RICOH
Image Communication

RICOH GROUP SUSTAINABILITY REPORT 2001

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Editorial Policy

◎ This report is aimed to clearly explain the ideals, goals, activities, and performance of the Ricoh Group to all readers, including environmental specialists, users of Ricoh products, suppliers, local communities, employees, nonprofit organizations (NPOs), students, investors, and people in charge of environmental issues for their companies.

◎ To facilitate readers to understand Ricoh Group activities from a broader perspective, we renamed our report the Ricoh Group Sustainability Report, following GRI Guidelines[1]. Information on the Group's environmental conservation activities is in accordance with the Environmental Reporting Guidelines of the Ministry of the Environment[2].

◎ With the belief that full disclosure of all activities is important in remaining loyal to our readers, we disclose information on penalties and fines imposed on us as well as on restoration of contaminated soil.

◎ We willingly disclose information that can be useful to others engaged in environmental conservation because we recognize the importance of encouraging the whole society seeking to reduce negative environmental impact.

1. The Global Reporting Initiative (GRI) is an international organization established by the Coalition for Environmentally Responsible Economies (CERES)—an environmental nongovernmental organization (NGO)—in cooperation with the United Nations Environment Programme (UNEP) to improve communications concerning sustainable development. Environmental performance, social performance, and economic performance are three requirements provided by GRI for the companies indispensable for the society. For more information, please visit http://www.globalreporting.org/
2. For more information (Japanese only), please visit http://www.env.go.jp/policy/report/h12-02/index.html

Message from the President

The rich resources of our planet Earth have given birth to many forms of life and have supported the wide-ranging and ambitious activities of mankind. Nevertheless, recent activities have exceeded this life-sustaining ability of the Earth. This poses a threat not only to our coexistence with other forms of life on this planet, but also to the future of the human race itself.

In order to leave a rich, fertile world to future generations, each of us must reduce the environmental impact caused by our activities. For that to happen, governments, companies, citizen groups, and even individuals must be aware of the environmental impact that is affecting the entire planet and actively seek to reduce it. Mutual consultation and cooperation are also critical to further advance.

For the Ricoh Group, as a global citizen, safeguarding this precious planet is one of our corporate missions, and the environmental conservation activities of the entire Group are a part of our management philosophy. Specifically, we believe that the following two ideas are crucial: (1) we must reduce the environmental impact of our products and (2) we must reduce the environmental impact of all of our corporate activities, including development, manufacturing, sales and services, product take-back, and recycling. We have taken the initiative in establishing an environmental management system by developing our own environmental accounting system, which we use to understand the efficacy of our activities and to handle our findings to better management.

To survive in the new century, a company needs to excel in environment-conscious management and social responsibility. We have already been through a Passive Stage, in which we dealt with regulations, and a Proactive Stage, in which we voluntarily took measures to reach higher goals in conserving the global environment. We are now in a Responsible Stage, in which we are increasing our economic value as a company by continuing environmental conservation activities. We need to work with communities and citizens groups in global activities that contribute to the environment in addition to practicing information disclosure and active communication. In this way, we will vigorously help build a society that recirculates resources, which is essential if the existence of mankind is to continue.

This report, which is made publicly available, summarizes the details and results of our global environmental conservation activities in fiscal 2000. We hope that this report will help as many of you readers as possible to discover the extent of the Ricoh Group's environmental measures. We welcome your honest opinion to further improve our activities in terms of both quality and effectiveness.

Masamitsu Sakurai

President and Chief Operating Officer
Ricoh Co., Ltd.

桜井正光

Profile of Organization

Ricoh Co., Ltd., was established on February 6, 1936. The Ricoh Group consists of Ricoh Co., Ltd., 363 subsidiaries, and 27 affiliates. The Ricoh Group's main global-scale activities include the development, production, and sales of office equipment (copiers and information equipment), optical devices, and other electronic equipment as well as after-sales services. The Group also sells its products under other brand names, such as Savin, Nashuatec, and Lanier.

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Ricoh Bldg., Minami-Aoyama 1-15-5,
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Phone: +81-3-3479-3111
Web site: http://www.ricoh.com/

Major Product Lines of the Ricoh Group

◎ **Copiers:**
Analog copiers, digital copiers, multifunctional printers, digital duplicators, related supplies, others

◎ **Information equipment:**
Facsimiles, laser printers, optical filing systems, optical-disk products, related supplies, others

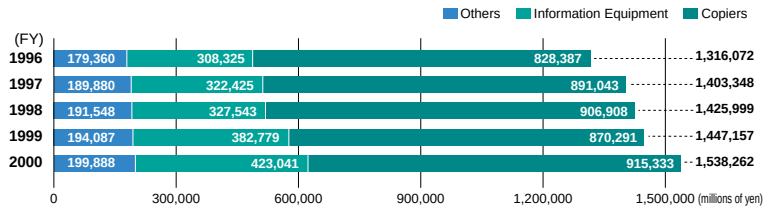
◎ **Optical devices:**
Digital cameras, analog cameras, lenses, others

◎ **Others:**
Semiconductors, printed circuit boards, others

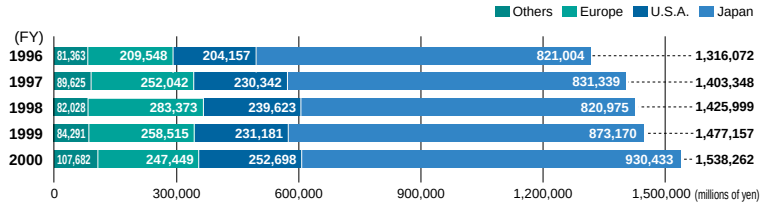
imagio Neo 350
(Aficio 1035)

IPSiO Color 8000
(AP 3800C)

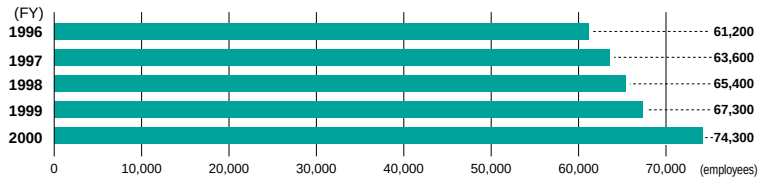
The Ricoh Group's Sales Classified by Business*



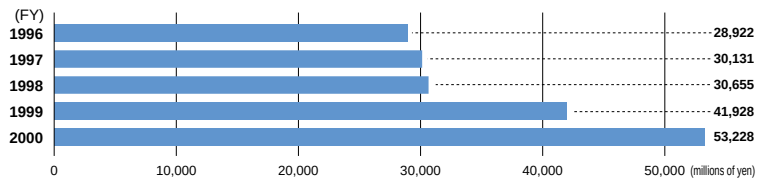
The Ricoh Group's Sales Classified by Region*



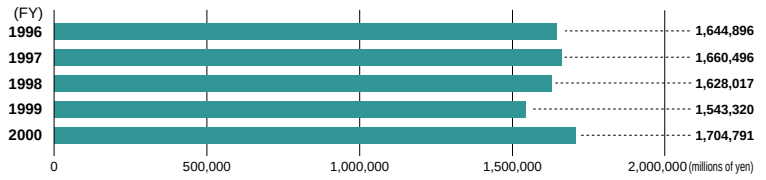
Change in the Number of Ricoh Group's Employees*



