CSR Report:
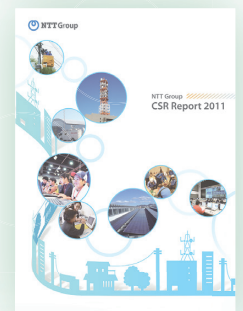**A 10-year Retrospective**

2005-2014

Leveraging ICT to address social issues

Progress on CSR Initiatives aimed at Leveraging ICT to address social issues

Starting from Social Contribution Activities

After privatization in 1985, NTT has carried on the tradition of actively making a contribution to society that has continued on from the Nippon Telegraph and Telephone Public Corporation days. In order to effectively develop our social contribution activities, NTT set four Group-wide themes as a symbol of our activities: "constructing communication networks to connect the world", "providing welfare services with telecommunications," "creating a new communications culture" and "designing social contribution activities that protect the environment." Furthermore, each of the offices set an individual theme in correspondence with local environmental factors: "Protecting the Natural Environment," "Social Welfare," "Promotion of Education and Culture," "Local Community Development and Interaction," "International Exchange and Contribution," "Promotion of Sports." These individual themes are still now the six pillars that sustain our social contribution activities.

Our "please call" notebooks are one of the most representative examples of our activities and are still popular today. In order to support the communication needs of people with speech and hearing impediments, the notebook can be used to write down a telephone number, name, and message and ask people nearby to make a call. This service started out as a customer request in 1983, and is now in its 24th year. In addition, we also distribute the "please call" memo which is a memo than can be written and erased repeatedly, and "Fureai Sokutatsubin" fax paper used to send faxes.

In the fiscal 2016, more than 160,000 of the "please call" notebooks were distributed. Through NTT East and NTT West branches, and also through regional authorities and social welfare groups, the "please call" notebooks have been distributed to the people with speech and hearing impediments from December 15, 2014.

Setting Initiatives aimed at Environmental Problems

Environmental problems were a central theme at the OECD Environment Ministers Meeting held in Paris in January 1991 and the 1991 G7 London Summit in July. In June 1992, 20th anniversary of the year of the United Nations Conference on the Human Environment (in Stockholm), Rio de Janeiro hosted the United Nations Conference on Environment and Development that had as its theme initiatives to tackle environmental problems on a global scale. It is in this context that Japanese companies began strengthening their initiatives to tackle environment problems and in April 1991, Nippon Keidanren (Japan Business Federation) set up the "Keidanren Global Environment Charter."

Within the NTT Group, an Environmental Promotion Office was setup in April 1991, and in July of the same year the NTT Group Environmental Protection Promotion Committee was established as the decision-making body on the environment for the whole Group. Furthermore, at the same time as the NTT Group's environmental ideals, key policies and promotion system were established in the NTT Group Global Environmental Charter in 1991, the Basic Program of Environmental Protection that outlined paper resource management, prevention of global warming, waste management, and ozone layer protection and other plans for measures in key areas were also established.

From March 1992, a detailed program was established by compiling the action plans from the different business divisions and in November 1997, under the NTT Group environmental protection promotion committee, separate promotion committees for each of the 6 key areas were established.

With the reorganization on NTT in July 1997 and the aim of making business activities compatible with the protection of the environment in order to realize a sustainable society, NTT Group Ecology Program 21 was established to serve as the basic concept for NTT Group environmental action programs. Based on the NTT Group Global Environmental Charter that was newly established in the same year, the NTT Group Ecology Program 21 consists of three core elements added to the research and development of cutting-edge environmental technologies and community contribution in the protection of the environment. It announced that as an information-sharing corporate group, the NTT Group would reduce overall environmental impacts in its business activities and contribute to reducing environmental impact in society by developing environmental technologies.

In March 2000, along with reviewing the fiscal 2001 major action goals and achievements that were set in 1991, the planned targets for paper resource management, prevention of global warming, and waste management were reviewed and new targets for fiscal 2011 were established.

The aims of making business activities compatible with environmental protection and contributing to reducing environmental impact in society in "NTT Group Ecology Program 21" were drawn up in the NTT Group Vision for Environmental Contribution in May 2006.

This clarifies our basic concept for providing ICT services that will enable our customers as well as society as a whole to reduce environmental impacts and defined our fiscal 2011 target of a ten million ton reduction of CO_2 in society by providing ICT services.

In 2010, we added the conservation of biodiversity as a basic policy to our NTT Group Global Environmental Charter, and drew up THE GREEN VISION 2020 as our new vision for the environment, identifying three environmental themes for the future: creating a low-carbon society, implementing closed-loop recycling, and conserving biodiversity. We also set quantifiable targets and conceived specific initiatives which are ongoing.

Progress on CSR Initiatives

To comprehensively manage the economic, environmental and social aspects involved in corporate activities on a foundation of corporate governance, corporate ethics and compliance, NTT created a CSR Promotion Office and in June 2005 a CSR Committee chaired by a senior executive vice president for ongoing and appropriate management of its CSR. In addition, two internal committees—the Global Environmental Protection Promotion Committee and Social Contribution Promotion Committee—have been established. In this way, the NTT Group is advancing CSR in a systematic, ongoing manner.

NTT drew up the NTT Group CSR Charter in June 2006 as a basic guideline for the more active implementation of CSR activities by Group companies (revised in June 2011), promoting a sense of unity on CSR across the Group. From 2006, Group CSR Liaison Meetings have been held periodically for Group companies to discuss issues and share information on their initiatives so as to coordinate CSR activities across the whole Group. We have also established issue- and theme-based working groups such as the Group CSR Priority Activities Review Committee and the Green with Team NTT Promotion Working Group (which examines employee participation-based environmental initiatives) to promote unity in CSR activities across the Group through Group-wide projects.

To drive the implementation of the NTT Group CSR Charter and take a more unified approach to addressing social issues both within Japan and overseas, we established our NTT Group CSR Priority Activities in November 2008 as activities to be pursued in common by group companies and drew up the Guidelines for NTT Group CSR Activities for Group companies to manage PDCA cycles in line with the Priority Activities. In fiscal 2010, group companies drew up CSR action plans for each of the eight Priority Activities so as to link them to their respective business and take CSR activities across the Group to a higher level. From fiscal 2012, we started setting Groupwide "quantifiable targets" and completed setting these targets for all eight priority areas in fiscal 2013.

With the aim of increasing awareness of CSR throughout the Group, from fiscal 2000 NTT has held an annual Environmental/CSR Reporting Symposium and in February 2014 an NTT Group CSR Conference was held with the aim of disseminating the CSR initiatives of individual Group companies throughout the entire Group.

The concept of leveraging ICT to address social issues serves as a cornerstone for our CSR activities. We believe that tackling such issues is the best way of uncovering opportunities for growth. In other words, we see business and CSR as being inseparable, and that is why we have made fulfilling our responsibilities to society an integral part of our Medium-Term Management Strategy. We will intensify our efforts to fulfill all aspects of our corporate social responsibility as a global ICT enterprise and Value Partner to contribute to the sustainable development of society.

External Evaluations

NTT has been highly rated by SRI evaluation organizations. As of March 31, 2014, we are listed on international SRI indexes such as Dow Jones Sustainability Asia Pacific Index and Ethibel Sustainability Index (ESI) Excellence Global.

NTT Group was recognized as one of the best companies in Japan for climate change information disclosure and performance by the CDP. NTT Group has been listed as one of the companies of both Climate Disclosure Leadership Index (CDLI) and Climate Performance Leadership Index (CPLI). Selection to the CDLI is the second consecutive year. To CPLI, NTT Group was selected for the first time from the telecommunications company in Japan.

2005

Commemoration of The NTT Group CSR Report

The NTT Group has been actively working on global environmental problems as whole group companies. We established the "NTT Global Environmental Charter" (in 1991) and since then tackled on mitigations for reducing paper resources and CO_2 emission. Moreover, in July, 1997, taking the opportunity of the NTT Group's reorganization, we established "NTT Group Ecology Program 21," as the basic concept for promoting environmental protection activities. Furthermore, we began to record our activities on global environment issues in the publication "NTT Group Environmental Protection Activity Report." From 2003, the NTT Group also began to disclose our environmental accounting.

Not limited to environmental protection activities, from 2005 we began to publish our "Environmental Protection Activities Report" as the "NTT Group CSR Report" in order to gain broad understanding of the ongoing social and economic activities in the NTT Group as a whole. In addition, with an increasing need for the transparency of non-financial information related to environmental, social, and governance for shareholders, we began including contents from the CSR Report on our Annual Report and began publishing an integrated report with a fuller and more transparent account of our non-financial activities.
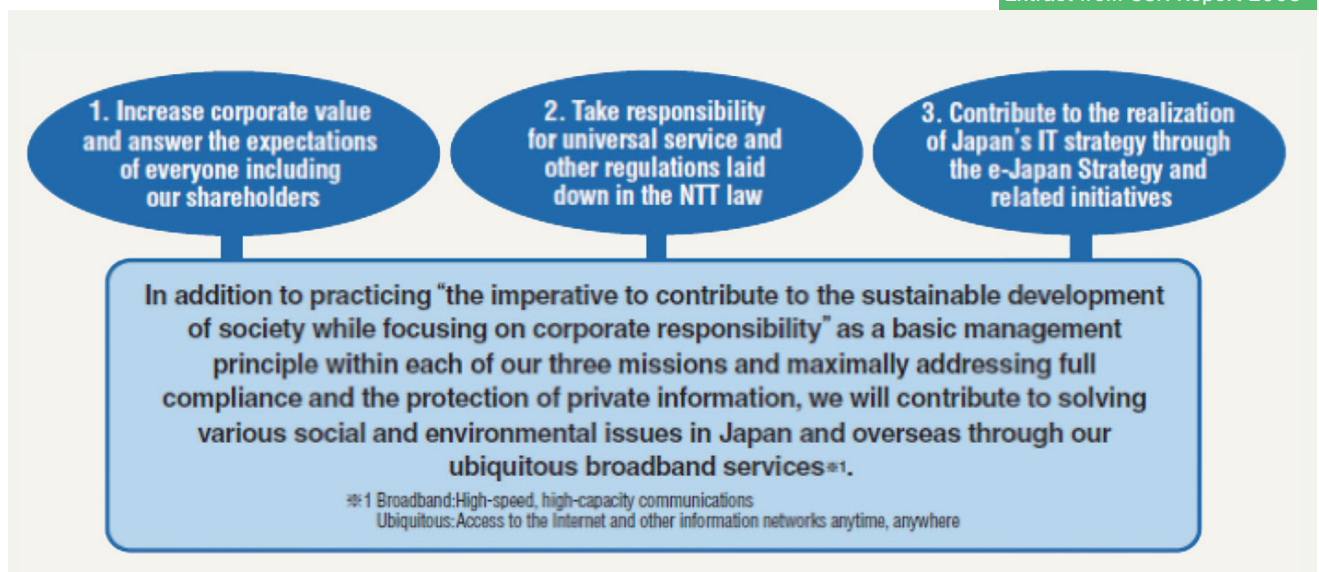
Verifying our basic stance on CSR

In our "2005 CSR Report" we listed the following three things as the NTT Group Mission, 1) increase corporate value and answer the expectations of our stakeholders; 2) take responsibility for universal service and other regulations laid down in the NTT law ; and 3) contribute to the realization of Japan's IT strategy through the e-Japan Strategy and related initiatives. We strongly promised to contribute to the sustainable growth of society, with an awareness of our corporate social responsibility, and this basic management stance runs through each of our missions. In addition, with compliance and a strong commitment to protection of personal information through broadband
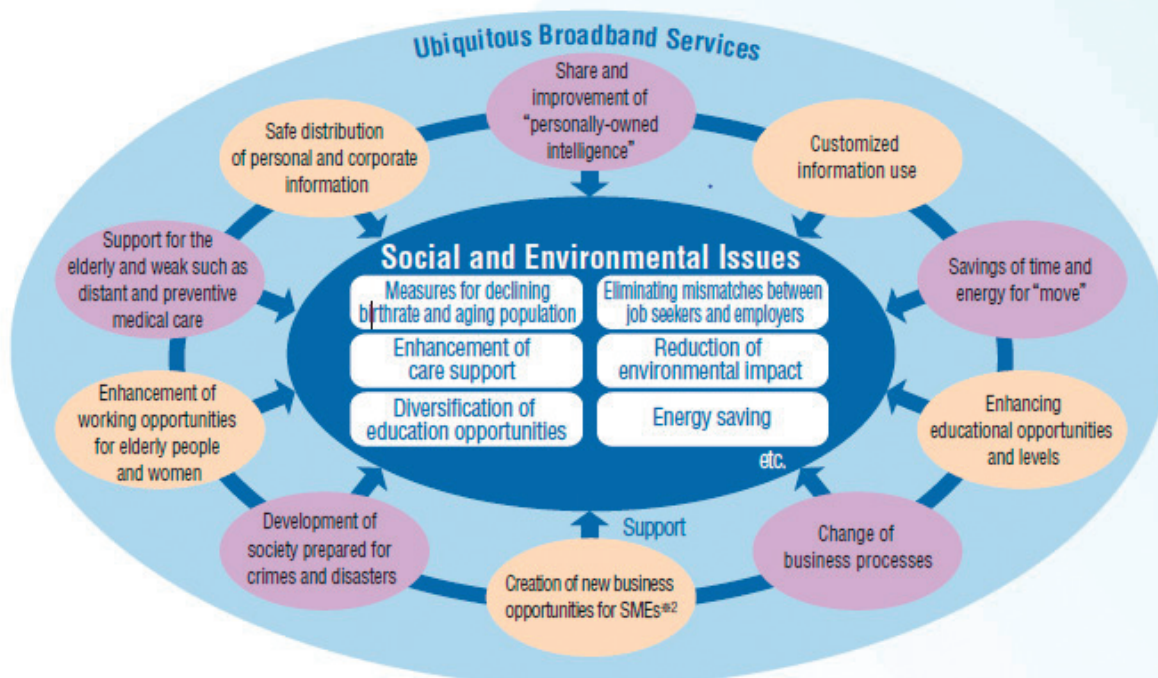
ubiquitous service, we have created the NTT Group's basic stance for CSR as making an even more active contribution to finding solutions to social and environmental problems that encompass not only Japan but the world.

Furthermore, on the basis of the Medium-Term Management Strategy we announced in November 2004, in order to achieve a safe and secure ubiquitous broadband society, we are aiming our CSR initiatives to fulfilling the role of aiming to overcome social and environmental issues not just from an environmental perspective in constant communication with all stakeholders.

Extract from CSR Report 2005

1. Increase corporate value and answer the expectations of everyone including our shareholders

2. Take responsibility for universal service and other regulations laid down in the NTT law

3. Contribute to the realization of Japan's IT strategy through the e-Japan Strategy and related initiatives

In addition to practicing "the imperative to contribute to the sustainable development of society while focusing on corporate responsibility" as a basic management principle within each of our three missions and maximally addressing full compliance and the protection of private information, we will contribute to solving various social and environmental issues in Japan and overseas through our ubiquitous broadband services[1].

[1] Broadband:High-speed, high-capacity communications
Ubiquitous:Access to the Internet and other information networks anytime, anywhere

The NTT Group will Help Solve Social and Environmental Issues by Supplying Ubiquitous Broadband Services.

