as ambulances in the fight against the Ebola virus in West Africa. Based on the Patrol SUV and deployed by the President's Office of Liberia, the vehicles are equipped with stretchers and first-aid kits. The Patrol SUV's rugged build is perfectly suited to road conditions in Africa and can help medical personnel to reach even the most remote areas.

#### Relief Activities in Hiroshima (Japan)

Nissan made a contribution of  $\pm 5$  million to the NGO Japan Platform to help those affected by major landslides caused by torrential rain in Hiroshima in August 2014 and to assist in reconstruction.

#### **NISSAN AS A COMMUNITY MEMBER**

Nissan aspires to be a good corporate citizen, acting as a valuable member of and active contributor to local communities wherever it does business. The company provides support to communities in ways that reflect local needs, such as by assisting with community events, sponsoring neighborhood cleanups and various other beautification activities near Nissan facilities and hosting fun and informational activities. Many employees actively participate as volunteers.

## Sponsorship of Disability Sports (Japan)

In December 2014, Nissan sponsored the Nissan Cup Oppama Championship 2014—the 15th National Wheelchair Marathon in Yokosuka, Kanagawa Prefecture—serving as co-host with several other local organizations. The contest has been held since 2000 with the aim of increasing the profile of disability sports, improving the level of competitors, engaging people in the area and building caring communities. During the road race between Grandrive, Nissan's test course at the Oppama Plant, and Oppama Station, around 500 volunteers were on hand, including company employees and local community residents.

The Nissan Technical Center (NTC) and Nissan Advanced Technology Center (NATC), in the city of Atsugi, Kanagawa Prefecture, contribute to the local community by promoting "Nice Wave" activities, which include neighborhood cleanups and cooperation with local events. Since 2012, NTC has also sponsored the Nissan Fureai Road Race. This contest for both visually impaired and able-bodied competitors is held on the NTC grounds, creating a safe environment in which participants are able to compete.

# Developing the Next Generation of Scientists and Engineers (U.S.)

In the United States, Nissan is making direct investments in the workforce of tomorrow through support of science, technology, engineering and mathematics (STEM) initiatives and technical education training programs. Nissan provides financial support to develop STEM programs for students in elementary, middle and high schools, and to support STEM programs in colleges.

In Tennessee, where Nissan has two major assembly plants, Nissan and its employees support the Music City BEST (Boosting Engineering Science and Technology) Robotics Competition in Nashville. In fiscal 2014, more than 20 Nissan employees volunteered as team mentors or competition judges. Student teams designed and built working robots from standard kits of simple building materials and then competed to perform specific tasks in three minutes. In this project-based STEM program the students solved real-world science and engineering problems, helping them develop technological literacy skills that may shape their long-term education and career direction.

Nissan has also partnered with the SAE Foundation and the award-winning "A World In Motion" program to deliver scientificliteracy curricula to students at the elementary level (K–3), their most formative learning years.



The Music City BEST Robotics Competition, held in Nashville, Tennessee.

**Messages from Our Stakeholders** 

# **Sparking Imagination for Change**

The China Foundation for Poverty Alleviation (CFPA) is China's largest charity working to reduce poverty. While China has seen tremendous growth in recent years, there remains poverty impacting more than 82 million people.

Established in 1989, the CFPA has twice received the Ministry of Civil Affairs' top 5A rating as a foundation. We believe success can be achieved with a high level of commitment to well-managed programs grounded in sound methodology. We also believe that the more people we influence through our good work, the more people will be encouraged to participate in improving situations for others—good works spread as ideas and imagination are sparked.

Through the years, we've created and sustained several programs, including the New Great Wall Project started in 2002. This project helped nearly 12,000 students at 500 schools pursue higher education. In 2009, we began the Care Package Project, which has reached 2.7 million students in 10,000 schools. Students receive a schoolbag packed with educational items, and schools get teachers.

We launched the School Dormitory Project in 2011 to build student dorms for 191 schools in poor, rural areas. The CFPA also manages the Microfinance Project to help micro-entrepreneurs in rural communities.

We were pleased to work with Nissan (China) Investment Co., Ltd. (NCIC) in 2012 on the Nissan Caring for Migrant Children program, which provided student scholarships and equipment for four schools. And in 2013, we worked with NCIC, Dongfeng Nissan Passenger Vehicle Company (DFL-PV) and Zhengzhou Nissan Automobile Co., Ltd. (ZNA) on the Dream Classroom program. Designed to inspire confidence in primary school students, the curriculum includes disaster prevention and safety training, outward-bound programs and courses to develop personal growth and social interaction.

Working with Nissan, we've come to appreciate the company's commitment to society and corporate citizenship, and are impressed with its attention to detail and problem solving. Going forward, we look forward to working together on the Dream Classroom Project and other educational efforts.

Zhu Feng Enterprise Cooperation Director Resources Development Dept. China Foundation for

Poverty Alleviation



NISSAN MOTOR CORPORATION SUSTAINABILITY REPORT 2018

The rating of a car and the value of an auto manufacturer's brand are dependent on the customer's appraisal of quality. A company can reinforce its brand by continually providing the value customers expect, but failing to meet expectations even once makes it harder to maintain a platform for providing new value to those customers.

Mobility needs are rising in the face of structural changes in the global economy, engendered by increased urbanization in countries around the world. Nissan is expanding production to fulfill its mission of offering people worldwide the rich benefits of mobility. At the same time, it believes that automakers have an important responsibility to constantly offer customers the kind of quality with which they will be satisfied.

QUALITY

Nissan aims to be a company trusted by its customers by addressing quality as a companywide issue. The company seeks to provide top-level quality to customers at every stage, from the planning of new vehicles through development, manufacturing, distribution and sales to after-sales service. Nissan's basic stance and production processes are also shared throughout the company's global value chain. Customer feedback received by Nissan's customer call center (Japan):

200,000 customer inquiries

# QUALITY

# SCORECARD

# FY2014 TARGET ACHIEVEMENT RATE: VV ACHIEVED V MOSTLY ACHIEVED × NOT ACHIEVED

Nissan makes year-round use of the CSR scorecard as a fundamental tool to manage, review and validate its progress in each of the sustainability strategies defined for its CSR activities. The table below shows some of the values behind Nissan's ongoing activities and the indices used in the scorecard to gauge the company's performance.

Nissan Priorities	Nissan Objectives	Indicators of P	rogress	FY2013 Results	FY2014 Results	Assessment	Action Planned for Next Year Onward	Long-Term Vision
Product quality leading Nissan		t goals of nfiniti a make utomotive Achievement of high scores in external indicators that are most influential to customers	North America: Consumer Reports and J.D. Power IQS/VDS	<ul> <li>U.S.: 10 models were recommended in Consumer Reports</li> <li>U.S.: Murano and Infiniti FX took the top spots, while Juke, Z and Infiniti G37 ranked in the top 3 in the J.D. Power IQS segment</li> </ul>	U.S.: 7 models were recommended in Consumer Reports     U.S.: Juke, Infiniti QX80 and Infiniti QX60 took the top spots, while Murano, Z, Maxima, Frontier and Infiniti QX70 ranked in the top 3 in the J.D. Power IQS segment	V	Further strengthen quality improvement activities for new and existing models under the leadership of the newly appointed Excecutive Vice President for quality	
			In Europe: U.K.: What Car? Germany: ADAC Italy: Quattroruote	U.K.: Qashqai and Note earned 4 stars and Juke earned 3 stars in <i>What Car?</i>	U.K.: Note earned 4 stars while Qashqai and Juke earned 3 stars in <i>What Car?</i>	V		
	Under quality improvement goals of Nissan Power 88, make Infiniti a leading luxury brand and make Nissan a leading global automotive brand by FY2016		In other regions: China: J.D. Power IQS/ VDS South Africa: Ipsos PSI Brazil: <i>Quatro Rodas</i> India: J.D. Power IQS	<ul> <li>South Africa: NP200 ranked 1st, Micra, Qashqai and X-Trail ranked 3rd in each Ipsos PSI segment</li> <li>India: Micra ranked 2nd in its segment in J.D. Power IQS</li> <li>China: Sylphy ranked 2nd in its segment in J.D. Power IQS</li> </ul>	<ul> <li>South Africa: NP200 and Micra ranked 1st, and Navara ranked 2nd in each Ipsos PSI segment</li> <li>India: Terrano 3rd in its segment in J.D. Power IQS</li> <li>China: Sylphy ranked 2nd in its segment in J.D. Power IQS</li> </ul>	V		Strive for the top level in quality from the customer's perspective
			Japan: J.D. Power IQS	• Japan: X-Trail ranked 3rd in its segment in J.D. Power IQS	Japan: DAYZ ROOX and Nissan LEAF ranked 2nd in each segment in J.D. Power IQS	V		
Sales and service quality	Achieve Top-Level Quality in all focus markets by FY2016		North America & Asia: J.D. Power SSI/CSI Europe: GfK SSI and TNS CSI Mexico & Brazil: Ipsos SSI/CSI	Maintained Top-Level Quality in Japan, China and Mexico and implemented <i>kaizen</i> actions in the U.S. and other major markets	Maintained Top-Level Quality in Japan, China and Mexico; implemented <i>kaizen</i> actions in ASEAN and India—where levels were below industry average—and other major markets with the goal of attaining Top-Level Quality	V	Systemize and standardize best practices in countries that have already attained Top-Level Quality to raise quality levels in other countries	Maintain Top-Level Quality for sales and service



# **NISSAN'S APPROACH TO QUALITY**

There are many aspects to quality. Nissan seeks to provide high quality at all stages of the customer experience. To achieve this, Nissan pursues effective companywide cooperation at the crossfunctional and cross-regional levels.

In 2011 Nissan announced its "Enhancing Quality" program, spelling out clear quality-related goals and methods that are to be achieved by fiscal 2016. Nissan aims to be recognized by customers as a brand with top-level quality. The company is working on both product quality and sales and service quality with the aim of reaching the top level in every region globally.

Click here for more information on "Enhancing Quality."
 website

The product quality of a vehicle is fundamental for a customer to use it safely and comfortably over the long term. Nissan aims to provide a high level of quality that meets customer expectations during the entire lifecycle of a vehicle. This includes the perceived quality when a customer opens the vehicle door in the showroom, sits in the seat and takes a test drive; the initial quality in the first year after purchase; and the durability that remains even after many years of use.

Nissan also conducts initiatives to increase customer satisfaction in the area of sales and service quality. The company aims to exceed expectations at every customer contact point, from visiting dealerships, purchasing a car and receiving maintenance to when the customer decides to replace the car.

Nissan listens to customers and reflects their feedback in every process throughout the company in its pursuit of customer satisfaction.

# COMPANY ORGANIZATION FOR QUALITY

Nissan recently established an executive post with responsibility for leading the companywide effort to achieve the goals of the "Enhancing Quality" program by the target date of fiscal 2016. This has significantly raised the focus on quality within the company and is leading to changes in employee perceptions as well.

The company also created forums to discuss specific issues under executive leadership, including the Quality Management Committee, the MarCom and Sales Executive Meeting, and the Sales & Service and Monozukuri Collaboration Committee. These teams conduct regular meetings.

## LISTENING TO CUSTOMER FEEDBACK

Quality is a means of displaying how successfully Nissan interacts with its customers. The aim is to provide the value that customers expect and to respond rapidly if they are not satisfied. The company listens to all feedback, reflecting it in measures to improve quality at every stage—from vehicle design and development to after-sales service.

Employees who buy Nissan vehicles are also customers and important stakeholders. The company actively seeks their views on quality for incorporation in improvement initiatives.

# Rapid Response to Customer Feedback

Nissan responds to customer comments and questions worldwide through a range of methods, such as points of contact at dealers, call centers and surveys.

Nissan's customer call center in Japan annually receives approximately 200,000 cases of comments and questions from customers. All catalogs, instruction manuals and similar materials published in the last 50 years have been converted into PDF files for easy searching, letting operators address customer concerns as quickly as possible. Operators also have access to a database of frequently asked questions and their answers, organized by vehicle models, keywords and categories.

For quality purposes, Nissan also positions its employees as customers of the company. The "Quality Listening Box," on the company intranet since 2013, lets employees actively contribute information to raise the quality of products and services.

# **Reflecting Customer Feedback in Products and Services**

Nissan has implemented a system for reflecting customer feedback in its products and services, putting this to work through reliable information sharing among all functions, including product planning, R&D, manufacturing and sales.

Opinions and comments received by the customer call center in Japan are shared companywide on the intranet, where employees can access and view the database at any time.

Additionally, important cases are discussed in executive-led committees, whose decisions are applied to Nissan's products and services.

## **Developing a CS Mindset**

To improve quality across the company, all employees must consider the customer's perspective and keep customer satisfaction (CS) in mind as they work.

In Japan, Nissan holds CS training for employees in their third year and newly appointed managers. The training covers quality policy in the Nissan Group and quality improvement measures, incorporating actual feedback from customers in group discussions. Nissan lets employees discuss what the company can do for customers and what action is necessary in the current situation, thus fostering a quality-improvement mindset rooted in CS among individual employees. The company is expanding its measures to overseas sites with the aim of cultivating this mindset globally.

The company has held the Nissan Quality Forum for employees and suppliers from 2003. This forum uses information displays, video presentations and actual vehicles and parts to showcase Nissan's latest status on quality, customer feedback and activities aimed at meeting targets. The forum is organized continuously and cross-functionally by the Total Customer Satisfaction Function (TCSX) and the R&D, manufacturing, sales/service and other divisions in order to raise awareness of CS and quality-improvement issues of all employees. The forum takes place in Japan, the United States, the United Kingdom, Russia, China, Thailand and other locations around the world.

The TCSX targets an overall increase in customer satisfaction with the goal of gaining a thorough understanding of customer dissatisfaction and making necessary improvements.

# **PRODUCT QUALITY**

Product quality is a basic feature in allowing customers to use a vehicle safely and comfortably over the long term. For Nissan, a leading automaker with a strong level of *monozukuri*, Japan's tradition of careful craftsmanship, the product quality of its vehicles is the foundation for its sustainability as a company. Nissan considers quality from the customer's perspective at all times and responds quickly in case a defect occurs, making efforts to prevent a recurrence so as not to inconvenience the customer. The company ascertains customer dissatisfaction and addresses it through all possible means. Product quality is being improved to increase customers' satisfaction.

Within product quality, Nissan includes perceived quality, initial quality and durability. Quality improvement efforts target the entire lifecycle of a vehicle, from planning and design to R&D, manufacturing, distribution, sales and after-sales service. Nissan monitors the results of third-party quality surveys for use as internal indices and makes improvements throughout the PDCA (plan, do, check, act) cycle.

# Product Quality Assessments by External Bodies

Nissan uses the results of third-party quality surveys → as internal indices, applying them in improving the manufacturing of its vehicles. The company has set high-level indices and is striving to achieve them in each of the regions in which it operates.

 Click here for more information on product quality survey results in the CSR scorecard.

# **Perceived Quality**

Perceived quality is the quality that customers feel when seeing, touching and operating 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.

The feeling of quality is a subjective matter, and fixing quantified criteria requires very careful investigation. To define criteria for quality evaluation from the customer's point of view, Nissan evaluates cars using the opinions of numerous employee product monitors and specialists with in-house training. The company also surveys customers who have purchased or are considering purchasing a Nissan car.

The company is now expanding the surveys' geographic coverage to gain a better understanding of customers' perceptions in different markets around the world while reflecting those perceptions in new vehicles from the development stage. Nissan scientifically measures and analyzes customer perceptions to gain a quantitative grasp of what makes people feel good.

This information shapes the company's specific design targets.

# Improving Initial Quality

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

All factors that affect CS, not just mechanical faults, are a part of vehicle quality. Nissan sees these factors as issues requiring action and strives to improve quality in these areas.

The J.D. Power Initial Quality Study indicated, for instance, that rear wiper switches on Nissan vehicles were difficult to use because of differences with other manufacturers' models. The sales and service division teamed up with R&D personnel to undertake a cross-functional initiative addressing the issue. This produced a revised instruction manual, as well as enhanced 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.

The value that customers expect from vehicles may vary according to their culture, gender, age and personal taste, and can be affected by such market factors as the level of car ownership or climate. Although Nissan uses a set of basic specifications for global design, it also makes adjustments to meet regional needs.

Because adjusting the production process in response to customer dissatisfaction or defects can be difficult once mass production begins, there is a need to incorporate the customer's perspective during the planning and development stages—in other words, "front loading" quality in the early stages of product development. Nissan is making efforts to reduce customer dissatisfaction and defects by substantially expanding the responsibilities of the Chief Quality Engineer, who participates from the product planning stage. Nissan gleans customer perspectives from market information and employee monitors. Priorities are set from the planning and development stages to consider responses that will be reflected in the product. The company confirms quality improvements for each process and examines risk-reduction measures by visualizing potential risks at the planning stage. By advancing all these processes with transparent criteria, Nissan can ensure the high quality of new models from the outset.

#### Enhancing Durability

Product life is affected by durability issues that can arise from long vehicle use: molded resin parts changing color or deforming, surface materials becoming abraded, chrome stripping away and material fatigue producing odd noises in the vehicle. Nissan not only obtains data for the two to four years after the initial sale during the warranty period but also conducts quality checks on recovered vehicles actually used by customers and utilizes nondefective parts for the early identification of defects. Analysis of such data contributes to the development of technologies that are more resistant to durability issues. Nissan's aim is to reduce durability quality issues by at least 30% by fiscal 2016, compared to the fiscal 2010 level.

# Working with Suppliers to Improve Product Quality

As Nissan's production network expands worldwide, there is greater risk of problems arising related to quality and supply of parts in the areas of operation. The company works with suppliers to improve quality at all production sites from the parts design stage onward to help ensure product quality.

Nissan is promoting stronger global management for the head offices of its suppliers with global operations and working to enhance its own global quality management. When suppliers fall short of Nissan standards in their production control or quality control during the manufacturing process, the company offers support for their *monozukuri* activities by visiting the shop floor and seeing what is actually happening. Nissan has also prepared checklists based on successful resolution of past issues. The company is implementing various quality-improvement measures by working not only with its direct suppliers but also with its tier-2 suppliers as well.

# Swift Improvement of Quality in Local Markets

Nissan is strengthening direct communication with sales companies and customers to promptly identify and respond to customer dissatisfaction and defects. The Total Customer Satisfaction Function (TCSX) addresses customer dissatisfaction and quality issues based on information from sales companies and the customer call center. It shares the information with the R&D and manufacturing divisions to investigate the causes and come up with countermeasures. The countermeasures are reflected on the production models in the market. In this way, Nissan seeks permanent solutions in order to prevent additional issues.

The global expansion of Nissan's corporate activities has increased the company's exposure to potential customer dissatisfaction and quality issues in many more regions of the world. Nissan established its Field Quality Centers (FQCs) with the goal of promptly gaining an understanding of quality issues and analyzing the causes. There are now eight FQCs in operation in Japan, Europe, the United States (two locations), Brazil, China, India and South Africa.

Click here for more information on Field Quality Centers.
 website

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 suppliers together with the company's R&D and manufacturing personnel to share information, to decide on areas for further investigation and to assign responsibilities. Based on the findings of the detailed studies, all staff members gather again to scientifically pinpoint the cause of 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 recurrence of reliability issues or incidents.

#### Producing Consistently High-Quality Products Worldwide

Nissan has adopted the 4G Strategies to produce high-quality products globally. These strategies enable Nissan to quickly create optimum production structures for providing consistently high-quality products to customers around the world.

# QUALITY

# Fair and Swift Action on Major Quality Issues

Nissan's primary responsibility as a manufacturer is to make every effort to ensure that product issues do not occur in the first place. Another duty is to ensure that vehicles, which are extraordinarily complex industrial products, are manufactured to be as ready as possible for various eventualities. Nissan's approach is to conduct recalls transparently and to handle them fairly and promptly. The decision to conduct a recall is based on the company's compliance with relevant laws and consideration of how the issue may affect customers' safety. When a recall is judged to be necessary, Nissan implements it swiftly, placing top priority on customers' safety and on minimizing disruption to their lives.

Nissan's robust 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 operation sites worldwide.

# Nissan's 4G Strategies

# 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 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. Nissan is meeting 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.

# SALES AND SERVICE QUALITY

While targeting high quality in its vehicles, Nissan works to increase the quality of its sales and service to customers in the buying process. The goal is to exceed customer expectations at all contact points. Through effective management of sales and service quality at sales companies in major national markets around the world, Nissan strives to improve customer satisfaction (CS). Based on the Nissan Sales and Service Way (NSSW) principles, the company's goal is to achieve top-level CS in 16 key national markets including Japan, the United States and major European markets, thereby boosting its brand image worldwide.

# **Customer Sales and Service Evaluation**

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

Nissan has set J.D. Power's Sales Satisfaction Index (covering such items as delivery process, delivery timing and salesperson) and Customer Service Index (including service quality, vehicle pick-up and service advisor) as internal indicators. In fiscal 2014, Nissan maintained top SSI levels in Japan, China and Mexico, coming in first place in CSI in Japan and Mexico.

# The Nissan Sales and Service Way

Nissan has established the Nissan Sales and Service Way (NSSW) as a set of global guidelines. These aim to improve customer perception of Nissan's brands and products, as well as to increase satisfaction with its sales and marketing activities and after-sales service. The company conducts a range of activities to increase customer satisfaction and to improve sales and service quality based on the NSSW. These activities include dealer training to improve product knowledge, technical capability and customer handling, as well as the provision of guidance to improve dealership operations in response to customer satisfaction surveys. Nissan is also developing personnel and systems to put these improvements into place and to focus its operations even more on customer needs, with care given to feedback collected through call centers and other channels.

Nissan carries out these initiatives globally while keeping in mind differences in cultural conditions and customs across countries and regions. The company strives to provide the best customer service during the purchase and ownership experiences.

# **Enhancing Sales Quality**

Maintaining sales quality requires that customers fully understand the functions of the new vehicles they purchase. Nissan's *monozukuri* and sales divisions work together to create a quick reference guide, in addition to a conventional owner's manual, to provide easy-to-understand instructions on features that have been updated from previous models and on the use of unfamiliar, new technologies. This user's guide is being progressively adopted in the United States, Japan, Europe and Asia.