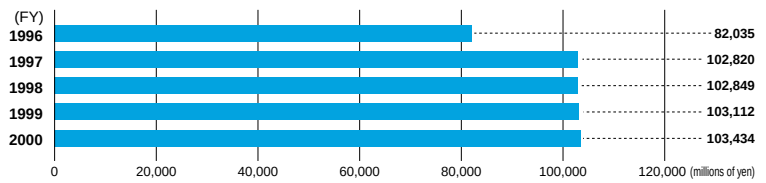
Change in the Ricoh Group's Net Income*



Change in the Ricoh Group's Total Asset*



Change in the Ricoh Group's Capital*



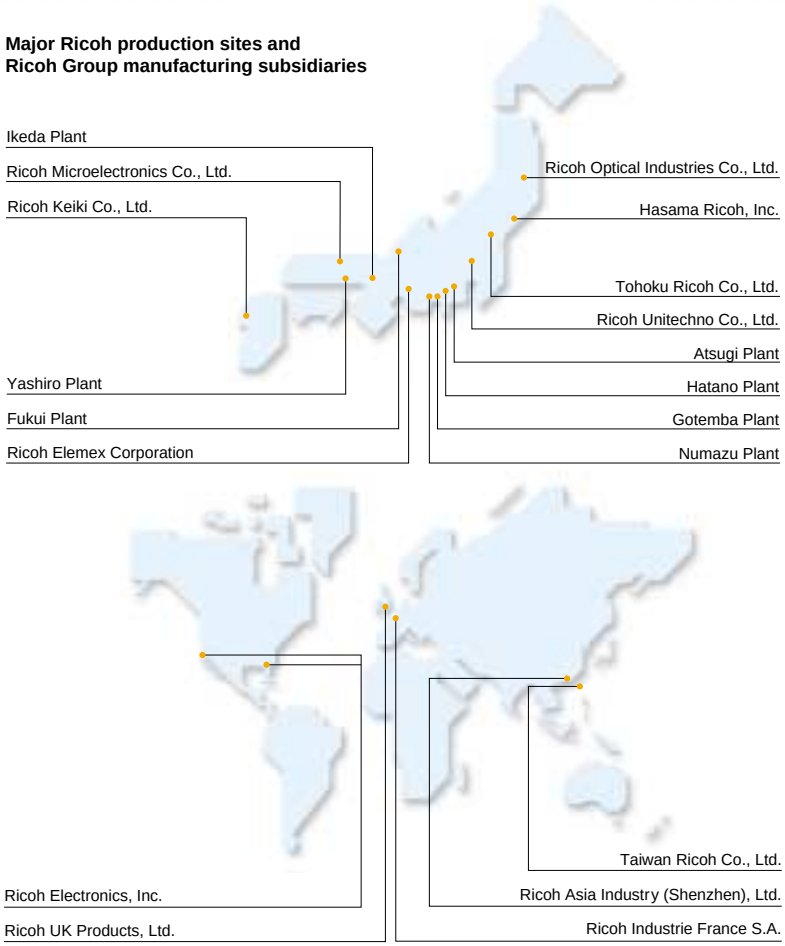
* Figures are from the Ricoh Group's securities report and, accordingly, may differ from those of the environmental impact data, because of difference of scope in data collection.

Scope of this Report

This report describes the environmental, social, and economic activities of the Ricoh Group in fiscal 2000. The report covers only fiscal 2000 (from April 2000 to March 2001); however, some of the target values given include data from fiscal 2001. The term “Ricoh” refers to Ricoh’s production and nonproduction sites and does not mean the Ricoh Group.

The environmental impact and environmental accounting data is taken from the following major Ricoh production and nonproduction sites and Ricoh Group subsidiaries and, as such, may differ from the Ricoh Group data presented elsewhere in this report.

Major Ricoh production sites and Ricoh Group manufacturing subsidiaries



● Scope of Collection and Inclusion of Environmental Impact and Environmental Accounting Data

Japan

Ricoh production sites:
Atsugi Plant, Hatano Plant, Numazu Plant, Gotemba Plant, Fukui Plant, Ikeda Plant, Yashiro Plant

Ricoh nonproduction sites:
Aoyama Office, Omori Office, Omori Office No. 2, Ginza Office, Ricoh System Center, Shin-Yokohama Office, Ricoh Service Parts Center, Research and Development Center, Software Research Center, Toda Technical Center, Applied Electronics Laboratory

Ricoh Group major manufacturing subsidiaries:
Tohoku Ricoh Co., Ltd.; Hasama Ricoh, Inc.; Ricoh Unitechno Co., Ltd.; Ricoh Optical Industries Co., Ltd.; Ricoh Keiki Co., Ltd.; Ricoh Microelectronics Co., Ltd.; Ricoh Elemex Corporation

Ricoh Group major nonmanufacturing subsidiaries*:
Ricoh Logistics System Co., Ltd.; Ricoh Techno Systems Co., Ltd.; Part Component System Co., Ltd.

* For environmental accounting data only

Overseas

Ricoh Electronics, Inc. (North America); Ricoh UK Products Ltd. (U.K.); Ricoh Industrie France S.A. (France); Ricoh Asia Industry (Shenzhen) Ltd. (China); Taiwan Ricoh Co., Ltd. (Taiwan)

●Future Expansion of Data Covered

This report covers data from all Ricoh production and nonproduction sites and affiliates that have established their own environmental management systems. Ricoh sales companies, both domestic and overseas, will establish their own environmental management systems in the future, so the coverage of environmental impact and environmental case study data will consequently be expanded.

●Past and Future Reports

The Ricoh Group has continued publishing annual environmental reports since issuing its first one in April 1998 to disclose fiscal 1996 data*. The *2002 Report* will be issued in the summer of 2002.

* See page 61.

●Significant Organizational Change during the Reporting Period

We acquired Lanier Worldwide, Inc., to improve the Group’s direct sales channel in the United States and Europe*.

* See page 63.

●How to Obtain Ricoh’s Corporate Information:

Environmental conservation: http://www.ricoh.co.jp/ecology/e-/
Social contribution (Japanese only): http://www.ricoh.co.jp/kouken/
IR: http://www.ricoh.co.jp/IR/e/

Corporate Philosophy/Management Philosophy

The driving force behind Ricoh's business development is its corporate philosophy, called "The Spirit of Three Loves," and a management philosophy based on that corporate philosophy. Since its establishment in 1936, Ricoh has endeavored establishing new markets by constantly creating new value in its products and services that meet with customer's needs. Ricoh's achievements in the areas of copiers and facsimiles are good examples of this. In the early stages, copiers and facsimiles were expensive and oriented toward limited markets and/or usage. However, thanks to Ricoh's corporate mission, which includes considering the customer's requirement in technological innovation, copiers and facsimiles are now popularized all over the world, effectively expanding this market potentiality. Such a corporate attitude still prevails even in this digital information and networks era, in which we are working hard for our envi-ronmental management.

Corporate Philosophy

– The Spirit of Three Loves –

Love your neighbor
Love your country
Love your work

l Corporate Philosophy

Kiyoshi Ichimura, Ricoh's founder, explained the Company's corporate philosophy as follows:

My motto in life is "love your neighbor, love your country, and love your work." I believe that a person's worth depends on the depth and breadth of the love that he/she feels. We have an innate love of ourselves, as all animals do, in the name of selfpreservation. Everyone at least loves himself/herself. As time passes, however, this feeling of love grows and expands to include parents, siblings, spouses, and children and, later, goes on to encompass neighbors, one's country and ethnic group, and, finally, all the people of the world. At this point, such people return the same amount of love or more to all people, plants, and animals. Therefore, I am convinced that our true worth depends on how much love we give and how far that love extends."The Spirit of Three Loves" is the foundation of Ricoh's approach to environmental conservation. All global citizens should carry out their mission and responsibilities by dealing with environmental conservation issues. However, these issues cannot be resolved by simply thinking about environmental laws and regulations, consumer interests, and the achievement of competitors. Ricoh, in developing its business on a global scale, recognizes the importance of becoming a leader in environmental conservation.

Management Philosophy

Our Purpose

To constantly create new value for the world at the interface of people and information.

Our Goal

To be a good global corporate citizen with reliability and appeal.

Our Principles

To think as an entrepreneur.
To put ourselves in the other person's place.
To find personal value in our work.

l Management Philosophy

Ricoh's management philosophy was formally introduced in 1986 to establish and nurture the corporate culture and system so that survival in a time filled with increasing change, information-oriented societies, diverse values and more intense competition can be ensured.

Our management philosophy is based on our corpo-rate philosophy and explicitly states our purpose, goals, and principles.

