

#### Hitachi Group Corporate Social Responsibility Report 2007



#### About the Hitachi Group CSR Report 2007

This report describes the corporate social responsibility (CSR) activities of the Hitachi Group so that our many stakeholders will have as clear and accurate an explanation as possible of the Group's philosophy and activities.

This report covers our work ethic and the nature of our operations as they have evolved since our founding, as well as our direction for the future.

This report is divided into three main sections: *CSR Management*, which provides an overview of our CSR activities and corporate governance; *Next Society*, which reports on the social dimension; and *Next Eco*, which shows our environmental activities.

In this year's report, we look at our business operations in relation to social issues and provide examples of the products and solutions offered by Hitachi technology in the subsection entitled *CSR Activities*. We also focus on the work we are doing to strengthen the *monozukuri* (manufacturing) technology that supports these products and solutions.

We hope this report will serve to further your understanding of the CSR efforts of the Hitachi Group and facilitate our dialogue with you.

## Scope of This Report Period: The main period covered is fiscal 2006 (April 1, 2006 through March 31, 2007) Companies: Companies covered under consolidated reporting of the Hitachi Group Scope of data: Financial data Hitachi, Ltd. and 934 consolidated subsidiaries (including modified entities to which the equity method of consolidated reporting applies) and 165 affiliated companies that use the equity method Social data Scope of data indicated under each item Environmental data Hitachi, Ltd. and 250 consolidated subsidiaries (including companies outside Japan)

#### **Related Reports**

We report on the financial performance of Hitachi, Ltd. in the "Financial Highlights" and Annual Report. Research and development and intellectual property (intellectual property rights and brands), which are major aspects of the technology management of Hitachi, Ltd. and its major subsidiaries, are covered in the "R&D and Intellectual Property Report."

Thirty Hitachi Group companies and 9 production facilities publish their own reports on environmental and social contribution activities. In addition, 46 Hitachi Group companies and four production facilities provide information on their Web sites.

#### Guidelines Referred to in Preparing This Report

"Environmental Reporting Guidelines" (FY 2003 version), Ministry of the Environment, Japan

"Environmental Performance Indicators Guideline for Organizations" (FY 2002 version), Ministry of the Environment, Japan

"Environmental Reporting Guidelines 2001-With Focus on Stakeholders," Ministry of Economy, Trade and Industry, Japan

"Sustainability Reporting Guidelines 2002," Global Reporting Initiative

\* This CSR Report will be published on an annual basis.

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(For inquiries on environmental activities) Corporate Environmental Policy Division 1–18–13 Soto-Kanda, Chiyoda-ku, Tokyo, 101-8608, Japan Tel: +81-3-3258-1111, Fax: +81-3-4564-4074 http://greenweb.hitachi.co.jp/en/

#### On the cover:

The cover photo is from MoanaLua Garden Park (Monkey Pod tree), Oahu Island, Hawaii. This tree has become known as the "Hitachi Tree" through television commercials over many years. The tree represents an abundance of the qualities that we like to emphasize at Hitachi—Synergy, Growth, and Strength.

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#### Symbols Used in This Report

For technical terms and proper nouns with a dagger (†), further explanations are given in side columns on the same or following pages.

When more detailed information on topics covered in this report is available on the Internet, the Web\_, () ink\_ symbols have been placed in the margins.

Web : This symbol indicates Web addresses on the Hitachi Web sites for complete texts of guidelines and corporate policy statements, details of activities, and quantitative data.

Link: This symbol indicates the addresses of related Web sites, which can also be accessed from the following address: http://www.hitachi.com/csr/

Graphs and other visuals use universal design for readers with color-impaired vision. Customer and company names may be abbreviated or referred to without their titles in this report.

#### **Company Profile**

Corporate Name: Hitachi, Ltd.

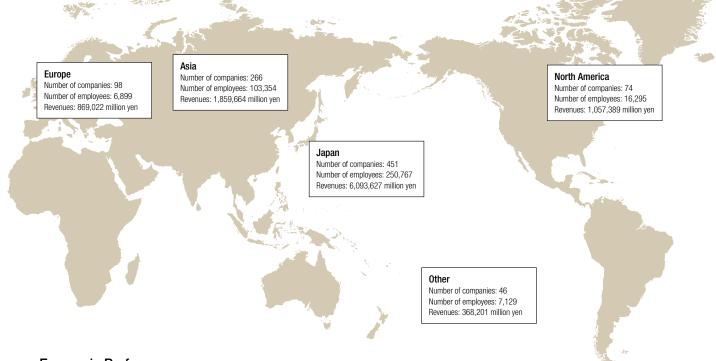
Incorporated: Incorporated February 1, 1920 (founded in 1910) Head Office:

1-6-6 Marunouchi, Chiyoda-ku, Tokyo 100-8280, Japan Representative:

Kazuo Furukawa, President and Chief Executive Officer

#### Hitachi Group Profile

Hitachi, Ltd. and the Hitachi Group make up a corporate group consisting of 1,100 companies, including 450 consolidated subsidiaries within Japan, and 484 overseas, and 79 affiliated companies in Japan that use the equity method and 86 outside Japan. In terms of business activities, there are seven business units, as indicated on Page 3, with revenues of about 10.2 trillion yen. The Group employs about 380,000 employees.



#### **Economic Performance**

As of March 31, 2007

Capital Stock: 282,033 million yen Number of employees (unconsolidated basis): 41,016 Number of employees (consolidated basis): 384,444 Number of consolidated subsidiaries:

934 (Japan: 450, outside Japan: 484) Number of affiliated companies that use the equity method: 165 companies (Japan: 79, outside Japan: 86) Period: Fiscal year ending March 31, 2007 (consolidated basis) Revenues:

10,247.9 billion yen (108% compared with the previous year) Operating income (loss):

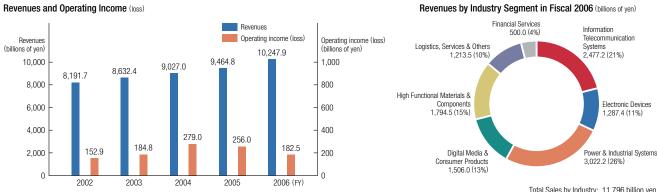
182.5 billion yen (71% compared with the previous year) Capital investment:

1,048.5 billion yen (110% compared with the previous year) R&D expenditure:

412.5 billion yen (102% compared with the previous year) Overseas output as a percentage of consolidated net sales: 22%

See Web site for economic performance reports.

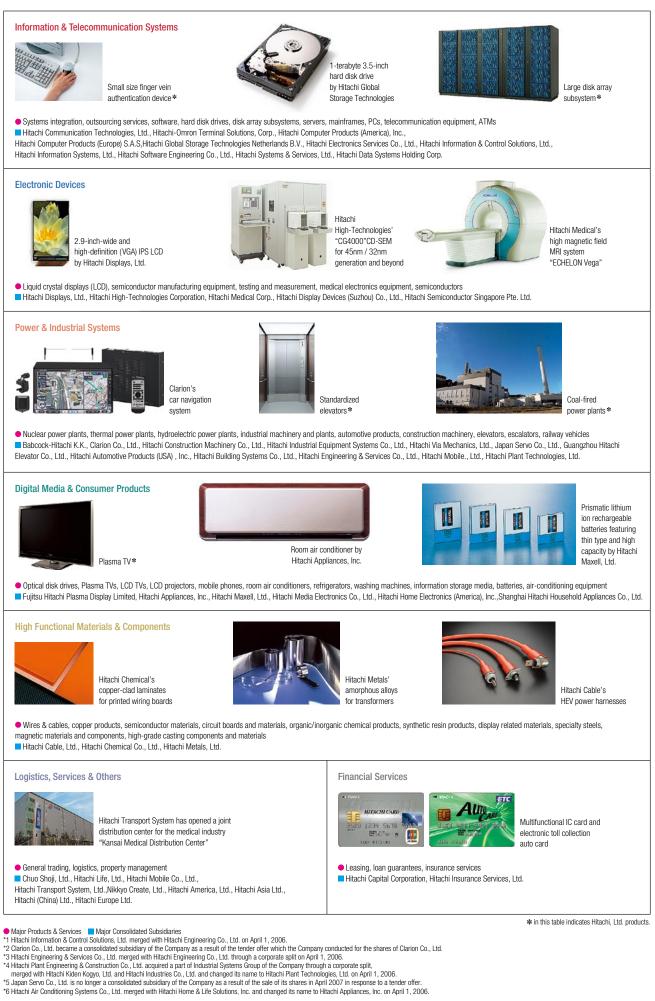
http://www.hitachi.co.jp/IR-e/index.html



Total Sales by Industry: 11,796 billion yen Consolidated Net Sales: 10,247 billion yen

#### Financial Results (consolidated basis)

**Revenues and Operating Income (loss)** 



#### Contributing to Society through Technology Based on Collaborative Creation and Profits

Climate change, poverty, information security breaches, healthcare issues, and various other complex phenomena are happening throughout the world. Hitachi is now advancing from the stage of problem identification to the stage of determining what we ourselves should do to address these issues. We believe it is crucial for our company to endeavor, in consultation with our stakeholders, to determine how we can contribute to society through the application of our businesses, technologies, and human resources.

#### Restoring Public Trust in Our Manufacturing

Fiscal 2006 was a challenging year for the Hitachi Group. Although every division saw increased revenues, we incurred a deficit overall. In Japan, we caused customers and others great inconvenience and concern with the turbine trouble at Hamaoka Nuclear Power Station Reactor No. 5 and Unit 2 of the Shika Nuclear Power Station, operated by the Chubu Electric Power Co., Inc. and the Hokuriku Electric Power Company, respectively. We take this problem very seriously because it raises questions about Hitachi's production and quality control. With the goal of restoring confidence, we have created the Supervisory Office for Monozukuri and the Supervisory Office for Power Systems to clarify all risks in monozukuri (manufacturing) and to review development and manufacturing in all business areas. (Hitachi's response to the turbine issue is detailed on page 6.)

#### Pursuing Collaborative Creation and Profits

Hitachi has contributed to the advancement of Japan and the world through its unique businesses and technologies based on the Hitachi Founding Spirit of harmony, sincerity, and pioneering spirit. No matter how the times and social context may change, this remains our lasting ambition. Drawing on these roots, Hitachi announced a new corporate strategy in November 2006 based on the key phrase collaborative creation and profits, with the ultimate objective of achieving sustainable growth and contributing to the resolution of the various issues society faces.

This corporate strategy aims to create new value through two key initiatives. First, we will comprehensively reorganize the Hitachi Group's various businesses into social innovation business—consisting of our social infrastructure, industrial infrastructure, life infrastructure, and information infrastructure—and infrastructure technology/products business, including high-functional materials and components. Second, we will enhance the synergy among the members of the Hitachi Group and enrich our partnership with stakeholders. Always taking the perspective of the market and society, we aim to give new inspiration to the next era by consistently implementing this corporate strategy.

#### Steadily Implementing CSR Activities Group-wide

Based on the Hitachi Group Three-Year CSR Roadmap formulated in fiscal 2005, we have created a framework to promote CSR activities throughout the Group and the world and have placed emphasis on building employee awareness of CSR. In our CSR promotion activities, we focus on encouraging a personal understanding of CSR and face-to-face discussions. We aim to not simply communicate information about CSR, but to have CSR pervade every aspect of our daily activities. To achieve this, it is crucial that every employee be aware of the relationship between his or her work and society and be able to talk about CSR in his or her own words. In Japan, the CSR Promotion Department at each Group company has formed a CSR with employees at every office. Overseas, local employees have initiated CSR Workshops to explore the relationship between their work and CSR. Our executives are also visiting business divisions and branch offices to discuss Hitachi's corporate strategy and have contact with younger employees.

Through these persistent efforts, we are starting to see new examples of "contributions to society through business activities," including proposals for new environmentally friendly transportation systems and ecosystem conservation. This report describes some of these activities, and we invite you to submit your frank comments and suggestions.

In fiscal 2007, we will evaluate the results of fiscal 2006 and steadily implement measures in line with our new corporate strategy. In our CSR activities as well, we will join hands with our employees to make concrete progress toward realizing our activity goals and implementing our proposals based on the Hitachi Group Three-Year CSR Roadmap. In addition, we will enhance our ongoing communication with stakeholders.

#### Looking Ahead to Our Centennial

Hitachi, Ltd. will celebrate its centennial in 2010. With the Corporate Credo of "contributing to society through the development of superior, original technology and products," the Hitachi Group has developed into the company it is today thanks to your firm support. As we look ahead to our centennial, we aim to demonstrate a synergy that integrates the knowledge and technology of the Hitachi Group, to contribute to the resolution of fundamental issues faced by the global community, and to create prosperous lifestyles and a better society based on Hitachi's founding spirit.



Etsuhiko Shoyama

Chairman of the Board

President and Chief Executive Officer

June 2007

#### Hitachi's Response to Nuclear Reactor Turbine Problems

In June 2006, a malfunction occurred in the low-pressure steam turbine in the Hamaoka Nuclear Power Station Unit No. 5 of Chubu Electric Power Co., designed and manufactured by Hitachi. A similar problem occurred the following July in the identically designed Shika Nuclear Power Station Unit No. 2 of Hokuriku Electric Power Co. Hitachi has since worked with Chubu Electric and Hokuriku Electric to identify the cause of these problems and is making every possible effort to enhance reliability and prevent similar problems from reoccurring. Moreover, through these efforts to address these problems, we are determined to reaffirm our commitment to Hitachi's corporate credo of "contributing to society through the development of superior, original technology and products," to raise our technical strength and reliability to higher levels than ever, and to bolster confidence in Hitachi's *monozukuri* (manufacturing).

#### Investigation of Turbine Problem and Remedial Steps

In the Hamaoka Nuclear Power Station Unit No. 5 of Chubu Electric, damage was found in 663 out of 840 of the moving blades on the twelfth stage of the low-pressure turbine.<sup>†1</sup> One of the blades was found to be fractured. In the Shika Nuclear Power Station Unit No. 2 of Hokuriku Electric, damage was found in 258 out of 840 of the moving blades on the twelfth stage of the low-pressure turbine.

Regarding the cause, it was determined that unanticipated vibration (random vibration<sup>†2</sup> and vibration from flashbacks<sup>†3</sup>) during test operations caused metal fatigue that led to cracks at the base of the blades, which progressively worsened. The turbines in question, embodying the latest in high-performance turbine design, had been subject to repeated testing using a scale model. However, the phenomenon was something that engineers were unable to anticipate during the design stage. Hitachi deeply regrets the trouble and anxiety that resulted.

To remedy these turbine problems, Hitachi redesigned and manufactured the turbines so that they can reliably tolerate any foreseeable vibration stress, this time taking full account of random vibration and flashbacks. During the design stage, we used cutting-edge testing equipment to improve verification accuracy by analyzing the results of tests using a scale model and by simulating actual operating conditions. We manufactured the new turbine blades based on this testing and analysis.

At the same time, because the design and manufacture of the new turbine blades required much time, we put in place an interim solution: taking out the moving and stationary blades on the twelfth stage of the turbines and replacing the stationary blades with pressure plates. After doing this, the Hamaoka Unit 5 was able to resume operation in March 2007.

#### Public Disclosure of the Problem

Aware of the importance of nuclear power stations and the circumstances of the incident, Hitachi held a briefing on the causes on the same day that Chubu Electric and Hokuriku Electric submitted their reports to Japan's Nuclear and Industrial Safety Agency. Stakeholders were notified during a briefing that was conducted in the presence of an executive officer, who is also the head of the task force charged with resolving the turbine problem, and the general manager of the Nuclear Systems Division.

#### Boosting Technical Strength and Reliability

Hitachi regards the turbine problem as a serious incident that calls into question Hitachi quality and *monozukuri*. Hitachi responded on September 15, 2006, by establishing a Supervisory Office for Power Systems and a Supervisory Office for Monozukuri, both directly under the president, to reexamine and strengthen our core *monozukuri* technologies.

In the Supervisory Office for Power Systems, we are working tirelessly to restore both power stations as soon as possible, while at the same time supervising the design, manufacture, and installation of the new turbines. In the Supervisory Office for Monozukuri, in addition to identifying and analyzing all the potential risks of *monozukuri*, we have established six committees to review development and manufacturing processes in each of Hitachi's business areas. Through these committees, we are working hard to prevent similar accidents in the future by improving the development and design process, redoubling our commitment to quality assurance training, and strengthening process management and human resource development. (For more on strengthening *monozukuri*, see page 26.)

#### +1 Low-pressure turbine

A low-pressure turbine is a second-stage turbine designed to turn efficiently on steam that has lost pressure after passing through the first-stage high-pressure turbine, which is turned by high-temperature, high-pressure steam.

#### +2 Random vibration

An irregular vibration of the turbine blades caused by steam turbulence within the turbine

#### †3 Flashback

A rapid reverse flow of steam caused by a drop in pressure within the turbine when, for instance, the turbine stops automatically

### Encouraging every employee to become conversant with CSR



We work to strengthen corporate governance and optimize risk management in order to fulfill our social responsibilities as a business, and to instill the CSR mentality in all our employees.



#### **Corporate Governance**

By enhancing corporate governance, the Hitachi Group is promoting speedier, more efficient management and is meeting the expectations of our stakeholders as a business that merits the public's trust.



Internal Control Handbook

Group management

#### +1 Committee system

A corporate governance system where a board of directors makes basic policy decisions and oversees the execution of business by executive officers, while the executive officers, appointed by the board of directors, are responsible for execution of business matters. Within the Hitachi Group, 15 listed companies, including Hitachi, Ltd., have switched over to the committee system.

#### †2 SOX (Sarbanes-Oxley Act)

Section 404 of this act, enacted in July 2002, mandates company management with the responsibility of establishing, maintaining and evaluating internal control over financial reporting, and also requires that the control be assessed by independent auditors.

#### †3 J-SOX

A framework for evaluating and reporting internal control under Japanese Financial Products Transaction Law, enacted in June 2006, comes into effect in April 2008.

Governance Structure of Hitachi, Ltd.

#### Strengthening Governance

Hitachi, Ltd. has improved management flexibility and agility, and strengthened oversight, by adopting the committee system<sup>†1</sup> of corporate governance. We made management oversight more effective by bringing in outside directors. As well, we sped up decision making—by delegating authority to executive officers—set up internal controls, enhanced governance, and improved management efficiency to earn the confidence of all stakeholders.

We also strengthened Group headquarters functions through guidelines on the environment, compliance, risk management, and internal auditing of companies within the Hitachi Group. Through communications with stakeholders, we are working to increase corporate value.

#### Internal Control

As a company registered with the U.S. SEC, Hitachi, Ltd. is subject to the U.S. Sarbanes-Oxley Act (SOX)<sup>†2</sup>. Setting up and maintaining internal controls are legal and regulatory requirements, and an important social responsibility as well. In the process of clarifying, examining, and visualizing management and operational frameworks, we are rebuilding them. At the same time, we will improve operational transparency, business credibility and management infrastructure.

Each company within the Hitachi Group is individually responsible for setting up and operating internal controls. All divisions of Hitachi, Ltd. and their 250 subsidiaries (including 90 overseas) document their operations, improve deficiencies and assess internal controls based on common guidelines every fiscal year. Management assessment of each company, with a certification, is collected by Group companies and business groups, and is finally reported to Hitachi, Ltd.

The Hitachi Group is strengthening organizational structure and internal audit functions to ensure that internal controls work correctly. Recognizing the importance of deeper employee understanding and awareness, in fiscal 2006, we developed and distributed 30,000 copies of the Internal Control Handbook (in Japanese, English, and Chinese) mainly to managers of Hitachi Group companies in Japan and overseas. In addition, approximately 100,000 Group employees have now completed an e-learning course. We will build internal control principles into company training—of every type—to ensure each Hitachi Group employee understands internal controls.

Fiscal 2006 was the first year that Japanese companies were subject to Section 404 of SOX. Hitachi evaluated the effectiveness of Group companies' internal control systems, based on an annual schedule adopted in April 2006. At the same time, monitoring by internal audit departments helped to highlight issues and provide remedial guidance. We completed independent audits in parallel with the management assessment. From now on, our efforts will focus on compliance with the regulations of both J-SOX<sup>†3</sup>—by the time it comes into force—and the anticipated revisions in SOX.

 General Meeting of Shareholders

 Election :

 Board of Directors

 (13 members, including 5 from outside)

 Nominating Committee

 (13 members, including 5 from outside)

 (5 members, including 3 from outside)

 3 from outside)

 3 from outside)

 Election :

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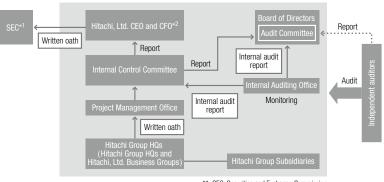
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#### Hitachi Internal Control Assessment Framework



\*1 SEC: Securities and Exchange Commission \*2 CFO: Chief Financial Officer

#### **Compliance and Risk Management**

With our involvement in businesses that impact public welfare and operations that handle vital information, the Hitachi Group places top priority on compliance and ethical business conduct, and we are working ceaselessly to protect private information and manage every type of risk.

#### **Compliance Framework**

The Hitachi Group operates on the principles of "conformance with the law and business ethics" and "fair and disciplined competition."

#### Total Commitment to Compliance

At Hitachi, Ltd., we have both the Compliance Division reporting directly to the president and the Advisory Committee, a monitoring body of outside members. We also have thorough compliance education, and monitor business activities, with the prime goal of ensuring legal compliance for bidding on public contracts by Group companies. In April 2003, we instituted a company-wide whistle-blower system to prevent, and quickly correct, illegal or inappropriate conduct in all business divisions and to improve our capacity for self-correction.

Despite these efforts, however, it was determined that we had violated the Japanese Antimonopoly Act on a contract bid in 2004 for ventilation in the Metropolitan Expressway Shinjuku Line tunnel, awarded by the Metropolitan Expressway Public Corporation (now Metropolitan Expressway Co., Ltd.). In September 2006, the Japan Fair Trade Commission ordered us to pay a penalty, and in March 2007, we suspended business activity for 15 days in a specified field.

We deeply regret having brought about this situation and are taking these actions: spreading greater awareness of compliance among all employees by circulating compliance messages from our top executives; enhancing the scope and intensity of audits and compliance education; and revamping our whistle-blower system.

#### Compliance Education

Now that the amended Antimonopoly Act is in effect, the Hitachi Group is implementing programs to educate salespeople around Japan about this new law. We are involving the entire Group, having invited outside attorneys to give workshops for executives (April 2006) and for Group compliance officers (March 2007).

#### Basic Approach to Information Security Governance

The Hitachi Group emphasizes two points in policies to protect personal information and information security: 1. Building a strong prevention system and responding promptly to security breaches 2. Raising employee ethics and awareness of security.

#### Efforts to Protect Personal Information

All employees, temporary workers included, strive to prevent information leaks and protect privacy, based on Hitachi's Information Security Basic Policy and Information Security Standards. In January 2007, we revamped our Personal Information Protection Policy to meet the recently revised JIS Q15001<sup>†4</sup> and made an all-out effort to educate employees about these new standards.

The Hitachi, Ltd. Information and Telecommunications Systems Group received Japan's "Privacy Mark"<sup>†5</sup> certification in February 2003, and the company as a whole was certified in February 2007. As of March 2007, this mark has been awarded to 37 companies in the Hitachi Group.

#### Efforts toward Information Security

The rapid spread of digital information and computer networks has made it crucial for businesses to keep information secure, if they are to keep the public's trust.

The Hitachi Group is working to prevent security breaches by applying, more rigorously than ever, the Three Rules for Preventing Leakage of Confidential Information. Using this system to minimize damage in the event of a breach, we promptly contact customers, report to the responsible

#### Major Compliance Education Activities

Hitachi, Ltd. Automotive Systems Group	"Compliance Made Simple" course implemented at 12 sites in Japan	
Hitachi Cable, Ltd.	Printing and distribution of Brand/CSR Guidebook	
Hitachi Capital Corporation	Compilation and distribution of Compliance Manual	
Hitachi Construction Machinery Co., Ltd.	"Grassroots Compliance Education" implemented at all sites	
Hitachi High-Technologies Corporation	"Code of Conduct for Managers" adopted; workshops carried out at each site	



Compliance workshop

#### W<mark>eb\_</mark>

Enhancing the whistle-blower system

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Basic approach to information security governance

#### Cink.

Personal Information Protection Policy

#### †4 JIS Q15001

Japanese Industrial Standards "Requirements for Compliance Program on Personal Information Protection"

#### †5 Privacy Mark

Certification given to corporations and organizations by the Japan Information Processing Development Corporation for proper handling of personal information

#### Web

Personal information protection and information security cards



Guidelines for Developing Business Continuity Plans

†1 BCP

Business Continuity Plan A plan for ensuring continuance of core operations and promptly restoring operations to normal in the event of a disaster or accident. government agency, investigate the cause, and take steps to prevent a reoccurrence.