Ubiquitous Broadband Services

- Share and improvement of "personally-owned intelligence"
- Safe distribution of personal and corporate information
- Customized information use
- Support for the elderly and weak such as distant and preventive medical care
- Savings of time and energy for "move"
- Enhancement of working opportunities for elderly people and women
- Enhancing educational opportunities and levels
- Development of society prepared for crimes and disasters
- Creation of new business opportunities for SMEs[2]
- Change of business processes

Support

Social and Environmental Issues

- Measures for declining birthrate and aging population
- Eliminating mismatches between job seekers and employers
- Enhancement of care support
- Reduction of environmental impact
- Diversification of education opportunities
- Energy saving

etc.

For the healthy development of a broadband society, customers must have access to safe and secure information and communications services providing connectivity. This requires standardization of connectivity and security from the customer's device to the network, as well as a network environment that gives customers a selection of providers and services.

Solving the digital divide[3] has also become a social issue. In order to realize a "vibrant aging society", it will be necessary to create a user-friendly environment that even unskilled users can access (e.g. working to simplify device and network service interfaces). Additionally, to stimulate local communities and promote remote-medicine and education, it will be necessary to solve regional differences in the development and availability of broadband services.

These issues must be addressed by a broad, unified coalition including industry participants and the government. The NTT Group intends to lend its full support to this effort.

※2 SMEs:Small sized and medium sized enterprises
※3 Digital divide:The gap between people skilled in the use of personal computers, the Internet, and other forms of information technology, and those without such skill

NTT created a CSR Committee chaired by a Senior Executive Vice President in June 2005 to establish a clear management structure for the sustained and systematic implementation of NTT Group CSR activities under two internal committees – the Global Environmental Protection Promotion Committee and Social Contribution Promotion Committee. Group CSR Liaison Meetings are also held periodically for Group companies to discuss issues and share information on their initiatives so as to coordinate CSR activities across the whole Group.

NTT Group CSR organization

- Board of Directors
- President (Executive Officers Meeting)
- Committees
  - CSR Committee
    - Group CSR Liaison Meetings
    - CSR promotion working groups
    - Global Environmental Protection Promotion Committee
    - Social Contribution Promotion Committee
  - Corporate Ethics Committee
  - Business Risk Management Committee
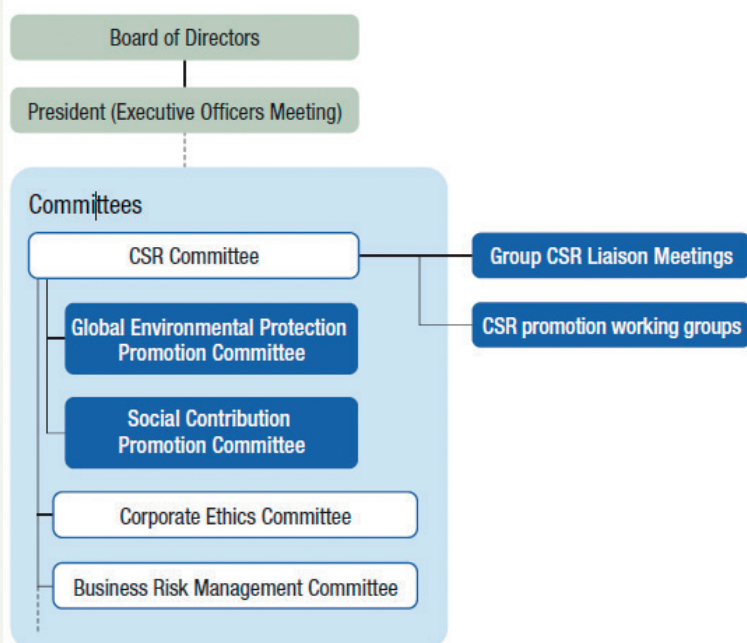
2006

The Establishment of NTT Group CSR Charter

NTT Group companies have long been involved in various activities to fulfill their corporate social responsibilities with respect to society, environment and economy in ways that make use of their respective strengths. However, to enable the NTT Group as a whole to make an even larger contribution to society, in June 2006 we established the NTT Group CSR Charter.
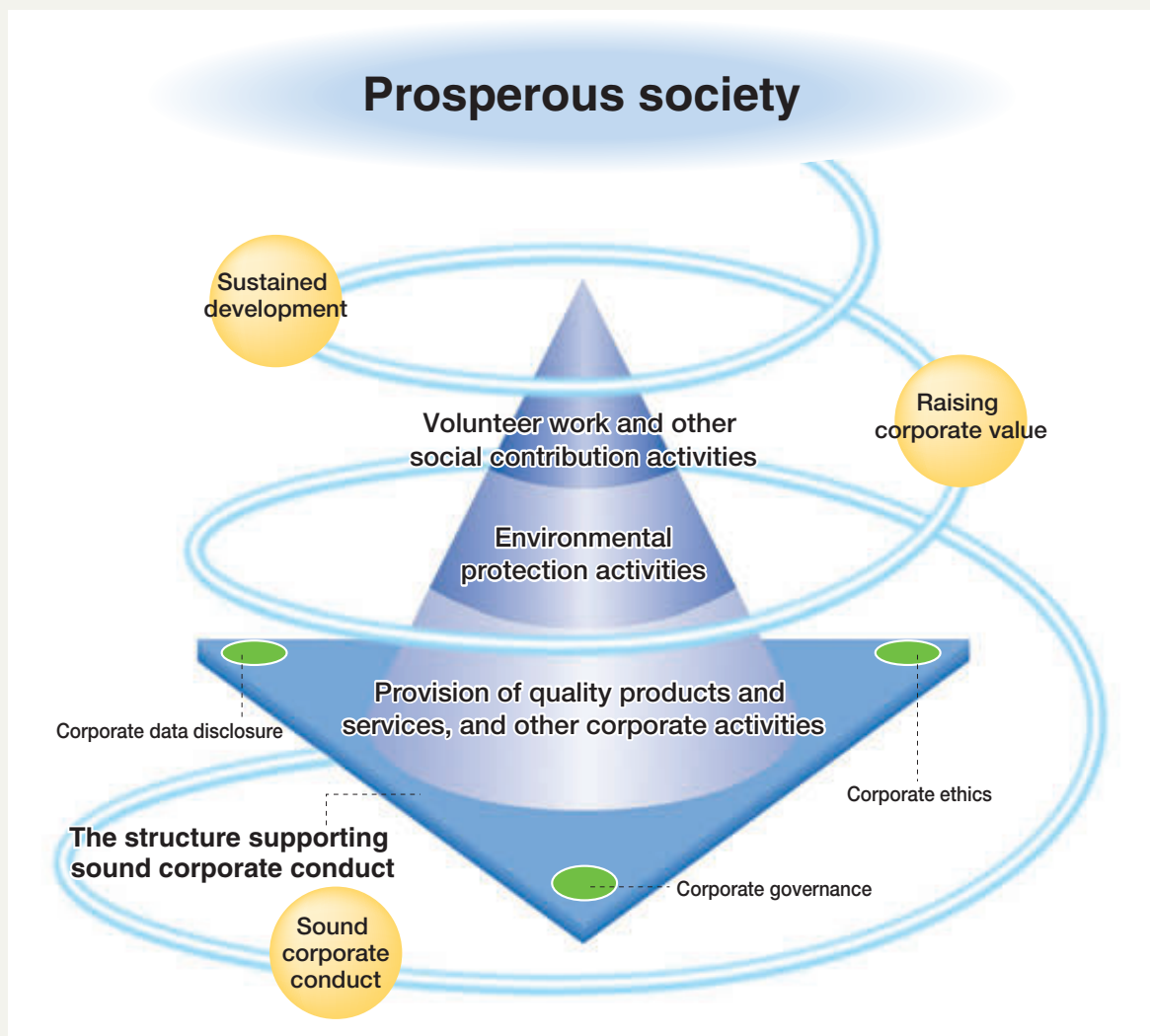
Extract from CSR Report 2006

Basic Approach to CSR
Ensuring Sound Corporate Conduct, and Contributing to the Creation of a Prosperous Society

Nothing could be more fundamental to the fulfillment of CSR than sound corporate conduct. This required not only compliance with laws and regulations, but also the application of high ethical standards to business conduct (corporate ethics), the active disclosure of financial and other information that the public has a right to know (corporate data disclosure), and mechanisms for the constant monitoring of business conduct (corporate governance). We feel that addressing the expectations of our stakeholders by implementing concrete endeavors

Prosperous society

Sustained development

Raising corporate value

Volunteer work and other social contribution activities

Environmental protection activities

Provision of quality products and services, and other corporate activities

Corporate data disclosure

Corporate ethics

The structure supporting sound corporate conduct

Corporate governance

Sound corporate conduct

based on the principles of the NTT Group CSR Charter - not only in our everyday work, but also through environmental protection and social contribution activities - contributes to our corporate value and our sustained development.

We of the NTT Group believe that by sustaining such activities, we can contribute to the creation of a safe, secure and prosperous society through communications that serve people, communities and the global environment.

NTT Group CSR Charter

The NTT Group CSR Charter, which consists of a statement of our commitment and four CSR goals linked by the common theme of communication, is now the basis on which the member companies of the NTT Group unite in the implementation of CSR activities.

Our Commitment

As a leader of the information and telecommunications industry, the NTT Group is committed to providing reliable, high-quality services that contribute to the creation of a safe, secure and prosperous society through communications that serve people, communities, and the global environment.

Our CSR Goals
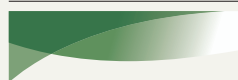
		CSR Priority Activities
Communication between people and their communities	1. We shall strive to create a richer and more convenient communications environment, and utilize our technology to contribute to the resolution of the various issues faced by societies with aging and declining populations.	• Helping to build a sustainable society through providing value to customers
Communication between people and the global environment	2. We shall strive both to reduce our own environmental impacts and build environment-friendly forms of communications, and to provide information and communications services that help to reduce the impact of society as a whole on the global environment.	• Creating a low carbon society • Implementing closed loop recycling • Conserving biodiversity
Safe and secure communication	3. While striving earnestly to ensure information security and resolve telecommunications-related social issues, we shall do our utmost to provide a safe and secure user environment and contribute to the creation and future development of communication culture. 4. Fully recognizing the role that telecommunications plays as critical infrastructure supporting society and protecting our livelihoods, we shall strive to offer secure and reliable telecommunications services fortified to withstand disasters and capable of connecting people irrespective of time, location, and other circumstances.	• Ensuring information security • Ensuring stable and reliable services as critical infrastructure
Team NTT communication	5. As Team NTT, we pledge to apply the highest ethical standards and awareness of human rights to our business duties, striving to fulfill our mission to society by working for the creation of pleasant workplaces, personal growth, and respect for diversity, and for the further development of a flourishing and vibrant community. • Team NTT comprises all NTT Group employees, including temporary employees, contract employees, employees of our corporate partners, and also former employees who endorse the NTT Group's CSR activities.	• Activities that contribute to respect for diversity and equal opportunity • Corporate citizenship activities

current as of 2014

The NTT Group's Vision for Environmental Contribution

In May 2006, the NTT Group announced its Vision for Environmental Contribution —a statement of its approach to reducing the environmental impacts of society as a whole through the provision of ICT services.

Our efforts to contribute to environmental protection have up to now been based on the NTT Group Ecology Program 21, our basic concept regarding environmental issues. Activities have included reducing the environmental impacts of our own business and developing technologies to reduce the environmental impacts of society as a whole.

Our Vision for Environmental Contribution clarifies our basic concept for providing ICT services that will reduce environmental impacts and also defines our CO_2 reduction target for 2010.

Our Vision for Environmental Contribution is a statement of our approach not only to reducing the environmental impacts of our business activities and implementing initiatives that benefit the environment, but also to contributing to environmental conservation by expanding the availability of ICT services.

The increased availability of ubiquitous broadband services which enrich the lifestyles of our customers and bring them greater convenience while reducing environmental impacts will also help us to achieve our goal of reducing CO_2 emissions by 10 million tons by 2010 as set down in our Vision for Environmental Contribution.

NTT Group Vision for Environmental Contribution

The NTT Group is helping to reduce the environmental impacts of its customers and society as a whole by developing and disseminating ubiquitous broadband-based ICT services that promote positive changes in lifestyles and business models.

[Reduction target for 2010]

| Reductions in CO_2 emissions as a result of ICT services | − | CO_2 emissions from providing ICT services | = | 10-million-ton reduction in CO_2 emissions |

Activities for achieving our targets for 2010

① Increase subscriber base for optical fiber services that enable lower impact lifestyles and business models
② Expand ubiquitous broadband services
③ Reduce the environmental impacts of our business activities
④ Reduce the electrical power required by customers' communications equipment

Launch of "NTT Dream Kids Net Town"

As one of our CSR initiatives, NTT Dream Kids Net Town 2006 was held in Tokyo and Sendai during July and August 2006. The event welcomed 940 visitors from its intended audience of 4th through 6th grade students who were fascinated to learn about the latest communications services and network structures.

The Internet and mobile phones have already become indispensable tools in our society, but they have also given rise to a range of social issues related to the appropriate and ethical use of ICT. To address such issues, we have been educating the public on appropriate ICT use and working to foster a wholesome ICT culture. Through these activities, we hope to contribute to the resolution of ICT-related social problems and the creation of a safer and more secure Internet and mobile communications environment.

As one part of "NTT Dream Kids Net Town 2006", staged jointly by NTT, NTT East, NTT West, NTT Communications, NTT DOCOMO and NTT DATA, since 2007 events designed to enable the children to learn about the fun and convenience of the Internet, smartphones and ICT services through actually experiencing them, while at the same time learning rules and manners for their safe and secure use have continued to be held. In 2014, the ninth year of the events, events were held in six locations throughout Japan, attracting over 1900 participants.

Implementation of 2006 NGN Field Trials

In December 2006, the NTT Group began field trials of its next-generation network (NGN), including the opening of showrooms in both Tokyo and Osaka, in preparation for launching commercial services at a later date.

Ubiquitous Protection and Nursing Care

Keeping track of schoolchildren on their way to and from school, and providing parents/guardians with real-time images

We live in an age in which parents and guardians of schoolchildren are always grateful for help in protecting their children from crime.

We are conducting field tests on a system that uses RFID tags to help keep track of children on their way to and from school and provide parents and guardians with real-time images of the children's location via RFID tag readers and network cameras set up in strategic locations.

Earlier such systems used the Internet and accordingly lacked the level of security required to protect the privacy of the children. This latest system, however, is able to use NGN's caller ID functionality to guard against spoofing and ensure that information and video images of children's whereabouts are viewable only when detected and only on the specific terminals of pre-registered parents or guardians.

Secure remote health monitoring of the people receiving nursing care

As Japan's population continues to age and shrink in size, more and more people see the provision of nursing care as an increasingly serious social issue. We are now field testing a new system that enables remotely located caregivers to monitor weight, blood pressure, and other health parameters while ensuring the privacy of those receiving care.

This system, which consists of a blood pressure gauge, weight scales, and a bed mat (known as Ai Mat) equipped with built-in sensors that monitor the subject's pulse, breathing, and body movements while sleeping, transmits all of this data automatically via NGN without the patient needing to do anything other than take routine measurements. Moreover, the NGN caller ID function can ensure that this information remains secure and unseen by unauthorized third parties.