The primary targets of sales under the Datsun brand, which

was launched in 2014, are customers making new car purchases for the first time. Nissan established dealership standards to ensure that customers will experience the Datsun brand values of Dream, Access and Trust. In India, Indonesia, Russia and South Africa, the four countries where Datsun has been introduced, the company arranges mystery shopping surveys to encourage dealerships to improve their customer treatment in keeping with those standards.

#### Boosting Service Quality

For service quality, Nissan places importance on offering highquality repair and maintenance in a swift and precise manner. Nissan has developed and rolled out proprietary training programs and materials to improve the skills of technicians.

In Japan, Nissan fosters highly competent technical staff with an in-house qualification system that requires even higher certification standards than national programs. Nissan is considering optimizing the allocation of highly certified Nissan technicians depending on dealer size, thereby ensuring consistent shop competency. Following Japan, this practice has also started in the North American and European markets.

Nissan also has a global "Train the Trainer" program to deploy technical skills to local technicians. Every year, technical trainers from subsidiaries around the world gather at the Global Training Center in Japan to take part in this program. They return to their countries and pass on technical skills and know-how to local technicians, enabling the provision of high-quality service worldwide. In fiscal 2014, a total of 155 trainers from 29 countries took part in "Train the Trainer" at the Global Training Center.

# Sharing CS Improvement Successes Globally

To improve customer satisfaction levels in all markets, it is essential to enhance sales functions on a global basis as well as to help sales companies in various national markets meet their local needs. Nissan conducts Sales Satisfaction Index (satisfaction with the purchasing experience) and Customer Service Index (satisfaction with repair and maintenance services) surveys in various markets. Regions with high satisfaction levels invariably possess know-how regarding specific approaches and tools, and these best practices are systematized and standardized so they can be applied in regions where customer satisfaction shows room for improvement.

Nissan Named Top-Ranked CSI Brand in Mexico for Third Straight Year

Nissan Mexicana (NMEX) continues to maintain its top brand position in Mexico, scoring highest in the Customer Service Index (CSI) for three consecutive years and ranking among the top companies in the Sales Satisfaction Index (SSI). NMEX is reinforcing the fundamentals in customer relations, strengthening its focus on "People," "Process" and "Technology."

NMEX honors outstanding sales consultants and service advisors to boost the motivation of workers at Nissan dealerships, and Loyalty Performance Coordinators (LPCs) are dispatched to enhance sales satisfaction. The LPCs analyze the SSI results and visit dealerships, identifying issues and discussing measures to resolve those issues with the dealers. NMEX shares its best practices within the company and implements follow-up measures.

NMEX has also streamlined a complicated dealer evaluation system so that the program can be operated at lower cost and with greater efficiency. It introduced a management program for bottom performance dealers, whereby dealers with low customer satisfaction scores are followed up on an ongoing basis at the management level.

With regard to technology, NMEX has developed software to assess whether the daily service operations at dealerships meet specified standards. This has enabled consistent assessment that is not subject to the skills of individual consultants. Product presentation quality has been upgraded through the aid of mobile devices that enable more efficient and effective product descriptions.

Nissan will continue to make efforts to give customer experiences that only it can provide and to further enhance customer satisfaction.
NISSAN MOTOR COPPORATION SUSTAINABILITY REPORT 2015

The challenges facing modern societies, like climate change and energy, are increasingly global in their scope. As a business with worldwide operations, Nissan pursues its activities on a similarly global scale, with a value chain that extends throughout the world. By improving its CSR management through sharing fundamental values and principles with its business partners, Nissan promotes consistency in the CSR activities undertaken throughout the value chain.

Together with its business partners, Nissan aims to achieve sustainable growth built on a foundation of mutual trust. The company listens carefully to and works with its suppliers and dealers as equal partners, developing and maintaining cooperative and competitive relations that enable it to implement best practices.

VALUE CHAIN

Renault-Nissan CSR Guidelines for Suppliers distributed to:

100% of suppliers

#### **VALUE CHAIN**

#### SCORECARD

#### FY2014 TARGET ACHIEVEMENT RATE: VV ACHIEVED V MOSTLY ACHIEVED × NOT ACHIEVED

Nissan makes year-round use of the CSR scorecard as a fundamental tool to manage, review and validate its progress in each of the sustainability strategies defined for its CSR activities. The table below shows some of the values behind Nissan's ongoing activities and the indices used in the scorecard to gauge the company's performance.

Nissan Priorities	Nissan Objectives	Indicators of Progress	FY2013 Results	FY2014 Results	Assessment	Action Planned for Next Year Onward	Long-Term Vision	
Working with suppliers	Promote thorough understanding and implementation of <i>Renault-</i> <i>Nissan CSR Guidelines for</i> <i>Suppliers</i> to instill CSR principles at suppliers and in the supply chain	Level of implementation of Renault-Nissan CSR Guidelines for Suppliers at suppliers	Continued Renault-Nissan CSR Guidelines for Suppliers requirement when sourcing suppliers and ensured the agreement of all suppliers	To ensure thorough legal compliance with new regulations, revised <i>Renault-</i> <i>Nissan CSR Guidelines for Suppliers</i> (to be deployed in 2015)	~~	<ul> <li>Deploy revised Renault-Nissan CSR Guidelines for Suppliers</li> <li>Continue to ensure the agreement of suppliers with guidelines</li> </ul>	Proceed continuously to ensure legal compliance in the supply chain and thorough understanding and implementation of appropriate measures	
	Conduct conflict mineral surveys to instill CSR mindset in the supply chain Level of implementation of co mineral surveys at suppliers at their supply chain		Conducted surveys in Japan, North America, Europe and China	<ul> <li>Expanded survey scope to include Asia</li> <li>Published Nissan policy and activities on website to ensure thorough understanding and implementation of activities throughout supply chain, including Asia</li> </ul>	44	Continue to conduct surveys		
	Promote management of controlled and banned substances at suppliers to meet environmental regulations		Collected component data for relevant vehicle models from suppliers	Promoted compliance with EU REACH Regulation among suppliers	~~	Continue to promote management of controlled and banned environment- impacting substances at suppliers, in line with Nissan Green Purchasing Guidelines	Continuously advance cooperation with suppliers regarding environmental management to help reduce use of environment-impacting	
	Conduct environmental surveys (CO <sub>2</sub> emissions, wastewater and other waste) at suppliers to reduce environmental impact in the supply chain	Conducting of surveys at suppliers representing more than 70% of total procurement by value	Continued implementation of surveys based on Nissan versions	<ul> <li>Implemented surveys by international NPO CDP, sharing outcomes (focus of CDP's survey activities and survey results) with suppliers to enhance process</li> </ul>	~~	Continue to conduct surveys of CO <sub>2</sub> emissions and wastewater at suppliers	substances	
Working with dealers	Implement the PDCA cycle to make improvements to promotion of CSR activities at sales companies in Japan	Level of implementation of compliance self-inspection program	Continued implementation of twice annual compliance self-inspection program to enhance compliance awareness	<ul> <li>Continued implementation of twice annual compliance self-inspection program to enhance compliance awareness</li> </ul>	~~	Continue to conduct and regularly review self-inspection program	Provide support to help cement voluntary efforts at sales companies	
		Discussion of policies for improvement based on examples of violations	Held June meeting for dealership representatives to share information about examples of violations, improvement policies and training	<ul> <li>Held June meeting for dealership representatives to share information about examples of violations, improvement policies and training</li> </ul>	~~	<ul> <li>Advise and warn dealers based on examples of violations and discuss policies for improvement</li> </ul>		
		Level of implementation of training based on examples of violations and initiatives to prevent violations	Distributed training materials and held training to prevent violations	Distributed training materials and held training to prevent violations	~~	<ul> <li>Prepare training materials based on examples of violations and conduct training as necessary</li> </ul>		
		State of initiatives for building new system to bolster prompt internal information sharing and responses when violations occur	<ul> <li>Implemented a new system to bolster prompt internal information sharing and responses when violations occur</li> </ul>	<ul> <li>To strengthen compliance, maintained system to bolster prompt internal information sharing and responses when violations occur</li> </ul>	~~	Maintain system to bolster prompt internal information sharing and responses when violations occur and review as necessary		

#### NISSAN'S APPROACH TO THE VALUE CHAIN

To promote effective purchasing activities, in 2001 the Alliance partners established a common purchasing company, the Renault-Nissan Purchasing Organization, and steadily increased the scope of its activities. This organization now covers all purchasing domains, incorporates all purchasing functions and builds mutually profitable business partnerships with all suppliers.

Transactions are based on the three important values of trust (work fairly, impartially and professionally), respect (honor commitments, liabilities and responsibilities) and transparency (be open, frank and clear).

Nissan uses a common transparent process worldwide when sourcing suppliers and provides a wide variety of opportunities for other companies to do business with it, regardless of their nationality, size or history with the company. When making selections, the relevant Nissan divisions meet together to examine from a range of perspectives the proposals received from suppliers. Nissan explains its decision to every supplier that has taken part in the sourcing process as part of a thoroughly fair, impartial and transparent system.

Nissan and Renault have produced a booklet, *The Renault-Nissan Purchasing Way*, ★ outlining the values and processes the Alliance sees as important when doing business. This booklet has been shared with the tier-1 suppliers of Renault and Nissan since 2006.

In addition, Nissan has been practicing transactions confirming to "proper trading guidelines" issued by the Ministry of Economy, Trade and Industry for the automotive industry.

➤ Click here to download The Renault-Nissan Purchasing Way.
➤ website

#### **COMPANY ORGANIZATION FOR THE VALUE CHAIN**

#### The Renault-Nissan Purchasing Organization



#### WORKING WITH SUPPLIERS

To make its global supply chain sustainable, Nissan aims to conduct ethically, socially and environmentally responsible business at every stage. The company collates and manages a database of plant locations, total value of purchases and other basic information for all of the suppliers with which it conducts transactions. Building on this understanding of its partners in the value chain and based on the *Renault-Nissan CSR Guidelines for Suppliers* and the Nissan Green Purchasing Guidelines,<sup>III</sup> the company is working together with all of its suppliers to instill CSR principles.

➡ Website
■ Click here to download the Nissan Green Purchasing Guidelines.

#### Renault-Nissan CSR Guidelines for Suppliers

▶ website

To effectively implement CSR practices worldwide, in May 2010, Renault and Nissan published the *Renault-Nissan CSR Guidelines for Suppliers* with reference to the CSR guidelines of the Japan Automobile Manufacturers Association, Inc. It also designed selfassessment checklists. Renault and Nissan have distributed the guidelines to all suppliers worldwide. The Alliance partners have also asked suppliers to further distribute them to secondary and tertiary business counterparts to ensure they are shared throughout the supply chain.

> Click here to download the Renault-Nissan CSR Guidelines for Suppliers.

Via explanations in the following five areas, the guidelines aim to help suppliers review their business activities from a CSR viewpoint and implement CSR activities.

- Safety and Quality: Providing products and services that meet customer needs, etc.
- 2 Human Rights and Labor: Prohibition of child labor and forced labor; compliance with working hour and remuneration laws, etc.
- Environment: Implementation of environmental management; reduction of greenhouse gas emissions, etc.
- Ocmpliance: Compliance with laws; corruption prevention, etc.
- Information Disclosure: Open and impartial communication with stakeholders, etc.

Chapter 3 of the guidelines, "To Our Suppliers," mandates compliance with laws and regulations. If suppliers engage in activities that violate legal compliance, they are to report this immediately, along with investigation results, and submit corrective countermeasures. In case of infringement, Nissan will take rigid actions based on its company rules and do everything necessary to prevent a recurrence.

When the guidelines were published in 2010, a section on compliance with laws and regulations was incorporated into the basic contract; Nissan confirms this section with all new business partners.

In 2014, Nissan began discussions regarding amendment of the guidelines to respond to new laws and standards, to reinforce thorough legal compliance and to instill CSR practices at business partners in emerging countries.

#### Confirming CSR Observance at Suppliers

Nissan oversees its suppliers observance of CSR requirements by confirming their acceptance of the *Renault-Nissan CSR Guidelines for Suppliers* and by checking their environmental management systems and environmental activities to be conducted with Nissan at time of selection. The company also conducts CSR training in its purchasing department to ensure that employees there are equipped to check supplier CSR activities during routine operations.

Any problems in the supply of parts and materials may lead to problems for Nissan's production and the value chain as a whole. The company therefore addresses CSR comprehensively, including confirmation of risk affecting suppliers' ability to supply under normal circumstances; suppliers' quality, cost, delivery, development, management (QCDDM) performance; and measures crafted together with suppliers in response to natural disaster risk to ensure production continuity or early restoration of capacity.

Nissan constantly assesses the situation at suppliers based on a range of factors. If cases of high risk emerge, the company works with suppliers to rapidly draft and implement countermeasures.

#### Suppliers and Environmental Activities

Nissan shares its environmental philosophy and its environmental action plan with suppliers. To improve environmental performance throughout the value chain, Nissan published the Nissan Green Purchasing Guidelines<sup>III</sup> in 2001, requiring suppliers' cooperation. The guidelines offer a more detailed explanation of the environment section in the *Renault-Nissan CSR Guidelines for Suppliers*.

 Click here to download the revised version of the Nissan Green Purchasing Guidelines.

#### VALUE CHAIN

Environmental activities at suppliers are based on the core components of compliance with environmental regulations and Nissan's basic environmental principles and activities to reduce environmental load.

To reflect trends in regulations worldwide, such as the European Union's Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) Regulation and the European Reusability/Recyclability/Recoverability (RRR) Directive, Nissan has also added further banned substances and expanded component data management globally. Further, the company checks environment-loading substance management and activities when suppliers are selected for new cars. Nissan informs suppliers of specific actions to comply with the REACH Regulation and requires their compliance.

Based on the Nissan Green Program 2016, № the company's mid-term environmental action plan, Nissan began environmental data surveys at suppliers in fiscal 2012 to ascertain CO2 emissions, water usage and other data related to environmental load. The company publishes the results of these surveys.

▶ page 24

2016. Note that the second sec

The Role of the Nissan Green Purchasing Guidelines

The Renault-Nissan Purchasing Way Basic Alliance principles for purchasing Nissan Green Program 2016 Shared values with suppliers (trust, respect, transparency) Mid-term environmental action plan Supplier sourcing process Support for suppliers Nissan Green Purchasing Guidelines **Renault-Nissan CSR Guidelines for Suppliers**  Compliance with regulations and Nissan's Safety and quality

- Human rights and labor
- Environment
- Compliance
- Information disclosure

- basic environmental principles
- Establishment of management system
- Management of chemical substances
- Activities to reduce environmental load
- Completion of surveys on CO<sub>2</sub> emissions, water usage, other environmental factors

#### Promotion of Monozukuri Activities with Suppliers

Nissan has been working to continually improve the competitiveness of its products through its Monozukuri Activities program, a collaboration among suppliers and Nissan that commenced in 2008. Since 2009, these activities have expanded through the joint Thanks Activities initiative, which emphasizes trust and cooperation between Nissan and its suppliers. With the goal of working with suppliers to become cost leaders in today's challenging market conditions, the company is striving to improve product quality, reduce costs and rationalize manufacturing through measures that include increasing production volume per part, promoting localization and improving logistics.

In fiscal 2013, Nissan introduced the Total Delivered Cost (TdC) Challenge as part of efforts to achieve the goals of its midterm business plan, Nissan Power 88. The initiative aims to optimize all fluctuating costs, including for specifications, materials, exchange rates and logistics. Nissan's various functional departments and suppliers are coming together to make strong efforts in the TdC Challenge and improve both quality and supply.

 Click here for more information on the mid-term business plan, Nissan Power 88.

#### **Engagement with Suppliers**

Providing suppliers with timely and accurate information is a key task for Nissan. Suppliers' meetings are held in Japan and overseas to spread understanding of the company's purchasing policy for the fiscal year and mid-term business plan, as well as other matters. In the case of Japan, Nissan holds monthly meetings and directly informs suppliers of its production plans and various activities and requirements. The meetings are also an opportunity for Nissan to respond to supplier questions and requests.

#### VALUE CHAIN

#### **Recognizing Supplier Contributions Worldwide**

Each year Nissan recognizes the contributions of its suppliers with awards presented in each of the regions where it operates, as well as with two worldwide supplier awards, the Global Quality and Global Innovation Awards. These are presented to suppliers that have contributed to its business performance at the global level. This awards system aims to encourage suppliers in the global supply chain to embrace Nissan's management approach, which balances the economic activities of quality, cost reduction and technological development with environmental concern and social responsibility.

Global Quality Award recipients are selected by Nissan's purchasing, quality and other divisions using standard criteria applied worldwide. Global Innovation Award recipients are selected from suppliers nominated by its production, development and quality divisions in the two categories of product technology and process management. In fiscal 2014, five companies received Global Quality Awards, and Global Innovation Awards went to 11 companies in the product technology category.

#### **Conflict Mineral Policy and Measures**

In August 2012, the U.S. government enacted regulations requiring companies to report the use of four minerals mined in the Democratic Republic of the Congo and surrounding countries, which were believed to be sources of funds for armed insurgents. Agreeing with the spirit of this legislation, Nissan investigated the supply chain for any use of conflict minerals and established a policy aimed at the nonuse of conflict minerals, announcing related information on its website. Investigations began in fiscal 2013.

 Click here for more information on Nissan's conflict mineral measures. The search for conflict minerals throughout the global supply chain is a large-scale undertaking. Nissan works together with organizations including the Japan Automobile Manufacturers Association, Inc., the Japan Auto Parts Industries Association and the Japan Electronics and Information Technology Industries Association and regularly discusses the issue in working groups, while considering the best methods for investigation and result analysis.

#### VALUE CHAIN

#### WORKING WITH DEALERS

Nissan undertakes various measures to ensure that its approach to compliance is shared with dealerships and to enhance its internal controls. The company is strengthening lines of communication with dealers to further improve its CSR management.

#### Working with Dealers for CSR Management

To promote consistency in the CSR management approaches taken by Nissan and its dealers, the company carries out activities on an ongoing basis aimed at helping dealerships in Japan enhance their compliance.

Twice a year Nissan organizes self-inspection programs at all dealerships to enhance understanding of compliance matters and improve their compliance management status. The dealerships check their current compliance status and issues based on Nissan's self-assessment checklists and use the PDCA (plan, do, check, act) cycle to make voluntary improvements. Nissan also updates, edits and expands the checklists based on audit results, informing dealerships of changes and ensuring compliance. The program status is shared among dealerships and applicable Nissan departments and reports are made to the Board of Directors. Through measures to check improvements and their effectiveness, and by ensuring that its sense of compliance is shared with dealerships, Nissan strives to further improve its CSR management.

When major compliance issues occur, legal, communications, external and government affairs and other applicable Nissan departments work together with dealers to take appropriate action.

#### **Compliance Training for Sales Companies**

Nissan conducts the following initiatives as part of training for sales companies:

#### Regular Revision of Code of Conduct

Every three years, Nissan revises its Code of Conduct<sup>®</sup> in response to legal amendments and social demands of corporate ethics. Nissan trains its employees concerning revisions and ensures thorough knowledge and implementation of the updated code. Nissan also holds training at sales companies based on the Nissan Code of Conduct. The last revision of the Code of Conduct was in October 2013.

 ▶ page\_105
 Click here for more information on the Nissan Global Code of Conduct.

#### **Bolstering Information Security and Preventing Harassment**

Based on teaching materials that cover the same topics as those taught in Nissan's e-learning courses, each sales company implements information security training to avert risks arising from serious incidents occurring in the course of daily activities, such as virus infections, unintended e-mail transmissions and information leaks due to misplaced or stolen PCs.

Examples of inappropriate posts on social networking services or blogs that are in violation of Nissan's global social media policy are shared with sales companies, which further share these internally to help prevent such posts. In an effort to enhance awareness and prevent recurrence, Nissan shares information on the potential adverse impact, not just to the sales company but also to the Nissan Group as a whole, when such posts are made.

In the light of growing social interest in abuses of authority and incidents of such abuse at sales companies, Nissan is providing training materials with a focus on power harassment. Since fiscal 2012, sales companies have implemented training on such topics as "examples of acts and statements that constitute harassment," "what impact a harassment case can have," "past incidents involving sales companies" and "what steps should be taken when a case comes to light." In fiscal 2014, sections of the training materials, principally relating to "examples of acts and statements that constitute harassment," were updated with reference to recent cases.

For more about activities with dealers, see the following sections.

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# NISSAN

# EMPLOYEES

The needs of customers are becoming increasingly diverse. To meet these needs Nissan employees from different backgrounds must work together. Employees are the driving force for the sustainable growth of Nissan. Therefore, the company places great importance on establishing a workplace that maximizes the performance of all.

The global expansion of Nissan's corporate activities has meant the growing diversification of not only Nissan's customers but also its employees. Work and lifestyle choices are changing, driven by demographic changes such as an aging

population and urbanization. Nissan believes that for employees to work in a worry-free, self-initiated manner, they need to be able to pursue their careers regardless of gender, nationality or other factors and to choose from among various work styles to suit their particular stage of life.

EMPLOYEES

The workplace environment is being strengthened around four pillars: "respecting diversity as a core component of management strategy," "offering career development and learning opportunities," "ensuring employee safety and health" and "strengthening internal communication." Ratio of managerial posts filled by women (Japan):



EMPLOYEES

#### **EMPLOYEES**

#### SCORECARD

#### FY2014 TARGET ACHIEVEMENT RATE: VV ACHIEVED V MOSTLY ACHIEVED × NOT ACHIEVED

Nissan makes year-round use of the CSR scorecard as a fundamental tool to manage, review and validate its progress in each of the sustainability strategies defined for its CSR activities. The table below shows some of the values behind Nissan's ongoing activities and the indices used in the scorecard to gauge the company's performance.