In fiscal 2006, Hitachi adopted measures designed to prevent information leaks from theft or loss of equipment. Now, only "security PCs" without hard disks can be taken out of the workplace. As well, recording data onto external devices, such as USB memory keys, and the encoding of this data are prohibited. To guard against slipups using file-sharing programs, such as Winny, we prohibit the business use of personally owned computers and have employees check their computers for stored business information.

For Group companies outside Japan, we compiled a set of Global Security Guidelines, to ensure that policies and measures consistent with the guidelines take hold throughout the Group.

#### Three Rules for Preventing Leakage of Confidential Information

**Rule 1.** In principle, confidential information cannot be taken from the workplace.

**Rule 2.** Permission must be obtained from an immediate supervisor to take any confidential information from the workplace.

**Rule 3.** Security precautions should always be taken when storing confidential data on a laptop computer, external storage device, etc., and when taking such a device out of the workplace.

#### **BCP Efforts**

Today, given the risk of major earthquakes, epidemics, terrorist attacks, and other disasters, we understand the importance of risk management and are hard at work drawing up business continuity plans (BCP<sup>+1</sup>). Aware that our operations extend globally and play an important role in society, we are working to enhance our BCPs to see that society is not seriously impacted by an interruption in operations.

#### Adoption of BCP Guidelines

In August 2005, Hitachi, Ltd. set up an Expert BCP Promotion Panel, which in December 2006 completed a set of Group guidelines for drafting BCPs. These guidelines outline the process for developing a BCP, clearly identifying priorities for restoring business operations. This was done based on the estimated risk and impact of interruptions, using, for example, scenarios where an earthquake causes an electronic components plant to suspend production.

In February 2007, representatives from 110 Group companies came together for a thorough briefing on BCP policy. The basic idea of business continuity planning is to prepare a written document that outlines the tasks needed to maintain business continuity, especially advance planning for operations continuing after major damage caused by a disaster or accident. With an operational system in place, we can now respond to almost any contingency. By using the Hitachi Group BCP Guidelines, each production facility and Group company can efficiently formulate a BCP, setting the stage for level-headed risk management based on a variety of emergency scenarios.

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#### Conducting a Map Exercise for a Large-Scale Disaster

In fiscal 2006, we held a map exercise for a "6 upper" earthquake (on the Japanese scale) at the Kasado Works in Yamaguchi Prefecture, Japan. This simulation drilled for lifesaving, community relief, equipment inspection, evacuation, and other procedures when wide-ranging damage might occur. Fifty employees were divided into two teams; one issuing information and requests for help; the other responding. Through this intense emergency drill, employees gain the experience to make level-headed judgments.

Every year since 1998, the Hitachi Group has held map exercises for a major disaster at a production facility, having now completed them at nine sites in Japan. "Our goal is for the entire Group to adopt an attitude of readiness consistent with the policy of Group headquarters," says Toshiro Kojima, head of Hitachi, Ltd.'s Risk Management Department.



# CSR Management | CSR Promotion Activities | http://www.hitachi.com/csr/

#### **CSR** Promotion Activities

Corporate social responsibility (CSR) is founded on the understanding and practice of each individual employee. Based on the "CSR Policy of the Hitachi Group," we have formulated a "Three-Year CSR Roadmap" and are promoting a wide range of activities to nurture this spirit of CSR.

#### Fundamental Credo

The basic credo of Hitachi is to further elevate its founding concepts of harmony, sincerity and pioneering spirit, to instill a resolute pride in being a member of Hitachi, and thereby to contribute to society through the development of superior, original technology and products.

Deeply aware that a business enterprise is itself a member of society, Hitachi is also resolved to strive as a good citizen of the community towards the realization of a truly prosperous society and, to this end, to conduct its corporate activities in a fair and open manner, promote harmony with the natural environment, and engage vigorously in activities that contribute to social progress.

(Adopted June 1983, revised September 1996)

#### **CSR** Concept

Based on the founding concepts stated in our fundamental credo, the Hitachi Group's mission is to "contribute to the solution of fundamental global issues, and to pursue the realization of a better and more prosperous global society utilizing the collective strengths of the Hitachi Group, characterized by its knowledge and technology." This also defines our CSR vision.

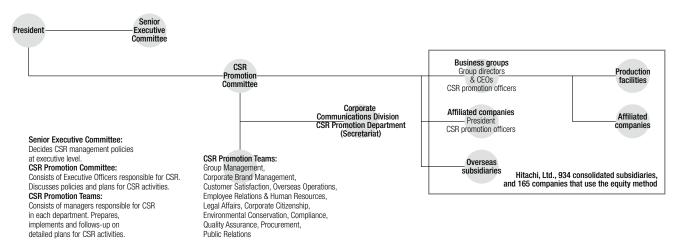
To fulfill this mission, we formulated the "CSR Policy of the Hitachi Group" in March 2005 as a Group-wide policy, and are building a structure for global CSR promotion.

#### CSR Policy of the Hitachi Group

- 1. Commitment to Corporate Social Responsibility (CSR)
- 2. Contribution to Society through Our Business
- 3. Disclosure of Information and Stakeholder Engagement
- 4. Corporate Ethics and Human Rights
- 5. Environmental Conservation
- 6. Corporate Citizenship Activities
- Working Environment
- Responsible Partnership with Business Partners (Adopted March 2005)

CSR Policy of the Hitachi Group

#### Structure of Hitachi Group CSR Promotion







#### **Towards Realization of** the "Three-Year Roadmap"

In 2006, the Hitachi Group formulated the "Three-Year CSR Roadmap" as a medium-term plan for CSR activities. The aim of this plan is to verify the various CSR activities that have been undertaken in light of the expectations and requirements of society, and to steadily resolve social issues.

In fiscal 2006, in order to promote the thorough and effective implementation of the "CSR Policy of the Hitachi Group" at every Group company, we conducted training by e-learning and CSR employee awareness surveys. At our overseas offices, we concentrated our efforts on establishing a structure for CSR promotion and formulating a policy for CSR activities.

In fiscal 2007, in addition to visualizing CSR activities, we will strengthen the management cycle through communication with stakeholders, and further promote CSR activities globally.

#### **CSR Promotion Activities in Fiscal 2006**

#### **CSR** Activities of Group Companies

CSR specialist groups and committees were set up at each Group company, and full-scale activities, such as issuing CSR reports, began. The penetration of CSR awareness and encouragement of CSR activities were also actively promoted.

Unique activities to raise CSR awareness and encourage the exchange of ideas have been carried out by Group companies. For example, Hitachi Plant Technologies, Ltd. is engaged in CSR caravan campaigns to provide CSR education to all of its offices in Japan, and Hitachi Chemical Co.,



CSR Meeting (Hitachi Chemical Co., Ltd.)

Ltd. holds CSR meetings for young and mid-level employees.

#### **Global Promotion**

The Hitachi Group has established Group-wide CSR platforms in each region, centered on regional headquarters in North America, Europe, China, and other parts of Asia and Hitachi Australia, Ltd.

In fiscal 2006, we widely promoted the "CSR Policy of the Hitachi Group," placing a strong emphasis on identifying CSR priorities in each region. For this goal, we held a number of activities, including CSR strategy meetings in North America and Europe and CSR workshops for local staff in Singapore, China (Beijing, Shanghai, and Guangzhou), and Australia.

From now on, while sharing the "CSR Policy of the Hitachi Group," the regional headquarters will clarify priority CSR activities based on the regional situation, formulate concrete plans for these activities, and implement them.

#### Use of Simple CSR Self-Assessment Checklists

To identify the priority issues at each Group company prior to starting CSR activities, simple CSR self-assessment checklists were prepared as an evaluation tool and used at about 120 Group companies in Japan. After referring to criteria-such as the CSR survey indicators provided by SRI<sup>†1</sup> evaluation organizations-social requirements were classified according to the eight areas of the "CSR Policy of the Hitachi Group" and their levels of progress were quantified.

The results of this survey revealed that across the whole Group there was under achievement in the areas of "communication inside and outside the company," "effective social contribution activities," and "CSR sharing with suppliers." The Hitachi Group will work-as a team-to resolve these issues and improve the level of CSR activities.

†1 SRI: Socially Responsible Investment Investment activities, such as

the selection of investment fund portfolios, based on an assessment of companies from the viewpoint of CSR

#### Results of CSR Activities in Fiscal 2006 and Goals/Plans for Fiscal 2007

The following table is a summary of the main CSR activities and results in fiscal 2006 and plans for future activities, based on the Hitachi Group "Three-Year CSR Roadmap." In accord with the "CSR Policy of the Hitachi Group," we aim to steadily resolve issues through planned projects and to implement higher-level CSR activities.

CSR Policy of the Hitachi Group	Activities in fiscal 2006	Results in fiscal 2006	Achievement level	Page(s)	Fiscal 2007 goals/plans	
1. Commitment to corporate social	Increased the learning rate of the CSR e-learning program	Implemented by 103 Hitachi Group companies (in Japan) / 90% of employees took part (Hitachi, Ltd.)	***	P. 12	Ensure that all employees of overseas Group companies are familiar with the "CSR Policy of the Hitachi Group" and formulate activity program in response to social issues in each region     Select and visualize Hitachi Group's CSR activities	
responsibility	Employee survey of CSR aware- ness	80% of employees "understand Hitachi's CSR activities." (Hitachi, Ltd.)	**			
2. Contribution to society through our business	Strengthened the prevention of reoccurrence of serious product accidents	A Quality First (QF) <sup>*1</sup> survey was conducted at six divisions where serious product accidents occurred in fiscal 2005. Remediation was confirmed to examine measures to prevent reoccurrences, and the Kepner-Tregoe Program <sup>*2</sup> was applied at 23 divisions and Group companies.	**	P. 6 P. 26–28	<ul> <li>Steadily implement various measures by Supervisory Office for Monozukuri</li> <li>Group-wide sharing of in-house good practices of PS risk assessment<sup>3</sup></li> <li>Identify themes for CS activities in each business and promote activities to improve CS</li> </ul>	
	Developed a Group-wide system for Customer Satisfaction (CS) activities	Shared examples of CS activities among business groups / Strengthened the Information and Telecommunication Systems Group's CS activities	**	P. 28–29		
3. Disclosure of information and	Strengthened the prevention of information leakage	Acquired Privacy Mark certification for all of Hitachi, Ltd. (February 2007)	**	P.9-10	Formulate global security guidelines     Determine appropriate contents and scope of information disclosed to the media and investors     Regular progress reports on structural reform of business, based on management policies and improvement of IR activities	
stakeholder engagement	Expanded IR activities of business divisions	Held two IR explanation meetings for business groups and one joint IR explanation meeting for Group companies	***	P. 31		
4. Corporate ethics and human rights	Reviewed corporate ethics education	Examined review of Business Ethics Handbook / Examined system for instilling ethics and compliance awareness	**	P. 9	Review Business Ethics Handbook and promotion     of education	
	Analyzed present status of ethics and compliance in all Group companies	Studied a compliance system for main Group companies and corporate behavior standards	***			
5. Environmental conservation	Group-wide integration of environ- mental departments and acquisi- tion of ISO 14001 environmental management system certification	Acquired certification for environmental management system, under the Hitachi Group Environmental Promo- tion Mechanism (September 2006)	***	P. 48–49 • Formulate separate integrated environmental management system plans for business groups and for Group companies • Increase Super-Eco Product ratio to 8%		
	Introduced Super-Eco Products and Super-Eco Factories	Registered 40 Super-Eco Products, start of Super-Eco Factory certification system	**	P. 54-60	Register 8 Super-Eco Factories	
6. Corporate citizenship activities	Group-wide and worldwide implementation of social contribu- tion activities	Expanded the operating area of Hitachi Young Leaders' Initiative (Vietnam)	**	P. 32–35	<ul> <li>Implement programs using the global environment as a theme</li> <li>Expand support programs in education (expansion of regions for promoting Universal Design)</li> </ul>	
	Expanded support programs in education through employee volunteering	Implemented support programs in education on theme of universal design at 10 elementary schools, etc., in Japan	**			
7. Working environment	Surveyed working environment on business process and opinion surveys*4	In response to results of survey, started to diversity promotion projects (in-company intranet Web site for disseminating information / Held forums for women managers / Prepared a guidebook on support for combining work and childrearing) (Hitachi, Ltd.)	**	P. 37–40	Promote diversification of human resources     Enhance activities for diversity promotion     (company-wide information sharing, appointment of     women managers)     Continue implementation of global manager training	
	Cultivated global managers and promote diversity through global training programs	Implemented global manager training for 500 Hitachi Group employees from Japan and overseas / Implemented diversity promotion projects, mainly in Japan, North America, and Europe	**		(1,000 trainees)	
8. Responsible partnership with business partners	Ensured that overseas partners were completely familiar with the "Guidelines for Procurement and Business Transactions" / Monitored the CSR activities of do- mestic and international partners	Ensured that overseas partners are completely familiar with "Guidelines for Procurement Activities" (already implemented for domestic partners in fiscal 2005) / Implemented a trial questionnaire survey at the 20 main domestic partners, based on a checklist prepared by the Japan Electronics and Information Technology Associa- tion (Hitachi, Ltd.)	**	P. 36	Monitor CSR activities of business partners and establish evaluation method     Qualitatively improve the environmental manage- ment systems of green suppliers through HI-KES'5 formulation courses and environmental procurement courses	
	·	Achieved 100% green supplier ratio	<b>***</b>			

\*1 Quality First (QF) survey: Examination by a specialist team that points out problems and studies measures for improvement

\*1 Quality First (QF) survey: Examination by a specialist team that points out problems and studies measures for imp in order to eliminate serious product accidents.
\*2 Kepner-Tregoe Program: A systematic method of resolving issues and reaching decisions by systematizing and formalizing four basic types of analysis.
\*3 PS (product safety) risk assessment: A process for assessing risks related to product safety and determining whether or not the risks can be tolerated.
\*4 Business process and opinion surveys: Surveys of employee opinions concerning work and life in the workplace (conducted once a year since fiscal 2001).
\*5 HI-KES: Activities conducted by Hitachi to support environmental safety activities of business partners based on the Kyoto Environmental Management System Standards (KES), a specified non-profit organization.

♦ ♦ ♦ : Achieved

♦ ♦ : Partially achieved

#### Hitachi Global CSR Activities

#### Chief Executive's Message



Tadahiko Ishigaki Senior Vice President and Executive Officer, Chief Executive for North America, Hitachi, Ltd.

Hitachi

Global

**CSR** Activities

North

America

In this age of advancing information and consumer empowerment, constant change has brought a renewed dedication to corporate social responsibility within the Hitachi Group. In 2006, Hitachi established a group CSR promotion team in North America to develop CSR initiatives to ensure that employees understand Hitachi's responsibility as a good corporate citizen.

Hitachi companies in North America are engaged participants in the environment and in conservation efforts, developing a sustainable supply chain and a diverse workforce, as well as helping those who are most in need. Today, we are working with more than 70 group companies as active partners within our communities.

We welcome Hitachi employees and associates in North America to join together in sustaining excellent relationships with our stakeholders and to be an integral part of our local communities and society. CSR is a vital component of our business, as well as our brand, future and legacy.

#### Grassroots Community Activities through the Community Action Partnership and The Hitachi Foundation

Hitachi believes that the greatest benefits to the community, employees, and the company result when employees are able to take action to address real community needs. The Hitachi Foundation and Community Action Committees (CAC)—driven by employees from 21 Hitachi North America Group companies—collaborate in the Hitachi Community Action Partnership. Together, we are taking part in many community support activities, including making donations, volunteering, supplying food, and building houses for those in need, and providing career guidance to middle and high school students.

For more than 20 years, The Hitachi Foundation has been a pioneer and model for others for making social contributions to better the lives of the economically and socially isolated. Drawing on this rich experience, the Hitachi North America Group is working to ensure that all Group companies fulfill their social responsibility as good corporate citizens.



Hitachi North America

**h**ink

Gateway site

Hitachi Foundation

North America Community Action Committee: Participants discuss how to energize local activities.



Hitachi North America Group Environmental Conference

#### Creating an Environmental Action Plan for North America

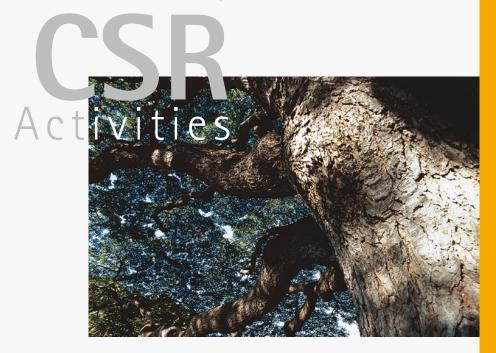
In November 2006, the Hitachi Environmental Conference in America was held in Dayton, Ohio to share information on the Group's environmental and advanced environmental initiatives. A Group Environmental Action Plan will be created in fiscal 2007, and ways will be developed to share information on the environment among Group companies. The plan will provide the basis for distinctive environmental programs by each company. At the same time, the Group will focus on environmental issues shared by Hitachi Group companies, and its combined muscle will be used to develop alternative energy and sustainable business models.

#### *Hitachi True Stories* Show the Value Created by Hitachi Technologies and Products

The gratitude we receive from customers is priceless. Since November 2006, we have selected some of the messages we have received about Hitachi products—such as optical telecommunications and medical equipment—and created 5-minute documentaries for a film series and Web site called *Hitachi True Stories* to illustrate the social value created through our products and services. One film, for example, is about a dentist/private pilot continuing with everyday life while receiving therapy using Hitachi proton beam cancer treatment technology. Another film is about Bandon, Oregon, a community benefiting from Hitachi fiber-to-the-home telecommunications.

True Stories campaign site

#### Working to realize Hitachi's vision of a sustainable society



We contribute to building a sustainable society through a wide range of businesses and activities aimed at creating a more fulfilling and healthy way of life leading to the future.

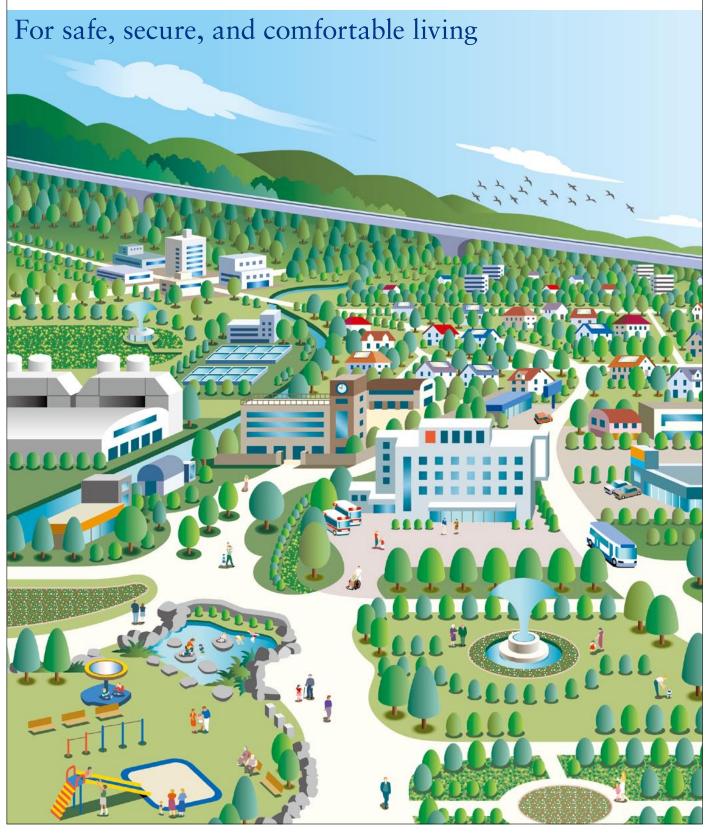


Compact chemistry benchtop analyzer: Allows clinics and other small healthcare facilities to get quick, accurate, on-the-spot results, and assists local primary physicians when doing examinations to prevent metabolic syndrome. Information technology systems for condominiums: Provides security and comfort for condominium dwellers with conveniences, such as IC card authentication for entering a condominium and a system that allows residents to use their cell phones to make sure their doors are locked while they are away from home

Induction cooking heater: A safe, easy-to-use flame-less cooking appliance with powerful induction heating

that achieves high energy efficiency by eliminating wasted heat.

Interactive whiteboard: Enables shared screen images and two-way handwritten communication between whiteboards at multiple sites; useful for distance education, meetings, etc.





Next-generation railway system: A safe, comfortable, environmentally friendly next-generation aluminum rail car developed by Hitachi using advanced technology and the concept of Universal Design; already in use in many places, including the Tokyo Metro.

Contact-less 0.4 mm IC chip: The  $\mu\text{-chip},$  one of the

world's smallest radio frequency identification (RFID) IC chips, used in traceability management of various products, ticket validation, room access management, and more; enhances safety and confidence and increases business efficiency.

Finger vein authentication systems: Used in ATMs, com-

puter login systems, room access management, and more; provides greater security through high-accuracy biometric identification.

Powertrain systems for hybrid vehicles: Batteries, motors, inverters, and more for hybrid cars; designed to improve fuel efficiency and stem global warming.

## where we can all live and work together

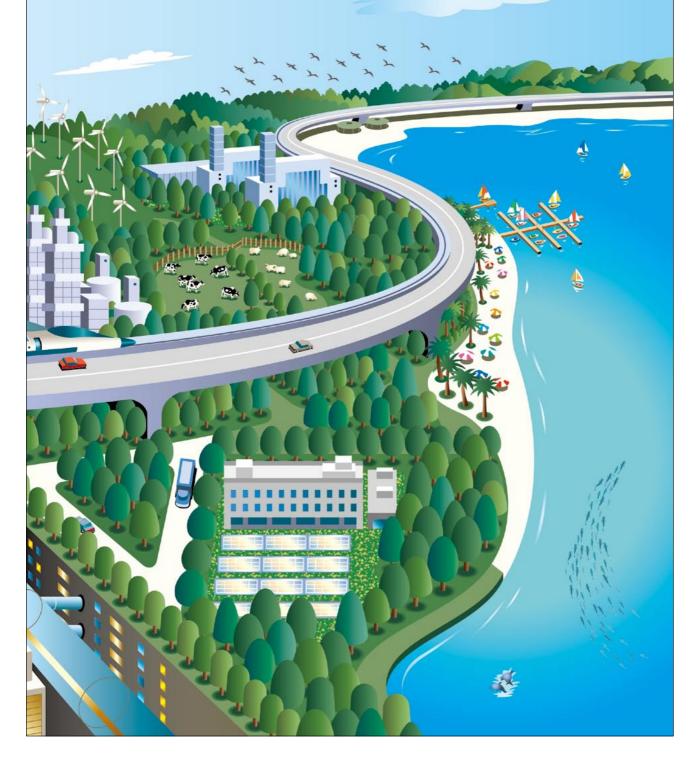
Toward a safe and convenient society



Flue gas treatment systems: Smoke treatment systems to remove sulfur oxides (SOx) and nitrogen oxides (NOx) from gas emissions; a step toward reducing acid rain and other environmental problems caused by air pollution. Advanced sewage treatment systems: Marshaling the power of microorganisms to efficiently remove nitrogen from sewage in the oxic tank by adding "Bio-N-Cubes" containing a high concentration of immobilized microorganisms in a polymer gel.

Energy solution service business (ESCO): ESCO provides comprehensive energy conservation services to factories, buildings, hospitals, etc., to save total energy expenses through energy saving and reduction of CO<sub>2</sub> emission. (Photo shows ESCO equipment supplied by Hitachi at Nihon Canpack Co., Itd's Akagi plant) **Home appliance recycling business:** A system for recycling used household appliances to recover usable resources.

#### To leave the next generation a healthier global environment



## The Hitachi Group's Vision for a Sustainable Society

Hitachi is working to "strengthen socially innovative businesses aimed at finding a solution to fundamental global issues." Our goal is a sustainable society where people can live more safely and comfortably in their daily lives, in the society that supports them, and in the global environment.