Ricoh's Code of Conduct

Ricoh's Code of Conduct was established in 1993 to express Ricoh's corporate attitude and outline the stance and course of action that all employees are expected to take. It reveals Ricoh's commitment to social contribution, environmental conservation, and health and safety at work or, to quote to code directly, "support activities that contribute to society," "respect the global environment," "respect basic human rights," and "provide a work environment in which individual capabilities can be demonstrated." Ricoh Group companies establish and put into practice their own codes of conduct pursuant to this one.

1. Ricoh's Basic Attitude

(1) Conduct sound business activities.
- 1) Aim toward stable growth and development.
- 2) Comply with social ethics and normal business practices.

(2) Promote mutual understanding with society.
- 1) Respect different cultures and practices.
- 2) Sincerely promote public relations.

(3) Support activities that contribute to society.
- 1) Engage in activities that contribute to local communities.
- 2) Create a corporate culture in which activities that contribute to society are encouraged.

(4) Respect the global environment.
- 1) Address environmental issues in a positive manner.
- 2) Manufacture products that are environment friendly.
- 3) Keep the prevention of pollution and the conservation of energy in mind.
- 4) Product recycling
- 5) Strive to maintain and improve the environment.

2. Employee Responsibility

(1) Ricoh's expectations of employees
- 1) Employees will comply with laws and regulations.
- 2) Employees will be civil.
- 3) Employees will act like responsible representatives of Ricoh.
- 4) Employees will improve customer satisfaction.
- 5) Employees will show initiative and creativity.
- 6) Employees will consider the other person's point of view.
- 7) Employees will align individual satisfaction with company growth.

(2) Respect basic human rights.
- 1) Abolish discrimination.
- 2) Protect individual privacy.

(3) Provide a work environment in which individual capabilities can be demonstrated.
- 1) Provide opportunities for self-fulfillment.
- 2) Respect the particular skills of others.
- 3) Give objective and fair performance evaluation.
- 4) Create a comfortable work environment.

3. Guidelines for Fair Corporate Activities

(1) Compliance with the Antimonopoly Law
- 1) Such meeting or agreement should not be held or made that restricts each other's free business activities.
- 2) Trading advantage should not be used.
- 3) Misleading indication should not be made and excessive premiums or prizes should not be offered.

(2) Compliance with Export-Related Laws
- 1) Prior verification
- 2) Careful judgment
- 3) Verification based on document

(3) Entertainment and gifts
- 1) Compliance with generally accepted business practices.
- 2) Entertainment or gift should not be offered to officials of public organizations (including former officials).

(4) Transactions with public organizations and political contributions
- 1) Transactions in strict compliance with related laws.
- 2) Illegal political contributions should not be offered.

4. Guidelines for Protecting Corporate Information

(1) Trade secrets*
- 1) Conformance to control regulations
- 2) Authorized disclosure
- 3) Corporate information should not be used for a private purpose.
- 4) Corporate information should not be obtained by illegal means.

* The term "trade secrets" refers to corporate information with asset value that has been created or obtained through normal business activities.

(2) Insider information*
- 1) Insider information should not be disclosed to any third party.
- 2) Insider information should not be used for private purposes.

* The term "insider information" refers to important internal information concerning unannounced increases or decreases of capital, new products, business tie-up, etc.

(3) Intellectual property*
- 1) Prompt report to the company.
- 2) Respecting intellectual property of third parties.
- 3) Comforming to disclosuring procedures.

* The term "intellectual property" refers to patents, utility model rights, designs, trademarks, copyrights, rights of layout-designs of integrated circuits, trade secrets, etc.

Established April 1, 1993
Revised December 1, 1995

Only the summaries of articles have been listed.

Ricoh General Principles on the Environment

Basic Policy

Based on our management principles, we recognize environmental conservation as one of the most important missions given to mankind, and we regard environmental conservation as an integral part of all our business activities. We therefore assume the responsibility of environmental conservation and approach this on a Companywide basis.

Action Guideline

1. Not only do we comply with all domestic and overseas environmental regulations, but we also set our own targets to reduce the negative environmental impact of our business in consideration of social expectations. We also endeavor to attain our targets.

2. We strive to promote technological innovations that help reduce negative environment impact while maintaining and improving our environmental conservation systems.

3. In the development, design, and operation of factory facilities, we always consider their impact on the environment, and we strive to prevent pollution, to utilize energy and resources effectively, and to reduce and dispose of waste in a responsible manner.

4. At every stage, from planning, development, design, procurement and production to sales, logistics, use, recycling, and disposal, we offer products and services that have minimum environmental impact and give maximum consideration to safety.

5. Through environmental education, we strive to raise the awareness of all our employees in order to develop a social viewpoint that enables them to conduct environmental activities on their own.

6. In every country and region where we conduct business, we maintain close ties with the local community and contribute to society by publicizing our activities and assisting in environmental conservation activities.

Established February 1992
Revised April 1998

Ricoh introduced its Ricoh General Principles on the Environment, which are based on its management philosophy, in 1992 and revised them in 1998. These principles, which are mentioned in Ricoh's environmental reports and on its Web sites, are regarded as a commitment to the Ricoh Group and to society as a whole.

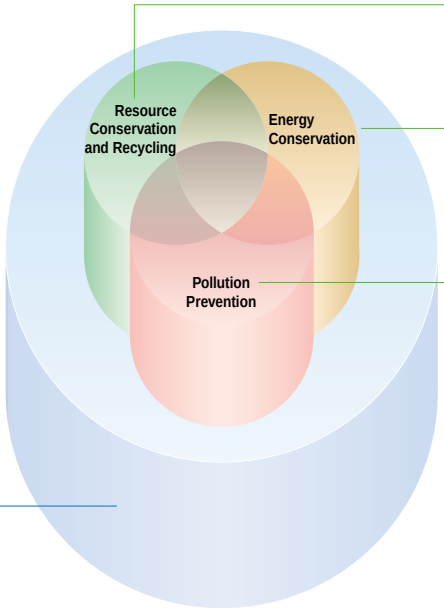
Identifying Environmental Impact

There are reports indicating that the accelerated deterioration of the current global environment may result in requiring the resources of three Earths to sustain all living things on land by 2050. Therefore, it is important for companies to identify precisely the environmental impact their business activities have as a whole in order to contribute to the global environment. The Ricoh Group takes a variety of approaches to designing and manufacturing products and managing business sites in major areas of environmental conservation activities or, more specifically, in resource conservation and recycling, energy conservation (to slow down the rate of global warming), and pollution prevention.

To promote these activities more efficiently, the Group strives to develop a basis for them, which comprises an environmental management system (EMS), environmental management information system, environmental education and awareness promotion, personnel measures, social contribution toward environmental conservation, health and safety, environmental communication, and environmental accounting. (See page 45 for information on and a review of the Ricoh Group's fiscal 2000 activities to reduce environmental impact in the areas listed below.)

[Basis]

- EMS ..... p. 16
- Environmental Management Information System ..... p. 19
- Environmental Education and Awareness Promotion ..... p. 47
- Personnel Measures ..... p. 49
- Social Contribution toward Environmental Conservation ..... p. 51
- Health and Safety ..... p. 57
- Environmental Communication ..... p. 61
- Environmental Accounting ..... p. 65



[Area]

- Resource Conservation and Recycling (Products) ..... p. 39
  To conserve resources, we are developing products based on recyclable designs, constructing a recycling network, and manufacturing products using recycled parts.
- Resource Conservation and Recycling (Business Sites) ..... p. 25
  At our plants, we are striving to achieve "complete production," i.e., getting maximum results using minimum resources with zero waste.
- Energy Conservation (Products) ..... p. 35
  To prevent global warming, we are developing and offering various energy-saving devices.
- Energy Conservation (Business Sites) ..... p. 29
  We are striving to slow down the rate of global warming through efficient power consumption and the introduction of new energy systems.
- Pollution Prevention (Products) ..... pp. 31, 38
  We are promoting the strict control of chemicals used in our products to reduce and eventually eliminate the use of toxic substances.
- Pollution Prevention (Business Sites) ..... p. 31
  In the area of manufacturing, the Ricoh Group is striving to reduce harmful emissions, waste, and the use of toxic substances.