Nissan Priorities	Nissan Objectives	Indicators of Progress	FY2013 Results	FY2014 Results	Assessment	Action Planned for Next Year Onward	Long-Term Vision
Respect for diversity	Raise the ratio of women in managerial positions to 14% or higher globally (10% or higher in Japan)	Ratio of women in managerial positions	Global: 10.6% Japan (Nissan Motor Co., Ltd.): 7.1%	Global: 12.0% Japan (Nissan Motor Co., Ltd.): 8.2%	~~	Japan: Enhance career support for female employees and work-life management for all employees     Global: Implement measures in line with situation in each country	Provide greater value to customers through diversity-enhanced work and personal lives of employees
Career development and learning opportunities	Build a learning-oriented corporate culture	The lowest of the average scores for each course in annual trainee satisfaction surveys (on a scale of 1 to 5)	4.4 or higher	4.2 or higher	~	Provide learning opportunities that lead to employee growth and satisfaction     Achieve trainee satisfaction scores of 4.4 or higher	Create a learning-oriented corporate culture and an organization that allows individual employees to achieve growth
	Strengthen support for self- initiated career development	Open Entry (program under which employees can apply for advertised position openings) fill rate	73%	64%	~~	<ul> <li>Raise the Open Entry fill rate by improving matches between available positions and applicant careers</li> </ul>	Provide support for career development that emphasizes employees' voluntary action
Building safe workplaces	Strengthen efforts to create a safe work environment	Lost-time injuries frequency rate (global) (Total lost-time injury cases + total working hours × 1 million)	1.20	0.95	~~	<ul> <li>Institute the safety auditing methods developed in Japan</li> <li>Develop safety management supervisors in each country</li> </ul>	Globally implement the same thoroughgoing safety management standards as in Japan
Dialogue with employees	Aim for high implementation and participation rates of employee satisfaction surveys to better capture employees' views	Number and participation rate of global and regional employee satisfaction surveys	Preparation of surveys	Conducted global employee satisfaction surveys of employees in North and Latin America, Europe, Middle East and Asia; global participation rate of 95% achieved	~~	<ul> <li>Regularly conduct satisfaction surveys and make ongoing improvements based on survey results</li> </ul>	Apply the findings of employee satisfaction surveys to create workplaces that enable workers to make maximum use of their skills



#### NISSAN'S APPROACH TO EMPLOYEES

Nissan strives to create a meritocratic workplace where employees are motivated to rise to challenges and are able to work safely and comfortably. Nissan ensures employee rights by requiring that all employees respect the human rights of others and forbids discrimination against or harassment of others based on race, nationality, gender, religion, physical capability, sexual orientation, age, place of origin or other reason. Nissan employees are empowered to report the discovery of discrimination in the workplace. By respecting employee diversity, Nissan promotes the establishment of a work environment that maximizes the performance of every employee and encourages teamwork to achieve ambitious goals.

The company has established the Nissan Global Code of Conduct, 
→ which applies to all Group employees worldwide. It describes how employees should act, and the standards apply globally to all Nissan Group companies.

The Nissan Way is a guiding principle that aims to ensure sustainable growth by motivating each employee. Based on the company's belief that "the power comes from inside," the Nissan Way outlines five mindsets and five actions. The Nissan Way is

 Click here for more information on the Nissan Global Code of Conduct. implemented throughout the Group to ensure that the activities of all employees lead to value creation for the customer.

The Nissan Way has been made available to employees worldwide in eight languages (Japanese, English, French, Chinese, German, Spanish, Dutch and Russian). It places importance on approaching all issues with clarity and shared understanding as well as nurturing a mindset to achieve maximum results with minimum resources. It also encourages employees to pursue ambitious goals. Welcoming diversity by being inclusive of a variety of views can establish a work environment that maximizes the performance of every employee—regardless of gender or nationality—and engender new thinking that can contribute to the company's business performance.

Nissan employees are educated regarding the Nissan Way and are evaluated based on its principles. Best examples of implementing the Nissan Way are shared globally, and top executives communicate its importance throughout the company in an effort to promote its value.

#### "The power comes from inside"

The focus is the customer, the driving force is value creation and the measurement of success is profit.

#### **Mindsets**

#### 1 Cross-functional, Cross-cultural

Be open and show empathy toward different views; welcome diversity.

Ø Transparent

Be clear, be simple, no vagueness and no hiding.

S Learner

Be passionate. Learn from every opportunity; create a learning company.

4 Frugal

Achieve maximum results with minimum resources.

6 Competitive

No complacency, focus on competition and continuous benchmarking.

#### Actions

#### Motivate

How are you energizing yourself and others?

- Ommit and Target Are you accountable and are you stretching enough toward your potential?
- 8 Perform
  - Are you fully focused on delivering results?

#### 4 Measure

How do you assess performance?

#### Challenge

How are you driving continuous and competitive progress across the company?

#### EMPLOYEES

#### HR ORGANIZATION

Nissan maintains three human resource management initiatives centered on (1) a specialized Center of Expertise, (2) human resources by function and (3) human resources by region. These three approaches, respectively, support Nissan's global operations, the Renault-Nissan Alliance and management by function and region. Regarding human resource management by region and function, reports are submitted not only to executives in charge of human resource matters but also to those responsible for each region and function. Also, an organization independent of the human resources function exists for diversity promotion.

#### Human Resource Management Structure



As of March 2015

#### **RESPECT FOR DIVERSITY**

Fostering diversity is an important management strategy at Nissan. The company undertakes a number of initiatives to realize the goal of achieving sustainable corporate growth while respecting diversity.

#### Promoting Diversity Around the Globe

Nissan's diversity policy is determined by the Diversity Steering Committee (DSC), comprising executives representing each business division. The DSC plays a leadership role in promoting diversity in Japan and Europe, while in North America, this role is performed by the Americas Diversity Council (ADC). The Diversity Development Office (DDO) is a department dedicated to diversity issues in Japan, and the Americas Diversity Office is charged with promoting diversity in North America. In other markets, diversity is promoted by the human resource and other departments.

#### Global Structure for Diversity Promotion

Region	Promoting Body	Office in Charge
Japan (Global Headquarters)	Diversity Steering Committee	Diversity Development Office
North America	Americas Diversity Council	Americas Diversity Office
Europe	Diversity Steering Committee (Europe)	Human Resources and General Affairs (Europe)
Latin America and the Caribbean	-	Governmental Affairs and Social Responsibility
Africa and the Middle East	-	Human Resource Division (Africa and the Middle East)
Asia and Oceania	-	Human Resource Division (Asia and Oceania)

#### Diversity as a Source of Strength

For Nissan, diversity is a source of strength. Ideas and perspectives contributed by employees from diverse backgrounds—in terms of gender, nationality, culture, age, academic background and lifestyle—can produce creative solutions with higher value, leading to enhanced corporate performance. Diversity rests at the foundation of Nissan's business strategy to meet the diverse needs of global customers by offering better products and services. All Nissan facilities are engaged in efforts to harness workplace diversity in the areas of gender and culture. Nissan strives to increase female employees' participation, while also actively exploring ways to create higher value through cultural diversity; in particular, by utilizing the cross-cultural nature of the Alliance formed with Renault in 1999.

Work-life management is a key component of Nissan's efforts in Japan, where all employees, regardless of their gender or age, may flexibly choose a suitable lifestyle for their particular stage in life. To ensure a workforce in which female employees boast a diverse range of skills, Nissan Motor Co., Ltd. has guidelines calling for 50% of newly hired office workers, 15% of engineers and 20% of technicians to be women. In North America, employees with diverse backgrounds in terms of race, sexual orientation and military service contribute to enhancing Nissan's corporate value. In Europe, Nissan is advancing cross-cultural corporate initiatives with many Alliance partners.

The company also undertakes a full set of initiatives to nurture a diversity-oriented mindset among all employees to reinforce a corporate culture that respects diversity.

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Click here for more information on Nissan's diversity.

#### **Global Initiatives to Support Women's Participation**

Since fiscal 2004 ongoing support has been provided for the participation of female employees in two main areas: career development and the business process.

#### Supporting Women's Career Development Around the Globe

The participation of women, particularly in management positions, is essential to providing diverse value to customers. Nissan focuses on increasing female representation in all levels of management and providing training to ensure that top candidates will be ready to take on greater responsibility. Support is provided for women's career development in every region where the company operates. Specifically, activities are organized that are geared toward female employees, including skill-development training courses and networking events. Examples of career development initiatives include mentoring programs and roundtables led by Nissan executives.

In Japan, Nissan provides personalized support for female employees through individual counseling sessions with career advisors. Career development meetings are organized for young female employees so they may network with other professional women outside of the company and with women who have risen into management roles in Nissan. Interviews with senior female employees contributing in a variety of fields within the company are posted on the corporate intranet to encourage more women to develop their careers.

As a result of a broad range of efforts, women comprise 6.4% of general and higher-level managers in Japan (as of April 2015), more than triple the 2% in 2008, and a total of 8.2% of managerial positions are filled by women. This compares

#### EMPLOYEES

favorably to the average of 3.1% for Japanese manufacturers with 1,000 or more employees (according to 2014 statistics from Japan's Ministry of Health, Labor and Welfare).

As of April 2015, women fill 12.0% of the managerial positions at Nissan globally, up from 7% in 2008. Nissan plans to raise the global ratio of women in managerial positions to 14% by April 2017, with many being appointed to overseas assignments.

#### Global Ratio of Women in Managerial Positions



#### Women's Forum

The Renault-Nissan Alliance sponsors the Women's Forum for the Economy and Society, which is an international platform to promote the advancement of women in the workplace. The annual global meeting in France gives women an opportunity to build networks and expand horizons through dialogue with their counterparts in diverse industries and by participating in workshops. Employees from Nissan Group companies around the globe are selected to participate in the meeting each year, and 11 took part in 2014.

#### Inviting Women's Input in the Business Process

In Japan, women have a significant influence on car-buying decisions, as 30% of all cars are purchased by women and roughly another 30% of purchases are by men with input from women, meaning that women participate in nearly two-thirds of vehicle purchase decisions. A similar trend can be seen globally as well. Adopting female employees' views is essential for meeting diverse customer needs worldwide.

Nissan facilitates input from female employees—including those working at affiliated and sales companies—in all stages of its business, from the development of new vehicles through their manufacture and sales. Models like the Nissan Note global compact car have benefited from women's recommendations. For example, designers and engineers adopted the recommendation to adjust the rear door's opening angle to make it easier for both men and women to access child seats. In the assembly stage as well, Nissan promotes ergonomic design of equipment and work processes at its manufacturing plants to benefit female workers. As a result, this benefits women while at the same time effectively increasing efficiency and reducing errors for all employees.

Nissan sales staff must also respond to the needs and guestions of men and women customers alike. The Nissan Ladies First Project was launched in fiscal 2013 to introduce shop designs and services with female customers in mind. A pivotal role in the project is played by female CAs, or car-life advisors. Both male and female customers report high satisfaction with Nissan's female CAs, and the company is making efforts to offer training and improve the work environment to give female employees more room to succeed. A workshop for female CAs under the Ladies First Project was held in November 2014, in which 251 female CAs—a third of the national total—participated. The goal is to increase the number of new customers by raising the awareness and skill levels of individual CAs. A Ladies First Shop certification program has also been launched to enhance the satisfaction of female customers with not only their showroom but also their after-sales service experiences. Some 108 shops nationwide (as of April 2015) offer special services for female customers.

Nissan also employs women as technical advisors (TAs) to help facilitate the vehicle maintenance process for customers. Nissan has received a positive response for the polite and responsible service provided by the female TAs, thereby contributing to the enhancement of customer satisfaction of sales companies. Workshops for new female TAs are held to promote networking and the sharing of information.

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#### A Firm Grounding for Cultural Diversity

Nissan recognizes the need to make full use of the strengths and abilities of its multinational, multicultural family of employees in order to develop its business globally. The company is working to leverage the synergy created through the cross-cultural Alliance with Renault, which not only recognizes and accepts cultural differences but also seeks to make cultural diversity a source of strength. Overseas job transfers have increased in recent years, and many transferees, both men and women, are no longer necessarily from Japan, the United States or other major markets. This is seldom seen at other global businesses and demonstrates Nissan's commitment to this area.

Nissan makes cultural diversity an integral part of its corporate culture. A vital part of the company's success rests on ensuring that people are welcome no matter where they come from, what language they speak, how old they are or what their background or training is. Nissan's top decision-makers, for example, often have different citizenship from the place where the company is headquartered, as can be seen from the company's Executive Committee, which is 50% Japanese and 50% non-Japanese. To more efficiently promote Nissan's partnership with Daimler and AVTOVAZ, efforts are being made to expand the share of managerial staff in Europe who speak German or Russian.

To help employees utilize cultural differences as a source of strength, the company has designed its e-learning program as a course open to anyone at any time. In Japan, for example, this enables Japanese people to learn skills for understanding and communicating with business partners of different cultural backgrounds, so that they can work together to get results. Training sessions cultivate a better understanding of specific countries with which Nissan enjoys particularly close relations, and further efforts are underway to make cultural diversity an integral part of Nissan's corporate culture.

### Nissan's Diversity Mindset

Nissan carries out regional diversity events and diversity training for employees around the world. All employees can learn about the company's diversity vision through the articles and videos that have been posted on the intranet site.

In Japan, those newly assigned to the post of manager undergo a training program that helps them understand the importance of diversity, learn how to best utilize employee diversity and think about how diversity can be useful in the company's business activities. Given the likely rise in the number of employees who must care for aging parents, a seminar was held in 2015 that offered employees basic knowledge about nursing care and prompted them to think about how they can best balance their work and caring needs by taking advantage of the company's policies and community services. Seminars were also conducted on various diversity issues, like the inclusion of and issues faced by lesbian, gay, bisexual and transgender (LGBT) individuals.

Nissan believes that embracing diversity is essential to growing as a trusted company. To instill this awareness among all managers and employees, a program called Championing Diversity was held in the United States. The program is designed to enhance workplace communication among colleagues with diverse backgrounds and viewpoints and to produce results through cooperation among multiple teams.

In Europe, a multicultural effectiveness training program was conducted to raise awareness of cultural differences and to support all employees working in a multicultural environment.

And in Australia, an event was held enabling participants to experience working with people from different countries and to help develop a cross-cultural mindset.

#### Work-Life Management for Employees (Japan)

Nissan believes in the importance of enabling individual employees to both achieve personal growth and make positive contributions to the company. There has been a growing diversification in the stages of life accompanying the globalization of the business environment. To enable both men and women to apply their competence and to continue performing at their best, they require work formats allowing them to work around time constraints and to pursue productivity on an hourly basis. Nissan has implemented a system offering flexible working arrangements to enable employees to effectively balance work with family responsibilities, such as childcare and nursing of elderly relatives. Arrangements to help employees of both genders strike an appropriate work-life balance in Japan include "Family Support Leave," which allows an employee to take time off for a wedding, the birth of a child, child rearing or nursing care; reduced working hours and home-based telecommuting for employees to provide childcare or nursing care; and the establishment of "March Land" daycare centers. The first March Land, at the Technical Center in Atsugi, Kanagawa Prefecture, was followed in fiscal 2012 by daycare facilities at the Global Headquarters and at the Nissan Global Information System Center.

A system is needed whereby employees can adhere to the work style of their own choosing, taking advantage of the available work-life support programs in pursuing the careers they desire, even in the face of such life events as the need to care for young children or elderly parents. Nissan conducts seminars before an employee takes a leave of absence or returns to work, providing them with hints so they can return in a positive frame of mind and with the full understanding and cooperation of those around them. Personal computers are loaned to Nissan employees during their leave so they can stay in touch with the workplace. Opportunities for meetings with supervisors regarding life-work support are being enhanced, and supervisors are being provided with information and workshop opportunities so they can properly support the balance of employees' childcare and career needs.

Employees may take a leave of absence for up to three years to accompany their spouses when they are transferred overseas. A reemployment policy is available for those wishing to restart their careers after being forced by circumstance to leave the work force.

Employees may also use the internal social networking site "Work/Life Park" for sharing information to support the balance between their career and childcare needs. Nissan has been recognized by the Japanese government as a corporation actively promoting childcare support, successfully implementing programs to achieve the goals set forth in the action plan of the Ministry of Health, Labor and Welfare based on an April 2005 law outlining measures to support the development of future generations.

Since January 2014, all employees<sup>™</sup> in Japan have been able to work at home up to five days a month (equivalent to 40 hours) as part of the company's work-life management policy. By working at home, they can use the time that had been spent commuting to meet childcare or nursing needs, enabling them to fulfill personal responsibilities without sacrificing working hours. This policy also enables employees without caregiving responsibilities to effectively apply their commuting time toward other uses. This policy requires close team effort and can thus lead to improved workplace productivity. More than 2,000 workers have registered for this system, regarded as a pilot program for possible extension to workplaces outside Japan.

#### Indirect employees.

Click here for more information on the Work-Life Balance
 Promotion Project of Japan's Ministry of Health, Labor and Welfare
 (Japanese only).

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#### Career Support Systems for Nissan Employees



#### Support Systems for Childbirth and Childcare (Japan)



#### EMPLOYEES

**Top-Down and Bottom-Up Approaches to Promoting Diversity** Nissan believes that both top-down and bottom-up approaches are needed to promote diversity. Diversity becomes a pervasive concept when activities spearheaded under the strong leadership of executives are combined with initiatives from the floor.

Regarding the bottom-up approach, Nissan emphasizes selfinitiated opportunities for learning. Female engineers at the Nissan Technical Center (NTC) and Nissan Advanced Technology Center (NATC) in Atsugi, Kanagawa Prefecture, have launched a team effort to consider ways to balance work with life. Trials began in fiscal 2012, and full-scale activities kicked off in fiscal 2013. Participants acquire knowledge on ways to sustain their careers by sharing tips, seeking each other's advice and conducting interviews with female role models.

In the United States, employee-driven Business Synergy Teams (BSTs) have been launched with management support to leverage diversity to achieve business objectives, expand crossfunctional interaction and assist with community outreach. These BSTs are operated from Nissan's North American headquarters in Franklin, Tennessee, R&D facility in Farmington Hills, Michigan, and the Dallas-based Nissan Motor Acceptance Corporation (NMAC), as well as at production facilities in Smyrna and Decherd, Tennessee, and Canton, Mississippi.

#### **Employee-Driven BSTs Enhance Work Environments**

BSTs link Nissan's diverse workforce under a common theme, and members have highly specialized knowledge. There are currently 19 BSTs across the United States, including the Women's BST (WBST), the first such group, established in 2007. This was followed by the creation of the Multicultural BST (MBST), which aims to enhance the company's customer-relations capabilities through cross-cultural communications and awareness. There are also a Generational BST and a Gay-Straight Alliance BST.

In 2013, the WBST began a program to encourage young women to consider careers in technical fields by partnering with Microsoft Corp. It organizes "Digigirlz," a oneday event in which high-school-aged girls participate in activities that expose them to the specific ways Nissan uses technology to create and market its innovative products. Also featured are presentations by Nissan executives who describe their careers and experiences as engineers, helping participants understand and consider an engineering career.

In 2014, health-focused BSTs were established at Nissan facilities around the United States. The Wellness Team at NMAC in Dallas, Texas, is engaged in promoting not just physical and mental health but all dimensions of well-being.

By voluntarily participating in BSTs, employees can apply what they have learned to create a more highly motivated and dynamic work environment while they contribute to Nissan's promotion of diversity.

#### Enhancing Workplace Diversity in the Americas Regional diversity initiatives

Nissan North America (NNA) has established a regional diversity steering committee for the Americas to create accountability and provide guidance to diversity initiatives in the region. NNA has also established regional offices to coordinate diversity initiatives in the United States, Canada, Mexico and Brazil.

#### Mentoring program for female and minority employees

Mentoring is an important tool for raising the motivation and performance of Nissan's staff, particularly women and minorities. NNA offers mentoring in a variety of formats—closed and open, private and in small groups, and theme-based activities. The company evaluates the achievements of the program and makes improvements on an ongoing basis.

#### Supplier diversity

NNA is committed to encouraging relationships with diverse suppliers. This commitment is grounded in the definitions of minority-owned and woman-owned businesses developed by the National Minority Supplier Development Council (NMSDC) and Women's Business Enterprise National Council (WBENC).

#### Diversity in the community

NNA also fosters future leaders by investing in student programs and offering students opportunities to pursue careers in science, technology, engineering and math (STEM) fields. Together with major scholarship programs for students from disadvantaged areas, NNA's diversity recruitment group works to improve internship and employment opportunities for these students.

#### Future Issues in Promoting Diversity

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It has been 10 years since Nissan announced its proactive commitment to diversity. The company has placed great importance on understanding and respecting other cultures, as 80% of vehicle sales are now in markets other than Japan and as opportunities to work with partners around the globe have expanded. Women are actively working in a variety of fields at Nissan Group companies worldwide, and the share of women in managerial positions is steadily rising.

A key theme henceforth will be to enable all employees, regardless of gender or nationality, to perform at their best in a global business environment under flexible and efficient work arrangements.

Nissan will continue to vigorously pursue diversity as a corporate strategy by promoting the efforts of diverse human resources, thereby reinforcing organizational strength and maximizing business results.

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**Recognition for 10 Years of Diversity at Nissan** 

Nissan established the Diversity Development Office (DDO) in Japan in 2004 to play a principal role in supporting the advancement of female employees and promoting multicultural understanding. These efforts to enhance Nissan's diversity and the value it places on a diverse workforce have not gone unnoticed.

In 2015, Nissan earned a spot as a Nadeshiko (active utilization of women) brand for the third consecutive year since 2013. The company was also awarded Japan's Minister of State for Special Missions Prize at the Advanced Corporation Awards for the Promotion of Women, an award established in 2015 by the Gender Equality Bureau of the Japanese government's Cabinet Office. It also won the prize for excellence at the 15th Tele-work Promotion Awards, sponsored by the Japan Telework Association, for expanding teleworking opportunities and promoting its fuller utilization in the workplace.

These awards are a clear sign that Nissan's commitment to diversity is producing results and that the company is on the right track in making cross-cultural and gender diversity key elements of its competitive strategy.

#### Nissan's Awards for Diversity

Year	Award	Sponsor
2007	Kurumin Mark	Ministry of Health, Labor and Welfare
2008	Catalyst Award	Catalyst Inc. (U.S.)
2008	Grand Prize, First Annual Diversity Management Awards	Toyo Keizai, Inc.
2012	Environmental, Social and Governance (ESG) Theme Issue List	Tokyo Stock Exchange Inc.
2013	Grand Prize, J-Win Diversity Awards	J-Win
2013	Diversity Management Selection 100	METI
2014	Executive Award (Individual Prize) for Vice Chairman Shiga, J-Win Diversity Awards	J-Win
2014	DiversityInc Top 25 Noteworthy Companies for Diversity & Inclusion	DiversityInc (U.S.)
2015	Japan's Minister of State for Special Missions Prize, Advanced Corporation Awards for the Promotion of Women	Gender Equality Bureau, Cabinet Office
2015	Prize for excellence, 15th Tele-work Promotion Awards	Japan Telework Association
2015	Perfect Score (100) in Corporate Equality Index (2nd straight year)	Human Rights Campaign (U.S.)
2015	Nadeshiko Brand (3rd straight year)	METI and TSE

Nissan was the recipient of other awards in the United States.