IP Retransmission of Digital Terrestrial Broadcasts

The Ministry of Internal Affairs and Communications has proposed a policy promoting high definition digital terrestrial broadcast retransmission for IP TV starting in 2008, with the intent of helping ensure stable digital broadcasts in areas with poor signal reception as well as providing consumers with an additional viewing option.

Digital terrestrial broadcast IP retransmission is being field tested via NGN as part of a study of the public sector use of digital terrestrial broadcasts carried out by NTT Communications under the auspices of MIC's official research programs for fiscal 2009. IP retransmission involves reception at IP transmission centers of digital terrestrial broadcast signals encoded in MPEG-2, the standard video codec for such broadcasts, followed by conversion in real time to H.264, an advanced video codec featuring superior data compression. These video and data broadcasting signals are then retransmitted via NGN using IP multicast technology for viewing on IP TVs equipped with suitable receivers.

Telepathology Systems

The term "pathological diagnosis" refers to both gross and microscopic examination of tissues taken from patients for diagnostic purposes. Physicians who specialize in pathological diagnosis are known as pathologists, and are responsible for the final identification of a patient's illness. If pathological diagnosis can be carried out promptly during surgery, it can significantly reduce physical burdens on patients. There is, however, a chronic shortage of pathologists in Japan, where there are fewer than 2,000 of these specialists in practice nationwide. Because of this, patients at many facilities without a resident pathologist are currently forced either to accommodate the schedule of a visiting pathologist or to wait for their specimens to be examined at another facility.

One approach to alleviating this situation is the use of telepathology, which enables pathologists at remote facilities to perform diagnoses via a network. Telepathological diagnosis not only involves the handling of confidential patient information but also depends on the ability to transmit high-quality images with no data loss, which is why NGN's safe, secure, and high-quality communications make it the most suitable network available for the field testing of such systems.

2007

Launch of NGN-based Commercial Services

NTT launched NGN-based commercial services in parts of the Tokyo metropolitan area and Osaka Prefecture in March 2008.
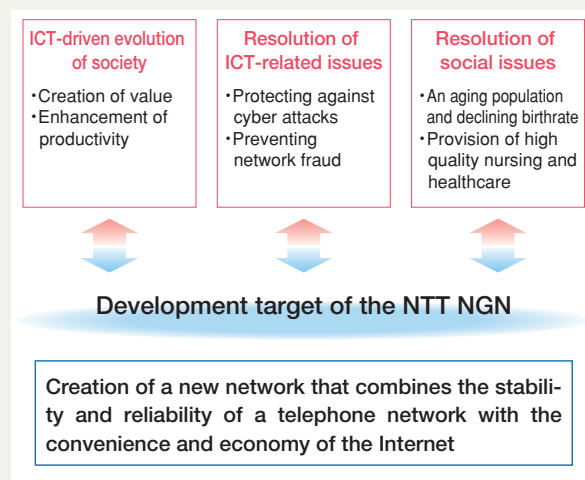
The Roles of NGN

NGN is designed to play three major roles.
1. To further drive the evolution of society through ICT and contribute to the creation of value and enhancement of productivity
2. To contribute to the resolution of ICT-related downside issues such as cyber-attacks and network fraud
3. To contribute to the resolution of social issues now faced by Japanese society, including an aging population and declining birthrate, and the need for ever greater levels of nursing and healthcare

NGN combines the stability and reliability of a telephone network with the convenience and economy of the Internet, and enables the safe and secure transmission of large volumes of data at high speeds. Whether for personal, business, or community applications, NGN helps users to enrich their communication experiences.

The NTT Group is promoting NGN as a major step in the realization of a society served by ubiquitous broadband communications that can help resolve ICT-related downside issues and other social issues.
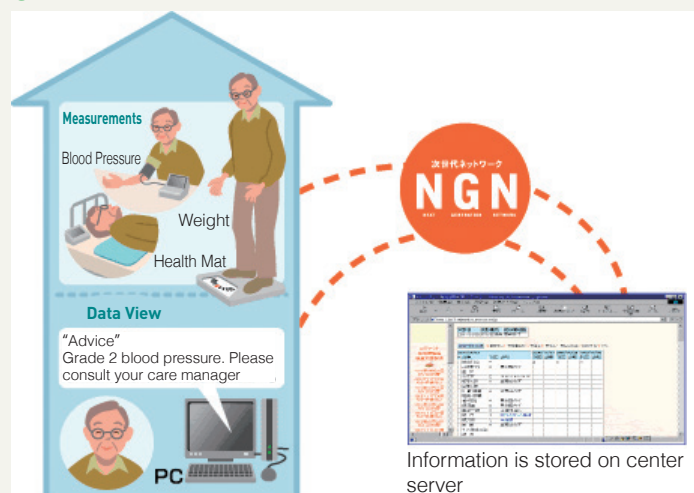
ICT-driven evolution of society	Resolution of ICT-related issues	Resolution of social issues
・Creation of value ・Enhancement of productivity	・Protecting against cyber attacks ・Preventing network fraud	・An aging population and declining birthrate ・Provision of high quality nursing and healthcare

Development target of the NTT NGN

Creation of a new network that combines the stability and reliability of a telephone network with the convenience and economy of the Internet

Examples of Activities that aim at leveraging ICT to address social issues

Trial of "Preventative Health Care" System at TelWel East Japan Setagaya Preventative Health Care Center

NTT and NTT East have established "aged healthcare" within the TelWel East Japan Setagaya Preventative Health Care Center. In order to create an NGN-based commercial service and to grasp the wide variety of customer needs and verify technology, we conducted an easy to understand and specific test with the Centre's customers using a preventative health care service that utilizes NGN.

Measurements

Blood Pressure

Weight

Health Mat

Data View

"Advice"
Grade 2 blood pressure. Please consult your care manager

PC

NGN
次世代ネットワーク

Information is stored on center server

About the Collaborative Empirical Trial of an Aged Care System
A New Aged Care System based on the Life Support Platform of Water Supply, Gas Meter

NTT, Nagoya City Waterworks and Sewerage Bureau and Toho Gas have together developed an aged care system based on the usage of water and gas meters. A test of the system was undertaken from January, 2008.

This collaborative empirical trial is the first initiative in Japan to create a system of aged care based on the combined readings of water and gas. Furthermore, by achieving this by using the life support platform utilizing NTT's telecommunications technology, a system with high development and operational potential was achieved.
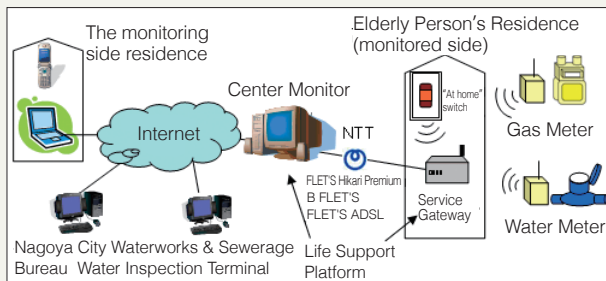
## "City of Nakatsugawa health trial" aimed at maintaining health

With the large scale merging of cities and towns during Heisei, there has arisen the problem of increased travelling distances for health guidance as the amount of areas in which medical and health professionals are allocated has decreased along with a decrease in the means of transport for elderly people with low mobility. We are attempting to leverage ICT to help alleviate this problem.

Furthermore, along with the rapid aging of society, the percentage of people with lifestyle diseases is increasing and these diseases account for the main cause of 30% of deaths. From April 2008, out of those with health insurance (national or employee health insurance), roughly 56 million of those above 40 years of age were diagnosed with "metabolic syndrome." For those in particular who were in the target range of needing "active support," changing their activities for 6 months and improving their lifestyle was deemed necessary by health advice.

However, compared to this target, there were very few advice staff. It was for this reason that an ICT system that has the potential to operate effectively as well as to advise on health efficiently.

To address this issue, since February 2008, NTT West and NTT have been working with the city of Nakatsugawa in Gifu Prefecture to run a trial of an ICT-based service to provide health guidance to such people.

In this trial, the "blood pressure guidance and management program" developed by NTT Micro System Integration Laboratories and the "Home Healthcare Platform" from the NTT Energy and Environment Systems Laboratories have been utilized as part of a remote health guidance system that is being evaluated and tested.
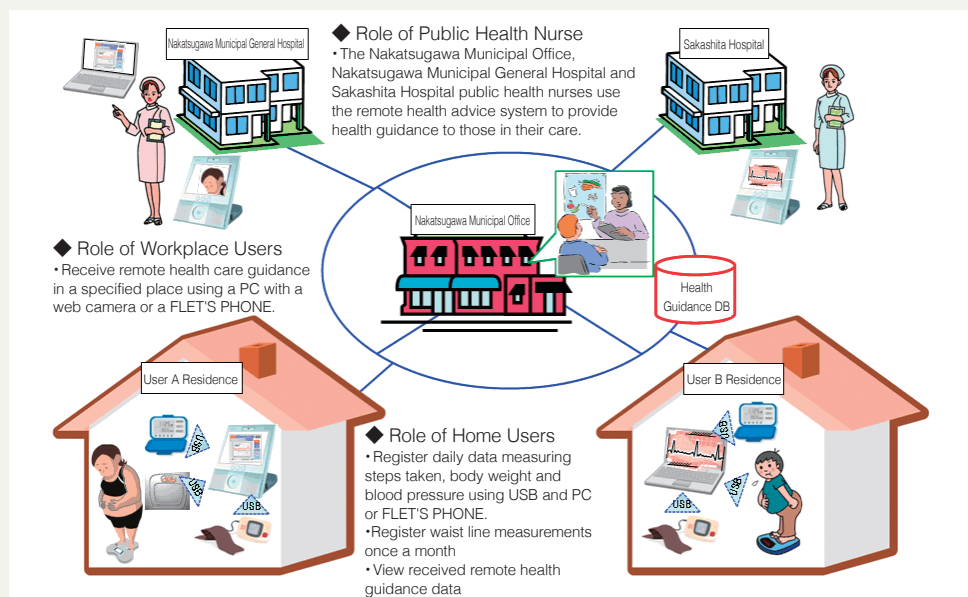
2008

Promoting "Green NTT Initiative"

In 1999, the NTT Group established the NTT Group Ecology Program 21. Furthermore, the group are working toward environment protection initiatives under the NTT Group Charter published in 2006. In May 2008, to make further contributions to stop global warming, we began to promote the use of renewable energy focused on solar power generation systems throughout the group as part of the "Green NTT" initiatives.

<Details of "Green NTT" Initiatives>

The NTT Group will install solar power systems with a total generating capacity of 5 megawatts by the fiscal year ending March 31, 2013 along with establishing NTT-Green LLP, a limited liability partnership charged with the task of driving the expanded use of renewable energies, with a focus on solar systems, within the NTT Group.

Specifically, progress is being made on the below initiatives.

1. Installation of Solar Systems within the NTT Group

The NTT Group has so far installed natural energy production systems with a total generating capacity of approximately 1.8 MW (across 112 locations) as we close to reaching our goal of a total generating capacity of 5 MW.

①. Green R&D Center

Implementation of solar systems and other facilities within the NTT Group's Research Laboratories
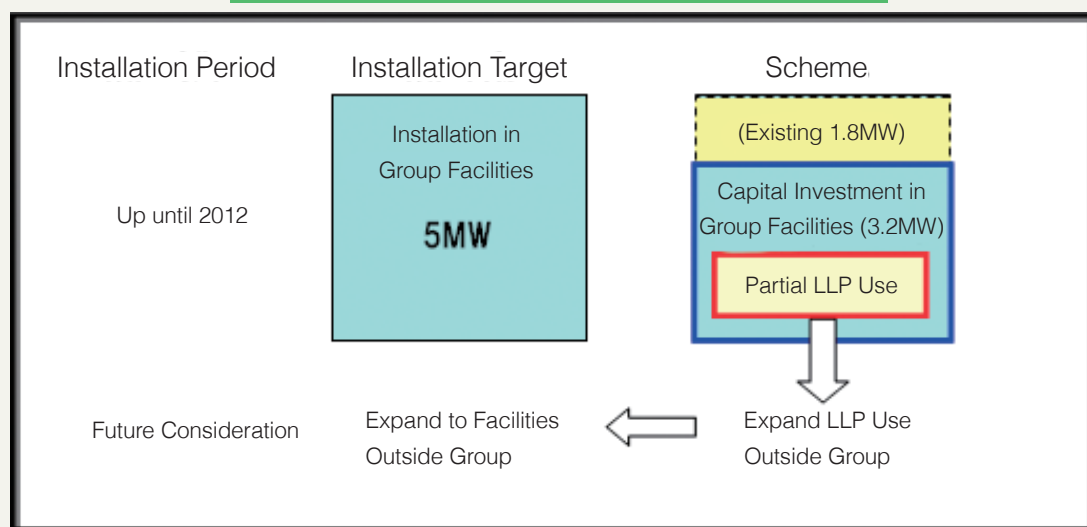
②. Green Facilities Centers

Starting with the communication facility centers and data centers of NTT Group companies, solar systems and other equipment will be installed in buildings used for business.

2. Establishment of NTT-Green LLP (a limited liability partnership) to Expand Natural Energy Use with a Focus on Solar Systems

In August 2008, we established NTT-Green LLP, a limited liability partnership charged with investment from Group Companies, for the task of driving the installation of solar systems in the NTT Group.

Along with actively promoting the installation of solar systems within the NTT Group, the LLP also investigate the possibilities for expanding its activities to companies outside the Group and further spreading solar systems in the future.

Comprehensive Measures Image of "Green NTT"

Installation Period	Installation Target	Scheme
Up until 2012	Installation in Group Facilities 5MW	(Existing 1.8MW) / Capital Investment in Group Facilities (3.2MW) / Partial LLP Use
Future Consideration	Expand to Facilities Outside Group	Expand LLP Use Outside Group

# Promoting the Use of Renewable Energy with NTT-Green LLP

NTT-Green LLP was established in August 2008 as the primary activity for promoting a Green NTT. Until fiscal 2013, we will install solar power generation systems with a total capacity of 5MW within the NTT Group facilities.

The Start of "NTT Green LLP"

The NTT Group established a limited liability partnership, NTT-Green LLP, in August 2008 (it was registered on September 9). It is part of the "Green NTT" initiative aimed at increasing the use of renewable energy sources, with special focus on solar power systems.

Within the NTT Group, there is the target of introducing 5 MW capacity solar power systems by FY 2013 with the LLP throughout the Group.

From fiscal 2009-2013, NTT Green LLP installed solar power systems in premises owned by NTT East and NTT West, and in the future plans to install these on the premises of local authorities and other companies as well as further promote the use of natural energy.
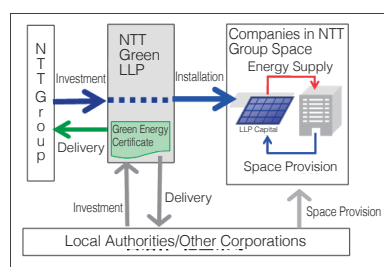
"NTT-Green LLP" Solar Systems

On February 1, 2010, NTT-Green LLP installed solar power systems in three premises owned by the Group and started to operate them. This is the first initiative in Japan that installs solar power systems on the basis of a corporations LLP and is a certified green business.

