## CSR CSR Report 2013

Special Feature

## Hong Kong Financial Data Centre Operations and CSR



## **NTT Communications' CSR**

## Top Message

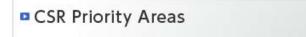


We will continue to contribute on a global basis toward the resolution of social problems and the realization of sustainable development.

Akira Arima President and CEO



## **Performance Report**





## Contributing to Society

We work toward ensuring information security and improving information and communications technology (ICT) while providing stable, highly reliable information and telecommunications services worldwide



## Protecting the Environment We are committed to providing information and take providing

information and telecommunications service solutions that reduce environmental impact, thereby helping to achieve a sustainable society



## Respecting Our Employees

We maintain high ethical standards in meeting our social responsibilities as a telecommunications professional



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**Overview of the NTT Communications Group** 

Corporate Information

Business and Society

# CSR Report 2013



Higher stock prices and a lower yen are among the factors behind significant signs of improvement in the Japanese economy since the beginning of the new Abe administration. However, the countries of Europe and emerging economies around the world still appear to be short of recovery, while in Japan the potential effects of planned consumption tax rate increases and other policies contribute to uncertainties about the future.

Within the telecommunications market, we anticipate expansion based on factors such as the proliferation of smartphone usage, the leveraging of Big Data and cloud-based computing to serve individual users, the creation of new industries and the streamlining of existing operations.

The NTT Communications Group is working to create a global, seamless management structure appropriate to this dynamic business environment. The ultimate goal of our Vision 2015 business plan, which was formulated in fiscal 2012, is to establish ourselves as the optimal "Global ICT Partner" for customers anywhere in the world.

Specifically, we aim to establish new services based on our global cloud vision, while striving to make our existing operations streamlined and competitive, and our global sales activities seamless.

The NTT Communications Group is in business thanks not only its valued customers but also to its stakeholders.

As a corporation, one of our responsibilities is to help contribute to the realization of sustainable development and the resolution of societal problems, by initiating CSR activities worthy of a "Global ICT Partner."

bira Arima

President and CEO NTT Communications Corporation

## CSR Report 2013 CSR Management Platform

While adhering strictly to all statutory and regulatory requirements as well as the principles of corporate governance, the NTT Communications Group strives to engage in business activities that are in tune with the needs of stakeholders. Endeavoring to contribute to the creation of a sustainable society, we are working diligently to build a sound CSR management platform from a wide range of perspectives.

## Approach to CSR

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## External Evaluations

- NTT Communications received the Gold Award in the British survey company Telemark Services' customer satisfaction survey.
- IT Management Award received from among the "IT Awards" bestowed by the Japan Institute of Information Technology for our "Work Style Reforms with ICT"
- ASP SaaS Category Overall Grand Prix Award of the "6th ASP SaaS Cloud Awards 2012"
- "Green Grid Data Center Awards 2012" Award for Excellence
- 2nd Place in the Communication and Service Category of Nikkei Shimbun's 16th "Environmental Management Survey"

## Promoting Dialogue with Stakeholders

- · Promoting Opportunities that Harness Feedback from Stakeholders
- · Specific Case Study 1: Dialogue with Customers
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## CSR Report 2013 Approach to CSR

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The NTT Communications Group established its Basic CSR Policy in June 2006. All efforts pursued by employees in line with this policy as part of day-to-day business constitute CSR activity.

## Making Contributions in a Manner that is Unique to the NTT Communications Group

## NTT Communications' Stance toward CSR

The NTT Communications Group places the utmost importance on contributing to society in an effective and unique manner. To this end, each and every employee is endeavoring to carry out the Group's CSR policy in their daily business activities based on more specific CSR priority activity targets and the Group's environmental vision.

## Basic CSR Policy

Our CSR activities aim to contribute to community prosperity and sustainability worldwide by creating new value and resolving problems through the information and communications services we provide as a Global ICT Partner.

## Priority Activity Policy

The NTT Communications Group continues to establish specific goals as a part of efforts to carry out its CSR policy. In addition, the Group has put in place a separate environmental vision while implementing other wide-ranging measures in keeping with its distinctive business activities.



The NTT Communications Group supports global growth and development by fulfilling its corporate social responsibilities in a genuinely distinctive manner through every facet of its business activities.

## As a Member of the NTT Group

The NTT Communication Group continues to establish specific goals as a part of efforts to carry out its CSR policy.

## Click here for details on the NTT Group CSR Charter.



The NTT Group CSR Charter

## Responsibilities as a Member of Society

## Our Business Principles

We define "stakeholders" as all the entities that have relations of any kind with the NTT Communications Group. The term includes not only our customers, business partners and shareholders, but also competitors that our business activities influence, society as a whole and individual employees. Understanding the perspective and earning the trust of our stakeholders are essential to enabling the Group to continue to profit and grow. We shall always be aware of our ties with various stakeholders as we bridge their present and future potential.

#### For Customers

1. From a customer-first perspective, we will provide solutions and services that offer true value.

2. We will act responsibly and with pride as a member of the NTT Communications Group in responding quickly, flexibly, and with integrity to our customers.

3. We will establish enduring relationships of trust with our customers.

## For Business Partners

1. We will maximize our cooperation with partners in order to offer the best possible value for our customers.

#### For Society

1. By providing more secure and innovative Internet services, we will contribute to the sound growth of the Internet society.

- 2. As part of our strong connection with society, we will contribute to global environmental protection.
- 3. We will understand and respect the cultures and customs of different nations.

## For Competitors

1. We will abide by rules and compete fairly.

### For Employees and the Workplace

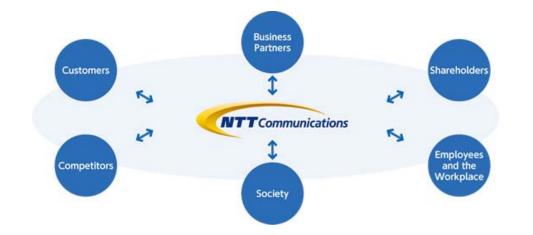
1. We will recognize individuality and diversity, and mutually protect human rights.

2. We will trust and respect each other and create an environment that is conducive to personal development and fulfillment of our goals.

3. As an ICT company, we will make a maximum effort to protect security.

## For Shareholders

- 1. We will disclose information concerning our business performance in a fair, accurate, and timely manner.
- 2. We will achieve sustainable growth as a company and seek higher benefits for our shareholders.



## **Promoting CSR**

## **Our Business Principle (OBP)**

The NTT Communications Group has formulated Our Business Principle (OBP) as a guideline for all of its business activities. As such, this guideline is shared by all employees and partner employees. OBP is a handbook that clearly states the basic principles that employees can turn to whenever they are uncertain about what constitutes correct judgment or behavior in the context of their relationships with various stakeholders. OBP thereby helps employees to remember their beginner's spirit, reflect on personal conduct and take the correct actions. We will continue to position OBP as the fundamental guideline for CSR activities as we promote these activities going

Click here for details on Our Business Principles.

#### Human Rights Policy

forward.

As a company that strives to develop and grow in the global market, NTT Communications considers one of its missions to be the creation of a corporate culture that respects human rights. With this in mind, we work diligently to solve human rights issues through our daily business activities.

### Basic Global Environmental Charter Philosophy

The NTT Communications Group will work actively to protect the global environment and to help bring about an environmentally friendly society. To this end, the Group will endeavor to provide the highest quality services, through every facet of its business activities from development to delivery, and help realize increased benefits for its customers worldwide.

## Accelerating Global Initiatives

As our customers have continued to expand their activities on the world stage in recent years, our own business model has evolved to incorporate increasingly diverse, cross-border concerns. Under these circumstances, we are accelerating our activities around the world, cognizant of the importance of introducing and expanding global concerns within our CSR activities, as we help create a sustainable society.

Approach to CSR
 External Evaluations

Promoting Dialogue with Stakeholders

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## CSR Report 2013 Promoting Dialogue with Stakeholders

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The NTT Communications Group makes every effort to take into consideration the concerns of its stakeholders in the conduct of its day-to-day activities. Guided by its Business Principle, the Group accordingly engages in management that focuses on stakeholders' needs. At the same time, equal emphasis is placed on CSR activities that draw on direct communications with stakeholders.

## **Basic Stance toward Dealing with Stakeholders**

## Promoting Opportunities that Harness Feedback from Stakeholders

In promoting dialogue with its stakeholders, the NTT Communications Group is generating opportunities to obtain invaluable input and feedback which it in turn channels through to its ongoing activities. We adopt a flexible approach toward promoting wide-ranging opportunities and topics. This includes issues that are carried over from year to year to designated themes and discussion points. The NTT Communications Group makes every effort to engage in detailed and in-depth dialog with its stakeholders.

Examples of Communication with Stakeholders

Communication with	We gather feedback from customer satisfaction surveys and take steps to improve satisfaction levels.
Customers	• Voice of Customer (VOC) Survey, NTT Communications Forum
Communication with Business Partners	We work with our business partners to improve communications quality, thereby improving customer satisfaction with respect to quality. • Arcstar Carrier Forum (ACF), Customer Council, Partner Summit We published a policy on procurement in accordance with our Guidelines for Green Procurement to ensure fair procurement activities. • Communication with suppliers
Communication with Society	We work to raise awareness of issues and develop a clear understanding of situations by communicating with NPOs and external experts. • Dialogue with stakeholders, various social contribution activities
Communication with	To help maintain and improve motivation among employees, we use an appropriate human resources system, provide a forum for communication with management, and make sure to reflect employees feedback.
Employees	• Dialogue with the president, KAIZEN Support Line.

## Specific Case Study 1: Dialogue with Customers

Obtaining wide-ranging feedback through dialogue with customers to help ensure a steady stream of higher quality products and services is an extremely important management issue. We have established the Voice of Customer (VOC) Survey Program as a Group-wide initiative and are actively promoting its use as a part of our efforts to enhance customer satisfaction and help identify new and innovative services.

### Specific Case Study 2: Dialogue with Prominent Figures

Exchanging opinions (dialogue) with external parties is an important process in helping companies improve their ability to contribute to the creation of a sustainable society. Recognizing this critical factor, top management and frontline employees of the NTT Communications Group regularly exchange opinions with prominent figures. During fiscal 2012, one meeting was held to discuss CSR activities closely linked to business.

Click here for details on Dialogue

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## CSR Report 2013 **CSR Management**

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External Evaluations

NTT Communications considers strengthening our corporate governance while ensuring transparent and sound management to be essential to increase our corporate value while fulfilling our public role as a provider of communications services.

## **Corporate Governance**

## Corporate Governance Structure

We aim to strengthen our corporate governance by drawing on our Board of Directors and our Board of Corporate Auditors. The Board of Directors has sixteen members and is chaired by the president. In principle, the Board meets once a month to make decisions and report on important management issues in compliance with laws and regulations, the Articles of Incorporation, and our Board of Directors' rules.

We appoint internal board members based on their character and professional experience, regardless of their gender or nationality. The Board of Corporate Auditors is made up of three external auditors. These auditors hold meetings of the Board of Corporate Auditors and audit the execution of directors' duties, and also attend important meetings such as those of the Board of Directors. A dedicated organization and staff facilitates efficient audit operations. The Board of Corporate Auditors cooperates closely with accounting firms and other parties by periodically sharing information on audit plans and results and through similar means, and it is currently working to strengthen the audit structure.



In 2006 we abolished the retirement benefits program for our directors. The remuneration system for internal directors was replaced by a system closely linked to business performance. Remuneration for external directors and corporate auditors is not related to business performance.

We established an Executive Council under the Board of Directors to discuss important management issues for NTT Communications and Group companies, and to aid in accelerating decision-making by the president on operational issues. The Executive Council met 48 times in fiscal 2012. The Market-In Promotions Council gathered 48 times during the year to deliberate and report on important individual matters. We also established committees, chaired by senior executives designated by the president, to address management issues that require specialized expertise. These committees include the CSR Committee, Compliance Committee, Business Risk Management Committee, and Human Rights Awareness Committee. These councils and committees report regularly to the Board of Directors, which deliberates on and oversees their activities.

## Internal Control

In accordance with the new Companies Act which began to be enforced in May 2006, we have formulated a basic policy for the creation of a system of internal controls for the entire NTT Group, and we are in the process of implementing these policies. Concurrently, as a member of the NTT Communications Group, the Board of Directors has resolved to implement the measures necessary for the development of a system of internal controls. We are also working to upgrade and expand internal controls over financial reporting in line with the requirements of the Financial Instruments and Exchange Act, which was enacted in June 2006.

## **Basic Approach to an Internal Control System**

- NTT Communications will maintain a system of internal controls, including measures to prevent and minimize losses, to ensure compliance with applicable laws, to enact appropriate risk management, and to carry out proper and efficient business operations.
- 2. To maintain and assess the effectiveness of the above system of internal controls, NTT Communications has established a Legal and Internal Audit Department. As a monitoring organization, this Department is responsible for regular audits and special audits of high-risk areas common to the NTT Group, in keeping with the standardized auditing criteria of Nippon Telegraph and Telephone Corporation. Necessary steps towards improvement are taken following assessments of the effectiveness of internal controls.
- 3. NTT Communications will cooperate with Nippon Telegraph and Telephone Corporation and take appropriate measures to ensure the reliability of its system of internal controls based on the US Public Company Accounting Reform and Investor Protection Act of 2002 (Sarbanes-Oxley Act), Sections 302 (disclosure controls) and 404 (internal control over financial reporting), and Japan's Financial Instruments and Exchange Law.
- 4. As the chief executive officer, the president will be responsible for ensuring the development and implementation of the system of internal controls.
- 5. We will take all necessary steps to comply with Nippon Telegraph and Telephone Corporation's basic policies related to the creation of a system of internal controls.

## Internal Audits

Throughout the year, we conduct standardized internal audits of our internal organizations and Group companies, primarily through the Legal and Internal Audit Department. Beginning in fiscal 2011, we worked to shift from previous audits, which focused on compliance with various rules and other regulations, to audits that address common management issues and individual risks that arise in the course of business execution.

Through these audits, we are working to improve internal controls throughout the entire NTT Communications Group by striving to reduce risk at individual organizations and Group companies while making business improvement proposals.

## CSR Committee

The NTT Communications Group has established the CSR Committee in order to promote CSR initiatives. The Committee aims to establish a structure to implement management initiatives from economic, environmental, and social perspectives. We maintain the Social Contribution Subcommittee and the Global Environmental Protection Sub-committee under the CSR Committee. The CSR Committee meets twice a year. In fiscal 2012, representatives of thirteen major Group companies attended these meetings. The Committee issues CSR and activity reports, and considers and implements measures aimed at promoting CSR activities. The Committee will continue to work to foster the NTT Communications Group's CSR initiatives and awareness by holding discussions on a regular basis.

## Compliance

## Compliance Ethics Framework

For the NTT Communications Group, compliance goes well beyond merely adhering to laws and ordinances. Therefore, we strive to establish a high level of corporate ethical standards in order to fulfill our social obligations. For this reason, we set up the Compliance Committee in fiscal 2002 and have established lines of responsibility by appointing a director, department, and officials in all business units to oversee corporate ethics. In addition, we provide annual compliance training to all employees and directors, including those at Group companies, as well as other personnel. We also actively conduct internal awareness-raising programs, including surveys on corporate ethics and a call for compliance slogans.

Looking to the future, based on the NTT Group Corporate Ethics Charter we will continue to take various initiatives to create an environment that enables everyone, from senior executives to all Group employees, to carry out their work duties while adhering to high ethical standards.

Click here for details regarding the NTT Group's Corporate Ethics Charter.

## Consultation Hotline

We established the NTT Communications Group Hotline, which can be accessed by Group employees in all countries. Additionally, the NTT Group operates an external consultation and reporting liaison desk, staffed with legal experts. These organizations are part of our commitment to a transparent corporate culture.

The Corporate Ethics Help Line (Consultation Center) is available to all NTT Group company employees, and serves as an external point of contact and consultation.

Click here for details regarding the Corporate Ethics Help Line (Consultation Center) (Japanese only)

## **Risk Management**

## Business Risk Management

We established the Business Risk Management Committee to better oversee and cope with major business risk factors capable of impacting the operation of the entire Company.

In fiscal 2010 we redesigned our risk management system. At that time we identified 25 material risk categories, and listed them in our Risk Definition Report. We adopted a system to monitor the management status of material risks through audits, while separating risk-related operations and making them more efficient. With this as our base, we asked each organization to continue to uncover potential risks and to consider all appropriate response and other measures during fiscal 2012. Taking into consideration these endeavors, our head office and each individual organization then specified the levels of risk according to each appropriate category, with steps taken to promote necessary countermeasures. An assessment and analysis of the impact of these risk factors on the Group in terms of its economic standing and reputation was also undertaken. Drawing on these results, we are conducting operating audits on each organization's ability to respond to risks.

Furthermore, we created a system to collect accurate risk information and ensure proper decision-making in response to potential major risks. If such events occur, we inaugurate the Disaster (Accident)/Risk Response Headquarters, which the president or a senior executive vice president may head depending on the situation.

We will continue to strengthen our systems to eliminate or minimize business risks for the entire Group.

## Crisis Risk Management

In the aftermath of the Great East Japan Earthquake, society's interest in crisis risk management and the corporate sector's ability to anticipate and respond to large-scale disasters have both risen dramatically. With a renewed awareness of our responsibilities and the need to maintain telecommunication services as an integral part of society's basic infrastructure, we are endeavoring to ensure a speedier response to emergency situations. To this end, we are working diligently to improve our management structure. In addition to ensuring strict adherence with crisis management manuals, we are raising awareness across all departments and divisions through training and various other initiatives. The fruits of these efforts were evident in our response during the floods in Thailand in 2011, a clear indication that our actions are having a positive effect.

#### Information Security

### Security Declaration

Because we believe that adherence to strict security management standards will lead to security improvements that will benefit our customers, we have set up the NTT Communications Security Declaration, which we use as a basic guideline in conducting our business.

## NTT Communications Security Declaration

In addition to protecting information that is vital to our customers and providing services they know are safe, our most important mission is contributing to an enhancement of our customers' security systems.

We regard security as our top priority when providing services to our customers, and we pledge to work with them to achieve optimal security systems.

We will do our utmost to ensure security in all phases of the value chain, from technology and service development to establishment and operation.

Furthermore, as Internet professionals, each one of us will raise our capabilities to respond to security-related issues.

#### **Three Resolutions**

- 1. We regard security as our top priority in providing services to our customers, and we will do our utmost to enhance their security.
- 2. As an IT partner entrusted with our customers' vital information, we will work with them at all times to ensure their security.
- Business partners and employees of our corporate partners are also important supporting members of NTT Communications. We will therefore collectively strive to ensure our own security.

Click here for details on our Security Declaration and Information Protection Policy.

## Information Security Management Structure

We have established uniform information security management benchmarks and policies in Japan and abroad, in keeping with the requirements of ISO/IEC 27001, the international standard for information security management systems. We regularly monitor compliance and take necessary corrective action as part of our ongoing governance efforts to improve our security management levels. Specifically, we established the Security Management Office under the Chief Security Officer to:

1. Formulate rules and standards and educate all employees

2. Plan and apply Companywide information security policies

3. Monitor compliance with information security regulations and take any necessary corrective action

4. Ensure a unified response to information security incidents.

Specially assigned officials in each business unit manage information security.

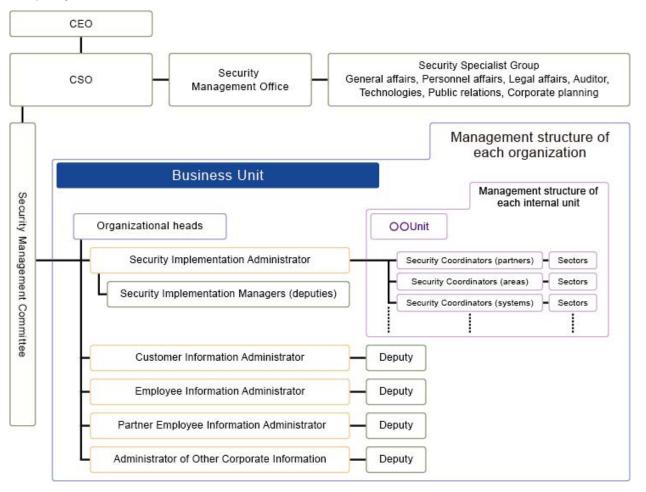
Major initiatives in fiscal 2012:

- In order to protect information systems from Internet security threats, we performed vulnerability assessments and extended them to Group companies on an ongoing basis.

- We assisted overseas subsidiaries and Group companies with the introduction of security management surveys.

Through these and other measures, we focused on enhancing Group-wide governance efforts to strengthen security management levels. We will continue to monitor internal and external trends and implement all necessary information security enhancement measures.

#### Security Management Framework



#### Measures to Protect Customers' Information and Privacy

We comply with the Ministry of Internal Affairs and Communications' guidelines on managing personal information. We conduct regular audits to ensure that vendors handling such information adhere strictly to our security standards with respect to the handling of customer information.

## Third-Party Assessment and Certifications

As of March 2013, fifteen Group companies, comprising eight Group companies in Japan and seven overseas subsidiaries, have received Information Security Management System (ISMS) certification from external organizations. Nine companies that primarily handle personal information entrusted by customers have obtained Privacy Mark accreditation in recognition of their personal information safeguards.

## Accelerating Initiatives in line with CSR Indices

The NTT Communications Group has identified efforts to "ensure information security" as one of four priority CSR index areas, and is engaging in appropriate ongoing activities. Among a wide range of activities, the Group is strengthening the reliability of its information handling processes, acquiring and maintaining ISMS certification, and conducting security surveys. We have identified the raising of workplace awareness as an especially important responsibility as an ICT company, and we are actively conducting education and training.



The e-Learning security training screen - we maintain an annual completion rate of 100% for all eligible training participants

### Respecting Human Rights

#### Promoting Human Rights Education

In order to create a rich corporate culture with a respect for human rights, in July 1999 the NTT Communications Group put in place a basic human rights education policy, and since then we have continued to actively promote human rights awareness. We also established a Human Rights Awareness Committee, which is charged with the responsibility of promoting human rights education and a corporate constitution that does not tolerate discrimination of any kind. Among its many duties, the Committee reports on educational activities and deliberates on promotional measures.

Beginning in fiscal 2009, we have strengthened our Group ties by having employees who are responsible for promoting human rights in Group companies also act as members of the Committee.

## Basic Policy on Human Rights Education

As a corporate group that diligently strives to develop its global business, NTT Communications places the utmost importance on solving human rights issues, including discrimination, as a part of our effort to build a rich corporate culture with a respect for human rights. As we strive to establish a corporate constitution that does not tolerate any form of discrimination, we are working to find solutions to human rights and discrimination issues through every facet of our business activities.

#### Maintaining a Business Structure that Respects Human Rights

Human rights are a vital focus for NTT Communications. We aim to maintain a corporate structure that abhors discrimination and fosters bright and energetic workplaces. We treat our regular employees and employees of our corporate partners equally, out of trust and respect for diversity and individuality. We work to raise human rights awareness by issuing a monthly in-house newsletter that highlights examples of workplace harassment tied to seasonal events, among other related issues.

## Human Rights Education Training

All regular employees of the NTT Communications Group, as well as employees of our corporate partners, must attend classes on human rights in the workplace in order to foster a heightened sense of awareness within each and every employee. In fiscal 2012, steps were again taken to reflect on the purpose and purport of the Universal Declaration of Human Rights as well as the importance of respect for human rights as a company. At the same time, particular emphasis was placed on further fostering an acute consciousness toward human rights and ensuring that behavior such as power harassment is not tolerated. As part of our efforts to enhance the awareness among directors and executives of the importance of employee diversity, classes on promoting diversity as a global company were also held for senior management.

We will continue to heighten employee awareness of human rights issues through such educational programs. Through these efforts, we strive to develop workplaces that do not tolerate harassment, as we foster human rights awareness to promote respect for diversity and acceptance of differences. We will thus continue working to develop even brighter and more energetic workplaces.

## Soliciting Human Rights as well as Regulatory Compliance and Ethics Slogans

Each year we solicit slogans relating to human rights as well as regulatory compliance and ethics in order to increase understanding of human rights issues.

A total of 20,388 entries from 9,098 people, representing an all-time high, were submitted in fiscal 2012. The top prize-winning slogan was: "Conveying a sense of trust through feelings of appreciation and understanding." The slogans are collected from all Group employees, including employees of overseas subsidiaries, employees of our corporate partners, and employee family members. In fiscal 2012, we again witnessed an increasing dominance in the number of submissions from employees of overseas subsidiaries. We hope to increase understanding of human rights by introducing the best slogans to all workplaces so that employees have something close at hand to remind them of human rights and further heighten awareness.

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Based on our basic CSR policy, we established indices for the actions we are taking to contribute to society, protect the environment, show our respect to employees, and implement corporate governance. We perform self-assessment on the results of these indices, then revise and improve upon them for the following year.

## 2012 Index Results and 2013 Targets

We have established new CSR indices since fiscal 2012 that reflect our CSR Priority Activities. Based on indices for each of these four CSR Priority Activities, we will continue to steadily conduct various CSR activities.

Achievement Levels		
Self-Assessment in Four Levels		
☆☆☆★ : Target not achieved at all		
**** : Target only partially achieved		
**** : Target almost achieved		
**** : Target achieved		

## 2012 CSR Index Results

Priority			Achievements	
Activities	Measures	Qualitative Targets	Status of Activities	Self-Assessment of Targets
		Governance		
	Continue privacy mark accreditation	We will complete our fourth renewal by rearranging issues slated during the previous round of examinations to be resolved by the next renewal.	We revised customer information protection guidelines. After passing the document-based examination for renewal, we are now undergoing onsite examination.	We obtained data from related departments and conducted interviews, among other efforts, enabling us to be totally prepared for the examination.
Ensure information security	Continuously raise awareness by implementing training programs	We will reduce incidents by working to enhance awareness through stratified security training programs. [Quantitative target] Companywide security training and comprehension level measurement 100% of target employee training course enrollment	Security training specific to job role conducted as follows: · Companywide security training and gauging levels of understanding: (Training) October to December; (Gauging) February · IRT training for systems managers: February to March · Training for those responsible for implementing security management/managers: February	***
			[Quantitative Result] • Training and evaluation of employee understanding: 100% completed • IRT training participants: 48 • Participants in training for security management personnel/managers: 96	
	Strengthen management of processes and systems	We will strengthen management of processes for safely handling customer information, bolster vulnerability analyses of information systems and expand such analysis Group-wide.	Throughout the year, appropriately managed application and approval systems for downloading customer information. Conducted vulnerability checks of Company and Group company information systems	***

Deite eiter			Achievements	
Priority Activities	Measures	Qualitative Targets	Status of Activities	Self-Assessment of Targets
			[Quantitative result] · Number of download approvals: 704 · Number of vulnerability checks conducted: 475 systems	
	Implement information security surveys	We will conduct security surveys on target companies.	Newly conducted Emerio security surveys.	****
	Sociality Surveys		[Quantitative result] · Surveys conducted (between August and January) at 11 Group companies in Japan and at 24 overseas subsidiaries	
		Contributing to Soc	siety	
	Provide Arcstar Universal One	We are working to resolve corporate ICT issues as a next-generation network service to ensure continuous and secure connectivity with the cloud. We will strive to enhance convenience by adding functions that will realize global- seamless and cloud-seamless operation.	In February 2013, we added the "Asia Submarine-cable Express" (ASE) linking Japan, Singapore, Hong Kong and other Asian hubs to our infrastructure in an effort to enhance reliability by reducing the risk of cable damage on the southern coast of Taiwan. We've also enhanced convenience by adding a LTE compatible plan to our mobile lineup in April 2012 and realizing secure, high-speed, low-latency mobile communications from the destination.	We achieved targets including enhancing global network reliability and better convenience in mobile communications.
Develop ubiquitous network infrastructure	Provide reliable and secure hosting services	We will provide platform services centered on BizHosting in order to realize a ubiquitous environment in which devices of all kinds can be reliably, securely and easily connected from any location. We will strive to further upgrade and extend our range of services, in an effort to boost user friendliness.	In June 2012 we started providing "Biz Hosting Enterprise Cloud," the world's first private cloud service that utilizes network virtualization technology both within data centers and between them, in both Japan and Hong Kong. By March 2013, we expanded to 9 data centers in 7 countries and, in order to handle social games, EC sites, and others that require large-scale and high-volume access, we greatly expanded our provision of the public cloud service"Biz Hosting Cloud <sup>n</sup> ,"among other efforts to broaden and improve services and enhance convenience. In addition, we received the Gold Award for customer satisfaction from the UK survey company Telemark Service, the"Overall Grand Prix"in the ASP-SaaS Category of the 6th ASE-SaaS Cloud Awards 2012, and ranked No. 1 overall in the"Business Cloud Overall Assessment Survey"of MM Research Institute. We were also bestowed Nikkei BP's"Best Service Award"in the Cloud Platform Service Category of its 5th and 6th Cloud Ranking," among other high praises.	We will continue efforts to expand and improve our service lineup and enhance convenience next year.
	Provide Biz Mail cloud computing email service to corporate customers	We will enhance user-friendliness by connecting NTT Communications' smartphone services to "Biz Mail," a cloud computing e-mail service accessible anytime, anywhere.	Through efforts such as promoting BYOD, NTT Communications further advanced the formulation of a ubiquitous user environment. In doing so, we pushed forward with the realization of Biz Mail's smartphone and tablet compatibility (April 2012) to contribute to the provision of BYOD solutions.	Favorable results as seen in the 43 orders received from sales activities sparked by BYOD (of which 11 were medium to large orders exceeding 10 million yen).
	Provide highly stable and reliable data centers	We will provide data centers via more than 100 bases across the world. While implementing quality control by means of a unified global standard, we will work toward disaster-resilient data center operations and plan further developments and expansion.	With the start of services at the "Singapore Serangoon Data Center,"our 4th in that city-state, and the "Malaysia Cyber Jaya 3 Data Center,"our 3rd in that country, and the completion of construction of our"Tokyo No. 6 Data Center," the largest in Tokyo, we expanded our network of data centers both domestically and overseas. We also enhancing the quality of our services by acquiring ISO 22301 certification, the international standard for business continuity, among other achievements. Meanwhile, we received lavish praises such as through the bestowment of the"Best Service	We will continue to expand our network of hubs and improve quality in the next fiscal year.

<b>D</b>			Achievements	
Priority Activities	Measures	Qualitative Targets	Status of Activities	Self-Assessment of Targets
			Award"in the Data Center Category of Nikkei BP's 5th and 6th Cloud Ranking.	
	Provide mobile connect safety confirmation and notification service	This service is an effective means of ensuring business continuity in the event of an emergency such as a natural disaster or influenza outbreak. Aiming to provide services that customers can securely access in the event of such an emergency, we will work to adapt the service to various situations in which it may be utilized, while further upgrading and increasing related functions. <b>[Quantitative target]</b> We will increase capacity by 10 fold and improve services taking into consideration how our services were affected in the wake of the Great East Japan Earthquake.	The Great East Japan Earthquake was a Magnitude 9 megaquake that caused a massive tsunami, a nuclear power plant meltdown and other damage that rendered business continuity difficult. This event made us all recognize the importance of BCP (Business Continuity Plan) and BCM (Business Continuity Management). Efforts to improve services in light of the surge in information processing volume and larger- than-expected burden on servers caused by the earthquake resulted in the further stabilization and fortification of our system platform, completed on July 24, 2012, to the extent that it could withstand the effects of another such large disaster. [Quantitative result] Realized over 10-fold capacity improvement through service improvements	Regarding the "Important Issues: (1) flexibly expand resources, (2) improve email transmission capabilities, (3) web registration capacity"for the achievement of targets, we implemented measures such as (1) utilizing NTT Com cloud services platform + internal emergency systems, (2) comprehensively revising email transmission formats and (3) to handle burst traffic from the use of internal emergency systems, and achieved our targets.
	Provide reliable and secure OCN services	We will constantly strive to upgrade and expand services so that all customers, irrespective of age group, can reliably access an Internet environment.	In April 2012, we began LTE compatibility with OCN mobile services and, in November of that year, we started providing"OCN Mobile Entry EM LTE"services in collaboration with E-Mobile, among other efforts that made possible mobile data communications over a vast area. Also, in September 2012, we strengthened the phishing website warning function on the OCN tool bar, among other efforts to expand and improve services that will enable secure internet utilization.	We achieved targets including the provision of OCN mobile services and a secure internet environment through the strengthening of our phishing website warning function on the OCN tool bar, among others.
	Develop disaster- resilient networks	We seek to build a even more disaster-resilient society by providing high-quality ICT services through multiple transmission routes, the distributed location of important communication centers and other initiatives in preparation for emergencies.	In Japan, we built relay communication routes to the existing Osaka route and the once isolated Wakasa Bay route. Globally, we built and started operating the ASE and increased routes to Asia.	We will continue to maintain disaster- resilient platform facilities that can minimize the effects of relay route damage in response to the latest hazard updates and official announcements, and quickly restore services in the affected areas.
stable and reliable mission- critical infrastructure	Measures to address major natural disasters and similar events (zero accidents)	We will upgrade disaster drills assuming hypothetical scenarios, including a major natural disaster extending to the Tokyo metropolitan area and rolling blackouts. We will refine and entrench crisis management processes in close cooperation with central and local governments. [Quantitative target] Annual drills	Companywide disaster prevention training drills assuming a Tokyo metropolitan area epicenter earthquake (October 19, 2012) • Information conveyance drills by each group • Personal safety confirmation drills [Quantitative result] Exercise held once a year.	In fiscal 2012, we conducted exercises in information conveyance using a practical course of action. All information handled was reported to HQ. The problem was the failure of any actual information reception through horizontal information sharing among groups. Next time we will attempt to implement a scene

			Achievements			
Priority Activities	Measures	Qualitative Targets	Status of Activities	Self-Assessment of Targets		
				that enables a debate from information provided to participants.		
	Implement network surveillance 24 hours a day, 365 days a year	We will provide surveillance of services for customers (networks, Internet, cloud computing, hosting, and voice services, etc.) at all times, while promoting seamless global responses. [Quantitative target] Reduction in number of long-term failures • In Japan: 140/year • Overseas: 500/year	Japan (1) Reduced long-term failures in NTT Communications equipment (2) Shortened time to dispatch maintenance personnel for subscribers Overseas (1) Implemented measures to prevent excessive time at N Front (2) Thanks to Navi tool introduction, we reduced alarm verification failure and judgment errors after alarm verifications (3) Integrated NMS introduction (4) Continuous individual quality improvements for specified lines prone to frequent long-term failures (5) Continuous collaborative improvement efforts with 6 core carriers and ALPJ for China [Quantitative results] Number of FY2012 long-term failures Japan: 158 Overseas: 521	Domestically, although we succeeded in reducing the number of incidents at NTT Communications, which were high in fiscal 2011, because of an increase in the NTT West Japan area due to heavy rainfall in Kyushu, the overall quantity of incidents went up. Overseas, automation and tool development efforts resulted in accelerated operation allowing us to decrease factors originating mostly at local carriers. We will continue to work towards lowering long-term malfunctions both domestically and overseas.		
	24-hour, year-round monitoring to ensure reliability and security of corporate information systems (SOC)	Corporations are being increasingly called upon to monitor and control the sound and effective operation of information systems. In this context, we will actively work to ensure the reliability and safety of the corporate information systems we are contracted to service, with 24-hour, 365 days-a -year operations, as we address a variety of changes in society. [Quantitative target] "Not to be disclosed" unauthorized access detection first contact within 15 minutes Success rate: 99.8% or better per year	We are reporting on unauthorized access detection trends and quality on a weekly and monthly basis to achieve quality targets [Quantitative result] Attaining 100% annual target of "no disclosure" unauthorized access detection first contact within 15 minutes	Achieved target at 100% success rate.		
Engage in social contribution	Number of participations in CSR activities such as regional beautification	We aim to achieve this target by implementing various clean-up programs and other activities, and tying them into NTT Group initiatives. [Quantitative target] 3,000 participants	Continuously engage in volunteer Great East Japan Earthquake recovery activities [Quantitative result] 796 individuals (Note: Number of Great East Japan Earthquake recovery volunteers: 167)	After embarking on the development of internal measures, we increased repeaters. (First year, 2011, about 9.9%, up to 30.8% the second year, 2012)		
activities	PET bottle caps	We will promote Ecocap activities as part of a concerted initiative throughout the NTT Group. [Quantitative target] 1,750,000 caps	Continue Group-wide Ecocap activities [Quantitative result] 1,145,494 caps	Launched Ecocap collection at offices Qty collected at the rugby pitch: 19,098 caps at 4 games		
	Global Environmental Protection					
Preventing global warming	Reduce CO2 emissions	Reduce CO <sub>2</sub> emissions from communications and office buildings thanks to energy-saving measures by the NTT Communications Group. [Quantitative target] 278,000t CO <sub>2</sub> or less Reduce CO <sub>2</sub> emissions from communications and office buildings thanks to energy-saving measures by the NTT Communications Group.	<ul> <li>Introduced energy-saving air-conditioning solutions (SmartDASH, blank panels, simple aisle capping) at 19 buildings</li> <li>Continuous energy-saving measures at office buildings</li> <li>[Quantitative result] 292,000t CO2</li> </ul>	☆☆★★		