#### Major Contemporary Issues and the Operations and Activities of the Hitachi Group

	Fundamental global issues	Activities toward resolution	Major businesses, products, technologies, and activities of the Hitachi Group		
	Major issues in society	of these issues			
tal Issues	Increasingly evident climate change	CO <sub>2</sub> reduction	Energy solutions business Clean energy business, modal shift		
ironmen	Depletion of natural resources	Waste reduction, recycling	Product recycling systems		
Global environmental Issues	Destruction of ecosystems	Controlling water pollution Controlling air pollution	Water purification systems Atmospheric purification systems Promotion of design and manufacturing aimed at reducing environmental burdens		
issues from a social perspective	Discrimination on the basis of race, religion, gender, physical challenge, etc. Declining birthrate and aging population Poverty, especially in developing nations Child labor and oppressive working conditions	Providing products and services easily used by anyone Elimination of the "digital divide" Promotion of diversity in hiring	Universal Design (home appliances, industrial machinery) Ubiquitous networks Human rights education Promotion of diversity in human resources		
Issues from a so		Strengthening of social infrastructure and livelihood Expansion of educational opportunities	Support for mine-clearing operations and subsequent restoration of cleared land Remote education systems (interactive whiteboards, etc.) Cooperation with suppliers in CSR (CSR procurement)		
	Large-scale natural disasters Warfare and terrorism	Prediction and prevention of natural disasters Fast damage assessments Rapid reconstruction of devastated areas Limiting the damage caused by terrorism	Flood simulation systems Navigation and support systems for disaster countermeasures Airport security systems, such as explosives detectors e-passports Mine-clearing equipment Formulation and implementation of BCP		
	Spread of chronic infectious diseases, increase in treatment-resistant diseases and modern diseases	Development of medical treatment technologies Improvements in quality of life	In-home health monitoring systems Portable automatic blood analyzer MRI (magnetic resonance imaging) systems for use during surgery Kokoro Gatari communication device for Lou Gehrig's disease (ALS; amyotrophic lateral sclerosis) patients Use of optical topography to investigate human mental activity		
	Leaks of personal information	Enhanced information security	Finger vein authentication systems Security PCs Education and management systems for information security		
	Food safety	Management of water and food safety	Food product traceability Processing and distribution systems for agricultural products Wireless environmental monitoring systems for food-product facilities		
	Increase in transportation disasters	Provision of safe, pleasant transportation systems	Cruise control systems for automobiles Safe-driving support systems using ITS (intelligent transport systems) Next-generation railways		

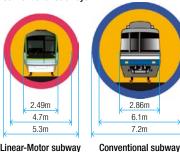




#### Linear-Motor Subways: The Future of Urban Mass Transit

The Nanakuma Subway Line in Fukuoka, Japan, which opened in February 2005, is a linear-motor subway developed by Hitachi, Ltd. Compact, good at handling curves and steep gradesand garnering attention as the regional mass transit system of the future.

Comparison of Linear-Motor and **Conventional Subways** 



Linear-Motor subway

**Compact and Maneuverable** Subway Trains

A linear-motor subway is driven by a linear motor where magnetic energy is generated between magnets in the train and plates in the track. This allows the chassis of the cars to be lower than conventional subway cars, and a more compact design, in turn, allows the diameter of tunnels to be reduced by almost half.

Another feature of a linear-motor subway is to allow exceptionally

tight curves because of the magnetic propulsion system and to enable the rails to be laid beneath existing roadways and intersections-reducing the constraints on new routes.

These characteristics of a linear-motor subway reduce the environmental impact: smaller-diameter tunnels are less costly to build and there is less excavated dirt and rocks.

#### Subway Design **Based on Citizen Input**

Fukuoka City Subway's Nanakuma Line has a number of innovations in addition to linear-motor propulsion, focused on the goal of passengerfriendly regional public transportation. For developing the cars, the priorities were noise reduction, roomy interiors, and Universal Design. Input from a design committee, made up of the Fukuoka City Transportation Bureau, local residents and experts, was closely evaluated.

Reduced tunnel diameters can also mean increased noise, but this was minimized by soundproofed wheels, antivibration materials, and double-glazed windows. To produce a sense of spaciousness, and to make the best use of limited interior space, under-seat lighting and other elements were used.

Other aspects of overall system and station design include the operations control system designed by Hitachi for greater safety and reliability, elevators for easy wheelchair access, and less gap between trains and platforms. Aboveground entrances were also given an innovative design, reflecting the local cityscape.

The new line has become a convenient transportation system for local residents, linking residential areas with the city center and alleviating traffic congestion within the city.

In recognition of these achievements, at the 35th Machine Industry Design Awards in 2005 (sponsored by Nikkan Kogyo Shimbun), Hitachi shared the Minister of Economy, Trade and Industry Award with the Fukuoka City Transportation Bureau and also won the Laurel Prize given by the Japan Railfan Club.

Hitachi will continue to provide comprehensive solutions for people-friendly regional public transportation, from design and construction of the trains to the systems used to monitor and control them.

> No luggage shelves or advertising banners means lots of headroom

Anti-vibration design for a guieter ride

Angled seats make it difficult to extend leas into the center aisle



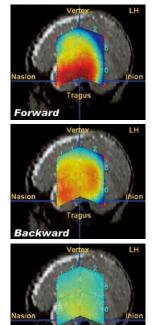
Double-glazed windows reduce noise and heat from outside

Clearly separated seats

Wall-mounted seats provide lots of learoom



Brain activity of a two-to-five-day-old infant hearing spoken language (top), hearing spoken language played backwards (middle), and hearing nothing (bottom). Research conducted jointly with Jacques Mehler of the Scuola Internazionale Superiore di Studi Avanzati.



#### Mapping the Brain

Topography is the charting of land features; Optical topography, an imaging technique for brain function, measures changes in blood flow using near-infrared light, a part of sunlight. The surface of the brain, or cerebral cortex, supplies freshened blood to other areas of the brain. Blood flow to the language area, for example, increases during speaking and decreases in silence, and reflected (or absorbed) light changes with the volume of blood. Optical topography shows changes in blood flow (0.1 second increments), revealing mental processes such as thinking and calculating. This technique is more than medical innovation; by contributing to scientific understanding of the brain, it offers unlimited possibilities for practical application in a wide range of fields.

#### Birth of Optical Topography

From the 1980s, I worked on developing MRI<sup>+1</sup> medical measuring equipment. Optical topography grew out of improving this technol-

#### The Potential for Optical Topography: Scientific Insights into the Brain Herald a "Science of Humanity"

Optical topography, using light to investigate brain activity, is being used not only for diagnostics and treatment of the brain but also for research into the mechanisms of the brain, giving birth to a "science of humanity" that integrates natural science and the humanities.



Using a brain-machine interface, a woman moves a model train by thinking.

ogy. I initially focused on changes in blood flow to show higher-level MRI images of brain function and form. This work revealed the principles of magnetic resonance angiography. We then developed an optical topography device using near-infrared light, making examinations easier and more comfortable for the subject. Measurements can be taken with a small device using semiconductors, making diagnosis easier. One effective approach: using optical topography for preliminary tests and higher-resolution MRI for closer examination.

Optical topography is now used to analyze brain activity—sensation, movement, language, memory, and so on. In 1997, we applied optical topography for identifying where epilepsy<sup>†2</sup> originates, facilitating corrective surgery, in collaboration with Tokyo Metropolitan Police Hospital. This technology is used in brainmachine interfaces in devices such as Kokoro Gatari, used for communication by patients paralyzed with ALS (Lou Gehrig's disease).

#### From Diagnostics to New Frontiers of Brain Research

The dawn of optical topography, let-

ting us see inside an active brain, has opened up fields of study that integrate brain science with humanities such as ethics, religion, and philosophy. It is now possible to see brain activity in restless infants and children using a small, easily-worn probe. In 2003, in collaborative research with a European cognitive psychologist, we discovered that a newborn can recognize its mother tongue, which caused a global sensation.<sup>†3</sup>

Looking ahead, optical topography opens up new technologies and areas of study for monitoring healthy minds in children, allowing them to become well-rounded people.

(Hideaki Koizumi)

#### †1 MRI

Magnetic resonance imaging: A technology that uses magnetic fields and electromagnetic waves to generate images of internal body structures

#### †2 Epilepsy

A brain disorder that causes convulsions and other symptoms when a certain area of the brain is overexcited

†3 Research conducted jointly with Jacques Mehler of the Scuola Internazionale Superiore di Studi Avanzati in Italy



Hideaki Koizumi, Ph.D. Fellow, Hitachi, Ltd.



#### Ballast-Water Purification System Reduces Ecosystem Damage

The threat to ecosystems from ballast water discharged by ships is a problem in harbors around the world. Using original technology, Hitachi has developed a ballast-water purification system that minimally impacts the environment.



Test operation in Tokyo Bay

#### The Growing Ballast Water Problem

When a tanker or freighter unloads, it rises in the water and needs to add ballast for stability. For this reason, ships have ballast tanks that are filled with seawater. A 300,000-ton tanker takes on about 100,000 tons of seawater, enough to fill over 50 fifty-meter pools. But the ship releases that water when it takes on new cargo, discharging foreign organisms that can wreak havoc on the local ecosystem.

#### System Generated from Dialogue with Customers

I learned of the gravity of ecosystem damage from ballast water when speaking at the "Japan Today" seminar in the Middle East. In response, I devised a ballast-water purification system using a technology I had developed in 2001 that uses a superconducting magnetic separator to coagulate and remove the bluegreen algae<sup>†1</sup> that grows in lakes and ponds, caused by excess nutrients.

The principle is the same as the one used to collect iron particles with a magnet. Adding iron powder and long strings of polymers to seawater and then agitating it causes organisms in the water to coagulate into small clumps (or flocs), which can then be collected with a magnet.

A superconducting magnet was originally used, but while the magnetic field was strong, the cost was high, and maintaining the proper temperature was difficult. These problems were overcome by using Hitachi Metals' compact, low-maintenance permanent magnet. Hitachi Plant Technologies also participated in the project, contributing expertise in water treatment. By trial and error, we exceeded the standards that the International Maritime Organization (IMO) had set: only 5 organisms between 10 µm and 50 µm per milliliter, no organisms over 50 µm, and no E. coli bacteria.

The IMO requires the phasein of ballast-water treatment equipment, with all ships fitted by 2017. The usual way to meet the IMO's water-quality standard is to use sterilization. However, this approach raises concerns over secondary pollution caused by residual chlorine or other disinfectants released into the ocean. In addition, dead organisms build up in the tanks causing rust. In contrast, Hitachi's coagulation and magnetic separation method collects the seawater organisms in flocs, without secondary pollution. Hitachi's system has attracted much attention in Europe, where there is deep interest in "green" ships.<sup>†2</sup>

#### Testing Underway with Goal of Commercialization in 2009

At present, a land-based test is being conducted in Tokyo Bay, with the goal of onboard testing in 2008. Hitachi bioscience researchers are carefully evaluating the ecological impact with the goal of commercialization in 2009.

This technology can also be applied to purification of the water discharged when oil is extracted from oil sands, and is currently being eyed as a promising alternative to conventional methods. Testing is already underway in Canada.

(Akira Mochizuki)

t1 Blue-green algae

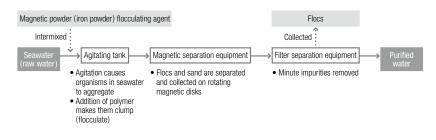
A type of phytoplankton that appears as green particles floating in water **†2 Green ship** 

An oceangoing vessel with low environmental impact



Akira Mochizuki General Manager of Business Relations, Business Incubation Division, Hitachi, Ltd.

#### **Ballast-Water Purification System**



#### e-Meister:

Making Technical Mastery Visible The techniques carefully cultivated since our founding are the basis of Hitachi's *monozukuri*—designing, manufacturing, or repairing products—and the technical excellence that underpins the quality of our products.

Today, demographic changes in Japan have created concern that highly skilled technicians and instructors will soon be in short supply, just when a high degree of precision is required and production is shifting overseas. Creating a reliable way to transfer technical know-how has become urgent. At its core, teaching technical skills is about how to efficiently pass on intuitive "feel" and "the tricks of the trade" gained through deep experience.

To meet this need, since 2001, the Hitachi Group has been developing the e-Meister program: using information technologies to accurately record and pass on experienced workers' know-how to the next generation.

#### Conveying Information with Video, Still Pictures, and Sound

e-Meister organizes the introduction of important skills using familiar media—video, still pictures, and sound—that convey information in an easy-to-understand way, not possible from reading a manual or description of procedures.

For example, brazing metal is divided into units: "Preparing the Tools," "Operating Instructions," "Work Procedures," "Job Know-How," and "Checking Your Work." After trainees select a topic, they see a video showing a skilled operator adjusting a welding-torch flame, the angle of the flame to the materials, etc. Many examples of common mistakes and acceptable results are shown, enabling a deep, practical understanding of the techniques.

By using e-Meister, differences in educational levels are evened out, training time is reduced, and exercise



(Upper left) Screen shot of instructions for brazing copper pipe (Lower left) Screen shot showing a finishing technique called *kisage* (Right) Training new employees in China

#### The e-Meister Program: Passing on *Monozukuri* to the Next Generation

The Hitachi Group is sustained by highly developed *monozukuri* capabilities—our accumulated design and manufacturing know-how. The e-Meister program is a tool for teaching this technical mastery, both in Japan and overseas, that is increasing efficiency of production and assuring high levels of product quality at our production centers.

review and repetition is possible. Where e-Meister has been introduced, these benefits are increasing production efficiency and product quality.

#### Widely Used Overseas

English- and Chinese-language versions of e-Meister have been produced for overseas affiliates, not only in North America and China, but in Europe and the rest of Asia.

For example, in China's rapidly growing economy, more than 10 Hitachi Group companies use e-Meister. Because they are constantly hiring new employees, fast acquisition of skills is essential to ensure product quality and to meet deadlines. At the production centers where e-Meister is used, response has been positive: "Skills acquisition is easier, and employee morale has risen."

One important task is to expand the e-Meister program, especially to

parts of Asia where other languages are spoken.

#### Enhancing Japan's *Monozukuri* Capabilities

We are eager to introduce this program to organizations outside our company, such as government ministries and agencies, the Japan Management Association, the Japan Institute of Industrial Engineering, and other manufacturing groups, to contribute more broadly to disseminating Japanese manufacturing skills, as well as developing our own human resources. (Mitsuhiro Ota)



Mitsuhiro Ota Senior Project Manager MONOZUKURI Technology Division, Hitachi, Ltd.

#### Chief Executive's Message



Sir Stephen Gomersall Senior Vice President and Executive Officer, Chief Executive for Europe, Hitachi, Ltd.

Hitachi

Global

**CSR** Activities

Europe

In today's markets, stakeholders expect companies to show their commitment to society and the environment. Demonstrating CSR therefore becomes a means of enhancing and protecting corporate value. This CSR report shows how Hitachi endeavours to implement this commitment worldwide.

The goal of Hitachi throughout its 97-year history has been to contribute to society through technology, and to be good corporate citizens in every international environment where we operate. As a group of consumerand infrastructure-related companies with increasing roots in Europe, the strongest link in implementing our CSR aims is our employees, and our aim is to develop a workforce for whom this commitment is embedded in our business culture and local relationships.

We believe that achieving this will raise the appreciation of our European operations, increase Hitachi's brand value, and contribute positively to our competitiveness and growth within Europe.

#### The EU-Hitachi Science and Technology Forum

At the EU-Hitachi Science and Technology Forum, the public policies that will improve the daily lives of EU citizens are discussed. The ninth forum was held in Warsaw, Poland in May 2006. Scientists, academics, government officials,

and business leaders met for three days of discussion on the theme "The impact of Information and Communication Technologies (ICT) on the safety, trust and security of European citizens." After the forum, a summary of the findings was published and distributed to EU officials, members of the European Parliament, as well as academia and industry, as a contribution to the EU public policy debate.



EU-Hitachi Science and Technology Forum

#### Creating Work-Friendly Workplaces

Hitachi Europe appoints local employees to lead efforts to create a workfriendly workplace. This year, 22 people from eight Hitachi Group companies participated in the "High Potential Development Programmes" that Hitachi Europe has designed to foster future executives and advance our business. After studying strategic management skills, participants were divided into strategic project teams to spend six months working on themes such as "the Czech Republic as an Emerging Market." They then presented the results of their analysis and made recommendations.

Europe's many countries make it vital to promote open communication and understanding of other people's values. Hitachi Europe, Ltd. provides all its employees with cultural awareness training, where they learn about the impact of history and culture on communication, how to develop relationships with people from different countries and areas, as well as business customs and practices in other cultures. Understanding of non-verbal communication is also deepened.

#### Hitachi Environment Film Competition in Poland

In July 2006, Hitachi and the Center of Japanese Art and Technology held the Hitachi Environment Film Competition with the cooperation of the Andrzej Wajda Master School of Film Directing in Warsaw.

To raise interest in environmental issues, high school students in Krakow, Poland, were invited to create short films on the theme of "the Significance of the Natural Environment and Protection of Natural Beauty in Poland." The winning film was presented at the Tokyo International Women's Film Festival, where it was well received. Technology Foru

Hitachi Europe Gateway site

**L**ink. EU-Hitachi Science and Technology Forum



in cultural awareness training



Award ceremony for the Poland Hitachi Environment Film Competition

#### Pioneering the future with our stakeholders



We work to provide highly dependable products and services and to create a comfortable work environment that encourages diversity. Through dialogue with our stakeholders, we are continually creating new social value.



#### Customers and Hitachi

"Thinking and acting from the perspective of our customers." This is the basic philosophy behind all the corporate activities of the Hitachi Group. Customer satisfaction and providing highly reliable products and services are the top priorities.

#### Strengthening Monozukuri

#### †1 monozukuri

Monozukuri is a Japanese term combining two words—mono meaning product and zukuri meaning manufacturing. Hitachi's monozukuri represents our total manufacturing solution, which includes software and hardware know-how and development expertise. As such, Hitachi's monozukuri provides maximum value for customers by providing end-to-end planning, design, manufacturing and quality control for every product.

#### †2 PM

project management A method of managing the progress of a project as a whole while coordinating staff, funds, equipment, materials, scheduling, etc. Since our founding, the Hitachi Group has carried on a tradition of "quality first" *monozukuri*<sup>+1</sup>. At Hitachi, we approach *monozukuri* from the customer's perspective, holistically applying a wide range of technologies, know-how, and management skills to the total process—from product development and design to production, sales, and service. However, when broken turbine blades were discovered in a nuclear power station in Japan in June 2006, we established the Supervisory Office for Monozukuri under the president the following September to further strengthen *monozukuri* capabilities and to restore customer confidence.

#### Six Committees Committed to Strengthening Core Technologies

The Supervisory Office for Monozukuri, with six committees, strategically introduces the latest simulation technology and specialized personnel. At the same time, it works to strengthen existing development and design processes, production technology, and quality assurance, then promotes these improvements throughout the Hitachi Group as part of a Group-wide campaign. The two fundamental principles that support quality and reliability in *monozukuri* are technical capability and managerial expertise.

Committee 1 strengthens development and design; Committee 3 improves quality and reliability based on the Hitachi founding spirit; and Committee 4 standardizes and makes knowledge about *monozukuri* widely available (information on previous accidents or failures, expertise, technology, and know-how).

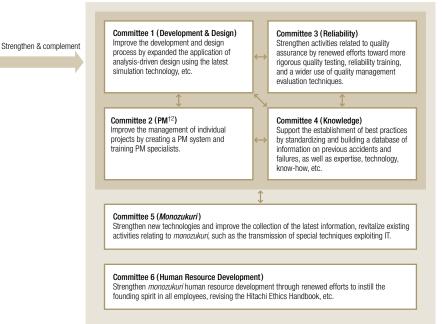
For enhancing managerial expertise, Committee 2 strengthens risk and project management, Committee 5 works on enhancing *monozukuri* competence, which forms the bedrock of management, and Committee 6 promotes human resource development.

Every committee simultaneously works to enhance *monozukuri* and on-site skills by continually sharing the results of its activities with the

Committees of the Supervisory Office for Monozukuri and Their Activities

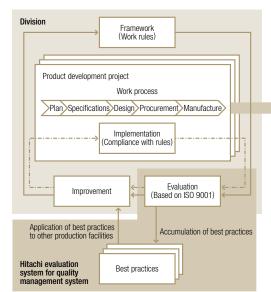


- Simulation technology
- Project management
- Quality assurance
- Production technology
- Skills Olympics
- Engineering ethicsManagement training
- :



← Partnerships and complementary relationships among committees

#### Hitachi Evaluation System for Quality Management



company's business divisions and rigorously applying the PDCA<sup>†3</sup> process.

#### **Quality Assurance (QA) Activities**

Using an integrated quality assurance (QA) system, the Hitachi Group focuses on QA at every stage of the product cycle—from planning to shipping and service. Through continual improvement of work processes and other measures, we work hard for high-quality *monozukuri* that leads to the ultimate in customer safety. We also do our best to develop personnel on the understanding that "quality begins with people."

#### Employee Training to Improve Quality and Reliability

At the Hitachi Group, we develop courses tailored to every technical and skill level for divisions involved with design and quality assurance, including "Reliability: Fundamentals and Applications," "Product Safety," and "Engineering Ethics." Our "Engineering Ethics" course introduces managers to the views of experts and reviews examples of applied ethics. As well, discussions are held on real-life workplace issues, recognizing that it is vital for every engineer to think and act ethically as an individual.

More than 40,000 employees have taken our general e-learning course "Introduction to Engineering Ethics."

Individual production facilities have also been implementing their own employee training programs for specialized skills. At Hitachi Ltd. Hitachi Works, for example, we have set up a training center to upgrade manufacturing, inspection, and maintenance skills and also provide young qual-



Quality training at the Hitachi Works Training Center

ity assurance employees with practical training in "QC seven tools."<sup>+4</sup> As well, lectures are given by experts on such topics as "Attitude for Quality Assurance Personnel."

#### **Total Commitment to Product Safety**

At Hitachi Group we focus all our knowledge and technical know-how in planning, research, design, manufacture, quality assurance, and maintenance on the goal of providing safe products and services.

Design and verification during product development, places the highest priority on protecting life, health, and property. In consumer electronics, we incorporate the most reliable safety mechanisms available to protect against serious secondary damage, such as fire or electric shock, if a component fails. We also conduct risk assessments, incorporating the opinions of other production and research facilities. In addition, we take rigorous steps to ensure consumer safety, in the unlikely event of fire, through forced ignition testing of our products.

#### Hitachi-Quality *Monozukuri* through Improved Work Processes

To provide excellent products and services, it is necessary to improve the quality of individual work processes, such as planning, design, and manufacture. For this reason, we constantly apply and continually improve the PDCA cycle during each process. At the Hitachi Group we use the Hitachi Evaluation System for Quality Management developed in-house.

For divisions seriously in need of remediation, we use more intensive measures, sending a special team to evaluate the quality of work processes and to fix weak points. In these cases, work-process

#### †3 PDCA

Product

A system for managing an organization in a continuous way by approaching the four steps of Plan-Do-Check-Action as a single process.

#### †4 QC seven tools

Seven statistical methods needed to pursue quality control (QC): (1) pareto diagram, (2) cause-andeffect diagram, (3) histogram, (4) check sheet, (5) scatter diagram, (6) control chart, and (7) stratification (grouping of data by common factors).

#### W<mark>eb</mark>

Quality Assurance Flow Chart

#### Web

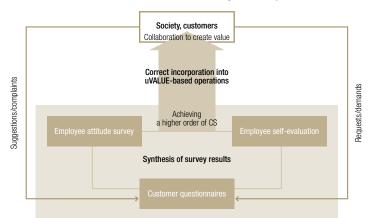
Promoting Compliance with Technical Laws

#### Web

OCHIBO HIROI (Program to prevent recurrences)



Customer Center, Hitachi Building Systems Co., Ltd Monitoring elevators and other building equipment



#### CS Efforts in the Information & Telecommunications Systems Group

#### †1 uVALUE

The Hitachi concept for integrating IT into a wide range of business domains within the Hitachi Group that will create value in the coming ubiquitous information society, thereby enriching society as a whole.

#### Web

Action Guidelines for CS Management

Web\_\_\_\_\_ How the Customers' Voices Are Reflected evaluations using the Hitachi Evaluation System for Quality Management have proven effective. Through this system, it is possible to determine—quantitatively and in clear detail—the extent to which a project is following set processes and whether there are problems with those processes. Any problems that are exposed are remedied using good practices, stored within the system, from other production facilities. At present, this system is being used in 12 production facilities, but in the future we plan to apply it to every company within the Hitachi Group.

#### Building Customer Feedback into Our Products

At Hitachi we have made our Customer Satisfaction (CS) Management Guidelines one of the pillars of business management, and we continue to improve CS with the goal of the "creation of innovation through collaboration with customers." We carry out a Customer Satisfaction Survey tailored to each business operation and market, analyzing the opinions submitted to our Customer Support Center. We then incorporate this information into product development and business activities.

#### CS Efforts in the Information & Telecommunications Systems Group

The Information & Telecommunications Systems Group is working for a better society by "collaborating to create the best value for our customers," based on the concept of uVALUE.<sup>†1</sup> This approach adopts the customer's viewpoint, using an annual questionnaire from customers on our products and services. Within the company, employees conduct self-evaluations to understand customer needs and issues, quality and speed of response to requests, and other items. In addition, we conduct an employee opinion poll on the workplace environment, including internal communications and decision-making speed. The results of these surveys are combined with customer questionnaires and analyzed from various angles to assess how daily activities are reflected in customer satisfaction.

Through these efforts, we strive to raise employee awareness and incorporate—as completely as possible—the customer's viewpoint into our operations.

#### CS Efforts in Consumer Electronics

For consumer electronics, we receive wide-ranging feedback, including questions and complaints on items ranging from plasma TVs to washing machines through our Customer Support Center and Web sites. In addition, we constantly use consumer questionnaires as feedback on the products they use, to improve products and services.

Regarding DVD camcorders, for example, many consumers wanted longer recording times. We responded by installing an HDD (hard disk drive) to supplement the DVD as a recording medium, boosting recording times to about 11 hours.