Using the Comet Circle Concept to Help Build a Society that Recirculates Resources

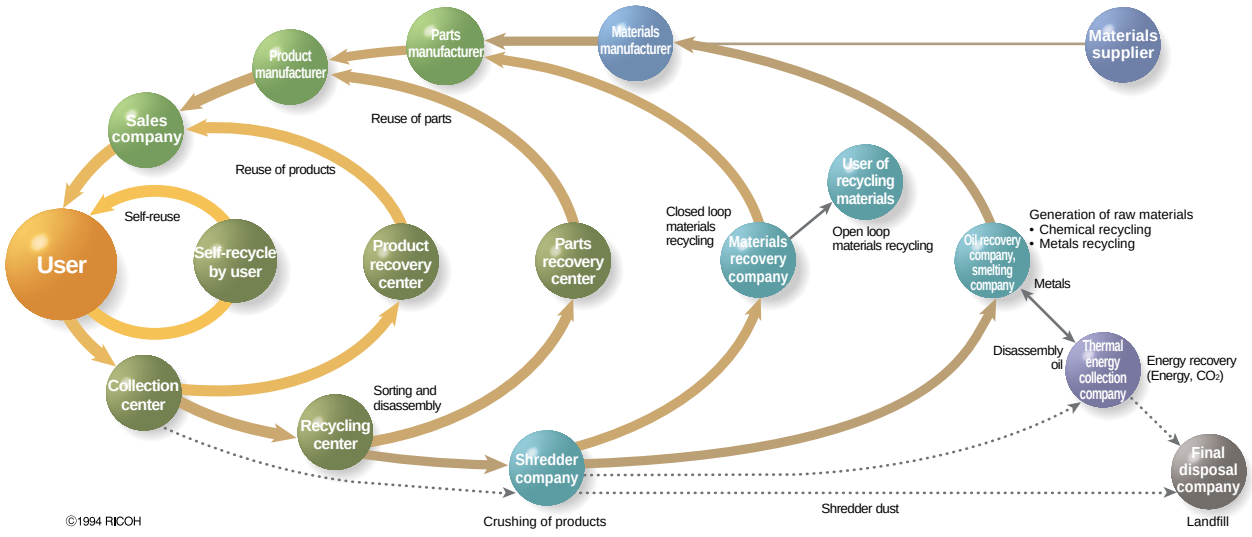
The sustainable society of the future needs to be able to recirculate minimum resources and energy for effective production. The Comet Circle represents a resource-recirculating society and points out the environmental, social, and economic activities that the Ricoh Group must deal with.

Forming partnerships with suppliers, customers, and recycling companies, the Ricoh Group strives to make the resource recirculation of the Comet Circle smaller at all stages (the entities represented by the spheres) by using fewer resources, doing more efficiently, and reducing environmental impact.

We also promote to establish an economically rational system for reuse and recycling of used products with recyclable design and an upgraded recycling system, in which the products and money flow in opposite directions.

The Ricoh Group and its stakeholders are not the only members of the Comet Circle. When individuals shop for things that have less environmental impact or separate their garbage for recycling, they become a part of the Comet Circle, too. Everyone should be aware of the resources that went into the packaging of the things that they buy and how those things were delivered. They should also think about how the garbage they separate will be recycled.

Concept for Realizing a Society that Recirculates Resources: The Comet Circle™



The five key points of the Comet Circle concept shown below embody the environmental, social, and economic activities that the Ricoh Group must deal with.

1) Determine and Reduce Environmental Impact at All Stages

A society that recirculates resources must minimize the environmental impact it causes by reducing it at each stage (the entity represented by a sphere in the Comet Circle diagram). For this reason, the Ricoh Group, suppliers, customers, and recycling companies must first determine the degree of environmental impact at all stages, including the transportation stage, and then reduce it using the latest technologies and recycling systems.

2) Priority Inner Loop Recycling

Resources have the highest economic value when those resources are manufactured into products and used by customers. The Ricoh Group puts priority on reducing, reusing and recycling in the inner loops of the Comet Circle, aiming at minimizing the resources and energy costs needed to return used products to their highest economic value.

3) Promotion of a Multi-tiered Recycling System

Repeated recycling to the furthest extent possible (i.e., multitiered recycling) reduces new resource consumption and waste generation. The Ricoh Group is developing activities that will reduce its landfill waste to zero.

4) More Economically Rational Recycling

A society that recirculates resources must also establish a recycling system in which products and money flow in opposite directions in both post-product-use stages and original production and sales stages. The Ricoh Group, making use of an upgraded design, is promoting a more economically rational recycling system in partnership with recycling companies. It is important to establish a social system that encourages people to understand and buy recovered and/or recycled products, such as the system introduced in response to the enactment of the Green Procurement Law.

5) Partnerships at Every Stage

The Ricoh Group, as a manufacturer, is limited in what it can do to reduce the environmental impact caused at each stage of production. The Group can effectively reduce environmental impact and recycling cost only by decreasing its usage of chemical substances with the cooperation of materials and parts manufacturers, encouraging more effort at the materials and parts stages, urging customers to use products that have less environmental impact, and designing products that are easily recoverable or recyclable. Thus, environmental impact can be reduced effectively in an economically rational way by forming a partnership at every stage.

The Ricoh Group helps reduce the environmental impact caused by society as a whole by sharing the information and know-how it obtained through its activities in the community.

From Passive Stage to Proactive Stage and, Ultimately, to Responsible Stage

"Environment-oriented" is a key word that is indispensable for a company wishing to survive and fulfill society's needs in the 21st century. Looking back at the Ricoh Group's environmental approaches, the Passive Stage came first, in the observation of laws and regulations as well as in response of customer needs, followed by the Proactive Stage, in the continuous and voluntary reduction in environmental impact as a global citizen. Because companies find it difficult to survive if they neglect economic efficiency in their business activities, the Group endeavors to carry out the highly economically efficient Responsible Stage when shifting its management system to a more environment-oriented one.

Aiming for such environmental management, it is important for manufacturers to develop superior environmentally friendly technologies and to market core products that incorporate these technologies. In fiscal 2000, the Aficio (imagio Neo) series, which boasts advanced energy conservation technologies, was marketed. The Ricoh Group hopes to slow down the rate of global warming by reducing CO_2 emissions from its products and by getting as many people as possible to use these products might accross the globe.

In fiscal 2000, we made a great leap toward achieving zero waste to landfill worldwide; all our domestic production sites as well as all our plants in France, the United States, and Mexico achieved zero waste to landfill. Even though landfills might be economical means of disposing waste, the Ricoh Group reduced zero waste to landfill under the slogan "Promote Recycling for the Sake of Our Children's Future." Thanks to thorough sorting, remarkable improvements in the environmental management system and in reducing waste disposal costs were achieved.

For the recycling of products and supplies, including toner cartridges, we established a nationwide recycling system in Japan. We also established an environmental impact information system to promote the more efficient environmental management of recycling in fiscal 2001.

To measure the achievements made under environmental management and to promote more effective activities, it is important to establish an environmental accounting system as a managerial tool. As the system gains momentum, it will be applied to the Group's sales company as well. It is hoped that in the future the system will be used to set goals for environmental action plans and as a corporate management indicator.

As for social contributions in fiscal 2000, the Group took out campaigns stressing the importance of virgin forests and made efforts to preserve and restore them in partnership with NPOs and local communities. Environmental issues attract global concern and help improve awareness and preservation activities on a global scale. The Ichimura School of Nature, in which children grow crops and learn about the natural environment on weekends, is scheduled to open in fiscal 2002, aiming to promote the sound education of Japan's youth.

On a global scale, Ricoh Group activities can lessen environmental impact only to a certain extent. The Group will continue to contribute to the conservation of the global environment, an issue that should be everyone's concern, by carrying out environmental management as well as disclosing information and know-how obtained in its environmental activities.