Deiterriter			Achievements	
Priority Activities	Measures	Qualitative Targets	Status of Activities	Self-Assessment of Targets
Reducing waste	Reduce final waste volume	The NTT Communications Group will reduce the final waste disposal rate of industrial waste (office waste, dismantled communications equipment, construction waste) by implementing measures to improve recycling rates. [Quantitative target] Office waste: 76% The NTT Communications Group will reduce the final waste disposal rate of industrial waste (office waste, dismantled communications	Promotion and appropriate understanding of thermal recycling Provided guidance for improving the rate of recycling to disposal companies [Quantitative result] 73.0%	☆☆★★
		equipment, construction waste) by implementing measures to improve recycling rates.		
Reduce	Reduce paper consumption	The NTT Communications Group reduced the amount of paper it uses by introducing integrated machines and improving printing methods.	Understood the number of paper sheets used by each individual and analyzed the necessity of paper use Improved projectors and other ICT devices	***
paper resources		[Quantitative target] 9,200 pages/year/person The NTT Communications Group will reduce the amount of paper it uses by introducing integrated machines and improving printing methods.	[Quantitative result] 7,082 sheets/year/person Understood the number of paper sheets used by each individual and analyzed the necessity of paper use Improved projectors and other ICT devices	
		Respecting Our Empl	oyees	
Respect diversity and take steps to promote	Promote diverse working styles by extending work-related reforms across the Company	We will promote more highly productive working styles according to business sector with the aim of entrenching horizontal development, and implement improvements in employee awareness and work environment upgrades.	In September and December, we transmitted discussions between learned individuals and management on an internal website. In connection with these discussions, we held lectures given by these knowledgeable individuals under the theme of WLB/work style reform in April, November and March. Moreover, we continued to work towards enhancing productivity through the formulation of a paperless conference system as part of our conference reforms and promoting the installation of various internal ICT environmental equipment that can be used via tablet PC. We also invited the public for suggestions on how to reform work styles and gave awards to exemplary ideas and pushed forward the horizontal development of other organizations by introducing them at events and posting them on our internal websites. <b>[Quantitative result]</b> Over 600 people participated in the events	***
equal opportunity and other objectives	Enhancing support for balancing child raising/nursing care responsibilities and careers	Besides implementing conventional work-life balance measures, we will expand the scope of these measures to male and younger employees, as well as other personnel, while extending these measures horizontally across the Group, to ensure that all employees can work energetically with a good work-life balance.	In June, we held the "Back to Work Support Seminar" for employees returning from a childcare leave that even included 3 male employees. In addition to having, for many years, implemented dual support measures aimed at both work and kids, in fiscal 2012, we've strengthened our seminar and mentor framework to promote long-term careers. For example, our "Working Mother Career Design Seminar" for female employees raising children presents role models from among them who have succeeded in advancing in their careers while raising their children and provides a forum for group discussions on important points. For the first time, in 2012, at the annual social gathering for female managers, we invited employees to voice suggestions to the company to raise the motivation of and develop junior female employees and promote their increased involvement in the workplace. Our "open café" for young female employees in their	***

Duitauita			Achievements	
Priority Activities	Measures	Qualitative Targets	Status of Activities	Self-Assessment of Targets
			20s feature female managers who form panels to talk about their career experience and give advice.	
			[Quantitative result] Over 370 people participated in these events (including Group employees)	
	Improve the statutory disabled employee ratio	Going beyond maintaining the statutory disabled employee ratio at NTT Communications, we will implement various activities designed to improve the Group-wide statutory disabled employee ratio.	Continuous proactive employment activities as a concerted, Group-wide effort [Quantitative result] NTT Communications: 1.89% Entire Group: 1.81% (as of June 1)	***
	Expand personnel exchanges on a global scale	We will energize personnel exchanges on a global scale by stepping up various initiatives, such as a program to dispatch primarily younger and mid-career employees as overseas trainees, and the secondment of employees of overseas subsidiaries to Japan. [Quantitative target] Particularly focus on increasing young employee overseas dispatches and lifting the fiscal 2011 total (mutual) by 30%	Since July, we have dispatched young and midlevel employees to overseas local companies and each organization of NTT Com has accepted secondments of employees of overseas local companies under a secondment program. We have worked to expand the number of organizations accepting secondments. [Quantitative result] Increase from 53 in fiscal 2011 (42 from NTT Communications, 11 from overseas branches) to 84 in fiscal 2012 (70 from NTT Communications and 14 from overseas branches), which was an increase of approximately 50%.	***
	Improve ratio of women in management positions	We will initiate a review of measures with a view to improving the ratio of women in management positions.	Our new "Mentoring Activities" measures this fiscal year by female managers for female employees kicked off in September after selecting 6 managers to be mentors for the first period. Mentors presided at seminars and events for female employees, mentored promising individuals and acted as role models in a variety of ways. In addition, since the annual social gathering for female managers held this fiscal year, we have continuously provided support for developing female employees and resolving their concerns in each organization of the Company with a focus on female managers and helped to further advance their careers.	☆★★★

## 2013 CSR Index Targets

Briority Activition	Measures	Target		
Priority Activities	Measures	Qualitative Targets	Quantitative Targets	
		Governance		
Ensure information security	Continuous Privacy Mark accreditation	In order to incorporate the know-how accumulated through the acquisition and renewal of the Privacy Mark into the PDCA daily tasks, we hold educational activities internally, revise related regulations, among others.	_	
	Continuously raise awareness by implementing training programs	We will reduce incidents by working to enhance awareness through stratified security training programs.	Ratio of eligible people attending Companywide security training/having their level of understanding measured: 100%	
	Strengthen management of processes and systems	We will strengthen management of processes for safely handling customer information, bolster vulnerability analyses of information systems and expand such analysis Group-wide.		
	Implement information security surveys	We will expand information security surveys to include targeted companies.	_	

Priority Activities	Measures	Target	
Filonty Activities	MedSures	Qualitative Targets	Quantitative Targets
		Contributing to Society	
	Provide Arcstar Universal One	We are working to resolve corporate ICT issues as a network service to ensure continuous, global, secure and user-friendly connectivity to the cloud. We will strive to enhance convenience by adding functions that will realize global- seamless and cloud-seamless operation.	_
	Provide reliable and secure hosting services	We will provide platform services centered on BizHosting in order to realize a ubiquitous environment in which devices of all kinds can be reliably, securely and easily connected from any location. We will strive to further upgrade and extend our range of services, in an effort to boost user friendliness.	_
Develop ubiquitous network infrastructure	Provide Biz Mail cloud computing email service to corporate customers	In addition to increasing the number of compatible models for smartphones and tablet PC as part of efforts started from the previous fiscal year, we will promote the realization of a more ubiquitous user environment by improving and expanding various functions such as secure browsers that enable the selection of a secure environment as desired by customers, English language operation for global users, among others.	_
	Provide highly stable and reliable data centers	We will provide data centers via more than 100 bases across the world. While implementing quality control by means of a unified global standard, we will work toward disaster-resilient data center operations and plan further developments and expansion.	_
	Provide mobile connect safety confirmation and notification service	This service is an effective means of ensuring business continuity in the event of an emergency such as a natural disaster or influenza outbreak. Aiming to provide services that customers can securely access in the event of such an emergency, we will work to adapt the service to various situations in which it may be utilized, while further upgrading and increasing related functions.	_
	Provide reliable and secure OCN services	We will constantly strive to upgrade and expand services so that all customers, irrespective of age group, can reliably access an Internet environment.	_
	Develop disaster- resilient networks	We seek to build a more disaster-resilient society by providing high-quality ICT services through multiple transmission routes, the distributed location of important communication centers and other initiatives in preparation for emergencies. We will examine ways to enhance the reliability of our relay platform network through multiple-route switching functions introduced by new optical wavelength remote-switching technology, as well as continue implementing necessary measures along with hazard updates such as Tokyo metropolitan area and Nankai Trough epicentered earthquakes, etc.	_
Ensure highly stable and reliable mission- critical infrastructure	Measures to address major natural disasters and similar events (zero accidents)	We will upgrade disaster drills assuming hypothetical scenarios, including a major natural disaster extending to the Tokyo metropolitan area and rolling blackouts. We will refine and entrench crisis management processes in close cooperation with central and local governments. We will fortify our intra-Group links.	Annual drills
	Implement network surveillance 24 hours a day, 365 days a year	We will constantly monitor customer services (NW, internet, cloud, hosting, voice service, etc.) to promote global-seamless operations.	Reduction in number of long-term failures • In Japan: 140/year • Overseas: 500/year
	Ensure the reliability and security of corporate information systems	As subtle security threats such as targeted attacks increase and companies are demanded more and more to provide sound and effective operational monitoring and control of information systems, the SOC is meeting such changes in society and is working to provide safe and secure cloud services and client company information systems.	"Not to be disclosed" unauthorized access detection first contact within 15 minutes Success rate: 99.8% or better per year
Engage in social contribution activities	Participate in community beautification programs and other social contribution activities	We aim to achieve this target by implementing various clean-up programs and other activities, and tying them into NTT Group GTN initiatives.	600 participants
	Promote Ecocap Movement	We will promote Ecocap activities as part of a concerted initiative throughout the NTT Group.	1,580,000 caps

	Measures	Target			
Priority Activities		Qualitative Targets	Quantitative Targets		
	Global Environmental Protection				
Preventing global warming	Reduce CO <sub>2</sub> emissions	Reduce CO <sub>2</sub> emissions from communications and office buildings thanks to energy-saving measures by the NTT Communications Group. Reduce CO <sub>2</sub> emissions from communications and office buildings thanks to energy-saving measures by the NTT Communications Group.	294,000 CO2 or less		
Reducing waste	Reduce final waste volume	The NTT Communications Group will reduce the final waste disposal rate of industrial waste (office waste, dismantled communications equipment, construction waste) by implementing measures to improve recycling rates.	Office waste: 76%		
Reduce paper resources	Reduce paper consumption	The NTT Communications Group will reduce the amount of paper it uses by introducing integrated machines and improving printing methods.	8,500 sheets/year/person		
		Respecting Our Employees			
	Promote diverse working styles by extending work-related reforms across the Company	In hopes of resolving the current issue of workplace productivity, a concern raised in a companywide employee questionnaire, we will strive to continuously improve processes, among other endeavors.	We will improve assessments of workplace productivity in companywide employee questionnaires.		
Respect diversity	Enhancing support for balancing child raising/nursing care responsibilities and careers	We will conduct support activities so that men and women can continue their careers as they joyfully work while providing child and family care at home.	_		
and take steps to promote equal opportunity and other objectives	Improve the statutory disabled employee ratio	Aiming towards achieving a new 2.0% statutory hiring rate, NTT Communications is conducing Group-wide activities that will enhance the hiring rate.	Statutory hiring rate: 2.0%		
	Expand personnel exchanges on a global scale	We will energize personnel exchanges on a global scale by stepping up various initiatives, such as a program to dispatch primarily younger and mid-career employees as overseas trainees, and the secondment of employees of overseas subsidiaries to Japan.	Maintaining and expanding the number of dispatches and secondments, which had increased last year (target: 100)		
	Improve ratio of women in management positions	We will continue to implement measures and work towards improving the ratio of women in management positions.	Improve the "career mindedness" assessment by female employees in companywide questionnaires.		

Approach to CSR

Promoting Dialogue with Stakeholders

CSR Management

CSR Indexes 2012-2013

External Evaluations

## CSR Report 2013 **External Evaluations**

Approach to CSR

Promoting Dialogue with Stakeholders

CSR Management

CSR Indexes 2012-2013

External Evaluations

NTT Communications receives evaluations from members of society for our CSR activities.

## **Global Awards and Recognition**

NTT Communications received the Gold Award in the British survey company Telemark Services' customer satisfaction survey.

Source: Telemark Services "Global dataVPN NTT Com Highlights (February 2012)"



Gold Award

## Awards for Social Initiatives

IT Management Award received from among the "IT Awards" bestowed by the Japan Institute of Information Technology for our "Work Style Reforms with ICT"

NTT Communications' "Work Style Reforms with ICT" won the IT Management Award, one of the "IT Awards" announced on November 27, 2012 by the Japan Institute of Information Technology. "Work Style Reforms" aim is to realize highly productive workmanship no matter where or when our employees are working and have employees use this experience to promote sales and improve service performance. Specifically, we plan to (1) introduce 2,000 tablet terminals as proposal presentation tools and combine the use of travel time and downtime during business trips in conjunction with the reduction of movements and operations themselves to realize more efficient and effective business activities, (2) cut costs by introducing "BYOD" (Bring Your Own



Device), which will bring 3,600 personally-owned terminals to the workplace, and (3) formulate information security regulations and operational rules.

These efforts were praised as "exemplary IT management through acts of collaboration by information security and systems departments together with human resources departments to achieve actual results that consist of reform in sales department activities," leading to receipt of the Award.

## ASP SaaS Category Overall Grand Prix Award of the "6th ASP SaaS Cloud Awards 2012"

NTT Communications won the Grand Prix in the ASP SaaS Category of the "6th ASP SaaS Cloud Awards 2012" announced June 20, 2012 by the NPO ASP SaaS Cloud Consortium (ASPIC).

The ASP SaaS Cloud Award recognizes excellence in on-demand services and application and content provision, as well as general network-based services such as data centers that realize superior and socially-beneficial ASP SaaS cloud services in Japan.

Entry categories are classified into three groups, namely the ASP SaaS Category (application and PaaS Fields), the Data Center Category and the User Category, and entries are judged by a committee formed of learned individuals not directly related to award hopefuls to ensure a fair and impartial selection of winners. The competition's aim is to help expand the business of participants and invigorate ASP SaaS cloud related industries as well as render cloud services the pillar of society's information platform.



ASP SaaS Category Overall Grand Prix "Biz Hosting"

## **Environmental Awards**

## "Green Grid Data Center Awards 2012" Award for Excellence

NTT Communications won the "Green Grid Data Center Awards 2012" Award for Excellence presented by the "The Green Grid"<sup>\*1</sup>, an NPO devoted to the promotion of energy efficiency improvement for data centers and IT devices, for our efforts toward enhancing the energy efficiency of the data center air-conditioning system and the quality of the center's thermal environment.

The objective of this Award is to promote the measurement and improvement of resource efficiency at data centers operated by organizations and companies in Japan. The Award was established in 2010, and this year marks its third bestowment.

It is awarded, not for the absolute numerical values of energy efficiency indices such as PUE<sup>\*2</sup> and DCiE<sup>\*3</sup>, but for the systematic quantification of energy efficiency using the aforementioned indices before and after the implementation of improvement initiatives, goal setting and planning, sustained improvement initiatives, social contributions, and creativity.

\*1. The Green Grid, established in 2007, is an industry group composed of member companies located around the world that promotes resource streamlining at data centers and in business computing. It does not endorse the products or services of any particular company but rather aims to provide best practice norms, indicators and technology necessary to ameliorate data center resource efficiency from a pan-industry perspective.

\*2. Abbreviation for "Power Usage Effectiveness"

\*3. Abbreviation for "Data Center Infrastructure Efficiency"

## 2nd Place in the Communication and Service Category of Nikkei Shimbun's 16th "Environmental Management Survey"

We were ranked 2nd in the "Communication and Service Category" of the Nikkei Shimbun's 16th "Environmental Management Survey." This Survey ranks companies with superior environmental management practices based on their responses to a corporate survey. In fiscal 2012, 1,730 manufacturing and 2,453 non-manufacturing sector companies were targeted for the survey to which there were 765 respondents. Non-manufacturing sector companies were judged for their "environmental management promotion system," "antipollution and biodiversity initiatives," "resource recycling" and "global warming initiatives."

NTT Communications prevailed over all others in the "global warming" initiatives category and was highly praised in both "resource recycling" and "antipollution and biodiversity initiatives" receiving 368 points out of 400 for the No. 2 slot.

Moving forward, we will strengthen our global environmental management efforts in the area of "environmental management promotion systems" and work towards achieving "Green ICT Vision 2020" targets, our medium term vision for environmental issues.

Approach to CSR

Promoting Dialogue with Stakeholders

CSR Management

CSR Indexes 2012-2013

External Evaluations

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## CSR Report 2013

## **CSR Priority Areas**

We have identified four priority areas and have made efforts to implement CSR activities in line with our Basic CSR Policy.

Here, I would like to touch on the areas of particular focus for each of our priority areas and our main activities for fiscal 2012.



Executive Vice President Chairperson of the CSR Committee

## Area 1: Contributing to Society

## We will consistently engage in activities that garner the trust of society.

## Areas of Particular Focus

- Develop ubiquitous network infrastructure
- Ensure highly stable and reliable mission-critical infrastructure
- Engage in social contribution activities

## Key Social Issues

- Consumers
- Community participation

## Main activities for fiscal 2012

- Global rollout of security operations
- Implement joint field trial for the Health Enhancement Assist Service
- Quality Improvement Forum with overseas partner carriers
- NTT America's social contribution activities

## Other initiatives

Click here for details

## Area 2: Protecting the Global Environment

# We are working to protect the continued beauty of the planet while supporting the harmonious coexistence of all living things.

## **Areas of Particular Focus**

- Prevent global warming
- Reduce waste
- Reduce paper consumption
- Preserve biodiversity

## Key Social Issues

• The environment

## Main activities for fiscal 2012

- Operating an energy-efficient data center in the U.K
- Bringing the Tokyo No. 6 Data Center on line

## Other initiatives

Click here for details

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We take great pains to nurture strong ties of mutual trust based on a deep respect for our employees and make every effort to put in place workplace environments that allow employees to fully express their individuality and fulfill their inherent potential.

## Area of Particular Focus

• Respect diversity and take steps to promote equal opportunity and other objectives

## **Key Social Issues**

- Human rights
- Labor practices

## Main activities for fiscal 2012

- Develop professional human resources
- Global Human Resource Management (GHRM) initiatives
- Increasing employment of foreign-national students
- Supporting career development for a diverse workforce

## Other initiatives

Click here for details

## Area 4: Governance

## We have positioned transparent and sound management as a key priority.

## Area of Particular Focus

• Ensure information security

## **Key Social Issues**

- Organizational governance
- Fair business practices

## Main activities for fiscal 2012

- · Bolster vulnerability analyses of information systems
- · Implement information security surveys at Group companies and overseas subsidiaries

## Other initiatives

Click here for details

## CSR Report 2013

## Special Feature: Hong Kong Financial Data Centre (FDC) Operations and CSR



## Providing top-level security and reliability to the growing Asian financial market

The NTT Communications Group kicked off operations at the Hong Kong FDC in May 2013 to serve our valued financial-institution clients in Hong Kong, the center of the growing Asian financial market. With floor space of around 70,000 square meters, it is the largest such facility in Hong Kong, achieving top-ranked security and reliability according to international standards for data centers.

## Low-Latency Connections thanks to the Asia Submarine-cable Express (ASE)

In an environment of ever-more-rapid financial transactions, we provide affordable low-latency connections by housing and utilizing the landing station of the "Asia Submarine-cable Express (ASE)." This high-capacity optical submarine cable directly connects the crucial Asian financial hubs of Tokyo and Singapore to the Hong Kong FDC, which is located near the Hong Kong Stock Exchange.



Asia Submarine-cable Express(ASE)



## **Resolving Social Issues**

## A strong, highly reliable data center supporting customer business continuity plans (BCPs)

Data centers provide crucial infrastructure in support of customer BCPs. With this in mind, we design all our NTT Communications data centers based on the "Tier" international data-center reliability standards. Among these, our Hong Kong FDC meets the highest quality level, "Tier IV." Housed in a solidly earthquake-resistant building located in a region safe from tsunami and floods, it relies on a totally failsafe backup system, with standby equipment that's kept in continuous operation, in anticipation of malfunctions and maintenance operations of electrical, air-conditioning, and telecommunications systems.

## Stringent security measures contribute to safe and incident-free operations for financial businesses

To assure the reliability of our data centers, we implement a stringent set of security measures. Customer systems are thoroughly protected with eight levels of security measures, including biometric identification, between the entrance of the building and the server room racks. We also use the most up-to-date security surveillance technology, including IP-based surveillance cameras. The FDC meets "ISO27001"<sup>11</sup> and "ISAE3402"<sup>12</sup> standards for security management.

\*1 International standards for information security management

\*2 International standards for internal control assurance at companies conducting consigned business

## omments from key persons

Implementing security measures to enhance customer convenience The Hong Kong FDC incorporates the highest level of security measures, including eight security checkpoints and biometric access cards. Our access control system provides web-based advanced entry reservation functions, electronic access procedures and other functions, with paperless operations and other features to enhance customer convenience. Senior Manager, Data Centre Business Eric Chan



## **Environmental Contributions**

## Helping customers achieve energy-reduction targets with high-efficiency air-conditioning and electrical equipment

The Hong Kong FDC building uses state-of-the-art environmental technologies and provides high-efficiency operations. It was designed in accordance with the Gold Certification of the LEED, or Leadership in Energy & Environmental Design, standards of the U.S. Green Building Council. Data centers are particularly prone to shifts in environmental performance, influenced by the cooling efficiency of their equipment and devices. In response, we have adopted inverter control fans in air-conditioning units and cold-aisle containment to separate cold air from air-conditioning units. We have also adopted double-floor, double-ceiling air-conditioning chambers to ensure sufficient space to control fan power. The operations-center power source is a fuel cell-based UPS (Uninterruptable Power Supply) which realized an adoption of environmentally friendly renewable energy, helping our customers achieve their green initiative targets.



High cooling-efficiency server room



Fuel cell-based UPS

## Unifying energy-saving measurement standards and enhancing the environmental efficiency throughout the

## data center

The Hong Kong FDC incorporates environmentally friendly facilities throughout its premises. These include solar-based water heating and rainwater drainage systems as well as motion-sensor light controls. These features are highly praised by customers when they visit the FDC on tours. To further enhance the data center's overall environmental efficiency, its energy saving performance measurement standards are matched with the PUE (Power Usage Effectiveness) energy guidelines for data centers and servers. We are also promoting energy efficiency policies through the PDCA cycle.

## **Comments** from key persons

## Providing a top-level, environmentally friendly service both now and in the future



This data center is not only certified as "Tier IV," the highest rank for electrical and machinery reliability indicators, but it also offers low-latency connections to major Asian financial hubs thanks to the high-capacity optical submarine cable landing station that is housed right in our center. In an effort to further solidify our leading position within Hong Kong's data center market, we will focus our efforts on providing top-level, environmentally friendly services both now and in the future.

Hong Kong Branch NTT Worldwide Telecommunications Ken Suzuki

## Fostering Human Resources

## Sharing the latest operating technologies and know-how with existing data center equipment and other devices

The Hong Kong FDC provides education and training to share the latest data center operation technologies and know-how with locally based employees. The center has an employee training room equipped with the same devices as those actually in use, and this facility doubles as a customer demonstration room. We use an e-Learning platform to provide homogeneous training to each employee at his or her own individual pace.



e-Learning

## Mutual technology sharing and discussions between Japanese and local staffs, and between data centers in Japan and overseas

In order to provide higher-quality data center services, the Hong Kong FDC proactively encourages information sharing and provides a forum to discuss the latest trends in data center-related technologies, both for Japanese employees dispatched onsite and locally hired employees. One example is the Technology Exchange Seminars, held jointly by Japanese and foreign data center hubs both to share technology and know-how and to spur motivation and create other synergic effects.



Technology Exchange Seminar

## omments from key persons

## Aiming to provide the highest-quality data center services

The Hong Kong FDC is now formulating a unique training system to hone the specialized skills of our managers. Improving our training capabilities is an important factor in enhancing the competitiveness of our services and in attracting talented individuals to work for us. Looking to the future, our partnerships with other Asian hubs will include joint training and data center management systems to ensure the provision of the highest-quality data center services in the world.

EVP, Cloud Business Taylor Man



## CSR Report 2013 Contributing to Society

Under our Basic CSR Policy, we work toward improvements in information and communication technology (ICT) and ensuring information security, and provide stable, highly reliable information and telecommunications services worldwide. Furthermore, through the provision of new business models, we contribute to the creation of a society in which all kinds of people can participate.



- Providing Arcstar Universal One
- Global Cloud Vision
- Providing Data Centers that Promote Safety and Security
- Participating in Businesses around the World
- Construction Begins on Asia Submarine-Cable Express, a High-Reliability Cable that will Link the Asia Region
- The World's Largest Internet Infrastructure Supporting a Stable
   Network Environment
- Submarine Cable-Laying Technology
- Achieving Managed Quality Operations (Highly Reliable Maintenance Services)

## Using ICT to Solve Social Issues

- Implementing Disaster Prevention and Public Media Fields Tests
- Providing a School System Platform Using Cloud-Based Education Support Services to the Yokohama City Board of Education
- Providing OCN IPV6 Services
- "CAVA" Home-Based Call Center Operations
- Health Enhancement Assist Service Joint Field Trial

### Our Relationship with Society

- NTT Communications' Social Contribution Activities
- Contributing to Society through Websites
- Group Social Contribution Activities through CSR Programs
- Ecocap Movement and NTT Green Team
- Contributing to Local Communities and Preservation of the Natural Environment
- NTT America's Social Contribution Activities
- Activities related to the Great East Japan Earthquake
- Ongoing Activities in Support of Disaster-Stricken Areas by Employees

## Our Relationship with Suppliers

- Promoting Fair Transactions
- CSR Procurement Policy
- Procurement Department Initiatives

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- · Keeping Networks Reliable Following Disasters
- · Providing Services that Underpin Business Continuity
- · Sapporo Business Continuity Center
- Enhancing Monitoring and Operations for Enterprise Network Security
- Enhancing ISP Security Services
- Display of the VeriSign Seal
- Promoting BYOD while Enhancing Security for Smartphones with Biz Mobile Connect
- OCN Anti-DDoS Service Protects Servers and Networks

## Contributing to a Healthy ICT Society

- Strengthening Web Search Service Provider Suicide Prevention Measures
- Providing a Safe Internet Environment for Children
- Measures Aimed at Blocking Child Pornography Sites
- ICT Supporter
- ".com Master" Internet Certification for ICT Personnel Development

## Faithfully Serving Our Customers

- Implementing Customer Satisfaction Surveys
- OCN Customer Feedback Quickly Addressing Customer Needs
- Evaluations of NTT Plala Educette
- Simultaneous Acquisition of ISO 14001 and OHSAS 18001 Certification
- Formulation of Advertising Regulations
- Universal Design Initiatives
- Providing Service Level Agreements (SLAs)
- · Quality Improvement Forum with Overseas Partner Carriers



## CSR Report 2013

# Maintaining Stable and Reliable Telecommunications Services

- Maintaining Stable and Reliable Telecommunications Services
- Ensuring Stable and Reliable Services as Critical Infrastructure
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- Our Relationship with Suppliers

NTT Communications uses its advanced network technologies and maintenance systems to provide reliable telecommunications services both in Japan and globally. We ensure network reliability even during disasters and other emergencies.

Specifically, we ensure telecommunications reliability and provide stable services by increasing capacity and enhancing the reliability of our communication routes, through redundant and decentralized equipment and facilities and with around-the-clock monitoring throughout the entire network.

Using ICT to Solve Social Issues

Faithfully Serving Our Customers

## Providing Services that Help Realize an Evolving Ubiquitous Society

## Providing Arcstar Universal One

Cloud services are quickly becoming an integral component of the growth strategies of companies. Turning to network services, reliable and secure outsourcing environments that are compatible with a full-scale cloud era are also attracting significant attention and increasing expectations.

NTT Communications initially launched Arcstar Universal One, a cloud-based enterprise network service, in May 2011 in Japan. Beginning in September 2011, this service was expanded to 160 countries around the world. In this manner, the Company is working to seamlessly provide services that deliver the superior quality and reliability that is expected of cloud-based networks in and outside Japan. With the addition to NTT Communications' global IP backbones of the high-capacity undersea optic cable Asia Submarine-cable Express, which came online in August 2012, successful steps have been taken to expand the Company's highly reliable global network service. Looking ahead, as a global ICT partner NTT Communications will continue to offer customers advanced services that address their business needs, which continue to gather pace on a global scale, and to help swiftly realize seamless business growth and development in Japan and overseas.

Click here for details regarding the Arcstar Universal One.

## **Global Cloud Vision**

NTT Communications' Global Cloud Vision provides a blueprint of the Company's comprehensive menu of services targeting the corporate sector. As customers' ICT requirements shift increasingly toward a cloud computing environment, the Company is helping customers in their management innovation endeavors, thereby expanding the revenues and earnings of the NTT Communications Group as a whole through global total ICT outsourcing that only a telecommunications carrier can provide. Under its Global Cloud Vision, NTT Communications is therefore developing a cloud-service structure that encompasses networks, data centers, sound/voice and other applications as well as security and other management.

One driving force behind the decision to establish and announce this Vision in October 2011 was the need to create a new business amid falling voice communication and data network revenues. The Vision is also designed as a response to calls for ICT innovations that are capable of supporting business against the backdrop of dramatic shifts in customers' market environments. The Global Cloud Vision is therefore a solution to several of NTT Communications' pending issues as well as a roadmap for addressing customers' future needs. Based on this Vision, NTT Communications is helping customers to use cloud technology to integrate ICT systems that are dispersed across customers' bases and to build an optimal global ICT system. In specific terms, customers include those who are seeking to integrate their entire global networks as well as those who have adopted a gradual approach encompassing certain bases, whether in Japan or overseas.

NTT Communications strives to add value and help customers in their management innovation endeavors by providing global total ICT outsourcing based on its Global Cloud Vision. In particular, this entails (1) building flexible, low-cost ICT environments that respond to business challenges; (2) optimizing ICT environments on a global scale; and (3) strengthening businesses through safe and secure ICT environments.

Click here for details regarding the Company's Global Cloud Vision.

## Providing Data Centers that Promote Safety and Security

NTT Communications continues to establish a platform that is capable of advancing the Company's global cloud services under the newly launched Nexcenter<sup>™</sup> brand. Under this brand, NTT Communications is building and operating a global network of data



centers that offers a uniform and consistently high level of quality. This network enables the Company to provide seamless and scalable advanced services worldwide. NTT Communications is engaging in the following multifaceted activities in order to provide highly reliable data center services on a stable basis.

1. High-quality facilities

Enable safe and timely facility maintenance during system operations by building data center facilities that boast high levels of disaster resistance in line with each region's level of disaster vulnerability and employing a facility setup of tier III-level<sup>\*1</sup> or higher.

2. Highly reliable network connectivity

Develop and provide a significant volume of global network services including high-speed, high-capacity tier 1<sup>2</sup> Internet backbone and Arcstar Universal One services through a minimal latency proprietary submarine cable platform that links the major cities of Japan, the U.S., and Asia.

3. Substantial managed services

Provide total management of customers' ICT infrastructure from networks to servers, through help desk services that can accommodate multiple languages and a 24-hour/365-day maintenance and operating schedule

\*1 A facility setup level to ensure redundancy with respect to such key functions as commercial power supply, air conditioning, and UPS as well as emergency electricity generation and distribution with no single point of failure based on data-center tier standards formulated by the U.S.-based industry association Uptime Institute. \*2 High-quality Internet through an Internet Service Provider (ISP) group that maintains its own global-scale broadband IP backbone, eliminating the need to rely on an upstream provider

Click here for details regarding the Company's data centers.

## Participating in Businesses around the World

NTT Communications is participating in businesses around the world in a variety of ways as part of our effort to ensure the growth and development of a global ubiquitous society.

In Asia, where use of the Internet is growing rapidly, we began providing Internet services using a proprietary optical fiber network previously laid in an industrial estate in Indonesia in March 2012. We also reached agreements with the governments of Laos and Brunei in February 2012 and May 2012, respectively, to provide international Internet access services to government-managed connection bases. NTT Communications is also active in areas other than Asia: In Eastern Europe, we established international IP backbone connection bases in Hungary, Romania, and Bulgaria in November 2011.

Through these and other initiatives, NTT Communications will continue to help improve Internet environments across wide-ranging regions. At the same time, we will endeavor to deliver higher-quality services that address the needs of local customers. In order to further enhance the company's services, we took up majority equity interests in an ICT service provider in Australia in May 2011 and a data center-related operator in India in January 2012. These measures are aimed at bolstering management ties with local companies. Looking ahead, we will engage in a broad spectrum of balanced activities that contribute to the Internet market as well as business growth.

## Network Technologies and Maintenance Systems for an Advanced Information Society

## Construction Begins on Asia Submarine-Cable Express, a High-Reliability Cable that will Link the Asia Region

Now more than ever, companies engaged in global business regard reliable communications infrastructure as the lifeblood of their business activities. In this context, they have come to expect the provision of seamless network services, both domestically and internationally, as a matter of course. Accordingly, NTT Communications is continually working to build environments that allow customers to access global networks with peace of mind, even after earthquakes or other disasters.

International communications traffic in Asia is increasing, with rising demand for highly reliable, minimal-latency submarine cables with broader bandwidth. Asia Submarine-cable Express (ASE), a new high-bandwidth optical submarine cable which became operational in August 2012, will connect Telekom Malaysia PLDT, headquartered in the Philippines, and StarHub, in Singapore, with the rest of the Asian region. NTT Communications designed a network to minimize latency from Japan to Taiwan and Singapore and to enable ASE to avoid cable failures near the Bashi Channel south of Taiwan, which is vulnerable to frequent earthquakes and typhoons, making ASE a more highly reliable, minimal-latency optical submarine cable.

At the end of 2011, thanks to collaboration between the main carriers in each country - Japan, South Korea, mainland China, Taiwan, Hong Kong, Singapore, Vietnam and Thailand - construction commenced on the Asia Pacific Gateway (APG), a high-capacity submarine optical cable. Through its participation in the construction of APG in addition to ASE, NTT Communications will increase the cable volume it possesses in the Asian region, ensuring redundancy by providing several cable routes and providing its customers with highly reliable international networks and cloud services.

## The World's Largest Internet Infrastructure Supporting a Stable Network Environment

NTT Communications' Global IP backbones are connected to fixed and mobile telecom companies, ISPs, data center operators and content providers and carry the main Internet traffic linking Japan with the rest of the world. The capacity of lines held between Japan and the United States is an industry-leading 700Gbps<sup>\*1</sup> and 600Gbps for the Asia and Oceania regions.

Although the international communications cable between Japan and the United States was partially damaged during the Great East Japan Earthquake of March 11, 2011, the impact was minimized by a fully redundant cable structure and collaboration between multiple overseas carriers and cable companies based on established cooperative relationships.

This Global IP backbone uses a dual-stack (IPv4 and IPv6) configuration, and is becoming one of NTT Communications' core networks located at the heart of IPv6, the next-generation communications standard.

Strengthening its efforts in Asia and emerging countries as a global Tier  $I^{2}$  carrier, NTT Communications is working to provide its customers with a communications environment of even higher quality.

\*1 700Gbps, equivalent to approximately 41,666 channels of digital terrestrial television or 598 years' worth of content in a daily newspaper \*2 Tier I is an IP group that is large enough that it doesn't need to purchase Internet routing information from other companies.

## Submarine Cable-Laying Technology

NTT World Engineering Marine Corporation (NTT-WE Marine) helps install and maintain not only domestic telecommunications cables in Japan but also international telecommunications cables in the Pacific Ocean, Southeast Asia and Indian Ocean regions.

Our technology for the installation of submarine telecommunications cables has been utilized to install submarine seismometer cables in water at depths of more than 1,000m, going back to the time when NTT-WE Marine was known as "NTT Submarine Cable Engineering Center."



Cableship "Subaru

## Achieving Managed Quality Operations (Highly Reliable Maintenance Services)

In order to provide our customers with appropriate services that invite their trust and satisfaction, NTT Communications endeavors to implement process innovations and service quality improvements. In the area of corporate data communication services, we provide a one-stop management service that centrally monitors the entire route from our network to the equipment installed at the customer site, that detects failures and notifies the customer, and that implements recovery measures. We are also making our one-stop maintenance service available 24 hours a day, 365 days a year, as well as expanding the maintenance targets for which network failure notification and recovery measures are dynamically carried out. Previously, the NTT Communications Customer Network Service Center in Japan and the Global Network Operations center for overseas locations were situated on different floors. Operations performed by these two service centers include establishing alternate trunk routes, duplicating or decentralizing telecommunications facilities, monitoring service status, and receiving error reports. However, in fiscal 2010 we combined our domestic and overseas operation floors. As a result, for customers who use a combination of domestic and global circuits, we are now able to provide a one-stop service where both centers work together, literally side by side, to resolve problems seamlessly regardless of national boundaries.

Furthermore, service managers are better placed to effortlessly respond in Japan and overseas to endeavors by customers to expand their systems overseas. Drawing on the lessons learned from the Great East Japan Earthquake, we are promoting BCPs across maintenance operation centers in Japan and overseas in an effort to ensure the reliability of increasingly stable communications. From a personnel perspective, with our hands-on seminars and certification systems, we are also continuing to develop professional human resources who, by implementing continuous-improvement and management proposals, enable us to provide our customers with the best possible maintenance services.

We are striving to provide high-quality maintenance services and powerful support for our customers' businesses by offering the following four benefits: fast and easy operation for customers, complete one-stop operation, highly skilled technical support, and global operations that take advantage of ICT.