We will continue listening attentively to our





Inspection of elevator machinery, Hitachi Building Systems Co., Ltd. All elevators are subject to rigorous inspections for vibration and noise. Only products that pass these tough inspections are shipped.

customers and will work to incorporate their needs into our products, as quickly as possible.

#### **Response to Product Quality Issues**

In Japan in September 2006, in some of the 24,043 dual-voltage "minus ion" hairdryers manufactured between November 2004 and September 2006, the ceramic anti-noise condenser broke. Inadequate voltage surge protection caused smoke to come out from the handle, which posed the risk of fire. In response, on October 24, 2006, Hitachi placed notices in 55 major Japanese newspapers and set up an office to deal with this issue. Data was collected at specially set up centers and we promptly recalled the dryers and exchanged them for upgraded products at no charge.

Since then, we have replaced defective parts and materials, and taken other steps, to avoid a similar incident from occurring. We have also applied the lessons learned to other products by strengthening safety measures during development, including parts selection and product safety testing.

#### **Ensuring Elevator Safety**

The number of elevators and escalators, "vertical modes of transportation" adapted to the vertical growth of cities, is increasing in stations, underground shopping malls, and other public facilities a part of barrier-free building design. Many people are seriously inconvenienced when elevators and escalators break down due to malfunctions, power failure, or earthquakes and other disasters.

The Hitachi Group is working hard to provide highly reliable elevators and escalators, together with quality maintenance services, to ensure "safety, comfort, and convenience." Our maintenance engineers are continually upgrading their acknowledged expertise and technical capabilities by training on equipment. In addition, with the Customer Center of Hitachi Building Systems Co., Ltd. as a hub, we now have 350 satellite maintenance centers throughout Japan operating 24 hours a day, 365 days a year, dispatching maintenance engineers as soon as we get an abnormal signal through the computer network.

With our new remote monitoring and diagnostic system, we can detect warning signs and respond proactively to prevent breakdowns before they occur. In the event that people become trapped in an elevator, the Customer Center can release them remotely—even before maintenance engineers arrive.

During the July 2005 earthquake in northwestern Chiba Prefecture in Japan, many elevator systems shut down, trapping people inside. In response, Hitachi Group developed a way to quickly restart elevators after wide-area disasters. We have also secured housing for maintenance engineers in Tokyo—where elevators are concentrated—to improve our readiness responce and to restore service on weekends, holidays and during the night.

#### **Universal Design**

Universal Design (UD) is the concept that all goods and services, available throughout society, should be useable by anyone, regardless of age, gender, nationality, or physical limitation.

The Hitachi Group is widely involved with society and people's lives through consumer electronics, information services, or public systems, making the UD perspective indispensable. We are continually offering better products and services "for each and every customer."

Our UD process has three steps: basic research; product development; and measures to inform and educate. During each step, we consult and deliberate to ensure that improvements are continually built into our products and services.

Our development of a standard elevator size incorporating the UD concept illustrates how these three steps work together.

#### Steps in Universal Design

During basic research, we began by establishing a research objective based on what people are looking for in an elevator, considered within the context of society and our business operations. Then we

#### **Universal Design Process**

Our work to achieve Universal Design rests on three pillars; basic research, product development, and measures to inform and educate, which in turn are based on customer needs, with feedback continually guiding our efforts.



went out into the community accompanied by people who have vision or hearing disabilities, or those in wheelchairs, to observe and study firsthand how they use elevators.

We also surveyed 358 people by questionnaire, including the elderly, wheelchair users, and foreigners living in Japan, then analyzed the results to pinpoint the problems that these people were experiencing.

During product development, we prioritized the problems that were revealed and began studying and proposing specific solutions. Focusing on the solutions with the most promise, we created prototypes (full-scale test models) and had them evaluated by 120 subjects, including people in wheelchairs, the elderly, the vision or hearing impaired, and healthy people. On the basis of these evaluations, we adopted a number of ideas to be applied to product development, such as a flashing destination floor button and a color LCD (liquid crystal display).

To inform and educate, we launched PR activities, such as product announcements, and held presentations for customers and sales units to promote understanding of UD and to gather feedback. At the same time, to spread the acquired knowledge about UD activities throughout the company, we are standardizing the results of these efforts, creating "tools," such as design guidelines and a database.

We not only use UD in manufacturing, we educate people about this subject as one of our CSR initiatives. For example, we are working to spread understanding and consideration for the disabled and the elderly through a hands-on curriculum to get children thinking about UD (see page 32).

†1 IAUD International Association for Universal Design

#### report-

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#### Participating in the International Conference for Universal Design

The 2nd International Conference for Universal Design was held in the Kyoto International Conference Hall in October 2006. The growing interest in UD attracted 14,700 people from 28 countries.

As special corporate co-sponsor, Hitachi Ltd. delivered a keynote address, presented papers in sub-sessions, gave a presentation on UD examples at the plenary session of the IAUD,<sup>†1</sup> and participated in a 48-hour design marathon.

In the exhibition, Hitachi displayed a wide range of CSR-oriented products-including some still under development - and introduced a few CSR activities. Receiving high marks from participants were our landmine removal equipment (Hitachi Construction Machinery Co., Ltd.), for its international role, and hearing-impaired Hitachi employees for sign-language explanations.



The Hitachi booth in the conference's exhibition hall.

#### To Our Shareholders and Investors

Hitachi is dedicated to enhancing communication with shareholders and investors while providing them, in a fair and appropriate way, with the information they need to make sound investment decisions.

#### Hitachi's IR Philosophy

The Hitachi Group approaches investor relations (IR) proactively, working from the basic principle of ongoing public disclosure of information in compliance with all relevant laws and regulations. We believe that providing timely, fair, unbiased, and accurate information on the corporation's current status and future prospects is an essential element of IR. Through the open, ongoing disclosure of information, we are working to both enhance the transparency of corporate management and to promote IR initiatives that meet the needs of our shareholders and investors.

#### **Proactive IR Approach**

At Hitachi, Ltd., our top executives, as well as our financial, legal, and corporate communications divisions, and each of our business divisions, work together on a wide range of IR initiatives. These include holding corporate strategy briefings and tours of production and R&D facilities for institutional investors and analysts, as well as participating in investor meetings sponsored by securities firms.

In fiscal 2006, we delivered presentations to introduce our R&D activities, hard disk drive business, and automotive operations, in addition to a major presentation on the new Hitachi Corporate Strategy covering the period ending March 2010. The R&D presentation, held at the Systems Development Laboratory of Hitachi, Ltd., introduced investors to our R&D and intellectual property strategies.

In addition, we hold more than 350 meetings a year for institutional investors and analysts, both Japanese and foreign. Moreover, we work hard to ensure that the feedback given by institutional investors and analysts at these meetings is incorporated into the company's management and business operations.

In January 2007, for example, we redesigned our IR Web pages, making information that shareholders and investors need clear and easily available. As well, we created a section for individual investors. In this way we are striving for full, public disclosure of information that promotes a better understanding of the Hitachi Group. We are also working to make access to information on our Web site

as fair as possible by providing the English as well as the Japanese presentation materials used in strategy briefings.

· Financial Highlights

• Hitachi Group CSR Report

• R&D and Intellectual Property Report



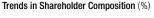
IR presentation on Hitachi's hard disk drive business

Investors

#### General Meeting of

Web\_

Results of External SRI Assessments in Fiscal 2006



Publications Providing Business Information

Financial Reports

Business Reports

Annual Report



#### report —

#### Top Executives Discuss Business Operations

We believe that providing an opportunity for Hitachi executives to explain business operations is an important aspect of investor relations. At the corporate strategy briefing held in November 2006, Hitachi President Kazuo Furukawa explained Hitachi's corporate strategy for the period ending in March 2010 to institutional investors and analysts.





#### Working in Harmony with Local Communities

Nurturing People, Connecting to the Future

Based on these commitments, the Hitachi Group engages in social contribution activities in the areas of education, the environment and social welfare.

#### Web

Hitachi's policy on social contribution activities

Link. Hitachi Group's social contribution activities

An American teacher sharing local legends as a part of HISTEP's Japan exchange program

#### **O**ink

Hitachi International School Teachers Exchange Program (HISTEP)

#### †1

The Hitachi International School Teachers Exchange Program (HISTEP) is an educational program for teachers from Japan, Europe and North America to visito one another's countries and give classes, have discussions with local teachers, and stay with local families.

#### †2

The Kyoto Edison Program is a program in which industry and schools partner on field trips to production plants and other activities to promote school-age learning about technology and product manufacturing.

#### Social Contribution Philosophy and Policy

#### Philosophy

The Hitachi Group strives to demonstrate its corporate citizenship in response to social needs and expectations, while endeavoring to enrich the quality of life and realize a better society.

#### Policy

The Hitachi Group promotes various social contribution activities to build a vibrant society based on fostering leadership to implement reformation for the next era. This is achieved by making optimal use of our knowledge and information technology in three specific areas, namely, education, the environment, and social welfare.

#### Awareness of Social Issues

The business operations of the Hitachi Group depend on having a shared sense of values with people in many countries and communities—and by building mutual trust with them. Hitachi stays constantly focused on the issues facing society, whether it is the problems of environmental conservation or fewer young people studying science or the need to honor diversity. We believe that an ongoing dialogue and fulfilling the inherent responsibilities of a company supported by society will lead to a brighter future for all and will facilitate our own development.

#### **Educational Initiatives**

Hitachi runs a teacher exchange program, accepts international students and researchers, and conducts other initiatives on a global scale to help foster the next generation's leaders. We also devote much energy to science education, given that increasing numbers of young people are turning away from the sciences.

#### 20th Anniversary of HISTEP

The year 2006 marked the 20th anniversary of the Hitachi International School Teachers Exchange Program, or HISTEP<sup>†1</sup>, which began in 1986.

In 2006 we sent seven Japanese teachers to Europe and North America and accepted eight teachers from those regions to Japan. To date, 246 teachers have participated in the exchange program.

This program includes an educational forum for the teachers visiting Japan, which is also open to the general public. In celebration of HISTEP's 20th anniversary, in 2006 we invited the screenwriter Mieko Osanai and two other intellectuals to discuss the future of education. They focused on the theme of education emphasizing humanity, or education fostering compassion for others.

#### **Universal Design Classes**

Employees of the Hitachi Group volunteer to provide support for education. One initiative is to hold classes on Universal Design (see page 29) during integrated learning hours at elementary schools. These classes provide basic information on Universal Design, feature talks by people with disabilities living nearby, and have students work in groups to think of and present products using Universal Design. The classes look at product development from many perspectives and convey the importance of compassion for others.

In fiscal 2006, the class was conducted 15 times at ten elementary schools in the Tokyo area. The smiles of children discovering ideas and innovations hidden within everyday products continue to motivate Hitachi's volunteers.

#### **Class for Making Dry-Cell Batteries**

The Kyoto Office of Hitachi Maxell helps sponsor the Kyoto Edison Program<sup>†2</sup>, run by the Kyoto Industrial Association and other organizations that get children interested in science, technology, and manufacturing.

In fiscal 2006, a class was held for elementary school children in Oyamazaki, where the office is located; the children made dry-cell batteries together with their parents. Fifty people (21 sets of parents and children) participated.

#### Fostering the Spirit of Inquiry

Hitachi High-Technologies Corporation, which develops and manufactures electron microscopes,





45 0.1

Support for Science Education.

Hitachi High-Technologies Corporation (Japan)



Spring Science Camp, Hitachi, I td.

conducted a program to support science education using tabletop electron microscopes. The students, prepared observation samples (plants, insects, etc.) themselves, with the focus on letting the children touch, experience directly, and see with their own eyes. This program has spread to branches around Japan and has even been conducted by our San Francisco office in the U.S.

In addition, Hitachi Plant Technologies, Ltd. holds the "We-Love-the-Earth Class" every year to teach elementary school children the importance of environmental protection. Tabletop electron microscopes and other instruments are used to introduce water treatment technologies.

#### Spring Science Camp

Hitachi, Ltd. participates in the Spring Science Camp administered by the Japan Science and Technology Agency. High school students are invited into research labs and given the opportunity to experience the latest, cutting-edge technologies.

In fiscal 2006, 12 high school students were invited to our Mechanical Engineering Research Laboratory and given the opportunity to learn about the mechanisms used in ATM machines, to run experiments on air conditioning heat pumps and to participate in other activities. This program is designed to allow students to directly experience the advanced technologies hidden in mechanical products. One of the students commented, "I learned the importance for product development of the physics and math concepts that I'm currently learning in school."

#### Hitachi Fellowship Program in China

Hitachi, Ltd. and Hitachi (China) Ltd. have partnered with Chinese think tanks<sup>†3</sup> to bring to Japan some of the mid-level researchers who will lead China's next generation. Each year, four researchers are provided with the opportunity to research a subject of their own choosing at Japanese research institute for three to six months. Through this program, we hope to deepen understanding between Japan and China and to build a foundation for a forwardlooking cooperative framework that will serve as a bridge for Sino-Japanese relations.

#### **Environmental Initiatives**

The Hitachi Group's social contribution activities protect the environment and foster an environmentally oriented mindset, with the aim of realizing a sustainable society.

#### **Environmental Education Symposium**

Established in 1972, The Hitachi Environment Foundation surveys and researches environmental problems, honors organizations that contribute to environmental protection, and conducts other

report

**Compassion Fostered** by Universal Design Class Akiko Oyama, Deputy Head Teacher, Komagome Elementary School, Toshima-ku Public School, Tokyo



:

I want our children to see the importance of building a caring society. Hitachi volunteers teach easy-to-understand classes on Universal Design so students develop a perspective for living together in society. I think expe-

riences like this will foster people capable of changing society.

Participation in the Hitachi Fellowship **Program for Chinese Researchers** Liu Tingwei, Director, International Exchange, Academy of Macroeconomic Research, National Development and Reform Commission



I carried out research on Japan's energy conservation policy at the Institute of Energy Economics, Japan for six months starting in August 2006. I am very grateful for having had this opportunity, and hope to leverage Japan's

successes towards China's energy conservation policies and to promote cooperation in this field between Japan and China

**†3** Chinese Think Tanks Hitachi's Four Think Tank Partners in China:

- Academy of Macroeconomic Research, National Development and Reform Commission
- · Chinese Academy of International Trade and Economic Cooperation, Ministry of Commerce of the People's Republic Development Research Center
- of the State Council Chinese Academy of Social Sciences

of China



Environmental Education Symposium (Sendai)



Hitachi Young Leaders Initiative: Students conducting water quality surveys on a river in the Hanoi area with children from an orphanage

related activities. Since fiscal 2005, the "Citizens Taking the Initiative in Environmental Education Symposium" was held around the country in cooperation with the Ministry of the Environment. The goal of the symposium is to steadily expand the scope of activities for creating a sustainable society through the participation of every citizen in environmental education and learning. In fiscal 2006, the symposium was held in Sendai and two other regions in Japan, and information was presented on examples of activities by local government bodies, non-profit organizations, and companies, as well as trends overseas and other issues. The hope is that the symposium will lead to more regionally rooted environmental activities directed at creating a recycling-based society.

# Asian University Students Discuss Water Resources

The 8th Hitachi Young Leaders Initiative was held in January 2007 in Hanoi, Vietnam. The initiative comprises a forum, workshops and a social contribution program designed to broaden the views of participating Asian university students on common issues in Asia and to help them develop into future leaders in the region. This year, in addition to the theme of regional economic integration, the students discussed and drew up recommendations on how to manage water resources for Asia's sustainable development. They also partnered with local orphans, conducting water quality tests in waterways and a purification plant in order to raise the children's awareness of water issues.

# **Cleanup Activities**

Many companies in the Hitachi Group have cleanup programs near their offices, at local beaches, along rivers, and other areas to protect the local environment and to preserve the surroundings. For example, Hitachi's Information and Telecommunication Systems Group holds the "10,000-Person Cleanup Campaign" with other group companies as a part of its local community activities. In fiscal 2006, 17 companies—around 8,700 people—helped in the cleanup and beautification of local communities and areas near their offices.

# **Social Welfare Initiatives**

Hitachi engages in these activities to create a better society by enriching lives—through support for the healthy development of young people and activities that help the socially and economically disadvantaged reintegrate into society.

# Helping Prevent Crime and Delinquency

Since its establishment in 1967, The Hitachi Mirai Foundation has built understanding and fostered the public's cooperation for preventing crime and delinquency and for assisting in social reintegra-



*Crime and Delinquency*, a periodical issued by The Hitachi Mirai Foundation

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#### report –

# Hitachi Tree Alive and Well

Hitachi Tree, the tree used in commercials for the Hitachi Group, is located in Moanalua Garden park on the island of O'ahu in Hawaii. There was temporarily some concern that the gardens might be sold and the tree cut down. But, based on the belief that the gardens should be preserved and open to the public and tourists, they were purchased by Kaimana Ventures, Ltd., and Hitachi committed to ongoing cooperation for their preservation. We plan to continue to carefully look after this tree, which serves as a symbol of the Group's solidarity and the sense of trust and affinity people have for Hitachi.

**Dink.** Hitachi Young Leaders Initiative



Cleanup activities, Information and Telecommunications Systems Group of Hitachi, Ltd. (Japan)

Hitachi employees performing volunteer work, Hitachi Global Storage Technologies (U.S.A.)

tion. The foundation publishes the periodical *Crime* and *Delinquency* to more widely publicize initiatives on crime prevention, correctional education, and rehabilitation.

In addition, with the goal of helping to bring about a bright, healthy society without crime or delinquency, the foundation provides support for people involved in related day-to-day activities. For example, in fiscal 2006 it provided funding for the Stockholm Prize in Criminology, which was recently established and based on a proposal by the Swedish Ministry of Justice. The prize is awarded to scholars who have produced exceptional work—on a global basis—in the field of criminology or to distinguished individuals who have contributed to the prevention of crime and the protection of human rights. A criminology symposium was held in conjunction with the awards ceremony.

### Supporting NPOs Involved in Helping People

Community Action Committees (CACs)<sup>†1</sup> made up of employees of Hitachi Group companies in North America provide support for non-profit organizations involved in social welfare activities and other initiatives that benefit local residents.

Hitachi America, Ltd. (New York) has supported Green Chimneys since 1996, a social welfare facility that provides animal-based therapy<sup>†2</sup> for children requiring special emotional support.

Hitachi Global Storage Technologies (Minnesota) supports PossAbilities of Southern Minnesota, a non-profit organization dedicated to providing work assistance to people with developmental disabilities. In addition to providing financial assistance, the company also supports activities that involve person-to-person interaction. For example, volunteer employees go in person to work at, and perform repairs on, daycare centers run by the organization.

# Six Foundations Promote Diverse Activities

Starting with The Hitachi Environment Foundation and The Hitachi Mirai Foundation mentioned above, Hitachi has six foundations located both in Japan and the U.S. that are active in many areas, including promoting family and science education, inviting university teachers and researchers from Southeast Asia, protecting the environment, supporting the healthy development of young people, and working on corporate citizenship initiatives in the U.S.

#### Hitachi's Foundations

- The Odaira Memorial Hitachi Education Foundation
- The Hitachi Environment Foundation
- The Kurata Memorial Hitachi Science and Technology Foundation
- The Hitachi Mirai FoundationThe Hitachi Scholarship Foundation
- The Hitachi Foundation (U.S.A.)

# **Support for Volunteer Activities**

Hitachi provides the support—information, time, and funds—that allows our employees to participate in volunteer activities.

To provide information, we publicize volunteer activities through seminars, introductions on our intranet, and by other ways. For time, Hitachi, Ltd. has a special annual paid leave system that employees can use for volunteering or self-development. For funding, we hold a volunteer support program every half-year and provide funds to non-profit organizations where our employees are volunteers.

# **Link.** Hitachi foundations

†1

Community Action Committees promote community initiatives in North America through the voluntary participation of employees. They are formed by a single business site or by multiple business sites in the same area. Funds for activities are provided by the company and The Hitachi Foundation. Activities are currently underway at around 30 business sites.

#### †2

Animal-based therapy is a form of therapy that seeks to lessen stress and calm the emotions of troubled children by having them interact with and look after animals.

#### report —

# Understanding and Supporting the Fight against Depression Ritsuko Yamaguchi

In Japan, over 60% of

people report feeling

stress at work and

the number of people

experiencing depres-

sion and other related

#### Hitachi Capital Insurance Corporation



difficulties is increasing.

I participate in the non-profit organization Mood Disorders Association Japan. Since 2002 the organization has run programs that help people return to work and has conducted seminars to raise awareness and further understanding of depression. Many people and their families participate.

This year the organization received a grant from Hitachi's Volunteer Support Program and is planning to hold a seminar at the Sonpo Kaikan in Ochanomizu, Tokyo in September 2007. It is my hope that everyone will learn that, with appropriate understanding and support, people suffering from depression are capable of returning to a normal life.

Volunteer Support Program in Japan This program works to promote volunteerism by providing grants for the social contribution activities of non-profit organizations in which Group employees are involved. There were 18 grant applications in 2006, and 2.68 million yen in grants was provided to 11 applicants.



# Working Together with Suppliers

The Hitachi Group procures raw materials, parts and services from companies around the world, an activity rooted in strong partnerships with suppliers. We are committed to developing harmonious, mutually prosperous relationships with our suppliers.

### **Basic Policy on Procurement**

Hitachi, Ltd. values partnerships and openness with suppliers above all. We are committed to maintaining and improving the mutual understanding and trust of our suppliers over the long term. While providing equal business opportunities, we select suppliers from around the globe based on the principle of open competition.

# Sharing CSR with Suppliers

To build relationships of mutual prosperity with our suppliers, it is necessary that they share our viewpoint on CSR. In April 2005 we revised our Guidelines for Procurement Activities from a CSR perspective and communicated these guidelines to our approximately 4,700 suppliers in Japan. We also requested that they carry out activities to raise CSR awareness.

In fiscal 2006 we asked the same of our nearly 400 principal suppliers in North America, Europe, Asia and China.

In addition, using the Supply Chain CSR Deployment Guidebook created by Japan Electronic and Information Technology Industries Association, we sent out a trial questionnaire to 20 domestic suppliers to gauge the state of CSR promotion by suppliers. Based on the results, we will work together with suppliers on how to deal with CSR issues.

# **Collaborative Creation with Suppliers**

Collaborative creation (joint activities) with trustworthy, technologically advanced suppliers is essential for product development.

The Hitachi Group carries out joint development with suppliers that possess cutting-edge technologies. We also provide guidance and sup-

Technical guidance for Chinese suppliers



port to a large number of suppliers, both in Japan and overseas, in order to ensure that their technology and quality levels meet Hitachi standards.

For example, we provided SJJ Railway Materials & Supply<sup>†1</sup>, a specialized Chinese manufacturer of parts for railroad cars, with guidance on railroad car welding technologies and helped them improve their quality and production management. After doing this, we began full-fledged transactions with the company in the second half of 2006.

We are expanding our supplier base globally through this kind of long-term partnership building, which also helps to develop supporting industries in the countries and regions where they are located.

# **Green Procurement**

In order to provide environmentally conscious products, the Hitachi Group has created and distributed Green Procurement Guidelines for sharing our approach on green procurement<sup>†2</sup> with our suppliers.

The guidelines were revised in December 2006 in conjunction with amendments to the Law for Promotion of Effective Utilization of Resources and enforcement of the EU's RoHS Directive<sup>†3</sup>.

In addition, we are registering companies that understand Hitachi's approach to green procurement as green suppliers, a measure intended to increase the number of suppliers engaged in environmental protection. This registration system targets small- and medium-sized companies that have acquired environmental management certifications, such as ISO 14001 and KES<sup>†4</sup>. These companies attend Hitachi's environmental seminar and are registered as green suppliers.

In connection with the use of this system, we are working to increase environmental activities by using the green supplier ratio as an indicator. Over 5,000 suppliers are cooperating with us to reduce our impact on the environment. In March 2007 we achieved a green supplier ratio<sup>†5</sup> of 100%.

reduced environmental impact from suppliers that are actively protecting the environment.

†1 SJJ Railway Materials & Supply Limited

Green procurement refers to

procuring parts and materials with

# †3

†2

The RoHS Directive is a directive banning the use of hazardous substances related to waste electronic equipment (EU Directive 2002/95/EC).

#### †4

KES is a Japanese environmental management system promoted by the KES Environmental Organization.

#### †5

The green supplier (GS) ratio is the ratio of principal suppliers that have acquired certification.

#### Web

Guidelines for Procurement Activities

# W<mark>eb</mark>

Green Procurement Guidelines

Web

Hitachi Group authorization system

Hitachi procurement

# Employees Make Hitachi What It Is

Hitachi is what it is today because of the day-in, day-out efforts of our employees. Hitachi is committed to creating a work environment that respects individuality, one where employees can develop to their full potential and aspire to high goals.

# Creating a Work-Friendly Corporate Culture

Hitachi, Ltd. is working hard to nurture human resources that can meet the requirements of the new age and to create a better work environment where all employees can give full expression to their individual capabilities. This endeavor is guided by three key words: (1) "openness" to encourage frank communication and to provide employees with opportunities to express their full potential, (2) "challenge" to aspire to high goals and personal transformation, and (3) "diversity" to respect individuality.