#### CAREER DEVELOPMENT AND LEARNING OPPORTUNITIES

Nissan believes that employees should "design their own careers" and that the company should actively assist their efforts to do so. Learning is an essential preliminary step for value creation, and a corporate culture of learning cannot exist without the desire to create value. As an organization that grows through constant learning, Nissan supports employees' personal growth through proactive human resource development.

#### **Continually Improving Human Resource Systems**

Nissan values the skills and potentials of all employees, working constantly to improve its human resource systems to achieve an organization empowering employees to reach their full potential. The evaluation-based remuneration system used to accurately gauge employee contributions is structured in a way that motivates them to set and achieve high goals. An employee's salary is determined through a combination of performance evaluations, which measure how well the employee achieved certain goals (commitments), and competency evaluations, which measure their skills, knowledge and attitude.

#### Support for Self-Designed Careers

Under a human resource management policy of offering employees opportunities for personal growth and satisfaction as long as they create value, Nissan invites employees to meet with their supervisors at least twice a year to discuss their performance and competency evaluations, as well as their career aspirations and goals.

Training programs to raise the evaluation skills of supervisors also contribute to the enhancement of career designing capabilities of employees. Specialized tools keep track of evaluation records so that even a newly instated supervisor can ascertain employee progress at a glance, maintaining consistency in human resource development. Nissan conducts surveys to gain employee input regarding the evaluation meetings and to learn their level of understanding and comfort with the system. Based on the results, the company implements measures and makes improvements if necessary. Nissan also monitors employee satisfaction regarding the meetings with their supervisors, and there has been an improvement in employee understanding and acceptance of the evaluation system.

Employees in Japan also have the chance to take on the challenge of a new position through the Shift Career System (SCS) and the Open Entry System (OES). The SCS enables employees to apply for positions in other departments and work in areas that interest them regardless of whether there is a position immediately available. The OES allows them to apply for all openly advertised positions. During fiscal 2014, 167 employees applied for 113 open posts, and 72 of them succeeded in getting the positions they applied for.

#### **Offering Learning Opportunities**

Within the company, Nissan implements training programs allowing employees to gain the task-specific skills they need and giving them opportunities to extend their knowledge in fields of their choosing. These measures create a culture of constant learning at Nissan.

#### Training Programs at Global Headquarters in Japan

FY2012	FY2013	FY2014
13,834	13,078	14,007
411,727	393,370	452,631
16.9	16.6	19.4
over 4.3	over 4.4	over 4.2
67,200	70,000	71,700
	13,834 411,727 16.9 over 4.3	13,834         13,078           411,727         393,370           16.9         16.6           over 4.3         over 4.4

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#### Nissan Learning Center

The Nissan Learning Center is a specialized training institute established to offer employees high-quality and timely skill development opportunities. The center provides training for middle-management and staff-level human resources based on the Nissan Way and structured around the four pillars of "enhancing familiarity with the Nissan Way," "improving management skills," "improving business skills" and "improving technical skills." The center also operates Monozukuri University to enhance the skills of Nissan's core manufacturing-related human resources.

#### Monozukuri University

The auto industry today is marked by the rapid pace of innovation and increasing technological sophistication. To maintain and develop Nissan's *monozukuri* tradition of careful craftsmanship that underpins the company's internationally competitive product manufacturing, individuals are needed with an understanding of the latest technologies that go into building an automobile and have a well-rounded personality with outstanding management skills. Monozukuri University was set up within the Nissan Learning Center to develop capable leaders who can pass down Nissan's technologies and skills to future generations. It offers a variety of programs aimed at developing engineers and technicians who carry forward the "Nissan DNA" and achieve continued success through the implementation of the Nissan Way. The "university" comprises Nissan Technical College, the School of On-Site Management and the School of Engineering.

#### Technical Education Around the World

To support Nissan's efforts to expand its business globally, the company must improve the technical skills of individual employees working across the globe. The company offers opportunities for personal growth equally to all employees in both R&D and production, whether they work in Japan or elsewhere, to help them enhance their capabilities.

### Global Training Program Participants from R&D Divisions



Note: Figures for 2015 onward are based on current plan.

#### Improving Management Quality

Nissan is working to improve the quality of its management in order to fulfill the goals of its mid-term business plan, Nissan Power 88, ➡ and achieve sustainable growth. In Japan, the company has established a training framework for mid-level managers. This gives them opportunities to promote activities that put the Nissan Way

Click here for more information on Nissan Power 88.
 website

into practice and to extend their skills in managing people and business operations.

Specifically, Nissan engages in (1) cultural diversity training to promote understanding of the actions and mindsets described in the Nissan Way; (2) training in business skills, leadership and liberal arts to nurture professionals; and (3) training in on-site management to teach the importance of the production site and to achieve maximum results through collaboration. These three core components of the training framework are supplemented with additional programs.

In North America and Europe, meanwhile, the Nissan Way Leadership Academy program for managers examines how the Nissan Way has been put to use most effectively and shares those actions as part of training tools to elevate management quality overall.

#### **Training Future Leaders**

To continually foster future managers and specialists who will lead the company, Nissan implements a strategic and systematic approach to training, job rotations and recruitment.

Specifically, Nissan engages in leadership training aimed at passing down the knowledge and experience to the next generations of workers. These programs are offered at various development stages, including those for young employees, regional middle managers and Group senior managers. Training consists of group sessions for intensive training in business skills, action-based sessions where participants tackle issues actually facing Nissan and cultural diversity classes to promote understanding of the issues.

A number of rotational programs are strategically and systematically implemented to give promising employees the experience needed to serve in management posts and direct global functions as capable managers and leaders.

Nissan is reinforcing its human resources not only through the

#### EMPLOYEES

recruitment of new graduates but also by actively hiring outstanding mid-level management candidates.

These talent management schemes are effectively operated through regular human resource meetings among senior managers. In these meetings, outstanding human resources are identified, then development plans and succession plans are made. Nissan's strategic talent management system is globally coordinated and active at the global, regional and functional levels.

#### Fostering Specialized Skills

Helping employees develop specialized skills over the medium to long term is vital for a company to achieve sustainable growth. The Nissan Expert Leader System is a means of strengthening and fostering further development of specialized skills in a wide range of technical and nontechnical areas like purchasing and accounting. In fiscal 2014, the system's ninth year, Nissan designated 53 employees as Expert Leaders and 1 management-level employees as Nissan Fellows in a total of 97 fields of specialization. The Expert Leaders and Fellows make use of their specialized knowledge to contribute to Nissan's business endeavors overall. In addition to sharing their knowledge with others via the corporate intranet and other communication tools, they contribute to the fostering of the next generation of experts by passing on their specialized skills in seminars and training courses.

#### **BUILDING SAFE WORKPLACES**

Nissan promotes practices aimed at reducing worker burdens and improving productivity. Promotion of employee health is a top priority and has been established as a key tenet in Nissan's companywide declaration on workplace safety.

#### **Employee Safety and Health Management**

Nissan has adopted a Basic Policy on Safety and Health so that all employees can focus on their work in a safe environment. It gives top priority to worker safety as well as their well-being as a matter of company policy. The work environment relating to employee safety and health is managed uniformly according to the Basic Policy at all Nissan sites, both in Japan and globally.

In Japan, Nissan holds a Central Safety and Health Committee meeting each year chaired by the executive in charge and attended by management and labor union representatives from Nissan facilities. Activities over the past year are reviewed in such areas as workplace safety, fire prevention, mental health, health management and traffic safety, and then plans are laid out for the following year. Each facility holds a Safety and Health Committee meeting each month, attended by labor union representatives. A safety and health officer is assigned at each workplace to ensure that all employees receive relevant information.

Globally, each facility applies the PDCA cycle. A teleconference is held twice a year linking all Nissan facilities worldwide to share information and discuss key issues. Regional managers for employee safety and health also meet every other year for a Global Safety Meeting. In the event of an accident, details and responses are shared globally in an effort to fully prevent their recurrence.

Many facilities both in Japan and globally have introduced the OHSAS 18001<sup>®</sup> occupational safety and health standard, creating a structure for the steady implementation of employee safety and health activities.

An internationally recognized standard for occupational safety and health management systems. Certification may be issued by a third-party accrediting body.

#### A Uniform Set of Global Safety Standards

To allow all employees to maximize their performance, Nissan designs workplaces with employee safety and health in mind.

The company works proactively at all levels to identify potential issues or concerns in the workplace environment, develops measures to address them and makes it easier for employees to get their jobs done. In 2010, Nissan standardized the safety indices that previously differed among its global sites. Safety performance is monitored quarterly for each production site.

#### Improved Production-Line Environments

Nissan seeks to fulfill the company's mission of engaging in "humanfriendly production" by continuously improving the workplace environments of its manufacturing facilities worldwide. Nissan has installed internal cold-air ducts and ensured there are set breaks to drink water, particularly in locations with considerable workloads. This is part of constant improvements to allow employees to work in a comfortable environment.

#### **Creating Safe Workplaces**

Nissan employs its own safety management diagnostic methods, as well as a risk-assessment approach to workplace management, to help reduce hazards in the work environment and prevent accidents.

Two tools developed internally by Nissan to identify the potential for a work accident are the Safety Evaluation System (SES) and the Fire-Prevention Evaluation System (F-PES). They call for workplace patrols in accordance with established evaluation standards to identify potential dangers and fire risks to help reduce incidents. The use of these tools has been effective in achieving these aims.

Global initiatives to avoid accidents and create a safe workplace include inviting employees from Nissan facilities around the world to undergo training on workplace safety. Responsible managers and leaders have also been offered training in SES and F-PES in preparation for the implementation of these programs at all Nissan facilities worldwide, which began in fiscal 2014 and is scheduled to be completed in fiscal 2015.

Since 2011 Nissan has been systematically carrying out riskprediction training at plants in Japan to ensure that individual workers are aware of the risk of accidents and to help prevent accidents. This training, which was continued in fiscal 2014, cultivates appreciation of danger among workers, thus reducing their risk of work accidents. Nissan is endeavoring to increase this method's effectiveness through repeated application.

**Global Occupational Accident Trends** 

#### Lost-Time Injuries Frequency Rate Lost-Time Ergonomics-Related Injuries Rate\*2 1.5 3.0 1.25 1.20 2.5 1.2 1.98 0.95 2.0 0.9 1.51 1.5 0.6 1.0 0.78 0.3 0.5 0.0 0.0 2012 2013 2014 (FY) 2012 2013 2014 (FY)

Total lost-time injury cases + total working hours × 1 million
 Total lost-time ergonomics-related injury cases + total working hours × 1 million

#### EMPLOYEES

#### **Specialized Mental Healthcare**

Nissan has put together a specialized team led by a mental health professional to care for the mental well-being of employees. In 2005, in cooperation with external mental healthcare specialists the company introduced the EAP (Employee Assistance Program), a mental healthcare program providing employees with consistent care covering everything from prevention and early diagnosis to treatment and recovery. Since fiscal 2007 the program has expanded to include production-line workers, giving employees and their family members access to mental-health professionals for consultations, diagnosis and counseling. Nissan also offers specialized care programs that respect employee privacy, such as the yearly "Stress Check," through which employees receive advice from a doctor via e-mail or letter. In fiscal 2011 the company's mental health training was extended to cover items bolstering the mental health of individual employees. Nissan promotes mental healthcare through a wide range of approaches.

#### Rehabilitation Center to Facilitate Return to Work

Appropriate support mechanisms are required to facilitate an employee's return to work in case of long-term or recurrent absence due to a mental or physical ailment. Nissan's support in this area includes rules established in 2008 for the use of external rehabilitation centers to ease employees' return to the workforce following long-term or recurrent absence. An in-house rehabilitation facility opened in 2012. By offering various programs suited to the needs of the respective workplaces, Nissan is seeing improvements in the return-to-work ratio.

#### **DIALOGUE WITH EMPLOYEES**

For both Nissan and its employees to continue to grow in the face of globally expanding corporate activities, employees need to understand the direction the company is moving and implement their own actions toward the achievement of business objectives. Overcoming challenges to achieve those goals can lead to personal growth for the employee and contribute to the realization of the company's vision. Nissan is strengthening its communication with employees so they will feel united with the company and be more engaged in tackling the challenges before them.

## Strengthening Communication to Raise Motivation and Build Confidence

In order to achieve the Nissan Power 88 mid-term business plan's objectives, all employees need to embrace Nissan's corporate vision and understand the significance of the plan. To succeed, employees' pride in the company's achievements and trust in the sustainability of its corporate activities are essential. At the same time, employee motivation needs to be enhanced to encourage them to take self-initiated action. Internal communication activities are focused on building confidence among employees and increasing their motivation.

#### Employee Engagement

EMPLOYEES



#### **Enhancing Communication Channels**

Building confidence between a company and its employees is based on the trust established through transparency of communication. Nissan discloses its statement of accounts and other business results to employees in a timely manner. Joint teams are organized in the Renault-Nissan Alliance in R&D, production engineering, supply-chain management, purchasing and human resources to deliver additional synergies. Information about the Alliance is shared with employees, enabling them to understand the goals and benefits derived from the Alliance.

A deeper understanding of Nissan products, services and technologies is gained through timely communications that engage employee interest and boost their motivation. Employees are regularly updated on Nissan's leadership in achieving a zeroemission society, development of Autonomous Drive vehicles, and other long-term projects.

Nissan is enhancing coordination among its various departments and with senior management and actively sharing

information that contributes to relationships of mutual trust and higher employee motivation.

Every new fiscal year starts with the CEO delivering the state of the company address, reflecting on the past year's performance and highlighting the direction for the new year. These are specific communication events that help build relationships of trust between the employee and the company. Leadership Exchange meetings, where the CEO and other Executive Committee members examine important issues with middle and senior managers, are held twice a year. The issues discussed are then shared and cascaded within each department. On a monthly basis, topics based on employee interest are also broadcasted through live web conferences called Management Information Exchanges, which encourage engagement between Executive Committee members and managers.

Employee motivation is also raised through new model announcements and test drive events, where employees gain a deeper understanding of Nissan's products and learn to convey product features and attractiveness to their friends and families more effectively. These have been well received, with some participants stating that their enhanced knowledge of Nissan products has boosted their pride in the company and their work motivation, and have been highly effective in creating "brand ambassadors" for Nissan.

From fiscal 2013, an employee photo contest has been held worldwide as another motivation-boosting program. Employees submit photos on specified topics, and the winners are chosen by the number of "likes" they receive from their colleagues. This program involves large numbers of employees not only as competition entrants but also as voters through use of the "like" button. Nissan's internal communication tools also help build relationships of confidence and boost employee motivation. Since Nissan introduced a corporate intranet system called WIN (Workforce Integration @ Nissan), it has been actively used to promote communication, information sharing and collaboration among employees. The WIN network now goes beyond Japan, North America and Europe to include other markets and Nissan's major business partners, helping communicate information that raises motivation on a global basis. A printed in-house newsletter called *Nissan News* is published monthly for employees at Nissan production sites so they may access needed information with no time lag.

#### **Engagement Kits that Generate Communication**

In fiscal 2014, Nissan began issuing Engagement Kits that summarize Nissan's global operations, business performance and major achievements. These kits are distributed to managers every month and are used as communication tools for information sharing. The managers not only are the recipients of information but also are assigned responsibility for disseminating it in their respective departments. This is intended to promote workplace communication, deepen employee understanding and raise motivation.

#### EMPLOYEES

#### Employee-Executive Exchange

Deepening mutual understanding and confidence requires opportunities for employees to voice their views and to share them with company executives. Nissan is making efforts to communicate information that will lead to greater employee confidence toward the achievement of the Nissan Power 88 mid-term business objectives. These efforts are monitored on an ongoing basis through key performance indicators (KPIs) and reflected in internal communication activities. The company conducts regular surveys regarding these communication initiatives and the results are then conveyed to company executives. The survey results are also used to run a PDCA (plan, do, check, act) cycle, with plans implemented based on decisions on whom to target and what type of additional information to communicate.

#### PDCA Cycle for Internal Communication Activities



In recent years Nissan has adapted to the fast-changing consumer landscape. The global economy is undergoing a dramatic shift as emerging economies take on an increasingly significant role in economic growth. Countries around the world are seeing rapid urbanization, creating demand for improved infrastructure and increasing the need for enhanced mobility solutions. As a global automaker, Nissan aims to provide mobility for all and to ensure a future with sustainable mobility. In working toward these goals, the company is expanding its business geographically so as to provide its products in all global markets. It is also globalizing all stages of its value chain, from the development and procurement of parts and materials to manufacturing, logistics and sales.

**RPORATION SUSTAINABILITY REPORT 2015** 

Nissan believes that expansion should be accompanied by sustainable, profitable growth benefiting both the company and contributing to the economic development of society as a whole through the creation of jobs and regional development. This principle is behind the implementation of Nissan's mid-term business plan, Nissan Power 88, which aims to maximize the company's economic value as a corporation in sustainable ways. Through its corporate vision of Enriching People's Lives, Nissan is pursuing technological innovation and creating value in wider society by establishing new markets, such as those for zero-emission vehicles, and by operating in a transparent manner through open disclosure of its performance to stakeholders. Nissan automobile production sites (as of end of March 2015) located in:

ECONOMIC CONTRIBUTION



#### **ECONOMIC CONTRIBUTION**

#### SCORECARD

#### FY2014 TARGET ACHIEVEMENT RATE: VV ACHIEVED V MOSTLY ACHIEVED × NOT ACHIEVED

Nissan makes year-round use of the CSR scorecard as a fundamental tool to manage, review and validate its progress in each of the sustainability strategies defined for its CSR activities. The table below shows some of the values behind Nissan's ongoing activities and the indices used in the scorecard to gauge the company's performance.

Nissan Priorities	Nissan Objectives	Indicators of Progress	FY2013 Results	FY2014 Results 💌	Assessment	Action Planned for Next Year Onward 💌	Long-Term Vision
Acceleration of profitable corporate growth	Implementation and promotion of Nissan Power 88: achieve 8% operating profit margin, 8% global market share by end of FY2016	Consolidated operating profit margin (Consolidated companies; for joint ventures in China, calculated on a proportionally consolidated basis)	5.3%	5.8%	<b>44</b>	FY2015 Outlook 6.3%	Target sustainable, profitable growth
		Global market share	6.2%	6.2%	~~	FY2015 Outlook 6.5%	and continue providing value to all stakeholders over the long term

Announced May 2015.



#### **NISSAN'S APPROACH TO ECONOMIC CONTRIBUTION**

Through its business activities, Nissan aims to create value and contribute to the development of a sustainable society. To achieve these goals, the company launched its mid-term business plan, Nissan Power 88, which established a clear, global vision and strategic directions through fiscal 2016. The company continues to implement the plan's strategies and initiatives to maximize its corporate value.

Click here for more information on Nissan Power 88.
 website

## COMPANY ORGANIZATION FOR ECONOMIC CONTRIBUTION

The Nissan Group consists of Nissan Motor Co., Ltd., subsidiaries, affiliates and other associated companies. Its main activities comprise the manufacture and sales of vehicles and related parts in its automotive business, as well as the manufacturing and sales of boats and related parts in its marine business. The Group also provides financing services to support its sales activities.

Nissan's Global Headquarters makes decisions about the allocation of resources to each business and manages operations of the entire Group. The Group has six regional management committees responsible for activities in Japan, Asia and Oceania; China; North America; Latin America and the Caribbean; Europe; and Africa, the Middle East and India, respectively. These regional structures are integrated with cross-regional functional departments covering activities including research and development, purchasing and manufacturing.

#### ACCELERATING PROFITABLE CORPORATE GROWTH

Nissan plays a leading role in the global automotive industry, making a significant contribution to its development. The company is committed to optimizing mobility for people around the world and helping to address a broad range of issues toward its goal of realizing a sustainable mobility society, while creating and delivering additional value through innovation. Sustained, profitable corporate growth is vital to achieving these goals, with the mid-term business plan Nissan Power 88 actively targeting the acceleration of corporate growth. By fully exploiting its capabilities as a global company, Nissan aims to create jobs and other value for society as a whole. At the same time, the company continues to invest in strategic initiatives and key markets to ensure future sustainable growth.

#### Strategic Investment in Focus Areas and Markets

To accelerate its growth in global markets, the company must expand its business and provide relevant products that satisfy the demands of customers. To achieve this, Nissan must create a more robust base for production on a global scale and enhance the careful *monozukuri* craftsmanship for which it is known.

Datsun has returned to the Group as its third brand alongside Nissan and Infiniti. The Datsun brand aims to enable customers in high growth markets to access the benefits of car-ownership. In March 2014 the Datsun GO hit the market in India, followed later in the year by the Datsun GO+, which offers wider choice and more versatility. The Datsun GO+ Panca, a multipurpose vehicle, and Datsun GO Panca hatchback, launched in Indonesia, are manufactured locally at a new plant in Purwakarta, West Java Province. In Russia, the Group launched the four-door, fivepassenger Datsun on-DO sedan and Datsun mi-DO hatchback, designed for the Russian market. Manufacturing is being handled by AVTOVAZ, a partner to the Renault-Nissan Alliance, at its Togliatti Plant. And in South Africa, the fourth market for the Datsun brand, the Datsun GO was launched in October 2014.

Nissan's Decherd Plant in Tennessee began production of a 2.0-liter, 4-cylinder engine for the Infiniti Q50 and the Mercedes-Benz C-Class line. The Renault-Nissan Alliance and Daimler AG are working together on this project, which will have an annual capacity of 250,000 engines at peak output and is expected to create 400 new jobs. Also in cooperation with Daimler AG, the company has announced the joint development of a next-generation compact car platform for both the Mercedes-Benz and Infiniti brands. The partners have agreed to jointly build a new plant in Aguascalientes, in the central part of northern Mexico, with an annual capacity of 300,000 vehicles. This plant is expected to create some 5,700 new jobs by the time it is fully operational in 2021. Thanks to an expansion of the Mexican supplier base, it will also feature a high localization ratio.