- Maintaining Stable and Reliable Telecommunications Services
- Ensuring Stable and Reliable Services as Critical Infrastructure

Using ICT to Solve Social Issues

- Contributing to a Healthy ICT Society
  Our Relationship with Society
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## CSR Report 2013

# Ensuring Stable and Reliable Services as Critical Infrastructure

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NTT Communications has established disaster countermeasures and strives to ensure information security because we put the customer first. We are helping to bring about a networked society where customers enjoy greater safety and peace of mind.

## Building Networks that are Resilient to Disaster

## Keeping Networks Reliable Following Disasters

NTT Communications has adopted a set of Disaster Policy Fundamentals to address disasters. Based on these policies, we work to maintain critical communications and swiftly restore disrupted communication services. For some time, we have also conducted annual training exercises aimed at allowing a swift response to disasters.

Based on the scenario of an earthquake striking directly beneath the Tokyo Metropolitan Area, we conducted quick-response drills for our disaster response team in February 2011. These drills differed from training, and were conducted without prior notification to disaster response team members. The scenario envisioned major damage to the Tokyo Metropolitan Area, to the extent that it ceased to function as a capital city. The drill entailed a specific response flow encompassing the establishment of an Initial Response Headquarters in the Kansai region of western Japan. We assumed that the Tokyo disaster response team would be unable to travel by normal means and thus had to commute on foot from their places of work to the Disaster Response Headquarters. Steps would then be taken to take over the headquarters function from Kansai.

We also conduct annual disaster response exercises for employees. In such cases, we use "Safety Confirmation," a service offered by NTT Communications. In fiscal 2010, we introduced "Safety Confirmation Exercises" involving not only full-time employees but all other employee categories as well.

By conducting regular training exercises in these ways, we are helping to raise awareness about disasters throughout the Company.

## Providing Services that Underpin Business Continuity

Offering a range of high-quality services for such crises as major earthquakes and pandemics, NTT Communications supports the continuity of its customers' businesses. To give a typical example, earthquake early-warning information is a service that delivers earthquake information, including seismic intensity and arrival time, before tremors are actually felt. Enabling initial damage prevention and ensuring safety, this is said to be an effective service in formulating a business continuity plan (BCP), since business restoration can be expected soon after an earthquake. A service that simultaneously reports safety confirmations both verifies and gathers information on the safety of employees during times of natural disaster, including outbreaks of new-strain influenza and earthquakes. Available on a routine basis via communications networks, this service is also effective in confirming the safety of school contact networks and elderly persons, as well as in simultaneously contacting employees who are visiting clients.

Expanding services to eleven bases in nine countries worldwide, Biz Hosting Enterprise Cloud is a global cloud service that leverages NTT Communications' outstanding technological capabilities as a telecom operator and consists of robust data centers that are also resilient to disasters. This service provides BCP solutions that ensure the timely backup of data at remote locations between Japan and overseas bases.

Biz Hosting Cloud provides an environment that enables the flexible change of resources even during periods of sudden and dramatic access at the time of a disaster. This service has a variety of applications including as a safety confirmation system platform.

Click here for details regarding NTT Communications' services that support business continuity.

## Sapporo Business Continuity Center

In June 2008, NTT Com Technology inaugurated its Sapporo Business Continuity Center, designed to constantly monitor and operate system networks, in Sapporo City, where relatively few natural disasters occur. In addition to monitoring and operating information and communications technology (ICT) systems 24 hours a day, 365 days a year, the Center handles customer inquiries, provides

troubleshooting assistance, and supports business continuity planning (BCP). Because ICT systems are crucial to corporate activities, data centers have been geographically dispersed as a countermeasure against potential major disasters and terrorism in Japan. However, the manned operation centers that constantly monitor and operate the ICT systems have tended to be concentrated in major metropolitan areas in order to attract a highly skilled workforce, frequently resulting in a single center monitoring dispersed systems. As corporations have come to recognize the importance of integrated BCP, there has been increased demand for dispersed operation centers for corporate systems to cope with major disasters and pandemics. It was in response to this demand that we inaugurated the Sapporo Business Continuity Center.



Sapporo Business Continuity Center

Since then, the Center has introduced and firmly established an IT Service Management System (ITSMS). The aim of the system, which is based on ITIL<sup>® \*1</sup>, is to enhance service quality, increase value for customers, and boost customer satisfaction levels while improving efficiency and productivity. As a result, in December 2009 the Center acquired ISO 20000 certification, an international standard for ITSMS. At the same time, we introduced ZABICOM, an ITIL-based open-source monitoring system allowing easy customization. Looking at customer systems, we are witnessing progress in the use of cloud technologies and the introduction of virtualization technologies. While working to keep pace with these changes, we will continue to deliver ongoing operational support services which offer high quality at a low cost as part of our drive to increase customer satisfaction.

\*1 ITIL<sup>®</sup>: Systematic guidelines regarding the operation and management of computer systems formulated by the UK government. The guidelines are compiled in several volumes of books. ITIL<sup>®</sup> (IT Infrastructure Library) is a registered trademark of the Office of the Government Commerce (OGC) of the UK government.

## Initiatives Aimed at Protecting Customers' Network Systems Around the Clock

## Enhancing Monitoring and Operations for Enterprise Network Security

With the continued globalization of business activities, we are witnessing growing calls for a uniform global approach towards risk management by the corporate sector. Meanwhile, the dramatic rise in such security risks as cyber attacks, including unauthorized access, computer viruses, and the leakage of data in recent years, has reached a point where the massive losses incurred by companies are threatening their very existence.

Under these circumstances, NTT Communications worked to secure cooperative ties with NTT Secure Platform Laboratories while including specialist overseas security operators as Group companies. After fortifying its development capabilities in this manner, the Company took steps to upgrade its business-based security operating services provided through its Security Operation Center (SOC), established in 2003, and to launch its information security and risk assessment, improvement, monitoring, and management portfolio of Managed and Professional Services under the new global WideAngle brand in June 2013.



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Security Operation Center

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Backed by the substantial security operating know-how and technology development capabilities of the NTT Group, NTT Communications is complementing its diverse security countermeasure menu with advanced services that help identify security threats with various options from which customers can select according to their security level requirements and budgets. Through these means, we are working diligently to put in place a safe and secure information system environment for as many companies as possible both in Japan and overseas.

## **Combating Viruses and Internet Crime**

## Enhancing ISP Security Services

In our role as an Internet service provider (ISP), NTT Communications must create environments that allow customers safe and secure access to the Internet. OCN offers a variety of security services bundled into a discount package ("Anshin Select Pack"). In addition, steps have been taken to provide blocking services to restrict Internet access to inappropriate sites as well as sites where access is not required from personal computers. Moreover, NTT Plala, in addition to blocking malicious websites, provides a free filtering service that blocks communications originating from Winny, a file-sharing program which has become a major problem.

My Pocket Plus is a suite of support and data storage services available to customers regardless of whether they subscribe to OCN, and it has an optional security service that covers all devices including personal computers, smartphones and tablets. With OCN Premium Support, customers now have the option of adding credit card protection to their support services, where they are compensated for any liabilities caused by illicit use of their credit cards, thereby providing reassurance when shopping online or participating in Internet auctions. In fiscal 2012, we introduced My Password as a cloud-based service for safely managing usernames and passwords online. These are just a few examples of how NTT Communications is striving to broaden the depth of its service offerings.

## Display of the VeriSign Seal

NTT Resonant, in a tie-up with VeriSign Japan K.K., in January 2011 began displaying the VeriSign Seal<sup>\*1</sup> provided by VeriSign on its goo web search results page. This seal allows users to confirm at a glance that the physical existence of the website operator has been confirmed, and that the website has passed a malware scan.

Websites displaying the VeriSign Seal on the goo web search results screen tell users at a glance that the site is safe, and not infected with malware programs such as Gumblar or other types of malicious software. VeriSign and NTT Resonant have enhanced the convenience of web search services by displaying the trustworthiness of a website in a way users can easily recognize.

\*1 VeriSign Seal: A seal displayed on a website certifying that Verisign has confirmed the physical existence of a website operator, and that the site has passed a malware scan.

## Promoting BYOD while Enhancing Security for Smartphones with Biz Mobile Connect

As smartphones and tablets replace laptop PCs for doing business while out of the office, an increasing number of companies are interested in allowing their employees to use their own personal smartphones (bring your own device, or BYOD) to easily and securely access work-related information while out of the office on business.

However, companies are concerned about security when personal smartphones are used for business purposes, and require measures to prevent handset spoofing and data leaks in order to protect confidential corporate information in the event handsets are lost or stolen. Moreover, an increasing number of employees own multiple devices, a smartphone and a tablet for instance, that anyone can possibly use, making it more difficult to build a BYOD environment that ensures a high level of security.

In view of these business needs, NTT Communications offers the Biz Mobile Connect service, which allows employees to simply and securely connect to corporate information systems while out of the office. The service basically makes it possible for a smartphone to have a web browser that does not leave behind data, such as in a content cache or browsing histories, and allows smartphones to display files controlled by business systems without having to first download them to the device. Beginning in May 2013, Biz Mobile Connect can now regulate the use of handsets with root-level access and handsets that do not have anti-virus software installed, contributing to the creation of BYOD environments that anyone can use without concern and at no additional cost.

Amid the proliferation of smartphones, NTT Communications will continue to augment security and convenience for smartphones used in business.

#### OCN Anti-DDoS Service Protects Servers and Networks

Since June 2009, NTT Communications has offered the OCN Anti-DDoS Service, which protects corporate customers' servers and networks against DDoS attack<sup>\*1</sup>. DDos attack is a method of cyber attack via the Internet (See footnote).

Because it is difficult to distinguish legitimate communications traffic from illegitimate traffic during a DDoS attack, it is extremely challenging for customers to take effective countermeasures, even after detection of an attack. The OCN Anti-DDoS Service protects customers' systems by installing an anti-DDoS device on our OCN backbone, which will reduce illegitimate traffic to customers' servers and routers.

\*1 Distributed Denial of Service (DDoS) attack: This kind of attack renders a service unavailable by sending a massive number of communication requests to the target server or network from multiple computers connected to the Internet, causing the load level to exceed the communication bandwidth or the server's processing capacity.

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Contributing to a Healthy ICT Society

# CSR Report 2013 Using ICT to Solve Social Issues

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NTT Communications provides new business models driven by information and communication technology (ICT) services and lifestyle proposals. In this manner, we are contributing to the resolution of issues faced by society.

# For a Safe and Secure Society

#### Implementing Disaster Prevention and Public Media Fields Tests

"Tsumugi" project committee (Representative: NTT PC Communications Incorporated), an organization that strives to provide reconstruction support to areas affected by the Great East Japan Earthquake, commenced "disaster prevention citizen media field tests" in November 2011 with the cooperation of Ofunato City (Mayor Kimiaki Toda). Drawing on the experience and lessons learned from various disaster-stricken areas, these fields tests were conducted using temporary housing facilities located within Ofunato City with the aim of pursuing research into disaster prevention systems. Thereafter, we received an order from the Ministry of Internal Affairs and Communications to embark on a project to upgrade information communications infrastructure, and we opened a business office in Ofunato City and established the NPO Disaster Prevention and Media Promotion Committee. Based on the experience we gained in disaster-stricken areas, we aim to promote the use of new disaster-prevention information systems by local governments throughout Japan.

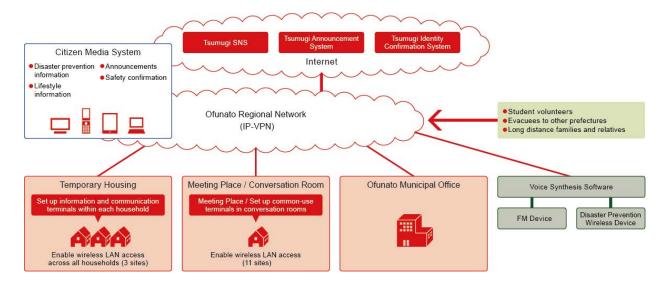
The "Tsumugi Program" is the moniker for our efforts in Ofunato City to support disaster-affected areas through core businesses, and NTT PC Communications has taken a unique approach to supporting the reconstruction of disaster-stricken areas.

#### First Event

Five employees visited disaster-stricken areas and offered guidance to senior students at Ofunato High School who hope to enter a science college.

Second Through Fifth Events

A total of twenty-four employees visited disaster-stricken areas eight times to offer PC classes for beginners (on Thursdays and Fridays). A total of 125 people took the classes.



# Providing a School System Platform Using Cloud-Based Education Support Services to the Yokohama City Board of Education

The Yokohama City Board of Education operates Japan's largest school business-based system platform. NTT Communications began providing cloud services to this platform in fiscal 2011.

In recent years, the need for ICT outsourcing as well as cloud computing aimed at promoting business continuity has grown rapidly. This is largely attributable to such factors as the review of large-scale natural disaster countermeasures and energy consumption. Under its digitization of education vision, Japan's Ministry of Education has identified several key initiatives designed to improve the school education frontline.

The Yokohama City Board of Education has been working to improve the efficiency of school administration by building a new integrated system to manage various kinds of information including student and parent lists, attendance records, health checks, academic grades, and guidance reports.

This school administrative system is expected to be used by 492 elementary and junior high schools within Yokohama after fiscal 2012, with plans to manage information related to as many as 270,000 students and 16,000 teachers.

NTT Communications has provided cloud service platforms encompassing such activities as the delivery of digital textbooks as a part of the Future School Promotion and Learning Innovation projects initiated by Japan's Ministry of Internal Affairs and Communications and Ministry of Education, respectively.

Drawing on this expertise, the Company will provide cloud-based services that address the dual needs of safety and efficiency.

#### Addressing the Problem of Insufficient IP Addresses

# Providing OCN IPV6 Services

Amid the growing need for IPv6 access services as a solution to the exhaustion of IPv4 addresses, OCN IPv6 was introduced as one of the world's first IPv6 access services for general users.

In fiscal 2012, we participated as a web service provider in World IPv6 Launch\*1, a world-scale event to promote the spread of IPv6. In addition to attending this event, on May 21, 2012, the Company began to provide OCN services over Flet's Hikari Next network that are compatible with IPv6 internet connections, with availability in all prefectures across Japan. We will continue to accelerate the proliferation of IPv6.

\*1 Beginning on June 6, 2012, all of the major global internet service providers, hardware makers and web service providers made their products and services perpetually compatible with IPv6, thereby hastening the proliferation of IPv6.

#### Expanding Employment Opportunities in Regional Communities

#### "CAVA" Home-Based Call Center Operations

NTT Com CHEO holds training courses and certification examinations on computer and Internet settings and operations. It contracts certified individuals with a high level of ICT skills as "CAVA operators," who work as home-based ISP call center staff.

Currently, NTT Com CHEO is working to expand nationwide training opportunities through the introduction of



Operator-senior citizen



Operator-housewife



Operator-Individual business owner

home-based training via the Internet. As of the end of fiscal 2012, there were approximately 1,900 CAVA operators. This system of home-based operators utilizes untapped human resources such as women who have had to stop employment due to child raising or caring for other family members, as well as retired senior citizens. In fiscal 2012, we institutionalized measures to help single parents become CAVA operators that were first initiated by NTT Com CHEO in fiscal 2009 with the aim of helping others achieve a better balance between work and childcare. We aim to expand employment opportunities by offsetting the cost of acquiring the necessary certifications and training to become CAVA operators.

Moreover, we are collaborating with local governments to provide employment support and to assist job seekers to gain ICT skills and certification while increasing opportunities to work from home. Through such activities, we aim to expand employment opportunities in local communities and contribute to community revitalization. Going forward, we will continue meeting the employment needs of a diverse range of people by providing opportunities for individuals to work without location or time constraints. As a part of this effort, we will expand operations beyond ISPs.

#### Features of CAVA

- There are two types of CAVA operators. The first is a home-based telephone support service to provide support for problems such as Internet connection settings. The second is a visiting setup support operation in which the employee travels to a customer's home to provide support. The two types can also be combined.
- 2. We offer a wide range of employment opportunities to people wishing to work from home, and we are helping to expand employment opportunities not only for housewives who must care for children or other family members, but also for single parents and senior citizens.
- 3. We carry out CAVA staff recruitment and training every month. By offering Internet-based CAVA training that can be undertaken (remotely) from home, we are making this training available throughout Japan.

- 4. CAVA operators working at home have a tendency to feel isolated. To address this, we use social networking as a medium that enables our CAVA operators to exchange information and get to know one another.
- 5. The network of CAVA staff distributed across the length and breadth of Japan will harness its strengths particularly in the context of BCPs. This entails various situations including the incidence of major disasters and pandemics.

#### Perspectives of CAVA Staff



Mari Senba



certification because I felt it could lead to a job. The biggest benefits of CAVA are the fact that I can work from home and have complete control over when and how many hours I work. A woman's lifestyle changes according to her family situation and the location and hours she can work also change as a result. However CAVA enables us to continue working. Since I probably could not have worked full time while raising my children, I am really grateful for the CAVA system.

I learned about CAVA when I was a full-time mother and housewife and decided to acquire ".com Master"

After retiring from my company, I acquired PC-related certification as I am interested in computers. I never dreamed I would be learning new skills at the age of 50, but I studied hard and was able to acquire ".com Master" certification. I think ".com Master" certification ensures that the applicant understands the basics of the Internet thoroughly, and I am grateful because, for me, it transformed a hobby into a job. Also, I have always been an avid motorcycle rider and now I can ride my bike when visiting customers to provide support. It would be great if I could keep working as a supporter like this for the rest of my life.

Hiroaki Tanaka



Masafumi Okada

I moved to Okinawa from a large city to recover from an illness. The CAVA system is really helpful to me because it allows me to take both my health and other commitments into consideration when scheduling work. Furthermore, because the system has no restrictions on work location or hours, it offers great benefits in local areas where there are few employment opportunities. I find it really exciting that I am connected to customers all over Japan through my CAVA work, even though I live in Okinawa.

#### For a Healthier Lifestyle

#### Health Enhancement Assist Service Joint Field Trial

In February 2011, NTT Communications, NTT Resonant Inc. and foo.log Inc. began a field trial of the jointly developed Health Enhancement Assist Service. The service helps with health management and enhancement underpinned by the concept of cloud computing-based storage and analysis of users' "life logs" (data on daily life) to provide services that will make their lives more enjoyable, convenient, and comfortable.

The trial was held for the world's first service that uses smartphones and computers to automatically estimate calorie consumption based on photos of meals, as well as estimating how many calories are burned while walking each day using the GPS location function and acceleration sensors in the user's smartphone. Various other functions provided by the service include comparisons with data from other users of the service, 5,000 recipes created under the supervision of professionals, and as many as 180 exercise videos. During the trial period, 60,000 people participated, and the application was downloaded more than 100,000 times.



"goo karadalog" Health Assist Screen

Faithfully Serving Our Customers

We received encouraging feedback including comments about the services' usefulness for dieting and maintaining good health, and the positive effect that having to record everything eaten has on keeping down one's weight.

In August 2012, NTT Resonant began providing Health Assist as a part of its "goo karadalog" health management service, drawing on the results of field trials conducted in fiscal 2011. Data about automated estimation of calories consumed and calories burned by walking can be managed on "goo karadalog" as one of around 200 items, making it easier to record and manage data.

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# CSR Report 2013 Contributing to a Healthy ICT Society

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Addressing head-on the negative aspects of ICT, we will focus on nurturing the human resources essential to supporting a future ICT society while putting in place all appropriate measures.

# Addressing Social Issues

#### Strengthening Web Search Service Provider Suicide Prevention Measures

For Enhanced Anti-Suicide Measures Month in March 2012, NTT Communications collaborated with companies providing Internet search services to strengthen suicide-prevention measures through such search services. Specifically, for users who searched keywords related to a desire to commit suicide such as "I want to die," links were posted urging the user to access pages listing information on help lines, including the National Center of Neurology and Psychiatry (NCNP)'s Center for Suicide Prevention, to provide useful information about suicide prevention.

Previously, search service providers had partially implemented similar efforts, but these had been managed separately, depending on each individual keyword setting. On this occasion, it was possible to plan enhanced measures by using shared keywords created by the NCNP's Center for Suicide Prevention.

Suicide prevention is a major societal issue. By enabling a chance to solve the problems of users in distress by ensuring that helpful information about suicide prevention can be readily accessed through Internet search services, it is hoped that many lives can be saved.

#### Participating Businesses (Business name: Service name in random order)

NTT Communications Corporation: OCN NTT Resonant Inc.: goo NTT DOCOMO, Inc.: i-mode search, dmenuTM search Excite Japan Co., Ltd.: Excite NEC BIGLOBE, Ltd.: BIGLOBE So-net Entertainment Corporation: So-net NIFTY Corporation: @nifty Yahoo Japan Corporation: Yahoo! JAPAN Rakuten, Inc.: Infoseek

#### Sound Child Development

#### Providing a Safe Internet Environment for Children

NTT Resonant offers "kids-goo," a child-oriented website portal that is safe for children to use. Using a proprietary filter and the same huge search database as the "goo" search engine, Kids-goo shows only web pages thought to be safe for children. As a useful search service that helps children learn within a safe Internet environment, Kids-goo is widely used in elementary-school Internet classes.



#### Measures Aimed at Blocking Child Pornography Sites

Blocking child pornography on the Internet is an important issue that must be addressed in order to protect the rights of children and ensure the provision of a safe Internet environment. It is an issue that has been examined from a variety of perspectives. In July 2010, the ministerial anti-crime conference of the Japanese government released its policy on a national campaign against child pornography. The policy called for Japanese Internet service providers to implement measures to block access to child pornography websites, and for associated efforts on the part of government agencies to be implemented during fiscal 2010.

In March 2011, the NTT Communications Group joined other ISPs, search engine service providers, filtering service providers, and related businesses to form the Internet Content Safety Association (ICSA). In April 2011, members of the ICSA began compiling information on websites they will block access to in order to block access to child pornography images, and providing other member providers with child pornography website address lists. The NTT Communications Group's "goo," "plala," and "OCN" services have access restrictions based on child pornography website address lists provided by the ICSA. Based on the child pornography website address lists provided by the ICSA. Based on the child pornography website address lists provided to block child pornographic images by each of the ISP providers in April 2011. In response, NTT Resonant is swiftly modifying the various search services that it operates. As Japan's largest ISP, OCN, in particular, is taking the initiative. Every effort is being made to prevent the distribution of child pornography, which is considered the ultimate abuse of human rights, and to contribute to the safety and reliability of search services.

The NTT Communications Group will continue to work closely with the ICSA as a part of our effort to prevent the distribution of child pornography. In fiscal 2011, OCN took steps to disseminate the knowledge gained through its participation in child pornography project demonstration experiments organized by Japan's Ministry of Internal Affairs and Communications. In addition to contributing to the formulation of child pornography website blocking guidelines [Japan Internet Safety Promotion Association (JISPA), Telecom Services Association, Japan Internet Providers Association (JAIPA), Telecommunications Carriers Association (TCA), Japan Cable and Telecommunications Association (JCTA), and the Internet Safety Content Association (ISCA)], OCN took steps to work closely with other ISPs.

#### **Nurturing ICT Human Resources**

# ICT Supporter

Amid the growing digitization within schools and classrooms, the need for teachers to take greater initiative in the use of ICT and the need for increased support for ICT applications continue to mount. In an effort to address these needs and issues, NTT Com CHEO is nurturing ICT supporters and providing human resources to promote the use of ICT during lessons taught at school. Expertise in ICT is not the only skill required of ICT supporters. Of equal importance are communication skills when dealing with children and teachers. ICT supporters must be able to provide instructions and impart information in an accurate and easy-to-understand manner. Given the multitude of skills required to engage in school education, developing the right human resources over a short period can be difficult.

Accordingly, steps are being taken to foster and dispatch ICT supporters, who can have an immediate impact in schools and classrooms, through a proprietary school education program. This program was created by NTT Com CHEO staff



An ICT supporter participating actively in frontline education

with considerable communication and instruction skills as well as know-how developed through the ICT skills and customer support operations that underpin ".com Master" (Dot Com Master) Internet certification.

In the future, the goal is to contribute to the development of children and students through support aimed at promoting ICT use in schools.

# ".com Master" Internet Certification for ICT Personnel Development

The level of ICT literacy required of society is undergoing a fundamental change with the rapid growth in smartphone and tablet terminal use, diversification in access methods, and developments in cloud-based computing. The ".com Master" (Dot Com Master) Internet certification program is an ICT skills certification program operated by NTT Communications since 2001. To date, a total of 390,000 people have taken examinations for certification. The certification is being used to provide evidence of ICT skills in job-hunting and business settings. The program has been incorporated into corporate ICT personnel development systems and ICT learning curriculums of universities and vocational training schools.

Plans are in place to renew the certification program in October 2013 to make it easier for a broad spectrum of customers to take the examination. At the same time, steps will be taken to further incorporate the latest trends so that everyone can master the safe and secure use of ICT while reorganizing the certification program into two levels comprising ".com Master ADVANCED" and ".com Master BASIC."

NTT Com CHEO operates "CAVA" (.com Advisor and Valuable Agent), an IT support business run by personnel with a .com Master certification. The system serves as a bridge between participants' newly acquired skills and practical application in work.

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Based on our Social Action Principles, we operate in harmony with society and make a variety of contributions to international and local communities as a good corporate citizen.

#### **Basic Approach to Social Contribution**

#### NTT Communications' Social Contribution Activities

NTT Communications implements a wide range of social contribution activities through which we are helping to contribute to the enrichment of society. The spheres of activity are diverse, and include international cooperation; environmental conservation; health, medical care and welfare; and regional development.

Social Action Principles				
Sustainability	We conduct lean but lasting activities over the long term.			
Efficiency We engage in cost-effective activities for ease of continuity.				
Due Diligence	We carefully assess whether prospective donations will truly benefit society.			
<b>Global Perspective</b>	We contribute both to Japan and to the international community.			
Skills	We utilize services and employee abilities developed through information distribution for the benefit of society.			

#### Serving Local and International Communities

# Contributing to Society through Websites

Through its websites, the NTT Communications Group engages in a wide range of social contribution activities.

OCN, operated by NTT Communications, has established the "OCN Charity for Guide Dogs" website. This website strives to raise awareness of the importance of seeing-eye dogs. It enables viewers to download content, and provides a point of contact to receive donations. In addition to this initiative, we donate, on an ongoing basis, a portion of the profits of OCN Green Version to various NPOs and NGOs that are working to find solutions to environmental problems. Since 2010 we have made donations on four occasions, totaling ¥2,630,000.

For the "Pink Ribbon Campaign 2012," run by NTT Resonant Inc. through the "goo" Internet portal, we updated the content of the campaign page, including a



breast cancer examination appointment service, and worked to provide services to as many people as possible, including the ability to make examination appointments via smartphones. For women taking advantage of these services, we also recommended that they consider periodic self-examinations.

## Group Social Contribution Activities through CSR Programs

The NTT Communications Group runs CSR programs that welcome participation from employees and their families. Some of the major activities include the Earthquake Reconstruction Volunteer Project and the Chiyoda-ku Cleanup Project. In addition to increasing environmental conservation awareness, these experiences provide opportunities for exchanges with regional areas and contributions to society.

#### Ecocap Movement and NTT Green Team

The NTT Communications Group has been a supporter of the NPO Ecocap Movement since February 2007. Among a number of initiatives, the Ecocap Movement aims to deliver vaccines to children around the world through donations derived from the collection and sale of used bottle caps.

Used bottle caps are separated and collected as a resource. When sold to recycling contractors, every 800 caps is equivalent to ¥20, enabling the vaccination of one child in a developing country. Moreover, this movement helps reduce CO<sub>2</sub> emissions (800 caps is the equivalent of 6,300g of CO<sub>2</sub> at the time of incineration as waste). In addition to contributing to society, this initiative also helps protect the environment.

In 2012 we also collected used bottle caps at rugby matches, in cooperation with NTT Communications' rugby team, the Shining Arcs. As a result, in fiscal 2012 2,863kg of caps (1,145,494 caps) were collected, allowing the delivery of vaccinations to 1,431 children.

#### Contributing to Local Communities and Preservation of the Natural Environment

With help from volunteer companies in Minato-ku and the Minato Welfare Agency for Challenged People, NTT PC Communications held a charity book drive and donated all of the proceeds to welfare facilities for the disabled.

Three times a year, NTT PC Communications also participates together with NTT ComTechnology in activities to preserve the environment around villages, such as during the rice-planting season and harvest festival, by cooperating with the NPO Shiroi Kankyojuku in Chiba Prefecture. In addition, NTT PC Communications is now collaborating with the NPO Satoyama Club to help with rice harvesting and other activities to preserve the natural environment in the Kanto region, its first such endeavor in this region.

#### NTT America's Social Contribution Activities

Working within the CSR of NTT Communications group, in the second quarter of the fiscal year NTT America continued to pursue social contribution activities through the Corporate Social Responsibility Program. As part of NTT Communications' regional beautification efforts, NTT America supported work in June 2012 to plant a garden and build a play space in the courtyard of P.S.161 Pedro Ablizu Campos, a public school in New York City. Work was carried out in collaboration with Dimension Data, a partner company of NTT, and Blue Coat Systems Inc., a company that is both an NTT customer and a vendor company. The project was organized by the charity City Year New York, an organization dedicated to improving school campus environments. In addition to this project, NTT America contributes to charities focused on the health and social welfare of children and youth, and in fiscal 2012 supported four such charity events, including a golf tournament supporting a local children's hospital.





#### Activities related to the Great East Japan Earthquake

#### Core Business Initiatives Addressing the Great East Japan Earthquake

Since immediately after the Great East Japan Earthquake, collaboration between Group companies has enabled NTT Communications to provide support through its core businesses in a variety of forms to help realize the earliest possible reconstruction of the affected areas. To ensure that ours does not end up as a temporary response to the disaster on the way to post-earthquake reconstruction, we will continue activities for everyone in the disaster-stricken areas.

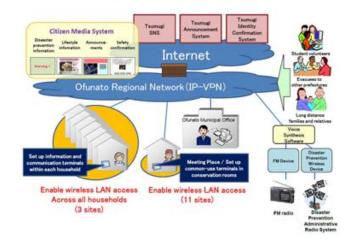
#### Examples of Reconstruction Support Activities: Project Tsumugi Centered on NTT PC Communications (NTTPC)

#### 1. Providing an Identity Confirmation System

Following the large number of cases of missing persons whose safety could not be confirmed in the aftermath of the disaster, NTTPC hastily constructed and released an identity confirmation system. Started in lwate Prefecture on May 30, 2011, the missing persons system was extended to cover Miyagi and Fukushima Prefectures in July. Having been accessed by more than 40,000 people on the first day of its release alone, the system was used by many people in the disaster-affected areas. The system was decommissioned in March 2012, having fulfilled its purpose.

#### 2. Supporting Disaster-Affected Areas through Field Trials of Disaster Prevention and Citizens' Media

We launched Project Tsumugi with the help of several companies and universities with the aim of creating new disaster prevention and public media systems. We implemented field trials for disaster prevention and citizens' media systems at Ofunato City in Iwate Prefecture. Thereafter, we received an order from the Ministry of Internal Affairs and Communications for a project to upgrade information communications infrastructure, opened a business office in Ofunato City, and established the NPO Disaster Prevention and Media Promotion Committee. Based on the experience we gained in disaster-stricken areas, we aim to promote the use of new disaster-prevention information systems by local governments throughout Japan.



#### 3. Conducting Computer Classes

As a way of supporting disaster-affected areas through our core business competencies, NTT PC Communications offered a total of eight PC classes for beginners at Ofunato City in Iwate Prefecture, the base of operations for Project Tsumugi.

In this way, NTT PC Communications has taken a unique approach to supporting the reconstruction of disaster-stricken areas after paying due consideration to the specific needs of the region while collaborating with local NPOs.

All our employees who participated as teachers traveled to disaster-affected areas, such as Ofunato



PC class

City and Rikuzentakata City, and were able to take home a deeper appreciation of the need to support disaster-affected areas as well as the difficulties of reconstruction. A total of eight classes for 125 people were taught by 24 employees. The classes used an original curriculum to teach people how to use office productivity applications.

More than 80% of the students were aged 50 years or older. The students were quite enthusiastic and optimistic about learning how to use PCs. Interest in ICT was high among middle-aged people and senior citizens from disaster-affected regions.

NTT PC Communications plans to continue dispatching employees to teach people how to use PCs.

# Donations to the Great East Japan Earthquake Relief Fund

Donation of relief money	<ul> <li>Via nonprofit organizations, we donated to victims a portion of revenue from various services, as well as relief money received from customers via our portal sites.</li> <li>Money raised through OCN Pay ON (NTT Communications) ¥90,037,700 (ended February 10, 2012)</li> <li>Money raised through OCN Point Talk Program (NTT Communications): ¥2,417,500 (ended February 29, 2012) *Addendum: The amount listed here was raised from June to August 2012. No efforts were made to raise money between March and May. Money was raised for the Red Cross in fiscal 2011, but this was discontinued when the Red Cross stopped accepting donations. Thereafter, money was raised starting in June for Ashinaga but discontinued in August after Ashinaga stopped accepting donations.</li> <li>goo fund-raising (NTT Resonant) ¥24,869,955 (during fiscal 2011)</li> <li>Midori goo (NTT Resonant) supports efforts at forest stewardship, greenification, and tree thinning as a part of reconstruction aid after the Great East Japan Earthquake. ¥7,000,000 (during fiscal 2012)</li> </ul>
	¥7,000,000 (during fiscal 2012) <ul> <li>Money raised through the E-Money Chocom service (NTT SmartTrade) ¥474,600 (during fiscal 2012)</li> </ul>

## Ongoing Activities in Support of Disaster-Stricken Areas by Employees

NTT Communications is positively supporting the reconstruction of disaster-stricken areas following the Great East Japan Earthquake through endeavors in and outside its mainstay business activities.

In fiscal 2011, the Group worked in unison to support ongoing volunteer activities mainly in the area around Shichigahama-cho, Miyagi Prefecture. Activities included the removal of rubble and floating debris.

In addition to establishing systems that allowed employees to easily participate in volunteer activities while actively promoting local community reconstruction efforts, we were successful in creating opportunities to meet the requests of employees eager to provide their support as volunteers.

In fiscal 2013, we will continue to engage in reconstruction activities in those areas affected by the Great East Japan Earthquake.

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We endeavor to increase customer satisfaction through rapid and sincere responses to customer feedback, as we work to create a system that guarantees high-quality service.

#### **Improving Customer Satisfaction**

#### Implementing Customer Satisfaction Surveys

NTT Communications conducts annual "Voice of Customer" surveys to ascertain how its various services and business operations are evaluated by customers. These efforts to garner the opinions and needs of customers are a part of comprehensive measures aimed at further enhancing customer satisfaction.

In fiscal 2012, we received replies from approximately 1,500 companies and individual customers.

Of this total, more than 80% expressed their satisfaction with each area of service. In particular, we heard from satisfied customers showing their appreciation for the rich service menu, highly reliable service quality, and exemplary support during the period before services were ready. Meanwhile, we have made concerted efforts to provide services that meet the expectations of our customers, and we have received requests to enhance services further in the cloud computing and security fields, areas where we have fielded many new inquiries and questions. We have also received requests from customers for portal features whereby users can easily confirm data via a web browser, and for enhanced functionality for managing customers across all of our services. In response to this feedback, we focused on augmenting and improving the feature set, including the Customer Portal, OCN My Page, and Operation Support Web (formerly OCN TechWeb).

Nearly 80% of our customers indicated they were satisfied with the sales channel through which they purchased services. We have also been fine-tuning our websites in response to customer requests for an easier-to-understand application process via the web.

Click here for more information about the customer satisfaction survey and the initiatives we have taken to improve.

# OCN Customer Feedback - Quickly Addressing Customer Needs

Since 2006, NTT Communications has operated "Action! OCN," an initiative that enables prompt responses to requests made directly by customers of OCN personal services. Under this initiative, we have made improvements to ensure that our customers remain satisfied with the services we provide. On April 19, 2011, we changed the name of the website to OCN Customer Feedback to better convey to customers the nature of the site. We also took the opportunity to upgrade the entire site.

We use the website to announce details of improvements made based on customer feedback and requests. Following the upgrade, improvements have been made based on the goals of making the site more accessible, convenient and user-friendly. For example, the website now offers samples of postings, options for reply email addresses, and details on initiatives. The addition of a FAQ page containing information on faults, procedures, and the various services available is a handy way for customers to get answers when they experience a problem.

OCN Customer Feedback is not used merely to make improvements to OCN. Recognizing that the thoughts of each individual customer concerning the Internet must be shared as the thoughts of OCN, our aim is for the website to play a role in creating a fulfilling Internet experience together with our customers.

#### Evaluations of NTT Plala Educette

In November 2009, the Net Barrier Basic filtering service we provide for NTT Plala, our Internet access service for individuals, and Business Plala, our Internet access service for corporate customers, received approval as a recommended product from the All Japan Parents and Teachers Association. Since then we have continued to receive approval for four consecutive years.

We also received approval from the All Japan Parents and Teachers Association for Educette, our Internet access service for schools, as a recommended product. This helped raise the value of the Educette brand and the trust and sense of security felt by our customers toward this service. As of the end of March 2012, NTT Communications was the only ISP that provided free Web filtering for this kind of service. The uniqueness of Educette has also led to higher customer satisfaction.