# **Promoting Diversity**

Vital to the sustained growth of both society and companies is how to respond to social change, such as the shrinking labor force—caused by declining birth rates and the aging of society—and problems with pension systems.

Hitachi believes that by developing the potential and widening the scope of action of the people who will be meeting this challenge, we can promote new value creation and open the way for sustained corporate growth respecting individuality and accepting diverse values. Based on this belief, Hitachi has introduced a range of measures that encourage diversity.

# Supporting a Work-Family Life Balance

Since March 2000, Hitachi, Ltd. has been following the "Gender-Free and Family-Friendly Plan" (F.F. Plan)—designed to create a better work environment—to eliminate gender considerations from personnel assignments and by urging employees to maintain a balance between work and family life.

However, analysis of the results of a B.O. survey<sup>16</sup> of employees suggests that while progress has been made within the systemic work structure, it is still necessary to promote greater awareness and understanding of this balance in the workplace.

To remedy this situation, in 2006, Hitachi introduced the "Diversity Promotion Project," an organization directly under the president that focuses on creating a better work environment for women. The "F.F. Plan II" was subsequently launched to bring about a change in the awareness and behavior of our employees for balancing work and family life, and to ensure that this new awareness and behavior take root.

Specifically, Hitachi is making every effort to better inform all employees about how women employees work by showing examples of problems confronting women in the workplace, by encouraging everyone to work together to solve these problems, and by creating an environment where every individual can realize their potential.

# **Re-employing Retirees**

Hitachi wants to use the rich experience, skills and know-how of our employees to create an attractive, motivating work environment.

In Japan, a "life-plan selection system" (reemployment for over-60s) has been introduced to offer re-employment opportunities in specific jobs at Hitachi, Ltd. and Group companies to interested employees who have reached the age of 60.

# Promoting Employment for the Physically Challenged

At the Hitachi Group, employees with physical handicaps work as part of our team. Hitachi is striving to improve the work environment for challenged employees by including Braille signs on elevators and other company facilities, and by introducing auxiliary tools, such as software that reads information out loud from a computer screen and bone

#### - report –

Creating a Work-Friendly Environment Kazuko Nishioka

Diversity Promotion Project, Hitachi, Ltd.



The Diversity Promotion Project is a Group-wide initiative. For example, in workplaces where an employee is going to have a child or is

Web

Web

Web

HIV/AIDS

Open systems supporting employee capacity building

Supporting a balance between

Hitachi's approach toward

work and family life

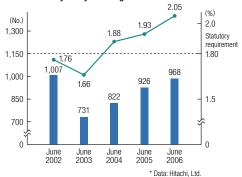
# †6 B.O. Survey

The Business Process and Opinion Survey is used to assess employees' views on their jobs and company lives. Launched in fiscal 2001, it is conducted annually.

raising a child, we have begun providing materials that give examples of communication and other issues that could be useful in thinking about how to push work forward. Rather than just putting systems into place, we are providing operational support to create a work-friendly environment where diverse individuals can express their full potential.

•

#### Ratio of the Physically Challenged



conduction telephones.

Across the Hitachi Group, to promote the employment of the physically challenged, all Group companies participate in joint interviews of challenged people. Some staff travel to provide advice and information to those Group companies that have yet to reach the legally required ratio for the employment of the physically challenged.

At the end of June 2006, the Hitachi Group ratio of employment for physically challenged persons reached 2.05% at Hitachi, Ltd. and 1.70%, on average, among major Group companies in Japan.

# Creating a Dynamic Workplace through Diversification

As one of Hitachi's main CSR activities in North America, Hitachi America, Ltd. is putting strong emphasis on a partnership with the Global Organization for Leadership and Diversity (GOLD), a non-profit organization (NPO) that supports global women leaders. Contributing to the development of women leaders is one of Hitachi's major themes for promoting workplace diversity.

Hitachi America, as part of its activities to support this NPO, sponsored a symposium held by GOLD in Los Angeles in March 2007 entitled 21st Century Women Leaders: Building Bridges Across the Pacific.

GOLD's work is part of a drive to promote women's leadership in the U.S. and Japan. GOLD aims to raise awareness of women's leadership issues at the global level by establishing innovative models for fostering women executives, introducing more diversity into the workplace, and promoting cross-cultural exchanges.

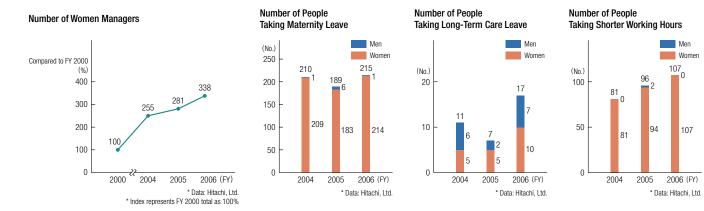
The many executives and staff from the Hitachi Group of companies in North America that attended the symposium built cross-border networks and shared common awareness of the issues.

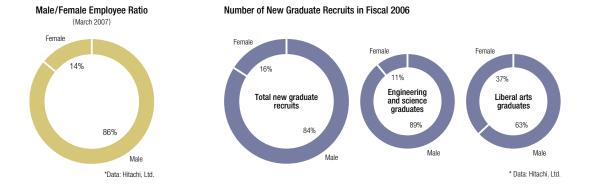
# **Diversity Training in Europe**

Believing that it is critically important to have an open corporate culture that embraces diversity, Hitachi Europe, Ltd. introduced a diversity training program in 2006 with compulsory participation for all Hitachi Europe directors and employees working in the United Kingdom.

This program, working to deepen employee awareness, teaches that diversity includes not just differences in gender, ethnicity, and physical handicap levels, but other attributes as well, such as age, sexual orientation, and religion. Participants also learn about issues such as the UK's age discrimination prevention regulations, workplace harassment, and bullying. In addition, Hitachi Europe, Ltd. has developed in-house regulations to cover these issues.

We believe that diversity in human resources and employment strengthens the company-employee relationship and lowers employee turnover, making it a critical issue for the sustainability of Hitachi's business operations. A Web site that features diversity was set up on Hitachi Europe's intranet in March 2007.





# Securing the Safety and **Health of Employees**

Hitachi, Ltd. strives to maintain and improve high safety and hygiene standards under the motto, "Protecting the safety and health of employees comes before all else."

# Promoting Employee Safety and Hygiene

The knowledge and experience of management, education, facilities, and the environment that Hitachi has accumulated over many years of safety and hygiene practice have been compiled as the company's "safety and hygiene knowledge" and put into daily use.

For example, we promote employee health by providing counseling from industrial physicians for staff who work a lot of overtime and by offering health guidance based on the results of regular medical checkups.

# **Promoting Mental Health**

report.

In recent years, maintaining the mental health of employees has emerged as a major social concern.

We have put up a stress-level checklist on our intranet so that employees can easily rate themselves. We also address mental healthcare by providing access to specialists and counselors.

An EAP<sup>†1</sup> Center has been established to help employees resolve their worries and concerns through person-to-person, telephone, and in-house online counseling. After ensuring privacy, findings from these programs are relayed to management for use in improving the work environment.

Kashiwa Reysol Invites Hitachi

**Employees and Their Families** 

The Hitachi Group supports Japanese proffes-

sional soccer team Kashiwa Reysol. The team

had a tough year in 2006, dropping down to

Division Two. To encourage the team, Hitachi

Kashiwa Reysol Co., Ltd. arranged "Hitachi

# Supporting Enriched Lives for Employees and Their Families

Hitachi has instituted a range of measures designed to support richer and more stable lives for our employees and their families.

### Supporting Employee Self-Help Efforts and Independence

A new program designed to support employee selfhelp efforts and independence was introduced in 2000 at Hitachi, Ltd. The "Cafeteria Plan" system enables employees to select the benefits they will receive. By adding new options, such as skills development, childcare, nursing care and health promotion to traditional benefits-dormitories, company housing, medical care, and various sickness benefits-Hitachi has created a "menu" that employees can tailor to their individual lifestyles and needs.

Employees can select the support they need when they need it within the scope of their "cafeteria points." Hitachi has other systems in place that can respond to social and household issues, such as childcare and nursing care.

# **Employee Life-Planning Support** through Corporate Pensions

With Japan's declining birth rate, the aging of society, and the growing diversity of post-retirement lifestyles, corporate pensions seem positioned to play an increasingly important role.

In response to the diversification of post-retirement lifestyles and other similar changes, the Hitachi

	1		*** **
Contraction of the second	ACHI FAMILY DAY		

Toughness 6 Days," handing out 9,213 free

passes to Hitachi Group employees and their families for six matches and organizing various

pre-match events. With support from these

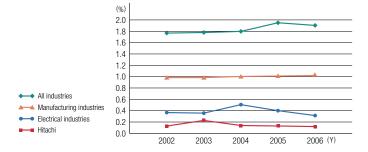
families and the Group as a whole, as well as

from the team's loyal fans, the team could return

to Division One in a year, now that they're enjoy-

ing a strong 2007 season.

#### Labor Accident Rates, Japan (per million hours)



Group has fundamentally revamped retirement allowances and pensions. Defined contribution and defined benefit plans have been introduced within the systemic infrastructure – across the Group – to provide life planning support for employees.

For defined contribution plans, Hitachi encourages the active participation of employees in their post-retirement planning through, for example, education on asset management and investments. For defined benefit plans, Hitachi has boosted the number of benefit options in response to employees' diverse needs.

### Human Resource Development and Human Resource Utilization

At Hitachi, we pay close attention to capacity building and career development because we believe that maximizing employee potential is critical to providing new value and resolving the fundamental challenges of a global society.

For capacity building, Hitachi supplements in-house education—based on on-the-job training—with group education. This group education has six educational programs: "Management Development," "Education for Engineers," "Production Worker Training," "Education for Internationalization," "Sales Education," and "Training by Job Function." These programs are offered across the Hitachi Group in conjunction with educational

#### - report -

Taking Part in the Global Basics Course Mark Checkley Hitachi Europe Ltd.



I participated in the September 2006 Global Basics Course "Ready to Inspire." This course had 16 members from Hitachi's

European companies, and focused on what the elements of the company's founding spirit—"harmony," "sincerity," and "pioneering spirit"—mean for Hitachi employees. Learning about each other's jobs and experiences enabled us to develop a deep understanding of Hitachi's diverse culture and wide-ranging business operations, and provided us with the expertise and skills that a manager needs. I found the four days extremely enjoyable and challenging, and was highly stimulated by the experience.

I'll continue to work toward a bright future for the Hitachi Group, bearing in mind the conviction of Hitachi's founder, Namihei Odaira, that the company should contribute to society. institutions, such as the Hitachi Institute of Technology, the Hitachi Institute of MONOZUKURI Skills and Engineering, and the Hitachi Institute of Management Development.

For career development, Hitachi is working to deepen the mutual understanding of employees' own wishes and goals and the company's expectations. Accordingly, we provide a variety of opportunities for self-realization and personal growth through work.

In addition, in order to expand educational opportunities for employees, Hitachi has also developed a unique e-learning system to support voluntary capacity building. To encourage use of this system by Group companies both in Japan and overseas, Chinese and English Web sites were added in fiscal 2006.

# Training Hitachi Group Managers for the Global Scene

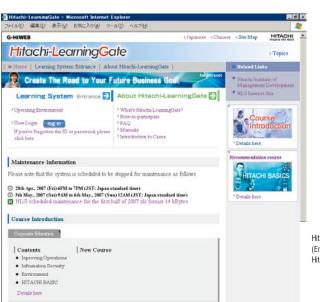
With Hitachi's operations taking on an increasingly global perspective, the Hitachi Group trains managers for this challenge through "global manager training" offered primarily to managers in Hitachi's overseas subsidiaries. Three courses are available: the Global Basics Course (GBC), the International Management Course (IMC), and the Global Strategy Course (GSC).

The GBC was launched in fiscal 2006 for newly appointed Group managers. Participants receive basic management training and learn about Hitachi's corporate philosophy. In the IMC, young managers learn the intercultural management skills indispensable in global business. The GSC focuses on strategic issues in group management.

Bringing together Hitachi Group managers from around the world to participate in these courses and exchange diverse views contributes to group unity and strengthens solidarity.

#### Supporting Career Development

At Hitachi, Ltd., the goal management system and the in-house career counseling system are core components of career development. They deepen



Hitachi Group e-Learning System (English version) Hitachi-LearningGate

mutual understanding of the employee's career between employees and their supervisors so that both parties can tackle their jobs with a clear vision.

Hitachi also operates the "Career

Development Workshop," a development support program designed to foster independent human resources. It helps participants achieve selfrealization, enabling them to develop a deeper selfunderstanding, including their reasons for working and living and their values in relation to work, and to set their personal career goals accordingly.

To energize our human resources, Hitachi has established a "Group Open-Placement System" for employees in Japan to express their will and desires through job transfers. Divisions advertise the job openings for which all employees are free to apply. As of March 2006, 21 Group companies were participating in this system; in fiscal 2006, there were 57 transfers.

Hitachi also adopted an "Intracompany Free Agent (FA) System" allowing employees to apply directly for transfers to other divisions. During fiscal 2006, 102 applications were received, leading to 17 transfers in Japan.

# Raising Motivation through the Rewards System for Employee Inventions

Many Hitachi employees are engaged in research and development, including some 1,200 with doctorates. In order to stimulate research activities and to create new inventions, Hitachi revised the Reward System for Employee Inventions in April 2005.

Inventions rewards include rewards for patent applications and registrations, and rewards for use of patent (e.g., used for Hitachi products and/or contributes to patent licensing income). The revisions put special emphasis on rewards for use of patents and have increased the objectivity of evaluations of patent contributions to Hitachi's business. The levels of payment for invention rewards were also revised to boost rewards for patents that have made a "substantial contribution."

In order to improve the transparency of payments for invention rewards and assure that they are being treated fairly, the Employee Invention Rewards Internal Arbitration Committee was established to receive inventors' claims and to determine the amount of payment for invention rewards offered. An Invention Information system has also been created to promote communication between inventors and business divisions, enabling inventors to make inquiries themselves to business divisions for information on internal and/or external use of patents and to confirm the basis for payment for invention reward calculations.

The "Annual Top 100 Rewards for Use of Patents" presidential award was launched in fiscal 2005. Also, the "Top 50 Rewards for Patent Applications" presidential award has been given, beginning in 2006, to inventors aged 35 years and younger based on their records for their first five years at Hitachi.

#### report —

#### Receiving a Presidential Prize for Developing Image Compression Technology Yusuke Yatabe

Consumer Electronics Laboratory Hitachi, Ltd.



I received a fiscal 2006 "Top 50 Rewards for Patent Applications" presidential award for my work in developing high-performance im-

age compression technology that allows long-running, high-quality recording of terrestrial digital broadcasting images.

Hitachi was looking beyond the compression methods currently used for

terrestrial digital broadcasting to develop a high-performance, next-generation compression method. My patents were invented as part of the work during the commercialization process.

Customer demand for long-running, high-quality recording including high-definition broadcasts lead to this invention.

I am currently working on applying these patents to televisions, cameras and other digital consumer electronics. I look forward to continuing to deepen Hitachi's proprietary technology and develop user-friendly digital consumer electronic devices with high picture quality.

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#### **Chief Executive's Message**



Shunsuke Ohtsu Chief Executive for Asia and Chief Innovation Officer for Asia, Hitachi, Ltd.

Asia is a celebration of diversity. On the one hand, we have developed nations while, on the other, we have emerging markets vying for international attention. There is much diversity within the region as Asian nations are at varying stages of economic, social, and environmental growth.

This diversity brings various opportunities to "glocalize." This is what Hitachi in Asia is committed to achieve. While we expand our business reach to various markets, we apply our technology and share valuable resources from our group synergy to respond to the social or cultural needs of Asian countries as well, wherever we are.

In the past year, we have supported programs enhancing education and technological expertise, and raised much needed funds for relief work in rebuilding communities. These activities are just some of the ways we continually demonstrate our commitment as a responsible industry partner to meet the diverse needs of Asia.

# Participating in the Eco-Products International Fair

In October 2006, 11 Hitachi Group companies participated in the Eco-Products

International Fair (EPIF), Southeast Asia's largest environmental fair, which was

held in Singapore. The latest green products and services were demonstrated

in line with the fair's theme: A Better Environment for All. Hitachi Chairman

Emeritus, Dr. Tsutomu Kanai, delivered a keynote presentation in the adjoining

Cink. Hitachi Asia Gateway site

Web Eco-Products International Fair

Orchard Road Christmas Light-Un

# Hitachi Global **CSR** Activities \$12



Hitachi Group booth at EPIF 2006



Hitachi Construction Machinery Indonesia presenting a hydraulic excavator

EPIF 2006 attracted more than 35,000 visitors-government officials, business representatives, students, and members of the public-making it a great opportunity to tell a wide audience about Hitachi's environment technologies and eco-products.

# Christmas Light-Up in Singapore

Independent Lives.

international conference room.

Since 1991, Hitachi has been the main sponsor of the Orchard Road Christmas Light-Up. This event promotes Singapore tourism and contributes to more than 150 social welfare programs that help those less fortunate. In fiscal 2006, the sixteenth

year that Hitachi has sponsored the Christmas Light-Up, Hitachi raised funds for four programs: Nurturing Children to Succeed, Dignifying the Lives of the Elderly, Keeping Families Together, and Helping People with Disabilities Lead



# Donation to the Chaipattana Foundation in Thailand

In September 2006, the 21 Hitachi Group companies in Thailand donated 104,000 baht (around 350,000 yen) to the Chaipattana Foundation. The Foundation helps local communities with development projects such as polluted water development programs and irrigation.

# Supporting Disaster Victims in Indonesia and the Philippines

In June 2006, to help victims of the earthquake in central Java, the Hitachi Group in Indonesia presented the Indonesian government with two hydraulic excavators and other machinery to assist in restoration, as well as donating blankets and other basic items to support aid organizations.

The Hitachi Group in the Philippines and Hitachi, Ltd. donated one million pesos (around 2.5 million yen) to the Department of Social Welfare and Development in the Republic of the Philippines for the relief operation and rehabilitation of the victims of the major landslide that occurred in Southern Leyte in February 2006.

# Pursuing *monozukuri* for a sustainable society



Our goal is to achieve a sustainable society by pursuing the advances in design and manufacturing that enable the creation of environmentally friendly products and services.



# Hitachi Group's Environmental Action Plan

To realize our environmental management objectives, we have formulated a long-term plan, or "Environmental Vision," based on our Hitachi Action Guidelines for Environmental Conservation. We then create yearly action plans, guided by our Sustainability Compass, verifying and improving our environmental performance, along the way using our GREEN 21 program.

Web\_\_\_\_\_\_ Hitachi Action Guidelines for Environmental Conservation

# Hitachi Action Guidelines for Environmental Conservation (excerpt)

The basic philosophy of these Guidelines is based on the "Hitachi, Ltd. Standards of Corporate Conduct" (Rule No. 2272, established on June 28, 1983). These guidelines are intended to set forth Hitachi's action guidelines for addressing environmental conservation in relation to its business activities.

#### **Purpose**

In order to realize an environmentally harmonious and sustainable society through products and services, Hitachi is committed to meeting its social responsibilities by promoting globally applicable "MONOZUKURI" (designing, manufacturing, or repairing of products), which is aimed at reducing environmental burdens of products throughout their entire life cycles, ensuring environmental conservation.

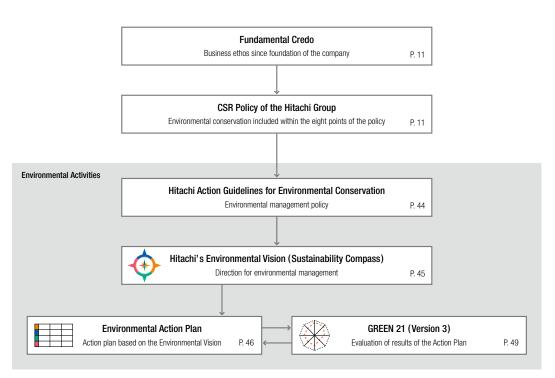
# Awareness of Environmental Issues

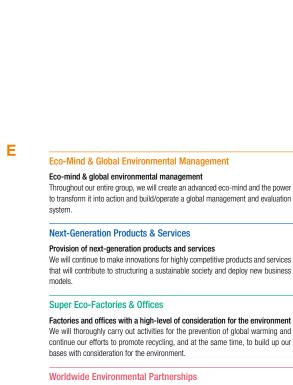
The Hitachi Group considers the reduction of global warming, resource recycling, and conservation of ecosystems to be especially important. That is why we strive to reduce our environmental impact throughout the product lifecycle (from production to final disposal). We make improvements at both the design stage, which determines the overall environmental load of a product, and at the production stage, which creates the emissions that have a direct impact on the environment.

We introduce environmentally conscious design at the R&D stage to improve the environmental efficiency of our products. At the production stage, we set annual targets to reduce the environmental load.

To make cuts at both stages in a balanced way, we are set to become "emission neutral" by fiscal 2015. This will reduce emissions at equal rates in both the *direct* environmental impact—imposed by procuring raw materials, production, and distribution—and the *societal* environmental impact created by finished products after they are sold. In fiscal 2006, we started developing systems for quantitatively evaluating our progress toward this goal.

# Flow of Hitachi Group's Environmental Activities





#### Collaboration with stakeholders

We will strengthen environmental communications and actively endeavor to realize concrete partnerships with our stakeholders while clarifying our objectives and achievements.

formulated the Stage 2 Environmental Strategy, which looks ahead to fiscal 2010.

In fiscal 2006, the first year of the new strategy, we certified and registered 40 Super Eco-Products and 9 production facilities as Super Eco-Factories, the top level of environmental efficiency in the industry. As well, we reinforced our environmental management systems by obtaining ISO 14001 certification for integrated EMS<sup>+1</sup> in our environmental management divisions. In these ways, we promote the wider use of environmentally responsible design and modification of production to reduce the environmental load.

To share information on Stage 2 Environmental Strategy targets, and the environmental concept behind them, with our production facilities around the world, we produced an environmental manage-

ment handbook and held environmental seminars in North America and China. We are promoting mutual understanding between top management and working-level employees, as well as broadly implementing this environmental strategy.



#### Seminar for environmental management staff in China

# Ν Sustainability Compass S

# **Environmental Vision 2015**

As a global citizen, we will promote innovation throughout the world while developing the potentials of the future generation to pioneer next-generation products and services.

### **Progress with Environmental Activities**

Using the Fundamental Credo for Corporate Activities, we have written Action Guidelines for Environmental Conservation that set out policies for environmental management, drawing up roadmaps that match these guidelines to each of the four categories shown in Environmental Vision 2015 (Sustainability Compass).

Based on these roadmaps, and considering factors such as social circumstances and laws and regulations, we formulated an Environmental Action Plan up to fiscal 2010, setting targets for each year. The plan handles a wide range of topics, including preventing global warming, using resources more effectively, expanding our lineup of environmentally friendly products, and active environmental communication. To check our performance and make continual improvements, we evaluate progress on 56 items in 8 categories and show the results on a radar chart.

# **Results from the First Year of** the Stage 2 Environmental Strategy

Following the Stage 1 Environmental Strategy (completed in fiscal 2005), the Hitachi Group has

+1 EMS: Environmental Management System System introduced to reduce

environmental impact caused by the activities of a company or an organization



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# Fiscal 2006 Environmental Action Plan and Achievements

For each item of the Environmental Action Plan, results achieved in fiscal 2006 are compared with targets. Fiscal 2007 targets were also set with a view to fiscal 2010, the final year of the Stage 2 Environmental Strategy.