However, by including the generation capacity of three introduced systems was 530 kW, resulting that the Group now has a solar producing capacity of 3 MW when all other things are added.

| Installation Location	Group Companies	Generation Capacity
Tsukuba R&D Center (Tsukuba City, Ibaraki Prefecture)	NTT	100kW
East Japan Logistic Center (Kazo City, Saitama Prefecture)	NTT East	300kW
Nagoya Logistics Center (Niwa County, Aichi Prefecture)	NTT West	130kW

The Largest Scale Solar Systems in NTT Group Installed and Operating

On October 1, 2011, solar systems were installed and began operation in three new places. At the Chiba Distribution Center, the largest solar system in any NTT premises was installed. It generates 480kW. This is also the largest one in Chiba. With the installation of this system, the Chiba Distribution Center's total energy has been cut by 28% and has also contributed to supplying a steady power source even during times of power outages.

Installation Location	Group Companies	Generation Capacity
Chiba Distribution Center (Ishikawa City, Chiba Prefecture)	NTT LOGISCO Inc.	480kW
Billing Solutions Kyushu Center (Fukuoka City, Fukuoka Prefecture)	NTT COMWARE	60kW
Sapporo West Building (Sapporo City, Hokkaido)	NTT East	52kW

Achieving The Target of 5MW by the end of fiscal 2013

To further reduce our impact on the global environment, the NTT Group promoted energy creation through the active utilization of power systems exploiting natural energy, mainly solar energy, with the aim of expanding our total power system capacity to 5 MW by fiscal 2013. As a result, our total power system capacity grew to 5.1 MW by the end of fiscal 2013, attaining our initial goal.
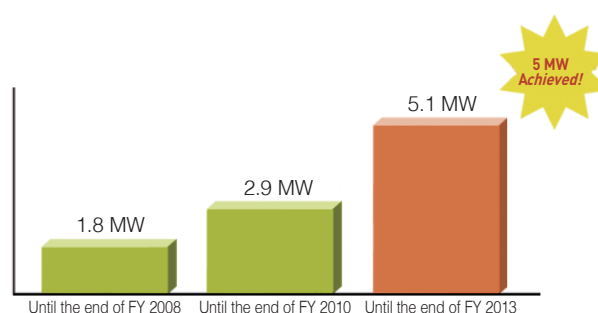
# Establishment of Four Areas of Priority Activities in NTT Group CSR Charter

After adopting our NTT Group CSR Charter in June 2006, we established our NTT Group CSR Priority Activities in November 2008 as common themes to be followed by all Group companies to promote the further implementation of the Charter and make an even greater contribution to the resolution of social issues both in Japan and overseas.

In deciding our CSR Priority Activities, we drew up a list of 49 CSR activities that we saw as important both to the NTT Group and to stakeholders and society at large. We then examined each activity to rate relative importance and PDCA management level to eventually narrow the list down to our eight CSR Priority Activities.
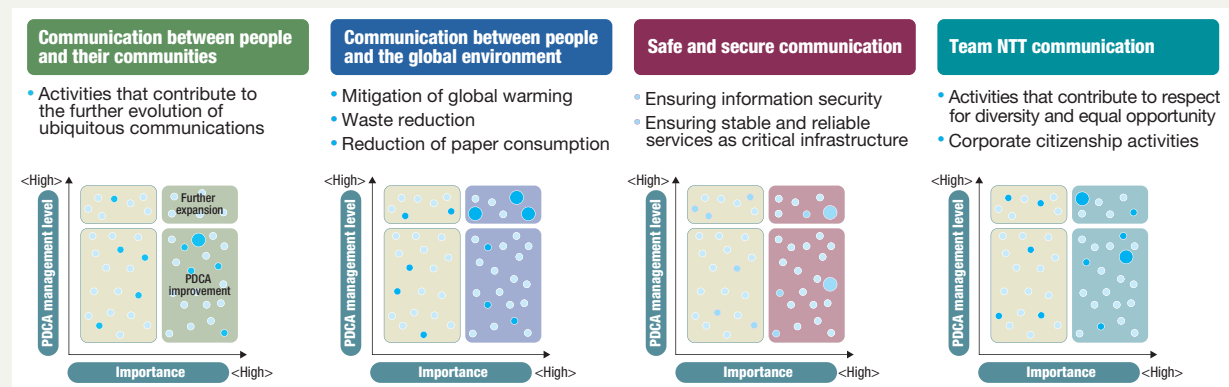
When we established the NTT Group CSR Priority Activities, we also drew up the Guidelines for NTT Group CSR Activities. Based on these Guidelines, the NTT Group works with Group companies to mutually monitor activity PDCA cycle status, and promote CSR activities that help to further cultivate Group unity.
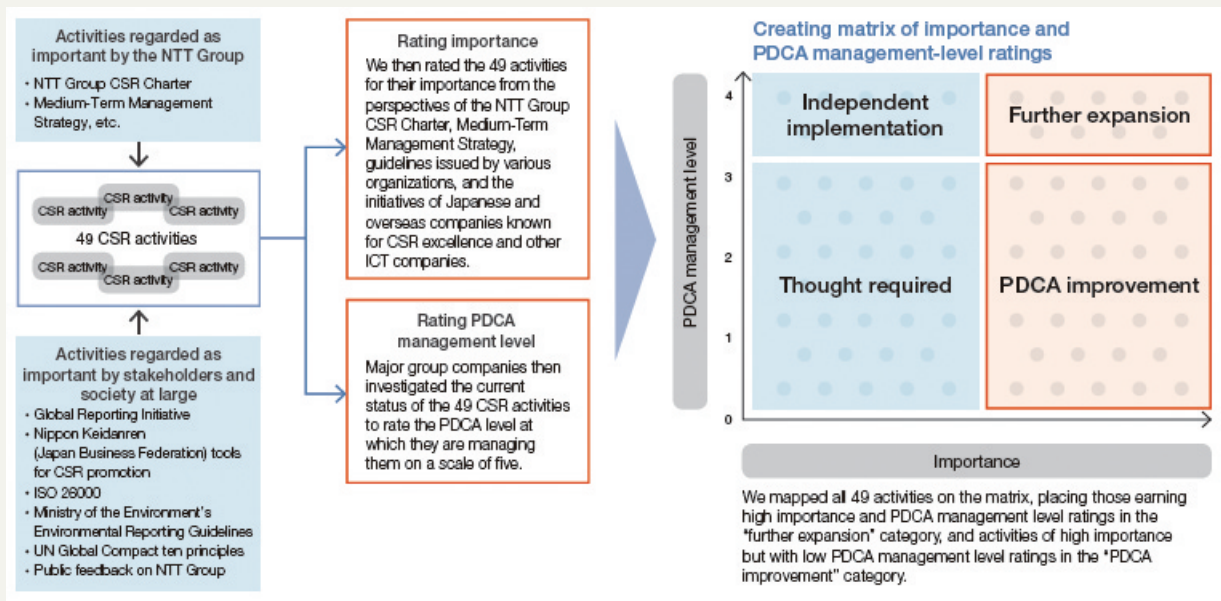
Selection of eight CSR Priority Activities from the two areas of high importance activities

Focusing on the two domains of high importance activities (further expansion and PDCA improvement), we selected one activity from each domain for each NTT CSR Charter goal to provisionally select a total of eight areas. We then considered these activities collectively in the light of public interests and NTT Group policies and plans to make a final selection of eight activities as our CSR Priority Activities*

* In the "Communication between people and the global environment" group, we decided to continue to pursue three Areas — mitigation of global warming, waste reduction, and reduction of paper consumption — that were established in March 2000 as NTT Group Principal Activity Plan Targets. In the "Communication between people and their communities" group, we combined several activities into one.

Communication between people and their communities
- Activities that contribute to the further evolution of ubiquitous communications

Communication between people and the global environment
- Mitigation of global warming
- Waste reduction
- Reduction of paper consumption

Safe and secure communication
- Ensuring information security
- Ensuring stable and reliable services as critical infrastructure

Team NTT communication
- Activities that contribute to respect for diversity and equal opportunity
- Corporate citizenship activities

※1 From fiscal 2014, "Helping to build a sustainable society through providing value to customers"
※2 From fiscal 2011, "Creating a Low Carbon Society," "Implementing closed loop recycling" and "Conserving biodiversity."

Examples of Activities that aim at leveraging ICT to address social issues

Trial Provision of Blood Pressure Management Services on the FLET'S Service

On April 24, 2008, NTT Data and NTT together started providing, on a trial basis, a blood pressure management service that supports the appropriate daily monitoring of at-home blood pressure. The system was provided as a component of the "Creative Health on FLET'S" service that is available exclusively to users of NTT West Corporation's FLET'S service on the FLET'S SQUARE website.

Initiatives of New Power Supply System for Energy Reduction in Telecommunication Buildings and Data Centers

The NTT Group, as part of its activities to reduce global warming, is promoting the installation and expansion of direct current power supply system that can contribute to low energy and developing new technology (high voltage direct current power supply system).

1.Developing high voltage direct current power supply system

The NTT Group is undertaking in the development and standardization of high-voltage direct current power supply technology, and will start installation by fiscal 2011.

2.Expansion of installation of direct current power supply systems

In the future, the NTT Group's communication systems and information systems' new facilities and updating, will promote the installation of direct current power supply system. Besides, we offer vendors to develop and expansion of the products corresponding to direct current. .

3.Popularization of direct current power supply systems

We will popularize the direct current power supply systems, that developed for a long time in telecommunications systems, through promoting in outside projects and international cooperation activities.

Remote Health Trials Using Flet's Hikari Next

NTT East and NTT DOCOMO held trials held among Group members for using NGN to conduct remote health checks.

Field Trials of "Ubiquitous Health Care Utilizing Active Tag" Project. Ubiquitous Special Business

NTT West and NTT took part in a field trial for the Ministry of Internal Affairs and Communications's Ubiquitous Health Care Utilizing Active Tag" Project. It was held in Okinawa from February 3, 2009.

Field Trial of "Next Generation Wireless Network." Ubiquitous Special Business

By achieving an environment ubiquitous sensor network that absorbs information about things economically in a network, NTT tested telecommunications infrastructure that supports safety, security, and eco. It was undertaken in six parts of Tokyo from March 31, 2009 to 2011.

At NTT Network Innovation Laboratories, through this test, the validity of developing a new wide area network with supporting companies was validated.

2009

Establishment of the Initiative for NTT Group CSR Priority Activities

We also drew up the Guidelines for NTT Group CSR Activities for Group companies to manage PDCA cycles in line with the Priority Activities. From fiscal 2010, Group companies are using the Guidelines to prepare and independently implement action plans for each Priority Activity according to the characteristics of their business through PDCA cycle management. We will also seek to take our activities to a higher level through leveraging Group synergy to promote active dialog between Group companies and the sharing of information on activities.

CSR goals	CSR Priority Activities	Examples of related major Group company initiatives*	
Communication between people and their communities	● Activities that contribute to the further evolution of ubiquitous communications	NTT EAST	Developing and providing services essential to the spread of broadband services for bridging the digital divide
		NTT Communications	Helping to enhance the productivity of customers through developing business communications tools that facilitate ubiquitous communication
Communication between people and the global environment	● Mitigation of global warming ● Waste reduction ● Reduction of paper consumption	docomo	Reducing waste and promoting the wise use of resources through enlisting the cooperation of customers to recycle mobile phones
		NTT FACILITIES	Using solar and other sources of renewable energy to reduce CO_2 emissions under the Green NTT initiative
Safe and secure communication	● Ensuring information security ● Ensuring stable and reliable services as critical infrastructure	NTT WEST	Creating a communications platform that people can depend on by strengthening measures to counter disasters and prevent communications system malfunctions in fiber optic-based broadband services
		NTT都市開発 NTT Urban Development Co.	Providing safe and secure buildings and high quality services based on rigorous safety and quality guidelines
Team NTT communication	● Activities that contribute to respect for diversity and equal opportunity ● Corporate citizenship activities	NTT DaTa	Implementing diversity management to create workplaces that will motivate and fulfill all employees
		NTT COMWARE	Helping to reduce CO_2 emissions and improve healthcare in developing countries through supporting the Ecocap Movement

※1 From fiscal 2014, "Helping to build a sustainable society through providing value to customers"
※2 From fiscal 2011, "Creating a Low Carbon Society," "Implementing closed loop recycling" and "Conserving biodiversity"

Examples of Activities that aim at leveraging ICT to address social issues
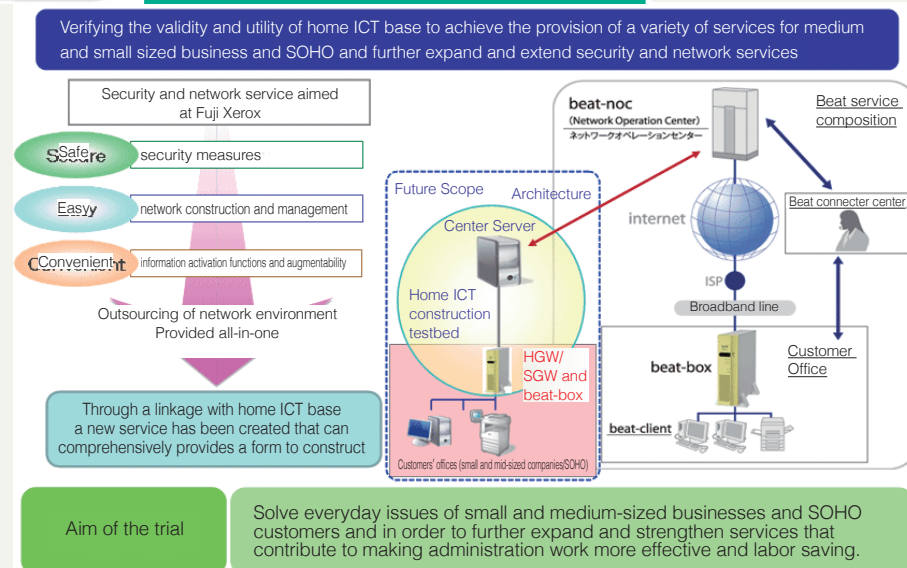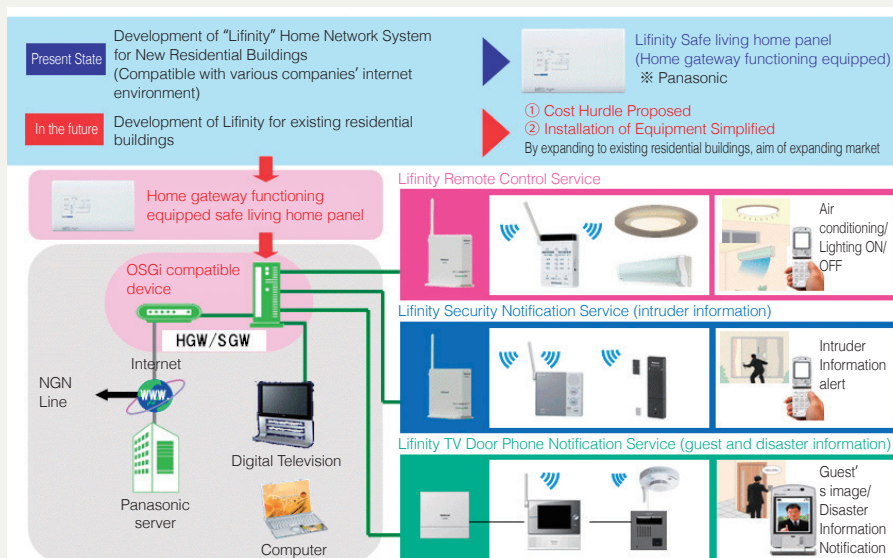
Field Trial related to Home ICT

The NTT Group is currently actively making a base for ICT focused on hikari, NGN and 3G/LTE. Furthermore working and collaborating with partners, we aim to be a "Service Creation Group" that achieves a new broadband ubiquitous service.