We will continue protecting children from harmful websites while acknowledging the social context and the needs of customers, as we endeavor to improve our services so that we can provide an even safer Internet environment for children.

#### Simultaneous Acquisition of ISO 14001 and OHSAS 18001 Certification

NTT Plala simultaneously acquired ISO 14001 and OHSAS 18001 certification, the international standards for environmental as well as occupational health and safety management systems, respectively, at all of its places of business in December 2011. Certification under both standards was a first for the ISP industry (according to research by NTT Plala).

As a company responsible for handling the personal information of its customers, NTT Plala had previously acquired ISO 27001 certification, the international standard for information security management, and it has continued to take steps to improve its information security management systems. Over the past few years, in order to fulfill its responsibilities even further, NTT Plala has stepped up efforts to engage in environmentally friendly business practices and to ensure the safety and physical and mental health of its employees, with the ultimate aim of offering safe and secure services as a company that is beneficial to both people and the environment. Against this backdrop, full-fledged efforts were launched in 2010 to build management systems based on ISO 14001 and OHSAS 18001, which culminated in recent certification.

# Responsible Public Relations and Advertising

#### Formulation of Advertising Regulations

Sophistication and diversification of services and pricing schedules in recent years mean advertising needs to be made easier to understand.

To give customers peace of mind when selecting and using services, NTT Communications has been striving to ensure reliability of advertising, in keeping with voluntary standards and guidelines for telecommunications advertising established by the Council for the Promotion of Telecommunication Service Improvement. In November 2008 we formulated and commenced enforcement of regulations on advertising.

Specifically, the regulations define materials requiring examination, designate personnel responsible for carrying out examinations, and clarify the examination process. The examination framework and processes have thus been strengthened. As well as complying with laws such as the Act Against Unjustifiable Premiums and Misleading Representations, NTT Communications will make further efforts to consider the customer's standpoint when engaging in advertising and other public relations and promotional activity.

#### Universal Design Initiatives

NTT Communications is pursuing ongoing initiatives to optimize its official websites.

From fiscal 2007 through fiscal 2009, the Company overhauled its guidelines for domestic and global websites to comply with the World Wide Web Consortium (W3C) Web Content Accessibility Guidelines (WCAG2.0).

In fiscal 2010, we completed the revision of our website development and operation guidelines to bring them in line with "JIS X 8341-3:2010," which had been revised to ensure consistency with the WCAG2.0 international standards.

In fiscal 2011, we began developing guidelines concerning the usage and introduction of social media. Additional efforts have been made to enforce these regulations to ensure that our websites are easily accessible to all users.

#### **Responsibility for Delivering High-Quality Services**

# Providing Service Level Agreements (SLAs)

In Service Level Agreements (SLAs), a quality standard is set for the services we provide. Then, in case the standard is not satisfied, a discounted fee will be applied.

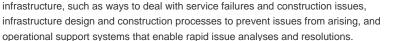
We applied Service Level Agreements (SLAs) to the cloud VPN service "Arcstar Universal One" covering network operating rate, circuit operating rate, fault repair time, network latency, fault notification time, guaranteed bandwidth, and network launch latency. We deliver top-quality services to customers based on clearly identified criteria for each of these seven items.

With an aim to further improve customer satisfaction, we will continuously examine and revise (if necessary) parameters and criteria within our SLAs.

#### Quality Improvement Forum with Overseas Partner Carriers

NTT Communications holds an annual Arcstar Carrier Forum (ACF) aimed at further improving the quality of its global network services at a time when more and more demands are made of customers to ensure business continuity.

The ACF is an international conference we have sponsored since 2000 that invites partner carriers from around the world to Japan for the purpose of improving quality in the operation and delivery of international network services. Until now, the focus has been on expanding discussions of initiatives aimed at improving the quality of essential





Arcstar Carrier Forum

In fiscal 2012, ACF was held in Chiba (in February 2013). Discussions centered on methods of improving customer satisfaction and increasing quality through the design, construction, operation and maintenance of Arcstar Global Network Service, the international network service offered by NTT Communications.

The Forum oversaw lively discussions based on the topic "Transparency for Transformation" within the context of improving overall service quality. As an outcome of these discussions, in addition to its existing agreements to (1) improve availability, (2) reduce the rate of service disruption and (3) reduce the frequency of extended service interruptions, NTT Communications agreed to focus its efforts on (4) improving its record for on-time delivery of customer requests, and (5) reporting to customers in real time the progress being made to restore services in the event of a disruption.

Through initiatives such as the ACF, we aim to improve the quality of international data communication service operations in other countries as well, while also amassing considerable know-how. Going forward, we will continue to enhance the overall quality of our global network through a variety of measures including expanding activities into more countries.

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NTT Communications established the CSR Procurement Policy to build strong ties based on trust with suppliers and all other business partners, and to ensure that transactions are entered into in fairness and good faith.

# Promoting Fair Transactions and Procurement (CSR Procurement)

# Promoting Fair Transactions

NTT Communications is eager to earn the trust of society. In our relationships with business partners, we place primary importance on building ties which are acceptable and beneficial to both parties, who partake in transactions on an equal footing based on mutual respect for the other's position. In building a relationship of trust, it is important to clarify the roles and responsibilities of each party while respecting one another's corporate culture and practices. As professionals in the industry, we do not pursue benefit or convenience solely for ourselves, but seek growth together with our business partners through mutual stimulation and encouragement. To raise the administrative efficiency of agreements and reduce related costs at NTT Communications and its business partners, the Company has promoted the adoption of electronic agreements beginning before fiscal 2009. In fiscal 2012, we entered into electronic agreements with around sixty companies.

# CSR Procurement Policy

NTT Communications has to procure high-quality services and products in an economical and timely manner to be able to maximize competitiveness as a corporation, respond flexibly to customer demands, and make continual improvements to our own services. NTT Communications therefore engages in fair and competitive procurement activities within the global market based on three basic procurement policies.

- 1. Procure in an open and transparent manner according to business needs;
- 2. Give all suppliers, Japanese or international, an equal opportunity to compete for our business;
- 3. Apply global standards and market principles to procure competitive services and products matching our business needs;

# Procurement Department Initiatives

The Procurement Department centrally manages procurement operations and supply agreements and carries out supply-chain management to streamline and optimize procurement processes.

We assess the environmental activities of all product suppliers, and they are required to observe our Guidelines for Green Procurement. In fiscal 2012 we also worked to develop a shared understanding of trends related to the promotion of green procurement with Group companies through two sessions of the Global Environmental Protection Promotion Subcommittee. In the future we also plan to further raise awareness of the importance of promoting green procurement among Group companies. At the same time, we intend to expand green procurement as a group through these and other initiatives.

Building on these activities, we will work to ensure that the Group avoids the use of conflict minerals by collaborating with suppliers. This is consistent with the NTT Group's Approach to Conflict Minerals established by NTT.

Click here for details regarding green procurement.

- Maintaining Stable and Reliable Telecommunications Services
- Ensuring Stable and Reliable Services as Critical Infrastructure
- Contributing to a Healthy ICT Society Our Relationship with Society

hip with Society 🛛 💽 Faithfully Serving Our Customers

Using ICT to Solve Social Issues

Our Relationship with Suppliers

# CSR Report 2013 Protecting the Environment

In line with our Basic CSR Policy, the NTT Communications Group is taking steps to reduce environmental impact in all our business activities. We are committed to providing information and telecommunications service solutions that reduce environmental impact, thereby helping to achieve a sustainable society that harmoniously coexists with the global environment.

#### Basic Philosophy and Environmental Management

- NTT Communications Group Global Environmental Charter
- Green ICT Vision 2020
- Fiscal 2012 Results and Fiscal 2013 Targets
- Fiscal 2012 Material Flow
- Scope 3 Measures
- Promotion Framework and Fiscal 2012 Initiatives
- Acquiring ISO 14001 Certification
- Environmental Audits and Environmental Surveys
- Environmental Accounting in Fiscal 2012
- Green Procurement Guidelines
- Environmental Education Initiatives
- Environment Day Established
- Complying with Environmental Legislation and Regulation

Creating a Low-Carbon Society

- Fiscal 2012 Results and Fiscal 2013 Outlook
- Implementing Energy-Saving Solutions for Air Conditioning
- Plans to Install HVDC Power Supply Systems that Reduce Electricity Consumption
- Introducing Solar Power Generation Systems
- Installing LED Lights at Data Centers
- · Planting Rooftop Gardens and Green Walls
- Introducing the NTT Group Energy Conservation Performance Guidelines
- Measures to Save Energy at Data Centers
- · Office Building Initiatives
- · Electricity-Saving Measures in the Office
- Actively Promoting Work-Style Reform
- · Promoting Use of the Company's Internal Cloud
- Reducing Employee Transfers through Remote Access and Thin Client Services
- Promoting Cooperation in Efforts to Conserve Electricity Using Thin Client Services
- · Electronic Billing Initiative
- Measures to Introduce Eco-Cars
- · Company Vehicle Initiatives
- Preventing Air Pollution and Promoting Energy Conservation through Electric Propulsion Ships
- Green ICT Initiatives
- Environmental Solutions Label System
- · Acquiring the eco-ICT Mark
- Participating in Smart Industrial Estate Demonstrations Targeting Southeast Asia
- Participation in Field Tests for Optimizing Electricity Supply and Demand
- Providing Energy Management Services for Multiple Stores



#### Promoting a Recycling-Oriented Society

- Fiscal 2012 Initiatives
- Recycling of Dismantled Telecommunications Equipment
- Recycling of Construction Waste
- Recycling of Office Waste
- · Effectively Using the Waste from Cafeterias and Dining Facilities
- Reducing Usage of Paper for Business Purposes
- Reducing the Amount of Paper Consumption through Tablet Terminals

# Preventing Environmental Pollution

- Air Pollution Countermeasures
- Ozone-Depleting Substance Countermeasures
- Asbestos Countermeasures
- Storage and Management of PCBs
- Strengthening Storage and Management in the Anticipation of Emergency Situations

#### Biodiversity Conservation

- Biodiversity Conservation Action Guidelines
- Recycling Water
- Maintaining Vegetation
- Ecology in the Ocean
- Caring for Nature Reserves
- Operations based on Guidelines
- "Mimawari Rakutaro" Wildlife Observation and Alarm Device
- Special Feature on Biodiversity on the "eco-goo" Portal
- goo Green Label
- Green OCN

# Reporting to Public and Other Authorities

- The Law Concerning the Rational Use of Energy
- Tokyo Metropolis
- Kanagawa Prefecture
- Yokohama City
- Saitama Prefecture
- Gunma Prefecture
- Nagoya City
- Shizuoka Prefecture
- Kyoto City
- Osaka Prefecture
- Hyogo Prefecture
- Okayama Prefecture
- Hiroshima City
- Miyazaki Prefecture
- Kagoshima City

# CSR Report 2013 **Basic Philosophy and Environmental Management**

- Basic Philosophy and Environmental Management Creating a Low-Carbon Society
- Promoting a Recycling-Oriented Society

Biodiversity Conservation

Preventing Environmental Pollution

Reporting to Public and Other Authorities

To help establish an environmentally friendly society and ensure that the Earth remains in a healthy state for future generations through our core businesses, we will make efforts to strengthen the framework of the NTT Communications Group for environmental management. To this end, we will aggressively pursue protection of the global environment in all processes pertaining to our business activities, ranging from procurement to operation and waste disposal.

# **Basic Philosophy and Vision**

# NTT Communications Group Global Environmental Charter

The NTT Group has established the NTT Group Global Environmental Charter to promote groupwide consideration and action, from a global perspective, relating to environmental protection. This philosophy and policy form the basis for the NTT Communications Group Global Environmental Charter, which is being disseminated among employees of the Group as a set of guidelines for implementation of environmental protection activities. In fiscal 2010, based on the NTT Communications Medium- and Long-Term Environmental Vision, we added a guideline on actions for the preservation of biodiversity to the Basic policy.

Click here for details regarding the NTT Communications Group Global Environment Charter.

# Green ICT Vision 2020

In fiscal 2010, the NTT Communications Group formulated Green ICT Vision 2020, which sets forth new policies for environmental protection activities and targets for fiscal 2020. We are promoting our three "eco" initiatives of Green of ICT, Green by ICT, and Green with Team NTT, in order to help enrich and streamline social activities, and to support the harmonious coexistence of all living things on our beautiful planet.

The promotion of these initiatives enables us to address the need to achieve a low-carbon society, promote a recycling-based society, and preserve biodiversity, as well as to help create a society that is friendly to the global environment, humans, and other living things.

#### Green of ICT

Reducing the increasing environmental impact of ICT equipment and facilities through the use of technology and process innovations.

#### Green by ICT

Reducing society's environmental impact through the use of ICT to improve transportation efficiency for people and goods, and by moving away from resource-intensive operations to, for example, a paperless workplace.

#### Green with Team NTT

Initiatives to reduce environmental impact in employees' homes and local communities.

# **Targets and Main Initiatives**

Environmental themes	Indexes	Fiscal 2020 targets	Main initiatives
Realization of a Low-carbon Society	CO <sub>2</sub> emissions <sup>*1</sup>	318,000 t-CO <sub>2</sub> or less (Reduce by 15% or more from the fiscal 2008 level)	Promoting the introduction of high-efficiency equipment     Refurbishing and upgrading to high-efficiency air-conditioning     systems     Enhancing lighting using reflectors, LEDs and other devices     Introducing high-voltage DC power supply systems     Expanding the use of natural energy sources
Promotion of a Recycling-based Society	Final disposal rate <sup>*2</sup>	2% or less	<ul> <li>Clarifying and thoroughly implementing recycling guidelines</li> <li>Promoting thermal recycling</li> <li>Entrusting construction work to contractors with a high final disposal rate and stepping up rigorous pre-construction supervision</li> <li>Continuing to achieve zero emissions<sup>'3</sup> for all removed telecommunications equipment</li> </ul>

Environmental themes	Indexes	Fiscal 2020 targets	Main initiatives
	Paper consumed per employee	8,500 sheets per employee (reduced by 30% from the fiscal 2008 level)	<ul> <li>Strengthen measures at the level of individual organizations based on data showing the results of multi-function printer usage</li> <li>Introduce ICT equipment and other devices that realize a paperless working style</li> <li>Promoting the use of electronic formats for internal documents</li> </ul>
Preservation of Biodiversity	_	_	<ul> <li>Promoting construction work based on environmental assessment and consideration for biodiversity</li> <li>Revising our biodiversity preservation guide</li> <li>Promoting environmental protection programs undertaken by employees and their family members.</li> </ul>

\*1 CO<sub>2</sub> emissions coefficient:

fiscal 2020: 0.33kg-CO2per kWh %<Target value for the Federation of Electric Power Companies of Japan> Fiscal 2008: 0.44kg-CO2per kWh <actual value> \*2 Final disposal rate

is calculated as the volume of waste transported to the final processing site divided by the total volume of waste generated.

\*3 Zero emissions:

The NTT Communications Group considers a final disposal rate of 1% or less to satisfy zero emissions conditions.

Click the following for details regarding "Green ICT Vision 2020.".

# Fiscal 2012 Results and Fiscal 2013 Targets

Guided by Green ICT Vision 2020, we are working to realize a low-carbon society, promote a recycling-based society, and preserve biodiversity and will make every effort to reduce the environmental impact associated with our business activities, In fiscal 2012, we took steps to reduce our environmental impact and protect biodiversity on a Groupwide basis both in Japan and overseas. In specific terms, we expanded management on an individual building and site basis for operations in Japan and overseas,

extended initiatives aimed at reducing greenhouse gases across our global operations, initiated new measures in an effort to preserve biodiversity, and actively promoted measures including tablet terminal meetings with a view to curtailing paper consumption. Through these endeavors, we achieved considerable results across the Group.

In fiscal 2013, we will maintain our focus on reducing environmental impact both in Japan and overseas. In advancing a variety of global measures, we will continue to channel our energies toward reducing electric power consumption, recycling waste, cutting back the volume of office-use paper, and promoting initiatives aimed at preserving biodiversity.

#### Environmental Impact Reduction Initiatives, Targets and Achievements in Fiscal 2012

		Fiscal 2012 Target	Fiscal 2012 Achievements	Assess -ment	Fiscal 2013 Initiatives	Fiscal 2020 Targets
CO2 emissions	Telecom equipment	Target: 252,000 t-CO2 or less*1	255,000 t-CO2 <sup>*1</sup> • Outdoor units for air conditioners and filter cleaning: reduction of 3,328 tons • Turning off idle equipment: reduction of 416 tons • Upgrading older air conditioners: reduction of 89 tons • Raising temperatures slightly in machine room cooling systems: reduction of 929 tons • Upgrading facilities (higher capacity and conversion to DC): reduction of 348 tons • Reducing use of older facilities as a result of service elimination: reduction of 451 tons • Installing solar power systems: reduction of 82 tons • Introducing new technologies: reduction of 1,088 tons	*	Target: 257,000 t-CO2 or less <sup>*1</sup> • Outdoor units for air conditioners and filter cleaning: reduction of 3,245 tons • Turning off idle equipment: reduction of 413 tons • Upgrading older air conditioners: reduction of 16 tons • Raising temperatures slightly in machine room cooling systems: reduction of 929 tons • Upgrading facilities (higher capacity and conversion to DC): reduction of 91 tons • Reducing use of older facilities as a result of service elimination: reduction of 817 tons • Installing solar power systems: reduction of 82 tons • Introducing new technologies: reduction of 9,699 tons	318,000 t-CO2 or less <sup>*2</sup> (reduction of more than 15% from the fiscal 2008 level)
	Offices	Target: 26,000 t-CO₂ or less <sup>*1</sup>	15,000 t-CO2 <sup>°1</sup> • Installing reflector lights and adopting automatic light level adjustment systems • Lowering blinds before leaving the office, and ensuring that lights are turned off when not in use • Continued promotion of dressing warmer in winter and cooler in summer	**	Target: 15,000 t-CO <sub>2</sub> or less <sup>-1</sup> • Using energy-efficient PC settings, unplugging PC power cables when leaving the office, turning off PCs when not in use • Selective operation of elevators and air-conditioning systems • Continued promotion of dressing warmer in winter and cooler in summer	

# CSR Report 2013(Online Version)

		Fiscal 2012 Target	Fiscal 2012 Achievements	Assess -ment	Fiscal 2013 Initiatives	Fiscal 2020 Targets
	Recycling rate for dismantled telecom equipment	Target: At least 94%	96.7% · Improving the recycling rate for glass and ceramic scrap (glass scrap, FTC,*2 and ball insulators)	***	Target: At least 97% · Internally using dismantled telecom equipment · Promoting the internal use of unneeded articles of inventory and other items · Promoting further recycling, including at Group companies	
Waste	Recycling rate for construction waste	Target: Specified materials: At least 99% Other: At least 70%	Specified materials + metals: 99.8% Other: 78.2% • Promoting measures to reduce final disposal volume • Completely eliminating waste that must be transported directly to final disposal plants • Promoting subcontracting to processing companies with higher recycling rates	***	Target <sup>*4</sup> : Specified materials + metals: At least 99% Other: At least 75% • Promoting measures to reduce final disposal volume • Utilizing intermediate processing plants that offer high recycling rates	Goal for all waste: Final disposal rate <sup>*3</sup> of 2% or lower
	Recycling rate for office waste	Target: At least 76.0%	<ul> <li>72.7% (for a total emission volume of 3,986 tons)</li> <li>Recycling plastic waste</li> <li>Promoting thermal recycling</li> <li>Highlighting best practices from each organization</li> </ul>	¥	Target: At least 76.0% • Promoting thermal recycling • Promoting the thoroughgoing sorting of waste • Evaluating the status of communications buildings and data centers; Promoting subcontracting to processing companies with higher recycling rates	-
	e (office paper, A4 size equivalent)	Target: 9,200 sheets per person	<ul> <li>7,082 sheets per person</li> <li>Visualizing paper usage status</li> <li>(double-sided printing rate, consolidated printing rate)</li> <li>Highlighting best practices from each organization</li> <li>Promoting the use of a video conferencing system</li> </ul>	***	Target: 8,500 sheets per person · Strengthen measures at the level of individual organizations based on data on multi-function printer usage · Introduce ICT equipment and other devices that realize a paperless working style	8,500 sheets per person (30% reduction per person from the fiscal 2008 level)

(Scope: 14 domestic companies of the NTT Communications Group)

\*1 The CO2 emission coefficient is 0.33 kg-CO2 per kWh.

\*2 Fire-tight covers (FTC) are used to protect communication cables from fire.

\*3 Final disposal rate is calculated as the volume of waste transported to the final processing site divided by the total volume of waste generated

\*4 Materials were reclassified in fiscal 2011.

# Fiscal 2013: Environmental Load Reduction Management Indices at Overseas Bases

• Switch off unnecessary lighting, air-conditioning, and PCs

• Promote the sorting and recycling of waste according to the circumstances of each building

• Implement double-sided and double-page office paper printing

#### **Environmental Impact of Business Activities**

#### Fiscal 2012 Material Flow

		Cu	stomers	CHAROLIN	ental Impact reductions from ICT u	saye
INPUT		Busit	ness process		OUTPUT	
Purchasing					Greenhouse gases	
Item obtained through green purch	the second se		Purchasing	3	Power	260,000 t-CO
Number of companies structurally	assesses 10				Fuel	7,700 t-CO
		_	•	_	Gas	3,200 t-CC
Telecommunications facilities					Heating	100 t-CO
Power	739.63 million kWh	0		1	General waste	2,475 ton
Fuel	2,860,000 liters	> ¥			Industrial waste	1,310 ton
Gas	1.42 million m <sup>3</sup>	Te	elecommunications			
Heat	2.44 million MJ		facilities	5	Final disposals of wastes	
		_			General waste	563 ton:
			-		Industrial waste	43 ton:
Offices	1	-			Greenhouse gases	
Power	35.77 million kWh				Power	16,000 t-CC
Water	220,000 m <sup>3</sup>	7 🚥			General waste	1,196 ton
Office paper	356 tons	m	Offices		Industrial waste	354 ton
			omee		-	
					Final disposals of wastes	
		1000			General waste	106
			-		Industrial waste	1
Reuse						
Paper pamphlets	4,140 tons	A	Sales		Greenhouse gases	
Invoice	196 tons		Sales	° —)	Fuel	1,000 t-CO
Fuel (automobiles) Gasoline and diesel	400,000 liters		-			
					Reuse	
		100			Reused dismantled telecommunication equipment, in-house	ons 368 unit
		1	0		Equipment and packaging	22,024 unit
		4 )	Reuse		Collections of subscriber terminals	54,000 unit
			Recycle	1	Reuse of disused fiber-optic cables	5 kilometer
		-			Recycle	
					Recycling of coaxial cables	0 kilometer
					Collection of confidential documents (SS-BOX)	429 ton

Click here to view an enlarged diagram summarizing input and output of the NTT Communications Group for fiscal 2012. 🗗

# Scope 3 Measures

NTT Communications has adopted the new international guidelines for measuring Scope 3 greenhouse gas emissions. Of the fifteen Scope 3 emission categories, NTT Communications is currently focusing on areas where emissions are substantial across the supply chain including purchased goods and services, capital goods, downstream transportation and distribution, and business travel. At the same time, the Company is evaluating areas where the potential for reduction is high. As a result, we were able to estimate emissions at approximately 650,000t-CO<sub>2</sub>. Looking ahead, we will closely examine each relevant category and all quantitative data with a view to selecting activity management areas. We intend to implement ongoing initiatives aimed at visualizing and reducing emissions. At the moment, our activities are in the trial stage in Japan. After determining an appropriate operating and management method, we plan to extend operations and management to overseas bases.

# **Environmental Management Structure**

## Promotion Framework and Fiscal 2012 Initiatives

In order to continuously promote environmental protection initiatives, we formed a working group for each issue, involving the entire NTT Group in tackling environmental issues.

As a general rule, we hold Environmental Protection Subcommittee meetings twice a year to formulate an overall plan encompassing a wide range of issues, including reduction of greenhouse gas emissions, Reducing Waste, and promotion of environmental solutions. Through these meetings, we also share information on the results of actions taken and promote horizontal expansion of various initiatives.

Beginning in fiscal 2009, we streamlined the bases for environmental management at key global locations, and expanded the scope of

environmental protection initiatives at telecommunications and data center buildings, as well as office buildings.

Our environmental management structure in Japan comprises fourteen companies representing the removal of three companies and the addition of three other companies since fiscal 2010.

In addition, we have assigned an officer responsible for environmental management at each operating base as part of our efforts to establish a global structure and system beginning in fiscal 2012. During autumn fiscal 2013, we will hold a global environmental management meeting as a forum for each country to provide and share details of their endeavors to reduce environmental impact. At the same time, particular emphasis will be placed on expanding measures aimed at decreasing the negative effect we have on our environment.

#### **Environmental Protection Framework**

President		Working Group	Main Tasks
CSR	ir	Greenhouse Gas Reduction	elPress whad with Todal Power revelution campaign to cut electricity consumption BVIsualize the energy usage at telecommunication and data centers and implement energy-saving measures at regular intensit elPromote installation of tsp-tunner equipment.
(CSR Office)	ŀ	Dismantling Communications Equipment	@Process and manage dismantied equipment in line with the law
P	-	Construction Waste	Process and recycle construction waite     eEliminate asbestos and manage reconstruction
obal Env	-	PCB Storage and Disposal	#Store and recycle construction biphenyls. #Submit polychiorinated biphenyls management report to the government.
Global Environmental Protection Sub-Com (Environmental Protection Office)		Office Environmental	8Aid efforts to share and resolve issues in activities to reduce paper usage, cut waste, and conserve electricity 6Maie the impact of PDCA efforts wiskle, estabilish targets, and formulate policies 6Share and commonly apply examples of advanced efforts from each business init.
A Protect		Environmental Measures Sub-Working Group	BiMaintain system that factors in locations and other elements within business units and educate on the environment @Plan and deploy conservation initiatives through small independent group from business unit
Son Sub	-	Customer Waste	©Treat and manage industrial waste from installation projects for customers @Put industrial waste treatment manuals through small independent groups from business unit
		Container Recycling	Comply with the Containers and Packaging recycling Law
nite	-	Green Procurement	@Encourage green purchasing companywide @Educate suppliers on green purchasing guidelines
0	-	Environmental Accounting	@Build environmental accounting system for management
	-	Community Contributions Related to Environmental Protection	BPromote Green with Team NTT     BPrint business cards solely on kenal to ease deforestation     BRecycle and donate PCs to nonprofit organizations
	+	Environmental Solutions Working Group	BUndentake environmental public relation (notable by informing about and promoting environmentally friendly service) BPush ahead with Green ICT initiatives BCIneate and deploy new solutions
	L	Group Company Working Group	BExpand working group initiatives groupwide and institute PDCA cycles

Click here to view an enlarged diagram of the Company's environmental protection framework.

#### Acquiring ISO 14001 Certification

Six companies within the NTT Communications Group had acquired ISO 14001 certification as of March 31, 2013. Through contracts with outside environmental consultants, certified departments and companies undergo internal audits once a year to ensure appropriate implementation of environmental management and continual improvements that will allow a steady reduction of the environmental impact of business activities. Regular reviews and renewal examinations are also undertaken by an independent certification body. Outstanding issues are thus identified and remedial measures are swiftly taken. Besides initiatives centering on reduction of office paper and electricity usage and promotion of waste recycling, we are pursuing the following measures as part of our contribution to the creation of an environmentally friendly society.

#### ISO 14001-certified Company

ISO 14001-cer	tified Company	Date of Certification	Related Company Websites
	Procurement Dept.	October 1999	Please click here for details on NTT
NTT Communications Corp.	Solution Services Dept. (Engineering Division I, Engineering Division II, Planning Division)	March 2004	Communications Corp. environmental protection activities
NTT World Engine	ering Marine Corp.	July 2001	Please click here for Environmental Activities
NTTPC Comm	unications, Inc.	November 2003	-
NTT Biz	Link, Inc.	March 2007	Please click here for details on NTT BizLink, Inc. environmental protection activities
NTT Com Solution	& Engineering, Inc.	April 2007	-
NTT P	lala Inc.	December 2011	-

As of March 31, 2013

Figures inside parentheses indicate actual results from fiscal 2011.

# Environmental Audits and Environmental Surveys

Guided by its Global Environmental Charter, the NTT Communications Group has established the Global Environmental Protection Subcommittee under the CSR Committee. At the same time, twelve working groups (WGs) drive the Group's wide-ranging environmental protection activities. Both Subcommittee and WGs issue PDCA and other reports outlining details of their various activities twice yearly. In addition to sharing information and calling for further development of effective initiatives, we are implementing environmental management on a Groupwide basis.

#### **Environmental Accounting**

# Environmental Accounting in Fiscal 2012

NTT Communications tabulates environmental conservation cost (categories corresponding to business activities) and economic benefit associated with environmental conservation activities (real financial impact) in line with Environmental Accounting Guidelines 2005, issued by the Ministry of the Environment, and NTT Group Environmental Accounting Guidelines.

Up until fiscal 2011, data was tabulated for NTT Communications on a non-consolidated basis. Beginning in fiscal 2012, tabulation was extended to include Group companies. In this manner, every effort is being made to implement environment accounting on a Groupwide basis.

The environmental conservation cost in fiscal 2012 came to approximately 3,839 million yen, consisting of around 2,276 million yen in investments and about 1,563 million yen in expenses. This represented a decrease of approximately 1,456 million yen compared with the previous fiscal year.

On the other hand, the economic benefit derived from the environmental conservation measures in fiscal 2012 included 74 million yen in revenue from optical cable sales and 820 million yen gained from the comprehensive implementation of environmental measures in offices, such as electricity usage reduction and expansion of the number of sites targeted. At the same time, the Mypage<sup>\*1</sup> website helped reduce mailing costs and paper usage, generating cost savings of approximately 567 million yen. New equipment purchases were reduced 388 million yen by reusing equipment. From an overall perspective, economic benefit came to about 1,849 million yen, an increase of around 227 million yen compared with last fiscal year due to such factors as the inclusion of Group companies.

\*1 Mypage: A service providing notification via the Internet and/or email of billing information relating, for example, to NTT Communications telephone charges, and which also allows receipt display and printing. By using the Internet and email to notify customers of billing information instead of conventional printing and postage, it is quicker and easier for customers to locate relevant information. This contributes to protection of not only paper resources, but also energy resources required for printing and delivery.

#### Environmental Conservation Cost-Categories Corresponding to Business Activities (Million yen)

	Catagony	Kaumaaanaa	Inves	tment	Expenses		
	Category	Key measures	FY2011 FY2012		FY2011	FY2012	
(1) Business	s area cost		1,234.4	2,217.6	498.1	440.9	
	1. Pollution prevention costs	<ul> <li>Asbestos removal and disposal, etc.</li> <li>Oil tank facility for engine generator</li> </ul>	401.7	320.5	23.1	23.0	
Breakdown	2. Global environmental conservation costs	Maintenance expenses for air-conditioning facilities for machinery rooms     Air-conditioning facilities for machinery rooms	832.5	1,865.4	82.1	91.6	
	3. Resource circulation costs	Waste disposal and reuse expenses	-	31.8	392.9	326.2	
(2) Upstream	n / Downstream costs	Mypage system improvements	108.9	58.6	0.6	987.9	
(3) Administr	ration costs	Greening of buildings; usage fees for environmental information system	-	-	94.3	79.6	
(4) R&D cost	ts	NTT Communications' portion of holding company's environmental R&D expenses	-	-	110.0	40.3	
(5) Social activity costs		Donations to environmental conservation organizations	-	-	28.2	14.3	
(6) Environn	nental remediation costs	-	-	-	309.6	-	
Total			1,343.2	2,276.1	1,040.7	1,563.0	

# Economic Benefit Associated with Environmental Conservation Activities (Real Financial Impact) (Million yen)

		FY2011	FY2012
Revenue	Revenues from sales (cables, metal scrap, etc.)	168.2	74.4
	Reductions in expenses derived from measures such as reduced electricity usage	312.9	819.8
Cost reductions	Reductions in new item purchases generated by equipment reuse	681.8	387.7
	Decrease in postal and paper costs from utilization of Mypage	458.6	566.7
Total		1,621.5	1,848.6

(Target period: April 1 - March 31)

(Scope: Fiscal 2011: NTT Communications (non-consolidated): Fiscal 2012: NTT Communications Group)

Tabulation and disclosure: Figures were tabulated in line with the Ministry of Environment's Environmental Accounting Guidelines 2005 and NTT Group Environmental Accounting Guidelines. Expenses include personnel expenses but exclude depreciation.

# **Promoting Green Procurement**

# Green Procurement Guidelines

NTT Communications issued the second version of its Guidelines for Green Procurement in January 2006. As we aim to reduce environmental impact along the entire supply chain, the guidelines incorporate awareness of environmental conservation into criteria for supplier assessment. Around 426 suppliers had been assessed as of the end of March 2013.

Version two of the Guidelines for Green Purchasing was revised in line with formulation of the NTT Group Energy Efficiency Performance Guidelines (the beginning of procurement of energy efficient ICT equipment) and was renamed as the Guidelines for Green Procurement in August 2010.

Energy efficiency considerations for the procurement of ICT equipment have been added to these guidelines.

Beginning in fiscal 2010, we have continued to promote Groupwide procurement initiatives by developing a shared understanding of trends related to the promotion of green procurement with various Group companies. Moreover, procurement from companies successfully passing NTT Communications' green procurement assessment is being expanded to the entire Group.

Meanwhile, turning to the Group's overseas company in Singapore, steps were taken to procure Green Label certified products. The Green Label certification program was introduced by the government of Singapore in 1992.

#### Status of Green Procurement and Green Purchasing

	Fiscal 2009	Fiscal 2010	Fiscal 2011	Fiscal 2012
Green procurement of goods excluding office supplies (1,000 units)	1,520	1,370	1,230	1,380
Green procurement of goods excluding office supplies (1,000 units)	510	470	350	260

# [Specific Case Study] Green Procurement of Office Paper

NTT Communications has continued to take into consideration and maintain a focus on environmental concerns in the procurement and use of office paper. In specific terms, the ratio of recycled waste paper to the total amount of paper consumed is 54.8%. 100% of the remaining 46.2% is environmentally conscious virgin pulp.

#### **Environmental Education**

#### Environmental Education Initiatives

Environmental awareness activities and environmental education, offered to all employees according to job type and description, have purposely been incorporated into CSR training, and the NTT Communications Group is always seeking new ways to raise employee awareness of environmental matters. We have also been extending the scope of participation to include not just employees, but also their families and business partners.

In fiscal 2012, we undertook a range of environmental awareness and education activities including a cleanup of waterways and coastal regions as well as the areas surrounding our offices. We also took steps to promote the ecocap movement. These and other activities form part of our Green with Team NTT initiative. In addition, NTTPC Communications encouraged its employees to participate in rice planting and harvesting as well as tree planting and thinning activities in a bid to raise the level of understanding regarding the importance of protecting the natural environment.

Click here for details regarding participation-oriented CSR activities:

# Objective/Level-Based Training

We provide level-based classroom instruction and participatory seminars on a regular basis to executives, CSR promotion leaders (leaders who promote environmental conservation initiatives in each workplace), general employees, and newly hired employees. In addition, we engage in activities that entail the thoroughgoing sorting, management, and proper disposal of waste in accordance with all relevant statutory and regulatory requirements. In fiscal 2012, we held explanatory meetings regarding the proper disposal of industrial waste for employees at all major buildings including those of Group companies. At the same time, we took steps to deepen the understanding of employees regarding industrial waste disposal.

As a result of our environmental education, employees have put forward proposals aimed at improving the Group's ability to protect the environment. Employees are also taking the initiative by making proposals and implementing measures aimed at curtailing the use of electric power and paper. Looking to the future, the NTT Communications Group is committed to listening to the suggestions of each of our employees, and to expanding our environmental protection initiatives in our business activities and office operations.

#### Environment Day Established

The NTT Communications Group has designated the fifth day of every month as Environment Day with the aim of increasing internal environmental awareness. Complementing Environment Day, the Group coordinates closely with participation-oriented CSR activities, including the simultaneous cleanup of areas around office buildings. Through these and other means, the NTT Communications Group will strive to increase the awareness of employees with regard to environmental preservation activities.

Meanwhile, at the Group's overseas company in the U.S., employees are encouraged to conserve the use of electric power and to actively engage in recycling in a bid to raise awareness regarding environmental preservation activities.

#### Complying with Environmental Legislation

#### Complying with Environmental Legislation and Regulations

The NTT Communications Group devotes itself to ensuring legal compliance and proper risk management while liaising closely with other corporations of the NTT Group. Legislation of all kinds, including environmental laws and ordinances that look to curtail pollution, emissions standards and the PRTR Law<sup>\*1</sup>, is fully communicated to related departments, and independent guidelines have been established for in-house application. We are also enhancing compliance education.

We were not involved in any litigation or legal violations pertaining to environment-related accidents, infringements, fines or complaints during fiscal 2012. We plan to continue our companywide efforts to prevent environmental pollution and comply with related laws and regulations.