Masaaki Iida

Managing Director
In charge of Environmental Conservation, Social Contribution and Public Relations
General Manager, CMS (Customer Satisfaction Management)
General Manager, Corporate Citizenship Promotion Office

Major Activities in Fiscal 2000

Environmental Conservation Activities

- Added environmental conservation into divisional evaluations under the Strategic Management by Objectives (SMO) (from fiscal 1999) pp. 15–16
- Completed the establishment of an environmental impact information system pp. 19–20
- Established Eco Balance and LCA of overall corporate activities pp. 21–22
- Achieved zero waste at all plants in Japan, France, the United States, and Mexico pp. 25–28
- Marketed the Aficio (imagio Neo) series, an energy-saving line of copiers p. 36
- Completed the construction of a recycling network in Japan p. 42
- Took measures to turn the environmental accounting system into a management tool pp. 65–68

Social Activities

- Jointly promoted virgin forest conservation activities pp. 51–52
- Started in establishing the Ichimura School of Nature to promote the awareness of environmental issues in young people p. 52
- Continued nurturing environmental volunteer leaders and conducted related activities throughout Japan pp. 53–54

Economic Performance

- Achieved an increase in income for seven consecutive years and an increase in profit for nine consecutive years p. 63
- Secured largest share for black-and-white copiers in the United States* and European countries p. 63

  *Office-use digital copiers
- Recognized as No. 1 for plain-paper copiers and facsimiles in a customer satisfaction survey in Japan p. 63
- Acquired Lanier Worldwide Inc. to reinforce the Group's direct sales channel p. 63

Progress in Environmental Action Plans

The Ricoh Group establishes environmental action plans and takes various approaches to achieve its goals of promoting innovative environmental conservation activities and of successfully carrying out environmental management on a global scale. The Group first identifies the overall environmental impact[1] of its corporate activities and determines the degree of impact.

	Goals
Environmental Management System (EMS) See pages 16–18.	● In order to continuously improve the EMS, it is essential for all Ricoh domestic and overseas business sites as well as production sites to acquire ISO 14001 certification by September 2000 and for the Ricoh Group as a whole to do so by the end of fiscal 2001 pursuant to standards that take environmental impact and one's business scope into consideration.
Environmental Management Information System See pages 19–20.	● Construct an environmental impact information system for copiers, facsimiles, and laser printers by the end of fiscal 2000 (by the end of fiscal 2001 for other product lines). ● Construct an environmental management information system by the end of fiscal 2000.
Resource Conservation and Recycling (Products) See pages 39–44.	● Establish a collection and recycling system for products and supplies, especially toner cartridges, in Japan, Europe, the Americas, China and Taiwan, and the Asia-Pacific region by the end of fiscal 2001. ● Increase the resource recovery rate for copiers, facsimiles, and laser printers, including toner cartridges, to 90% or more by the end of fiscal 2001.
Resource Conservation and Recycling (Business Sites) See pages 25–28.	● Ricoh is to reduce final waste 90%, compared with that in fiscal 1992, by the end of fiscal 2001. ● Achieve a 100% resource recovery rate (zero waste to landfill) at all domestic production sites by the end of fiscal 2000. ● Achieve a 70% resource recovery rate at all domestic nonproduction sites by the end of fiscal 2001. ● Achieve a 100% resource recovery rate (zero waste to landfill) at all overseas production sites by the end of fiscal 2001.
Energy Conservation (Products) See pages 35–37.	● Reduce a 30% energy consumption per product, compared with that in fiscal 1996, by the end of fiscal 2001. ● Increase the speed of duplex copying and the number of types of recyclable paper that can be used in copiers to promote the efficient use of paper and thus reduce CO_2 emissions during paper manufacturing.
Energy Conservation (Business Sites) See pages 29–30.	● Ricoh is to reduce CO_2 emissions at least 15% by the end of fiscal 2001 on a per sales basis (the target figure divided by revenue), compared with those in fiscal 1990. (Domestic and overseas production sites other than Ricoh's have set numeric goals of 15% or more each compared with that of fiscal 1990.)
Pollution Prevention (Products) See page 38.	● Reduce the volume of specified chemical substances, such as lead and polyvinyl chloride (PVC), at least 50% on a per product basis in all products introduced in fiscal 2001, compared with products introduced in fiscal 1997. ● Reduce the level of noise at least 2 dB and emissions of ozone and other by-products at least 20% for all copiers, facsimiles, and laser printers introduced in fiscal 2001, compared with products introduced in 1997.
Pollution Prevention (Business Sites) See pages 31–32.	● All domestic and overseas production sites, research centers, manufacturing subsidiaries of the Ricoh Group are to reduce Pollutant Release and Transfer Register (PRTR) substances at least 20%, and emissions at least 50%, compared with those in fiscal 1997, and completely eliminate landfill waste by fiscal 2001. ● The Ricoh Group is to completely eliminate the use of trichloroethylene, tetrachloroethylene, chloroform, and dichloromethane (except in the manufacturing of existing photosensitive materials) by the end of fiscal 2001 and to completely eliminate the use of dichloromethane in the manufacturing of existing photosensitive materials by the end of fiscal 2007.

Based on this determination, environmental action plans are drafted to effectively reduce the degree of the impact identified. The effects of the ensuing environmental conservation measures as well as the economic benefits gained are disclosed in the environmental accounting[2] of the Group.

1. See pages 21–22.
2. See pages 65–68.

Progress Made in Fiscal 2000

▶ Eleven of Ricoh's nonproduction sites acquired the integrated ISO 14001 certification in September 2000. Two hundred and eighty-six Ricoh Techno Systems business sites and four Ricoh Logistics business sites acquired multisite certification* in September and December 2000, respectively. At present, 446 domestic sales bases (sales companies) and overseas sales bases (Ricoh Corporation, Ricoh Europe B.V., Ricoh Hong Kong Ltd., and Ricoh Asia Pacific Pte. Ltd.) are making efforts to acquire certifications for EMS.

* Two or more business sites can be covered by one certification.

▶ A system to identify and analyze the environmental impact data of copiers, facsimiles, and laser printers has been established. This system is to start in June 2001. (A collection and recycling system is to be completed in August 2001.)

▶ The establishment of a cost accumulation system was completed in fiscal 1999. The cost accumulation system has been in operation at Ricoh from the second half of fiscal 1999.

▶ As of fiscal 2000, all targeted systems have been completed (i.e., databases on environmental laws and their revisions, product recycling/energy conservation measures, external queries, World Wide Web inquiries, and the kinds of waste generated at business sites as well as information from environmental label forums, forums on the business environment surrounding sales, and the CO_2 Forum).

▶ **Product Collection and Resource Recovery System**
Nationwide networks of collection and recycling centers are completed in Japan. In Europe, the Americas, China and Taiwan, and the Asia-Pacific region, collection systems are almost completed and resource recovery systems have, with the exception of some countries, already started.
Toner Cartridge Collection and Resource Recovery System
In Japan, Europe, the Americas, China and Taiwan, and the Asia-Pacific region, collection systems are almost completed, and resource recovery systems have, with the exception of some countries, already started.

▶ In Japan, the copier resource recovery rate in the second half of fiscal 2000 was 96%. In Europe, the Americas, China and Taiwan, and the Asia-Pacific region, resource recovery rates were 60%–80%. The toner cartridge resource recovery rate in Japan in the second half of fiscal 2000 was 77%. In Europe and the Americas, the resource recovery rates were at least 95%.

▶ In fiscal 2000, final waste was reduced by 93.6%.

▶ As of March 2001, 16 domestic production sites and Group manufacturing subsidiaries (Fukui Plant, Numazu Plant, Gotemba Plant, Yashiro Plant, Hatano Plant, Atsugi Plant, Ikeda Plant, Part Component System's Sagamino Plant, Ricoh Elemex's Ena Site, Ricoh Elemex's Okazaki Site, Ricoh Unitechno, Ricoh Keiki, Tohoku Ricoh, Ricoh Microelectronics, Hasama Ricoh, and Ricoh Optical Industries) all have achieved zero waste to landfill.

▶ Achieved 76.7%, surpassing the goal for fiscal 2000.

▶ As of fiscal 2000, Ricoh Industrie France and Ricoh Electronics, Inc. (all six business sites) achieved zero waste to landfill.