In the Chinese market, where there is growing demand for luxury vehicles, Nissan has advanced its strategic partnership with Dongfeng Motor Corp., with the formal launch of Dongfeng Infiniti Motor Co., Ltd., enabling both companies to benefit from this fast growing segment. Dongfeng Infiniti will independently operate the Infiniti brand under the principles of "One Strategy, One Brand, One Team, One Channel." The Infiniti Q50L has already gone on sale as the first vehicle to be locally produced in China, at the Xiangyang Plant in Hubei Province. This plant has expanded its annual production capacity to 250,000 vehicles, of which 60,000 will be Infiniti models. This plant in China is the third global production base for Infiniti, along with the Infiniti manufacturing centers in Japan and

the United States. In China the brand will continue to enhance its product lineup as it pursues further growth in the Chinese market.

In the fast-growing markets of Africa and Southeast Asia, Nissan is working to expand its production lines. In Nigeria, the company has begun manufacturing the Patrol, as well as launching mass production of the Almera and the NP300. In Indonesia, Nissan invested ¥33 billion in a second plant in Purwakarta, boosting annual output capacity in the country to 250,000 vehicles and creating as many as 3,000 jobs. In Thailand, a key component of Nissan's Asian growth strategy, the company established its second factory in the country in Samutprakan Province. This plant will reach a maximum annual capacity of 150,000 vehicles and create 2,000 new jobs. The new facility will serve as a hub plant for the NP300 Navara, Nissan's next-generation pickup truck, which will be exported to 45 countries around the world. In China, meanwhile, the Dalian Plant began production of the X-Trail. Annual capacity, currently 150,000 vehicles, is expected to be doubled.

#### **INNOVATION MANAGEMENT**

One of Nissan's major missions is the creation of new value that contributes to a future of sustainable mobility. Research centers in Japan, the United States, India and Russia monitor social trends and conduct research into how to respond to the needs of tomorrow's automotive society.

#### The Foundation of Nissan's Innovation

The Nissan Research Way forms the basis for innovation that can identify, suggest and deliver increased value to the wider society. The Nissan Research Way's three pillars are "to forecast technology and social change," "to create open innovation with the world's intellectuals" and "to develop competitive technologies in strategic domains." By giving multidisciplined researchers full support for their innovative work, the company pursues continual improvement of the Nissan Research Way.

In 2013, the Renault-Nissan Alliance opened the Nissan Research Center Silicon Valley in California. This innovation hub enables partnerships with some of the world's leading technology companies and academic research bodies.

The Silicon Valley facility's main research fields include autonomous vehicles that will help create a future with safe, stressfree mobility; connected vehicles that can tap into infrastructure and the Internet to maximize energy and time efficiency; and humanmachine interfaces that enhance the experience of autonomous and connected vehicles.

In 2015, the Nissan Research Center Silicon Valley entered into a five-year partnership with the NASA Ames Research Center to engage in joint R&D on autonomous driving systems. In addition to work on these systems, the partners will collaborate on a variety of technological developments, including human-machine interfaces and advanced hardware and software solutions for use in the road/ driving environment and in outer space. The center's testing of zero-emission vehicles equipped with autonomous-drive technologies draws on the same applications used for remote control of planetary rovers. This partnership is expected to accelerate the pace of development of autonomous driving systems.

# 2014 THOMSON REUTERS

For the second consecutive year, Thomson Reuters selected Nissan as one of its Top 100 Global Innovators. In deciding this award, Thomson Reuters uses its proprietary database of patent information to analyze not just recipients' advanced and innovative technologies but also their development of solutions with broad application in the real world. The award recognizes the most innovative companies and organizations in all industries, all around the world. Four metrics form the core of the evaluation: volume of innovation patents, success rate (ratio of approved patent applications), global reach of patent portfolio and patent citation influence. Nissan received high marks for the global reach of its portfolio and portfolio influence, as well as showing marked improvement over the year in its success rate.

#### SHAREHOLDER AND INVESTOR ENGAGEMENT

Nissan's shareholders and investors are partners in the creation of a more sustainable society. To facilitate a deeper understanding of the company, Nissan has an active IR program that provides information both promptly and transparently.

#### **Communication with Shareholders and Investors**

To communicate with shareholders and investors, the company's IR team holds quarterly results briefings, meets frequently with institutional investors and sell-side analysts and responds to inquiries in a timely manner. Nissan also proactively discloses information on its operations through business briefings and participation in conferences and company briefings for individual investors hosted by securities companies. The latest information is also available on the IR website.

Each year Nissan holds events to present its business activities to investors and analysts, focusing on themes most relevant to them and making available the company's divisional and regional managers to actively provide the required information. In fiscal 2014, presentations covered the Common Module Family, a new vehicle design approach undertaken by the Renault-Nissan Alliance, and the purchasing activities that are key to the Alliance. Another meeting covered Nissan's business strategy in the North American market, a main driver of the company's sales performance during the fiscal year. Nissan takes advantage of a

Click here for more information on the Common Module Family.
 page\_41

broad range of opportunities to disclose information on the longterm vision behind its strategies, the innovations it is introducing to boost competitiveness, and the latest market trends.

The company will continue to disclose information appropriately to meet the needs of stakeholders and investors, thereby increasing understanding of its business.

#### 115th Shareholders Meeting

The 115th Ordinary General Meeting of Shareholders was held at the Pacifico Yokohama on June 24, 2014, and was attended by 1,617 shareholders. After the meeting all board members and corporate officers, including CEO Carlos Ghosn, attended an informal gathering to interact directly with shareholders. On June 21, prior to the General Meeting, 200 shareholders were selected by lottery to experience Nissan's automotive technology at an event at the Oppama Plant in Kanagawa Prefecture.

The General Meeting of Shareholders is an opportunity for the executive team to communicate directly with the company's owners. Nissan aims to develop trust at these meetings and related events, paying full attention to shareholders' opinions and offering careful explanations to enhance their understanding.

Beginning in 2009, the company has collected questions and opinions from shareholders before the General Meeting and worked to provide appropriate explanations, reports and responses.

Since 2008, the Oppama Plant event has offered the chance to experience Nissan technologies firsthand through observation of plant production lines, test drives and other activities. Participants can also spend time with company executives, allowing for a lively exchange of views. This exchange with shareholders provides valuable information for the General Meeting that follows.

#### ECONOMIC CONTRIBUTION

#### Positive External Assessment for IR Activities

At the 20th Awards for Excellence in Corporate Disclosure presented by the Securities Analysts Association of Japan, Nissan ranked second in the automobiles, auto parts and tires category. Winners of these awards, established with the goal of improving corporate disclosure, are selected through assessment by analysts in five categories: company management's IR engagement, briefings, fair disclosure, corporate governance and voluntary disclosure. The analysts recognized Nissan for its fair disclosure, such as its question-and-answer sessions at informational meetings, for its executive management's proactive participation in investor relations and for its corporate governance.

► website Detailed IR information is available on our website.

# CORPORATE GOVERNANCE & INTERNAL CONTROL

In order to be a sustainable company, Nissan must display a high level of ethics and transparency, as well as a strong foundation for the organization. Nissan has extensive global operations with numerous stakeholders around the world. It is essential to continue earning their trust and to ensure the high ethical standards and compliance of all employees. The company must also establish a corporate governance system that maintains business transparency, while implementing various monitoring systems, and must accurately assess and effectively manage risks that might prevent the achievement of business goals. In addition to carrying out cooperation among sites in the regions in which it operates, Nissan has set up global management systems and provides relevant training programs to its employees and business partners. Employees in Japan receiving Nissan Global Anti-Bribery Policy training in fiscal 2013:

CORPORATE GOVERNANCE &



#### **CORPORATE GOVERNANCE & INTERNAL CONTROL**

#### SCORECARD

#### FY2014 TARGET ACHIEVEMENT RATE: VV ACHIEVED V MOSTLY ACHIEVED × NOT ACHIEVED

Nissan makes year-round use of the CSR scorecard as a fundamental tool to manage, review and validate its progress in each of the sustainability strategies defined for its CSR activities. The table below shows some of the values behind Nissan's ongoing activities and the indices used in the scorecard to gauge the company's performance.

Nissan Priorities	Nissan Objectives	Indicators of Progress	FY2013 Results	FY2014 Results	Assessment	Action Planned for Next Year Onward	Long-Term Vision
Compliance	A fully functioning framework for the prevention of conduct violations and compliance at all Nissan companies	Holding of Global Compliance Committee meetings     Implementation status in different regions and development of relevant policies as necessary	<ul> <li>Held Global Compliance Committee meetings in May and December</li> <li>Updated Japanese version of Nissan Code of Conduct (undertaken every three years) and held training for all Nissan Motor Co., Ltd. employees</li> <li>Implemented new professional training on export controls in Japan; reinforced cooperation with affiliated companies to ensure thorough compliance with export controls</li> <li>Started externally run Nissan Compliance Hotline for reporting internal compliance issues in Japan, supplementing company reporting channels</li> </ul>	<ul> <li>Held Global Compliance Committee meetings in May and December</li> <li>Decided new governance measures for Global Compliance Committee to accompany reform of management system</li> <li>Published local guidelines related to global compliance on each region's intranet</li> <li>Began General Awareness training covering anti- bribery measures and export management in the Americas; later to be conducted in other regions</li> </ul>	VV	Establish compliance functions in emerging markets and strengthen activities	All individual employees have a high awareness of and maintain full compliance
Risk management	Implement PDCA cycle annually and ensure that risk management is functioning properly	Implementation level in the following areas based on the risk-management process • Assessment of corporate risks and revision of risk map • Reports and proposals to management • Disclosure of risk-management activities to stakeholders • Oversight of risk-management activities and regular reports to Board of Directors	<ul> <li>Identified corporate risk factors that could negatively affect the mid-term plan and owners of those risks at meeting of the Executive-Level Committees; managed each risk under lead of risk owners</li> <li>Submitted interim and year-end reports on level of implementation of activities to the Internal Control Committee and Board of Directors; ensured proper functioning of the PDCA management cycle companywide</li> <li>Updated "Business and other risks" in financial information (Yukashoken-Hokokusho) and "The current state of Nissan's risk management" in Sustainability Report and Annual Report</li> <li>Held meetings with Japanese affiliated companies twice a year; held meetings with Chinese joint ventures; shared information and exchanged opinions with North American and European sites and Renault representatives</li> </ul>	<ul> <li>Identified fiscal 2014 corporate risk factors and owners of those risks at meeting of the Executive- Level Committees; managed each risk under lead of risk owners</li> <li>Submitted interim and year-end reports on level of implementation of activities to the Board of Directors; acknowledged that the risk management PDCA cycle was mostly functioning properly</li> <li>Updated "Business and other risks" in financial information (Yukashoken-Hokokusho) and "The current state of Nissan's risk management" in Sustainability Report</li> <li>Held meetings with Japanese affiliated companies twice a year; shared information and exchanged opinions with North American, European, Australian and Brazilian sites and Renault representatives</li> </ul>	44	<ul> <li>Identify corporate risk for fiscal year at start of each fiscal year and make proposals at Executive-Level Committees</li> <li>Continue to report regularly to the Board of Directors</li> <li>Update information disclosed to increase Nissan's risk management reputation</li> <li>Continue to regularly share information and exchange opinions with domestic and overseas affiliated companies to maintain cooperation on risk management within the Group</li> </ul>	Contribute to raising corporate value with a global risk-management system; obtain better external understanding through appropriate information disclosure
	Meeting of KPIs for maintenance and enhancement of information security, prevention of information leaks, damage limitation and maintenance of transparency in the event of leaks	Degree of implementation in the following areas based on the Information Security Policy • Holding of Information Security Committee meetings • Implementation of annual training • Management of incidents • Management of information assets • Assessment of information security	<ul> <li>Strengthened implementation activities worldwide</li> <li>Held Information Security Committee meetings</li> <li>Implemented annual training and revised content reflecting identified needs</li> <li>Quickly identified internal incidents and implemented corrective actions to prevent recurrence</li> <li>Continually improved management of information assets and accuracy of asset ledger</li> <li>Assessed status of information security and revised assessment indicators</li> <li>Made improvements to ensure that incidents similar to recent server attacks and internal violations at other companies and organizations do not occur at Nissan</li> </ul>	<ul> <li>Strengthened cooperation with Renault for each activity</li> <li>Strengthened Information Security Committee management</li> <li>Implemented annual training and revised content reflecting identified internal incidents and implemented corrective actions to prevent recurrence</li> <li>Continually improved management of information assets and strengthened asset identification and tracking process</li> <li>Assessed information security and revised assessment indicators</li> <li>Made improven attacks and internal violations at other companies and organizations do not occur at Nissan</li> </ul>	V	Target further strengthening of cooperation with Renault     Strengthen policies worldwide at countries and Group companies where improvement is needed     Continue to strengthen policies to prevent such incidents as server attacks and internal violations	Contribute to pursuing stable corporate activities and social responsibility by globally implementing PDCA cycles on information security

## NISSAN'S APPROACH TO CORPORATE GOVERNANCE & INTERNAL CONTROL

Governance systems, compliance and risk management are key factors in Nissan's business management. The company's global approach to corporate governance is founded on three pillars: construction of a system in which management responsibility is clear and transparent, compliance built on the high ethical standards of all employees and an effective and appropriate riskmanagement system.

#### **CORPORATE GOVERNANCE SYSTEM**

Nissan believes that enhancing its corporate governance is one of its most important business issues. Ensuring clear management responsibility is a key way to achieve this. Nissan announces clear management targets and policies to all its stakeholders and discloses its performance promptly with a high degree of transparency.

#### Corporate Governance System in Detail

To increase management transparency and flexibility, Nissan uses a corporate structure with supervision by the Board of Directors and auditing by the Statutory Auditors. The company has also adopted a corporate officer system. This clarifies the structure for taking responsibility and ensures appropriate supervision and auditing of activities by the directors. The Board of Directors includes outside directors and makes key decisions on important company operations, as well as supervising individual directors' execution of duties.

Nissan's Board of Directors is compact, enabling effective and flexible management, with authority regarding operations clearly entrusted to corporate officers and employees. Additionally, Nissan has established focus committees whose chairs are responsible for carrying out discussions on important company matters and daily operations.

➤ website

#### Internal Control Systems

Nissan places high value on transparency in its corporate management, both internally and externally. The company focuses on consistent and efficient management in order to achieve clear commitments. In line with this principle, and in accordance with Japan's Companies Act and its related regulations, the Board of Directors has decided on Internal Control Systems to pursue these goals and on its own basic policy. The board continually monitors the status of implementation regarding these systems and the policy, making adjustments and improvements if necessary. One board member is assigned to oversee the Internal Control Systems as a whole.

Nissan has adopted a system under which the Board of Statutory Auditors oversees the Board of Directors. The Statutory Auditors attend board and other key meetings, and also carry out interviews with board members to audit their activities. The Statutory Auditors regularly receive reports on the results of inspections as well as plans for future audits from independent accounting auditors and exchange information to confirm these reports. The Statutory Auditors also receive regular reports from the Global Internal Audit Office, making use of this information for their own audits.



#### **Independent Internal Audits**

Nissan has established a global internal audit unit, an independent department to handle internal auditing tasks. Under the control of the Chief Internal Audit Officer, audit teams set up in each region carry out efficient, effective auditing of Nissan's activities on a groupwide and global basis.

#### Nissan's Internal Governance System



As of March 2015.

### CORPORATE GOVERNANCE & INTERNAL CONTROL

#### COMPLIANCE

In promoting corporate social responsibility (CSR), it is essential that each employee practice compliance with high ethical standards. In order to raise compliance awareness throughout the company, Nissan has established specialized departments and appointed officers to promote compliance policy in each region where it operates.

#### **Employees and Compliance**

The foundation of Nissan's CSR promotion is based on each employee's capability to practice compliance with an ethical view. In 2001, the company produced the Nissan Global Code of Conduct, ■ outlining a set of guidelines for employees to put into practice. Today this Code of Conduct is applied at all Nissan Group companies worldwide.

Nissan has also produced guidance for directors and corporate officers regarding compliance, holding regular seminars and educational activities to ensure strict adherence to the rules. Under the oversight of its Global Compliance Committee, the company has established regional compliance committees in each of the regions in which it operates to form a system for preventing illegal and unethical behaviors. Nissan is working with all regions and bases of operation to ensure full awareness of compliance issues and engage in prevention of illegal activities. Nissan deals severely with any employee who violates or infringes the Global Code of Conduct or the law. In fiscal 2014, Nissan redefined the scope of its information disclosure and established a global reporting process to ensure more rigorous compliance management.

▶ page\_105
Solution of Conduct.

#### FY2014 Global Compliance Committee Organization



As of December 2014.

### CORPORATE GOVERNANCE & INTERNAL CONTROL

#### Security-Related Export Controls

To help maintain both national and international peace and security, Nissan thoroughly complies with export control laws and regulations in Japan and other countries and regions where it operates to prevent sensitive goods and technologies from reaching sponsors of terrorism, as well as corporate espionage or human rights violations. In line with these rules, Nissan implements export controls under an independent system headed by its representative executive. Specifically, working together with business owners, the Export Control Global Secretariat sets control and monitoring mechanisms to ensure compliance with security-related export controls. The company strictly applies this process to its operations.

To improve the level of internal control and to minimize overall Nissan risk exposure, the Secretariat has been conducting employee training in all three of the company's main regions of operation. Since 2013, in addition to e-learning and other basic education, managers and employees in Asia, the Americas and Europe have been receiving in-depth educational programs adapted to their needs. For example, sensitive classification training has been provided in-house to related functions including R&D in Japan and the Americas; AMIE participants have benefited from Renault-Nissan seminars.

Overall, the Secretariat has increased knowledge globally and demonstrated that compliance can help minimize risk and facilitate trade. More specifically, the Secretariat supports global sales initiatives in large exporting Nissan entities with relevant controls and proactively provides regulatory advice on new Nissan technology, such as Autonomous Drive, in-car connectivity and EVs, so as not to hinder their development.

#### Global Export Control Policy Framework



#### Promoting Thorough Compliance

Nissan has established a Global Code of Conduct and has appointed departments and officers at each of its operations worldwide to take responsibility in promoting compliance measures.

To ensure full understanding of the code, employees in Japan take an e-learning or video training course based on the Japanese version of the Nissan Code of Conduct-"Our Promises," drawn up in 2004 and revised every three years since (most recently in October 2013)-after which they sign an agreement to abide by it. In this way, Nissan seeks to ensure across-the-board understanding, making sure all employees are fully aware of compliance issues. A number of education programs to promote compliance are held regularly for employees in North America, and a set of universal guidelines has been drawn up for each country in Europe. Nissan also carries out compliance-related training in other regions based on guidelines that take into account conditions in each country. Moreover, all Group-affiliated companies have introduced their own codes based on the Nissan Global Code of Conduct. Nissan institutes global training to foster employee respect for compliance measures and the Code of Conduct. The company communicates compliance measures to all of its employees in Japan. By fiscal 2013 more than 90% of these employees had undergone training on the Nissan Global Anti-Bribery Policy.

Nissan has created a series of internal regulations that are applied globally, covering areas such as insider trading, personal information management, information security, bribery and corruption and use of social media. With these regulations in place, Nissan is working to prevent compliance infractions.

 Click here for more information on the Nissan Global Anti-Bribery Policy.

### CORPORATE GOVERNANCE & INTERNAL CONTROL

#### **Global Code of Conduct for Nissan Group**

#### Principle

The following standards apply to all employees in Nissan Group companies (collectively herein referred to as "Nissan" or "Company"). Each member of the Company is charged with responsibility to uphold and extend this Code of Conduct.

#### Global Code of Conduct

1 Comply with All Laws and Rules

Nissan employees will abide by all laws of the country, and all regulations of the Company, in which they work.

2 Avoid Conflict of Interest

The best interests of Nissan are expected to be foremost in the minds of employees. It is prohibited to behave, act or use information in a way conflicting with Company interests.

- Preserve Company Assets Nissan employees are personally accountable for preserving and safeguarding Company assets. Unauthorized use or diversion of Compan assets, including funds, information and intellectual property, is prohibiter
- 4 Be Impartial and Fair

lissan employees must maintain impartial and fair relationships vith business partners, including dealers, parts suppliers and other hird parties.

- Be Transparent and Accountable Nissan employees shall make fair, transparent, timely and approprial disclosure of the Company's business activities to our stakeholders, including stockholders, customers, other employees and local communities.
- Value Diversity and Provide Equal Opportunity We value and respect the diversity of our employees, suppliers, customers and communities. Discrimination or harassment, in any form or degree, wil not be tolerated.
- 7 Be Environmentally Responsible

Nissan employees shall strive, within the business objectives of Nissan, to consider environmental protection when developing products and services, to promote recycling and to conserve materials and energy.

8 Be Active; Report Violations

Nissan employees are expected to carry out their work in accordance with the Code of Conduct. Employees who suspect that a violation of the Code of Conduct has occurred are obligated to report it as soon as possible, and such employees shall be protected from retaliation.

#### Nissan's Stance Against Discrimination and Harassment

Item 6 of Nissan's Global Code of Conduct, "Value Diversity and Provide Equal Opportunity," is the requirement to accept, respect and value the diversity found among the company's employees, business partners, customers and communities, while rejecting discrimination and harassment in all forms, regardless of the magnitude. Nissan executives and employees must respect the human rights of others, and may not discriminate against or harass others based on race, nationality, gender, religion, physical capability, sexual orientation, age, place of origin or any other reason; nor may they allow such a situation to go unchecked if discovered. The company also works to ensure that all employees, both male and female, can work in an environment free from sexual and other forms of harassment.

#### Internal Reporting System for Corporate Soundness

To promote thorough understanding of compliance among all employees worldwide and to facilitate sound business practices, Nissan employs a variety of internal reporting mechanisms. These mechanisms allow employees to submit opinions, questions or requests to the company, thereby improving workplaces and operations as well as fostering a complianceoriented corporate culture.

In Japan, Nissan's Easy Voice System offers full protection to any persons offering information in accordance with Japan's Whistleblower Protection Act of April 2006 and has become an integral part of operations in all Nissan Group companies in the country. In August 2013, the Easy Voice System was joined by the external Nissan Compliance Hotline, which aims to further promote ethical business practices. Using this system, employees can report compliance issues under their real name or anonymously either via the Internet or by telephone. Experienced counselors at a third-party organization take appropriate action, such as by passing along information to departments or organizations that can take follow-up steps while protecting the privacy of the reporting employee.