\*1 PRTR Law: Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

- Basic Philosophy and Environmental Management
- Creating a Low-Carbon Society
  - Biodiversity Conservation
    Preventing Environmental Pollution
- Promoting a Recycling-Oriented Society
   Reporting to Public and Other Authorities

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# CSR Report 2013 Creating a Low-Carbon Society

- Basic Philosophy and Environmental Management Creating a Low-Carbon Society
- Promoting a Recycling-Oriented Society
- Biodiversity Conservation

Preventing Environmental Pollution

Reporting to Public and Other Authorities

Although the advancement and spread of ICT are adding convenience to lifestyles and business, the increase in power consumption by ICT-related equipment is placing enormous pressure on the environment. The NTT Communications Group's employees are responding eagerly to energy efficiency improvements and other initiatives, as they progress as a team toward voluntary company targets set for telecommunications equipment, which account for around 90% of total CO<sub>2</sub> emissions from business activities, through to energy savings by offices.

In fiscal 2012, each and every employee within the NTT Communications Group worked diligently to implement a variety of measures aimed at conserving energy at its nationwide office, telecommunications, and data center buildings in the aftermath of the earthquake disaster. This helped significantly reduce the amount of electricity consumed as well as CO<sub>2</sub> emissions.

# Fiscal 2012 Initiatives

## Fiscal 2012 Results and Fiscal 2013 Outlook

#### **Fiscal 2012 Results and Initiatives**

When calculating the volume of greenhouse gas emissions that we generate, we include buildings owned by other companies including those buildings where we rent space as well as data centers (DCs) that provide colocation services, in addition to buildings owned by the NTT Communications Group.

In fiscal 2012, CO2 emissions by the NTT Communications Group totaled 270,000 t-CO2. This was 8,000 t-CO2 lower than the Group's established target and a decrease of approximately 3% compared with the previous fiscal year.

While sales of the Tokyo No. 5 Data Center, a telecommunications facility and data center building, were robust, resulting in an increase in CO<sub>2</sub> emissions, this overall decline was mainly the result of the favorable flow-on effects of energy-saving measures focusing particularly on air-conditioning electric power consumption, which held emissions to 255,000 t-CO2 (up 4,000 t-CO2 compared with the previous fiscal year).

Turning to office buildings, we continued to pursue energy-saving measures while at the same time taking steps to review any overlap in the accounting of data within Group companies. Moreover, we successfully achieved a decrease in emissions of 15,000 t-CO2 (approximately 11,000 t-CO2 compared with the previous fiscal year) by adopting tabulation methods in accordance with Japan's Law Concerning the Rational Use of Energy.

As initiatives aimed at reducing CO<sub>2</sub> emissions in fiscal 2012, we introduced SmartDASH<sup>1</sup>, which we outline in more detail on the next page, Aisle Capping<sup>\*2</sup>, and Blank Panel solutions at nineteen telecommunication facility buildings and data centers in an effort to promote increased energy efficiency. These initiatives were designed to specifically target the Group's air-conditioning systems. In addition, we undertook a variety of measures as part of our efforts to curtail the energy consumption of ICT equipment and devices. While endeavoring to purchase servers and other equipment with the highest energy conservation performance (five stars) based on the Energy Conservation Performance Guidelines, we continued to upgrade air conditioning to more efficient systems, dismantled unnecessary facilities, and carefully cleaned exterior equipment. In order to expand the use of renewable energy, we installed a third solar power generation system at an inner-city communications building in Japan in March 2013. This in turn has helped to generate a total of 300 kilowatts of power. Guided by an overarching policy to introduce eco-cars, we also actively promoted the use of low-emission vehicles. As a result of these endeavors, we recorded a 98% achievement rate toward meeting the Group's target for fiscal 2015 in fiscal 2012. In fiscal 2012, CO<sub>2</sub> emissions at overseas bases amounted to approximately 76,000 t-CO<sub>2</sub> (including about 74,000 t-CO<sub>2</sub> from datacenters and 2,000 t-CO2 from business offices), a slight increase.

In fiscal 2013, we project CO<sub>2</sub> emissions will edge up to around 82,000 t-CO<sub>2</sub> as a result of growing demand for cloud-based services and datacenters.

Our overseas datacenters have acquired Gold-level ratings for Leadership in Energy and Environmental Design (LEED), a certification system for green buildings, including our Serangoon Data Center in Singapore, Cyberjaya 3 Data Center in Malaysia, and Chennai Data Center in India. We are currently applying for a Gold LEED rating for our Hong Kong Financial Data Center, which was constructed in fiscal 2013 based on green data center designs to reduce environmental load.

#### **Fiscal 2013 Projections and Plans**

For fiscal 2013, NTT Communications projects a slight increase in CO2 emissions to 271,000 t-CO2 because of the commencement of operations at our Tokyo No. 6 Data Center, which features cutting-edge green ICT facilities, and the new construction of

telecommunications equipment buildings centered on cloud computing.

As major initiatives for fiscal 2013, we are making improvements such as changing the layout of floor panels and fine-tuning temperature settings in order to further increase the effectiveness of SmartDASH, while also aiming to expand in Japan and abroad.

In addition, NTT Communications has been field-testing the design, maintenance and operation of high-voltage direct current (HVDC) power supply systems since fiscal 2012, and plans to install these systems inside its telecommunications buildings in major cities in fiscal 2013 with the aim of lowering electricity consumption.

At its telecommunications facilities and data center buildings, the Company also aims to expand the use of LED lighting.

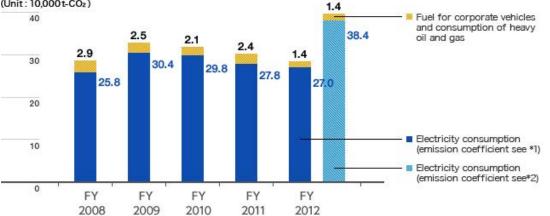
\*1 Depending on the country and region, SmartDASH is a registered trademark or trademark of Vigilent Corporation.

\*2 Aisle Capping is a registered trademark of NTT Facilities, Inc.

\*3 Leadership in Energy and Environmental Design (LEED)

# CO<sub>2</sub> Emissions from Business Activities





(The scope of tabulation was fourteen NTT Communications Group companies in fiscal 2010, thirteen Group companies for fiscal 2009, and eleven Group companies for fiscal 2008.)

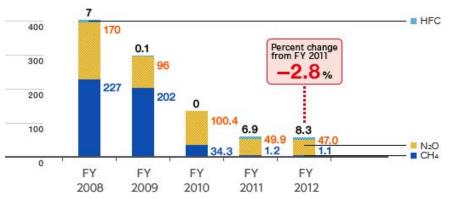
\*1 The CO2 emission coefficients used in the dark blue bars are 0.378 kg-CO2 per kWh until 2010, and 0.33 kg-CO2 per kWh from fiscal 2011 onward.

\*2 The CO2 emission coefficients used in the light blue bar are from electric power companies.

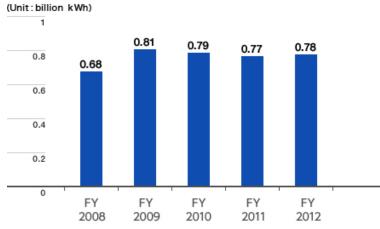
\*3 Calculated using net emissions that exclude other telecommunications operators in accordance with revisions to the Energy Saving Act.

#### Other Greenhouse Gas Emissions (Converted to CO<sub>2</sub> Equivalent) (Unit:t-CO2equivalent)

500



(The scope of tabulation was fourteen NTT Communications Group companies in fiscal 2010, thirteen Group companies for fiscal 2009, and eleven Group companies for fiscal 2008.)



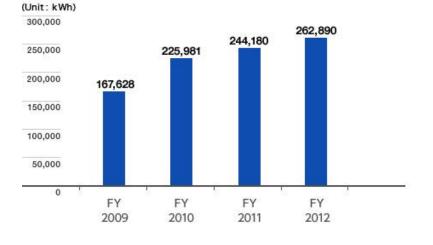
(The scope of tabulation was fourteen NTT Communications Group companies in fiscal 2010, thirteen Group companies for fiscal 2009, and eleven Group companies for fiscal 2008.)

#### Volume of Electricity Generated by Solar Power

Power Purchases

NTT Communications began generating electricity with solar power systems in May 2009, mainly at its data centers in Tokyo. The electricity generated was used to power lighting in common areas. In fiscal 2012, about 260,000 kWh of electricity was generated by solar power. In addition to Japan, solar power systems have also been installed at our data centers in Singapore, Malaysia and Hong Kong, advancing the utilization of clean energy overseas.

Moreover, our office buildings in Thailand and data centers in India use electricity generated by wind turbines for lighting and other purposes. In this way, NTT Communications promotes the introduction of renewable energy that suits regional characteristics.



# Initiatives related to Telecommunications Facilities

#### Implementing Energy-Saving Solutions for Air Conditioning

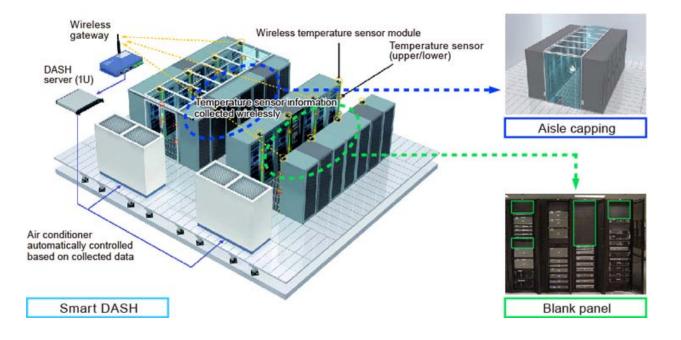
We have introduced SmartDASH<sup>\*1</sup>, Aisle Capping<sup>\*2</sup> and Blank Panel solutions at our telecommunication facility buildings and data centers, thereby reducing power consumption in air conditioning.

SmartDASH is a system that visualizes temperature zones in server rooms, detects areas that are too cold, and automatically readjusts temperatures.

Aisle Capping is a technique that physically separates the intake (low temperature) and exhaust (high temperature) air from IT equipment by strategically placing vinyl sidewalls and ceilings around IT equipment in the aisles between rows of server racks. Blank Panel is a technique for enhancing cooling effectiveness within racks by blocking the front of unused spaces in server racks. The combination of these two techniques has reduced electricity consumption by about 15% for air conditioning. NTT Communications is rolling out these solutions to other data centers in Japan and overseas to further reduce power consumption.

\*1 Depending on the country and region, SmartDASH is a registered trademark or trademark of Vigilent Corporation.

\*2 Aisle Capping is a registered trademark of NTT Facilities, Inc.



# Plans to Install HVDC Power Supply Systems that Reduce Electricity Consumption

With the ability to change voltage, alternating current (AC) is the commonly used form of electricity for power plugs in office buildings and homes. However, most types of electrical equipment operate on direct current (DC) and therefore require an AC/DC converter to change alternating current into direct current, and some electricity is lost during the conversion. Low-voltage DC power sources have been deployed in some scenarios, but there are installation and cost issues to consider, such as the need to have large power cables in order to supply a large volume of electricity.

High-voltage direct current (HVDC) systems have been developed over the past few years as a promising technology that surmounts these challenges, by realizing higher voltages while converting alternating current to direct current. Since January 2012, NTT Communications has been implementing field tests to accelerate the deployment of HVDC systems.

These field tests entailed the build-out of an HVDC system and the establishment of methods needed to design, install, maintain and operate the system. We performed a cost-benefit analysis and an overall assessment of the system, including its efficiency, reliability and power consumption. We now plan to install an HVDC system at one of our telecommunications equipment buildings in Tokyo in January 2014. We expect this highly efficient system, the largest of its kind in the world (4MW class), to lead to lower power consumption and a major reduction in installation costs.

NTT Communications will, in principle, deploy HVDC systems when constructing and operating new power supply systems in the future.

#### Introducing Solar Power Generation Systems

In March 2013, NTT Communications installed solar power generation systems (about 110 kilowatts) on the rooftops of telecommunications equipment buildings in Tokyo. To date, the Company has installed solar power generation systems with a combined capacity of 300 kilowatts, including systems on the roofs and walls of data centers in the Tokyo metropolitan area. The generated electricity is used for lighting in the common areas of the data centers.

NTT Communications is aiming to expand the use of renewable energy and, in addition to the installation of solar power generation systems, plans the ongoing disclosure of information on the amount of power generated.

In fiscal 2012, we generated 262,890 kWh of electricity. This translates into a reduction of approximately 97.3 tons of CO<sub>2</sub>, equivalent to the amount of CO<sub>2</sub> absorbed by 6,953 Japanese cedar trees in one year.

The introduction of solar power generation—not only in Japan but also at data centers in Singapore and Malaysia in April 2012 and at the Hong Kong Financial Data Center in April 2013—is being used for such purposes as the lighting in common areas of the buildings.

Click here for details regarding solar power generation.

#### CSR Report 2013(Online Version)



Solar panels installed at Tokyo No. 5 Data Center



Solar panels installed on the rooftop of the Data Center building in Malaysia

# Installing LED Lights at Data Centers

The NTT Communications Group installed LED lights in some of its data centers in addition to its office buildings. LED lights offer the benefits of reduced electricity usage and lower maintenance costs due to their longer service life. They also help reduce the electricity required for air conditioning because they operate at a cooler temperature. We plan to actively promote installation of LED lights in our data centers and office buildings in order to help alleviate global warming.



# Planting Rooftop Gardens and Green Walls

#### **Planting Rooftop Gardens**

We are using rooftop gardens<sup>\*1</sup> on our data centers and other facilities to reduce the heat island effect<sup>\*2</sup> as part of our green ICT efforts. These gardens also shield buildings from heat and reduce the power consumption of air-conditioning systems. Another benefit is that they clean the air by absorbing CO<sub>2</sub> and discharging oxygen, as well as improving living environments and beautifying views. NTT Communications has expanded this rooftop garden initiative outside Japan to data centers in Singapore and Malaysia. Through these means, the Company is reducing electricity consumption at its buildings.

\*1 Rooftop gardens Cultivating such gardens is one way of improving living environments. Evapotranspiration from plants lowers ambient temperatures and blocks heat, helping to cut a building's energy consumption.

\*2 Heat island effect This is a phenomenon where summer temperatures in urban areas rise several degrees above surrounding areas because of heat from asphalt surfaces, buildings, air conditioners, and car exhausts. The term stems from the way that cities appear as islands of heat in thermal images compared with surrounding rural areas.



Rooftop garden on an office building in the Kansai area



Rooftop gardening of the Singapore data center



Rooftop gardening of the Malaysia data center

#### Green walls

NTT Communications began installing green walls on telecommunications buildings in Tokyo. Like rooftop gardens, green walls help reduce the heat island effect and prevent overall temperature rise in building by shielding them from the sun. They also reduce the power consumption of air-conditioning systems and beautify the view. The Tokyo No.5 Data Center, which began service in April 2011, has green walls on its east and south faces from ground level to about 15m in height.

By implementing various greening measures according to the structures and uses of individual buildings, we plan to help prevent global warming and promote harmonious coexistence with the natural world through our business activities.



Green walls



Building with green walls

#### Introducing the NTT Group Energy Conservation Performance Guidelines

As part of our initiatives to prevent global warming, the eight companies of the NTT Group, including NTT Communications, established the NTT Group Energy Conservation Performance Guidelines and began implementing the necessary actions in April 2010.

These Guidelines established by the NTT Group are modeled after the ICT Ecology Guidelines created by the ICT Ecology Guideline Council, and spell out our basic philosophy regarding the development and procurement of the ICT devices, such as routers and servers, used by the NTT Group.

We are developing and procuring equipment ICT equipment designed to conserve energy as well as for functionality, performance and cost-efficiency.

Steps were taken to establish the NTT Group Energy Conservation Performance Guidelines Version 4 to coincide with the announcement of the ICT Ecology Guidelines in April 2013.

In fiscal 2012, we purchased approximately 1,490 servers with the highest energy conservation performance (five stars). We will continue to expand the scope of energy-saving equipment that we use and ensure that these guidelines are adopted by each company within the NTT Communications Group.

#### Measures to Save Energy at Data Centers

#### Initiatives to Conserve Electricity at the Hong Kong Financial Data Center

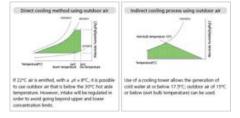
#### Our Data Centers in the United Kingdom also Feature Excellent Energy Conservation Performance

As companies accelerate their development of overseas markets, the need for global ICT services has been rising. To support the overseas operations of its customers, NTT Communications operates data centers around the world that are tightly integrated with its telecommunications network. We have focused on restraining increases in the energy used at our continuously growing data centers as we keep up with a constantly rising tide of data processing volume.

In Europe, we acquired Gyron in the United Kingdom in June 2012 and began offering services with a core focus on the cloud-based services business. We have been implementing measures to conserve energy at Gyron's data centers by installing advanced environmental technologies.

One of these environmental technologies is indirect outdoor air cooling, which takes advantage of crisp outdoor air during the winter. The system takes cold outdoor air and channels it inside through the air-conditioning system to offset the heat generated by servers and networking equipment. The facility boasts both world-class energy conservation performance and high reliability. Another environmental measure is the utilization of a method that supplies cool air from walls using air flow optimization control technology. Compared with the traditional way of supplying cool air from the floor, there are fewer variances in temperatures for more efficient cooling.

NTT Communications will continue to advance energy conservation at its constantly expanding data centers by increasing the use of natural energy resources and installing highly efficient energy systems.



Indirect outdoor air cooling



Air-conditioning system that blows cool air from walls

#### Initiatives to Save Energy at Other Global Data Centers

In India, Netmagic's Chennai Data Center features a renewable energy system based on wind power that generates 4MWh annually. NTT Communications has been surveying other data centers to assess the feasibility of using renewable energy. At the Chennai Data Center, server rooms and other facilities are efficiently cooled by separating hot aisles and cold aisles.

#### Launch of Operations at Tokyo No. 6 Data Center with Cutting-Edge Green Performance

On April 23, 2013, NTT Communications began offering services at its Tokyo No. 6 Data Center after recently completing its construction. One of the largest of its kind in Tokyo, the data center is a cutting-edge facility with advanced anti-seismic measures, environmental performance, convenience, reliability and expandability. In terms of environmental performance, the data center has the highest level of

green performance in Japan thanks to its highly efficient electric power and air-conditioning systems.

The data center features highly energy efficient water-cooled air-conditioning systems and a rotary uninterruptable power supply (UPS) that has little electricity loss and forgoes the use of batteries, which contain harmful substances. The facility takes advantage of natural energy resources with air-conditioning systems that use cool outdoor air and collect rainwater on the roof for later use as cooling water. Thanks to airflow management in server rooms that separates cold air from the hot air expelled by equipment, the Tokyo No. 6 Data Center has achieved a power usage effectiveness (PUE) score of 1.2, the highest level for a data center in Japan.

Regarding anti-seismic measures, the building was constructed on solid bedrock, eliminating concerns of liquefaction, and the server building has seismic absorbers that can reduce seismic shock by as much as 80%, making it extremely resilient to earthquake tremors. NTT Communications offers services via data centers at more than 140 locations around the world. NTT Communications created a new brand, Nexcenter™, for its global data center services to coincide with the opening of the Tokyo No. 6 Data Center. We will make every effort to further improve the level of services, enhance quality and improve green performance.

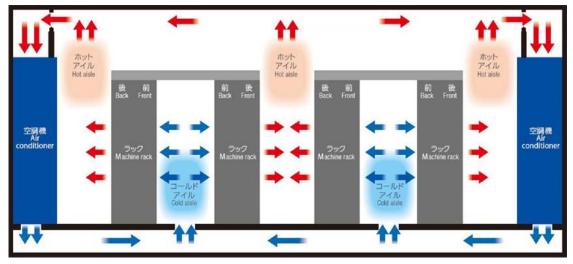
\* Nexcenter<sup>TM</sup> derives its name from two words, Next and Center, to symbolize the continued provision of data center services that are one step ahead. Patent pending.



Rotary UPS



Outdoor air-conditioning equipment: modular chillers on the roof



Airflow management

#### **Office Initiatives**

#### Office Building Initiatives

NTT Communications established the Office Environmental Working Group for evaluating and implementing all environmental protection measures related to offices, and created a policy that allows each business operation to undertake autonomous office-related environmental initiatives. These initiatives are not limited to locations in Japan, but are also being actively carried out at our overseas subsidiaries, tailored to the individual circumstances of each country.

In Japan, we have been operating the Office Database Visualization Website, which tallies and visualizes environmental impact data related to electricity, paper, and waste for each organizational unit, on our Company's intranet since August 2009. The employees responsible for promoting office-related environmental measures in each organization analyzed the data posted on this website in detail and carried out autonomous PDCA



Office database visualization website

cycles taking into account business content and characteristics, in an effort to reduce electricity and paper usage. In fiscal 2012, tight electrical power supply and demand conditions loosened in Japan, as they did in 2011. Nevertheless, NTT Communications continued measures to conserve electricity, such as setting PCs to conserve energy, turning off unneeded lighting, using electric vehicles, and lowering air-conditioning thermostats, in order to reduce electricity consumption in Japan. In office areas, we utilize RenaCast Spot Media, a streaming information bulletin board, to help employees improve their environmental awareness on a daily basis, for example, by highlighting best practices, promoting trash sorting, and encouraging employees to turn off lights when not in use and to use double-sided or consolidated printing. Furthermore, an Environmental Email Newsletter, sent to all employees by the Environmental Protection Promotion Office every month, includes monthly trends in environmental data, features the initiatives being taken by various organizations, and helps employees improve their skill levels, for example, by providing advice to those employees hoping to obtain "eco certification."

#### Electricity-Saving Measures in the Office

The NTT Communications Group aims to save as much electricity as possible at its office, since it will be difficult to reduce electricity usage significantly at data centers and telecom buildings, which are required to operate stably.

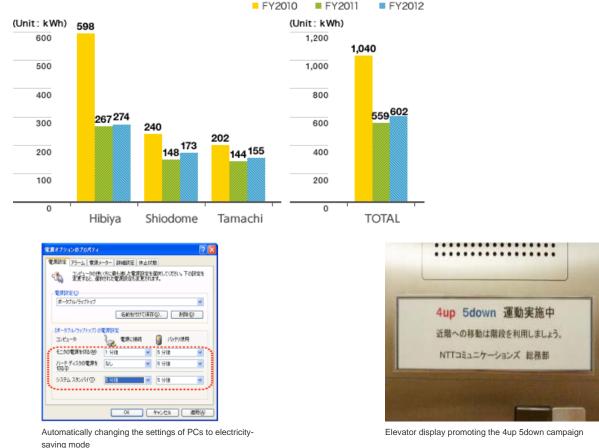
During the summer months, the Group targeted a reduction in electricity consumption of 30% from the fiscal 2010 level. Over the period in question, the Group accordingly undertook a variety of measures. For example, every effort was made to reduce the use of air conditioning, cut back the number of lamps and lights employed, and curtail elevator operating rates. In this manner, the NTT Communications Group adhered strictly to a policy of electricity consumption reduction through its office automation and other equipment. Thanks largely to these endeavors, the Group achieved a reduction in electricity consumption measured in kWh of approximately 42% at its three principal Hibiya, Shiodome, and Tamachi buildings.

The NTT Communications Group also implemented measures undertaken during the summer over the period during the winter from December 1, 2012 to March 31, 2013 in a manner that did not overly impact its business operations.

At Group companies overseas, we made sure to turn off power for lighting, PCs and air conditioners after work or when they were not needed. In China in particular, we focused on setting PCs to energy conservation modes and setting displays to sleep after a few minutes of inactivity. In Vietnam, we installed low-reflective glass windows in buildings. In Malaysia, we switched to LED lighting in office buildings. In China, Hong Kong, Singapore and Malaysia, we adjusted the thermostat of air-conditioning systems at offices to conserve more electricity.

In China and Taiwan, we set the objective of reducing electricity use by 5% year on year, taking a proactive and progressive approach to saving energy.

# Year-on-year comparison of electricity consumption at the Group's three principal office buildings



### Actively Promoting Work-Style Reform

In response to the measures to save power in the summer, the NTT Communications Group actively made changes to work patterns with a view to reducing the power consumed by air conditioning, which is said to account for around 50% of an office building's power consumption. These changes included the implementation of daylight saving time, which brought forward the start of business during a certain period, the taking of a unified company summer vacation, and Biz Desktop Pro, through which working from home to coincide with air-conditioning stoppages was introduced. These moves realized power-saving measures that showed consideration for minimizing air-conditioning use, such as operations shutting down from 5 p.m. onward on weekdays, holidays and during the Bon holiday period (August 11-19) as well as partial limitations on individual air-conditioning.

# Promoting Use of the Company's Internal Cloud

In addition to internal systems for conducting operations in the same manner with other companies, NTT Communications possesses a number of internal systems to provide customers with OCN and VPN services. Since fiscal 2009, we have been migrating and integrating internal ICT infrastructure into a private cloud using server virtualization with a view to reducing the costs of these internal systems, lessening environmental impact by reducing power consumption, and forming a more robust business continuity plan (BCP). In fiscal 2012, we migrated 191 internal systems onto the internal ICT infrastructure, a move that reduced the number of servers that accommodate the migrated system by around 50%. Looking ahead, we plan to migrate and integrate our internal ICT infrastructure in Japan with that overseas, while working on efforts to reduce environmental impact on a global basis.

#### Reducing Employee Transfers through Remote Access and Thin Client Services

The Mobile Connect Service provided by NTT Communications enables simple and secure connection with in-company systems from a PC or smartphone when the user is away and also allows users to remotely check their company e-mail messages and schedules. Combining this with the Biz Desktop Pro thin client service has ensured security from thin client PCs and tablet computers even when away from the office and enabled the reproduction of a company PC environment.

Providing this environment by supplying around 10,000 units primarily to employees in charge of sales who are often away on business is not only effectively realizing diverse work styles, for example by taking advantage of time gaps between appointments by providing an environment that enables duties to be carried out without having to return to an office. With this service, NTT Communications is aiming to put into practice environmentally friendly work styles in which peoples' movements are reduced.

#### Promoting Cooperation in Efforts to Conserve Electricity Using Thin Client Services

Utilizing its Biz Desktop Pro thin client service that enables access, for example via the Internet, to a cloud-based virtual computer, NTT Communications has promoted systems that have enabled working from home with a view to realizing diverse work styles. During the power saving campaign of July to September 2011, which was associated with the Great East Japan Earthquake and carried out within the jurisdiction of Tokyo Electric Power Company and Tohoku Electric Power Company, Inc., we contributed to reducing the amount of corporate electricity consumption by expanding the use of this service to around 8,000 employees. We continue to implement these activities internally.

#### **Transportation Initiatives**

# Electronic Billing Initiative

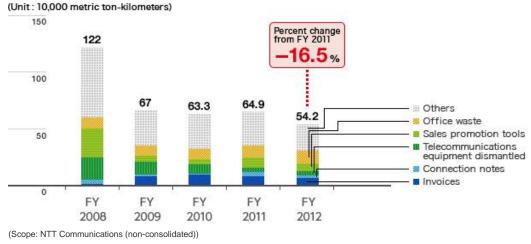
The revised Energy Conservation Law implemented in April 2006 requires that parties providing and seeking transportation services endeavor to save energy. We annually audit transportation volumes for invoices, sales promotion tools, and office waste. We voluntarily seek ways to streamline transportation, such as reducing the number of transportation trips, the volume of items transported and the transportation distance, and otherwise enhance logistics.

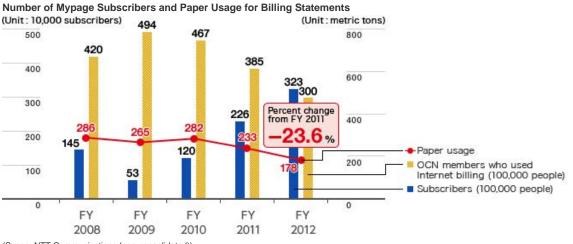
We have cut the use of transportation by promoting the convenience of our online billing information service. In addition, to further reduce transportation, we have made the Internet our standard means of invoicing since October 2008 instead of mailing billing statements (mainly for individual users of OCN Internet services).

Thanks to our continued promotion of Internet-based billing using emails, the volume of paper used for invoices in fiscal 2012 fell to 178 tons from 233 tons in fiscal 2011, a reduction of approximately 24%. We also implemented various measures to improve our transportation efficiency.

Our total transportation decreased 16.5% compared with the previous fiscal year to 542,000 ton-kilometers as a result of transportation efficiency gains, greater use of information technology, and a reassessment of various tools.

Goods Transportation Volume under the Revised Energy Conservation Law





(Scope: NTT Communications (non-consolidated))

# Measures to Introduce Eco-Cars

Companies can contribute to the realization of a low-carbon society and help solve pollution problems by working concertedly to lower the environmental impact of business-use vehicles. As part of our efforts at environmental conservation, we have devised measures to introduce environmentally friendly vehicles. Based on this policy, we are accelerating their deployment across the entire group.

NTT Communications Group Low Emission Vehicle Introduction Policy	
1 Objective	• Introduce low emission vehicles for internal use as a part of efforts to reduce environmental impact
2 Scope	<ul> <li>All vehicles owned and operated by NTT Communications and its Group companies. However, this shall not apply for special-purpose vehicles (power supply and broadcasting vehicles) when low emissions vehicles are not available.</li> </ul>
3 Introduction Standards	<ul> <li>In principle, the introduction of vehicles shall be limited to low emissions vehicles. (fuel efficient, low emission certified vehicles <vehicles 2010="" efficiency="" fuel="" meet="" standards="" that="">)</vehicles></li> <li>Commercial vehicle that offer the lowest possible emissions shall be selected when the introduction of low emission vehicles is problematic</li> </ul>
4 Targets	<ul> <li>All (100%) of the Group's fleet to comprise low emission vehicles* by 2015</li> <li>* Low emission vehicle: 0% or more of the 2010 fuel efficiency standard</li> </ul>
5 Future Initiatives	<ul> <li>Hold eco-drive training sessions</li> <li>Promote "drive doctor" installation Recommend introduction to ensure optimal vehicle operating management, driving safety, the prevention of accidents and contributions to environmental protection</li> </ul>

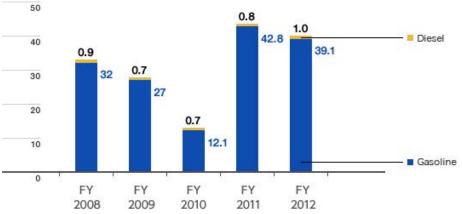
# Company Vehicle Initiatives

We have taken a number of proactive steps in relation to company vehicles, including introducing hybrid vehicles, raising employee awareness of ecologically sound driving practices, and implementing modal shifts to public transportation.

As a result, fiscal 2012 use of gasoline and diesel by company vehicles was 391,000 liters and 10,000 liters, respectively. Compared with fiscal 2011, gasoline use was reduced by about 37,000 liters after a review of the number of company vehicles used for business. Our fleet of eco-cars (low-emission vehicles) expanded by 12.5% after an organizational review was conducted in fiscal 2012, and the ratio of eco-cars in the entire fleet increased by one percentage point to 98% from the previous fiscal year. Aiming to increase this ratio to 100% in fiscal 2015, we will optimally allocate vehicles and continue to upgrade to eco-cars.



(Unit : 10,000 liters)



(The scope of tabulation was fourteen NTT Communications Group companies in fiscal 2010, thirteen Group companies for fiscal 2009, and eleven Group companies for fiscal 2008.)

#### Preventing Air Pollution and Promoting Energy Conservation through Electric Propulsion Ships

The undersea cable-laying ship Subaru is one of the few ships in Japan with an electric propulsion system (i.e. electricity from a generator drives the propulsion motor). The system helps prevent air pollution by reducing NOx and SOx contained in engine exhaust. In operating the ship, we realize energy savings of about 10% per year by efficiently controlling the number of generator-driven engines operating, for example, running three engines when heading to a construction site and running two engines when returning.

In addition, rust and seashells on the hull are eliminated by sandblasting to reduce resistance in the water, and very smooth paint conforming to the International Convention on the Control of Harmful Anti-Fouling Systems on Ships (AFS Treaty) is used to paint the hull after sandblasting, to conserve energy.

We are also conserving energy by introducing LED lighting for ships and reducing their environmental impact by replacing their air-conditioning systems.

#### Implementing the Ship Energy Efficiency Management Plan (SEEMP)

The adoption of SEEMP became a mandatory requirement in July 2011 under the MARPOL international treaty for prevention of marine pollution caused by ships.

As a result, it is now a compulsory requirement for ship operators to adopt the most effective operating methods (which includes reduction of speed, selection of the most appropriate route taking into consideration ocean currents and weather conditions, and proper maintenance) in order to curtail the amount of CO<sub>2</sub> emissions, and to promote improvements in energy efficiency based on a PDCA cycle. NTT Communications formulated a plan by January 2013 and implemented it in all ship operations.

# Reducing Environmental Impact through Our Services

#### Green ICT Initiatives

Green ICT involves aiming to reduce the environmental impact of ICT itself and utilizing ICT effectively to advance environmental impact reductions and environmental protection activities.

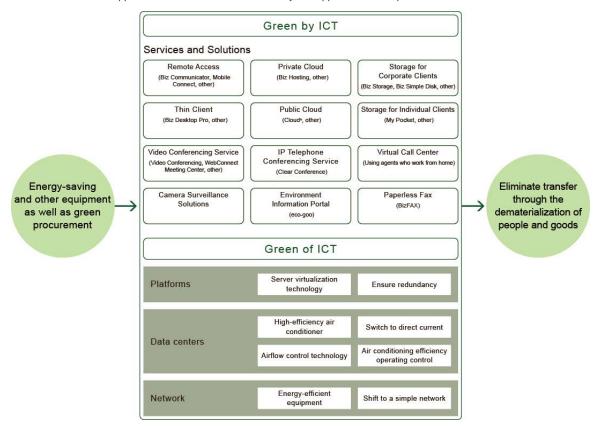
Reducing the environmental impact of ICT itself is referred to as "Green of ICT," which specifically refers to initiatives for reducing negative environmental impact by reducing the power consumption of ICT systems and recycling resources. In contrast, utilizing ICT to reduce environmental impact and increasing positive impact on the environment is referred to as "Green by ICT," and includes measures



Cable-laying Ship Subaru (9,557 tons)

such as improving the efficiency of transportation of people and goods.

NTT Communications applies both Green of ICT and Green by ICT approaches to its pursuit of "Green ICT."



Click here to view an enlarged diagram summarizing Green of ICT and Green by ICT.

Click here for details regarding Green of ICT and Green by ICT.

#### Environmental Solutions Label System

The NTT Group is exploring the idea of an Environmental Solutions Label System for self-certification of environmentally friendly ICT solutions and services. To qualify, ICT solutions and services will have to achieve CO<sub>2</sub> reductions of at least 15%, as assessed through objective evaluation of environmental impact reduction benefits. The entire NTT Group provides these environmentally friendly services in order to help reduce the environmental impact caused by society.

In utilizing this certification system, we at NTT Communications Group have registered five solutions through fiscal 2012. Details of these are described on the NTT BizLink website together with quantitative CO<sub>2</sub> reduction effects.

Click here for details on an Environmental Solutions Label System.

Click here for details on NTT BizLink's ICT solutions services. New window will open.



## Acquiring the eco-ICT Mark

After performing a self-assessment of our CO<sub>2</sub> reduction measures, we submitted an application in accordance with the ICT Ecology Guidelines created by the ICT Ecology Guideline Council<sup>\*1</sup> and acquired the eco-ICT Mark. In February 2010, the council created and published guidelines for appropriate CO<sub>2</sub> reduction measures to be implemented by telecommunications carriers, clearly defining the standards for procuring systems and data center services from the viewpoint of reducing power consumption.

These guidelines have been subsequently revised with a fourth version publicly announced in February 2013. Through participation in these efforts, NTT Communications is striving to reduce the amount of its CO<sub>2</sub> emissions.

\*1 ICT Ecology Guideline Council: The council was established on June 26, 2009, by the following five industry organizations: the Telecommunications Carriers Association, the Telecom Services Association, the Japan Internet Providers Association, the Communications and Information Network Association of Japan, and the ASP-SaaS Industry Consortium (a designated nonprofit organization).

Click here for details on the eco-ICT Mark provided by the Telecommunications Carriers Association.

Click here for details on the self-assessment checklist.



eco-ICT Mark

#### Participating in Smart Industrial Estate Demonstrations Targeting Southeast Asia

Working in collaboration with such companies as Sumitomo Corporation, Mitsubishi Electric Corporation and Fuji Electric Co., Ltd., NTT Communications participated in feasibility studies in a smart community technology demonstration project at an industrial estate on the Indonesian island of Java, a contract business of Japan's New Energy and Industrial Technology Development Organization (NEDO).

As the country shows significant economic growth, the supply and demand of electricity in Indonesia remains tight. The project was implemented as a preliminary study of a technology demonstration project centered on power stabilization systems that will enable the supply of high-quality electricity at industrial parks, where the need is thought to be likely to increase as development and expansion progress.

NTT Communications was engaged in building considerations for the information and communication technology (ICT) systems platform necessary to provide a stable supply



Suryacipta Industrial Estate, the testing ground for feasibility studies

Preventing Environmental Pollution

of high-quality power. The ICT systems platform supports power optimization by stabilizing the power supply - by means of power distribution automation and uninterruptible power supply (UPS) systems - and by cooperation between demand-side management and a factory energy management system (FEMS).