▶ In fiscal 2000, energy consumption of black-and-white copiers and multifunctional copiers was reduced by 10.5%, compared with that in fiscal 1996. (See notes to the Changes in Energy Consumption of Black-and-White Copiers and Multifunctional Copiers graph on page 35 for calculations.)

▶ In fiscal 2000, energy consumption of facsimiles was reduced by 79.7%, compared with that in fiscal 1996. (See notes to the Changes in Energy Consumption of Facsimiles graph on page 35 for calculations.)

▶ In fiscal 2000, energy consumption of color copiers and multifunctional copiers was reduced by 33.5%, compared with that in fiscal 1996. (See notes to the Changes in Energy Consumption of Color Copiers and Multifunctional Copiers graph on page 35 for calculations.)

▶ The duplex copying/printing function* of copiers and laser printers was improved through advanced paper feed technology.
Black-and-white digital multifunctional copiers marketed in fiscal 2000 were able to sustain 100% duplex copying productivity during continuous printing.

* Duplex copying productivity (%) = (Time spent on simplex → duplex copying)/(Time spent on simplex → simplex copying) × 100

▶ Ricoh reduced CO_2 emissions by 20.1% in fiscal 2000, compared with those in fiscal 1990.
Seven domestic production affiliates reduced CO_2 emissions by 5.6%–68.6%.

▶ Lead-free solder (Sn-Ag-Cu), halogen-free harnesses (polyolefinic products), and hexavalent-chromium-free steel boards are being used in production sites.
The Aficio 1022/1027 (imagio Neo 220/270) series (marketed in June 2001) incorporates these materials.

▶ As of fiscal 2000, the level of noise emitted during operation and while on standby was reduced 2.3 dB and 2.5 dB, respectively, surpassing the 2-dB reduction goal for the current fiscal year. Ozone emissions were reduced by 20%, compared with that in fiscal 1997, but reductions in dust emissions, although improving, had not achieved the 20% target rate. The target is expected to be reached in fiscal 2001.
(Calculations are based on the weighted number of all copiers, facsimiles, and printers introduced and use a copying productivity of 50 sheets per minute for all machines.)

▶ PRTR substance use was reduced by 24.1% and emissions by 26.9% in fiscal 2000.

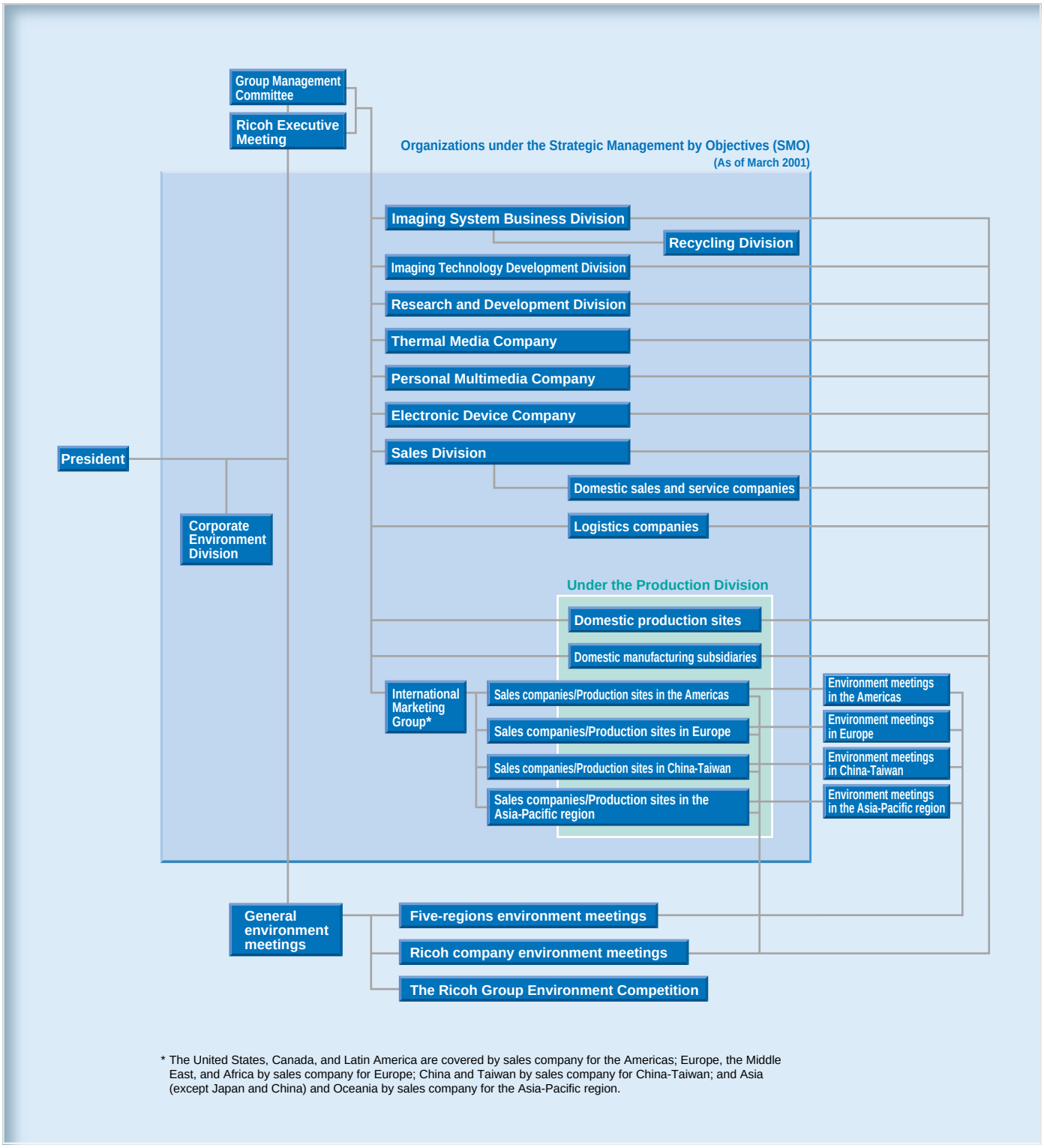
▶ The use of trichloroethylene and chloroform was completely eliminated at all domestic and overseas business sites.
The use of tetrachloroethylene was completely eliminated at all domestic business sites. Only one overseas business site has not completely eliminated the use of tetrachloroethylene but is expected to do so in fiscal 2001.

▶ The use of dichloromethane in fiscal 2001 has been restricted to the manufacturing of existing photosensitive materials only, and a search for a suitable replacement began.

Ricoh Group Environmental Activity Promotion System

The Ricoh Group promotes environmental conservation activities by (1) recognizing achievements made under the environmental action plans of divisions in Group companies around the world at its general environmental meetings, (2) facilitating the plan-do-check-action (PDCA) cycle by introducing environmental conservation through the Strategic Management by Objectives (SMO)*, (3) promoting environmental impact reduction on a global scale through worldwide committee-level meetings, such as those for product recycling or zero waste at business sites, and occasional internal benchmarking, and (4) ensuring that the knowledge thus gained is passed on to all Group companies.