As one specific initiative, by not only connecting a PC but television, headphones, camera, printer and other home and office devices to a network, starting with customer service, security, healthcare, low energy and other areas,

we will achieve a more convenient, safer and more secure home/office environment. We will promote collaboration with many different partners. We have been promoting the development of home ICT base based on international standards employing NTT's research and development power up until now.

The trial started in December, 2009. NTT with Panasonic, Fuji Xerox, Sharp, NEC, and Buffalo aimed at realizing an office environment that is more prosperous and convenient by connecting home and office devices to a network.

Present State — Development of "Lifinity" Home Network System for New Residential Buildings (Compatible with various companies' internet environment)

In the future — Development of Lifinity for existing residential buildings

Lifinity Safe living home panel (Home gateway functioning equipped) ※ Panasonic

① Cost Hurdle Proposed
② Installation of Equipment Simplified
By expanding to existing residential buildings, aim of expanding market

Home gateway functioning equipped safe living home panel

OSGi compatible device

HGW/SGW

Internet

NGN Line

Panasonic server

Digital Television

Computer

Lifinity Remote Control Service — Air conditioning/Lighting ON/OFF

Lifinity Security Notification Service (intruder information) — Intruder Information alert

Lifinity TV Door Phone Notification Service (guest and disaster information) — Guest's image/Disaster Information Notification

Verifying the validity and utility of home ICT base to achieve the provision of a variety of services for medium and small sized business and SOHO and further expand and extend security and network services

Security and network service aimed at Fuji Xerox

Safe — security measures

Easy — network construction and management

Convenient — information activation functions and augmentability

Outsourcing of network environment Provided all-in-one

Through a linkage with home ICT base a new service has been created that can comprehensively provides a form to construct

Future Scope — Architecture
Center Server
Home ICT construction testbed
HGW/SGW and beat-box
Customers' offices (small and mid-sized companies/SOHO)

beat-noc (Network Operation Center) ネットワークオペレーションセンター
Beat service composition
internet
ISP
Broadband line
beat-box
beat-client
Beat connecter center
Customer Office

Aim of the trial — Solve everyday issues of small and medium-sized businesses and SOHO customers and in order to further expand and strengthen services that contribute to making administration work more effective and labor saving.

2010

Establishment of the Green Vision 2020

The NTT Group's new vision for the environment protection activities up to fiscal 2021 – The Green Vision 2020 –

The NTT Group has endeavored to protect the environment through the three priority activities of mitigating global warming, reducing waste, and reducing paper consumption. In November 2010, we added the conservation of biodiversity to these priorities, and drew up THE GREEN VISION 2020 as a new vision to guide our efforts for the environment protection activities up to fiscal 2021. Going forward, all group members will work as one to achieve the goals of this new vision.

THE GREEN VISION 2020

The three approaches of the NTT Group's vision for the environment up to 2020

The NTT Group will continue to leverage ICT and the combined talents of its workforce to contribute to the sustainable development of society. We intend to focus our efforts for the environment up to 2020 particularly on the three themes of creating a low carbon society, implementing closed loop recycling, and conserving biodiversity, and will drive those efforts through the three approaches of "Green of ICT", "Green by ICT", and "Green with Team NTT".

The NTT Group's three themes for the environment

Green of ICT
OF

Green by ICT
BY

WITH
Green with Team NTT

Conserving biodiversity
Pursuing activities that conserve biodiversity

Creating a low carbon society
Reducing both our own and society's CO$_2$ emissions

Implementing closed loop recycling
Efforts to achieve zero emissions

THE GREEN VISION 2020

Implementing three approaches

The NTT Group's three themes for the environment

The three themes of our new vision show the environmental issues that we should put greatest priority. We have set specific targets for each three themes. For example, where the theme of "creating a low carbon society" is concerned, we aim to reduce the CO_2 emissions of domestic group companies and to reduce the CO_2 emissions of society through the provision of ICT services.
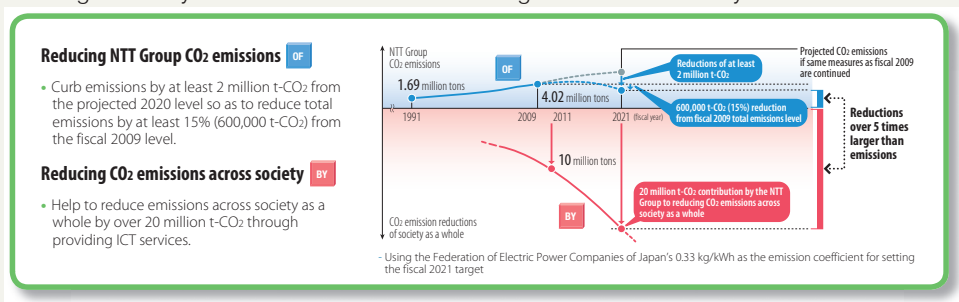
Similarly for the themes of "implementing closed loop recycling" and "conserving biodiversity", we have set specific policies and quantitative targets, and aim to contribute to the sustainable development of society through achieving them.

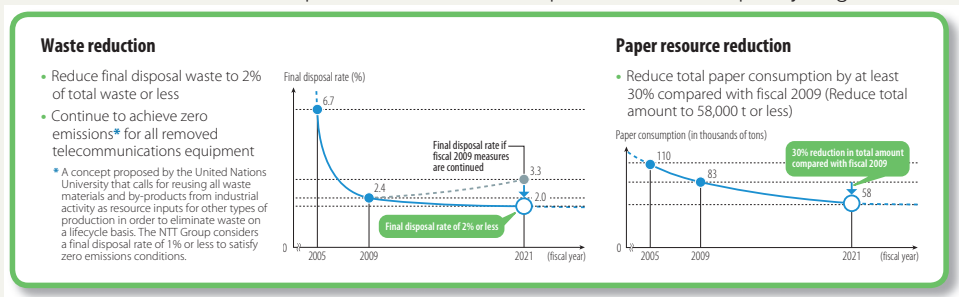# Specific Activities on the "Three Themes for the Environment"

1. Creating a Low-carbon Society

In an effort to address global warming, the NTT Group is working to reduce CO_2 emissions from its internal business operations and improve energy efficiency in society at large by driving the adoption and spread use of ICT services with the aim of contributing to society's overall emissions and achieving a low-carbon society.

Reducing NTT Group CO_2 emissions OF
- Curb emissions by at least 2 million t-CO_2 from the projected 2020 level so as to reduce total emissions by at least 15% (600,000 t-CO_2) from the fiscal 2009 level.

Reducing CO_2 emissions across society BY
- Help to reduce emissions across society as a whole by over 20 million t-CO_2 through providing ICT services.

NTT Group CO_2 emissions
1.69 million tons
OF
4.02 million tons
1991   2009   2011   2021 (fiscal year)

Reductions of at least 2 million t-CO_2
Projected CO_2 emissions if same measures as fiscal 2009 are continued
600,000 t-CO_2 (15%) reduction from fiscal 2009 total emissions level
Reductions over 5 times larger than emissions

CO_2 emission reductions of society as a whole
10 million tons
BY
20 million t-CO_2 contribution by the NTT Group to reducing CO_2 emissions across society as a whole

- Using the Federation of Electric Power Companies of Japan's 0.33 kg/kWh as the emission coefficient for setting the fiscal 2021 target

2. Implementing closed loop recycling

In order to use limited natural resources effectively, the NTT Group is working to reduce the amount of waste and paper consumption from its internal business operations and aims to implement closed loop recycling.

Waste reduction
- Reduce final disposal waste to 2% of total waste or less
- Continue to achieve zero emissions* for all removed telecommunications equipment
  - *A concept proposed by the United Nations University that calls for reusing all waste materials and by-products from industrial activity as resource inputs for other types of production in order to eliminate waste on a lifecycle basis. The NTT Group considers a final disposal rate of 1% or less to satisfy zero emissions conditions.

Final disposal rate (%)
6.7
Final disposal rate if fiscal 2009 measures are continued
3.3
2.4
2.0
Final disposal rate of 2% or less
0   2005   2009   2021 (fiscal year)

Paper resource reduction
- Reduce total paper consumption by at least 30% compared with fiscal 2009 (Reduce total amount to 58,000 t or less)

Paper consumption (in thousands of tons)
110
83
30% reduction in total amount compared with fiscal 2009
58
0   2005   2009   2021 (fiscal year)

3. Conserving Biodiversity

Efforts to preserve biological diversity are based on two newly formed initiatives that extend and improve upon previous ones.

The NTT Group's policy for biodiversity

Implementation based on business activities

Recognizing the close ties between human activities and biodiversity, we will monitor the scope and impact of our business activities both in Japan and overseas according to their features, and implement initiatives shown to benefit the conservation of biodiversity on a sustained basis.

Implementation based on social contribution

We will work with stakeholders to broadly implement initiatives for conserving biodiversity irrespective of their relevance to our business, and report the results of these efforts.

Implementing Three Approaches

In THE GREEN VISION 2020, the NTT Group proposes the three approaches of "Green of ICT," "Green by ICT," and "Green with Team NTT." "Green of ICT" refers to efforts to reduce the environmental impacts of our own business activities. "Green by ICT" refers to our efforts to reduce CO_2 emissions across society through providing ICT services. "Green with Team NTT" refers to efforts by group employees and their families to work with local communities to help protect the environment.

Specific Activities for the "Three Approaches"
(1) Green of ICT

Our Green of ICT approach entails reducing the environmental impacts of our own business activities and ICT utilization through developing more energy efficiency, renewable energy and implementation of reuse and recycling.

(2) Green by ICT

Green by ICT entails promoting the utilization and widespread use of broadband based applications that help to reduce environmental impacts across society as a whole.

(3) Green with Team NTT

Green with Team NTT refers to the efforts of NTT Group employees to reduce environmental impacts in their workplaces, homes, and local communities through the practice of an eco-lifestyle.

OF — **Green OF ICT**
Caring for the environment in our business activities

BY — **Green BY ICT**
Reducing environmental impacts across society through products and services

WITH — **Green WITH Team NTT**
Protecting the environment together with our employees, their families, and local communities

"Conserving Biodiversity" Added to NTT Group Global Environmental Charter

Everything we do, whether in our everyday lives or during the business activities of the NTT Group, is connected to the various life forms that exist on this planet. For this reason, the sustainable development of society will be impossible without an eye turned to biodiversity. Aware of this fact, the NTT Group takes the utmost care in preserving the natural environment in the areas surrounding sites where it builds offices, operates bases, or base stations in addition to where it lays telecommunications cables.

In October 2010, the tenth meeting of the Conference of the Parties on the Convention of Biological Diversity (COP10) was held in Nagoya with a focus on initiatives at the corporate level to conserve biodiversity.

Considering our role as a leading member of the ICT industry not only in Japan but throughout the world, the NTT Group formulated and announced a new vision for the environment up to fiscal 2021. We added the Conservation of Biodiversity to the basic policies outlined in the NTT Group Global Environmental Charter, and drew up THE GREEN VISION 2020 as a new vision to guide our efforts for the environment up to fiscal 2021.

Establishment of NTT Group Energy Efficiency Guidelines

Eight NTT Group companies[1] have drawn up the NTT Group Energy Efficiency Guidelines that set forth our basic approach to the development or purchase of routers, servers, and other ICT equipment, and set performance targets according to device. These new guidelines, which went into effect on May 1, 2010, implement how we will from now on develop or procure ICT devices for use within the NTT Group on the basis of energy conservation performances as well as functionality, performance, and cost.

More than 90% of CO_2 emissions associated with NTT Group business activities are attributed to the use of electricity for powering the company's offices and equipment. In order to effectively roll back its CO_2 emissions, it is imperative for the NTT Group to develop and procure equipment for group power systems that deliver high energy-efficient performance/function. The Guidelines refer to the Ecology Guideline for the ICT Industry set forth by the ICT Ecology Guideline Council.

[1]. The eight NTT Group companies are NTT Corporation, NTT East, NTT West, NTT Communications, NTT DOCOMO, NTT DATA, NTT FACILITIES and NTT COMWARE.

Eight NTT Group Companies Acquire Eco ICT Logo

In the area of ICT, The Ecology Guideline Council began receiving applications from July 2010 from telecommunications service providers based on the self evaluations who were reducing CO_2 emissions. Eight NTT Group companies [1] submitted sent applications based on self-evaluations and received the Eco ICT Logo. The Eco ICT Logo is a mark to signify efforts to reduce CO_2 emissions by electronics makers.

After first receiving the mark on July 1, many Group companies began to receive it.

Examples of Activities that aim at leveraging ICT to address social issues

Leveraging overhead cable stringing technology to help protect endangered species

NTT East Yamanashi Branch Group and Technical Assistance and Support Center have since April 2009 been supporting the animal pathway creation efforts of the Animal Pathway Research Society (APRS) in Hokuto City, Yamanashi Prefecture.

Animal Pathways are bridges or tunnels connecting wildlife habitat that has been divided by roads to help protect populations of endangered species such as the Japanese dormouse (about 8 cm long) that use tree branches as paths.

Creating and maintaining such pathways for small treed welling animals invariably involves equipment and technology for stringing overhead cables. The Yamanashi Branch is leveraging its cable stringing expertise to support these efforts by providing boom lift trucks and veteran operators for such work.

This initiative was recognized in May 2010 with a Minister of the Environment award in the Keidanren Committee on Nature Conservation's 1st Contest for Corporate Activities on Biodiversity. NTT will continue to help protect tree-dwelling animals through supporting the spread of animal pathways.

Group wide TPR campaign to reduce electricity consumption

Over 90% of the CO_2 emissions produced by NTT Group business operations are attributable to office and power consumption of telecommunications equipment. The NTT Group accordingly created a group wide energy conservation strategy called Total Power Revolution (TPR) in October 1997 to reduce its power consumption. By promoting efficient energy management at buildings owned by NTT, installing energy-efficient electrical power units and air conditioning systems, and switching to energy-saving DC power supply for broadband equipment, we managed to reduce power consumption across the NTT Group by 265 million kWh in fiscal 2011.

Reducing the environmental impacts of company ICT infrastructure through server virtualization and integration

NTT Communications is reducing environmental impacts as well as cutting operation costs and boosting business continuity by integrating the company ICT infrastructure that underpins its services and using server virtualization technology to create a private cloud.

Starting in fiscal 2010, it had by July 2010 consolidated 94 physical servers into just eight, a reduction of approx. 90%. This integration resulted in a reduction in electricity consumption of about 50% by the end of fiscal 2011 compared with end of fiscal 2010. NTT Communications plans to implement this measure globally, expanding its environmental protection initiatives alongside growth of its global business.