# Participation in Field Tests for Optimizing Electricity Supply and Demand

Since the Great East Japan Earthquake, a movement called demand response has spread in reaction to the deterioration in supply and demand conditions for electrical power. Under demand response, electric power companies contact companies, households and other customers via email and other means when electricity shortages seem likely, and the customers that are contacted voluntarily reduce their electricity use. However, this framework involves people, in other words a "manual" mechanism. To overcome this and streamline control, research is being conducted on automated demand response (ADR) systems, where signals sent from electric power companies can automatically control equipment on the customer side to reduce electricity consumption.

The NTT Group has been proactively engaged in the creation of smart communities that can more effectively use electricity across entire communities. ADR research is a part of this initiative. On July 4, 2013, NTT acquired certification for OpenADR 2.0a Profile, an international standard for using signals to control equipment, and was the first company in Japan to acquire this certification. Since the summer of 2013, NTT Communications has been participating in field tests for the Japanese version of ADR being implemented by Waseda University. In the field tests, an OpenADR-compliant smart community platform developed by NTT is deployed via cloud-based services provided by NTT Communications as an environment for testing and evaluating system interconnectivity. The NTT Group will assist activities that promote ADR in Japan as a way of contributing to the realization of smart communities of the future.

#### Providing Energy Management Services for Multiple Stores

Some statistics\* show that air conditioning accounts for about half of the energy consumption at retail stores and restaurants, making it a target for energy conservation. NTT Communications has developed an energy management service that enables reductions in electricity consumption by automatically controlling the air-conditioning systems of business owners that operate a large number of stores. It began offering this service in February 2013.

The energy management service automatically controls electricity consumption through remote manipulation during peak demand periods in the summer and winter. The service entails installing energy management systems (BEMS) at customer stores, which allows business owners to see electricity usage at each of their stores and gives the headquarters a visualization of usage at all stores in the system. Costs are kept down through the use of existing internet connections and cloud-based apps, and it is easy to start up the service with new customers.

NTT Communications will continue to address issues in the field of the environment and energy by promoting this service.

\* Fiscal 2011 statistics from the Agency of Natural Resources and Energy

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# Promoting a Recycling-Oriented Society

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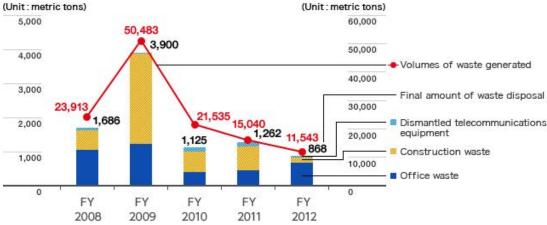
Reporting to Public and Other Authorities

The NTT Communications Group is making a concerted effort to minimize environmental impact by Reducing Waste generated by business and office activities and making improvements in reuse and recycling rates.

#### Waste Reduction and Recycling Initiatives

## Fiscal 2012 Initiatives

The NTT Communications Group is working to reduce the volume of dismantled telecommunications equipment, construction waste and office waste and is promoting reuse and recycling. In fiscal 2012, final disposal of waste from dismantled telecommunications equipment amounted to 43 tons, construction waste 155 tons, and office waste 670 tons. In overall terms, the total volume of final disposal waste decreased 394 tons compared with the previous fiscal year to 868 tons, while the total volume of waste generated decreased 3,497 tons to 11,543 tons.



NTT Communications Group Final Disposal Waste and Total Waste Generation

(The scope of tabulations for office waste and construction waste was fourteen NTT Communications Group companies for fiscal 2010, thirteen Group companies for fiscal 2009, and eleven Group companies for fiscal 2008.)

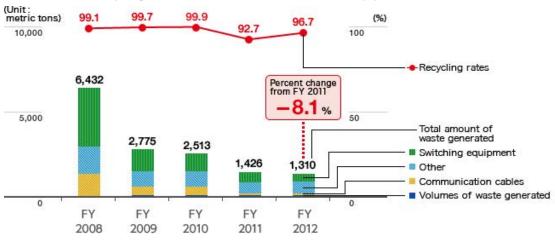
(The scope of tabulations for dismantled telecommunications equipment was fourteen NTT Communications Group companies in fiscal 2010 to fiscal 2011, and NTT Communications on a non-consolidated basis for fiscal 2008 to fiscal 2009.)

## **Recycling of Dismantled Telecommunications Equipment**

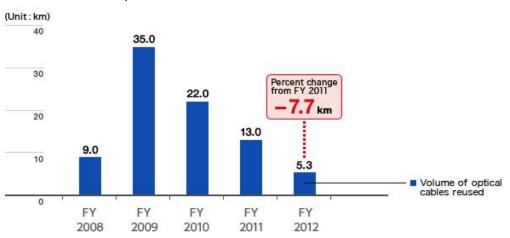
We upgrade telecommunications equipment and cables to provide more reliable, higher-guality services. Wherever possible, we try to reuse telecommunications equipment that is no longer needed in-house and within the NTT Group, and to properly dispose of the remainder in compliance with laws and regulations relating to industrial waste and industrial waste requiring special handling. In fiscal 2012, the volume of dismantled telecommunications equipment across the Group totaled 1,310 tons. The recycling rate for the Group as a whole was 96.7%, up 4 percentage points compared with the previous year. This improvement was largely attributable to a variety of measures that encompassed Group companies as well as industrial waste disposal companies.

We will continue to further efforts in reuse and recycling, and aim to increase the recycling rate for the entire corporate group.

Total Volumes and Recycling Rates of Dismantled Telecommunications Equipment



(Scope of compilation: fourteen NTT Communications Group companies for fiscal 2011, NTT Communications on a non-consolidated basis for fiscal 2008 to fiscal 2010.)



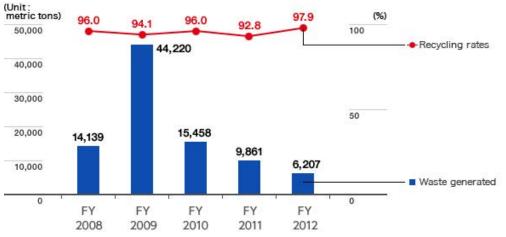
#### Volume of reused fiber-optic cable

(Scope of compilation: fourteen NTT Communications Group companies from fiscal 2010, thirteen NTT Communications Group companies for fiscal 2009, and eleven NTT Communications Group companies for fiscal 2008.)

# Recycling of Construction Waste

In order to continue offering customers highly reliable services, we are rebuilding old facilities and implementing expansion and remodeling to accommodate rising demand. In fiscal 2012, the volume of construction waste generated decreased 3,654 tons compared with the fiscal 2011 level to 6,207 tons. The recycling rate for designated materials such as concrete was 99.8%. The recycling rate for non-designated materials, on the other hand, was 78.2%. In addition, the overall recycling rate improved 5.1 percentage points to 97.9%. We are pushing ahead with ongoing efforts to promote reduction of final disposal waste, reduce the amount of waste taken directly to final disposal sites to zero, and outsource jobs to contractors with high recycling rates.

# Total Generation and Recycling Rates of Construction Waste



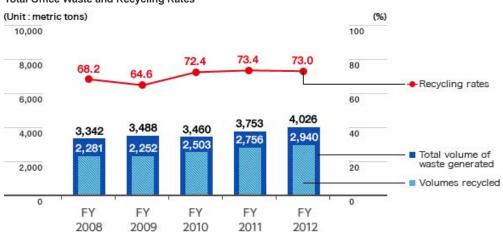
(The scope of tabulations was fourteen NTT Communications Group companies for fiscal 2010, thirteen Group companies for fiscal 2009, and eleven Group companies for fiscal 2008.)

## Recycling of Office Waste

The NTT Communications Group ensures proper disposal, control, and complete sorting of waste in compliance with laws and regulations. In fiscal 2012, the total volume of office waste generated increased by 273 tons from fiscal 2011 to 4,026 tons. The volume recycled was 2,940 tons, and the recycling rate 73.0%. Looking ahead, we will implement a variety of measures focusing mainly on efforts to improve recycling rates at telecommunications buildings and data centers. Among a host of initiatives, we will assess and review disposal flows at principal buildings and centers while ensuring the thoroughgoing sorting of waste. Moreover, in-house departments are making every effort to use and apply discarded assets as well as PCs. In fiscal 2012, for example, positive steps were taken to reuse 2,052 PCs. Moving forward, we will continue to actively promote reuse and application.

We began the thermal recycling of plastics in 2009 and of burnable trash in 2010. We will promote thermal recycling and also explore ways of determining the volume of thermally recycled waste. We will continue to work harder and collaborate with our subcontractors to improve the quality of our recycling system, achieving environmental protection at the same time as we ensure the security of recycled confidential documents.

Meanwhile, Group companies outside Japan are taking steps to ensure that waste is properly sorted in conjunction with the introduction of recycling boxes in buildings. In addition, we are actively recycling printer toner at bases in Hong Kong, Singapore, Thailand, Australia, and Germany.



# Total Office Waste and Recycling Rates

(The scope of tabulations was fourteen NTT Communications Group companies for fiscal 2010, thirteen Group companies for fiscal 2009, and eleven Group companies for fiscal 2008.)

#### Effectively Using the Waste from Cafeterias and Dining Facilities

In addition to giving due consideration to the effective utilization of materials in offices, dealing with waste from cafeterias is taking on added importance. NTT Communications has introduced a raw garbage disposal machine to deal with the waste generated by its employee cafeteria. A system to recycle the waste into organic compost is in operation, with NTT East-Gunma acting as subcontractor. In fiscal 2012, we processed 21.8 tons of kitchen waste. As a result, this was recycled and generated 2.18 tons of compost, which was put to use by farmers in the Kanto region and others.

This initiative is not merely an effective utilization of resources, as it is also important to note the CO<sub>2</sub> reduction effect from disposing of

less waste by incineration. In continuing to promote this initiative we are strengthening environmental considerations in our day-to-day operations and at the same time improving employee awareness.



Organic compost for commercial sale



Harvested vegetables

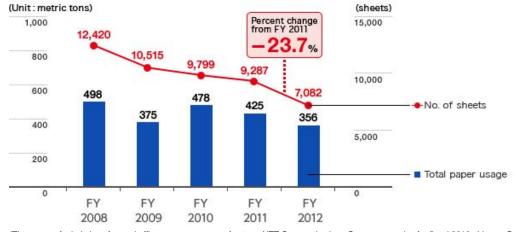
## Initiatives for Reducing Paper Usage

#### Reducing Usage of Paper for Business Purposes

NTT Communications is working to reduce usage of all kinds of paper for business purposes, including office paper and paper for printing customer billing statements. In fiscal 2007, we established a paper usage index per full-time employee in order to reduce office paper usage.

In fiscal 2012, we continued to reduce paper usage through the use of IC card multi-function printers and printing log data. Specifically, data on the number of sheets used, the double-sided printing rate and the consolidated printing rate are automatically collected and analyzed by individual and section, with the results disclosed to all employees on a monthly basis. This helps to further raise awareness. In addition, we have been able to confirm individual monthly usage as well as usage conditions through the daily use of multi-function printers by employees since fiscal 2011. We also continue to encourage digitization of paper documents and the use of projectors in conference rooms. In fiscal 2012, paper consumed per full-time employee (converted to A4-size office paper) was 7,082 sheets. Turning to our operations outside Japan, Group companies also use double-sided printing. In China and Europe employees are taking the initiative to share computer files during meetings in a bid to reduce the amount of paper used. In Taiwan, we are working diligently to reduce the amount of paper consumed as a part of efforts to achieve the established reduction target of 5%.

During fiscal 2013, we will pursue further reduction in paper usage through the application of the latest ICT technology.



Total and Per-Employee Office Paper Usage (Sheets)

(The scope of tabulations for total office paper usage was fourteen NTT Communications Group companies for fiscal 2010, thirteen Group companies for fiscal 2009, eleven Group companies for fiscal 2007.) (The scope of tabulations for office paper usage per full-time employee was fourteen NTT Communications Group companies for fiscal 2011, and NTT Communications (non-consolidated) for previous fiscal years.)

#### Reducing the Amount of Paper Consumption through Tablet Terminals

In fiscal 2011, we undertook such initiatives as maintaining a database of, for example, information and proposals on our tablet computer equipment and services. This enables sales staff to demonstrate and propose our services to customers by means of tablet computers. From a sales aspect, the use of tablet computers enables easily understood, compelling proposals, including the showing to customers of videos showcasing and explaining our services. Having the benefit of not only enabling the creation of effective proposals, but also of

dispensing with the need for proposal printouts and pamphlets outlining our services, it can be expected that tablet computers will have the added effect of reducing our use of paper.

In addition to this kind of business efficiency improvement, we are working to take advantage of ICT so that we can further reduce our environmental impact.

In fiscal 2012, these tablet computers were actively used in meetings and related gatherings. In addition to promoting paperless meetings, successful steps were taken to further advance the reduction of paper consumption. Looking ahead, we will continue to focus our attention on this area while making more efficient use of the latest ICT equipment.

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# Reducing the Amount of Paper Consumption by Adopting a Tablet Meeting System

In order to reduce the amount of paper consumed, Group company NTT BizLink, Inc. has used projectors during business meetings since fiscal 2006. During these meetings, however, certain participants had commented that visual displays were difficult to read depending on the seating arrangements. While every effort was made to keep distribution to a minimum, documents were provided to participants as required. For the most part, the documents distributed are confidential in nature, raising the additional issue of collection at the end of each meeting.



To address these issues, NTT BizLink adopted a tablet meeting system from fiscal 2010. This has eliminated the need to distribute documents. Under this system, important files are stored in PDF

Tablet Meeting System

format on a designated server, which meeting participants can freely access through their tablet terminals. In using tablet terminals, electronic documents can be expanded to enhance readability. In addition to reducing paper consumption, this initiative has eliminated the need to collect documents at the end of each meeting. By increasing the efficiency of meetings, the use of tablet terminals has attracted wide in-house acclaim. Currently, this system is being used for all executive meetings including business and management discussions. By adopting this system, the volume of paper consumed has fallen by approximately 420,000 sheets in fiscal 2012 compared with fiscal 2010.

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Together with the prevention of global warming, the preservation of ecosystems, where living things co-exist in an intricate balance, has recently developed into a major environmental challenge with regard to the creation of a sustainable society. As a member of the NTT Group, NTT Communications has established a set of action guidelines with regard to biodiversity conservation in order to promote activities that take into consideration concerns in this area. While making every effort to avoid affecting ecosystems through business activities such as the construction and dismantling of wireless relay stations within nature reserves, we also engage broadly in awareness activities and dissemination of information through the "eco-goo" portal of Group company NTT Resonant Inc., where a special biodiversity website was set up early on.

#### Putting in Place Policies

# Biodiversity Conservation Action Guidelines

As members of the NTT Group, we are formulating Biodiversity Conservation Action Guidelines and implementing approaches through business and social contribution activities to promote initiatives that take biodiversity conservation into account. Specifically, for some time we have promoted three environmental contributions through ICT - Green of ICT, Green by ICT and Green with Team NTT - and are developing approaches that contribute to biodiversity in each.

There is a growing awareness of global-scale biodiversity conservation issues. In addition to inspection efforts, identifying issues and promoting improvement efforts, we will disclose the status and achievements of those activities across the Group as a whole by such means as our CSR reports.

#### NTT Communications Group Action Guidelines with Regard to Preservation of Biodiversity

# 1. Basic Policy: In compliance with the NTT Group biodiversity "approach concept," established by the NTT Group

• Development Centered on Business Activities

The Group recognizes that all activity is inextricably linked to the planet and to biodiversity, understands that the scope and impact at home and overseas are related depending on the nature of a business, and promotes initiatives that are recognized as having a preservation effect.

Development Centered on Contribution to Society

In partnership with its stakeholders the Group widely promotes initiatives toward the preservation of biodiversity, regardless of their relevance to its business.

#### 2. Action Guidelines

- Implement actions that take into account the preservation of biodiversity in business activities (Green of ICT)
- Contribute to preservation of social biodiversity in business activities (Green by ICT)
- Deepen understanding of biodiversity, promote nature conservation activities together with employees, their families and the planet (Green with Team NTT)



Forest environmental conservation activities conducted by NTTPC Communications (Ome, Tokyo)

#### NTT Communications Group Initiatives Related to Preservation of Biodiversity

Initiative Items	Outlines of Initiatives
	At the time of construction of a wireless relay station, conducting a habitat survey of the area's plants, birds and insects, and implementing a construction plan that does not destroy ecosystems. Removal of wireless relay stations should be carried out in the same way.
	Providing wireless relay station space in an effort to facilitate the observation of wild bird protection
We implement actions that take into account the	Decreasing electric power consumption by making air conditioning more efficient and improving lighting in communications and office buildings as well as through PC energy-saving measures
We implement actions that take into account the preservation of biodiversity in business activities (Green of ICT)	Reducing the impact on ecosystems of product procurement by procuring bestselling devices and green purchasing
	With the prevention of marine pollution as a basic policy, laying submarine cables that protect coral reefs and cleaning the ocean floor before and after laying cable
	Rainwater, recycled water used at data centers in Singapore, Hong Kong and Malaysia for air-cooled chillers and for watering plants. Reducing the amount of electricity used for lighting by efficiently applying natural daylight at data centers and office buildings in Vietnam
We contribute to preservation of social biodiversity in	Including biodiversity special features and disseminating information on the environment from home and overseas in "eco-goo."
business activities (Green by ICT)	Undertaking wildlife damage countermeasures that efficiently employ IT
	Remote monitoring by camera of rice growth status
	Elimination of disposable chopsticks in cafeteria
	River water purification by (dropping) effective microorganism (EM) mud balls into rivers
We deepen understanding of biodiversity and promote	Chichibu terraced rice field regeneration program
nature conservation activities together with employees, their families and the planet (Green with ICT)	Encouragement of personal cup use at vending machines
······	Participation by NTT Taiwan in flora and environmental protection activities organized by the Taiwan Environmental Information Association
	Forest environment conservation and tree planting through Tokyo Greenship Action

# **Considerations during Data Center Construction**

# Recycling Water

As a global ICT company, we promote biodiversity considerations at our data centers. Our newest data centers incorporate cutting-edge innovations with regard to the effective use of water resources, an area in which there has been growing global interest in recent years. The multifaceted approach adopted for the Singapore Serangoon Data Center that commenced operations in 2012 included the following innovations

#### Use of rainwater

• Rainwater is used for watering on-site plants. From a health and safety aspect, care is taken to set up rainwater collection in such a way that oil does not become mixed in with the rainwater.

#### Use of reclaimed and recycled water

- Desalinated seawater and recycled water that has been used once before are used for purposes such as air cooling.
- The automatic sprinklers for the rooftop gardens on the building and car park roofs usually operate with recycled water only.
- The green wall equipment on the ground floor usually operates with recycled water only.
- Greening facilities such as outdoor ponds make extensive use of rainwater.



A water storage tank that has been made to blend in with its surrounding environment by the use of greenery.



Surrounding water tanks with shade mesh protects them from direct sunlight.

# Maintaining Vegetation

From the perspective of building facilities in harmony with the environment, plant life considerations are taking on added importance in facility design. For the Serangoon Data Center attempts were made to take advantage of local vegetation through the efforts set out below.



Data center plantings give consideration to indigenous species

#### Consideration in planting indigenous species

- In green areas, making a point to incorporate a variety of trees that are found locally
- Taking advantage of plants that symbolize the Indonesia-Malaysia region, such as by using Johannesteijsmannia palm species in the underbrush. In association with trees, these act as a device that helps evoke the local forest.

#### Transplantation of roadside trees

- In Singapore, all roadside trees are registered with and managed by the National Environment Agency (NEA).
- When the need arises to cut down trees during the course of facility construction, roadside trees are transplanted within the data center in cooperation with the NEA, and plans made for their effective use.

# Laying of Submarine Cables

#### Ecology in the Ocean

The NTT Communications Group is also actively taking steps to protect the ocean environment when providing global network services. NTT World Engineering Marine Inc. (NTT-WE Marine), which lays and maintains submarine cables, has designated the prevention of ocean pollution as one of its basic policies. When building submarine network infrastructures, we maintain a high level of awareness as a company that is closely involved with the natural marine environment. Our intention is to fully comply with environment-related laws and regulations, including MARPOL 73/78 (a treaty for preventing marine pollution), and to harmoniously coexist with marine life forms and the fishing industries.

#### Designing cable routes to protect coral reefs

When designing routes for laying submarine cables in shallow offshore areas, we take care to select cable routes that avoid coral reefs. Where intersecting with coral is unavoidable, we try to lay the cables in naturally occurring trenches in the ocean floor to disturb the coral as little as possible. We also make sure to cooperate with the Ministry of the Environment and other related agencies and government bodies, as well as local fishing industry associations when we plan and lay cables.



We lay cables on the sand, away from coral reefs



Cables are laid in natural ocean floor trenches

#### Collecting trash from the bottom of the ocean

Before laying or burying submarine cables, we clean the planned ocean seabed route. We collect abandoned fishing nets, rope, and wires during the cleanup operation and remove and properly dispose of them as industrial waste.



Trash collected from the bottom of the ocean

#### Consideration for the marine biotope on cable-laying vessels

Marine organisms that infest the chain lockers of submarine cable-laying vessels have the potential to threaten native ecosystems in other parts of the ocean as vessels navigate from one area to another. As a result, the cable-laying vessel Subaru undertakes thoroughgoing measures to clean its anchor chain locker as part of its efforts to protect ecosystems.

#### Adoption of coating method to suppress adhesion of marine organisms and use of eco-friendly paints

When marine organisms attach themselves to a ship's hull, this not only leads to higher fuel consumption and therefore increased CO<sub>2</sub> emissions but also has as an effect on ecosystems by carrying the organisms to other ocean areas. To prevent this, during maintenance of a ship's paintwork extensive use is made of sandblast painting, the blowing of air under high pressure and the polishing of surfaces before painting.

Although widespread use is made of ship paints that in the past contained tin, much more has become known about tin's effects on ecosystems in recent years. In response, we are thorough in our use of tin-free paints in compliance with the AFS Convention (the International Convention on the Control of Harmful Anti-fouling Systems on Ships) that came into effect in 2008.





After hull sandblast painting



After hull painting

#### Improving Cooling Effects through Heat-Shield Painting

In fiscal 2009, steps were taken to paint the above-deck exposed areas of cabins on a trial basis. Recognizing the benefits of this initiative, steps were taken to apply heat-shield paint to the exposed bridge area in the current fiscal year. In this manner, efforts to protect one-third of all exposed areas and 70% of the bridge structure have been completed. We are endeavoring to reduce environmental load by improving the cooling efficiency of air-conditioning equipment within the vessel.



Prior to heat-shield painting



After heat-shield painting

#### **Considerations during Wireless Station Construction and Dismantling**

#### Caring for Nature Reserves

As of March 31, 2013, ten of our 123 wireless stations for telecommunications and broadcasting networks were in national parks. The NTT Communications Group carefully considers biodiversity requirements in building micro-roads recognizing that we need to patrol and maintain these facilities, while adhering strictly to the law and our own environmental assessment methods. In undertaking assessments, we establish specific areas of concern and align construction processes accordingly. We adopt a multifaceted approach toward avoiding and minimizing any impact on the ecosystem.

In addition, we strive to restore the environment to its original state prior to construction when dismantling wireless stations. We consult with local residents and use local soil in our restoration activities rather than bringing in soil from other regions.



Wireless station

#### Operations based on Guidelines

We produce wireless station construction plans after surveying the distributions of plant, bird, and insect life and other habitat distribution factors to prevent damage to the biotope. If we identify animals or plants on the World Conservation Union's Red List of endangered species, we contact third-party government bodies and nonprofit organizations to ensure that our construction plans do not affect biodiversity.

When surveying, planning, designing, and working on station sites and roads, we will continue to adhere to our guidelines at each step of our operations to safeguard nesting areas, animal paths, and vegetation.

# TOPICS

#### Providing Locations to Observe Migratory Birds at Amami-Oshima

In September 2012, the Amami Ornithologists' Club, a local non-profit organization, held a meeting within NTT Communications' wireless relay station located in Amami City, Kagoshima Prefecture, to observe the migratory patterns of the Chinese sparrow hawk (accipiter soloensis), a species of hawk. As an important communication infrastructure, access to the wireless relay station is prohibited. However, recognizing its ideal location, the Company approved the request for its use as a point of observation subject to the oversight of employees. The small Chinese sparrow hawk is widely found in the Korean Peninsula and mainland China. Towards winter, this species migrates to Southeast Asia, passing through the Kyushu area in the autumn. The Amami Ornithologists' Club held three meetings to observe this migratory pattern and on one occasion observed a flock of over 2,000. Positioned at the pinnacle of the food chain, the hawk is recognized as a key element in the ecosystem as a whole. As a result, any change in migration numbers is an important indicator in evaluating the status of the ecosystem. Looking ahead, we will continue to support a variety of activities that are designed to preserve the ecosystem.

#### Contributing to Ecosystem Conservation using ICT

#### "Mimawari Rakutaro" — Wildlife Observation and Alarm Device

The damage to agriculture caused by wild boars and deer is becoming an issue of increasing concern across Japan's farming and mountain communities. Against this backdrop, along with a variety of associated issues including changes in the ecosystem and mountain forests as well as the aging of the farming population, the setting of traps is being used as one countermeasure to minimize the damage caused by wildlife.

NTT PC Communications Inc., an NTT Communications Group company, has developed "Mimawari Rakutaro" as one part of its "field cloud service." This is a wildlife observation and alarm device which utilizes an outdoor sensor that transmits data. In this manner, the company is contributing to countermeasures aimed at minimizing the



Mimawari Rakutaro

damage caused by wildlife. This device employs the communication services of NTT Docomo to automatically transmit a message to a

designated mobile phone or PC when a trap door closes.

To date, the ability to capture wildlife relied entirely on labor-intensive patrols and surveillance. The use of "Mimawari Rakutaro" significantly reduces the burden of patrols and helps to realize a prompt response, which in turn facilitates the use of captured wildlife as meat. "Mimawari Rakutaro" also comes equipped with a camera. The transmission of images further ensures an immediate response when humans enter a trap by mistake. Since its commercial release in July 2011, 150 units of "Mimawari Rakutaro" have been adopted by fifteen municipalities across Japan.

Moreover, NTT PC Communications is working to promote a culture that recognizes wildlife as part of a staple diet. The company is also helping to manage the Japan Gibier Association and advance a variety of activities in a bid to secure the growth and development of a regional society.

Moving forward, we will contribute to the preservation of an abundant natural environment by engaging in a wide range of activities.

#### Awareness Activities through the Provision of Information

#### Special Feature on Biodiversity on the "eco-goo" Portal

NTT Resonant Inc. took the lead in setting up a special biodiversity site on its Japanese "eco-goo" portal in January 2008. The site uses a test and other features to convey information about biodiversity in a straightforward manner.

Coinciding with the International Year of Biodiversity in 2010, steps were taken to join the Japan Business Initiative for Biodiversity (JBIB) in April 2009. In addition to its collaboration with the NTT Group as a matter of course, every effort is being made to coordinate with a broad spectrum of companies. Furthermore, the Japan Committee for the United Nations Decade on Biodiversity (UNDB-J) set up a corner in collaboration with the biodiversity bookcase, which strives to promote increased understanding and awareness of biodiversity. At the same time, energies are being channeled toward upgrading and expanding information and undertaking educational activities that focus on biodiversity conservation.

Click here for details regarding the special feature on biodiversity. (Japanese only) 🗗

Click here for details regarding the 12th Environment goo Awards. (Japanese only) 🗗



Special feature on biodiversity on the "eco goo" portal

#### goo Green Label

The goo Green Label portal donates a portion of the profits generated through use of the site to organizations engaged in environmental protection and social activities. All users can participate in this initiative simply by changing over to "goo Green Label," the top design version of the "goo" web portal, and using the search engine in the same way as they did before.

Currently, sixty NTT Group companies and 28 other companies have signed up for the "Corporate Partner Program," which enlists corporations that will promote "goo Green Label" usage internally.

Since its inception in August 2007, donations totaling 48,500,000 yen have been made to 84 organization, the majority of which are NPOs engaged in global environmental protection activities.

In fiscal 2012, we contributed a total of 5,500,000 yen to the National Land Afforestation Organization, a public utility association, which undertakes tree-planting activities as part of revival efforts following the Great East Japan Earthquake.

Moreover, we participated in "eco-products," Japan's largest environmental exhibition. In addition to our online activities, we are therefore working to create a communication format with users through events.

Click here for details on "goo Green Label" (Japanese only) 🗗



"goo Green Label" site

# Green OCN

Based on the concept of "Environmentally Friendly Web Services" provided via OCN, NTT Communications started its "Green OCN Search Engine" in June 2010 as a service contributing to environmental protection activities. In the same manner as "goo Green Label," the plan called for a "Green OCN Search Engine" to donate a portion of the revenues earned from sponsor ads shown on OCN search result screens to environmental protection groups tackling environmental problems.

Currently, operations are being undertaken in conjunction with goo Green Label managed by NTT Resonant. Since its inception in 2007, the cumulative total of donations made on thirteen occasions is 48,500,000 yen.

Click here for details on "OCN Green Version" (Japanese only)



- Basic Philosophy and Environmental Management
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   Creating a Low-Carbon Society

   Biodiversity Conservation
   Preven
  - Preventing Environmental Pollution

Promoting a Recycling-Oriented Society
 Reporting to Public and Other Authorities

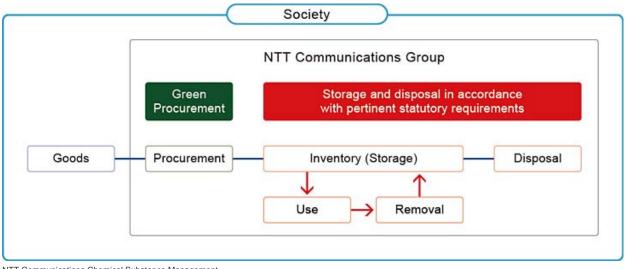
# CSR Report 2013 **Preventing Environmental Pollution**

- Basic Philosophy and Environmental Management Creating a Low-Carbon Society
- Promoting a Recycling-Oriented Society
- Biodiversity Conservation
- Reporting to Public and Other Authorities

Preventing Environmental Pollution

The NTT Communications Group is taking various steps to avoid a broad range of environmental risks stemming from business activities, such as environmental pollution and hazardous substance leaks. Measures include the formulation of guidelines covering the introduction of low-emission vehicles, improvements to facilities and methods of operation, bolstering of management, and education and training.

With regard to chemical substance management systems, in which society has shown a growing interest, the Company has implemented proper management in maintenance departments over the course of its history - based, for example, on the Waste Disposal and Public Cleansing Act, the Law Concerning Special Measures Against PCB Waste and the Electricity Business Act - including assigning vice presidents as managers. While conducting storage inspections on a regular basis, we are thoroughly overhauling the system to implement rapid checks in the event of an earthquake or disaster. During training sessions on environmental laws, we always keep abreast of the content of law revisions, share information among all Environmental Working Groups and plan optimization of our operations in a timely manner.



NTT Communications Chemical Substance Management

#### Handling of Environmentally Hazardous Substances

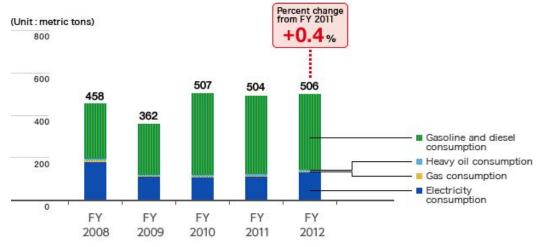
#### Air Pollution Countermeasures

Our business activities emit NOx and SOx, which cause air pollution. Approximately 70% of the NOx emissions are attributable to the use of gasoline and diesel in our operational vehicles, with the remaining 30% are emitted during the generation of electric power in communications buildings and other facilities.

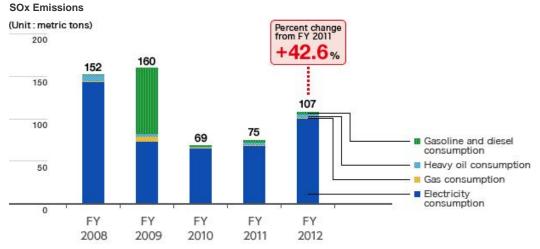
Most SOx (around 93%) is emitted during generation of the electricity we use. In fiscal 2012, we increased our NOx emissions due to higher levels of electric power consumed compared with the fiscal 2011 level by 3 tons to 506 tons, while increasing SOx emissions, again due to higher electric power consumption, compared with the fiscal 2011 level by 32 tons to 107 tons.

We will continue to take action to mitigate global warming and prevent air pollution, for example, by promoting environmentally conscious driving techniques and reduction of electricity usage.

# NOx Emissions



(The scope of compilation: fourteen NTT Communications Group companies from fiscal 2010, thirteen Group companies in fiscal 2009, eleven Group companies in fiscal 2008.)



(The scope of compilation: fourteen NTT Communications Group companies from fiscal 2010, thirteen Group companies in fiscal 2009, eleven Group companies in fiscal 2008.)

# Ozone-Depleting Substance Countermeasures

We dispose of ozone-depleting substances in an appropriate manner. The volume of specified halons used in our fire extinguishing equipment in fiscal 2012 was approximately 143 tons, roughly the same as in fiscal 2011. Meanwhile, the volume of specified halons (the amount of fluorocarbons (CFCs)) used in our air-conditioning equipment in fiscal 2012 was around one ton, essentially unchanged from fiscal 2011.

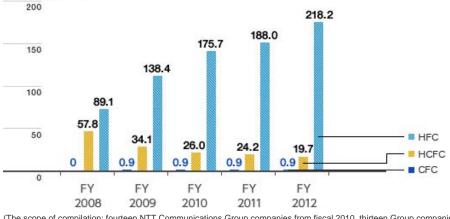
(Unit : metric tons) 150 143 143 143 143 143 140 0 FY FY FY FY FY 2008 2009 2010 2011 2012

Volume of Specified Halons Used in Fire-Extinguishing Equipment

(The scope of compilation: fourteen NTT Communications Group companies from fiscal 2010, thirteen Group companies in fiscal 2009, eleven Group companies in fiscal 2008.)

Volume of Specified CFCs Used in Air-Conditioning Systems

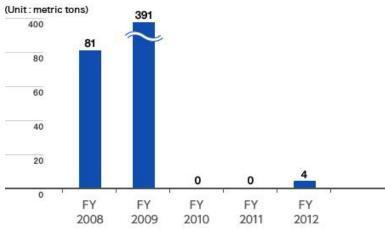




(The scope of compilation: fourteen NTT Communications Group companies from fiscal 2010, thirteen Group companies in fiscal 2009, eleven Group companies in fiscal 2008.)

#### Asbestos Countermeasures

Asbestos countermeasures for buildings and offices involved implementation of airborne asbestos surveys of buildings for which asbestos had been spray-applied to confirm that levels did not exceed statutory limits, which were revised in September 2006. Since no buildings were demolished in fiscal 2011, no asbestos emissions were detected. In fiscal 2012, asbestos emissions totaled 4.4 tons owing mainly to the demolition of buildings. We are going to continue systematic implementation of appropriate measures such as removal, containment or enclosure of asbestos in buildings where it is present in line with manuals issued by the Japan Construction Occupational Safety and Health Association and individual local authorities.



Asbestos Emissions

(The scope of compilation: fourteen NTT Communications Group companies from fiscal 2010, thirteen Group companies in fiscal 2009, eleven Group companies in fiscal 2008.)

#### Storage and Management of PCBs

The NTT Communications Group appropriately manages devices that contain PCBs (polychlorinated biphenyl). Such devices were used in the past as insulators for electrical facilities. As a policy for PCB storage, we have established a set of guidelines prescribing early detoxification treatment as well as methods for ascertaining conditions and management when use of equipment containing PCBs is to be continued.

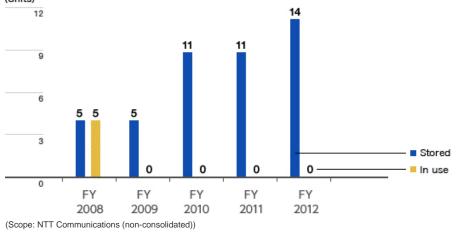
NTT Communications was confirmed to be in possession of 4,189 systems containing PCBs in fiscal 2012, around the same level as in fiscal 2011, and will continue to carry out thorough management of items stored and in use while working toward formulation of a medium- and long-term plan targeting proper PCB processing.