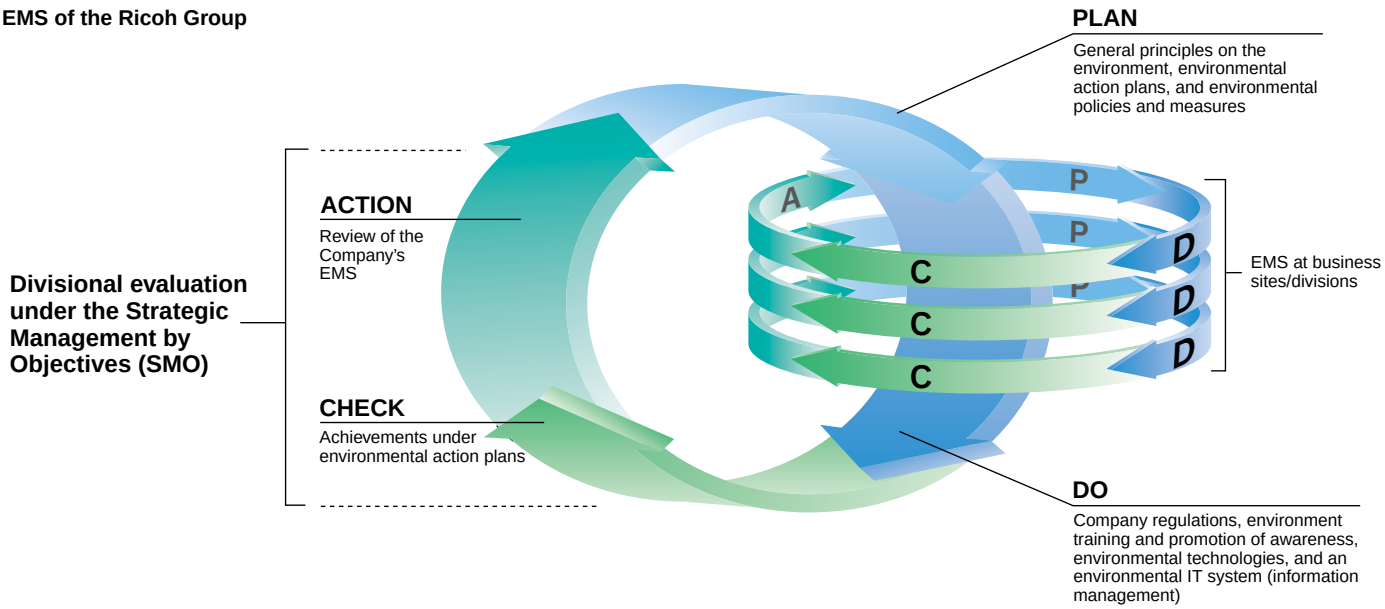
* The Strategic Management by Objectives (SMO) was introduced in 1999. See page 16 for details.



* The United States, Canada, and Latin America are covered by sales company for the Americas; Europe, the Middle East, and Africa by sales company for Europe; China and Taiwan by sales company for China-Taiwan; and Asia (except Japan and China) and Oceania by sales company for the Asia-Pacific region.

Environmental Management System (EMS)

EMS of the Ricoh Group



EMS is an important tool in realizing environmental management. The system continuously improves the environment in the PDCA cycle. The Ricoh Group uses the PDCA cycle to efficiently reduce environmental impact caused by not only the Group as a whole but by individual business sites or divisions.

Groupwide EMS

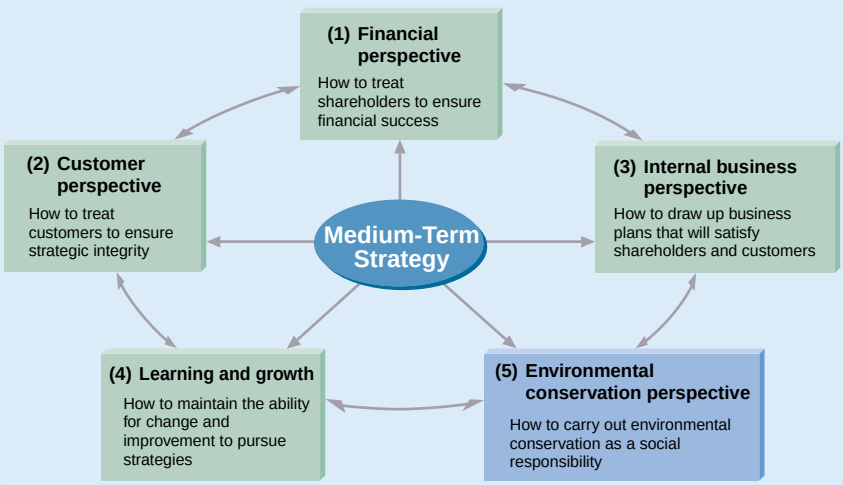
Ricoh regards environmental conservation activities as its duty as a global as well as corporate citizen. The more improvements the Company tries to make, the more managerial resources it has to invest. Ricoh therefore uses an environmental accounting system* to identify environmental cost-effectiveness. Furthermore, Ricoh introduced the Strategic Management by Objectives (SMO) in 1999 to clarify evaluation standards for environmental conservation activities that are used in divisional performance evaluations. This system is based on the Balanced Scorecard system, a performance management system developed in the 1990s in the United States and characterized by its use of four perspectives. Ricoh has added a specific environmental conservation perspective to the system and is developing it to make the PDCA cycle work more efficiently throughout the entire Ricoh Group.

* See pages 65–68.

EMS's for Business Sites and Divisions

The Ricoh Group, as a global entity that establishes businesses all over the world, sets up EMS at each of its business sites and divisions pursuant to ISO 14001, an international standard for environmental management systems. Major overseas production sites have already acquired the ISO 14001 certifications, and in fiscal 2000, nonproduction sites, including Ricoh offices, have also acquired certification.

Divisional Evaluation Using the Four Perspectives of the Balanced Scorecard and an Environmental Conservation Perspective



● Development of Environment-Oriented Activities

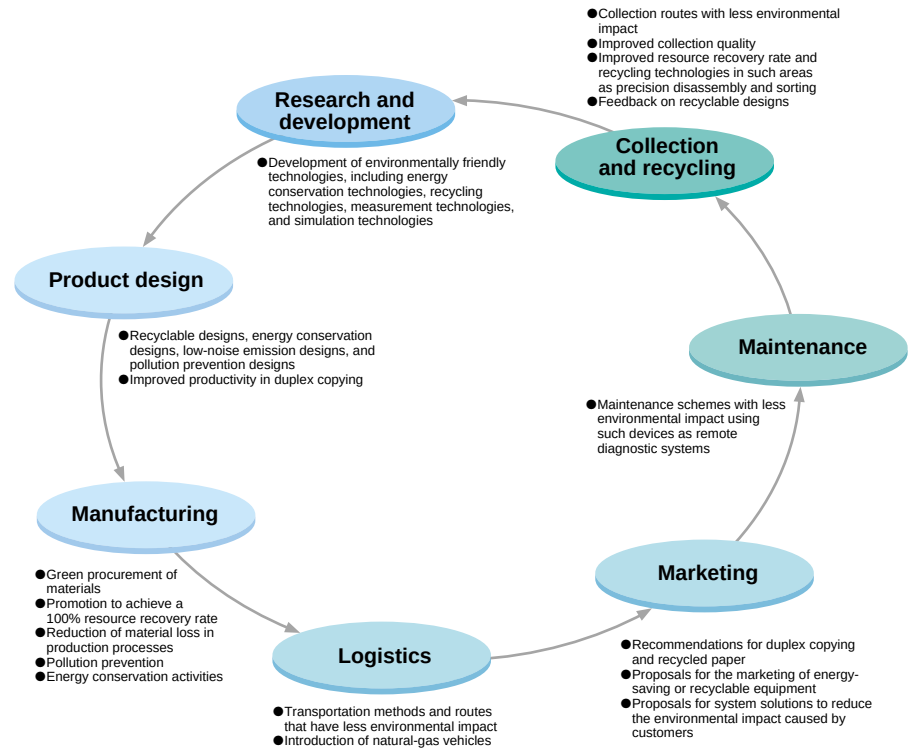
The Ricoh Group is establishing divisional EMS, taking division-specific environmental aspects into account. For example, nonproduction sites engage in activities focusing on indirect environmental impact reduction, such as designing products with less environmental impact and recommending them to customers, as well as direct environmental impact reduction, such as conducting zero waste campaigns at offices and practicing energy conservation.

● Environmental Audits

The Ricoh Group's internal environmental audits are carried out by internal auditors[1] at each business site, and the results are given to the top management of the sites audited. Executive Officers and the Company Executive Committee[2] determines whether the Group's environmental action plan[3] is being faithfully followed. Environmental auditing is essential in improving Groupwide envi-ronmental conservation activities.