2011

Restoration Efforts after the Great East Japan Earthquake

Extracted from CSR Report 2011

At 2:46 p.m. on March 11, 2011, an M9 earthquake — the strongest one since Japan started measuring such events — struck off Miyagi Prefecture's Sanriku coast, shaking much of Japan's Tohoku and Kanto regions with tremors of a seismic intensity of 5 or more. The quake also triggered huge tsunamis that took many thousands of lives and caused immense destruction along Japan's Pacific coast.

This unprecedented disaster caused extensive damage to NTT Group communications facilities, as a result of which some services became unavailable. We put together a team of over 10,000 and pooled all of our resources to carry out repairs. As a result, we managed to rehabilitate almost all communications buildings and mobile phone base stations by the end of April. We are doing our utmost to restore services in areas where the damage was so serious as to prohibit complete restoration until roads and other infrastructural components are repaired.
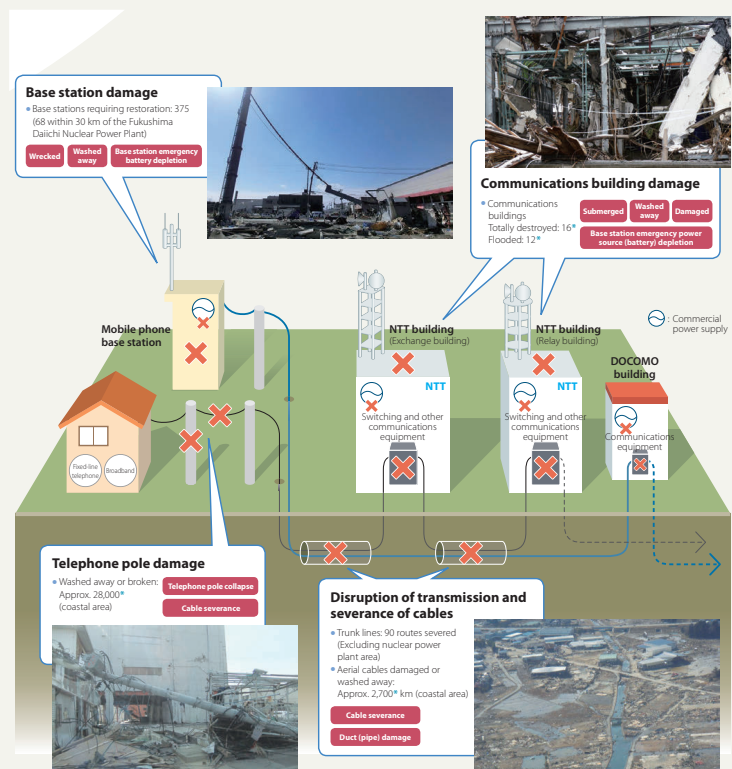
To fulfill our responsibilities with respect to the Great East Japan Earthquake, we called on all of our capabilities not only to restore telecommunications infrastructure damaged by the disaster, but also to support recovery efforts in affected areas through ICT, including the provision of emergency message services, and lending of satellite mobile phones and public Wi-Fi services at no charge. Moving forward, we will endeavor to further enhance our disaster preparedness by building even more disaster-resistant networks, providing new disaster services, and improving existing services. Moreover, in the light of power shortage issues triggered by the disaster, we are striving as one to fulfill our responsibility as a telecommunications provider whose operations consume great amounts of electricity by implementing energy-saving measures across the whole Group.

Damage caused by the earthquake

The powerful earthquake and tsunamis caused extensive damage to NTT Group telecommunications buildings and equipment.

NTT East, which provides fixed-line communications, data communications, and other regional telecommunications services in eastern Japan, suffered the total destruction of 18 telecommunications buildings in coastal locations where they were engulfed and some even swept away by the tsunamis, as well as the loss or breakage of over 60,000 telephone poles. Trunk line aerial cables were also severed and other assets damaged.

Many mobile phone base stations operated by NTT DOCOMO, which provides nationwide mobile communications services, were also wrecked or washed away, or suffered battery depletion due to prolonged power outages, as a result of which transmission by 375 base stations was disrupted at the peak of the disaster.

Base station damage
- Base stations requiring restoration: 375 (68 within 30 km of the Fukushima Daiichi Nuclear Power Plant)

Wrecked | Washed away | Base station emergency battery depletion

Communications building damage
- Communications buildings Totally destroyed: 16* Flooded: 12*

Submerged | Washed away | Damaged
Base station emergency power source (battery) depletion

: Commercial power supply

Mobile phone base station

NTT building (Exchange building)
NTT
Switching and other communications equipment

NTT building (Relay building)
NTT
Switching and other communications equipment

DOCOMO building
Communications equipment

fixed-line telephone | Broadband

Telephone pole damage
- Washed away or broken: Approx. 28,000* (coastal area)

Telephone pole collapse
Cable severance

Disruption of transmission and severance of cables
- Trunk lines: 90 routes severed (Excluding nuclear power plant area)
- Aerial cables damaged or washed away: Approx. 2,700* km (coastal area)

Cable severance
Duct (pipe) damage

*As of November 2011. Changed from figures announced on March 30, 2011 (preliminary figures) as a result of detailed field audits.

Efforts to restore communications

First ever Disaster Countermeasures Office established to work with other organizations

After the earthquake struck, NTT declared a 1st level emergency situation in line with the disaster readiness plans1 that it drew up and discloses as a designated public institution 2 under the Basic Act on Disaster Control Measures, and established a Disaster Countermeasures Office on the 6th floor of its Otemachi Teishin Building, gathering a team of about 30 under the president.

The Disaster Countermeasures Office identified the damage suffered by group companies and served as NTT's interface with the central government's Emergency Disaster Response Headquarters 3 (headed by the prime minister), the cabinet, and other relevant ministries and agencies, centralizing coordination functions and ensuring the smooth and appropriate execution of disaster readiness plans.

Providing backup to group companies endeavoring to secure critical communications

In addition to checking on the safety of group employees and identifying extent of damage in the initial phase immediately after the earthquake, the Disaster Countermeasures Office gathered information on the fuel requirements of group companies and reported these requirements to relevant government agencies in order to maintain group company telecommunications building functions in the face of likely fuel supply exhaustion as a result of prolonged wide-area power outages. We also provided group companies with whatever backup they needed to secure critical communications.

In relation to the planned blackouts in Tokyo Electric Power Company's supply area as a result of the Fukushima Daiichi Nuclear Power Plant accident, we submitted requests regarding group wide fuel requirements to relevant government agencies to ensure the maintenance of communications services.

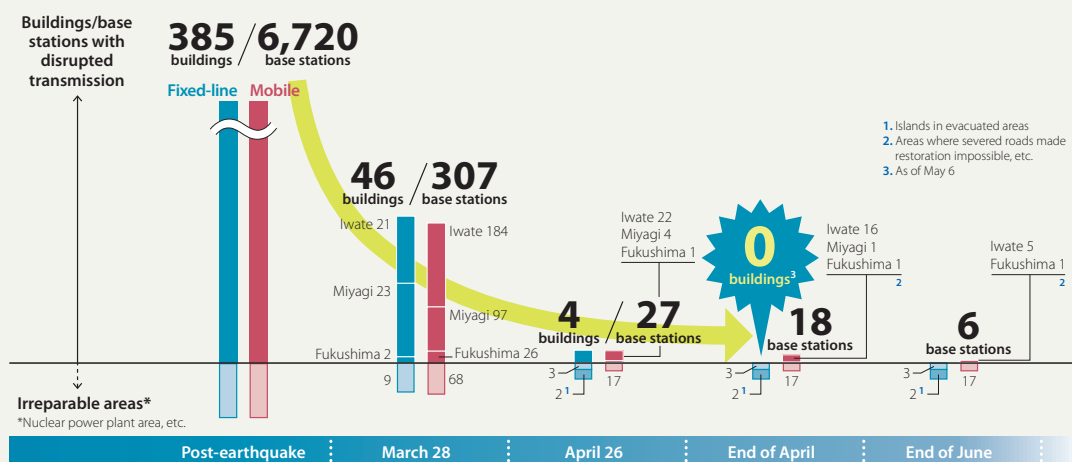## Restoration of telecommunications infrastructure

To fulfill their public mission and social responsibility as providers of the telecommunications infrastructure that was so vital to the affected areas, NTT Group companies such as NTT East, which provides fixed-line communications in eastern Japan, and NTT DOCOMO, which provides mobile communications services, devoted themselves to restoring communications facility buildings and equipment in affected areas with the help of over 10,000 NTT Group and telecommunications construction company personnel.

With respect to the Fukushima Daiichi Nuclear Power Plant accident, we restored electricity supply with the cooperation of the power company and then restored communications buildings in areas designated at the time as evacuation areas so as to restore fixed-line, mobile phone, and other communications services to customer residential areas.

At the peak of the disaster, 385 communications buildings were unable to function, and about 1.5 million customer lines were cut off. NTT East examined the damage at each building to decide on the speediest possible means of restoring them, and with help from NTT West and other group companies, succeeded in rehabilitating almost all of them by the end of April.

NTT DOCOMO also restored about 90% of the 6,720 mobile phone base stations damaged by the earthquake and tsunamis by the end of April, using various means including expanding the range covered by functioning base stations.

The earthquake damaged parts of international submarine cable linking Japan with the USA and other parts of Asia, but NTT Communications managed to maintain transmission for its international services by using other routes.

Buildings/base stations with disrupted transmission

385 buildings / **6,720** base stations

Fixed-line   Mobile

46 buildings / **307** base stations
Iwate 21   Iwate 184
Miyagi 23   Miyagi 97
Fukushima 2   Fukushima 26
9   68

4 buildings / **27** base stations
3   17
2 1

Iwate 22
Miyagi 4
Fukushima 1

0 buildings3

18 base stations
Iwate 16
Miyagi 1
Fukushima 1
              2
3   17
2 1

6 base stations
Iwate 5
Fukushima 1
              2
3   17
2 1

1. Islands in evacuated areas
2. Areas where severed roads made restoration impossible, etc.
3. As of May 6

Irreparable areas*
*Nuclear power plant area, etc.

| Post-earthquake | March 28 | April 26 | End of April | End of June |

Providing assistance to affected areas

Restoring Public Infrastructure

In areas affected by the earthquake, NTT Group communications buildings and equipment suffered extensive damage, resulting in widespread connection problems and total loss of both mobile and fixed-line communications in some areas. Both to victims themselves and to everyone else praying for the recovery of affected areas, nothing is more important in an emergency situation than information on missing people and the restoration of essential services.

The NTT Group accordingly endeavored to fulfill its social mission by securing mobile, fixed-line, Internet, and other means of communication, assisting local authorities in affected areas by leveraging ICT, providing supplies to support living environments, and various other activities in addition to providing emergency services such as Disaster Emergency Message Dial.

Main activities for securing means of communications

Securing means of communications and use of ICT	**Fixed-line and mobile** / **Internet**	**Deployment of specially installed public telephones using portable satellite equipment: approx. 3,600 phones**
		Deployment of mobile base station vehicles: approx. 30 units
		Free use of satellite mobile phones: approx. 900 units **Free use of mobile phones: approx. 2,100 units** **Installation of free battery recharging stations: approx. 410 stations**
		Deployment of free Internet booths: 336 locations Cooperation with other businesses in providing broadband Internet as a means of obtaining information
		Free use of tablet devices: approx. 670 units
		Provision of free access to public wireless LAN services (FLET'S SPOT, etc.) Free for earthquake victims and persons engaged in volunteer activities
	ICT-based assistance	**Provision of portal sites to provide livelihood support information to affected persons (operational status of evacuation centers, water supply locations, stores, etc.)**
		Government-related — • **Free provision of pre- and post-earthquake/tsunami map data and aerial photographs to government agencies, etc.**
		Healthcare-related — • **Free provision of videophones, etc. for remote health consultations at evacuation centers** Provision for Minamisoma City in Fukushima Prefecture and Tono City in Iwate Prefecture to support the activities of volunteer organization Great East Japan Earthquake Disaster Area Continuous Care and Cure Network Project (C3NP)
		Education-related — • **Free provision of mass notification systems for schools to communicate with parents/guardians** • **Support for the creation of student learning environments** Collaboration with education experts and education industry partner companies to provide learning drills for tablet devices, etc.
Safety confirmation		**Disaster Emergency Message Dial: approx. 3.3 million messages** **Disaster Emergency Broadband Message Board: approx. 260,000 messages** **Disaster Message Board Service: approx. 4.47 million messages**
		Message handling Saving and passing on messages from earthquake victims
Life support		**Provision of company housing (54 premises, approx. 3,400 homes) and land (12 premises)** Provided as living space for disaster victims at the request of local authorities
		Provision of free telephones to temporary housing, etc.: initially 30,000 phones
Other		**Donation of ¥1 billion from the NTT Group**
		Donations of approx. ¥1 billion through an affected area support charity site and member service point exchange program
		Waiver of basic monthly charges, etc. for the periods that communications services were unavailable
		Use of agricultural products grown in the affected areas at company cafeterias

• Taken from press materials issued on April 27, 2011

Revision of CSR Charter

In November 2010, the ISO 26000 international standard for social responsibility was published. Responding to this development as a globalizing enterprise, we reviewed our CSR Charter in fiscal 2011 to bring our CSR management in line with the international standard, and in June 2011 rephrased parts of it to more clearly express our stance with respect to human rights and work practices, two central themes of the ISO 26000 standard. We are also planning to revise our basic policy on human rights with the same intentions.

2012

Establishment of Basic Policies on Human Rights

Based on the Universal Declaration of Human Rights and other references, NTT has long endeavored to address the Dowa problem (discrimination based on ancestry in Japan) and other human rights issues, and create a corporate culture opposed to any form of discrimination. To take an even more proactive approach to respect for human rights in the light of growing awareness of their importance worldwide, we established our Basic Policies on Human Rights in June 2012.

Our Basic Policies on Human Rights

Nippon Telegraph and Telephone Corporation, hereunder NTT, believes that human rights is an important issue, and recognizes the fact that making efforts towards promotion of and respect towards human rights is a social responsibility that all companies should discharge. NTT aims to build up corporate culture that respects human rights in order to build a safe secure and enriched society.

1. The NTT management themselves take a lead in respecting human rights of all the stakeholders.
2. NTT will, through its business activities, strive for a solution on the Dowa Issue* and other human rights issues.
3. NTT respects diversity, promotes equal opportunity, and strives to create a healthy working environment that is free of harassment issues.
4. NTT will, and from the standpoint of respect to human rights, review its operation, as appropriate, and will adapt and improve these to its business activities.
5. NTT will, through its Human Rights Education Committee, initiate and execute employee-focused activities.
6. NTT is committed to supporting its Group companies in their efforts to raise awareness on human rights issues.

Furthermore, all NTT Group companies provide workshops, e-learning courses and other programs that enable employees to learn about these issues on a multifaceted continuing basis. Other activities to boost and establish awareness of human rights include soliciting slogans and ideas for posters promoting awareness of human rights from NTT employees and their families, the best of which are compiled into calendars and distributed around the workplace.