Category/Item	Corresponding page	Action target	Fiscal 2006 target
Eco-Mind & Global Environmental Management	1	1	1
Establish environmental management system	P. 48–49	Establish and deploy integrated environmental management system	ISO certification of EMS for Hitachi Group Environmental Promotion Mechanism
Raise level of environmental activities (Green Points [GPs])	P. 49	Raise GPs of GREEN 21 activities	768 GPs
Nurture environmental literacy (ability to apply knowledge)	P. 50	Promote Hitachi Group-wide training	Promote Internet-based training
Promote environmental accounting	P. 50–51	Establish environmental evaluation system	Promote internal use of indicators for efficiency in environmental impact reduction and other parameters
Next-Generation Products & Services			
Expand Eco-Products	P. 54–57	Increase percentage of registered Eco-Products (application rate) Increase percentage of Super Eco-Products (registration rate)	80% <sup>*1</sup> /over 60% <sup>*2</sup> Introduction
Enhance environmental efficiency of products (for object product, basis: FY 2000)		Improve global-warming prevention factor Improve resource factor	17%*1/7%*2 24%*1/7%*2
Use resources effectively (for object product basis: FY 2000)	1	Increase use of recycled plastic Reduce volume of packaging used	7% 4%
Promote control of hazardous substances used in products		Establish comprehensive definitions and data for hazardous substance control	Establish individual product systems to control 13 substance groups prohibited by the Hitachi Group (including substances subject to the RoHS directive) (June 2006)
Promote green procurement	P. 36	Increase rate of green suppliers	Increase rate of green suppliers to 100%
Develop a sustainable business model	P. 58	Systematically promote business models that will reduce the environmental burden for the next generation	Draw up development and sales expansion plans and formulate strategies
Super Eco-Factories & Offices			
Promote Super Eco-Factories	P. 59-62	Build industry-leading factories	Develop certification standards for Super Eco-Factories
Reduce CO <sub>2</sub> emissions from energy sources		Reduce CO <sub>2</sub> emissions (basis: FY 1990) [Japan] Achieve specific industry targets or reduce CO <sub>2</sub> per unit of production (basis: FY 1990) [Japan] Reduce CO <sub>2</sub> per unit of production (basis: FY 2003) [Outside Japan]	7% Achieve specific industry targets or reduce CO <sub>2</sub> per unit of production by 21% 2%
Reduce emissions of greenhouse gases other than CO <sub>2</sub>		Reduce SF <sub>6</sub> (basis: FY 2003) Reduce PFC (basis: FY 1995) [Semiconductors] Reduce PFC (basis: FY 2000) [LCDs]	31% 6% 8%
Reduce energy used in transportation		Reduce transport energy per unit of real production (basis: FY 2006) [Japan]	Calculate energy volumes related to transport (products, waste) and formulate energy conservation plans
Thoroughly manage chemicals and reduce emissions	P. 62-63	Reduce VOC emissions to the atmosphere (basis: FY 2000) [Japan] Reduce VOC emission ratio to total consumption (basis: FY 2005) [Outside Japan]	41% 2%
Use resources efficiently	P. 64	Reduce volume of waste (basis: FY 2000) Increase resource recycling rate (basis: FY 2005) [Japan] Reduce volume of water used (basis: FY 2005) [Outside Japan]	12% 2% 2%
Purchase eco-friendly office supplies, etc.		Promote green purchasing (basis: FY 2006)	Purchase eco-friendly products; expand items designated for green procurement
Worldwide Environmental Partnerships			-
Information disclosure and dialogue	P. 65	Enhance publicity and Web sites	Actively participate in environmental activities sponsored by organizations Exchange opinions with environmental experts, local residents, and other stakeholders
Global citizenship activities	P. 65	Promote social contribution activities	Participate in the "Environmental Minister of Our Home" program Consider adding an environmental component to education support program Conduct social contribution activities related to the environment

Fiscal 2006 result	Achievement level	Fiscal 2007 target	Fiscal 2010 target	
Certification obtained (Sept. 2006)	***	Formulate plan for obtaining integrated EMS certification for each business group/group company Obtain integrated EMS certification for each business group/group company	Obtain integrated EMS certification for each business group / group company	
845 GPs	***	896 GPs	1,280 GPs	
67,958 people completed training	***	55% of employees complete training	70% of employees complete training	
Reduced volume of energy used in production by 3 million kWh/100 million yen Reduced volume of final waste disposal from production by 180 t/100 million yen	0 million yen (Establish environmental accounting that incorporates external economic effects)			
92%*1/79%*2 Introduced (2.4%)	***	85%*1/over 60%*2 8%	100%*1/over 60%*2 30%	
60%*1/17%*2 70%*1/10%*2	***	25%*1/10%*2 35%*1/10%*2	50%*1/20%*2 70%*1/20%*2	
7% 4%	***	10% 5%	20% 10%	
System construction completed	***	Conduct full survey of hazardous substances used in products (25 substance groups controlled by the Hitachi Group)	Establish data management system compliant with the EU's REACH regulation	
Achieved green supplier rate of 100%	+++	Maintain/enhance the level of green suppliers		
Established strategy considering regions and products	***	Complete planning	100% achievement of development and sales expansion plans	
Completed development of certification standards	***	9 production facilities	20 production facilities	
14%         CO2 per unit of real production reduced by 52% [production facilities belonging to the Japan Electrical Manufacturers' Association]           2.3%         Co2	***	8 production facilities 7% Achieve specific industry targets set by the Japan Electrical Manufac- turers' Association or reduce CO <sub>2</sub> per unit of production by 21% 2%	30 production facilities 7% Achieve specific industry targets or reduce CO <sub>2</sub> per unit of production by 25% 5%	
70% 33% 97%	***	50% 7% 8%	50% 	
Calculate actual volumes and completed energy conservation plans	***	1%	4%	
44% 2.6%	***	42% 4%	45% 10%	
Reduced overall volume by 20% across Group, reduced basic unit by 15% across Group 3%	***	14%	20%	
3.6%		4%	10%	
Used e-sourcing mall	***	Green purchasing rate 30% (basis: FY 2006)	50%	
	1	[		
Conducted Hitachi Eco Campaign Exhibited at the International Eco-Products Exhibition and Eco- Products 2006 Exhibition	***	Improve communication with homemakers and young people Exhibit at the Tokyo and International Eco-Products Exhibitions	Maintain ongoing communication with stakeholders Exhibit at the Tokyo and International Eco-Products Exhibitions	
Created environmental education program Cooperated in habitat survey for endangered butterfly species Conducted clean-up in wild bird reserves	***	Launch environmental education programs / conduct environmenta	I, planting, and cleanup activities in cooperation with local NGOs	

✦ ✦ ✦ : Achieved
✦ ✦ : Partially achieved

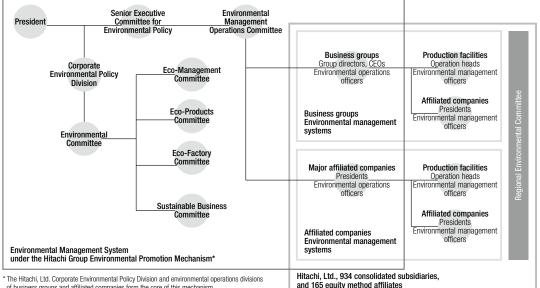
\*1 Information & Telecommunication Systems, Digital Media & Consumer Products \*2 Electronic Devices, Power & Industrial Systems, High Functional Materials & Components, Logistics, Services & Others

Next Eco 47



# "Eco-Mind" & Global Environmental Management

From firmly establishing the "Eco-Mind" vision as a part of our corporate culture to building a systematic environmental management system, Hitachi is striving to improve and enhance the ongoing promotion of efficient environmental management and activities.



#### **Environmental Management System**

of business groups and affiliated companies form the core of this mechanism

Web List of ISO 14001-certified sites

# **Environmental Management System**

The Hitachi Group has built a consolidated environmental management system. The Senior Executive Committee for Environmental Policy, chaired by the president, assesses and sets the entire Group's environmental policies and strategies, which are then delegated to the Environmental Management Operations Committee and communicated throughout the Hitachi Group.

	Jaj	oan	Outside	e Japan	
	Production Sites	Non-Production Sites	Production Sites	Non-Production Sites	Total
No. of certified sites	169	81	79	5	334



The Environmental Committee and all subcommittees work toward goals and resolve problems by investigating and developing technologies and evaluation methods. Organizations are set up to promote environmental activities, and environmental operations officers are appointed within Hitachi, Ltd., Group companies, subsidiaries, and affiliated companies.

In September 2006, the Hitachi Group Environmental Promotion Mechanism obtained an ISO 14001 certification to carry out environmental activities via the plan-do-check-act cycle and to use the combined strengths of the Group to reach environmental goals. The mechanism is centered on Hitachi, Ltd.'s Corporate Environmental Policy Division, the six business groups, the R&D group, as well as environmental operations officers and environmental operations units in 18 Hitachi Group companies. This mechanism's scope of control extends to 250 Group companies and about 300,000 employees, or almost 90% of the Hitachi Group's environmental impact.

ISO 14001 certifications have also been gained for 334 environmental management sys-

Status of ISO 14001 Certification (as of March 2007)

tems in business groups and Group companies (as of March 31, 2007). Certifications will be spread to the entire Group, as we move toward 2010.

All production facilities continually improve operations through internal audits combined with regular inspections by external certification bodies. Internal audits are carried out by about 2,000 specially trained and certified auditors. Moreover, all sites, including those outside Japan, perform environmental audits within their business operations as part of their management audits.

# GREEN 21 (Version 3) Activities Begin Analysis of Fiscal 2006 Results

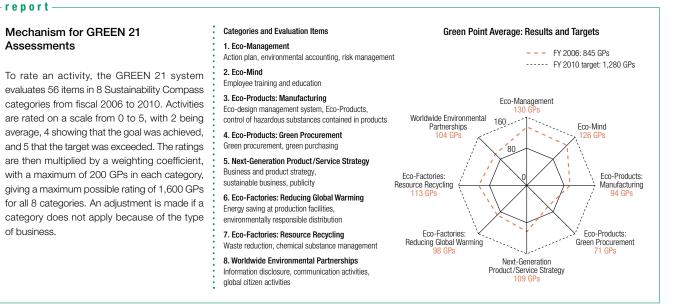
To ensure continual improvements and raise the level of environmental activities, we use the GREEN 21 evaluation system in every business group and affiliate. We assess the way these activities have been structured to achieve goals in a given year, the specifics of the goals, and the degree to which they are achieved. Version 2, used from 2002 to 2005, has been upgraded to Version 3, and was implemented in fiscal 2006.

The results of GREEN 21 assessments, reflected in evaluations of the Group's business

performance, are used as an incentive to raise the level of environmental activities to improve both CSR and profitability. Top management in each group uses GREEN 21 assessments to check levels of achievement, and to further improve and inject new energy into activities. In fiscal 2006, a Group average score of 845 GPs was achieved, exceeding the target of 768 by 77 points. Improvements over the previous year were made in these categories: Eco-Mind, Eco-Products, Next-generation Product/Service Strategy, Resource Recycling, and Worldwide Environmental Partnerships.

# **GREEN 21 Awards**

The GREEN 21 Award program—focusing on advanced environmental activities, products, and services—was established to energize environmental activities and apply successful examples to the entire Group. Items eligible for awards include top environmentally friendly products and technologies, as well as facilities with groundbreaking energy and resource savings and recycling. Prize winners are judged on overall performance, using GP scores from GREEN 21 assessments. Six activities earned a GREEN 21 Award in fiscal 2006.



### **Environmental Education and Training System**



# Web\_

Required and actual numbers of legally certified staff

### **Environmental Education**

To foster "Eco-Mind," all Hitachi Group employees are given general training to raise their knowledge and awareness of environmental activities; those working in specialized fields receive specific training that encourages them to learn and apply environmental technologies.

General training is offered via the Internet in Japanese and English, and 67,958 employees have taken courses (March 2007). Executive-level managers are given comprehensive training on the importance of environmental management; the deeper awareness gained is reflected in their management practices.

Environmental management system auditors receive specialized education, while design and manufacturing personnel are trained to develop Eco-Products. ISO 14001-based training is given to bolster environmental activities, resource conservation, and energy saving at production facilities. Emergency drills and other special procedures training for reducing the environmental burden are given for work that has a significant impact on the environment.

# **Environmental Accounting**

#### Purpose of the System

The Hitachi Group has used an environmental accounting system since fiscal 1999 to promote efficiency and continual improvements of environmental investments and activities. This system has also helped stakeholders to gain a deeper understanding of our corporate approach to the environmental provide the environmental standard statement of the environmental provide the environmental standard statement of the environmental provide the environmentation provid

ment. It provides them with information on how we allocate management resources for environmental activities and on the value created by environmental technologies and Eco-Products.

Our environmental accounting includes depreciation costs. The effectiveness of our activities is evaluated for both economic and physical effects, which are based on the degree that environmental impacts are reduced. Economic effects are calculated based on solid financial data. Physical effects-applying Hitachi's fundamental philosophy of contributing to society by developing our own advanced technologies and products-are calculated based on the reduction of environmental impact, not only during the manufacturing process, but also during use of our products. Moreover, we are reducing environmental impact by using an "environmental impact reduction ratio" to assess how much each type of environmental impact is reduced per unit of expenditure.

# 2006 Results

In fiscal 2006, we reduced our environmental impact by measures that reduce global warming, and in other areas. As a result, costs increased 9% over the previous fiscal year while economic effects through energy and resource savings increased 30% over the previous fiscal year.

Expenditures for R&D and design to reduce the environmental impact of products accounted for 42% of costs, while energy consumed through use of our products was reduced by 810 million kWh.



Cost Ratio by Industry Segment
Investment Ratio by Industry

· Investment Ratio by Counter-

Economic Effect by Industry

Web

Segment

measure

Segment

#### GREEN 21 Award Winner: ESCO Projects

The Urban Planning and Development Systems Group won a GREEN 21 Award for CO<sub>2</sub> emission reductions for its energy solution service business (ESCO projects). For energy conservation, the projects introduced equipment that balances electric and thermal energy at a wide range of sites, including factories, hospitals, and local government offices. As a result, between 2000 and 2006 it achieved an aggregate reduction of about 160,000 tons per year of  $CO_2$  emissions, contributing to the reduction of global warming.

The projects won a 2006 Minister of the Environment Award for global warming prevention and a gold medal for the second year at the Second ESCO Excellence Awards in Japan.



Gold medal winner in the fiscal 2006 ESCO Excellence Awards (for equipment supplied to Nitto Denko Corporation)

	literer	Overview Costs of maintenance of equipment with low environmental impact, depreciation, etc.		Costs (Unit: billion yen)		
	Item			FY 2005	FY 2006	
	Business area costs			32.46	39.24	
	Upstream/downstream costs	Green procurement expenses, recovery and recycling of products and packaging, recycling expenses	2.69	2.59	2.89	
seuses	Management activities costs         Labor costs of environmental management, implementation and maintenance of environmental management system           Research and development         PRD for the reduction of environmental impacts as used by preducts and preduction processors		10.76	9.76	10.31	
Ext	Research and development costs			42.16	41.66	
	Social activity costs	Environmental improvements such as afforestation and beautification, PR and publicity expenses	0.61	0.38	1.20	
	Environmental damage costs Environment-related measures, contributions, and levies		2.23	2.49	2.89	
Total		87.62	89.84	98.19		
Tota	l investment	Investment in energy-saving equipment and equipment that directly reduces environmental impacts	ts 14.10 13.80 15.		15.48	

Depreciation expenses on equipment investments are calculated using the straight-line method over 5 years.

# Effects

# Economic Effects\*

Item	<b>D</b> escription		Effects (Unit: billion yen)		
nem	Overview	FY 2004	FY 2005	FY 2006	
Net income effects	Profit on sales of recycled waste	6.25	7.72	12.28	
Reduced expenses effects	Reduction in material costs due to resource saving, reduction in waste treatment costs due to reduced waste, reduction in power expenses due to energy saving	12.77	17.29	20.15	
Total		19.02	25.01	32.43	

# Physical Effects

Item	Overview	Amount Reduced (parentheses: equivalent no. of households)		
		FY 2004	FY 2005	FY 2006
Reduction in the amount of energy used during production	Decrease in amount of energy used due to installation of energy-saving equipment	125 million kWh (36,000)	157 million kWh (45,000)	159 million kWh (46,000)
Reduction in the amount of final waste disposal	Decrease in final waste output volumes due to separation and recycling activities	5,922 t (20,000)	5,254 t (18,000)	6,375 t (22,000)
Reduction in the amount of energy consumed during product usage	Decrease in energy requirements of Hitachi products	730 million kWh (210,000)	723 million kWh (208,000)	813 million kWh (234,000)

Benefits on equipment investment are calculated using the straight-line method over five years, as with costs. \* Economic Effects includes the following items. 1. Net income effects: benefits for which there is real income, including income from the sale of resalable material and income from environmental technology patents. 2. Reduced expenses effects: reduction in electricity and waste treatment expenses arising from environmental impact reduction activities.

# Efficiency of Environmental Impact Reduction\*

Category	FY 2004	FY 2005	FY 2006
Reduction in energy used during production (million kWh/billion yen)	33	36	30
Reduction in amount of waste for final disposal (t/billion yen)	1,690	1,620	1,800

\* This is an indicator of the efficiency of environmental impact reduction, calculated as the amount of environmental impact reduction divided by expenses needed for the reduction.

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# Environmental Impact Data for Corporate Activities (Fiscal 2006)

This chart shows resource inputs and environmental impacts pertaining to the fiscal 2006 corporate activities of the 250 Hitachi Group companies covered by this report.

	Total energy consumption (crude	oil equivalent)	1,610,000 kl	
		Electricity	4.92 billion kWh	
4		Oil (crude oil equivalent)	367,000 kl	
	New energy types	Electricity	70 million kWh	
I		Heat	17,000 kℓ	
I	Total input of materials			
l	Metals 1,266 kt	Iron (including steel sheeting)	1,012 kt	
I		Stainless steel	44 kt	
l		Aluminum	94 kt	
I		Copper	277 kt	
l		Other nonferrous metals	129 kt	
I	Plastics 191 kt	Thermoplastics	164 kt	
		Thermohardened plastics	21 kt	
	Rubber		9 kt	
I	Other materials		418 kt	
I	Chemical substances	Handling volume for chemical substances covered		
I		Handling volume for ozone-depleting substance		
1		Handling volume for greenhouse gases	989 t	<i></i>
I				
I				
I				Careford and
l	Water consumption		61.12 million m <sup>3</sup>	
I		Surface water	7.06 million m <sup>3</sup>	
1		·		
		Industrial water	27.54 million m <sup>3</sup>	
		Industrial water Groundwater	27.54 million m <sup>3</sup> 26.05 million m <sup>3</sup>	A Contraction
		Groundwater	26.05 million m <sup>3</sup>	- 5-
		Groundwater	26.05 million m <sup>3</sup>	
	Total energy consumption (crude	Groundwater Rainwater	26.05 million m <sup>3</sup>	
*	Total energy consumption (crude	Groundwater Rainwater	26.05 million m <sup>3</sup> 0.02 million m <sup>3</sup>	
÷	Total energy consumption (crude	Groundwater Rainwater oil equivalent)	26.05 million m <sup>3</sup> 0.02 million m <sup>3</sup> 630,000 k2	
<b>*</b>	Total energy consumption (crude	Groundwater Rainwater oil equivalent) Electricity	26.05 million m <sup>3</sup> 0.02 million m <sup>3</sup> 630,000 ke 1.87 billion kWh	
*		Groundwater Rainwater  oil equivalent) Electricity Oil (crude oil equivalent)	26.05 million m <sup>3</sup> 0.02 million m <sup>3</sup> 630,000 ke 1.87 billion kWh	
*	Total energy consumption (crude Total input of chemical substance Chemical substances	Groundwater Rainwater  oil equivalent) Electricity Oil (crude oil equivalent)	26.05 million m <sup>3</sup> 0.02 million m <sup>3</sup> 630,000 k2 1.87 billion kWh 166,000 k2	
<b>*</b>	Total input of chemical substance	Groundwater Rainwater  oil equivalent)  Electricity Oil (crude oil equivalent)  s	26.05 million m <sup>3</sup> 0.02 million m <sup>3</sup> 630,000 k2 1.87 billion kWh 166,000 k2	
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	Total input of chemical substance	Groundwater Rainwater  oil equivalent)  Electricity Oil (crude oil equivalent)  N Handling volume for chemical substances covere	26.05 million m <sup>3</sup> 0.02 million m <sup>3</sup> 630,000 k2 1.87 billion kWh 166,000 k2 d under the PRTR law 11 kt	
	Total input of chemical substance Chemical substances	Groundwater Rainwater  oil equivalent)  Electricity Oil (crude oil equivalent)  S Handling volume for chemical substances covere  Handling volume for chemical substances covere  Surface water	26.05 million m³           0.02 million m³           630,000 k²           1.87 billion kWh           166,000 k²           d under the PRTR law 11 kt           4 under the PRTR law 11 kt           14.79 million m³           4.84 million m³	
	Total input of chemical substance Chemical substances	Groundwater Rainwater  oil equivalent)  Electricity Oil (crude oil equivalent)  N Handling volume for chemical substances covere	26.05 million m <sup>3</sup> 0.02 million m <sup>3</sup> 630,000 k2 1.87 billion kWh 166,000 k2 d under the PRTR law 11 kt	

# INPUT

Input and Output

Next

Input represents the total volume of energy, materials (raw materials, etc.), and water used in manufacturing of products and other business operations. Output represents the products themselves, as well as the environmental impacts caused in the course of business operations, including CO<sub>2</sub> and other chemicals, waste products, and wastewater.

# OUTPUT

CO<sub>2</sub> emissions

CO<sub>2</sub> emission

Total volume of products manufactured and	sold	3,379 kt including package
Volume of chemical substances discharged	or transferred	
Discharge or transfer volume for chemical s	ubstances covered under the PRTR law	4.5 kt *0.39% (FY 200
Volume of discharge for ozone-depleting sub	ostances	4.0 t (0.22 ODPt <sup>+</sup>
Greenhouse gas emissions 23 t (412 kGWPt)	SF6	5 t (127 kGWP
	PFCs	7 t (54 kGWP
	HFCs	7 t (1.0 kGWP
Substances subject to emissions regulations	SO <sub>x</sub>	119 t *0.01% (FY 200
	NOx	953 t *0.17% (FY 200
Total volume of waste generated		590 I
Waste generated		590 kt *0.01% (FY 200
Waste reduction		43 kt *0.018% (FY 200
Recycling (rate) 524 kt (97%)	Volume re-used	97 kt (18%
	Volume of material recycled	396 kt (75%
	Volume of thermal recycled	38 kt (7%
Final disposal (rate)		16 kt (2.8%) *0.04% (FY 200

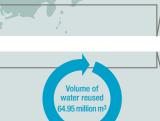
2,803 kt (2,803 kGWPt<sup>†1</sup>) \*0.2% (FY 2005)

4

1,626 kt (1,626 kGWPt)

4

Total volume of wastewater		52.50 million m <sup>3</sup>
Breakdown of wastewater by destination	Public waters	42.33 million m <sup>3</sup>
	Sewerage system	9.38 million m <sup>3</sup>
	Underground infiltration, etc.	0.79 million m <sup>3</sup>
Water quality	BOD	364 t
	COD	246 t







e of

Volu water reused

Volume of chemical substances releas	ed or transferred	
	Discharge or transfer volume for chemical subs	tances covered under the PRTR law 0.6 kt
	SOx	154 t
	NO <sub>x</sub>	309 t
Total volume of waste generated		177 kt
	Waste generated	177 kt
	Waste reduction	11 kt
	Recycling (rate)	121 kt (73%)
	Final disposal (rate)	45 kt (26%)

Total volume of wastewater		9.43 million m <sup>3</sup>
Breakdown of wastewater by destination	Public waters	4.63 million m <sup>3</sup>
	Sewerage system	4.80 million m <sup>3</sup>
Water quality	BOD	113 t
	COD	288 t

* Ratio of national total, and fiscal
year used for comparison. Source
for the total figures for Japan
was the fiscal 2004 PRTR results
listed in the Annual Report on
the Environment in Japan 2005.
(Ministry of the Environment)

# †1 GWPt

Global warming potential (global warming coefficient, in CO2 equivalent tonnes). Converted to amount of CO $_{2}$  (t) by multiplying greenhouse gas emissions by the global warming coefficient. The global warming coefficient shows the extent of impact on global warming from a greenhouse gas, compared to the equivalent amount of CO2.

# †2 ODPt

Ozone depletion potential converted to CFC equivalent tonnes by multiplying ozone depletion emissions by the ozone depletion coefficient.



# **Next-Generation Products & Services**

The Hitachi Group will continue contributing to a sustainable, recycling-oriented society by offering products and services that reduce the impact on the environment by conserving energy and natural resources, reducing global warming, and reducing the use of hazardous chemicals.





Environmental Efficiency of Hitachi Products Based on Factor X

Web

†1

# Expanding Lineup of Eco-Products

In 1999, the Hitachi Group introduced Assessment for DfE (Design for Environment) to reduce the environmental impact at each stage of a product's lifecycle. Products are assessed using eight criteria, including resource reduction, product longevity, resource recycling, and ease of decomposition. Products that score at least 2 (from 0 to 5) for all criteria with an average score of 3 or higher are designated "Eco-Products." These products are shown in catalogs and Web sites with an "eco" symbol. As of March 2007, 1,012 products (5,491 models) were certified as Eco-Products, accounting for about 83 percent of Hitachi's total net sales across all departments.

#### **Environmental Efficiency**

To use natural resources more effectively. Hitachi introduced an "Environmental Efficiency" index that measures environmental impact and resource

(No. of products)

1,200

1,000

600

400

200

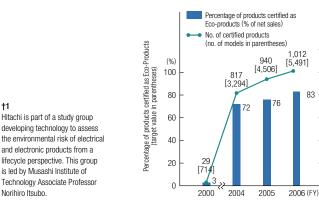
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83 800

Definition of Environmental Efficiency     Efficiency of Global Warming Prevention =     Product lifespan*1 × Product function	<ul> <li>Resource Efficiency = Product lifespan*<sup>1</sup> × Product function</li> </ul>
Volume of greenhouse gas emissions throughout the product lifecycle	$\sum$ Resource value coefficients × (new resources used in lifecycle <sup>*2</sup> + resources disposed of in lifecycle <sup>*3</sup> )
Definition of Factors	
• Factor of Global Warming Prevention =	Resource Factor =
	Resource Factor =     Resource efficiency of evaluated product

\*1: The specified usage period of a product

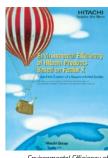
\*2: The quantity of resources used to manufacture a product, minus the quantity of resources reused or recycled \*3: The quantity of resources used to manufacture a product, minus the quantity of reusable or recyclable resources



#### **Eco-Products Certification Trends**

consumption.