Internal reporting systems have also been established at

Nissan's global sites in appropriate forms that take into account local culture and laws. In the United States, Canada, Mexico and Brazil, Internet and telephone hotlines are available 24 hours a day, 7 days a week. Nissan is also preparing to start full-scale implementation of systems in Asia and Europe. Employees reporting issues through internal reporting systems are protected and do not suffer any detriment.

CORPORATE GOVERNANCE & INTERNAL CONTROL

#### **RISK MANAGEMENT**

Nissan defines risks as anything that might prevent it from achieving its business goals. By detecting risks as early as possible, examining them, planning the necessary measures to address them and implementing those measures, the company works to minimize the materialization of risks as well as the impact they cause.

#### Principles for and Approach to Corporate Risk Management

Risk management must be a real-world activity that produces concrete measures. Based on its Global Risk Management Policy, Nissan carries out activities on a comprehensive, groupwide basis.

In order to respond swiftly to changes in its business environment, Nissan has set up a department in charge of risk management that carries out annual interviews of corporate officers, carefully investigating various potential risks and revising the company's "risk map" in line with impact, frequency and control level.

The Executive-Level Committees make decisions on risk issues that must be handled at the corporate level and designate "risk owners" to manage the risks. Under the leadership of these owners, the company designs appropriate countermeasures. Finally, the board member in charge of internal control regularly reports to the Board of Directors on progress.

With respect to individual business risks, each division is responsible for taking the preventive measures necessary to minimize the frequency of risk issues and their impact when they do arise as part of its ordinary business activities. The divisions also prepare emergency measures to put in place when risk factors do materialize. Nissan Group companies in Japan and overseas are strengthening communication in order to share basic processes and tools for risk management, as well as related information, throughout the Group.

In addition, Nissan has created an area on its intranet called "Companywide Risk Management." Information relating to risk management is also distributed to subsidiaries in Japan, North

America, Europe and other overseas regions, as well as to major affiliated companies.

Nissan is currently engaged in meeting the goals of the Nissan Power 88 mid-term business plan. ► To achieve the ambitious goals of raising both global market share and operating profit margins, the company needs to fully utilize its existing production capacity in countries around the world so that new spending can be curtailed. It also needs a highly efficient production setup allowing guick restoration of production if a plant is forced to shut down by unforeseen circumstances.

To support the mid-term business plan from a riskmanagement perspective, Nissan's efforts will be expanded worldwide and throughout the supply chain, incorporating the valuable lessons learned from responding to the 2011 earthquake and tsunami in east Japan as well as the 2011 flooding in Thailand.

Click here for more information on Nissan Power 88. ▶ website

#### Protecting Personal Data and Reinforcing Information Security

Nissan shares its Information Security Policy with Group companies worldwide as a basis for reinforced information security, implementing via the Information Security Committee measures enhanced through the PDCA cycle. The company reliably addresses issues by identifying internal and external information leaks as they occur worldwide and reinforces information security on a timely basis. To thoroughly educate and motivate employees to adhere to relevant policy, the company institutes regular in-house educational programs.

Moreover, Nissan recognizes its social responsibility to properly handle customers' personal information in full compliance with the respective personal information protection law in each region. Nissan has set up internal systems, rules and procedures for handling personal data. All Group companies are fully enforcing these processes.

#### Click here for more information on risk management.

▶ website

Click here for the GRI Sustainability Reporting Guidelines Index.

CSR DATA

➡ website
### **CORPORATE PROFILE**

Date of Establishment	December 26, 1933
Location of Organization's Headquarters	1-1, Takashima 1-chome, Nishi-ku, Yokohama, Kanagawa 220-8686, Japan
Group Structure and Business Outline	The Nissan Group consists of Nissan Motor Co., Ltd., subsidiaries, affiliates and other associated companies. Its main business includes sales and production of vehicles, marine products and related parts. The Nissan Group also provides various services accompanying its main business, such as logistics and sales finance.
Brands	Nissan, Infiniti, Datsun
Consolidated Number of Employees (as of March 31, 2015)	149,388
	R&D: 15 countries/areas (Japan, USA, Mexico, U.K., Spain, Belgium, Germany, Russia, China, Taiwan, Thailand, South Africa, Brazil, India, Vietnam; total of 43 sites)
Global Network (as of March 2015)	Design: 5 countries (Japan, USA, U.K., China, Brazil; total of 7 sites)
	Automobile Production: 22 countries/areas (Japan, USA, Mexico, Brazil, U.K., Spain, Russia, China, Taiwan, Korea, Thailand, Indonesia, Malaysia, Philippines, Vietnam, India, Iran, Pakistan, South Africa, Kenya, Egypt, Nigeria; total of 38 sites)

#### **FINANCIAL DATA**

		(F		
	2012	2013 *	billion yen 2014	
Consolidated net revenue	9,629.6	10,482.5	11,375.2	
Consolidated operating profit	523.5	498.4	589.6	
Ordinary profit	529.3	527.2	694.2	
Profit before tax	516.7	529.4	687.4	
Net income	342.4	389.0	457.6	
Capital expenditure	524.5	536.3	463.1	
Depreciation	315.8	347.1	373.3	
R&D costs	469.9	500.6	506.1	

Since the beginning of fiscal year 2013, Nissan has reported figures calculated under equity method accounting for its joint venture with Dongfeng in China.

Click here for more detailed financial information at Nissan's IR website.

#### ▶ website





### **GLOBAL SALES VOLUME AND PRODUCTION VOLUME**

			(FY)
			thousand units
Global Sales Volume	<u>2012</u> 4,914	2013 5,188	2014 5,318
Japan	647	719	623
China	1,182	1,266	1,222
North America	1,466	1,648	1,829
Europe	660	676	755
Others	959	879	889
			thousand units
	2012	2013	2014
Global Production Volume	4,836	5,082	5,061
Japan	1,060	1,000	871
North America	1,344	1,558	1,744
Europe	643	716	720
Others	1,789	1,808	1,726





FY2014 figures



Japan

#### **EMPLOYEE DATA**

			(FY)
	2012	2013	2014
lissan Motor Co., Ltd.			
Number of employees	23,605	23,085	22,614
Male	21,675	21,153	20,567
Female	1,930	1,932	2,047
Average age (years)	42.6	43.0	43.0
Male	43.1	43.5	43.5
Female	37.9	37.9	38.0
Average service (years)	20.5	19.4	20.1
Male	21.0	19.9	20.6
Female	14.7	14.0	14.9
Employee turnover rate	4.1	3.8	4.3
Voluntary leave	1.0	0.9	1.1
Company initiated	3.1	2.9	3.2
Average annual salary (yen) 🐿	6,996,504	7,665,078	7,767,269
Disabled employment ratio	1.88	2.09	2.04
Number of employees taking parental leave	219	233	269
Male	6	3	11
Female	213	230	258
Ratio of returnees from parental leave	99	99	97
Male	100	100	100
Female	99	99	97
Number of employees taking nursing care leave	17	9	6
Male	11	6	2
Female	6	3	4
Number of employees taking maternity leave	213	230	258
Days of paid holiday taken	17.7	18.3	18.7
Taken paid holiday ratio	88.5	91.5	93.5
Average overtime hours/month	19.9	18.9	16.3
Number of unionized employees	22,865	22,196	22,179

Average annual salary for employees not in managerial positions; includes bonuses and overtime pay. Beginning in fiscal 2013, calculated for employee base including managerial positions.



▶ GRI G4 Indicators
▶ G4-9/G4-10/G4-11/G4-12/G4-38/

G4-EC1/G4-LA1/G4-LA3/G4-LA12

			2012	2013	201
Number of female mana	gers		170	183	2
		Ratio	6.8	7.1	8
		Target	10	0% in FY201	6
General and higher-le	evel managers		38	44	
		Ratio	4.7	5.0	e
Number of female corpo	orate officers		1	1	
		Ratio	2.1	2.0	2
		Target	(h	nternal target	t)
Number of female board	l members		0	0	
		Ratio	-	-	-
- Female board memb	oers (internal)		0	0	
		Ratio	—	—	-
- Female board memb	oers (external)		0	0	
		Ratio	-	-	-
Number of auditors			0	0	
		Ratio	-	—	-
Number of new graduate	es hired		415	537	6
		Male	310	412	4
		Female	105	125	1
Bachelor/master grad	luates		219	324	4
		Male	157	249	3
		Female	62	75	1
Others			196	213	2
	Junior college school gradua		19	18	
		Male	19	18	
		Female	0	0	
	High school g	raduates	177	195	1
		Male	134	145	1
		Female	43	50	
Retention					
Number of new recru	its 3 years ago		46	231	2
		Male	44	196	1
		Female	2	35	
Number of the above	3 years later		46	222	2
		Male	44	190	1
		Female	2	32	

			(FY)
	2012	2013 💌	2014
Consolidated			
Consolidated number of employees	160,530	142,925	149,388
	(36,449)	(21,750)	(20,381
Japan	67,290	65,480	65,77
North America	28,637	32,272	37,18
Europe	15,198	15,931	16,53
Asia	46,187	24,383	25,43
Other countries	3,218	4,859	4,45

Numbers in brackets represent part-time employees not included in the consolidated number of employees.

Since the beginning of fiscal 2013, Nissan has reported figures calculated under equity method accounting for its joint venture with Dongfeng in China.

#### UNION INFORMATION

Nissan Motor Co., Ltd.'s employees are affiliated with the All Nissan Motor Workers' Union, for which the governing body is the All Nissan and General Workers Unions, and the Japanese Trade Union Confederation (Rengo) through the Confederation of Japan Automobile Workers' Unions. The labor-management relations of the company are stable, and the number of union workers was 22,179 as of March 31, 2015.

At most domestic Group companies, employees are affiliated with their respective trade unions on a company basis, and the governing body is the All Nissan and General Workers Unions.

At foreign Group companies, employees are affiliated with their respective trade unions. In Mexico, for example, workers are affiliated with a domestic trade union for which the governing body is the Confederation of Mexican Workers (CTM) or independent trade unions, whereas most employees in the United Kingdom are affiliated with the Unite the Union Nissan Motor Manufacturing (UK) Ltd. Branch. Local employees of other Group companies are affiliated with different types of trade unions according to the labor environment in each country.

#### SOCIAL CONTRIBUTION ACTIVITY DATA

# Global social contributions (FY2014): ¥1.8 billion

(including donations and monetary contributions)

(FY) 2014 2012 2013 ¥17.0 million ¥12.0 million ¥38.0 million (by Nissan Motor Co., Ltd. for Great East Japan Earthquake) (by Nissan Motor Co., Ltd. for Great East Japan Earthquake) (by Nissan Motor Co., Ltd. for Great East Japan Earthquake) ¥10.0 million 3.0 million yuan (about ¥48.0 million) 2.0 million yuan (by Nissan Motor Co., Ltd. for heavy rains in northern Kyushu) (by Nissan Motor Co., Ltd., Nissan [China] Investment Co., Ltd. (about ¥33.0 million) and Infinity Business Unit [China] for Sichuan earthquake in (by Nissan Motor Co., Ltd. for Yunnan Province earthquake in Donations for disaster relief €100,000 and a vehicle China) China) (by Nissan International SA and Nissan Italia S.r.I for northern Italy earthquakes) ¥20.0 million in total ¥5.0 million (by Nissan Motor Co., Ltd. for typhoon in the Philippines) (by Nissan Motor Co., Ltd. for heavy rain and landslides in \$20,000 and a vehicle (by Nissan North America, Inc. for Hiroshima) Hurricane Sandy) \$10,000 (by Nissan North America, Inc. for tornado in Illinois, USA) ¥10.0 million (by Nissan Motor Co., Ltd. for Ebola outbreak in Liberia)

#### Breakdown of FY2014 social contributions (Nissan Motor Co., Ltd.)

	Activity costs	Monetary donations	Donations of items (value)	Other	Total
Amount (¥ million)	742	849	146	72	1,809
% of total	41.0%	46.9%	8.1%	4.0%	100%

#### **ENVIRONMENTAL DATA**

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► page_41	Please see p. 41 for Employee Engagement and Education.

#### **Regarding Data for Publication**

• Fiscal year: April 1, 2014 through March 31, 2015.

- Scope: All Nissan manufacturing facilities, management offices and subsidiaries worldwide covered under consolidation of Nissan Motor Co., Ltd., and equity method affiliated manufacturing companies.
- Environment Management Regions: Managed companies included in the scope are categorized by following regions: Japan: Japan

  - North America: United States, Mexico, Canada Europe: United Kingdom, Spain, Russia, Germany, Italy, France, Netherlands, Belgium, Hungary, Finland, Switzerland (Russia data moved from Others and included in Europe from 2013)
  - Others: China, Thailand, Indonesia, India, Australia, South Africa, Brazil, Egypt, Vietnam, UAE, others

#### **Restatement of Information Provided in Previous Years**

- 'Per vehicle produced' figures were recalculated from fiscal 2010 reflecting changes in 'global production volume'. See p.109 for details of global production volume.
- COD figures were recalculated from fiscal 2010 following the introduction of a revised methodology that is now applied across all global operations.
- Some recalculation of Energy Input and Carbon Footprint figures was made as a result of revisions to our internal guidelines, which includes emission factors applied to each operation. This impact of change is less than 3% of total performance data.

#### **CORPORATE INDICATORS**

#### Material Balance

Input		(FY)
	Unit	2014
Raw materials	ton	7,055,790
Water	1,000 m³	30,204
Energy	MWh	9,412,024

Output		(FY)
	Unit	2014
Vehicles		
Global production volume	unit	5,061,000
Waste	ton	173,513
Waste for disposal	ton	13,153
Recycled	ton	160,360
Wastewater	1,000 m³	22,204
CO <sub>2</sub> emissions	t-CO <sub>2</sub>	3,283,867
VOC	ton	10,888
NOx	ton	405
SOx	ton	40

Nissan's mid-term environmental action plan, Nissan Green Program 2016 (NGP2016), focuses on reducing the environmental impact of corporate activities and pursuing harmony between resource consumption and ecology. To minimize the company's corporate carbon footprint, Nissan aims to reduce CO<sub>2</sub> emissions per vehicle sold and, to improve resource efficiency by increasing the recycled material usage ratio. Four key actions, including the above, are impremented throughout Nissan's corporate activities.

 → GRI G4 Indicators
>→ G4-EN1/G4-EN3/ G4-EN8/G4-EN15/ G4-EN16/G4-EN21/ G4-EN22/G4-EN23

#### **CORPORATE INDICATORS – ENERGY**

#### Energy Input

						(FY
	Unit	2010	2011	2012	2013	2014
lotal	MWh	9,353,605	9,460,190	8,894,864	9,207,124	9,412,024
Japan	MWh	5,525,097	5,573,174	4,565,499	4,424,486	4,191,517
North America	MWh	1,782,399	1,733,447	2,157,793	2,061,393	2,424,94
Europe	MWh	1,066,503	939,469	982,332	1,027,027	1,094,17
Other	MWh	979,606	1,214,099	1,279,240	1,694,218	1,701,39
Primary						
Natural gas	MWh	3,691,097	3,467,178	2,847,325	2,894,901	3,060,12
LPG	MWh	340,985	527,696	360,891	339,751	295,80
Coal	MWh	245,848	160,720	235,239	149,232	137,45
Heating oil	MWh	259,530	253,821	248,445	226,513	225,11
Gasoline	MWh	81,502	90,413	211,449	263,663	322,62
Diesel	MWh	18,114	20,247	72,151	71,371	99,04
Heavy oil	MWh	92,607	87,368	67,967	61,359	58,27
External						
Electricity (Purchased)	MWh	4,603,208	4,775,721	4,785,477	5,038,384	5,084,98
Renewable energy	MWh	962	1,157	15,522	118,917	154,51
Chilled water	MWh	11,692	9,087	25,947	11,646	4,23
Heated water	MWh	0	0	7,492	6,227	4,63
Steam	MWh	9,022	67,940	114,281	133,849	110,95
Internal						
Electricity (In-house generation)	MWh			8,199	10,227	8,77
Renewable energy	MWh			8,199	10,227	8,77
Total renewable energy	MWh	962	1,157	23,721	129,144	163,28
Ratio of renewable energy	%	0.01%	0.01%	0.26%	1.40%	1.73%

Despite the extensive energy-saving activities at Nissan facilities, energy usage was 9.41 million MWh in fiscal 2014, a 2.2% increase from fiscal 2013. Energy-saving activities throughout our corporate operations and efficient manufacturing contributed to limiting the rise, given that sales volume increased by 2.5% in the same period. Manufacturing operations accounted for 8,375,000 MWh of total energy consumption.\*

#### ▶ page\_135

#### This figure is subject to assurance by PricewaterhouseCoopers Sustainability Co., Ltd. For details, please see p. 135.

Nissan has the objective of increasing the usage of renewable energy to 9% of total energy used in global activities by fiscal 2016.

▶ GRI G4 Indicators
▶ G4-EN3

#### **Energy per Vehicle Produced**

In fiscal 2014, despite extensive energy saving activities at global Nissan facilities, energy per vehicle produced increased to 1.86 MWh, a deterioration of 2.7% compared to the previous fiscal year. This is due to an increase in parts production for Alliance partners and other auto manufacturers that are not counted in the denominator of produced vehicles. But as shown in Manufacturing CO<sub>2</sub> per Vehicle Produced on p. 116, the energy used in manufacturing Nissan and Infiniti vehicles is improving, thus emitting less CO<sub>2</sub> per vehicle produced.





# 1.07 1.01

**Energy per Revenue** 

(MWh/million ¥)

1.2



In fiscal 2014, efficient energy use throughout global Nissan facilities improved energy per revenue to 0.76 MWh, an improvement of 5.8% compared to the previous fiscal year. This result shows our continuous steps toward decoupling financial capital generation from energy use.



		(FY)
	Unit	2014
Japan	MWh/vehicle	4.81
North America	MWh/vehicle	1.39
Europe	MWh/vehicle	1.52
Other	MWh/vehicle	0.99

Data for the Japan region includes manufacturing of powertrains and other components for use in overseas assembly operations. Since the denominator is vehicles produced in the region, this results in intensity tending to show higher values.



#### **CORPORATE INDICATORS – CO2**

#### **Carbon Footprint**

						(FY)
	Unit	2010	2011	2012	2013	2014
Scope1	t-CO <sub>2</sub>	1,023,208	1,047,691	835,766	812,062	861,457
Scope2	t-CO <sub>2</sub>	1,944,684	2,051,965	2,432,889	2,538,360	2,422,410
Scope1+2	t-CO <sub>2</sub>	2,967,892	3,099,656	3,268,655	3,350,422	3,283,867
Japan	t-CO <sub>2</sub>	1,444,074	1,451,343	1,526,182	1,446,871	1,267,676
North America	t-CO <sub>2</sub>	610,016	623,654	758,457	698,934	769,696
Europe	t-CO <sub>2</sub>	316,856	311,790	284,079	259,972	290,109
Other	t-CO <sub>2</sub>	596,945	712,868	699,937	944,644	956,386
Scope3						
Commuting	t-CO <sub>2</sub>		449,110	468,346	426,487	455,510
Japan, U.S., Europe	t-CO <sub>2</sub>		213,538	214,619	217,091	227,248
Logistics	t-CO <sub>2</sub>	1,438,000	1,660,000	1,490,050	1,678,903	1,632,070

Scope 2 emissions: 2.134 million tons).▶

In fiscal 2014, CO<sub>2</sub> emissions from Nissan facilities decreased 2% from the

previous fiscal year, and the total of Scope 1 and 2 emissions was 3.28

million tons. This is due to energy-conservation activities in Japan and a

revision in the national grid CO<sub>2</sub> coefficient. The CO<sub>2</sub> emissions in Japan

decreased by more than 10%. Total CO<sub>2</sub> emissions from manufacturing

processes were 2.923 million tons (Scope 1 emissions: 0.789 million tons,

#### Scope 1 and 2 Emissions per Vehicle Produced

(t-CO<sub>2</sub>/vehicle) 1.0



#### (By Region)

		(FY)
	Unit	2014
Japan	t-CO <sub>2</sub> /vehicle	1.46
North America	t-CO2/vehicle	0.44
Europe	t-CO2/vehicle	0.40
Other	t-CO <sub>2</sub> /vehicle	0.55

Data for the Japan region includes manufacturing of powertrains and other components for overseas assembly use. Since the denominator is vehicles produced in the region, this results in intensity tending to show higher values.

#### Scope 1 and 2 Emissions per Revenue



(		• /							
0.35	0.3	4	0.3	3	0.3	4			
0.30					••••		0.29	0.26	
0.25									
0.20									
0.15									
0.10									
0.05									
0.00	201	0	201	1	201	2	2013	2014	(FY)

For fiscal 2014, CO<sub>2</sub> emissions per vehicle produced decreased 1.6% from the previous fiscal year, with combined Scope 1 and 2 emissions at 0.65 tons. Energy conservation diagnosis and best practice sharing among global Nissan plants contributed to achieving these significant improvements.



In fiscal 2014, as measured by the per revenue  $CO_2$  emissions from our global operations, the result was 0.26 tons per ¥1 million, an improvement of 9.7% compared to fiscal 2013.





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For details, please see

(%)

100

80

60

40

20

0

100

2005

84.6

84.9 84.6

2011 2012 2013 2014 (FY)

77.4

#### Corporate Carbon Footprint per Vehicle Sold

In the Nissan Green Program 2016 (NGP2016), the company aims to reduce CO<sub>2</sub> emissions from corporate activities by 20% compared to fiscal 2005, focusing on manufacturing, logistics, offices and sales companies in Japan. Fiscal 2014 saw an improvement in energy consumption in manufacturing and offices, with overall corporate emissions reduced by 22.6 % compared to fiscal 2005, achieving the target two years in advance.



#### Manufacturing CO<sub>2</sub> per Vehicle Produced

In the Nissan Green Program 2016 (NGP2016), the company aims to reduce CO<sub>2</sub> emissions per vehicle produced from manufacturing activities by 27% in fiscal 2016 compared to fiscal 2005. In fiscal 2014, Nissan's manufacturing CO<sub>2</sub> emissions per vehicle produced reached 0.56 ton, a 23.9% reduction compared to fiscal 2005.