Setting of Quantitative Indicators for CSR Priority Activities

To implement common CSR initiatives across the Group based on our NTT Group CSR Charter, we drew up eight NTT Group CSR Priority Activities in fiscal 2009, and from fiscal 2012, started to set common groupwide quantitative indicators. With the completion of this process for all eight Priority Activities in fiscal 2013, we have further integrated CSR initiatives with the businesses of group companies, enhancing groupwide activities as a result.

CSR goals	CSR Priority Activities	Quantitative indicators (fiscal 2014)	Fiscal 2013 results
Communication between people and their communities	Helping to build a sustainable society through providing value to customers	Number of new products/services qualifying as contributing to sustainable society[1]	Continued implementation of CSR action plans[3] Example: Elimination of digital divides by working with communities to provide broadband services
Communication between people and the global environment	Creating a low carbon society	Reduction of CO_2 emissions[2]	**CO_2 emissions reduced to 4.411 million tons**
	Implementing closed loop recycling	Waste product reduction[2] Paper consumption reduction[2]	Final disposal rate for all waste materials reduced to 1.45%, continued achievement of zero emissions for decommissioned telecommunications equipment, total paper consumption reduced to 68,000 tons
	Conserving biodiversity	Common qualitative initiatives for ecosystem preservation and forest improvement activities[2]	Tree planting: Kesennuma Oshima Earthquake Recovery Support Activity - GTN Green Pearl Coastal Forest Regeneration Project, docomo Woods, etc.
Safe and secure communication	Ensuring information security	Number of employees receiving information security training	237,125
	Ensuring stable and reliable services as critical infrastructure	Service stability[1] Number of serious accidents[1]	Continued implementation of CSR action plans[3] Example: Providing high quality, stable communications services
Team NTT communication	Promoting respect for diversity and equal opportunity	Ratio (number) of women in managerial positions	3.5% (383)[4]
	Citizenship activities	Number of Operation Clean Environment (local community cleanup) participants Number of PET bottle caps collected (Ecocap Movement)	Operation Clean Environment (local community cleanup) participants: Approx. 119,000 participants PET bottle caps collected (Ecocap Movement): Approx. 33 million caps

1. From fiscal 2014
2. Initiatives leading up to fiscal 2021
3. Prepared by group companies for each CSR Priority Activity in line with the nature of their respective businesses
4. Number at section manager level or higher in NTT, NTT East, NTT West, NTT Communications, NTT DOCOMO, NTT DATA, NTT FACILITIES, NTT COMWARE and NTT Urban Development as of the end of fiscal 2013

Examples of Activities that aim at leveraging ICT to address social issues

Launch of the "J-anpi" All-Japan Safety Confirmation Portal for Disaster Website in Conjunction with NHK

In March 2011, with the Great East Japan Earthquake, there were many efforts to collect and share safety confirmation information among telecommunications providers, news outlets, companies and organizations. Many people used these to check on the safety of family members or friends and acquaintances. On the one hand, there were many different sources of information and users could not get the information they needed without checking many different sources, which took a lot of time.

In relation to this issue, different telecommunications providers strengthened co-operation on their message boards and countermeasures. This time, in addition to various telecommunications providers providing emergency message boards, the collaborative site that included information from news outlets, companies and organizations was created. "J-anpi" accumulates various emergency information and is searchable.

"J-anpi", a site that accumulates various information from companies and organizations during major disasters and is searchable, began to be provided on October 1, 2012.

Furthermore, from fiscal 2014, starting with local authorities such as Tokyo Metropolitan Government and Chiba Prefectural Government, collaboration with universities and chambers of commerce and Industry began. With this, local authorities began compiling lists of people who had evacuated and universities provided lists of students, while chambers of commerce and Industry listed company employees and so on, making information searchable and able to be checked.
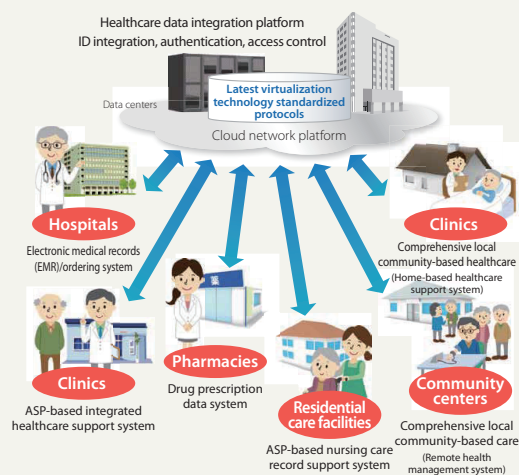
Miyagi Prefecture Ishinomaki – Kesennuma Healthcare Area Community Healthcare Integration System

NTT East has worked with the Miyagi Medical and Welfare Information Network (MMWIN) and other NTT Group companies to build the Miyagi Prefecture Ishinomaki-Kesennuma Healthcare Area Community Healthcare Integration System. This system is aimed both at resolving issues related to the graying population and shortage of healthcare resources, and at ensuring the continuity of medical services even when disasters occur.

To enable the integration of data between healthcare facilities and provision of home-based healthcare, nursing care and self-care support, the system seamlessly integrates a combination of ten subsystems, including a healthcare data referencing system, an ASP-type healthcare data support system and a remote health management system.

The system also guards against the loss of medical records in the event of a disaster, thus ensuring healthcare continuity, by enabling the digitization of medical, nursing care, drug prescription and personal health records using standardized formats for sharing between healthcare facilities, and backing up all data to a private cloud.

A healthcare data integration platform that uses technology developed at NTT laboratories enables the safe and seamless integration of these multiple systems.

Healthcare data integration platform
ID integration, authentication, access control

Data centers

Latest virtualization technology standardized protocols

Cloud network platform

Hospitals
Electronic medical records (EMR)/ordering system

Clinics
Comprehensive local community-based healthcare (Home-based healthcare support system)

Clinics
ASP-based integrated healthcare support system

Pharmacies
Drug prescription data system

Residential care facilities
ASP-based nursing care record support system

Community centers
Comprehensive local community-based care (Remote health management system)

Shabette-Concier

Launched by NTT DOCOMO in March 2012, Shabette-Concier is a voice-agent service for smartphones that discerns the meaning of questions or commands spoken by the user, and launches features or applications accordingly. A Knowledge Q&A feature that enables the phone to reply to user questions was added when a new version of the service was released in June 2012. If, for example, the

user asks, "What is the highest mountain in the world?", Shabette-Concier employs language processing technology to analyze the question, and respond with the answer "Everest" based on the results of searches of a cloud based knowledge database or the Internet.

How high is Mount Fuji?

3,776 m

Building a sustainable Eco Model Town through energy management system (EMS) deployment

The Tagonishi Eco Model Town Project on the outskirts of Sendai was launched in 2009 as the Tagonishi Land Readjustment Project, an initiative that brought government, academia and private industry together to probe sustainable urban development concepts. After the Great East Japan Earthquake, the project was positioned in the Sendai City Earthquake Disaster Reconstruction Plan as an Eco Model Town that is currently being developed with the help of subsidies from Sendai and the Ministry of Internal Affairs and Communications.

NTT FACILITIES and NTT East joined Kokusai Kogyo, the lead contractor for the Tagonishi Land Readjustment Project, had established Sendai Green Community Association. This organization is equipping disaster reconstruction public housing and detached homes with energy management systems (EMS) to create a smart community that is both energy-efficient (and thus also economic) and resilient to disasters.

The NTT Group is going beyond reducing the energy consumption of houses and buildings to achieve optimal control of energy networks by engineering the visualization of energy consumption in the community as a whole.
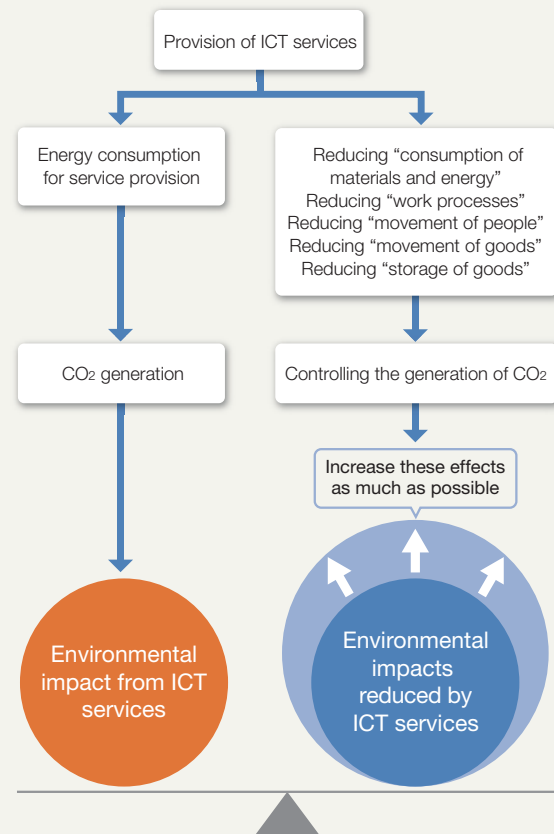
2013

Reducing CO$_2$ through ICT

Extracted from CSR Report 2014

Reduction of CO$_2$ and other greenhouse gases is one of the important issues that needs to be addressed on a global scale. The NTT Group aims to reduce CO$_2$ emissions from its ICT services, because we are the largest data center operator in Japan. Our efforts to achieve this aim included, for example, choosing and installing energy saving servers, as well as using high efficiency air conditioning equipment.

On the other hand, ICT can help to control the generation of CO$_2$ by reducing "consumption of materials and energy," for the production of books and music as well as visual media; reducing "work processes" through increased operational efficiency; reducing the "movement of people" through network utilization; and reducing the "movement and storage of goods" through information digitization. Therefore, ICT services not only provide innovation in daily life but also contribute to reducing CO$_2$ emissions in society.

This contribution is called "Green by ICT," and in this way the NTT Group makes efforts to contribute to the reduction of CO$_2$ of society as a whole.

Provision of ICT services

Energy consumption for service provision

Reducing "consumption of materials and energy"
Reducing "work processes"
Reducing "movement of people"
Reducing "movement of goods"
Reducing "storage of goods"

CO$_2$ generation

Controlling the generation of CO$_2$

Increase these effects as much as possible

Environmental impact from ICT services

Environmental impacts reduced by ICT services

Announcement of Plan to Double Number of Female Managers within the NTT Group

As part of the promotion of diversity management to increase competitiveness in the era of the global cloud, NTT is proceeding with training and promoting women employees into management positions in the NTT Group. Up until fiscal 2021, NTT is aiming to double the number of women in Japan in management positions. "Plan to increase number of women managers" was announced in December 2013.

In order to respond to rapidly changing market conditions and diverse customer needs as well as become the "Value Partner" that customers continue to select, NTT aims to strengthen its corporate competitiveness

and innovation by utilizing various human resources, and diversity management was positioned as an important topic in the Medium-Term Management Strategy.

Up until then, on the topic of diversity management, from 2007, there were efforts to promote activities and specialist organizations (Diversity Management Office, etc) were established in the NTT Group's main companies. In particular, activities to promote women, such as systems to support women working and raising families and setting up child care facilities and so on were promoted, and we promoted the setting of an environment in which it is easy for women to work.

Furthermore, in recent years, the potential of women has been activated to the fullest extent, so that they can brightly undertake activities that support and advance their careers, and do so with self-respect, and we are also putting efforts into achieving a style of work that is efficient and flexible so that both males and females can balance work and life and work effectively.

We are also undertaking initiatives in promoting diversity management so that in the future there will be more women in leadership roles and decision making at management level.

The NTT Group Statement on Promoting the Role of Women[1]

(1) Aim to "double the number of women managers" by fiscal 2021
[2.9%[2] in fiscal 2013 results > 6.0% by fiscal 2021]
(2) Aim to have "women make up over 30% of new graduate recruits" from fiscal 2015
NTT has further strengthened the initiatives it has in place as a Group and promotes a work environment that achieves the acceptance of diversity of female and male employees and where each individual can work in the most effective way and fully activate their skills and desire to improve.

[1] The target companies include Nippon Telegraph and Telephone Corporation and the companies it directly operates within Japan and various companies that are responsible for business areas (59 in total).
※ The number of female managers is approximately 700 at the end of fiscal 2013.

Continuing volunteer and fundraising activities to support recovery efforts in the Great East Japan Earthquake disaster zone

The NTT Group continues to carry out volunteer activities to support recovery efforts in the Great East Japan Earthquake disaster zone.

NTT Communications is supporting such efforts in the town of Shichigahama in Miyagi Prefecture. In fiscal 2013, a total of 529 employees volunteered to help clear debris and carry out other tasks on weekends from May to September.

NTT DOCOMO has established a corporate matching gift program, and 26 companies in the DOCOMO Group are also participating in its Tohoku Reconstruction Employee Volunteer and Fundraising Program. In fiscal 2013, a total of 549 employees participated in 18 employee volunteer sessions in the town of Minami Sanriku in Miyagi Prefecture. Approximately 11,000 employees have donated to the fundraising program, which with matching gifts from DOCOMO Group companies had as of the end of March, 2013 raised approximately 75 million yen for the recovery efforts. Furthermore, in fiscal 2014, efforts to improve the living environment also began in the town of Rikuzentakata in Iwate Prefecture.

The NTT DATA Group is carrying out IT-based volunteer activities in the city of Ishinomaki and its surroundings in Miyagi Prefecture. Leveraging the knowledge and skills of its employees as an IT services provider, the Group is working with local organizations to assist with such activities as computer skills class instruction and streamlining of the management processes of the Japan Car Sharing Association, which is helping to provide disaster victims with affordable access to vehicles. In fiscal 2013, a total of 92 employees were dispatched to volunteer their services on 22 occasions from May 2012 to March 2013. NTT DATA provided backup for these activities by covering the travel and insurance costs for the volunteering employees.
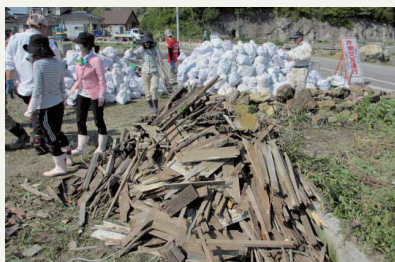
Helping to clear debris (NTT Communications)

Volunteer activity (NTT DOCOMO)

Computer skills classroom (NTT DATA)

NTT Group CSR Conference

In February 2014 we held the NTT Group CSR Conference with the objective of further promoting the CSR initiatives that have been implemented by NTT Group companies.

For the NTT Group CSR Conference, we invited Group companies to submit superior CSR initiatives in line with the NTT Group's CSR Priority Activities. More than 60 submissions were received, and from these nine superior initiatives were selected. The conference was attended by 140 people, including people in charge of the selected initiatives and people in charge of CSR and environmental issues at each company, as well as other Group employees with an interest in CSR.

At the presentation of the superior CSR initiatives, the person in charge of each initiative discussed the initiative's purpose, how it got started, its characteristics and results, its future outlook, and other matters. After the presentation, opinions, impressions, and questions were received from the participants. The conference concluded with the selection of one initiative for the First NTT Group CSR Award. The panel of judges comprised people in charge of CSR at Group companies, and the selection was made from the viewpoints of the scale of the social issue and the extent of the resolution, newness and originality, and future potential in such areas as business development.