This product evaluation index is used to calculate two measures of efficiency of a product's value for function and lifespan. The first measure is the ratio of the product's value to the raw materials used in its



Environmental Efficiency of Hitachi Products Based on Factor X

production and the amount of waste remaining when it is disposed (resource efficiency); the second is the ratio of a product's value to the quantity of greenhouse gases generated during its lifecycle (efficiency of global warming prevention). We use another factor to express a product's environmental efficiency relative to a base year.

We calculated the environmental efficiency of representative Hitachi Group products and published this information in a brochure: Environmental Efficiency of Hitachi Products Based on Factor X.

In lifecycle assessment, we conducted a pilot test of the integrated environmental impact assessment that also covers chemicals and scarce resources<sup>†1</sup>, applying it to a water-saving washing machine. We are further looking at a combined environmental-economic impact assessment which factors in chemical risk (impact on biodiversity, etc.) and accompanying costs.

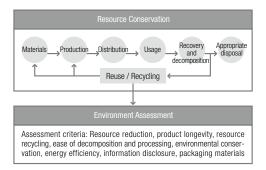
### **Development of Super-Eco Products**

Hitachi is currently developing "Super-Eco Products," which have an Environmental Efficiency Factor of 10 or more, are industry leaders, and are highly regarded by others. We intend to boost sales of these products to more than 30 percent of total Eco-Product sales by 2010.

# Supporting Global Eco-Friendly Design

Hitachi is working with German research institute Fraunhofer IZM to develop an eco-friendly design support system that measures recycling costs and environmental impact based on the recycling methods used in the region of final product disposal.

#### Approach to Complete Lifecycle Product Design





Wooden crates previously fit four units per pallet.

Reinforced cardboard packaging

now fits six units per pallet.

When complete, this system will assess-at the design stage-environmental impact and costs in each region where the products are shipped, used, and recycled. This will contribute to the global development of products with a lower recycling cost and a lower environmental impact.

# Management of **Product Chemical Content**

### Compliance with the RoHS Directive

To comply with the European Union's RoHS Directive, the Hitachi Group has worked to completely eliminate the six chemicals specified in the directive: lead, hexavalent chromium, cadmium, mercury, PBB<sup>†2</sup>, and PBDE<sup>†3</sup>.

By working in cooperation with suppliers, and through our own engineering development initiatives, we have shifted to lead-free and hexavalent chromium-free parts. As a result, we achieved complete compliance in July 2006. Moreover, information on 380,000 parts was registered in our chemical management database, as of March 2007.

# Preparation for Compliance with **REACH**<sup>†4</sup> regulation

The Hitachi Group has begun working toward compliance with the REACH regulation that came into force on June 1, 2007.

The EU's REACH regulation promotes the safety evaluation of existing chemicals, covering thousands of chemical types. REACH makes it obligatory to register chemical substances exported to the EU and to file reports and apply for authorization for the chemicals contained in products. The Hitachi Group has begun preparing for preliminary registration, starting with products incorporating the categories of materials requiring registration.

Because we regard communicating the information necessary for reporting and authorization under the REACH regulation as a task for the whole supply chain, we are using our participation in JAMP<sup>†5</sup> to develop an effective information system. Hitachi will also use this system for communicating information on SVHCs<sup>+6</sup> in molded articles where reporting is required.

# **Resource Conservation Initiatives** Improved Packaging

In October 2006, Hitachi-Omron Terminal Solutions, Corp. and Hitachi Transport System, Ltd. began using cardboard packaging for Worldwide Cash Modules, for cash in/out in ATMs<sup>†7</sup>.

Because these modules are precision machines and weigh a hefty 35 to 45 kilograms, they were previously carried in wooden crates. Reinforced cardboard became the new packaging material after passing tests for strength and the ability to withstand moisture and other conditions. A review of the space between the unit and its packaging shows that it halved the volume.

As a result, the number of units loaded into each container has increased by 1.6 times, with the volume of CO<sub>2</sub> emissions for transportation being cut by around 43 percent.

Web

†2 PBB

Commission Volumes for Containers and Packaging

# Polybrominated biphenyl, a type of

specified brominated fire retardant. t3 PBDF Polybrominated diphenyl ether, a

type of specified brominated fire retardant.

#### †4 REACH

Registration, Evaluation, Authorization, and Restrictions of Chemicals Under this EU regulation initiative, all businesses within the FU zone that manufacture chemicals governed by the regulations, or products containing the chemicals, as well as all that import the chemicals into the EU zone, will be obligated to keep records of and file reports on the chemicals they handle.

#### †5 JAMP

Japan Article Management Promotion-consortium

t6 SVHC Substances of Very High Concern

**†7** ATM Automated Teller Machine

#### †8 Polylactic acid

A lactic acid, produced by fermenting starch or sugars, such as corn and potatoes, used as a raw material in manufacturing plastic.

#### †9 Biomass Mark

Label identifying biomass-derived products as a means of promoting an eco-friendly and sustainable society

report-

# **Bioplastic Cell Phone Adapter**

Low environmental impact plant-based plastics are drawing attention as petroleum alternatives. The Hitachi Group has been working with Casio Hitachi Mobile Communications Co., Ltd. and Toray Industries, Inc. to develop products using plant-based resins derived from raw materials such as corn.

The body of the W43H adapter delivered to

KDDI in September 2006 contained a resin using polylactic acid<sup>†8</sup>, a material that, compared with petroleum-based resins, reduces petroleum use and CO<sub>2</sub> emissions across the entire lifecycle. The W43H has received Biomass Mark<sup>†9</sup> certification from the Japan Organics Recycling Association. This adapter will be improved for mass production, and the technology is being used on adapters for other cell phones.



Next

Eco

| Next-Generation Products

Et Services | http://greenweb.hitachi.co.jp/en/

# Super-Eco Products

### Hybrid Camcorder-"Wooo"

#### **Eco-friendly features**

- Annual power consumption cut by approximately 30 percent (compared with Hitachi models in 2000)
- Compliant with RoHS and WEEE<sup>†1</sup> Directives
- CO<sub>2</sub> emissions reduced by easy dubbing on the camcorder itself (down 10 percent from previous Hitachi models)
- Bromine-free, flame-retardant materials used in case
- Smaller box reduces the amount of cardboard used (winner of the Electric Equipment Packaging Category Award at
- the 2006 Japan Packaging Contest)Prevention of global warming factor: 51
- Resource factor: 85

#### Product features

- Video recorded to HDD can be easily edited on the camcorder without a PC or external burner connection
- Approximately 2x high-speed dubbing to DVD drive (Hitachi, Ltd.) of video recorded to HDD (Hitachi Global Storage Technologies, Ltd.); save-time halved; easy dubbing on the carncorder itself
- Approximately 3.31 megapixel resolution (triple previous models), 924cc volume (66 percent of previous models), approximately 11 hours recording in fine mode (about 11 times longer than previous models)

Refrigerator— "Tappuri Big Sumizumi Cool" Hitachi Appliances, Inc.

#### **Eco-friendly features**

- Double cooling from cold air and cool panels keeps temperature constant and even throughout the refrigerator, while use of Pulse-Amplitude Modulation (PAM) and low-speed control, as well as high-performance vacuum insulation, cuts annual power consumption by 35 percent
- Saves energy through continuous optimization based on data drawn from 7 temperature sensors
- Refrigerator doors shut automatically as they near the refrigerator cabinet, preventing cold air escaping from half-open doors
- Uses non-HFC (hydrofluorocarbon) refrigerant R600a (isobutane), which has an extremely low global warming potential (GWP)
- RoHS Directive and J-Moss<sup>+2</sup>/Green Mark compliant
- Recycled plastic used for mounted board case, etc.
- Prevention of global warming factor: 2.3
- Resource factor: 2.1

### Product features

- Freezer compartment located in the middle; high-performance vacuum insulation; thinner panels using "highly fluid urethane," etc., produce the industry's largest-capacity (535 L) refrigerator with a 685mm width (R-SF54WM)
- Winner of the ECCJ (Energy Conservation Center, Japan) Chairman's Prize at the 2006 Energy Conservation Grand Awards

#### **†1 WEEE Directive**

Waste Electrical and Electronic Equipment Directive 2002/96/EC, which mandates a way to recover and dispose of waste electrical and electronic equipment.



# the specified level.

†2 J-Moss (JIS C0950: 2005)

"The marking of the presence of

the specific chemical substances

for electrical and electronic equip-

Resources has mandated application of a J-Moss content label for

products containing any of the six

chemical substances designated

in the RoHS Directive. An optional Green Mark may be applied to

products that do not contain these

substances, or contain less than

ment." Revision of the Law for Promotion of Effective Utilization of

†3 PCB

the 1970s.

Polychlorobiphenyl, a highly stable

insulating oil, the manufacture and

use of which was discontinued in

### PCB<sup>+3</sup> Online Micromeasurement Apparatus—"CP-2000P" Hitachi High-Tech Control Systems Corporation

# **Eco-friendly features**

- Reduction in power consumption by downsizing the vacuum pump
- Reduction in impact on the ozone layer by changing the air conditioner refrigerant
- Prevention of global warming factor: 25
- Resource factor: 34

# Product features

- Online and real-time analysis of PCBs in flue gas from a PCB decomposition plant
- Highly sensitive and highly precise analysis using Hitachi's original ionization technology
- 24-hour continuous online measurement using dioxin precursor monitoring technology
- Robust and stable operation using real-time calibration and automatic recovery system from instant power failure
- Winner of the 33rd Environment Prize





Delivery to the Toyota office of the Japan Environmental Safety Corporation

#### Anisotropic Conductive Films for Displays Hitachi Chemical Co., Ltd.

# Eco-friendly features

- Substitute for lead solder; lowers environmental impact
- Short time and low-temperature bending contributes to energy saving during manufacturing
- Prevention of global warming factor: 2.5
- Resource factor: 2.5

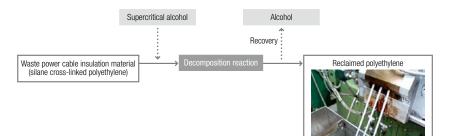
#### **Product features**

- Adhesive film with conductive particles
- A particular electrical property (anisotropic conductivity<sup>†4</sup>) by bonding between two substrates by means of heat and pressure
- For connecting very fine circuits on flat panel displays or chips to those on substrates
- 38th Japan Chemical Industry Association Technology Award (Special Prize) (2006)
- IMAPS John A. Wagnon Technical Achievement Award (2005)
- Advanced Display of the Year 2004
- National Commendation for Innovation:
- The Prime Minister Prize 2004 • The Award of the Society of Polymer Science, Japan (2003)



A characteristic of a film whereby conductive particles adhere and provide conductivity between facing circuits and insulation from adjacent circuits.

#### Recycling using supercritical alcohol



# Sustainable Business Model

To help realize a sustainable society, the Hitachi Group is committed to building a sustainable business model.

Recycling materials is one way to do this. The Hitachi Group is developing plastic recycling technologies to pursue materials recycling.

# Development of Recycling Technology for **Cross-Linked Polyethylene**

**†1** Supercritical alcohol

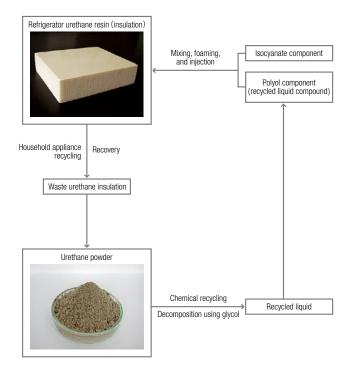
Alcohol in a state in which the critical temperature and pressure points at which gas and liquid coexist are exceeded. Supercritical alcohol has both the diffusion properties of a gas and the material solubility of a liquid.

Hitachi Cable, Ltd. has developed a continuous processing technology for recycling the silane



Hitachi air purifier filters

#### Chemical recycling of waste urethane



cross-linked polyethylene produced in the manufacturing and disposal of power cables, so that it can be used again as power cable insulation.

While an estimated 10,000 tons of waste silane cross-linked polyethylene are produced every year in Japan, this material's lack of thermoplasticity obstructs recycling. Hitachi Cable has successfully developed a continuous recycling process that exposes cross-linked polyethylene to supercritical alcohol<sup>†1</sup> to transform the waste insulation material (silane cross-linked polyethylene) into thermoplastic polyethylene that can be molten-molded. Research is underway on practical applications of this technology.

#### Artificial Zeolite

Hitachi Setsubi Engineering Co., Ltd. has developed machinery that makes porous, inorganic zeolite from incinerated ash. This artificial zeolite has absorptive, ion exchange, and catalyst properties, allowing it to absorb heavy metals and odorous gases. Hitachi Appliances, Inc. is using artificial zeolite as a deodorizer in its air purifier filters.

# Refrigerator Urethane Resin Recycling Technology

Rigid polyurethane, an outstanding insulator with good mechanical strength, is used as thermal insulation in refrigerators. However, urethane has traditionally been difficult to recycle.

The Hitachi Research Laboratory has developed a recycling technology that chemically decomposes waste urethane resin from refrigerators into raw urethane.

This technology opens the way for recycling through the use of a glycol-based decomposer with barium oxide, which decomposes easily at a low temperature, or a glycol-based decomposer with an added amine.

# Super Eco-Factories & Offices

Super Eco-Factories are designed for the prevention of global warming, efficient use of resources, and management of chemical substances. To reduce the environmental impact of production facilities and offices, the Hitachi Group is setting ambitious goals, such as striving to achieve certification of Super Eco-Factories as quickly as possible.

# **Super Eco-Factories**

The Hitachi Group's Super Eco-Factories Certification for production facilities took effect in 2007. This initiative will promote industry-leading environmental action and develop pioneering case studies, by recognizing the efforts of Hitachi sites to reduce their impact on the environment.

We present case studies here for three Hitachi Group facilities: Fujitsu Hitachi Plasma Display Ltd.'s Miyazaki plant, Hitachi Maxell, Ltd.'s Kyoto plant, and Hitachi Engineering & Services Co., Ltd. in Japan.

# Super Eco-Factories Certification Criteria

Production facilities that achieved 100 percent of their GREEN 21 target values in the applicable year (eco-factories) and performed especially well in six areas: 1. Energy efficiency

- 2. Improvement in resource recycling
- 3. VOC emissions reduction
- 4. Water recycling
- 5. Renewable energy use
- Other (special commendation or use of original technologies to meet targets)

# Putting Together Technology for Environmental Impact Reduction

The Miyazaki plant of Fujitsu Hitachi Plasma Display Ltd. makes display panels for plasma TVs. Though production volume is growing every year, the plant has reduced its environmental impact. To improve energy efficiency, we optimized operational efficiency by integrating control of all heat-generating equipment (such as turbo refrigerators, chilled water pumps, and cooling towers). As a result, energy efficiency per panel produced has improved by 10 percent. Moreover, resource efficiency was improved by reducing display panel thickness from 2.8 to 1.8 mm, and by increasing the blank-cutting efficiency for panels. At the same time, through recycling, the final waste disposal rate was cut to 0.1 percent. Alkaline waste liquid is concentrated and dried using waste heat from a cogeneration system, reducing the volume of waste. Further, the pure water discharged from the process is recycled using a water treatment device.

# High-efficiency Energy Utilization

To improve energy-use efficiency, Hitachi Maxell, Ltd.'s Kyoto plant has been implementing ESCO (energy

service company) projects since 2002. In addition to introducing a cogeneration system fuelled by natural gas and eliminating VOC<sup>†2</sup> emissions using a thermal combustion VOC incinerator, the plant has taken other steps, including air conditioning using steam generated by the waste heat from the VOC incineration. Through measures such as this, the plant managed to cut CO<sub>2</sub> emissions by 31 percent in absolute terms, or 52.4 percent per real production unit.

#### The Latest in Environmentally Conscious Offices

As a base for energy solutions, Hitachi Engineering & Services Co., Ltd. has built a three-story design center at its Onuma plant. Following the basic concept of "constructing an environmentally friendly



Thermal VOC incinerator at Hitachi Maxell

Inverter-type freezer at

Fujitsu Hitachi Plasma Display that can be operated

†2 VOC

at high efficiency through

control of rotational speed to match the seasons

Volatile Organic Compounds



Solar panels and wind generator at Hitachi Engineering & Services

#### Web

- CO<sub>2</sub> Emissions by Industry Segment
- Trends in composition of
- energy use
- Volume of new energies

#### †1 Air-conditioning system using thermal storage in building mass

A system for reducing daytime power consumption of air conditioning systems by using the heat stored in the concrete roof during the night

#### †2

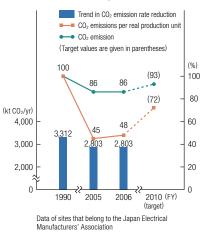
Due to revision of the Law Concerning the Promotion of Measures to Cope with Global Warming (effective April 2006), calculations of emissions in fiscal 2005 and 2006 were made using CO<sub>2</sub> emission coefficients for each electric power company, as published by the Ministry of Environment. For fiscal 1990, the total average power was used. high-efficiency office," the building features a variety of energy-saving technologies, including wind and solar power generation, an air-conditioning system using thermal storage from building mass,<sup>†1</sup> total heat exchangers, and an automatically controlled lighting system. Combining these measures yields an energy saving of 33 percent.

# CO<sub>2</sub> Reduction in Production Processes CO<sub>2</sub> Emission Reduction in Japan

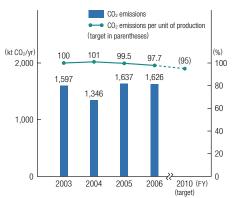
The Hitachi Group is striving to achieve two essential  $CO_2$  emission reduction targets – cutting its total  $CO_2$  emissions by 7 percent below the 1990 level by fiscal 2010, and in the same period either meeting specific emission targets set by industry groups, or reducing  $CO_2$  emissions per unit of production by 25 percent (at Hitachi's offices, hospitals, etc.).

The CO<sub>2</sub> emission reduction system (introduced in 2003) ranks designated production facilities according to their progress in meeting reduction targets. In fiscal 2006, we switched from an across-the-board CO<sub>2</sub> emissions reduction target of 7 percent to targets set voluntarily by each facility. In the same year, we also extended the range of facilities in this system by including not only Type 1 Designated Energy Management

#### Trend in CO<sub>2</sub> Emissions in Japan<sup>†2</sup>



#### CO<sub>2</sub> Emissions outside Japan



Facilities but Type 2 Facilities as well. Among the included 130 facilities, 53 percent have achieved their targets.

At the same time, as a result of energy-saving investments of 5.3 billion yen in Japan, Hitachi managed to limit total  $CO_2$  emissions to the same level as 2005, despite the fact that a new plasma display plant began operating in 2006. The Group's total  $CO_2$  emissions for 2006 were 2,803 kt, which is 14 percent below the 1990 level.

Twenty-eight production facilities reduced energy use per unit of production (5 year average) of 6 percent per year. This level of reduction is one of the criteria for certification as a Super Eco-Factory. In the coming years, by converting from using heavy oil as a fuel to gas and electricity, and by adopting energy-saving technology, the Hitachi Group will promote further reductions.

# CO2 Emission Reduction outside Japan

The Hitachi Group is setting the target of reducing CO<sub>2</sub> emissions per unit of production by 2010 to 5 percent below the 2003 level.

As Hitachi shifts production lines and builds new factories outside Japan, the number of production bases subject to energy conservation management has doubled since 2003, from 31 to 62. As a result of growing efforts to reduce  $CO_2$ emissions outside Japan, in fiscal 2006 we cut total  $CO_2$  emissions per unit of production to 1.8 percent below the 2005 level.

## **Reducing Greenhouse Gas Emissions**

The Hitachi Group is working to reduce emissions of greenhouse gases other than  $CO_2$  (specifically PFCs, HFCs, and SF<sub>6</sub>), and has already met the targets set by industry associations. However, since SF<sub>6</sub> is used in large quantities, Hitachi is pursuing a Group-wide target of reducing SF<sub>6</sub> emissions by 35 percent (relative to the 2003 level) by 2010.

Through measures such as switching to alternative gases, widespread adoption of technology to neutralize these gases, and improving reutilization rates, in fiscal 2006 we cut emissions by 61 percent (relative to fiscal 2003), significantly outpacing our target. We are committed to maintaining this trend to help reduce global warming.

# Reduction of SF<sub>6</sub> in

Semiconductor Properties Inspection Processes Hitachi, Ltd.'s Hitachi Works and Hitachi Haramachi Electronics Co., Ltd. in Japan manufacture and test high-voltage semiconductor products capable of withstanding 100 to over 10,000 volts. If the voltage-resistance testing process is conducted in the open air, electrical discharges will occur, resulting in problems, including destruction of the product. For this reason, semiconductor property inspections have conventionally been conducted in an atmosphere of SF<sub>6</sub> gas. However, with a view to preventing global warming, we have switched to using alternatives to SF<sub>6</sub>.

Since the alternate solvent to  $SF_6$  (GWP: 320) that we investigated is a liquid, we needed to convert it to a gas before using it for testing semiconductor properties. We developed a technique

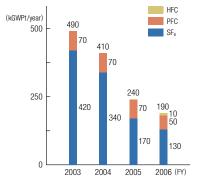


Voltage-resistance inspection device at Hitachi Haramachi Electronics

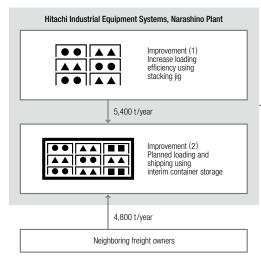
#### High-voltage Resistance Measurement System for Semiconductor Property Inspection (substitute for SF<sub>6</sub>)

NO	Item	Before change	After change
1	Gas to prevent electrical discharge	SF <sub>6</sub>	Specified alternate solvent to CFC
2	GWP (t)	23,900	320
3	Quantity used (kg/month)	220	50
4	CO <sub>2</sub> -equivalent emissions (kGWPt/year) (figures in brackets are a percentage of previous values)	63 (100%)	0.4 (0.67%)

#### Greenhouse Gas Emissions and Breakdown



#### Schematic Illustration of Modal Shift



for stably transforming this liquid into a gas using a carburetor. By gasifying this CFC substitute, we managed to totally eliminate the use of SF<sub>6</sub>.

# **Boosting Transportation Efficiency**

Reducing CO<sub>2</sub> Emissions in Transportation The revised Energy Conservation Law (April 2006) in Japan, obliges freight owners to implement transportation energy savings. Thus, in 2006 we began collecting CO<sub>2</sub> emissions data for product and waste transportation for all Hitachi Group production facilities involved in product transportation. Total product transportation in 2006 was 1.26 billion t-km, or 1,226 kt in CO<sub>2</sub> emissions.

#### A Model Business

### for the Green Distribution Partnership Conference

The transportation modal shift jointly implemented in Japan by Hitachi Transport System Ltd. and Hitachi Industrial Equipment Systems Co., Ltd. was recognized as a model at the "Green Distribution Partnership Conference" co-hosted by the Ministry of Land, Infrastructure and Transport, the Ministry of Economy, Trade and Industry, and the Japan Institute of Logistics Systems. Most products of Hitachi Industrial Equipment Systems Co., Ltd. are heavy, such as industrial motors. Due to their variations in shape, they could not be stacked, limiting loading efficiency. In response, we developed a transport jig with free height adjustment for stacking products, substantially increasing load efficiencies. Also, the company set up an interim container-collection base to cooperate with neighboring companies for jointly collecting and transporting containers over 40 kilometers between factory and freight depot, and decided to transport three containers at a time on trailers. Now, CO<sub>2</sub> emissions are 400 tons less per year, and use of wooden pallets and other packaging materials was reduced by 100 tons per year.

Customers

# Management of Chemicals

# **Chemical Risk Management**

JR Freight Tokyo terminal

Joint transport 10,200 t/year

> In 1998, Hitachi introduced an on-line system in Japan for the Group-wide management of chemical substances, CEGNET (Chemical Environment Global Network), and began chemical risk management.

> When introducing a new chemical, information is collected on hazardous properties and applicable laws. The Special Committee for Chemical Substances then decides whether to use this substance. For proper management of any controlled hazardous chemicals, handling is closely coordinated with all departments at every

# - report -

# Eco Rail Mark Certification

For transport energy conservation, Hitachi is promoting the "Hitachi Group Guidelines for Transport Energy Conservation," transportation modal shifting, and acquisition of Eco Rail Mark certification.

The Railway Freight Association (Japan) awards its Eco Rail Mark to companies that use rail to transport more than 15 percent of their freight carried over distances greater than 500 km. In fiscal 2006, Hitachi Maxell, Ltd. and Hitachi, Ltd. were each awarded the Eco Rail Mark.