Number of transformers in our possession

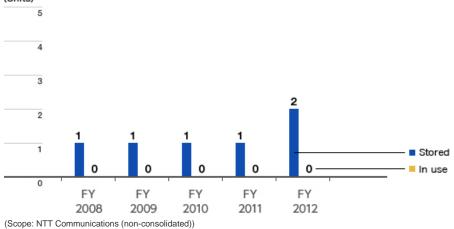
# Number of Transformers in Our Possession (Units)

PCB containing devices in storage

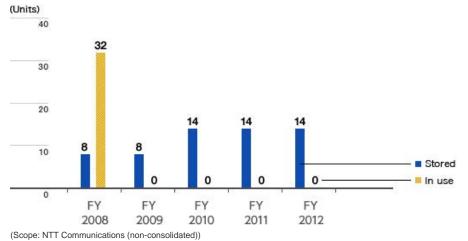


Number of High-Voltage Capacitors in Our Possession

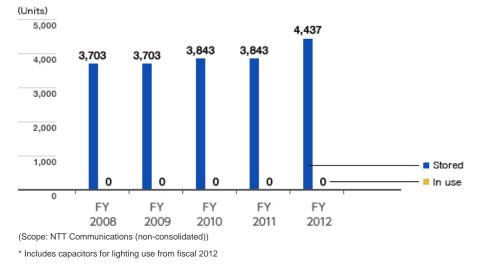
(Units)







#### Number of Ballasts in Our Possession



#### Strengthening Storage and Management in the Anticipation of Emergency Situations

Against a backdrop of natural disasters that are occurring frequently on a global scale, in recent years society has shown a growing interest in the management systems needed for environmental pollutants in times of emergency. Owning and operating IT infrastructure throughout the world, we have been thorough in establishing storage and management systems with "events" in mind for some time. In the management of pollutants and PCBs in particular, we have implemented measures that recognize such factors as earthquakes, fires, flood controls, lightning protection, puncture resistance, ventilation and security. By carrying out periodic inspections, we are constantly confirming that such substances are properly managed. With regard to such events as major earthquakes and disasters, we have built a rapid verification system designed not only to prevent damage when a disaster first strikes but also from the perspective of preventing secondary disasters. We exercise great care in conducting uninterrupted operations in safety and security.

Basic Philosophy and Environmental Management

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Preventing Environmental Pollution

Reporting to Public and Other Authorities

Preventing Environmental Pollution

# CSR Report 2013 Reporting to Public and Other Authorities

- Basic Philosophy and Environmental Management
  Creating a Low-Carbon Society
- Promoting a Recycling-Oriented Society Biodiversity Conservation
- Reporting to Public and Other Authorities

## Fiscal 2012 Global Warming Countermeasure Plan/Report

## The Law Concerning the Rational Use of Energy

- NTT Communications Regular Reports 🗗 [PDF: 1,05MB]
- NTT Communications Medium- to Long-term Reports 🗗 [PDF: 215KB]

# Tokyo Metropolis

- NTT Communications Site 0924 [PDF: 770KB]
- NTT Communications Site 0925 [PDF: 784KB]
- NTT Communications Site 0926 PDF: 731KB
- NTT Communications Site 0927 🗗 [PDF: 739KB]
- NTT Communications Site 0928 🗗 [PDF: 723KB]
- NTT Communications Site 1327 PDF: 715KB
- NTT Communications Site 0564 [PDF: 782KB]

#### Kanagawa Prefecture

NTT Communications Kanagawa Building 🗗 [PDF: 319KB]

#### Yokohama City

NTT Communications Yokohama Building 🗗 [PDF: 1.07MB]

#### Saitama Prefecture

NTT Communications Saitama Building 🗗 [PDF: 812KB]

Gunma Prefecture

NTT Communications Gunma 🗗 [PDF: 140KB]

#### Nagoya City

NTT Communications Nagoya A Building PDF: 566KB

Shizuoka Prefecture

NTT Communications Shizuoka A Building F [PDF: 117KB]

# Kyoto City

NTT Communications Kyoto 🕂 [PDF: 335KB]

# Osaka Prefecture

NTT Communications Osaka Building 🕂 [PDF: 238KB]

# Hyogo Prefecture

NTT Communications Hyogo Building 🗗 [PDF: 342KB]

# Okayama Prefecture

NTT Communications Okayama Building 🗗 [PDF: 1.02MB]

Hiroshima City

NTT Communications Hiroshima Building 👉 [PDF: 513KB]

# Miyazaki Prefecture

NTT Communications Miyazaki Building 🗗 [PDF: 105KB]

# Kagoshima City

- NTT Communications Kagoshima Building 🗗 [PDF: 86.5KB]
  - Basic Philosophy and Environmental Management Creating a Low-Carbon Society
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    Biodiversity Conservation
    Preventing Environmental Pollution
  - Reporting to Public and Other Authorities

# CSR Report 2013 Respecting Our Employees

The NTT Communications Group respects employee diversity and provides workplaces that champion self-fulfillment based on our Basic CSR Policy. We maintain high ethical standards in meeting our social responsibilities as a telecommunications professional that offers services around the world.



#### Human-Resource Development and Evaluation

- Human-Resource Development Policy
- Training Systems
- Developing Professional Human Resources
- Internal Job Posting System
- Personnel Evaluation

#### A Workplace for Everyone

- Diversity Office Initiatives
- · Global Human Resource Management (GHRM) Initiatives
- Recruiting Global Human Resources
- Ensuring that Diversity is Well Accepted and Entrenched throughout the Group
- Providing Career Development Support for Diverse Human Resources
- Promoting Work-Style Reform
- Retaining Employees Who Reach Retirement Age
- Incorporating Employee Feedback
- Dream Idea Contest

#### Maintaining and Improving Employee Health

- Work-Life Committee
- Occupational Safety and Mental Healthcare
- Cafeteria Plan
- Supporting Volunteer Activities

# CSR Report 2013 Human-Resources Development and Evaluation

Human-Resources Development and Evaluation
 Maintaining and Improving Employee Health

A Workplace for Everyone

We are developing a personnel system in which each individual can exhibit his or her personality and capabilities to the fullest,

and we support the development of capabilities that enable employees to achieve self-fulfillment.

#### Human-Resource Development and Personnel Evaluation

#### Human-Resource Development Policy

We are implementing various measures based on our Human Resource Management (HRM) policy, which was unveiled in April 2006. With an emphasis on execution and teamwork (overall optimization), the policy aims to make NTT Communications a company where employees themselves demonstrate on-site capabilities while playing an active role in business operations.

We aim for continuous improvement through a human-resource development cycle. The cycle begins by defining ideal employees and desired skills. We then assess individual skills, and identify gaps between an individual's current skill level and that of an ideal employee. Finally, we consider how to effectively assign job duties and develop a training plan to close the skill gap.

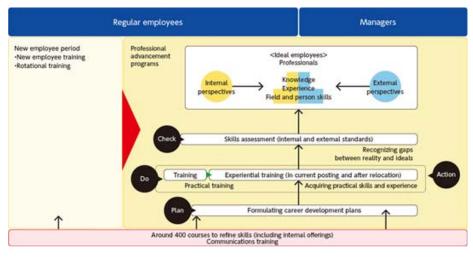
The implementation rate for our Professional Human Resource Development Program, a main pillar of our Group's human-resource development policy, reached virtually 100% in fiscal 2010 and has become established as a system in the Group, including our overseas operations. We believe that we have gained a significant level of results in raising employee skills and elevating them to higher ranks. In the future we will continue to promote human-resource development efforts based on the HRM policy, aiming to bolster corporate competitiveness through accelerated globalization. While continuing with our thinking that practical on-site experience is most effective, we will work on human-resource development that in particular helps strengthen specialist expertise, as we endeavor to realize our Vision 2015.

# Training Systems

younger generation.

We are improving employee skills and encouraging career development through an array of training programs. We provide rotational training for new employees, mainly in business units that deal directly with customers. The goal here is to cultivate customer-oriented mindsets and encourage these employees to gain objective perspectives on individual operations. After they are assigned to certain areas of work, employees move to the professional human-resource development program, where they discuss their career development plans (CDPs) with supervisors and choose training courses accordingly. All employees are directed toward professional human-resource development and are encouraged to grow through real on-site experience based on employee CDPs. We strive to develop more practical and appropriate training content, while creating systematic training menus, partly based on employee survey results. Looking ahead, we will continue advancing to a more practical training lineup that will lead to professional human-resource development, and bolster in-house training where employees themselves will act as instructors to pass on knowledge and experience directly to the

#### Overview of Training Programs

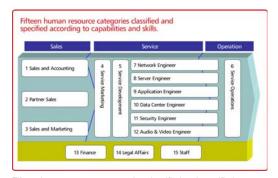


Click here for an enlarged view of our diagram of training system 🗗

## **Developing Professional Human Resources**

In general terms, operating environments are experiencing significant change due to such wide-ranging factors as the growing diversity, sophistication, and complexity of customer needs as well as the increased pace of transition to new business and consumption models and globalization. At the same time, we are witnessing a hollowing out of skills and a fragmentation of organizations.

Based on our concept of professional human resources, we have classified personnel into fifteen categories. Within each category we have identified the necessary practical knowledge and skills, underpinned by appropriate experience, for human resources to prevail, as well as the on-site capabilities and human skills required of all personnel. With this as a starting point, we are establishing essential skill criteria on an individual human-resource category basis, taking into consideration both in-house and external perspectives.



Fifteen human resource categories classified and specified according to capabilities and skills.

Click here for an enlarged view of our fifteen Human Resource Categories

# Definition of Professional Human Resources (Conceptual Image)

#### 1. Human resources who possess frontline skills

Frontline professionals with practical technological and other skills who draw on a wealth of personal pride and experience in supporting customers

#### 2. Human resources who can produce results through teamwork

Professionals in their own right who can take a proactive role in decision-making and action within a team environment and can maximize added-value through team play

#### 3. Human resources who can excel in all environments

Human resources who can excel not only within the NTT Communications Group, but also in all environments

## Internal Job Posting System

We use an internal job posting system that provides motivated employees with challenging opportunities to maximize their potential in a wide range of fields.

This is being used extensively by employees of all ages, with job postings conducted within the NTT Communications Group and the NTT Group.

#### Job postings focused on the following areas were conducted in fiscal 2012.

- Human resources aimed at bolstering cloud-related services
- Human resources aimed at bolstering global business
- Human resources aimed at bolstering upper layer-type services
- Human resources who are capable of bolstering Group companies toward maximization of total Group power

In fiscal 2012, approximately sixty employees were assigned to departments of their choice within the NTT Group.

Looking ahead, we will continue to actively use the internal job posting system to help employees advance their careers and to revitalize the organization. At the same time, we plan to promote job postings in domains that exhibit growing strength with the aim of attaining our business vision.

# Personnel Evaluation

To further motivate our employees, we introduced a performance evaluation and compensation system that values results. This system places importance on fairness and transparency, and does not tolerate discrimination of any kind, including, for example, gender-based discrimination.

Accurately assessing employees' performance against their goals is a crucial aspect of this system.

Under this system, we recognize the importance of employees who act with an increased sense of speed, and are prepared to boldly address change, without the fear of failure, while positioning the needs of customers as their first priority. At the same time, we are cognizant of the need to accurately grasp and evaluate the results of efforts to overcome certain challenges and reach specific results. In this context, we encourage employees to reflect on their voluntarily set goals and provide the opportunity to participate in semiannual performance review meetings with their supervisors to ensure agreement on the results of their job performance evaluation.

Human-Resources Development and Evaluation
 Maintaining and Improving Employee Health

A Workplace for Everyone

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# CSR Report 2013 A Workplace for Everyone

Human-Resources Development and Evaluation
 Maintaining and Improving Employee Health

A Workplace for Everyone

NTT Communications is creating workplaces with diverse human resources where employees can truly harness their skills by drawing on their individual attributes, values, and ideas.

#### **Promoting Diversity**

# Diversity Office Initiatives

In April 2008, NTT Communications established the Diversity Office in order to promote a business management strategy that utilizes the diversity of human resources, and implemented activities that centered on supporting the successful development of women in the workplace, promoting the hiring of people with disabilities and securing diversity.

In fiscal 2012, particular attention was placed on promoting women in the workplace. The Company continued with efforts to boost the ratio of female employees in management positions, which is showing a steady annual increase and currently stands at 3.8% (as of April 1, 2013). Aiming to increase the number of women who excel on the frontline, we have channeled our energies toward developing the careers of female employees and worked diligently to raise awareness of opportunities. While helping to create a network among female employees in management positions, we have taken steps to actively promote mentoring programs and to implement various role model initiatives. Carrying on from fiscal 2011, we continued to advance "work-style reform." In specific terms, we put in place a smart device environment to realize work-styles that help increase the efficiency and autonomy of work as well as productivity regardless of time and place. Making full use of this environment, we initiated efforts aimed at engaging in work styles that place a premium on efficiency while promoting paperless meetings. In order to enhance productivity, we hope to introduce ways of better balancing the work and home lives of employees. Accordingly, we will continue to implement this project in an effort to foster a corporate culture that places the utmost emphasis on employee health and the opportunity to further improve skills and capabilities.

#### Global Human Resource Management (GHRM) Initiatives

Diversity management is attracting attention as a way of utilizing various concepts of values from a diverse workforce. We will have all Group companies work on HRM as a unit with "Global One Team" as our key message to promote global activity by human resources. In the management training program that started in fiscal 2009, seventeen locally hired overseas employees were seconded to the head office and are involved in business in Japan. In fiscal 2011, reciprocal human resource exchanges (training programs, etc.) were expanded between NTT Communications and overseas subsidiaries. Carrying on from the previous fiscal year, we continued to hold global communications training, pre-assignment training, and joint management training for NTT Communications and overseas subsidiaries. An overseas assignment program for young employees was also started in July 2011. This is a program for developing employees who can succeed globally as soon as possible by dispatching new employees (in their first and second year) to on-site locations overseas.

In the future we will continue to aim for further expansion of GHRM initiatives through the development and assignment of managers at overseas subsidiaries, who will lead global business for the entire Group, as well as through the promotion of global human resource exchanges.

	Fiscal 2008	Fiscal 2009	Fiscal 2010	Fiscal 2011	Fiscal 2012
Number of employees	8,360	8,350	8,150	8,000	6,850
Male	7,455	7,410	7,200	7,000	5,900
Female	905	940	950	1,000	950
New employees	201	196	215	226	212
Male	146	144	157	160	148
Female	55	52	58	66	64

#### Number of Total Employees and New Employees by Gender

(Scope: NTT Communications (non-consolidated), excluding seconded employees)

# Recruiting Global Human Resources

Taking into consideration the rapid and dynamic changes in its operating environment, the NTT Communications Group established Vision 2015, a medium-term policy that emphasizes the need to further increase the pace of business development. From the perspective of its human resources, the Group is strengthening its personnel platform in an effort to achieve this vision. This entails actively recruiting a wide variety of employees Recruiting activities in Korea who are capable of bolstering competitiveness while taking the



lead in the Group's globalization endeavors. In particular, we are aggressively hiring personnel who adopt a hands-on approach toward our worldwide expansion activities, focusing especially on students from a broad range of countries.

Given the strong global nature of our recruiting activities, we are stepping up efforts at overseas subsidiaries. Considerable weight is being placed on uncovering and hiring the highest caliber personnel in human resource markets outside Japan, focusing on Asia, which continues to enjoy growth. In this manner, we are successfully welcoming outstanding personnel, including engineers, to the Group. In addition to hiring overseas students and Japanese nationals who have graduated from universities outside Japan, we are currently conducting job fairs throughout the world as well as recruiting on the campuses of overseas universities. In fiscal 2012, we undertook local recruiting activities in South Korea, China, the U.S., and India.

#### Ensuring that Diversity is Well Accepted and Entrenched throughout the Group

NTT Communications is convinced that an understanding of the significance and importance of diversity by each and every employee is vital in realizing a workplace in which personnel maintain a mutual respect for one another. Based on this awareness, the Diversity Office took the lead in implementing the following measures throughout fiscal 2012.

#### 1. Distributing Information through the Intranet

NTT Communications set up and has continued to operate a designated Diversity Office site with the specific aim of educating employees, beginning in August 2008. In fiscal 2012, particular weight was placed on providing details of roundtable talks among employees on such themes as "globalization" and "work-style reform." Furthermore, steps were taken to provide information of the measures implemented by the Diversity Office as well as columns on enhancing productivity and increasing operating efficiency.



#### 2. Implementing Awareness Surveys Encompassing All Employees

In fiscal 2012, NTT Communications again initiated an awareness survey targeting all employees The survey, which had an implementation rate of around 77%, sought employee feedback on such key issues as the Company's "organizational environment," "conditions throughout the workplace," "level of satisfaction," and "career enhancement." The results of this survey will be used to create workplace environments that help motivate employees.

#### 3. Holding Town Hall Meetings with Managers

NTT Communications decided to modify the format of its management training program and systems to commence town hall meetings on an individual workplace basis beginning in fiscal 2012. Encompassing all responsible managers, these town hall meetings were used as a forum to discuss how best to improve workplace productivity as well as such wide-ranging issues as the Company's human resources system and evaluation methods. Moving forward, we will continue to create opportunities for managers to speak directly with senior executives in order to improve the workplace environment and raise employee productivity.

#### 4. Promoting "Family Day"

In similar fashion to fiscal 2011, two family days were also implemented for employees and their families in fiscal 2012. Seventy-two families and a total of 202 employees and family members participated in the events. Among a host of initiatives, quiz-style competitions using iPads, discussions with senior executives, television conferences with overseas subsidiaries, and tours of "Toudou," NTT Communications' communication cable designated pipeline tunnel, were held. Successful steps were taken to provide family members with a deeper understanding of the

Company's business by allowing participants to experience NTT Communications' latest ICT technologies as well as tour communications facilities.



## Providing Career Development Support for Diverse Human Resources

NTT Communications provides career development support at various stages as part of our effort to increase opportunities for diverse human resources to engage in work in a lively and vibrant manner. In fiscal 2012, energies were channeled toward helping our female employees develop their careers.

NTT Communications undertook the following three key initiatives in an effort to help develop the careers of its female employees. 1. To enable the Company's female managers to engage in the exchange of opinions. This measure strives to encourage our female

managers to actively become role models for junior employees and to further bolster relationships and networks 2. To launch mentoring activities as a means to resolve career development concerns and issues and to help plot a medium- to long-term

career path at an early stage in each employee's career

3. To establish an open café that allows female employees to speak directly to female managers as part of our efforts to build a career pool and better visualize the future.

Employees participating in these initiatives commented that they felt encouraged to pursue their careers. Each measure was an important point of reference when looking to the future, taking into consideration the varied and diverse types of female managers and their multi-faceted sense of values. Buoyed by these comments, we will continue to reenergize our female employees, focusing on women in management positions going forward.

Again carrying forward initiatives undertaken in the previous fiscal year, in fiscal 2012 we continued to implement various measures to help employees caring for young children. In addition to notifying employees currently on childcare leave of the Company's wide-ranging systems through such media as the Company's NTT-LiFE+ online child and nursing care support site, we asked employees who had used these systems to share their experiences. At the same time, we initiated workplace return preparation seminars for employees taking childcare leave and career design seminars for employees caring for young children. Collectively, around 170 employees participated in these initiatives.



Open Cafe



Seminar on leave and work return support



Career design seminar

#### Promoting Work-Style Reform

Among a host of endeavors, the Company is promoting a system that allows employees to work from home along with other measures designed to increase productivity. These endeavors are designed to provide employees with the opportunity to make the most their abilities and to help create a workplace environment in which employees can go about their duties with greater vitality. In addition, we took steps to improve the work-from-home system by extending the scope of eligibility to help employees with their child and nursing care commitments. Currently, the number of system users totals around 240. Through these and other measures, NTT Communications has successfully promoted more flexible work-styles across a wide and diverse range of employees. Over and above the work-from-home system, we are accelerating the implementation of work-style-related measures that are unique to an ICT company. In fiscal 2012, we focused on creating an environment that would allow employees to work from remote locations when, for example, visiting clients outside the office or on a business trip. The use of thin client terminals was therefore introduced to allow staff to more effectively use their spare time. Furthermore, particular emphasis was placed on reducing the number of documents and increasing the efficiency of meetings. To this end, we undertook educational activities using Meeting 1/8th posters while adopting paperless meeting tools to simplify the manner in which meetings are conducted.



Slim Meeting Program up to one-eighth

Great awareness by each and every employee is essential to enhancing operating efficiency through the use of ICT. In fiscal 2012, we invited key figures as part of our work-style reform promotion program to speak with the Company's executives. These discussions were transmitted using our in-house intranet site. We also asked prominent figures from outside the Company to conduct several lectures. An aggregate total of approximately 600 employees attended these events.

## Retaining Employees Who Reach Retirement Age

We introduced the Career Staff System, which allows employees reaching the mandatory retirement age of 60 to continue working, if they wish, until they reach 65.

#### Number of Rehired Employees

Fiscal 2009	Fiscal 2010	Fiscal 2011	Fiscal 2012
56	60	91	55

(Scope: NTT Communications (non-consolidated))

# Creating More Satisfying Workplaces

#### Incorporating Employee Feedback

We communicate closely with employees because we seek to build a pleasant and motivating corporate culture. Our goal is to quickly reflect the ideas of our employees in our management and business processes by enabling employees to feel free to send proposals directly to us.

As part of that commitment, we launched the KAIZEN (Continuous Improvement) initiative in July 2006. We also instituted a Direct Line program to deal with constructive proposals from employees beyond organizational and supervisory boundaries. In May 2011 we made it easier to submit proposals through a change in the submission format that now requires only the identification of a problem within a business process, without necessarily requiring an improvement plan. We also changed the name to KAIZEN Support Line. The proposals and the status of related solutions can be viewed on the KAIZEN Portal on the company intranet. In fiscal 2008 we instituted the KAIZEN awards system to encourage more proposals, and to recognize both those who submit outstanding proposals and those who implement them.

We received around 806 proposals through July 29, 2013. We will continue to ensure an environment that increases opportunities for employees to voice their concerns, and in which a wide variety of ideas are reflected in business process improvements in a timely manner.

As a way to support and improve employee motivation, we also conduct surveys to gain an understanding of the actual conditions surrounding the degree of implementation of the daily habits of employees, as well as their attitudes towards work and the workplace. We use these survey results to establish a range of measures to help support and improve employee motivation.

#### Dream Idea Contest

As an initiative aimed at expanding the horizons and opening up the future of the NTT Communications Group, we are calling for the submission of new ideas in a wide range of areas, and implementing measures that will contribute to the development of services. This initiative is dubbed "the Dream Idea Contest," which encapsulates our desire to see a more vibrant NTT Communications Group.

This contest allows anyone working within the NTT Communications Group to submit an idea. After the first call, we received around 600 submissions with the second call attracting approximately 210 replies.

Applications were posted on a designated SNS site to allow for easy access and browsing while promoting the exchange of opinions. A system was put in place that allows even those uninitiated in the use of SNS sites to amend and brush up their ideas as they please.

Ideas that are picked as new services are recognized through an award from the president, which is helping to further motivate applicants to submit ideas.

As we work to become a company that is filled with dreams, we will continue to implement measures that help create a vibrant and comfortable workplace.



Dream Idea Contest

- Human-Resources Development and Evaluation
   Maintaining and Improving Employee Health
  - d Evaluation A Workplace for Everyone

# CSR Report 2013 Maintaining and Improving Employee Health

Human-Resources Development and Evaluation Maintaining and Improving Employee Health

A Workplace for Everyone

We strive to provide an environment in which employees can work in a healthy, safe, and secure manner.

# Work-Life Balance

#### Work-Life Committee

The Work-Life Committee was established to create more satisfying workplaces and help employees improve the balance between their professional and private lives. The committee comprises management and employee representatives, who make a continual effort to implement a range of measures aimed at achieving the goals of decreasing annual total work time, realizing work-styles that help increase the efficiency and productivity of work, and ensuring that duties are carried out appropriately and thoroughly. In fiscal 2012 the committee oversaw steps to further upgrade and expand edification activities in order to ensure a greater focus on efforts aimed at increasing operating efficiency. In addition to the regular distribution of electronic newsletters to all employees, prominent figures from outside the Company were invited to conduct lectures and seminars. Among a host of educational initiatives, the committee also initiated e-Learning training, all in an effort to ensure the proper conduct of duties. At the same time, the committee took steps to extend WORK-LIFE initiatives across NTT Communications Group companies in an effort to promote uniform Groupwide operation.

#### **Occupational Safety and Mental Healthcare**

We are implementing various measures to secure occupational safety based on the creation of work environments that ensure the health and safety of our employees.

We are training "mental health keepers" whose role is to attend to employee mental health on the job so that employees can work in a healthy, safe, and secure environment. (In fiscal 2012, 176 employees were certified as mental health keepers, bringing the total number to 1,774. Nearly all section heads have completed the training.)

In addition, we offer various other services on a continual basis including counseling for high-risk employees based on reports issued by Japan's Ministry of Health, Labour and Welfare (a total of 470 participants in fiscal 2012). In putting in place a comprehensive support structure, we also provide employee consultation desks both inside and outside the organization, a counseling environment for employees on overseas assignment, and "stress-check corners."

Going forward, we will continue to implement various measures that include Group companies in Japan to ensure healthy and comfortable work environments. We will also strengthen measures aimed at providing on the job support. These will include efforts to ensure that all responsible general managers are appropriately trained as "mental health keepers."

#### Number of Work-related Accidents (while working or commuting)

Fiscal 2009	Fiscal 2010	Fiscal 2011	Fiscal 2012
6	1	16	12
(working 1 / commuting 5)	(working 0 / commuting 1)	(working 4 / commuting 12)	(working 5 / commuting 7)

(Scope: NTT Communications (non-consolidated))

# Cafeteria Plan

To cater to their varying lifestyles and needs, we offer various benefits to all our employees equally throughout their time in our organization.

We have introduced a "Cafeteria Plan" system, which allows employees to choose from a wealth of benefit options (a total of 45 options in fiscal 2012) that suit individual employee lifestyles.

In order to provide employees with life design support, we also set up a life design consultation office. In fiscal 2012, 276 employees used this office. Moreover, we offer life design training to 30-year-old employees while holding second-life seminars for employees aged 59. In fiscal 2012, 172 employees participated in life design training while 100 employees attended second life seminars. We will continue enhancing our programs and "menus" to make them more employee-friendly.

# Supporting Volunteer Activities

We believe that being exposed to a variety of value systems inside and outside the workplace will help vitalize both our employees and our corporation. We therefore administer a volunteer leave system that has been in place since the early days of the Company, and we encourage employees to utilize it for volunteer activities. In fiscal 2012, a total of 114 employees made use of this system to participate in social contribution activities across a wide range of areas.

#### Number of Employees Using Our Volunteer Leave System

Fiscal 2008	Fiscal 2009	Fiscal 2010	Fiscal 2011	Fiscal 2012
74	65	84	199	114

(Scope: NTT Communications (non-consolidated))

Human-Resources Development and Evaluation

A Workplace for Everyone

Maintaining and Improving Employee Health

# CSR Report 2013 About CSR Report 2013

Details of the Group's approach toward compiling and issuing this report as well as supplementary information and data.

#### CSR Report Editorial Policy

Information about our policy and approach toward creating the digest editions and detailed editions, our methodology for choosing key information to report, and a profile of the report.

#### GRI Guidelines Comparison Table

An index and a table allowing readers to compare the guidelines we followed with those of the Global Reporting Initiative's Sustainability Reporting Guidelines (Version 3.0).

#### Environmental Reporting Guidelines Comparison Table

An index and a table comparing the guidelines we followed with those from the Japanese Ministry of the Environment's Environmental Reporting Guidelines (Fiscal Year 2007 Version).

#### 2012 Questionnaire Results

Below are the results of the CSR Report 2012 questionnaire that we received from our readers last year.

#### PDF Download / Back Issues

PDF of the digest editions and PDF of the detailed editions are published.

Back issues from fiscal 2003 onward are also available for download.

#### Third-Party Opinion

An opinion from Maki Saito, President of the ASU International LLC.

#### ISO26000 Comparison Table

An index and a table allowing readers to compare the guidelines we followed with the core themes and issues in Guidance on Social Responsibility developed by the International Standardization Organization.

#### Questionnaire

Please feel free to fill out a questionnaire on this website. We appreciate your feedback and thoughts about our report.

#### Contact Us

If you have any questions or suggestions about the report, please feel free to send them directly to us via our website.

# CSR Report 2013 **CSR Report Editorial Policy**

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2012 Questionnaire Results

# About the CSR Report

#### Editorial Policy

As a Global ICT Partner, the NTT Communications Group conducts CSR activities with the aim of contributing to community prosperity and sustainability worldwide by creating new value and resolving problems through the provision of telecommunications services. We have issued this report to clearly convey our CSR approach and activities to our stakeholders.

We are also dedicated to improving accuracy and thus use "we" when reporting on the entire NTT Communications Group, and use company names when reporting on NTT Communications or Group companies. The information provided in this report has been assigned a Self-Declared B Application Level under the GRI's Sustainability Reporting Guidelines. Going forward, we intend to continue enhancing the report's content.

## Selection of Material Issues and Other Items for Disclosure

We used the two-stage selection process described to the right to provide a well-balanced presentation of material issues and other items, in terms of their importance to the Group, as well as requests from society and the need for disclosure from all stakeholders. In the process, we referred to the materiality requirements of Version 3 of the Global Reporting Initiative's Sustainability Reporting Guidelines and other publications.

We present information with a high degree of materiality in the booklet and all other information in the online version of the report, according to the results of the selection process. In this manner, the printed and online versions of the report are differentiated to make the most of the features of these media.

In response to the issuance of the ISO 26000 standard, we have sought to improve how we explain our contribution to society as a global corporate group and the penetration of CSR within our organization in the 2013 version of the report. Another priority was to actively disclose information about our response to the Great East Japan Earthquake.

#### Two-Stage Selection Process

#### Stage 1: Determine issues and other items that should be considered for disclosure from the following:

- · Traditional disclosure items reflecting GRI's Sustainability Reporting Guidelines
- · Issues disclosed by peer companies, and various companies in peripheral business sectors

# Issues attracting growing interest following the issuance of ISO 26000

#### Stage 2: Select disclosure items from the following six perspectives

- · Issues relating to ongoing CSR impacts, risks, and opportunities identified through surveys by expert individuals and organizations specializing in CSR
- · CSR issues of significant social interest that the media frequently covers
- · Issues that interest stakeholders (in employee and customer surveys and through other initiatives)
- · Key organizational issues, notably those relating to our management philosophy, Basic CSR Policy, and Our **Business Principles**
- · Regulatory and voluntary agreement issues covering our organization and operations, notably the Telecommunication Business Law and the rules of the Telecommunications Carriers Association
- · Important issues relating to other companies, particularly competitors and companies with outstanding CSR programs

# Report Profile

Reference Guidelines

**GRI** (Global Reporting Initiative)

Version3.0 of the GRI's Sustainability Reporting Guidelines

Japan's Ministry of the Environment's Environmental Reporting Guidelines (Fiscal Year 2012 Version)

Japan's Ministry of the Environment's Environmental Accounting Guidelines 2005

ISO 26000: 2010, Guidance for social responsibility

\* Report compliance with the GRI's Sustainability Reporting Guideline and Environmental Reporting Guidelines is disclosed in the online version.

• Third-Party Opinion

Each year, we have an independent expert provide an opinion to help us improve our CSR activities.

· Report Scope

This report covers organizations important to reporting on CSR activities, namely NTT Communications and Group companies, based on the Group's Basic CSR Policy. However, any reporting outside this scope is indicated separately.

· Period Covered

Fiscal 2012: April 1, 2012 to March 31, 2013 (some content may fall outside this timeframe)

Issue Dates

This report: October 2013 (Previous edition: October 2012; Next report: Scheduled for October 2014)

## About the Reporting Medium

This website provides a comprehensive presentation of the content of the NTT Communications Group CSR Report 2013. This report comprises two parts: an abridged version; and detailed version. We aim to provide information effectively by taking into consideration those readers envisioned for each medium. As can be expected of a company that provides ICT services, an electronic format of NTT Communications' CSR Report has been provided from 2012.

The abridged version presents the NTT Communications Group's more important CSR activities in a clear, straightforward manner to the general public.

The detailed version presents numerous specific examples of the NTT Communications Group's CSR activities, through a comprehensive look at concrete CSR activities and detailed data.

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# CSR Report 2013 Third-Party Opinion

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ThirdParty Opinion

#### Maki Saito

#### CSR Consultant, President of ASU International

After graduating from college, Ms. Saito entered Dentsu Inc., a leading advertising agency in Japan. Graduated with a Master's degree in international affairs from Columbia University School of International and Public Affairs in New York, U.S.A. Currently, President of ASU International and a CSR Consultant to numerous companies in Japan and the United States. Assistant Professor at SBI Graduate School, board member of the Human Security Forum of Tokyo University as well as Sailors for the Sea Japan, an affiliate of Sailors for the Sea based in the U.S. and founded by David Rockefeller Jr. Authored such books as "100 Simple Ways to Change the World for the Better" and "Social Entrepreneur New Trends in the Social Responsibility Business." Translated and provided commentary for "The Social Venture Network Series." Plans to release newest book "100 Ways to Change Japan from the Disaster Area" soon.

Contact Us



Continuing on from the previous year, I have again provided a third-party opinion on the NTT Communications CSR Report. Guided by the slogan, "Global ICT Partner," the Company offers services across a data center network in more than 140 locations and provides ICT environments in 31 countries in a bid to actively build stable global-scale social infrastructure. Having read both the digest and detailed editions of this year's CSR Report, as well as after speaking with the CSR representative, I believe that certain key terms help to define the Company and its activities. Overall, NTT Communications maintains a "global" perspective, exhibits traits that are "unique to Japan," and places the utmost emphasis on "a sense of common ownership and sharing."

From a "global" perspective, the CSR Report clearly outlines NTT Communications' ongoing efforts to further expand its worldwide activities through the Company's highly reliable services that offer advanced environmental performance. Key examples include the construction of a 6th data center in Tokyo, details regarding such initiatives as the Financial Data Center in Hong Kong as well as a data center in the U.K., and an update on the Asia Submarine-cable Express (ASE), a high-bandwidth optical submarine cable system that connects thriving economies in Asia.

In addition to the tangible aspects of its operations, most notably the construction of data centers, NTT Communications is to be particularly commended for its intangible endeavors including the development of human resources who can excel on the world stage. In order to ensure that technologies and know-how are shared throughout the Company, NTT Communications has put in place a system of training and exchange seminars that extend across all organizational levels from employees to management. I am particularly impressed by the positive affects these systems have on enhancing motivation. These initiatives epitomize the Company's key "Global One Team" message.

NTT Communications' aspirations toward a universal "Global One Team" concept are encapsulated in the following three initiatives that focus on resolving social issues through the Company's mainstay activities.

1. The launch of the new global data center service Nexcenter<sup>™</sup> brand, which incorporates disaster-resistant facilities, high-density advanced air conditioning systems, and cutting-edge technologies that boast outstanding security and green performance.

2. The introduction of Arcstar Universal One, which seamlessly provides network services that deliver superior quality and reliability in and outside Japan, and

3. The launch of Wide Angle, a globally integrated security service.

Details regarding the Hong Kong Financial Data Center, which is expected to play a leading role in promoting the Nexcenter<sup>™</sup> brand, were of particular interest. This is especially true of the facility's compliance with Gold Certification under the Leadership in Energy & Environmental Design (LEED) standards of the U.S. Green Building Council, which encompasses energy conservation and environmental load reduction across every aspect of the Center's establishment and operations from planning, design, construction, management, and maintenance. The emphasis placed on efforts to acquire LEED certification under Japan's Comprehensive Assessment System for

Building Environmental Efficiency (CASBEE) and to distinguish NTT Communications from other companies by officers responsible for CSR carry considerable weight. Having toured the Tokyo No. 5 Data Center last year, I have seen first-hand how the Company utilizes its advanced know-how while at the same time channeling energies toward ensuring that its other bases meet global standards.

In looking at the uniquely Japanese traits exhibited by NTT Communications, I would like to review certain aspects of the Company's operations that deserve commendation. In the United States, where I currently reside, the word "kaizen" is becoming an accepted term in business circles. As a concept that epitomizes the nature of commerce in Japan, "kaizen," a key component of NTT Communications culture, warrants further evaluation. This is particularly true in each of the following example areas.

1.Promoting various work styles across the Company as a whole: NTT Communications takes steps to openly detail examples of workplace and work style reform. In addition to picking out and commending outstanding examples, efforts are made to promote crosssectional use through introductory events and posting details on the Company's intranet.

2.Adopting mechanisms to make full use of employees' comments: NTT Communications has set up a "kaizen portal" on its intranet to allow portal users to better visualize various kaizen proposals and the status of implementation. A system has also been established to reward employees who put forward proposals as well as those individuals and departments who contribute to implementation. 3.Promoting the ongoing development of network infrastructure: In the wake of the earthquake disaster, NTT Communications has again recognized the importance of business continuity plans (BCPs) and business continuity management (BCM). Thanks largely to the Company's efforts to further enhance its services, NTT Communications has witnessed a more than 10-fold increase in performance. 4.Pushing forward energy-saving measures: Every possible effort has been made to conserve energy within the Company. Beginning with steps to control the use of air conditioning, reduce the number of lights, and minimize elevator operating rates, NTT Communications has introduced early morning calls of encouragement to reduce energy consumption while promoting the selective operation of alternative floor vending machines. As a result of these endeavors, NTT Communications has successfully cutback energy consumption at its three principal office buildings by approximately 42% since the earthquake disaster.