The conference successfully enhanced the CSR awareness of Group employees, and participants commented that they had developed a deep understanding of the initiatives of other companies and that they had developed a better understanding of how their company is useful to society, which made them proud. We will continue to hold this conference next year and in the years ahead, and we will work to increase the numbers of initiatives and participants and to further enhance CSR awareness.

A scene from the NTT Group CSR Conference

Initiatives Presented at the NTT Group CSR Conference

First NTT Group CSR Award

Cloud-based system to address the problem in emergency medical care where ambulances carrying people needing emergency transport are refused at multiple hospitals	NTT DaTa

Superior initiatives

Seamless, disaster-resistant community healthcare cooperation	NTT EAST
Realization of optimal energy usage to reduce environmental burdens	NTT FACILITIES
Rearing environment sensing for endangered species through the use of a sensor network	NTT
Participating in the Hana Ippai Project at Higashiyama Zoo and Botanical Gardens	NTTビジネスアソシエ西日本
Construction of disaster-resistant information cooperation system in Ishinomaki city	NTT Communications
BRIMOS® bridge monitoring system	NTT DaTa
CSR activities that promote understanding of disabilities and initiatives to support the creation of pleasant, agreeable workplaces	NTT CLARUTY CORPORATION
Tohoku reconstruction support volunteer initiative	docomo

Examples of Activities that aim at leveraging ICT to address social issues

Development of a New Emergency Medical Information System Using ICT

IT systems have long been used by medical facilities to share information on their available resources with ambulance crews at the frontline of emergency treatment, but there have still been issues, such as the appropriate updating of information about whether or not a medical institution can accept patients. In some cases, these systems were not fully utilized in certain local governments.

In response, NTT DATA proposed a new emergency medical information system (EMIS) to local governments. The proposal called for shifting teams. Under the system created by NTT DATA, the emergency response teams and medical institutions can use smartphones or other devices to share patient details, transport records and other information in real time. Developing a system to transport sick or injured people to the optimal medical institution as rapidly as possible. This system facilitates the transport of emergency patients to the optimal medical institution as rapidly as possible.

With the new EMIS, each time an emergency patient is transported, the emergency response teams use their smartphones to enter details. The system will aggregate such information in a way that enables real-time viewing of available treatment facilities, thereby minimizing the likelihood of patients being shunted from one facility to another. In addition, the emergency response teams use digital pens during transport to digitize and register their observations of the emergency patient. The registered information can be seen in advance by the medical institution, which can prepare to rapidly implement emergency measures.

This initiative was selected as the winner of the First NTT Group CSR Award at the NTT Group CSR Conference.

Basic Operational Flow
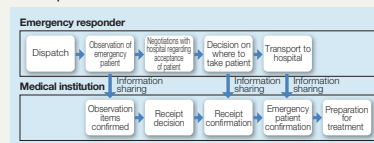
Digitization of Patient Observation Notes Using Digital Pen
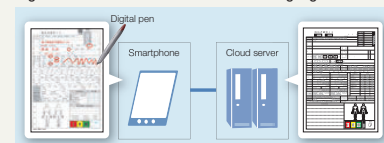
Participating in the JASA Cloud Information Security Promotion Alliance to promote the use of safe and secure cloud services

The rapid spread of cloud services has made the building of robust security systems imperative. With cloud services certain to continue to grow, the Japan Information Security Audit Association (JASA)※1 created the JASA Cloud Information Security

Promotion Alliance (JCISPA) in May 2013 as one of the world's first organizations for promoting the auditing of cloud service security to encourage the selection and use of secure, high quality services. Eight NTT Group companies※2 are participating in JCISPA alongside 17 other Japanese cloud service providers and auditing businesses with the aim of contributing to the creation and development of an environment for the safe and secure use of cloud services.

JCISPA will formulate basic information security management requirements for cloud service providers, and plans to launch a Cloud Information Security Audit System in fiscal 2015 for conducting cloud information security audits designed to assess providers according to their compliance with the above requirements and provide users with clear reassurance of the security of cloud services. An international certificationsystem will likely be launched in conjunction with the slated 2015 publication of the ISO/IEC 27017 international standard for cloud security. As such, JCISPA's proposed audit system will precede international standardization, and its findings will likely prove to be useful to standardization activities.

Press announcement of the launch of JASA Cloud information Security Promotion Alliance

1. A Specified Nonprofit Corporation established to promote the adoption of the Information Security Audit System established by the Ministry of Economy, Trade and Industry
2. NTT East, NTT West, NTT Communications, NTT DATA, NTT COMWARE, NTT Software, NTT PC Communications and NTT

2014

Establishment of NTT Group Human Rights Charter

Guided by the NTT Group Human Rights Charter, all NTT Group employees around the world are working to raise human rights awareness.

Based on the Universal Declaration of Human Rights and other references, the NTT Group has long endeavored to address the Dowa Issue (discrimination based on ancestry in Japan) and other human rights issues, and to create a corporate culture opposed to any form of discrimination. In recent years, businesses have been becoming ever-more global, and the international community is strongly urging companies to implement measures to ensure that human rights are respected. Amidst this rising emphasis on human rights, the NTT Group unveiled its NTT Group Human Rights Charter in June 2014. This charter embodies our commitment toward fulfilling our social responsibilities as a company that is actively growing on the global stage.

NTT supports the ideals contained within ISO 26000, an international standard for social responsibility published in 2010, as well as the Guiding Principles on Business and Human Rights that were endorsed by the United Nations Human Rights Council in 2011. These ideals were incorporated into the NTT Group Human Rights Charter.

Going forward, NTT will work to spread awareness throughout the Group's global operations with regard to the background of the formulation and goals of the NTT Group Human Rights Charter with the aim of instilling its mindset into all employees. At the same time, we will pursue the resolution of various human rights issues by acting in accordance with our Basic Policies on Human Rights.

The NTT Group's Human Rights Charter

June 16, 2014

We recognize that the respect for human rights is a corporate responsibility and aim to create a safe, secure and rich social environment by fulfilling its responsibility.

1. We respect internationally recognized human rights, including the Universal Declaration of Human Rights in all company activities.
2. We responsibly respect for human rights by efforts to reduce any negative impacts on human rights holders. We respond appropriately when negative impacts on human rights occur.
3. We aim to not be complicit in infringing human rights, including being involved in discrimination, directly or indirectly.
4. When negative impacts on human rights are done by a business partner and are linked to a product or service of the NTT group, we will expect them to respect human rights and not to infringe on them.

(note) "We" means the NTT group and its officers and employees.

Promoting Research and Development toward 2020 Concept
Technology Development of things such as "Omotenashi," "sports viewing," and "sports performance support"

NTT, aiming towards 2020, is establishing a telecommunications base that is safe, secure, comfortable, and stable and has countermeasures against rapidly increasing cyber attacks, and manages a massive network telecommunications volume based on the rapid and enormous increase Internet of Things and the spread of smartphones and other new devices, and furthermore is announcing research that promotes research and development that provides, as it ought to, the world's highest level of experience and impression utilizing ICT technology, and this is directed toward tourists, foreigners who visit Japan and people all around the world.
This time, NTT Research and Development, directed toward 2020, has developed the following concepts/technology.
1.New "Omotenashi" for foreigners who visit Japan
Things like stuffed toy sthat offer travel guidance, transportation navigation, tourist information navigation for foreigners who visit Japan.
2.New "Sports Watching" inside stadium and other distant places
Support watching that displays marathon runners' information and so on, 3D virtual performances of sports from distant places, sports watching through head-mounted displays worn by athletes during sporting events.
3."Sports performance support" directed toward amateurs and pros Wearable shirts that provide feedback based on power and nervousness, advice from sports instructors.

In the future, NTT, through collaborations with various partners, will provide people throughout the world with "the highest level of Omotenashi" and is currently promoting research and development of this.

Examples of Activities that aim at leveraging ICT to address social issues

Digitally Archiving Historic Handwritten Documents in the Vatican Apostolic Library

On March 20, 2014, NTT DATA and the Vatican Apostolic Library concluded an initial agreement for a project involving the digital archiving and long-term preservation of handwritten documents that are historic treasures of humankind. These documents, about 82,000 volumes with about 40 million pages, are from the 2nd to the 20th centuries and are held by the Vatican Apostolic Library.

The initial agreement between the Vatican Apostolic Library and NTT DATA, will cover the digital archiving of about 3,000 documents over a four-year period. In the future, there are plans to undertake a large scale project involving the digitalization of around 80,000 hand written documents. On this basis, "handwritten documents that are invaluable to human history" and become more fragile each day are digitalized and stored long-term and made publicly accessible, increasing their academic and cultural usage value.

From October 20, 2014, the Vatican library is being properly made public, and there are plans to create full search functions in order to respond to the increase in the number of publicly available documents that will be added to annually.

Field Trial for Education Square x ICT Project to Link Schools with Households

The NTT Group launched a three-year field trial for the Group's Education Square x ICT project in the first quarter of fiscal 2012 with the aim of leveraging ICT to develop new learning methods.The trial is being conducted in line with national public school education computerization initiatives and policies, with the cooperation of 12 elementary and junior high schools in five municipalities nationwide as well as education experts and education industry businesses. In fiscal 2013, the field trial focused in particular on two specific themes.

Education Square x ICT overview
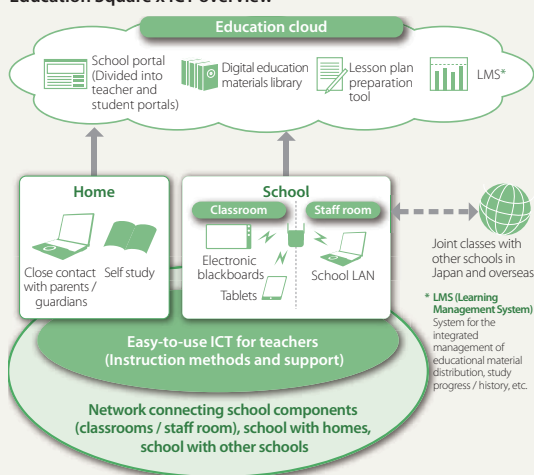
Boosting motivation to participate by enabling students to present their ideas on an electronic blackboard

Students can develop their understanding by repeatedly viewing digital educational materials at their own pace.

Digital educational materials can promote understanding by augmenting textbook explanations of experiments or scientific observations that children are unable to experience first-hand.

One of those was to promote the use of ICT in school by leveraging the knowledge and skills in ICT utilization gained by teachers participating in the trial up to then to make functional improvements and enhance support for the everyday use of ICT in classes. The other theme was the enhancement of home study through, for example, the award of points according to progress made in study conducted on a student's tablet, with those points being used in turn to raise characters or win trophies and such like. This kind of "gamification" was found to have a positive effect on home study.

Junior high school students were also provided with repetitive learning opportunities that made use of the iKnow! vocabulary memorizing tool and English Central pronunciation practice tool to help them gain basic English language skills. They then used a videoconferencing system to improve their communication skills through chatting with students of the same age in schools in Australia.

The utilization of ICT in this way was shown to boost the students' interest, motivation, thinking and expressive abilities. Teachers too were enthusiastic, saying that simulation materials that required students to progress by trial and error helped improve their thinking skills, and that the use of electronic blackboards boosted students' motivation to give presentations.Use of the function to connect tablets with electronic blackboards also enabled students to share and discuss their answers with each other, resulting in lively collaborative learning. Teachers commented that the opportunity to compare different opinions in this way promoted communication and broadened their students' minds.

New initiatives planned for fiscal 2014 include the provision of mechanisms for simple and flexible lesson support, and tablets designed for teachers.
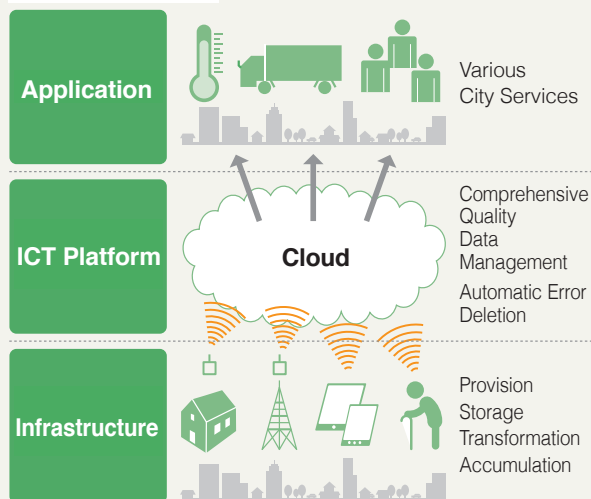
In fiscal 2015, we collated the results from our "Education Square x ICT" field trials and released the "Education Square x ICT" field trial report titled "From the Sites of ICT Education."

Launch of Empirical Testing of a Glocal Approach Local Authorities and the Public Aimed at Achieving Smart City Applications

NTT East, Keio University SFC Laboratory, Panasonic System Solution, Japan; National Institute of Informatics, Japan, have collaborated as Framework Programme 7(FP7) that the European Commission will ratify, have begun trials with the cooperation of Mitaka City (Tokyo) and Fujisawa City (Kanagawa), as part of "collaborative research based on collaboration with Europe toward realizing the next generation network."

The collaborative research is planned over three years, from April, 2013 to March, 2016, to link "Internet of Things technology" with cloud computing and by achieving the smart city service that both of these services use as their base, it is aiming at significantly lowering the cost and time for both services. Furthermore, to promote smart cities in both Japan and Europe, another aim is to strengthen and extend the relationship.

Overall Image of Collaborative Research

Application	Various City Services
ICT Platform	**Cloud** — Comprehensive Quality Data Management / Automatic Error Deletion
Infrastructure	Provision Storage Transformation Accumulation

"ICT Car" enables communication to promptly recover after large-scale disasters

Based on instructive experiences from the Great East Japan Earthquake, NTT have developed an ICT Car that enables communication to promptly recover after a large-scale disaster as a product of the R&D project in which NTT, Tohoku University, Fujitsu Corporation and NTT Communications are engaged.

Our ICT Car is a van-type vehicle in which equipment for providing ICT services such as telephone calls and information processing are installed.

By transporting and installing an ICT Car in a disaster-struck area, we can promptly establish a Wi-Fi available area with a radius of 500m assuming unobstructed visibility and provide suffered people in the ravaged area with communications access. People in the Wi-Fi area can be contacted via their original phone number regardless of the carrier they subscribe to. Moreover, they can communicate with people outside the disaster area or use various network services once the ICT Car is connected to a wide area network via a photonic link or satellite circuit.

In addition, our ICT Car has a system for collecting and distributing social data. In the wake of most large-scale disasters, we are normally forced to record and manage the information on the well-being of the survivors by hand-written documents. The new system can promptly register people into the system's data base with their information (name, address, sex, age, etc.) after uploading their face photos and photos of certificates taken by a tablet PC with a camera.

The ICT Car and "ICT portable unit" were used in areas affected by the November 2013 typhoon in the Philippines as part of a United Nations project (ITU Project). They are provided to the field trial testing the restoration of communication lines from December 2014 to September 2015.

Module for spot Wi-Fi service

Wi-Fi antenna set up in field

Central control of Wi-Fi AP using 900MHz band sensor

Expand area