#### **CORPORATE INDICATORS – WATER**

Water	Input
-------	-------

						(FY)
	Unit	2010	2011	2012	2013	2014
Total	1,000 m³	28,671	30,513	29,537	30,967	30,204
Japan	1,000 m <sup>3</sup>	17,612	18,565	15,956	16,818	16,032
North America	1,000 m <sup>3</sup>	4,330	4,591	4,770	5,176	5,419
Europe	1,000 m³	2,297	2,276	2,410	2,404	2,310
Other	1,000 m <sup>3</sup>	4,432	5,081	6,401	6,569	6,443

Nissan's objective is to reduce intake water by 15% in fiscal 2016 compared with fiscal 2010 in cubic meters per production unit. In fiscal 2014, water input in our global sites was 30,204 thousand m<sup>3</sup>, an improvement of 2.5% from fiscal 2013. This is mainly due to the water-saving activities in vehicle production plants, as shown in Vehicle Production Plant Water Input per Vehicle Produced on p. 117. Water use allocated for manufacturing processes in Japan is 6,353,568 m<sup>3</sup>.

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For details, please see p. 135.



#### Water Discharge

						(FY)
	Unit	2010	2011	2012	2013	2014
Total	1,000 m <sup>3</sup>	19,281	20,398	21,228	23,482	22,204
Japan	1,000 m³	13,030	13,565	13,710	15,114	14,372
North America	1,000 m <sup>3</sup>	2,732	3,214	3,055	3,658	3,533
Europe	1,000 m <sup>3</sup>	1,830	1,930	2,031	2,054	1,793
Other	1,000 m <sup>3</sup>	1,689	1,689	2,432	2,656	2,507

						(FY)
	Unit	2010	2011	2012	2013	2014
Quality						
Chemical oxygen demand (COD)	kg	27,695	31,982	34,894	32,130	27,883

In fiscal 2014, water discharges from our global sites totaled 22,204 thousand m<sup>3</sup>, which was an approximately 5.4% decrease from fiscal 2013.



#### Water Input per Vehicle Produced

In fiscal 2014, water use per vehicle produced decreased to 5.97 m<sup>3</sup>, a 2.1% improvement from fiscal 2013. This is mainly due to the water-saving activities in vehicle production plants as shown below.



#### (By Region)

		(FY)
	Unit	2014
Japan	m³/vehicle	18.41
North America	m <sup>3</sup> /vehicle	3.11
Europe	m <sup>3</sup> /vehicle	3.21
Other	m³/vehicle	3.73

Data for the Japan region includes manufacturing of powertrains and other components for overseas assembly use. Since the denominator is vehicles produced in the region, this results in intensity tending to show higher values.

#### Water Discharge per Vehicle Produced



#### (By Region)

		(FY)
	Unit	2014
Japan	m³/vehicle	16.50
North America	m³/vehicle	2.03
Europe	m³/vehicle	2.49
Other	m³/vehicle	1.45

Data for the Japan region includes manufacturing of powertrains and other components for overseas assembly use. Since the denominator is vehicles produced in the region, this results in intensity tending to show higher values. In fiscal 2014, water discharge per vehicle produced was 4.39 m<sup>3</sup>, which was a 5% improvement from fiscal 2013.





# Vehicle Production Plant Water Input per Vehicle Produced

Nissan's objective is to reduce intake water by 15% in fiscal 2016 compared with fiscal 2010 in cubic meters per production unit. In fiscal 2014, water use per vehicle produced in vehicle production plants improved 7.3% compared with fiscal 2010.



#### **CORPORATE INDICATORS – EMISSIONS**

#### Emissions

						(FY)
	Unit	2010	2011	2012	2013	2014
NOx	ton	751	731	525	450	405
SOx	ton	41	46	43	40	40

GRI G4 Indicators

In fiscal 2014, NOx and SOx emissions from our facilities were 405 tons and 40 tons, respectively.

#### Volatile Organic Compounds (VOCs)

						(FY)
	Unit	2010	2011	2012	2013	2014
Total	ton	10,130	11,424	12,305	11,734	10,888
Japan	ton	4,018	4,399	3,623	3,492	2,826
North America	ton	2,941	3,366	5,194	5,338	5,082
Europe	ton	3,171	3,658	3,488	2,904	2,979



Nissan's objective is to reduce volatile organic compounds (VOCs) from the body manufacturing process by 15% in fiscal year 2016 compared with fiscal year 2010 in grams per square meters. In fiscal 2014, VOCs from manufacturing plants were 10,888 tons globally, a 7.2% decrease from fiscal 2013. This is mainly due to improvements in emissions from paint shop operations.

#### **VOC Reduction from Paint Shop Technologies**

In 2013, Nissan opened its most advanced paint plant in the world. The state-of-the-art facility in Smyrna, Tennessee, sets new standards for quality, efficiency and environmental impacts, as it is capable of reducing energy consumption by 30%, carbon dioxide emissions by 30% and volatile organic compound (VOCs) emissions by 70%. The plant uses an innovative three-wet paint process that applies all three paint layers in succession, before the vehicle goes into the oven. The plant is Nissan's "Showcase Project" as part of the U.S. Department of Energy's Better Buildings Better Plants Challenge, where Nissan has committed to reducing energy intensity in its three U.S. plants by 25% by 2020.

#### VOCs per Vehicle Produced



#### (By Region)

		(FY)
	Unit	2014
Japan	kg/vehicle	3.25
North America	kg/vehicle	2.91
Europe	kg/vehicle	4.14
	3	

In fiscal 2014, VOCs per vehicle produced were 2.15 kg, a 6.8% decrease from fiscal 2013, mainly due to improvements in emissions from paint shop operations.



#### Released Substances Designated by PRTR Law (Japan)\*

						(FY)
	Unit	2009	2010	2011	2012	2013
Japan site total	ton	3,773	3,607	4,441	4,158	4,183
Oppama	ton	1,263	911	981	715	676
Tochigi	ton	897	829	915	942	1,155
Kyushu	ton	910	1,106	1,390	1,394	1,300
Yokohama	ton	429	418	555	581	579
lwaki	ton	13	58	320	183	128
NTC	ton	260	284	280	343	347

The table shows chemical substance emissions calculated based on the Japanese government PRTR guideline. PRTR emissions show total volume excluding substances adherent to the product.

In fiscal 2013, released substances designated by the PRTR (Pollutant Release and Transfer Register) Law in Japan were 4,183 tons, a slight increase from the previous year. Results for fiscal 2014 will be updated later this year.

# ➡ GRI G4 Indicators ▶ G4-EN21

#### **PRTR Emissions per Vehicle Produced** (Japan)

In fiscal 2013, PRTR emissions per vehicle produced in Japan were 4.18 kg, a 6.6% increase from the previous year. The result was greatly influenced by the increase of R&D activities in Japan. Results for fiscal 2014 will be updated later this year.





#### **CORPORATE INDICATORS – WASTE**

#### Waste

Recycled

						(FY)
	Unit	2010	2011	2012	2013	2014
Total	ton	164,381	193,798	168,617	172,849	173,513
Japan	ton	70,136	74,412	65,412	61,999	59,808
North America	ton	31,806	35,780	40,208	51,767	58,452
Europe	ton	59,617	56,996	50,495	51,295	45,358
Other	ton	2,822	26,610	12,502	7,788	9,895
Detail						
Waste for disposal	ton	41,288	40,048	31,187	17,903	13,153

123.093

153.750

137.430

Nissan's objective is to reduce waste in manufacturing plants by 2% per year for Japan and 1% per year globally compared to BAU (business as usual). For fiscal 2014, waste generated totaled 174 ktons, an increase of 0.4% from fiscal 2013. Although total waste generated increased, waste for disposal improved greatly by 26.5% from the previous year, mainly due to an activity at a manufacturing plant in Spain. The boundary of the waste data is limited to global production facilities. Waste generated from the 5 major manufacturing plants in Japan is 27,307 tons.\*

ton

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154.946

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160.360



#### Waste per Vehicle Produced

Waste per vehicle produced was 34.28 kg, an increase of 0.8% from fiscal 2013. This is due to full operation at a new manufacturing plant in Mexico, which is expected to improve its figures in the following years.



#### Waste for Disposal per Vehicle Produced

Nissan production sites overseas continue to make strong efforts toward reducing waste for disposal. In fiscal 2014, despite the fact that total waste volume increased slightly, Nissan reduced the volume of waste for disposal to a total of 2.60 kg per vehicle produced, a 26.2% reduction from fiscal 2013. This is mainly due to the effort at the manufacturing plant in Spain.





#### (By Region)

(kg/vehicle)

9.95

2010

8.35

2011

12

10

8

6

4

2

0

		(FY)
	Unit	2014
Japan	kg/vehicle	68.67
North America	kg/vehicle	33.52
Europe	kg/vehicle	63.00
Other	kg/vehicle	5.73

6.45

2012

3.52

2013

2.60

2014 (FY)

#### **CORPORATE INDICATORS – LOGISTICS**

#### **Logistics Volume**

						(FY)
	Unit	2010	2011	2012	2013	2014
lotal 🛛	mil ton-km	35,132	37,946	35,747	37,719	35,259
Inbound	mil ton-km	10,659	11,603	12,156	12,883	11,594
Outbound	mil ton-km	24,473	26,343	23,591	24,836	23,665
Sea	%	71.8	70.8	70.7	64.3	62.0
Road	%	19.6	20.4	20.6	24.9	25.0
Rail	%	8.2	8.1	8.2	10.5	12.5
Air	%	0.4	0.7	0.5	0.4	0.5

In fiscal 2014, global shipping decreased by 6.5% from the previous year to reach 35,259 million ton-km, primarily due to increased land shipping using rail transport, which emits less CO<sub>2</sub>, associated with North American operations. Enhancing management techniques and utilizing other transportation methods allowed Nissan to considerably reduce the amount shipped, resulting in an annual reduction of 9.9% in sea freight volume.





#### CO<sub>2</sub> Emissions in Logistics

						(FY)
	Unit	2010	2011	2012	2013	2014
Total	t-CO <sub>2</sub>	1,412,657	1,642,195	1,490,050	1,678,903	1,632,070
Inbound 🍽	t-CO <sub>2</sub>	686,412	859,671	821,030	908,804	846,340
Outbound™	t-CO <sub>2</sub>	726,246	782,524	669,020	770,098	785,730
Sea	%	25.2	23.3	23.9	20.2	18.2
Road	%	54.7	50.8	55.3	61.7	59.6
Rail	%	4.5	4.1	4.3	5.2	5.0
Air	%	15.7	21.8	16.4	12.9	17.1

"Inbound" includes parts procurement from suppliers and transportation of knockdown parts, and "Outbound" includes transportation of complete vehicles and service parts. In fiscal 2014,  $CO_2$  emissions from logistics were 1,632,070 tons, a decrease of 2.8% from the previous year, mainly due to use of rail transport, which only increased  $CO_2$  emissions by 5.1% while boosting logistic volume by 11.4%.

→ GRI G4 Indicators
→ G4-EN19/G4-EN30

#### **CO**<sup>2</sup> Emissions per Vehicle Transported



In fiscal 2014, despite an expansion in global production, the  $CO_2$  emissions per vehicle transported were 0.41 ton, a 3.3% improvement from fiscal 2013.



#### **Employee Commuting CO<sub>2</sub> Emissions**



#### CO<sub>2</sub> Emissions from Commuting



In fiscal 2013, we introduced a companywide CO₂ reduction plan for car commuting employees in Japan. For fiscal 2014, CO₂ emissions from car commuting in Japan were approximately 54 kton, or 2.90 ton-CO₂/ vehicle annually. This plan encourages car commuters to shift from internal combustion engine vehicles to the zero-emission electric vehicle Nissan LEAF to reduce CO₂. The objective is to reduce emissions by 1% in ton-CO₂/vehicle annually.

- Calculated by using below parameters together with vehicle homologation data:
- Average car commuting range (JPN): 9,000 km/ vehicle-year
- National Greenhouse Gas Inventory Report of Japan (2009), Ministry of the Environment, Japan: 0.33 kg-CO2e
- CO<sub>2</sub> emission factor in fiscal 2011, Tokyo Electric Power Company: 0.000463 t-CO<sub>2</sub>/kWh
- Employees of Nissan offices and manufacturing plants in Japan, fiscal 2013.

#### CO<sub>2</sub> Emissions from Business Trips

In 2005 the company started the Nissan Meeting Way program to improve the efficiency of meetings. This program has five major rules: keep things paperless, require as little movement of people as possible, take only 1 hour per unit of discussion, confirm meeting objectives and record clear minutes. As a result of this program, meeting efficiency was improved; CO<sub>2</sub> emissions from business travel were also reduced through the use of video and telephone conference systems.

#### Achieved 18% Reduction of CO<sub>2</sub> Emission from Business Travel

Currently, CO<sub>2</sub> emissions from business travel are approximately 238 kton. Nissan has achieved an 18% reduction in business-travel-related CO<sub>2</sub> emissions compared to fiscal 2005 through the use of video and telephone conference systems since 2009.



Contribution to CO<sub>2</sub> Reduction by

#### **CORPORATE INDICATORS – SUPPLY CHAIN**

#### Supplier Emissions

				(11)
	Unit	2011	2012	2013
Carbon footprint	kt-CO <sub>2</sub>	49,254	48,226	48,089
Direct	kt-CO <sub>2</sub>	22,927	22,534	22,732
Indirect	kt-CO <sub>2</sub>	26,327	25,692	24,597
Energy input	GWh	143,594	139,800	136,219
Renewable energy	GWh	683	703	846
Water input	1,000 m <sup>3</sup>	118,907	118,786	113,102
Water discharge	1,000 m <sup>3</sup>	100,555	98,661	92,477
Waste	kton	3,002	2,971	2,493

A supply-chain environmental survey was conducted on global tier-1 suppliers. Calculations were based on actual submitted data from suppliers and combined with other estimated data. This survey is one of Nissan's efforts to reduce CO<sub>2</sub> emissions throughout the entire value chain. In fiscal 2013, the carbon footprint of contract suppliers was flat from the previous year. From fiscal 2014, with tier-1 suppliers' own individual targets, overall CO<sub>2</sub> emissions are expected to improve by 1% in t-CO<sub>2</sub> per turnover annually. Overall water input usage/waste emissions are also expected to improve by 1% per turnover annually. Nissan is regularly engaging with global suppliers to continuously reduce environmental impacts. The company is involved in energy-saving collaborative Thanks Activities with suppliers to reduce energy/CO<sub>2</sub> in China. Results for fiscal 2014 will be updated later this year.



(FY)

Scope 3 Emissions by Category		(FY)
Category	Component ratio	2014
1. Purchased goods & services	kt-CO <sub>2</sub>	16,035
2. Capital goods	kt-CO <sub>2</sub>	1,145
3. Fuel- and energy-related activities	kt-CO <sub>2</sub>	368
4. Upstream transportation & distribution	kt-CO <sub>2</sub>	846
5. Waste generated in operations	kt-CO <sub>2</sub>	176
6. Business travel	kt-CO <sub>2</sub>	243
7. Employee commuting	kt-CO <sub>2</sub>	456
8. Upstream leased assets	kt-CO <sub>2</sub>	0
9. Downstream transportation & distribution	kt-CO <sub>2</sub>	786
10. Processing of sold products	kt-CO <sub>2</sub>	9
11. Use of sold products	kt-CO <sub>2</sub>	122,788
12. End-of-life treatment of sold products	kt-CO <sub>2</sub>	379
13. Downstream leased assets	kt-CO <sub>2</sub>	448
14. Franchises	kt-CO <sub>2</sub>	0
15. Investments	kt-CO <sub>2</sub>	0
Total	kt-CO <sub>2</sub>	143,678

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 The values marked with an asterisk are subject to assurance by PricewaterhouseCoopers Sustainability Co., Ltd.
For details, please see p. 135. Nissan conducted a study based on the Corporate Value Chain (Scope 3) Accounting and Reporting Standard from the GHG Protocol. The results showed that about 90% of Scope 3 emissions were from the use of sold products. Nissan has introduced fuel-efficient vehicles globally and disclosed the resulting progress in corporate average fuel efficiency. As about 10% of Scope 3 emissions were from purchased goods and services, Nissan believes actions are necessary along the entire value chain. Since 2011, the company has shared its environmental policy and promoted collaboration with suppliers. For details, please see p. 42.

#### **CORPORATE INDICATORS – ENVIRONMENTAL ACCOUNTING**

#### **Environmental Conservation Cost**

					(FY)
	Unit	2012	2	201	3
		Investment	Cost	Investment	Cos
Total	mil ¥	5,520	165,959	3,225	178,833
Business area	mil ¥	320	1,632	25	1,635
Upstream/downstream	mil ¥	-	683	-	665
Management	mil ¥	0	2,537	0	2,362
R&D	mil ¥	5,200	161,000	3,200	174,000
Social activities	mil ¥	0	106	0	114
Damage repairs	mil ¥	0	0	_	5
					(FY
	Unit		2012		2013
Total	mil ¥		2,604		2,478
Cost reduction	mil ¥		900		897
Profit	mil ¥		1,704		1,581

All environmental costs are based on the guidelines provided by Japan's Ministry of the Environment, and are calculated for activities in Japan only. Results for fiscal 2014 will be updated later this year.





#### **CORPORATE INDICATORS – FACILITY**

#### **Carbon Credit**

						(FY)
	Unit	2010	2011	2012	2013	2014
Allowance	t-CO <sub>2</sub>	7,308	7,308	7,308	21,015	21,225
Credit	t-CO <sub>2</sub>	4,934	4,066	5,261	-	-

Nissan Motor Iberica, S.A. in Barcelona, Spain, entered EU-ETS in fiscal 2009. The verified allowance earned for fiscal 2014 was 21,225 tons.

#### **ISO 14001 Certification**

▶ GRI G4 Indicators
▶ G4-DMA



Nissan is progressing with the introduction of environmental management systems to all its operating sites worldwide. In January 2011 the company obtained integrated ISO 14001 certification for its Global Headquarters and all main facilities in Japan for research and development, production and distribution, as well as for product development processes. Nissan has also obtained ISO 14001 certification at all major production plants outside Japan.

#### **Green Building Policy**

With ISO 14001 management processes for evaluating environmental impact, Nissan makes it a key task to optimize its buildings in the construction or refurbishing stages to make all its structures greener. Evaluation metrics in this area include buildings with a smaller environmental footprint, such as lower CO<sub>2</sub> emissions; construction methods producing less waste and emissions; and reduced use of hazardous materials and other quality control tasks. Furthermore, in Japan Nissan uses the Ministry of Land, Infrastructure, Transport and Tourism's Comprehensive Assessment System for Built Environment Efficiency (CASBEE) as one performance index.

CSR DATA

Among Nissan's current business facilities, the Global Headquarters in the city of Yokohama has earned CASBEE's highest "S" ranking, making it the second Nissan structure to do so following the Nissan Advanced Technology Center (NATC) in Atsugi, Kanagawa Prefecture.

The Global Headquarters gained a Built Environment Efficiency Rating of 5.6, the highest CASBEE rating for a new structure, making it one of Japan's greenest office buildings. The building's use of natural energy sources to reduce its energy usage and its CO<sub>2</sub> emissions were evaluated highly, as were its methods of water recycling and its significant reduction in waste produced.

Since April 2000, Nissan has been deploying unique environmental facility certification system based on ISO 14001 for sales dealers called the Nissan Green Shop. The company's environmental policy requires all dealers in Japan to meet a certain standard and continue to be audited by Nissan each year. The dedicated evaluation sheet has a total of 84 KPIs and is regularly revised to reflect requirements of national legislation, local communities and the Nissan Green Program.

#### **Fines from Environmental Laws**

No fines or compliance concerns from national environmental law materialized in the reporting year.





#### PRODUCT INDICATORS

#### **PRODUCT INDICATORS – FUEL ECONOMY, CO2**

#### Japan Fuel Economy by Weight Rank

										(FY)
Passenger cars	Unit	2006	2007	2008	2009	2010	2011	2012	2013	2014
≦702 kg	km/L 10-15									
703–827 kg	km/L 10-15	20.6	20.9	20.8	21.7	22.5	25.0	26.2	27.3	28.2
828–1,015 kg	km/L 10-15	18.8	18.6	18.3	19.5	22.5	23.0	23.1	28.5	28.2
1,016–1,265 kg	km/L 10-15	17.6	18.1	18.3	19.5	19.4	19.4	21.8	23.0	23.1
1,266–1,515 kg	km/L 10-15	12.8	13.6	13.3	13.8	14.4	14.4	14.5	15.8	16.0
1,516–1,765 kg	km/L 10-15	11.8	11.6	12.0	12.7	13.1	14.1	15.2	16.1	16.9
1,766–2,015 kg	km/L 10-15	8.7	8.6	9.2	9.2	11.7	11.9	12.5	13.7	14.1
2,016–2,265 kg	km/L 10-15	8.3	8.3	8.4	8.4	9.2	9.4	9.7	10.1	10.1
≧2,266 kg	km/L 10-15	5.5	5.5							

The progress on fuel efficiency in each market is measured according to fuel efficiency standards applied in the Japanese, U.S., European and Chinese markets, respectively. Regarding the fiscal 2014 results for Japan and Europe, provisional values determined by Nissan are used.





In fiscal 2014, mainly due to strong sales of the DAYZ and Note, the average fuel economy improved to 20.0 km/L in JC08 mode, which is approximately a 1.5% improvement compared to fiscal 2013.

**Corporate Average Fuel Efficiency in the United States** 



In fiscal 2014, sales of the fuel-efficient Altima, Versa and Rogue resulted in CAFE of 40.0 MPG for passenger cars, an improvement of 2.3% from fiscal 2013. CAFE for light duty trucks was 27.5 mpg.



#### **CO<sub>2</sub> Emission Index from Nissan Vehicles** in Europe

In fiscal 2014, sales of the new Qashgai launched in fiscal 2013 and the fuel-efficient new Note improved CO<sub>2</sub> emissions by 13% compared to fiscal 2013 for Nissan's passenger car models sold in Europe.



(g-CO<sub>2</sub>/km)

147

#### Global Corporate Average Fuel Efficiency (CAFE)

Nissan's CAFE result in fiscal 2014 represented a 36.4% improvement from the fiscal 2005 level (as measured by fuel efficiency standards in the Japanese, U.S., European and Chinese markets). The sales of "kei" minicar DAYZ in Japan, Note in Europe and Altima and Versa in the U.S. market improved the overall CAFE result.