Two Hitachi Maxell alkaline dry-cell products were also awarded the Eco Rail Mark. The fact that only 10 products have earned this mark shows that these products are recognized as leaders in eco-performance. Hitachi is planning to present the Eco Rail Mark to consumers by showing it on products.

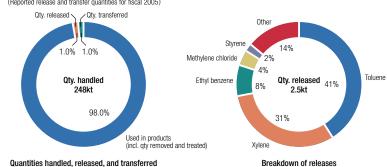


	Transport qty. (100 Mt-km)
Road	10.97
Sea	1.26
Rail	0.36
Air	0.04
Total	12.63

#### Web

Ratio of low-emission vehicles to total owned by company

# Survey Results for Substances Covered by Japan's PRTR Law



facility responsible for design, manufacturing, or purchasing.

# **Reducing VOC Emissions**

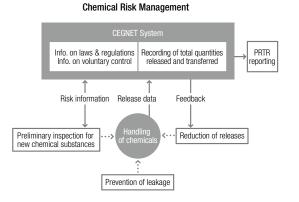
In response to an amendment to the Air Pollution Control Law in Japan in April 2005, Hitachi worked to reduce VOC emissions at all facilities. To satisfy a plan by the Ministry of Environment to reduce emissions by 2010, the Group formulated a reduction plan for 41 selected VOCs.

In fiscal 2006, total VOC emissions at Hitachi's Japanese plants were 5.7 kt—44 percent below the level of 2000. Total VOC emissions at sites outside Japan for the year were 0.96 t. Hitachi is committed to cut domestic VOC emissions by 45 percent (base: 2000) by 2010.

Even at overseas facilities, where increases in VOCs will match production growth, we set the target of lowering VOC emissions per unit of usage by 10% (base: 2005) by 2010. In fiscal 2006 alone, we managed to achieve a 2.6 percent drop in this index.

# Survey of Chemicals Covered by PRTR Law

According to Japan's Pollutant Release and Transfer Registers (PRTR) Law, introduced in April 2001, Hitachi must control all releases of PRTR substances into the atmosphere and public waters, and all solid-waste transfers or liquid discharge into



sewage systems.

Data is collected on all substances handled (10 kilograms or more per year), even when the amount is below the minimum for mandatory reporting. In 2006, Hitachi used 127 of the 354 substance groups covered by PRTR. The volume of chemicals handled was approximately 248,000 tons. Of this volume, the amounts released and transferred were 1%. The three most used PRTR substances were toluene, xylene, and ethyl benzene. In fiscal 2006, 115 facilities submitted PRTR reports to local governments.

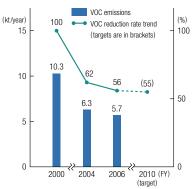
Hitachi has voluntarily agreed to classify 1,400 substances that are not PRTR regulated into categories of "eliminate," "reduce," and "control," and to monitor and control their release and transfer.

# Preventing Pollution of Soil and Groundwater

Hitachi is working to prevent leaks of chemical substances into the soil or groundwater by converting underground piping, pits, and tanks to above the ground, making inspections easier. To prevent leaks, underground tanks not yet converted are rigorously tested for corrosion and inspected using such techniques as ultrasonic testing.

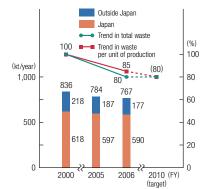
A full 90 percent of facilities that have used chemicals confirmed that they have completed groundwater and soil decontamination, or that there is no contamination. The remaining facilities

# Trend in VOC Emissions (Japan)



Web

- PRTR investigation results
   Percentage of PRTR chemicals handled, by industry segment
   Emission and transfer volumes of PRTR chemicals by industry
- segment



are taking countermeasures and monitoring groundwater.

# Efficient Use of Resources

### **Reduction of Generated Waste**

The Hitachi Group promotes monozukuri (manufacturing) that does not use unnecessary resources and generates little waste. As part of this effort, we are taking measures to meet the goal of cutting total waste to 20 percent below the 2000 level by fiscal 2010. In connection with this, Hitachi has classified facilities into two groups, according to the characteristics of their operations. One group aims to reduce the total amount of generated waste, while the other strives to cut waste per unit of production, with each group working to meet its particular reduction target. In fiscal 2006, the first group managed to cut total emissions by 20 percent; the second cut its total waste per unit of production by 15 percent. Through these measures, total waste fell by 8 percent.

Note that from the viewpoint of resource recycling, materials such as scrap metal, which can be a valuable resource, are counted as generated waste.

# Improvement of the Resource Recycling Rate

By exploring methods and applications for effectively using waste as a new resource ("reuse," "recycle"), in addition to reducing waste generation ("reduce"), the number of Hitachi facilities that achieved "zero emission<sup>†1</sup>" at final waste disposal reached 119 sites (up 22 over the previous year).

In addition, the Group is also improving methods for reducing final waste disposal, shifting from thermal recycling and materials recycling to reuse. Through this approach, Hitachi is hoping to increase the resource recycling rate by 10 percent over the level of 2005 by fiscal 2010. To quantify resource recycling, recycling rates are calculated by coefficients according to type of waste and waste processing methods, based on the environmental impact from an LCA<sup>†2</sup> perspective. Using this method, we improved our resource recycling rate by 3 percent in fiscal 2006.

# Efficient Use of Water Resources

To cut water use (at overseas facilities) to 10 percent below the 2005 level by fiscal 2010, Hitachi is striving to reduce industrial water consumption by recycling cooling water. During fiscal 2006, the Group cut water use at 62 outside Japan sites by 3.6 percent.

At Hitachi Displays, Ltd.'s China plant, water use was reduced by 43.2 kt/year by recycling the highly turbid wastewater discharged from its pure water manufacturing equipment. Currently, we are planning to start collecting and using wastewater with high electrical conductivity. This is expected to yield 144 kt/year in water savings.



# report —

# Cultivating Corn Using Organic Packaging

As production output at Hitachi Automotive Products (U.S.A.) Inc. has increased, the volume of styrene foam used for packaging parts from Japan has grown. Since there is no recycling system for styrene in America, all this waste ended up in landfills, prompting us to switch to using an organic material for packaging.

We now grow corn on our site using this

used packaging material as a fertilizer. In August, when harvesting corn, we had a barbecue party for employees, their families and members of the local community, including the mayor, and the state governor.

Thus, in addition to improving resource utilization, this initiative enabled a social exchange with the local community.



#### **†1 Zero emission** The Hitachi Group defines "zero emission" as "reducing final disposal to no more than 1 percent of total generated waste and less than 5 tons per year."

**†2 LCA** Lifecycle Assessment A method for evaluating the environmental impact of a product throughout all stages of its life—from manufacturing and use to disposal and recycling

Web

Products

Methods

Zero Emissions Sites
Flowchart for the Treatment

Breakdown of Recycling

of Waste and Reusable Waste

# Worldwide Environmental Partnerships

The starting point of all Hitachi Group activities is creating a sustainable society together with our stakeholders—customers, local community members, shareholders, investors, suppliers, and employees. For this reason, we engage in dialogues with our stakeholders and work hard to disclose various forms of information.

# **Environmental Communication**

Hitachi responds to questionnaires and inquiries from stakeholders, in addition to providing information—via this CSR Report, various pamphlets, the corporate Web site, exhibitions, and symposiums. We also engage in direct dialogue with stakeholders in forums, such as town meetings in local communities.

In March and April 2007, we conducted the Hitachi Eco Campaign, setting up a new Web site to promote understanding of the environmentally conscious features incorporated into five of Hitachi's latest home appliances, and inviting customers to serve as product monitors.

# **Dialogue with Students and Local Communities**

In October 2006, Hitachi, Ltd. took part in an event sponsored by the Nature Conservation Society of Japan entitled "Special Real Nature Seminar: Dialogue between Students and Corporations," providing an opportunity for dialogue with some 50 students on CSR activities and ecosystem conservation.

Seminar participants voiced the opinion that Hitachi's plans are clearly laid out in publications, such as this CSR report, and can be trusted. They also said they would like Hitachi to get consumers and society as a whole involved in the widespread use of Eco-Products and to take action to conserve ecosystems. We will keep valuable opinions, such as these, in mind as we move ahead with our



Hitachi Eco Campaign Web site





Top left: Dialogue between students and corporations sponsored by the Nature Conservation Society of Japan Top right: Collaboration on a habitat survey of endangered butterfly species Bottom: Tour of Hitachi Chemical's Goshomiya plant

environmental activities.

Every year the Goshomiya Works in Japan of Hitachi Chemical Co., Ltd. offers a tour of a plant for local people. The fiscal 2006 tour was held in November, and included an explanation of measures to deal with offensive odors.

In collaboration with Earthwatch Japan, a specified non-profit organization that supports scientists researching the environment and wildlife, the Hitachi Group participated in activities to conserve endangered butterfly species at the base of Mt. Fuji.

# Legal Compliance

The Hitachi Group sets voluntary standards that are stricter than those imposed by law. Information on major regulatory changes and new legislative trends is shared within the Group in an effort to reduce environmental risk. As a result, in fiscal 2006 the Group once again incurred no fines or other financial penalties due to incidents or accidents affecting the environment.

### Web

- Publication of CSR report by group companies and production facilities (including posting on Web sites)
- Group company and production facility contacts for inquiries related to CSR reports
- Group company and production facility environmental Web links

Web

#### Chief Executive's Message



Minoru Tsukada Senior Vice President and Executive Officer, Chief Executive for China, Hitachi, Ltd.

Hitachi's Beijing office, established in 1979, today has more than 130 Group companies operating in China, including Hitachi (China) Ltd. We supply a vast array of products and services, ranging from power generation plants, transportation equipment, and ITC systems to consumer electronics and highperformance materials and parts.

As China becomes a leading advanced economy, we must address environmental issues, such as reducing the environmental burden. Hitachi too is working on the environment and energy conservation, vital components of CSR, one of our four key business areas in China.

As members of China's business community, the China Hitachi Group works as a team to meet social responsibilities: to preserve the environment; ensure ethical behavior and respect for the law; achieve harmony with local communities; meet the needs of all employees; and promote openness and transparency. We intend to become "The Most Trusted Partner in China."

# **Energy Conservation and Environmental initiatives**

China, identifying environmental protection and energy conservation as key priorities of its 11th Five-Year Plan, has begun to reduce emissions of pollutants and to save energy in 10 areas, including electricity and energy generation.

To support these initiatives, in April 2006, the Hitachi Group set up the China Energy Conservation and Environment Commercialization Promotion Project Team within Hitachi (China) Ltd., and is vigorously pursuing technology exchange among Group companies.

In January 2007, the Hitachi Energy Conservation and Environmental Protection Technology Exchange Conference was hosted by the National Development and Reform Commission. Here, Hitachi shared expertise and technology in areas such as energy conservation and environmental protection with around 200 representatives from Chinese businesses with high resource consumption. We are continuing to work with the Chinese government on the development of Chinese society.

# Holding Employee-Driven CSR Workshops

From February to March 2007, CSR workshops were held for Hitachi Group employees in Beijing, Guangzhou and Shanghai. Participants learned about the CSR philosophy, then engaged in a lively Q&A session with some of the employees who are shown in this report. They then broke into groups to review their work from a CSR perspective and presented the results.



Employee-driven CSR workshop (Shanghai)

**Mink** 

Hitachi China Gateway site

# Support for Flood Victims in Guangdong Province

Six Hitachi Group companies closely tied to Guangdong Province donated RMB1.5 million (around 22.5 million yen) for disaster recovery from the flooding caused by the typhoon and heavy rain that hit the province in the summer of 2006. The six companies are Hitachi (China) Ltd., Guangzhou Hitachi Elevator Co., Ltd., Hitachi Air-Conditioning and Refrigerating Products (Guangzhou), Guang Dong Hitachi Koki Co., Ltd., Guangzhou Hitachi Unisia Automotive, Ltd., and Hitachi Global Storage Technologies (Shenzhen) Co., Ltd.

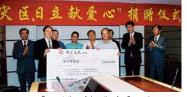
# Hitachi Cup Chinese Celebrated Universities Debate Invitation Game

The finals of the 12th Hitachi Cup Chinese Celebrated Universities Debate Invitation Game were held in December 2006 at the Shanghai Education Television Station. The participation of students from Singapore and Australia as observers gave the event an international flavor. The Hitachi Group will continue to support the talented young people who will power China's future.

# Hitachi Global CSR Activities China



Ceremony for conclusion of a memorandum of understanding on a tie-up between Hitachi (China) Ltd. and the Department of Small and Medium-Sized Enterprises, National Development and Reform Commission (right: Koushi Nagano, President, Hitachi (China) Ltd.)



Presentation of donation for Guangdong Province disaster recovery

# Dialogue with the Experts

While implementing the Hitachi Group Three-Year CSR Road Map, we have worked hard to improve it by verifying our activities through dialogues with experts. In fiscal 2006, we conducted invaluable exchanges of opinion with eight CSR specialists, including academic experts, a representative of a CSR assessment organization, a journalist, and a lawyer. Below we present the views of four of these experts.

# Recognizing the Impact on Society as a Whole; Raising Employees' Crisis Awareness

Iwao Taka, Professor, International School of Economics and Business Administration, Reitaku University



Hitachi has steadily promoted global CSR activities, such as landmine removal. I think that you should make more effort to communicate activities like this to the public. If you recruit volunteers from among your

employees to participate, you can more effectively raise awareness among them about CSR. Since Hitachi does not have a wide range of business-to-consumer operations, your employees may not be sufficiently aware of the risk of losing consumer trust in the event of problems. On top of observing laws and regulations, I hope you will strive to further raise this awareness to keep the trust of society that you have built up over the years.

With the various commemorative events that you are planning for Hitachi's centennial in 2010, I expect you to promote dynamic activities that tackle social issues on a global scale. (January 2007)

# Understanding the Risks; Establishing an Approach for Improvement One Akiyama,

President, IntegreX Inc.



When assessing CSR surveys to date, we have emphasized the sustainability of corporations themselves, but from now on we intend to emphasize their contribution to the sustainability of society.

I believe that Hitachi's CSR activities have been moving in the right direction, shown by the Hitachi Group CSR Three-Year Roadmap. At the same time, it is essential to deal head-on with incidents and accidents which occured, and listen carefully to people outside the company and strive for continual improvement to regain trust.

You should keep promoting improvement by understanding potential workplace risks, quantifying and visualizing issues, and conducting periodical examination. I hope that Hitachi will not only focus on resolving current issues, but also in the long term, develop a vision of a sustainable society through activities that help realize this ideal. (October 2006)

#### Message from the CSR Promotion Committee Chair



Masahiro Hayashi Executive Vice President and Executive Officer of Hitachi, Ltd., and Chair of the CSR Promotion Committee In fiscal 2006, based on the CSR Three-Year Roadmap, at the Hitachi Group, we improved our global CSR promotion organization, focusing on deepening employees' CSR awareness and understanding of the current situation. In fiscal 2007, we will visualize and verify CSR activities through continual dialogue with stakeholders and by clarifying goals. As stated in this report, we are determined to contribute to the realization of a sustainable society toward 2010, our 100th anniversary. We will also promote CSR activities in close harmony with our business operations by implementing innovative projects to resolve social issues.

The Next Step: Consider Points of Contact with Society; Convey Corporate Value Mariko Kawaguchi,

Senior Analyst, Daiwa Institute of Research, Ltd.



Up to now, Hitachi's CSR activities have been based on the perspective of tackling what the company ought to do. The next step, should be to readdress these activites within society and social needs. The meaning

of the "S" in SRI<sup>†1</sup> is now changing from "socially" to "sustainability." Investors are becoming more interested in the impact of various sustainable risks on corporate value.

I admire Hitachi's corporate tradition of contributing to society through technology, but Hitachi's value could be better conveyed if there is a clear message that gives the image of the desirable society that Hitach wants to contribute to, through its technology. (October 2006)

Expanding Material Flow Cost Accounting, including the Supply Chain Katsuhiko Kokubu, Professor, Graduate School of Business Administration, Kobe University



Hitachi's activities cover a wide spectrum, but as the emphasis placed on materiality<sup>†2</sup> in the 3rd Edition of the GRI Guidelines<sup>†3</sup> shows, it is important for companies to promote continual improvement

by determining top priorities and clarifying the relevant management indicators and goals. During this process, the validity of the Roadmap can be confirmed by reflecting on stakeholders' views. From the environmental perspective, I think that material flow cost accounting is more effective than conventional cost accounting, as the positive results of Hitachi Maxell have shown. I hope that Hitachi will extend material flow cost accounting<sup>†4</sup> to the whole product and service production process, including the supply chain. (October 2006) 11 SRI: Socially Responsible Investment Investment activities, such as selection of investment fund portfolios, based on an assessment of companies from the viewpoint of CSR

#### †2 GRI Guidelines

Guidelines of the report on international sustainability by the Global Reporting Initiative (GRI)

#### +3 Materiality

The degree of material or concrete influence of individual CSR activities on corporate value

#### †4 Material flow cost accounting

Evaluation of the material cost and material loss (waste) in each production process for the purpose of reducing costs and, at the same time, lowering the environmental burden

# Data on Hitachi Web Sites Detailed information related to this report can be accessed on Hitachi's Web sites

(Further information on topics identified by the Web\_ and Oink\_ symbols in the report can be accessed through the URLs listed below)

# http://www.hitachi.com/csr/data/

	Category	Activity	Related page	Content	Web sit coverag
	Corporate Governance		P. 8	Group management	$\oplus$
	Compliance and Risk Management		P. 9	Enhancing the whistle-blower system	$\bigcirc$
				Basic approach to information security governance	
				Personal information protection and information security cards	$\oplus$
	CSR Promotion Activities		P. 11	CSR Policy of the Hitachi Group	
	Customers and Hitachi	Quality Assurance	P. 27	Quality Assurance Flow Chart	$\oplus$
				Promoting compliance with technical laws	$\oplus$
				OCHIBO HIROI (Program to Prevent Recurrences)	$\oplus$
		Hitachi's Policy on Customer Satisfaction (CS) Activities	P. 28	Action Guidelines for CS Management	
				How the customers' voices are reflected	
	To Our Shareholders and Investors		P. 31	General meeting of shareholders	$\square$
				Results of external SRI assessments in fiscal 2006	
	Working in Harmony with Local Communities	Social Contribution Activities	P. 32-35	Hitachi's policy on social contribution activities	$\bigcirc$
	Working Together with Suppliers	Basic Policy on Procurement	P. 36	Guidelines for Procurement Activities	
		Green Procurement	1	Green Procurement Guidelines	
				Hitachi Group authorization system	
	Employees Make Hitachi What It Is		P. 37	Open systems supporting employee capacity building	
				Supporting a balance between work and family life	
				Hitachi's approach toward HIV/AIDS	
	Hitachi Group's Environmental Action Plan		Inside cover	List of companies covered by report (environmental impact data covered)	$\oplus$
			P. 44	Hitachi Action Guidelines for Environmental Conservation	
	Eco-Mind & Global Environmental Management	Environmental Management System Based on ISO 14001 Standards	P. 48	List of ISO 14001-certified sites	
		Environmental Education	P. 50	Required and actual numbers of legally certified staff	
		Environmental Accounting	P. 50-51	Cost ratio by industry segment	
				Investment ratio by industry segment	
				Investment ratio by countermeasure	
				Economic effect by industry segment	
	Next-Generation Products & Services	Eco-Products	P. 54–57	Eco-Products list and data sheets	
				Environmental efficiency of Hitachi products based on Factor X	
				Commission volumes for containers and packaging	
	Super Eco-Factories & Offices	CO <sub>2</sub> Reduction in Production Processes	P. 60-61	CO <sub>2</sub> emissions by industry segment	
				Trends in composition of energy use	
				Volume of new energies	
		Boosting Transportation Efficiency	P. 62	Ratio of low-emission vehicles to total owned by company	
		Management of Chemicals	P. 62-63	PRTR investigation results	
				Percentage of PRTR chemicals handled, by industry segment	
				Emission and transfer volumes of PRTR chemicals by industry segment	
		Efficient Use of Resources	P. 64	Zero emissions sites	$\oplus$
				Flowchart for the treatment of waste and reusable waste products	$\oplus$
				Breakdown of recycling methods	$\bigcirc$
ĺ	Worldwide Environmental Partnerships	Information Disclosure and Dialogue	P. 65	Publication of CSR report by group companies and production facilities (including posting on Web sites)	
				Group company and production facility contacts for inquiries related to this CSR Report	
				Group company and production facility environmental Web links	
1				Awards	
1			P. 42	Eco-Products International Fair	

For general information on the CSR activities of the Hitachi Group: http://www.hitachi.com/csr/

For general information on the environmental activities of the Hitachi Group: http://greenweb.hitachi.co.jp/en/

# HITACHI Inspire the Next





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# Hitachi Group Corporate Social Responsibility Report 2007

To Our Questionnaire Participants:

Thank you for your interest in Hitachi.

We are pleased to present the Hitachi Group Corporate Social Responsibility Report 2007.

The report details our corporate social responsibility (CSR) activities over the past fiscal year and is divided into three sections: "CSR Management" gives an overview of our CSR activities, including corporate governance; "Next Society" covers the Hitachi Group's activities from the social perspective, and "Next Eco" covers the environmental perspective. The report will also be made available on our Web site.

In addition to redoubling our efforts to continually enhance our CSR activities, the Hitachi Group will also strive to publish ample information concerning the details of these efforts so that they may be better understood by the public.

We invite you to read the report and provide us with your feedback.

Thank you very much for your cooperation.

The Hitachi Group

Contact:

# CSR Promotion Department Corporate Communication Division @Hitachi, Ltd.

1–6–6 Marunouchi, Chiyoda-ku, Tokyo 100-8280 Japan Tel: +81-3-3258-1111 Fax: +81-3-4564-1454 http://www.hitachi.com/csr/

Results of Questionnaire of	on Hitachi Group C	SR Report 200	6 (Total respondents: 116)
			Main Feedback and Our Responses
Comprehensibility		Low (5%)	<ul> <li>Praise</li> <li>The report was easy to understand as it offered detailed ex-</li> </ul>
High (61%)		verage 34%)	<ul> <li>planations of Hitachi's activities in various fields, from the underlying philosophy to ongoing initiatives and their results.</li> <li>The report was developed in a logical way, starting from the Hitachi Spirit and then moving on to the Fundamental Credo, the CSR Policy of the Hitachi Group, the CSR Road-</li> </ul>
Volume Too much	Appropriate		<ul> <li>and the fiscal year results for the individual initiatives.</li> <li>"The WorldSkills Competition, Supporting Manufactur- ing" and "Kokoro Gatari: Connecting Patients and Fami-</li> </ul>
(42%)	(58%)		lies" were impressive articles.
Government/       Public administration employees (6%)       Suppliers       (30%)	Research / education institution employed Students Hitachi Group employ (36	ees/family members %)	<ul> <li>Suggestions</li> <li>Text takes up too much of the page. Increase the amount of space dedicated to diagrams and photos.</li> <li>The articles would be easier to understand if they were more focused.</li> <li>Hitachi should engage in more activities that involve stakeholders.</li> </ul>
Leard about the Report from	(3%) Cesidents near Hitac	hi facility (3%)	<ul> <li>Our Responses</li> <li>We reduced the overall amount of text and increased the amount of space used for diagrams and photos.</li> </ul>
	Other (86%) gazines (3%); Web site (3%); Seminars (2	%)	<ul> <li>We posted the reports up through fiscal 2006 and other previously released information on our Web site and focused this year's report on the main activities of fiscal 2006.</li> <li>Throughout the year we engaged in dialogue with experts in various fields related to CSR and used their comments to improve our CSR activities. We included the results in this report.</li> </ul>

Hitachi Group CSR Report 2007: Questionnaire

Please complete the questionnaire and mail or fax it to the address below.

CSR Promotion Department, Hitachi, Ltd. 1–6–6 Marunouchi, Chiyoda-ku, Tokyo 100-8280 Japan

# Fax: +81-3-4564-1454

					ly one for each line.)
	(1) Comprehensibility	🗌 High	Average	Low	-
	(2) Volume	Too much	Appropriate	Too little	
	(3) Articles	Excellent	Average	Inadequate	
	(4) Layout	Easy to rea	d 🗌 Average	Hard to read	
	Please explain the reas	sons for your selec	ctions.		
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	Next Society Customers and Hitacl Working Together with		☐ To Our Shareholders a ☐ Employees Make Hitad		ny with Local Communities
	Hitachi Group's Enviro     Environmental Impact		_	co-Mind" & Global Environmental Manaç xt-Generation Products & Services	gement
	<ul> <li>Super Eco-Factories &amp;</li> <li>Other</li> <li>Hitachi Global CSR A</li> </ul>	& Offices		orldwide Environmental Partnerships	
Q3.	<ul> <li>Super Eco-Factories &amp;</li> <li>Other</li> <li>Hitachi Global CSR A</li> <li>If any of the above article</li> </ul>	& Offices	Wo Dialogue with the Experts terested you, please explaine Hitachi Group's	orldwide Environmental Partnerships	es?
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Report or the Group's CSR activities and initiatives.