Finally, I would like to touch on the Company's efforts to promote "a sense of common ownership and sharing." As the Company strives to push forward its world-class "kaizen" culture, I would hope that every emphasis placed on further promoting a global-scale sense of common ownership and sharing. With this aspiration, I am convinced that NTT Communications will best be served by commonly sharing this "kaizen" culture through a Plan-Do-Check-Action (PDCA) cycle.

In addition, I strongly believe that NTT Communications must redouble its efforts to help resolve many of the world's problems and to share details of its initiatives with all stakeholders. Only in this manner, will the Company be recognized and appreciated as a truly global organization.

NTT Communications already engages in a wide variety of activities aimed at resolving social issues particular to Japan. This includes the prevention of suicides, measures designed to block child pornography sites, and participation in the "Tsumugi Program," a unique approach to supporting the reconstruction of disaster-stricken areas. The Group as a whole is also to be commended for its global endeavors. This includes collaboration between each Group company and compliance with the Guidelines for Green Procurement, as well as efforts to avoid the use of conflict minerals mined in conflict-affected areas where a portion of funds are used in support of armed insurgents and any endeavors that may trigger an abuse of human rights. Each of these initiatives is consistent with expectations that global companies will properly address events even when they occur on the other side of the world.

Examples of other activities that will clearly assist NTT Communications in further expanding its global presence and lifting its corporate value include participation in the United Nations Global Compact initiative, successful efforts to achieve the United Nations Millennium Development Goals, and steps to strengthen engagement with the communities of areas in which NTT Communications operates. At the same time, I am convinced that the Company will enhance its global corporate value by then providing details of its activities by geographic region in its CSR Report and deepening its relationships with stakeholders.

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# CSR Report 2013

# **GRI Guidelines Comparison Table**

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G3 Disclosure	Indicator	Reported Information
1 Strategy and	l Analysis	
1.1	Statement from the most senior decisionmaker of the organization (e.g., CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and its strategy.	•Top Message
1.2	Description of key impacts, risks, and opportunities.	•Top Message •Approach to CSR •CSR Priority Areas
2 Organization	al Profile	
2.1	Name of the organization.	Corporate Information
2.2	Primary brands, products, and/or services.	Corporate Information     Business and Society
2.3	Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures.	Business and Society
2.4	Location of organization's headquarters.	Corporate Information
2.5	Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report.	-Business and Society
2.6	Nature of ownership and legal form.	Corporate Information
2.7	Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries).	Corporate Information     Business and Society
2.8	<ul> <li>Scale of the reporting organization, including:</li> <li>Number of employees;</li> <li>Net sales (for private sector organizations) or net revenues (for public sector organizations);</li> <li>Total capitalization broken down in terms of debt and equity (for private sector organizations); and</li> <li>Quantity of products or services provided.</li> </ul>	Corporate Information
2.9	Significant changes during the reporting period regarding size, structure, or ownership including: • The location of, or changes in operations, including facility openings, closings, and expansions; and • Changes in the share capital structure and other capital formation, maintenance, and alteration operations (for private sector organizations).	Not applicable
2.10	Awards received in the reporting period.	External Evaluations
3 Report Parar	neters	
Report Profile		
3.1	Reporting period (e.g., fiscal/calendar year) for information provided.	·CSR Report Editorial Policy
3.2	Date of most recent previous report (if any).	·CSR Report Editorial Policy
3.3	Reporting cycle (annual, biennial, etc.)	·CSR Report Editorial Policy
3.4	Contact point for questions regarding the report or its contents.	Contact Us
Report Scope	and Boundary	
3.5	<ul> <li>Process for defining report content, including:</li> <li>Determining materiality;</li> <li>Prioritizing topics within the report; and</li> <li>Identifying stakeholders the organization expects to use the report.</li> </ul>	-CSR Report Editorial Policy
3.6	Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers).	·CSR Report Editorial Policy
3.7	State any specific limitations on the scope or boundary of the report.	·CSR Report Editorial Policy
3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations.	Not applicable

G3 Disclosure	Indicator	Reported Information
3.9	Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report.	CSR Report Editorial Policy
3.10	Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement (e.g., mergers/ acquisitions, change of base years/periods, nature of business, measurement methods).	Not applicable
3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report.	Not applicable
GRI Content Ir	idex	1
3.12	Table identifying the location of the Standard Disclosures in the report.	This table
Assurance		
3.13	Policy and current practice with regard to seeking external assurance for the report. If not included in the assurance report accompanying the sustainability report, explain the scope and basis of any external assurance provided. Also explain the relationship between the reporting organization and the assurance provider(s).	-
4 Governance,	Commitments, and Engagement	·
Governance		
4.1	Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight.	Corporate Governance
4.2	Indicate whether the Chair of the highest governance body is also an executive officer (and, if so, their function within the organization's management and the reasons for this arrangement).	Corporate Governance
4.3	For organizations that have a unitary board structure, state the number of members of the highest governance body that are independent and/or non-executive members.	Corporate Governance
4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body.	Corporate Governance
4.5	Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organization's performance (including social and environmental performance).	Corporate Governance
4.6	Processes in place for the highest governance body to ensure conflicts of interest are avoided.	Corporate Governance
4.7	Process for determining the qualifications and expertise of the members of the highest governance body for guiding the organization's strategy on economic, environmental, and social topics.	Corporate Governance
4.8	Making Contributions in a Manner that is Unique to the NTT Communications Group	·Approach to CSR
4.9	Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles.	Corporate Governance
4.10	Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance.	Corporate Governance
Commitments	to External Initiatives	
4.11	Explanation of whether and how the precautionary approach or principle is addressed by the organization.	·Risk Management
4.12	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses.	Special Feature on Biodiversity on the "eco-goo" Portal     Acquisition of the eco-ICT Mark
4.13	<ul> <li>"Memberships in associations (such as industry associations)and/or national/international advocacy organizations in which the organization:</li> <li>Has positions in governance bodies;</li> <li>Participates in projects or committees;</li> <li>Provides substantive funding beyond routine membership dues; or</li> <li>Views membership as strategic.</li> </ul>	Corporate Information
Stakeholder E	ngagement	
4.14	List of stakeholder groups engaged by the organization.	·Approach to CSR
4.15	Basis for identification and selection of stakeholders with whom to engage.	·Approach to CSR
4.16	Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group.	Dialogue     Faithfully Serving Our Customers     Our Relationship with Society     Our Relationship with Suppliers     A Workplace for Everyone

Dis	G3 closure	Indicator	Reported Information		
4.17		Faithfully Serving Our Customers     Our Relationship with Society     Our Relationship with Suppliers     A Workplace for Everyone			
5 Mai	nagement	Approach and Performance Indicators			
Econ	omic				
		Disclosure on Management Approach	-		
aspe	ct: Econo	mic Performance			
EC1	CORE	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments.	Financial Information     Corporate Information		
EC2	CORE	Financial implications and other risks and opportunities for the organization's activities due to climate change.	-		
EC3	CORE	Coverage of the organization's defined benefit plan obligations.	-		
EC4	CORE	Significant financial assistance received from government.	-		
aspe	ct: Market	Presence			
EC5	ADD	Range of ratios of standard entry level wage compared to local minimum wage at significant locations of operation.	-		
EC6	CORE	Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation.	•Our Relationship with Suppliers		
EC7	CORE	Procedures for local hiring and proportion of senior management hired from the local community at locations of significant operation.	-		
aspe	ct: Indirec	t Economic Impacts			
EC8	CORE	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement.	·Using ICT to Solve Social Issues     ·Contributing to a Healthy ICT     Society     ·Our Relationship with Society		
EC9	ADD	Understanding and describing significant indirect economic impacts, including the extent of impacts.	-		
Envir	onmental		1		
		Disclosure on Management Approach	Basic Philosophy and     Environmental Management		
aspe	ct: Materia	als			
EN1	CORE	Materials used by weight or volume.	Environmental Impact of Business     Activities		
EN2	CORE	Percentage of materials used that are recycled input materials.	Environmental Impact of Business     Activities		
aspe	ct: Energy	/			
EN3	CORE	Direct energy consumption by primary energy source.	Environmental Impact of Business     Activities     Creating a Low-Carbon Society		
EN4	CORE	Indirect energy consumption by primary source.	Environmental Impact of Business     Activities     Creating a Low-Carbon Society		
EN5	ADD	Energy saved due to conservation and efficiency improvements.	·Creating a Low-Carbon Society		
EN6	ADD	Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives.	·Creating a Low-Carbon Society		
EN7	ADD	Initiatives to reduce indirect energy consumption and reductions achieved.	·Creating a Low-Carbon Society		
aspe	ct: Water				
EN8	CORE	Total water withdrawal by source.	Environmental Impact of Business     Activities		
EN9	ADD	Water sources significantly affected by withdrawal of water.	-		
	ADD	Percentage and total volume of water recycled and reused.			

G3 Disclosure		Indicator	Reported Information		
aspeo	ct: Biodiv	ersity			
EN11	CORE	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	Biodiversity Conservation		
EN12	CORE	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.	Biodiversity Conservation		
EN13	ADD	Habitats protected or restored.	-		
EN14	ADD	Strategies, current actions, and future plans for managing impacts on biodiversity.	Basic Philosophy and Environmental Management     Biodiversity Conservation		
EN15	ADD	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.	-		
aspeo	ct: Emissi	ions, Effluents, and Waste			
EN16	CORE	Total direct and indirect greenhouse gas emissions by weight.	Environmental Impact of Business Activities     Creating a Low-Carbon Society		
EN17	CORE	Other relevant indirect greenhouse gas emissions by weight.	Environmental Impact of Business Activities     Creating a Low-Carbon Society		
EN18	ADD	Initiatives to reduce greenhouse gas emissions and reductions achieved.	·Creating a Low-Carbon Society		
EN19	CORE	Emissions of ozone-depleting substances by weight.	Prevention of Environmental     Pollution		
EN20	CORE	NOx, SOx, and other significant air emissions by type and weight.	Prevention of Environmental     Pollution		
EN21	CORE	Total water discharge by quality and destination.	-		
EN22	CORE	Total weight of waste by type and disposal method.	Promoting a Recycling-Oriented Society		
EN23	CORE	Total number and volume of significant spills.	Prevention of Environmental     Pollution		
EN24	ADD	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally.	Prevention of Environmental     Pollution		
EN25	ADD	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff.	Biodiversity Conservation		
aspeo	ct: Produ	cts and Services	1		
EN26	CORE	Initiatives to mitigate environmental impacts of products and services, and extent of impact	Creating a Low-Carbon Society		
EN27	CORE	Percentage of products sold and their packaging materials that are reclaimed by category.	-		
aspeo	ct: Compl	iance			
EN28	CORE	Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with environmental laws and regulations.	Not applicable		
aspeo	ct: Transp	port			
EN29	ADD	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce.	Creating a Low-Carbon Society		
aspeo	ct: Overal		1		
EN30	ADD	Total environmental protection expenditures and investments by type.	Environmental Accounting		
Labo	r Practice	s and Decent Work			
		Disclosure on Management Approach	Human-Resources Development and Evaluation     A Workplace for Everyone     Maintaining and Improving Employe Health     Respecting Human Rights		
aspeo	ct: Emplo	yment			
LA1	CORE	Total workforce by employment type, employment contract, and region.	•A Workplace for Everyone		
LA2	CORE	Total number and rate of employee turnover by age group, gender, and region.	-		

G3 Disclosure		Indicator	Reported Information					
LA3	ADD	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations.	•Maintaining and Improving Employee Health					
aspect: Labor/Management Relations								
LA4	CORE	Percentage of employees covered by collective bargaining agreements.	-					
LA5	CORE	Percentage of employees covered by collective bargaining agreements.	-					
aspect: Occupational Health and Safety								
LA6	ADD	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs.	-					
LA7	CORE	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region.	Maintaining and Improving Employee Health					
LA8	CORE	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases.	•Maintaining and Improving Employee Health					
LA9	ADD	Health and safety topics covered in formal agreements with trade unions.	-					
aspe	ct: Trainin	g and Education						
LA10	CORE	Average hours of training per year per employee by employee category.	-					
LA11	ADD	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings.	•Human-Resources Development and Evaluation					
LA12	ADD	Percentage of employees receiving regular performance and career development reviews.	•Human-Resources Development and Evaluation					
aspe	ct: Diversi	ity and Equal Opportunity						
LA13	CORE	Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity.	-A Workplace for Everyone					
LA14	CORE	Ratio of basic salary of men to women by employee category.	-					
Huma	an Rights							
		Disclosure on Management Approach	Respecting Human Rights					
aspe	ct: Investr	nent and Procurement Practices						
HR1	CORE	Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening.	-					
HR2	CORE	Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken.	-					
HR3	ADD	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.	·Respecting Human Rights					
aspe	ct: Non-Di	iscrimination						
HR4	CORE	Total number of incidents of discrimination and actions taken.	Not applicable					
aspe	ct: Freedo	om of Association and Collective Bargaining						
HR5	CORE	Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to support these rights.	-					
aspe	ct: Child L	abor						
HR6	CORE	Operations identified as having significant risk for incidents of child labor, and measures taken to contribute to the elimination of child labor.	Not applicable					
aspe	ct: Forced	l and Compulsory Labor						
HR7	CORE	Operations identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of forced or compulsory labor.	Not applicable					
aspe	ct: Securi	ty Practices						
HR8	ADD	Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations.	-					
			1					
aspe	ct: Indiger	nous Rights						

Dis	G3 closure	Indicator	Reported Information	
Socie	ety			
		Disclosure on Management Approach	•Compliance     •Our Relationship with Society	
aspe	ct: Comm	unity		
SO1	CORE	Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting.	-	
aspe	ct: Corrup	tion		
SO2	CORE	Percentage and total number of business units analyzed for risks related to corruption.	-	
603	CORE	Percentage of employees trained in organization's anti-corruption policies and procedures.	-	
504	CORE	Actions taken in response to incidents of corruption.	Not applicable	
aspe	ct: Public	Policy		
SO5	CORE	Public policy positions and participation in public policy development and lobbying.	Contributing to a Healthy ICT     Society	
SO6	ADD	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country.	-	
aspe	ct: Anti-Co	ompetitive Behavior		
S07	ADD	Total number of legal actions for anticompetitive behavior, anti-trust, and monopoly practices and their outcomes.	-	
aspe	ct: Compl	iance		
608	CORE	Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with laws and regulations.	Not applicable	
Prod	uct Respo	nsibility		
		Product Responsibility	Information Security	
aspe	ct: Custor	ner Health and Safety		
PR1	CORE	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.	Faithfully Serving Our Customers     Ensuring Stable and Reliable     Services as Critical Infrastructure	
PR2	ADD	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes.	Not applicable	
aspe	ct: Produc	ct and Service Labeling		
PR3	CORE	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements.	-	
PR4	ADD	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes.	-	
PR5	ADD	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.	Improving Customer Satisfaction	
aspe	ct: Market	ing Communications		
PR6	CORE	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.	•Responsible Public Relations and Advertising	
PR7	ADD	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes.	Not applicable	
spe	ct: Custor	ner Privacy		
PR8	ADD	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data.	Not applicable	
spe	ct: Compl	iance		
PR9	CORE	Monetary value of significant fines for noncompliance with laws and regulations concerning the provision and use of products and services.	Not applicable	

# Standard Disclosures under Global Reporting Initiative Telecommunications Sector Supplement for NTT Communications Group Corporate Social Responsibility Report 2013

G3 Disclosure	Indicator	Reported Information
Internal Operation	ons	
Investment		
IO 1.	Capital investment in telecommunication network infrastructure broken down by country/region.	-
IO 2.	Net costs for service providers under the Universal Service Obligation when extending service to geographic locations and low-income groups, which are not profitable. Describe relevant legislative and regulatory mechanisms.	-
Health and Safe	ty	
IO 3.	Practices to ensure health and safety of field personnel involved in the installation, operation and maintenance of masts, base stations, laying cables and other outside plant. Related health and safety issues include working at heights, electric shock, exposure to EMF and radio frequency fields, and exposure to hazardous chemicals.	-
IO 4.	Compliance with ICNIRP (International Commission on Non-Ionising Radiation Protection) standards on exposure to radiofrequency (RF) emissions from handsets.	-
IO 5.	Compliance with ICNIRP (International Commission on Non-Ionising Radiation Protection) guidelines on exposure to radiofrequency (RF) emissions from base stations.	-
IO 6.	Policies and practices with respect to Specific Absorption Rate (SAR) of handsets.	-
Infrastructure		
IO 7.	Policies and practices on the siting of masts and transmission sites including stakeholder consultation, site sharing, and initiatives to reduce visual impacts. Describe approach to evaluate consultations and quantify where possible.	Biodiversity Conservation
IO 8.	Number and percentage of stand-alone sites, shared sites, and sites on existing structures.	-
Providing Acces	s	
Access to Telec	ommunication Products and Services: Bridging the Digital Divide	
PA 1.	Polices and practices to enable the deployment of telecommunications infrastructure and access to telecommunications products and services in remote and low population density areas. Include an explanation of business models applied.	-
PA 2.	Policies and practices to overcome barriers for access and use of telecommunication products and services including: language, culture, illiteracy, and lack of education, income, disabilities, and age. Include an explanation of business models applied.	Faithfully Serving Our Customers     Ensuring Stable and Reliable Services as     Critical Infrastructure     Using ICT to Solve Social Issues
PA 3.	Policies and practices to ensure availability and reliability of telecommunications products and services and quantify, where possible, for specified time periods and locations of down time.	Maintaining Stable and Reliable     Telecommunications Services     Ensuring Stable and Reliable Services as     Critical Infrastructure
PA 4.	Quantify the level of availability of telecommunications products and services in areas where the organisation operates. Examples include: customer numbers/market share, addressable market, percentage of population covered, percentage of land covered.	-
PA 5.	Number and types of telecommunication products and services provided to and used by low and no income sectors of the population. Provide definitions selected. Include explanation of approach to pricing, illustrated with examples such as price per minute of dialogue/bit of data transfer in various remote, poor or low population density areas.	-
PA 6.	Programmes to provide and maintain telecommunication products and services in emergency situations and for disaster relief.	Ensuring Stable and Reliable Services as Critical Infrastructure Activities related to the Great East Japan Earthquake
Access to Conte	ent	
PA 7.	Polices and practices to manage human rights issues relating to access and use of telecommunications products and services. For example: •Participation in industry initiatives or individual initiatives related to Freedom of Expression •Legislation in different markets on registration, censorship, limiting access. •Interaction with governments on security issues for surveillance purposes. •Interaction with national and local authorities and own initiatives to restrict criminal or potentially unethical content. •Protecting vulnerable groups such as children. Explain how such policies and practices are adapted and applied in different countries.	•Using ICT to Solve Social Issues     •Contributing to a Healthy ICT Society

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G3 Disclosure	Indicator	Reported Information					
Customer Relations							
PA 8.	Policies and practices to publicly communicate on EMF related issues. Include information provides at points of sales material.	-					
PA 9.	Total amount invested in programmes and activities in electromagnetic field research. Include description of programmes currently contributed to and funded by the reporting organisation.	-					
PA 10.	Initiatives to ensure clarity of charges and tariffs.	Faithfully Serving Our Customers					
PA 11.	Initiatives to inform customers about product features and applications that will promote responsible, efficient, cost effective, and environmentally preferable use.	Faithfully Serving Our Customers					
Technology App	lications						
Resource Efficie	ency						
TA 1.	Provide examples of the resource efficiency of telecommunication products and services delivered.	Reducing Environmental Impact through Our Services					
TA 2.	Provide examples of telecommunication products, services and applications that have the potential to replace physical objects (e.g. a telephone book by a database on the web or travel by videoconferencing).	-Reducing Environmental Impact through Our Services					
TA 3.	Disclose any measures of transport and/or resource changes of customer use of the telecommunication products and services listed above. Provide some indication of scale, market size, or potential savings.	-Reducing Environmental Impact through Our Services					
TA 4.	Disclose any estimates of the rebound effect (indirect consequences) of customer use of the products and services listed above, and lessons learned for future development. This may include social consequences as well as environmental.	Using ICT to Solve Social Issues     Faithfully Serving Our Customers     Reducing Environmental Impact through Our     Services					
TA 5.	Description of practices relating to intellectual property rights and open source technologies.	-					

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Core Subjects	Issues	Reported Information	
Organizational governance		-CSR Management	
Human rights	<ol> <li>Due diligence</li> <li>Human rights risk situations</li> <li>Avoidance of complicity</li> <li>Resolving grievances</li> <li>Discrimination and vulnerable groups</li> <li>Civil and political rights</li> <li>Economic, social and cultural rights</li> <li>Fundamental principles and rights at work</li> </ol>	Respecting Human Rights     A Workplace for Everyone	
Labour practices	<ol> <li>Employment and employment relationships</li> <li>Conditions of work and social protection</li> <li>Social dialogue</li> <li>Health and safety at work</li> <li>Human development and training in the workplace</li> </ol>	<ul> <li>Human-Resources Development and</li> <li>Evaluation</li> <li>A Workplace for Everyone</li> <li>Maintaining and Improving Employee Health</li> </ul>	
The environment	<ol> <li>Prevention of pollution</li> <li>Sustainable resource use</li> <li>Climate change mitigation and adaptation</li> <li>Protection of the environment, biodiversity and restoration of natural habitats</li> </ol>	Basic Philosophy and Environmental Management Creating a Low-Carbon Society Promoting a Recycling-Oriented Society Biodiversity Conservation Preventing Environmental Pollution	
Fair operating practices	<ol> <li>Anti-corruption</li> <li>Responsible political involvement</li> <li>Fair competition</li> <li>Promoting social responsibility in the value chain</li> <li>Respect for property rights</li> </ol>	•Compliance •Our Relationship with Suppliers	
Consumer issues	<ol> <li>Fair marketing, factual and unbiased information and fair contractual practices</li> <li>Protecting consumers' health and safety</li> <li>Sustainable consumption</li> <li>Consumer service, support, and complaint and dispute resolution</li> <li>Consumer data protection and privacy</li> <li>Access to essential services</li> <li>Education and awareness</li> </ol>	Maintaining Stable and Reliable     Telecommunications Services     Ensuring Stable and Reliable Services as     Critical Infrastructure     Faithfully Serving Our Customers     Information Security	
Community involvement and development	<ol> <li>Community involvement</li> <li>Education and culture</li> <li>Employment creation and skills development</li> <li>Technology development and access</li> <li>Wealth and income creation</li> <li>Health</li> <li>Social investment</li> </ol>	Using ICT to Solve Social Issues     Contributing to a Healthy ICT Society     Our Relationship with Society	

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	Reported Information		
BI-1: CEO's statement			
	a.	Environmental management policy	•Top Message     •Basic Philosophy and Vision
	b.	The recognition of the status of the environment, the need for environmental initiatives within an organization, and the future prospect of the construction of a sustainable society.	•Top Message •Basic Philosophy and Vision
с.		The environmental policy and strategies of an organization corresponding to the industry, operational scale, character and overseas development; status of environmental impacts (significant environmental aspects) and a summary of environmental initiatives which reduce the negative environmental impacts, including targets and results.	•Top Message •Basic Philosophy and Vision
	d.	A commitment to society concerning the implementation of such environmental activities, the achieving of targets by any promised time limit and the disclosure of results to the public.	-Basic Philosophy and Vision
	e.	The signature of the CEO	•Top Message
BI-2: Fundamental requirem	ents	s of reporting	
	a.	Organizations covered by the reporting (Note: If environmental reporting has been published in the past, and changes were made in the organizations when compared to the latest reporting, such changes and their background need to be included.)	-CSR Report Editorial Policy
3I-2-1: Organizations, periods and	b.	Reporting time period, the date issued, and schedule for the next issue (Note: If environmental reporting has been published in the past, the issue date of the latest version needs to be included.)	-CSR Report Editorial Policy
areas covered by the reporting	с.	Reporting areas (environmental, social and economic fields)	·CSR Report Editorial Policy
	d.	Standards or guidelines that are used in conformity to, or as a reference (including ones specific to the industry)	·CSR Report Editorial Policy
	e.	The division in charge of the publication and means of contact	Contact Us
	f.	URL of the organization's website	·CSR Report Editorial Policy
BI-2-2: Boundary of the reporting organization and coverage of environmental impacts	a.	Percentage of the impacts caused by the reporting organization compared to the total business environmental impacts (the entire group for consolidated accounts). (i.e., Status according to the coverage of the environmental impacts)	-CSR Report Editorial Policy
BI-3: Summary of the organ	izati	on's business (including management indices)	
	a.	Nature of the organization's business (kind of industry and type of operation)	Corporate Information     Business and Society
	b.	Major products and services (field of business)	Corporate Information     Business and Society
	c.	Amount of sales or production (consolidated or unconsolidated in the case of an entire group, or just the reporting organization)	Corporate Information
	d.	Number of employees (consolidated or unconsolidated in the case of an entire group, or just the reporting organization)	Corporate Information
	e.	Other information relating to management (e.g., total assets, total sales profits, operating profits, ordinary profits, net income and loss, and total value added)	Financial Information
	f.	Details of significant changes in organizational structure, composition of shareholders, or products/services that have occurred in the reporting period (if significant changes to the environmental impacts have occurred due to events such as, mergers, company break-up, sale of a subsidiary or operating division, new business opportunities, or construction of new plants)	Not applicable

		Reported Information		
BI-4: Outline	of environmen	tal r	eporting	
		a.	Summary of the organization's business, such as corporate name, sales figures, and total assets over the past five years or so (refer to BI-3)	Corporate Information
		b.	Status of compliance with environmental regulations (refer to MP-2)	-Basic Philosophy and Environmental Management
			Changes in major environmental performance over the past five years or so	•Environmental Impact of Business Activities
			-Total amount of energy input (refer to OP-1)	·Creating a Low-Carbon Society
			-Total amount of material input (refer to OP-2)	Promoting a Recycling-Oriented Society
BI-4-1: List of maj	jor indicators		-Amount of water impute (refer to OP-3)	•Environmental Impact of Business Activities
		c.	·Total amount of products or sales (refer to OP-5)	-
			-Amount of greenhouse gas emissions (refer to OP-6)	Creating a Low-Carbon Society
			-Amount of release and transfer of chemical substances (refer to OP-8)	Preventing Environmental Pollution
			·Total amount of waste generation and final disposal (refer to OP-9)	Promoting a Recycling-Oriented Society
			·Total amount of water discharge (refer to OP-10)	•Environmental Impact of Business Activities
			-Eco-efficiency indicators (refer to EEI)	•Green ICT Vision 2020
BI-4-2: Summary plans and results environmental init	regarding	a.	Summary of targets, plans, results, and improvement measures regarding initiatives for environmental conservation	•Fiscal 2012 Results and Fiscal 2013 Targets
BI-5: Material	balance of org	gania	zational activities (inputs, internal recycling, and outputs)	
		a.	An overall picture of the environmental impacts caused by the organization's activities	•Environmental Impact of Business Activities
Management	Performance I	ndic	ators: MPI	
MP-1: Status of environmental	MP-1-1: Environmental policy in organizational activities	a.	Environmental policy in organizational activities	Basic Philosophy and Environmental Management
management	MP-1-2: Status of environmental management systems	a.	Status of environmental management systems	<ul> <li>Basic Philosophy and Environmental Management</li> </ul>
MP-2: Status of c environmental reg		a.	Status of compliance with environmental regulations	Basic Philosophy and Environmental Management
		a.	Costs of environmental conservation initiatives	Environmental Accounting
MP-3: Environme information	ntal accounting	b.	Environmental effects relating to environmental conservation initiatives	·Environmental Accounting
		c.	Economical effects associated with environmental conservation initiatives	Environmental Accounting
	tatus of environmentally a. Environmentally conscious policy, targets, plans, status of initiatives, and results related to investment and financing		-	
	us of supply chain ent for environmental on environmentally conscious policy, targets, plans, status of initiatives, and results related to the supply chain management		•Our Relationship with Suppliers •Promoting Green Procurement	
MP-6: Status of g or procurement	reen purchasing	a.	Fundamental policy, targets, plans, status of initiatives and results of green purchasing or procurement	•Our Relationship with Suppliers •Promoting Green Procurement
MP-7: Status of re development of ne technologies and	ew environmental	a.	Policy, targets, plans, status of initiatives and results of research and development related to environmental technologies, engineering methods, and DfE	•Creating a Low-Carbon Society
		a.	Policy, targets and plans for environmentally friendly transportation	Creating a Low-Carbon Society
MP-8: Status of e		b.	Total volume of transportation and reduction measures: current status and results	Creating a Low-Carbon Society
friendly transporta	ation	c.	Energy-induced CO <sub>2</sub> emissions attributable to transportation, and reduction measures, the current status and results	-Creating a Low-Carbon Society
MP-9: Status of b conservation and of biological resou	sustainable use	a.	Policies, targets, plans, status of initiatives, and results related to conservation of biodiversity	-Biodiversity Conservation

		Basic Information: BI	Reported Information
MP-10: Status of environmental communication	a.	Policy, targets, plans, status of initiatives, and results related to environmental communication	Biodiversity Conservation
MP-11: Status of social contribution a.		Policy, targets, plans, status of initiatives, and results of social contribution related to the environment	-Biodiversity Conservation
MP-12: Status of products and	a.	Policies, targets, plans, and the status of initiatives and results related to products and services that contribute to the reduction of negative environmental impacts	·Creating a Low-Carbon Society
services that contribute to the reduction of negative environmental impacts	b.	Status of re-merchandizing (converting used items into marketable products) as stipulated by the Containers and Packaging Law, the Home Appliances Recycling Law, and the Automobile Recycling Law	-
Operational Performance In	dica	tors: OPI	
	a.	Policy, targets, plans, status of initiatives, and results of reduction measures related to total energy input	·Creating a Low-Carbon Society
	b.	Total amount of energy input (unit: joule)	-
		Breakdown of total amount of energy input (the amount used by type) (unit: joule)	-Environmental Impact of Business Activities
OP-1: Total amount of energy input and reduction measures		·Purchased electricity (excluding purchased new energy)	•Environmental Impact of Business Activities •Creating a Low-Carbon Society
	c.	·Fossil fuel (e.g., oil, natural gas, LPG or coal)	<ul> <li>Environmental Impact of Business Activities</li> </ul>
		New energy (renewable energy, recyclable energy, new forms of using conventional energy)	·Creating a Low-Carbon Society
		·Others (e.g., purchased heat)	•Environmental Impact of Business Activities
OD 2: Tatal amount of motorial	a.	Measures to reduce total material input (or the purchased amount of main raw materials, etc. including containers and packaging materials) and policy, targets, plans, initiatives, results, etc. related to the effective use of renewable and recyclable resources	·Promoting a Recycling-Oriented Society
OP-2: Total amount of material input and reduction measures	b.	Total material input (or the purchased amount of main raw materials including containers and packaging materials) (unit: ton)	•Environmental Impact of Business Activities
	c.	Breakdown of total material input (unit: ton)	•Environmental Impact of Business Activities
	a.	Policy, targets, plans, initiatives, results, etc. related to measures to reduce the amount of input water resources	-
	b.	Amount of input water resources (cubic meters, m <sup>3</sup> )	-Environmental Impact of Business Activities
		Breakdown of input water resources (m <sup>3</sup> )	
OP-3: Amount of water input and		·Clean water	
reduction measures		·Industrial water	
	c.	Groundwater	-
		Seawater	
		·River water	
		·Rainwater, etc.	
	a.	Policy, targets, plans, initiatives, results, etc. related to the recycling-based use of materials (including water resources) in the facilities of an organization	Promoting a Recycling-Oriented Society
	b.	Amount of materials recycled in the facilities of an organization (unit: ton)	•Environmental Impact of Business Activities
OP-4: Amount of materials recycled within an organization's	c.	Type and amount of each material recycled in the facilities of an organization (unit: ton)	-Environmental Impact of Business Activities
operational area	d.	Amount of water recycled in the facilities of an organization (unit: cubic meters) and measures to increase it	-
	e.	Breakdown of the amount of water recycled (unit: cubic meters) ·Amount of recycled water (in principle, cooling water is not included) ·Use of recycled wastewater	-
OP-5: Total amount of manufactured products or sales	a.	Total amount of manufactured products or that of sold commodities	-

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		Basic Information: BI	Reported Information
OP-6: Amount of greenhouse gas emissions and reduction measures	a.	Policy, targets, plans, initiatives, results, etc. related to measures to reduce greenhouse gas emissions, etc.	Fiscal 2012 Results and Fiscal 2013 Targets
	b.	Total amount (converted to tons of CO <sub>2</sub> ) of greenhouse gas emissions (six substances subject to the Kyoto Protocol) (The breakdown of the amount both in Japan and overseas is needed.)	Creating a Low-Carbon Society
	C.	Breakdown by type of the amount (converted to tons of CO <sub>2</sub> ) of greenhouse gas emissions (six substances subject to the Kyoto Protocol)	·Creating a Low-Carbon Society
OP-7: Air pollution, its environmental impacts on the living environment, and reduction measures	a.	Policy, targets, plans, initiatives, results, etc. related to measures to reduce the amount of released sulfur oxides (SOx), nitrogen oxides (NOx), and volatile organic compounds (VOC)	Prevention of Environmental Pollution
	b.	Each released amount (in tons) of sulfur oxides (SOx), nitrogen oxides (NOx), and volatile organic compounds (VOCs) according to the Air Pollution Control Law	Prevention of Environmental Pollution
	c.	Status of noise, etc. generated (in decibels) according to the Noise Regulation Law and reduction measures	-
	d.	Status of vibrations, etc. generated (in decibels) according to the Vibration Regulation Law and reduction measures	-
	e.	Status of offensive odors, etc. generated (specified offensive odor substance concentration or odor index) according to the Offensive Odor Control Law and reduction measures	-
OP-8: Amount of release and transfer of chemical substances and reduction measures	a.	Chemical substance management policy and status of chemical substances being managed	Prevention of Environmental Pollution
	b.	Policy, targets, plans, initiatives, results, etc. related to the released and transferred amount of chemical substances and reduction measures	Prevention of Environmental Pollution
	c.	Initiatives, results, etc. concerning replacement of current chemical substances with safer ones	Prevention of Environmental Pollution
	d.	Released and transferred amount of chemical substances subject to the PRTR system based on the Law Concerning Reporting etc., of Release of Specific Chemical Substances to the Environment and Promotion of the Improvement of Their Management (unit: ton)	-
	e.	Concentration of specified substances when released into the atmosphere (benzene, trichloroethylene, and tetrachloroethylene) among hazardous air pollutants controlled by the Air Pollution Control Law	-
	f.	Status of soil and groundwater pollution	-
	g.	Status of pollution by dioxins controlled by the Law concerning Special Measures against Dioxins	-
	h.	Concentration of hazardous substances, controlled by the Water Pollution Control Law, contained in wastewater and specified underground infiltrated water	-
OP-9: Total amount of waste generation and final disposal and reduction measures	a.	Policy, targets, plans, initiatives, results, etc. related to measures to prevent further wastes from being generated and to reduce, and recycle them	·Promoting a Recycling-Oriented Society
	b.	Total amount of discharged wastes (unit: ton)	·Promoting a Recycling-Oriented Society
	c.	Amount of final disposal wastes (unit: ton)	·Promoting a Recycling-Oriented Society
OP-10: Total amount of water discharge and reduction measures	a.	Policy, targets, plans, initiatives, results, etc. related to measures to reduce the total amount of discharged wastewater	-
	b.	Total amount of discharged wastewater (unit: cubic meters)	-
	C.	Concentration (average and maximum values) of hazardous substances in wastewater (which are classified into health items, living environment items, and dioxins), the release of which is controlled by the Water Pollution Control Law and the Law Concerning Special Measures Against Dioxins; and the pollutant discharge load of the substances subject to the total volume control of the Water Pollution Control Law, etc., and reduction measures	-
		Breakdown of the amount of wastewater by discharge destination (unit: cubic meters)	
		·Rivers	
	d.	·Lakes and marshes	-
		·Sea areas	
		·Sewage, etc.	

	Reported Information					
Eco-Efficiency Indicator: EEI						
	a.	The relationship of economic value created by economic activities, such as value added, with environmental impacts caused by the same activities	•Green ICT Vision 2020			
Social Performance Indic	ators:	SPI				
Status of social initiatives	1	Information and indicators concerning industrial safety and hygiene	•Maintaining and Improving Employee Health			
	2	Information and indicators concerning employment	•Human-Resources Development and Evaluation •A Workplace for Everyone			
	3	Information and indicators concerning human rights	·Respecting Human Rights			
	4	Information and indicators concerning contributions to local communities	•Our Relationship with Society			
	5	Information and indicators concerning corporate governance, corporate ethics, compliance, and fair trade	Corporate Governance     Compliance			
	6	Information and indicators concerning personal information protection	Information Security			
	7	Information and indicators concerning a wide range of consumer protection and product safety	Ensuring Stable and Reliable Services as Critical Infrastructure     Faithfully Serving Our Customers			
	8	Economic information and indicators concerning organization's social aspects	-			
	9	Information and indicators concerning other social aspects	Maintaining Stable and Reliable     Telecommunications Services     Using ICT to Solve Social Issues     Contributing to a Healthy ICT Society     Our Relationship with Suppliers			

CSR Report Editorial Policy

ISO26000 Comparison Table

2012 Questionnaire Results

Third-Party Opinion GRI Guidelines Comparison Table

Environmental Reporting Guidelines Comparison Table

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Questionnaire