#### Corporate Average Fuel Efficiency (CAFE) in China

The results from the Chinese market are added from fiscal 2014. For domestically produced vehicles, CAFE improved 9.4% from the previous fiscal year. The result includes production for other brands by Nissan's joint venture partners in China.



➡ GRI G4 Indicators

▶ G4-EN7/G4-EN27



#### **Top Fuel Economy Models**

			(FY)
	Unit		2014
Global	km/L (JC08)	Moco 0.66L 2WD + Stop/Start System, DAYZ 0.66L 2WD + Stop/Start System	30
Best selling model	MPG	Altima 2.5L 2WD	31
Japan (excl. light vehicles)	km/L (JC08)	Note 1.2L 2WD + Super Charger + Stop/Start System	25.2
Japan (incl. light vehicles)	km/L (JC08)	Moco 0.66L 2WD + Stop/Start System, DAYZ 0.66L 2WD + Stop/Start System	30
Europe	g-CO <sub>2</sub> /km	Note 1.5L dCi + Stop/Start System	90
U.S.	MPG	Versa 1.6L 2WD	35
China	L/100km	March 1.2L 2WD	5.3



Only models with internal combustion engines are listed, and the 100% electric Nissan LEAF is excluded. From fiscal 2013, fuel economy in Japan is shown in JC08 mode.

#### **Energy Savings through Ultracompact Mobility**

The Nissan New Mobility Concept enables efficient use of energy and realization of smooth traffic flow. 50 units of this two-seat, ultracompact, lightweight vehicle, used in the car-sharing program "Choimobi Yokohama," contributed more than 10 ton of CO<sub>2</sub> reduction compared to "kei" vehicles. This is based on total autonomy range until end of fiscal 2014. Nissan is cosponsoring the city of Yokohama's Y-Green Partner program for wind power generation in Japan. From fiscal 2013, by allocating purchased green power certificates for this program, Nissan is supporting the use of renewable energy in car-sharing operations.

#### **Fuel Economy Leaders**

The *Fuel Economy Guide* published by the U.S. Environmental Protection Agency (EPA) and Department of Energy (DOE) helps buyers to choose the most fuel-efficient vehicle. Based on the *Model Year 2014 Fuel Economy Guide*, the all-electric Nissan LEAF was listed as a leader in the Midsize Cars category with a combined fuel economy of 114 MPGe.



Compiled from the Model Year 2014 Fuel Economy Guide by the U.S. Environmental Protection Agency (EPA) and Department of Energy (DOE)

#### **PRODUCT INDICATORS – TECHNOLOGIES**

#### Sales Ratio by Powertrain Type

	Unit	Gasoline- powered vehicles	Diesel- powered vehicles	Natural-gas drive vehicles	Hybrid drive vehicles	Electric drive vehicles
Japan	%	84.7	2.7		1.43	1.38
North America	%	97.8	0.2	0.05		
Europe	%	55.6	41.5	0.05		
Other	%	91.2	8.6			



Sales of the all-electric Nissan LEAF—the world's best-selling zeroemission car—surpassed 170,000 units in fiscal 2014. The ratio of EVs is steadily improving as a new commercial EV, the e-NV200, was launched.

#### **Green Product Innovation**

Nissan believes it is important not only to develop and introduce zeroemission vehicles such as electric vehicles and fuel-cell vehicles, but also to improve the fuel economy of engine-powered vehicles. Nissan's PURE DRIVE title is given to vehicles that not only meet existing fuel economy requirements in each market but clear more stringent internal standards which we periodically review in line with societal demands. PURE DRIVE implements innovative environmental technologies that maximize energy efficiency to lower fuel consumption and reduce CO<sub>2</sub> emissions. Cars featuring these technologies are being marketed worldwide.

#### **Core Technologies for Green Products**

Nissan strives to develop technologies that maximize the overall energy efficiency of internal combustion engines and improve transmission performance, as well as zero-emission technologies. Nissan's core technologies in this area are lithium-ion batteries, Intelligent Dual Clutch Control Hybrid and the Xtronic transmission (Continuously Variable Transmission, or CVT) system.









#### ICE with CVT Sales Volume



#### EV

The Nissan LEAF is now sold in more than 40 countries, with sales increasing every year. In March 2015, total sales worldwide reached 170,000 vehicles.

Nissan also launched the company's first commercial EV, the e-NV200, in the European and Japanese markets in 2014.

#### HEV

In fiscal 2013, the Nissan Group launched two rear-wheel-drive vehicles, the Skyline and the Infiniti Q50, equipped with an original hybrid system. Nissan is also expanding use of its hybrid system for front-wheel-drive vehicles. The extremely compact system is combined with the Xtronic transmission in the fiscal 2013 Pathfinder and Infiniti QX60. A simple and compact hybrid system, S-Hybrid, has been used in the Serena since 2012. The system includes an auxiliary motor with enhanced energy regeneration capacity and power output, as well as a sub-battery installed in the engine compartment to boost storage capacity.

#### The Xtronic Transmission

Nissan's goal is to ship 20 million Xtronic-equipped vehicles, with their fuel efficiency benefits, by fiscal 2016 from their first launch in 1992, thereby helping to reduce global  $CO_2$  emissions. Nissan sold 2.95 million Xtronic vehicles in fiscal 2014, bringing the cumulative total to 19.10 million.

#### **PRODUCT INDICATORS – OTHER EMISSIONS**

Compliance with Emission Regulations		(FY)
	Unit	2014
Japan 75% lower than 2005 standard (SU-LEV)	%	99
Europe Euro 5	%	100
U.S. U-LEV/SULEV/ZEV	%	93
China National 4	%	100

While Nissan has zero-emission vehicles, the ultimate clean car, in its portfolio, the company endeavors to make the entire fleet as clean as possible by reducing exhaust emissions. Nissan has introduced vehicles that comply today with each region's or country's more stringent future emission regulations. Due to differences in regulations, there is no direct way to compare by region or country, but this shows the percentage of Nissan's fleet in each location produced to the strictest standards of that region or country. In Europe, the Euro 6 standard went into effect in September 2014; Nissan has begun working to ensure its vehicles' compliance. The National 5 (Euro 5 equivalent) standard is applied in some regions of China; Nissan's vehicles marketed there are 100% compliant.



#### Share of Noise Emissions





Noise emissions are shown by the noise produced by the acceleration of vehicle in accordance with each national regulation. Only complete, built-up imported models are shown for Europe and China data.



#### China (%) 100 80 60 51 40 25 22 20 1 0 0 0 0 70 and less 71 72 73 74 75 76 (dB)

#### Regulated Chemical Substances

In 2007, Nissan created a unified global approach to reducing environment-impacting substances. Since then the company has enhanced management of these substances and advanced plans to reduce or to replace their use. Through communication with NGOs, Nissan restricts usage of substances that have potential to be hazardous, that are thought to have a high risk of falling into this category or that have been identified as potential threats even if they are not covered by laws and regulations in each country where it does business. As defined in the Nissan Engineering Standard (NES) titled "Restricted Use of Substances," these substances are banned or subject to controls in line with this approach. Nissan is working to apply this standard from the early development phase onward to the modules, raw materials and service parts that go into all Nissan vehicles. In fiscal 2014, the NES was revised to include total of 2,897 substances in consideration of substances of high concern under the European regulation.

CSR DATA

**Defined Chemical Substances** 





#### **PRODUCT INDICATORS – LIFECYCLE ASSESSMENTS (LCAs)**

#### Lifecycle Assessment to Reduce Environmental Impact

Nissan uses the lifecycle assessment (LCA) method to evaluate and comprehensively assess environmental impact in all stages of the vehicle lifecycle, from resource extraction to production, transport, customer use and vehicle disposal. The company also carries out LCAs for new technologies as they are introduced.

#### CO<sub>2</sub> Emissions over Vehicle Lifecycle for Nissan LEAF\*



Company calculations show that the Nissan LEAF reduces CO<sub>2</sub> emissions by up to 40% over its lifecycle compared to gasoline-powered vehicles of the same class. This assessment was certified by a third-party LCA assessment organization, the Japan Environmental Management Association for Industry.

Nissan has also obtained LCA methodology certification from TÜV Rheinland and calculated LCAs for the e-NV200. Calculations show that electric vehicles reduce CO<sub>2</sub> emissions by up to 40% over their lifecycle compared to equivalent gasoline-powered vehicles and by 30% compared to diesel-powered vehicles.





Electric vehicles' unique parts, such as their batteries, show relatively higher CO<sub>2</sub> emissions compared to those for ICE vehicles at the manufacturing stage. But in fuel production, electricity generation and energy use, the higher energy efficiency of electric vehicle leads to lower CO<sub>2</sub> emissions.

Nissan is making efforts to reduce CO<sub>2</sub> emissions in manufacturing by improving the yield ratio of materials, using more efficient manufacturing processes and increasing the use of recycled materials. Nissan also continues to pursue technology development on electric powertrains, power savings on ancillary devices and the use of renewable energy to reduce CO<sub>2</sub> emissions over the entire EV lifecycle. In the end-of-life stage, used batteries can be utilized for energy storage to contribute to comprehensive CO<sub>2</sub> emission reduction in society.

#### LCA Conducted Product Ratio in Sales Volume (EU Market)



Nissan is working to enhance the application of the LCA method and to extend quantitative understanding of environmental impact. In fiscal 2014, the LCA application rate as a percentage of total sales volume in the EU was more than 90%, thus allowing Nissan to better understand the environmental impact of a wider range of segments, including small- to large-size internal combustion engine vehicles and zero-emission vehicles. The segment shown here is made with reference to the definition of the European Automobile Manufacturers' Association (ACEA).

#### **PRODUCT INDICATORS – MATERIALS, RECYCLING**

#### Material Ratio

Nissan is increasing the use of renewable resources and recycled materials in addition to the traditional approach of using resources more efficiently to reduce reliance on them. The company's efforts with respect to recycled materials are based on the thought that once a natural resource is extracted, it should continue to be used, while maintaining quality, to minimize environmental impact. Nissan has set a target of increasing the recycled material usage ratio per new vehicle for which production begins in fiscal 2016 by 25% in Japan, the United States and Europe. The data shown here represents the status in fiscal 2014.



#### **Recycled Material Ratio**

For production, Nissan has focused efforts on using recycled materials containing steel, aluminum and plastics. As a result, recycled materials account for approximately 20% by weight in the average vehicle. For example, the recycled ratio of cast aluminum in vehicle components such as engine cylinders is over 90% in total. This calculation was based on Nissan production in fiscal 2010.



#### Recycling

(0%)

Nissan has defined a long-term goal of maintaining global usage of these natural resources at 2010 levels through 2050.

Toward this end, Nissan is presently researching ways to increase the recovery rate further in order to reclaim and reuse valuable materials from end-of-life vehicles (ELVs). As of fiscal 2014, company calculations showed that Nissan had achieved a recovery rate of 99.6% in Japan.

From the early development stage, Nissan considers the use of highly recyclable materials and makes structural improvements for ease of recycling. Since the Note, launched in 2005, all new models have achieved a 95% or greater recyclability rate based on the national regulations on ELVs in regions such as Europe, Japan and Korea.

#### **Recycled Plastic Usage in Vehicle**

20					
	15.5	15.5	15.5	15.5	15.5
15					
10					
5					
0	2010	2011	2012	2013	2014 (FY)

Ratio of recycled plastic to total plastic was based on the best performance model in Europe. Recycled plastic use in fiscal 2014 was 15.5%.

#### Automotive Shredder Residue to Landfill Ratio



Based on the Automobile Recycling Law in Japan, Nissan calculated the ratio of landfill to residue after removing ferrous and nonferrous metals from ELVs. Nissan achieved a zero landfill ratio in fiscal 2014 by enhancing recycling capability through the acquisition of additional facilities that comply with the law.

▶ GRI G4 Indicators
▶ G4-EN2/G4-EN27

#### **PRODUCT INDICATORS – ELV PROGRAMS**

#### **ELV Programs**

Nissan has joined forces with other automotive companies to promote the recycling of ELVs through dismantling and shredding. In fiscal 2014, the program in Japan achieved a final recovery ratio for ELVs of 99.6% (actual value), at the same time reducing the amount of automotive shredder residue (ASR) related landfill and incineration disposal to zero based on the calculation method provided by the Japanese government.

This program consists of three phases: First, any Nissan ELVs entering the dismantling process are recycled, including flat steel, cast aluminum, bumpers, interior plastic parts, wire harnesses and precious rare earth metals. Second, specific items such as lithium-ion batteries are collected individually and directed to a dedicated recycling process. Third, residues from the dismantling process are shredded and collected at a dedicated facility.

Since 2004, Nissan and seven other Japanese auto manufacturers have promoted this facility to recycle ASR. Aligned with the Automobile Recycling Law in Japan, this serves as an integral part of a system to recycle ASR effectively, smoothly and efficiently. Nissan is a team leader of this alliance.

Another activity is Nissan's take-back system for ELVs in Europe. This network of Authorized Treatment Facilities was developed for individual countries in collaboration with contracted dismantlers, contracted service providers and governments to be aligned with the European ELV directive.

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#### THIRD-PARTY ASSURANCE

#### Third-Party Assurance

June 11, 2015

This English language report is a translation of the original Independent Practitioner's Limited Assurance Report in Japanese for reader's convenience.

> Independent Practitioner's Limited Assurance Report on Sustainability Report 2015

To: Mr. Toshiyuki Shiga, Representative Director, Nissan Motor Co., Ltd.

We have undertaken a limited assurance engagement of the information marked(\*)(hereafter the "Selected Information") in the Nissan Sustainability Report (hereafter the "Report") for the year ended March 31, 2015.

We have not performed any procedures with respect to other information in the Report and, therefore, no conclusion is expressed on such information.

#### Management's responsibilities

Nissan Motor Co., Ltd. (hereafter the "Company") is responsible for the preparation of the Selected Information in accordance with the "fasis of Calculation for CO2 Emissions, Waste Generated, and Water Input Subject to Third Party Assurance" (hereafter "Reporting Criteria") which is applied as explained in note of the Report. The Company's responsibility includes the design, implementation and maintenance of internal control, relevant to the preparation of the Selected Information that is free from material misstatement, whether due to fraud or error.

GHG quantification is subject to inherent uncertainty because of incomplete scientific knowledge used to determine emissions factors and the values needed to combine emissions of different gases.

#### Our Independence and Quality Control

We have complied with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

In accordance with the International Standard on Quality Control 1, we maintain a comprehensive system of quality control including documented policies and procedures with respect to compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

## Understanding reporting and measurement methodologies

The absence of a significant body of established practice on which to base the evaluation and measurement of non-financial information allows for different, but acceptable, measurement techniques. The nature of non-financial information, and the techniques and precision used to determine and evaluate it, can result in materially different measurements. This may affect comparability between different entities and periods of time. The Selected Information, therefore, should be read and understood together with the Reporting Criteria (Tasias of Calculation for CO<sub>2</sub> Emissions, Waste Generated, and Water Input Subject to Third Party Assurance' ). The Reporting Criteria used is applicable as at March 21, 2015.

PricewaterhouseCoopers Sustainability Co., Ltd.

Sumitomo Fudosan Shiodome Hamarikyu Bldg. 8-21-1 Ginza, Chuo-ku, Tokyo 104-0061, Japan

#### Our Responsibility

Our responsibility is to express a limited assurance conclusion on the Selected Information based on the procedures we have performed and the evidence we have obtained. Depending on the type of information, we conducted our limited assurance engagement in accordance with:

- International Standard on Assurance Engagements 3410, Assurance Engagements on Greenhouse Cas Statements ("ISAE 3410") for CO2 emission information (scope 1 emission and scope 2 emission).
- International Standard on Assurance Engagements 3000, Assurance Engagements other than Audits and Reviews of Ilistorical Financial Information ("ISAE 3000" revised December 2003) for other information in the Selected Information.

These standards require that we plan and perform this engagement to obtain limited assurance about whether the Selected Information is free from material misstatement. A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks.

We assessed the risk of material misstatement in the Selected Information due to fraud or error, and performed the following procedures:

- inquiry with relevant Company management;
- evaluating the suitability of the Reporting Criteria as the basis for preparing the Selected Information;
- responding to the assessed risks as necessary in the circumstances;
- evaluating the overall presentation of the Selected Information;
- evaluating the design of the key structures, systems, processes and controls for managing, recording and reporting the Selected Information. This included visiting

the four manufacturing sites and corporate offices selected on the basis of their inherent risk and materiality to the group, to understand the key processes and controls for reporting site performance data and to obtain supporting information; and

performing limited substantive testing on a selective basis of the Selected Information at the corporate offices and in relation to twenty-six manufacturing sites to check that data had been appropriately measured, recorded, collated and reported.

The procedures we performed were based on our professional judgment and included inquiries, observation of processes performed, inspection of documents, analytical procedures, evaluating the appropriateness of quantification methods and reporting policies, and agreeing or reconciling information with underlying records.

The procedures performed in a limited assurance engagement vary in nature from, and are less in extent than for, a reasonable assurance engagement. As a result, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement. Accordingly, we do not express a reasonable assurance option about whether the Selected Information has been prepared, in all material respects, in accordance with the Reporting Criteria.

#### Limited Assurance Conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the Selected Information in this report for the year ended March 31, 2015 is not prepared, in all material respects, in accordance with the Reporting Criteria.

<sup>1</sup> The maintenance and integrity of Company's vehicle is the responsibility of Company management. Our engagement did not consider matters relating to the maintenance and integrity of Company website. Accordingly, we accept the responsibility for any errors or changes to Selected Information or Reporting Criteria when presented on the website.

#### THIRD-PARTY ASSURANCE

# [Remarks] Basis of calculation for $CO_2$ emissions, waste generated and water input subject to third-party assurance

- CO<sub>2</sub> emissions from production sites: Calculated based on Nissan internal standards. The energy use data of each site is based on invoices from suppliers, which are multiplied by a CO<sub>2</sub> emissions coefficient publicly available for each production site.
- CO<sub>2</sub> emissions resulting from employees' commutes: Calculated based on the GHG Protocol Scope 3 Standard. Specifically, the annual CO<sub>2</sub> emissions resulting from each employee's commute are calculated using a standard unit of measurement announced by Japan's Ministry of Economy, Trade and Industry, Ministry of the Environment, and Ministry of Land, Infrastructure, Transport and Tourism. This figure is calculated on the basis that employees working at Global Headquarters commute by bus and others employees use cars that are vehicles designated by Nissan, based on the data they submit when applying for transportation allowances. This is multiplied by the number of employees at each facility or office.
- CO<sub>2</sub> emissions from the use of sold products: Calculated using the average regional CO<sub>2</sub> emissions per vehicle multiplied by estimated average lifecycle mileage and multiplied by fiscal 2014 sales volumes. The average CO<sub>2</sub> emissions for the use phase (including direct emissions only) per unit are calculated for each of our main regions (Japan, North America, EU and China) and extrapolated from average emissions of these markets for other markets. The Sustainable Mobility Project (SMP) model issued by the International Energy Agency was used to determine estimated average lifecycle mileages.
- Scope 3 emissions figures are estimates subject to varying inherent uncertainties.
- Waste generated from production sites of Nissan Motor Co., Ltd. in Japan: Calculated based on Nissan internal standards. The discharged waste is based on data from truck scales at the sites or data reported by disposal contractors. All discharged waste within the sites concerned is targeted. However, nonsteady and irregular generated waste, waste generated in canteens, waste from permanently stationed companies at the sites, waste generated by external vendors and waste from construction are excluded. In addition, materials recycled in-house, used in reproduction (reused by Nissan) or recycled (as salable, valuable materials) are not categorized as generated waste.
- Water input from production sites of Nissan Motor Co., Ltd. in Japan: Calculated based on Nissan internal standards. Water input is the water withdrawal amount according to billing meters or company meters installed on site. The water withdrawal amount includes drinking water (tap water), industrial-use water, underground water (spring/well water) and rainwater or the like.

#### **GRI** index (Environment)

	Index	Reference
G4-EN1	Materials used by weight or volume	113,133
G4-EN2	Percentage of materials used that are recycled input materials	133-135
G4-EN3	Energy consumption within the organization	37,113
G4-EN4	Energy consumption outside of the organization	120-122
G4-EN5	Energy intensity	36-37,114
G4-EN6	Reduction of energy consumption	37,113-114
G4-EN7	Reductions in energy requirements of products and services	33,125-128
G4-EN8	Total water withdrawal by source	116
G4-EN9	Water sources significantly affected by withdrawal of water	-
G4-EN10	Percentage and total volume of water recycled and reused	-
G4-EN11	Location and size of protected areas	-
G4-EN12	Description of significant impacts in protected areas	-
G4-EN13	Habitats protected or restored	-
G4-EN14	Total number of IUCN Red List species in areas affected by operations	-
G4-EN15	Direct greenhouse gas (GHG) emissions (Scope 1)	115
G4-EN16	Energy indirect greenhouse gas (GHG) emissions (Scope 2)	115
G4-EN17	Other relevant indirect greenhouse gas emissions	123
G4-EN18	Greenhouse gas (GHG) emissions intensity	115-116
G4-EN19	Reduction of greenhouse gas (GHG) emissions	37,115-116
G4-EN20	Emissions of ozone-depleting substances (ODS)	-
G4-EN21	NOx, SOx and other significant air emissions	118
G4-EN22	Total water discharge by quality and destination	116
G4-EN23	Total weight of waste by type and disposal method	23,119-120
G4-EN24	Total number and volume of significant spills	124
G4-EN25	Weight of transported, imported, exported, or treated hazardous waste	-
G4-EN26	Areas affected by the reporting organization's discharges of water and runoff	-
G4-EN27	Extent of impact mitigation of environmental impacts of products and services	26-35,38-39,125-134
G4-EN28	Percentage of products sold and their packaging materials that are reclaimed by category	38-39,133-134
G4-EN29	Significant fines and noncompliance with environmental laws and regulations	124
G4-EN30	Environmental impacts of transporting products, goods, materials, and members of the workforce	37,120-122
G4-EN31	Total environmental protection expenditures and investments by type	123
G4-EN32	Percentage of new suppliers that were screened using environmental criteria	42,72
G4-EN33	Significant actual and potential negative environmental impacts in the supply chain and actions taken	42
G4-EN34	Number of grievances about environmental impacts filed, addressed, and resolved through formal grievance mechanisms	-