1. Ricoh Group has approximately 230 internal auditors in Japan.
2. See page 15.
3. See page 13.

Divisional Activities for Environmental Impact Reduction



Risk Management (Pollution and Disaster Prevention)

The Ricoh Group acquired ISO 14001 certification at its main production sites around the world and has established a risk management system based on this. The Ricoh Environmental and Chemical Safety Information System (RECSIS) defines methods for dealing with accidents involving chemical substances and is available to every business site. All accidents are reported to the top management, following decisions made at environmental meetings around the world, and appropriate countermeasures are taken, such as prompt information disclosure to affected communities.

■ Examples of Risk Management from around the World

Ricoh Group companies are addressing the problems of chemical substances through reduction, recycling, installing contamination- and disaster-preventing equipment, and training.

Abolishment of Solvent-Based Paint

Ricoh Industrie France has developed a water-based paint to replace its solvent-based paint. The use of the water-based paint lowered the emissions of volatile organic compounds by 83%. The lower temperature and shorter time needed to bake on water-based paint reduce costs and energy requirements. As a result, annual cost dropped approximately €27,000, or ¥2.8 million.

Solvent Gas Collection and Disposal Device

To reduce the usage or emissions of PRTR* substances, the Fukui Plant uses a device to collect and recycle organic solvent gas generated in the manufacturing process. The plant uses a direct solvent gas burner to reduce the amount and density of emitted gas, which is further treated in a deodorization process.


Direct solvent gas burner

* PRTR: Pollutant Release and Transfer Register

ISO 14001 Certified Divisions and Business Sites of the Ricoh Group

Name of Business Site	Location	Assessing/ Registering Organization	Date of Certification
Gotemba Plant	Shizuoka Prefecture	JQA	Dec. 25, 1995
Ricoh UK Products, Ltd.	England	BSI	July 11, 1996
Ricoh Unitechno Co., Ltd.	Saitama Prefecture	LRQA	Aug. 15, 1996
Okazaki Site, Ricoh Elemex Corporation	Aichi Prefecture	KHK	Dec. 27, 1996
Tohoku Ricoh Co., Ltd.	Miyagi Prefecture	BVQI	Feb. 14, 1997
Numazu and Fukui Plants	Shizuoka and Fukui Prefectures	JQA	Mar. 12, 1997
Ena Site, Ricoh Elemex Corporation	Gifu Prefecture	JQA	Mar. 31, 1997
Hatano Plant	Kanagawa Prefecture	JQA	April 21, 1997
Atsugi Plant	Kanagawa Prefecture	JQA	April 21, 1997
Ricoh Industrie France S.A.	France	AFAQ	May 6, 1997
Electronic Devices Division, Ricoh (Yashiro Plant, Ikeda Plant, Shin-Yokohama Office, and Ricoh System Center)	Hyogo, Osaka and Kanagawa Prefectures/ Tokyo	JQA	June 4, 1997
Ricoh Asia Industry (Shenzhen), Ltd.	China	CCEMS	Jan. 20, 1998
Ricoh Electronics, Inc. (Office Machine Group) • Equipment Production Division	U.S.A.	QMI	Feb. 2, 1998
Ricoh Electronics, Inc. (Office Machine Group) • P.C.B. Production Division	U.S.A.	QMI	Feb. 2, 1998
Ricoh Electronics, Inc. (Office Machine Group) • Machine Parts Division	U.S.A.	QMI	Feb. 2, 1998
Ricoh Electronics, Inc. (Office Machine Group) • Special Products Division	U.S.A.	QMI	Feb. 2, 1998
Ricoh Microelectronics Co., Ltd.	Tottori Prefecture	JQA	Feb. 6, 1998
Ricoh Keiki Co., Ltd.	Saga Prefecture	JQA	April 17, 1998
Sagamino Plant, Part Component System Co., Ltd.	Kanagawa Prefecture	JQA	May 29, 1998
CHANG HWA FACTORY, Taiwan Ricoh Co., Ltd.	Taiwan	BCIQ	June 22, 1998
Shanghai Ricoh Facsimile Co., Ltd.	China	Shanghai City Environmental Bureau CCIB	July 20, 1998
NRG Distribution	The Netherlands	LRQA	Oct. 2, 1998
Asan Plant, Sindo Ricoh Co., Ltd.	South Korea	LRQA	Dec. 1, 1998
Ricoh Electronics, Inc. (Supply Products Group, California)	U.S.A.	ABS	Jan. 29, 1999
NRG Benelux B.V.	The Netherlands	KEMA	Aug. 1, 1999
Hasama Ricoh, Inc.	Miyagi Prefecture	BVQI	Aug. 15, 1999
Ricoh Electronics, Inc. (Supply Products Group, Georgia)	U.S.A.	ABS	Sept. 24, 1999
Ricoh Optical Industries Co., Ltd.	Iwate Prefecture	JQA	Dec. 17, 1999
Ricoh Electronics, Inc. (Disk Media Group)	U.S.A.	QMI	Mar. 27, 2000
Ricoh Industrial de Mexico, S.A. de C.V.	Mexico	SGS	Mar. 30, 2000
GR Advanced Materials, Ltd.	England	BM TRADA	May 15, 2000
Ricoh Dianzhuang (Shenzhen)	China	SQCC	Aug. 22, 2000
Ricoh (11 nonproduction sites)	Tokyo/ Kanagawa and Miyagi Prefectures	JQA	Sept. 14, 2000
Ricoh Technosystems Co., Ltd.	Japan	JQA	Sept. 29, 2000
Gestetner Management, Ltd.	England	LRQA	Dec. 21, 2000
Gestetner Büromaschinen-Verkaufsges. m.b.H.	Austria	LRQA	Dec. 21, 2000
Ricoh Logistics System Co., Ltd.	Japan	NKKKQA	Dec. 28, 2000
Technology Center, Ricoh Elemex Corporation	Aichi Prefecture	JQA	Jan. 12, 2001

Storing Chemical Substances

Chemical substances at Ricoh Industrie France are stored over a concrete basin to prevent leakage into the environment in case of emergency. An emergency kit, which includes chemical absorption mats and leak-proof barriers, has also been installed.

Checking Water Quality

Ricoh Industrie France regularly checks the water quality around the upstream and downstream areas of the groundwater flow at its site.

Preventing Pollution During a Fire

Ricoh Industrie France constructed a basin to collect water used in extinguishing fires and prevent chemical substances that may have mixed with the water from leaking out of the plant and into the environment, which is a possibility if the plant catch fire. The water is then pumped through underground waterways to a water treatment plant.

Gas Sensor Units

This device at the Yashiro Plant is designed to detect the leakage of various types of gas, with relevant data monitored constantly in a control room.

Comprehensive Monitoring to Ensure Safety

The safety control room at the Yashiro Plant monitors detection devices throughout the plant. In an emergency, appropriate instructions are immediately given from the control room, accompanied by alarms and warnings on monitors.

Training to Prevent Pollution and Deal with Emergencies

Yearly training is conducted at the Yashiro Plant on the proper emergency measures to take when kerosene leaks from tank trucks and other scenarios.

Environmental Management Information System

The Ricoh Group constructed a variety of information systems, including those on environmental impact and environmental accounting, in its drive to realize environmental management (Responsible Stage). In fiscal 2000, the Group completed the construction of an environmental impact information system for imaging devices (i.e., copiers and information equipment) to be used by the Group's domestic bases. This system will be implemented in fiscal 2001.

Environmental Impact Information System

If the Ricoh Group is to successfully realize the establishment of a society that recirculates resources through the promotion of environmental conservation activities, it is imperative for the Group to identify the environmental impact of its business activities as a whole based on using the Comet Circle concept we can effectively improve those processes that affect the environment. It is also important to identify data using a life cycle assessment (LCA) and disclose that information to society as well as to identify the degree to which internal environmental conservation activities need to improve. To this end, the Ricoh Group has constructed an environmental impact information system that accurately analyzes its activities, quantitatively identifies environmental impact data in all areas of its business activities using the Eco Balance* system, and presents these results in a form that can be used in environmental management.

* Eco Balance is a system that involves the listing of environmental impact input/output data to identify, quantitatively measure, and report the environmental impact made by companies.

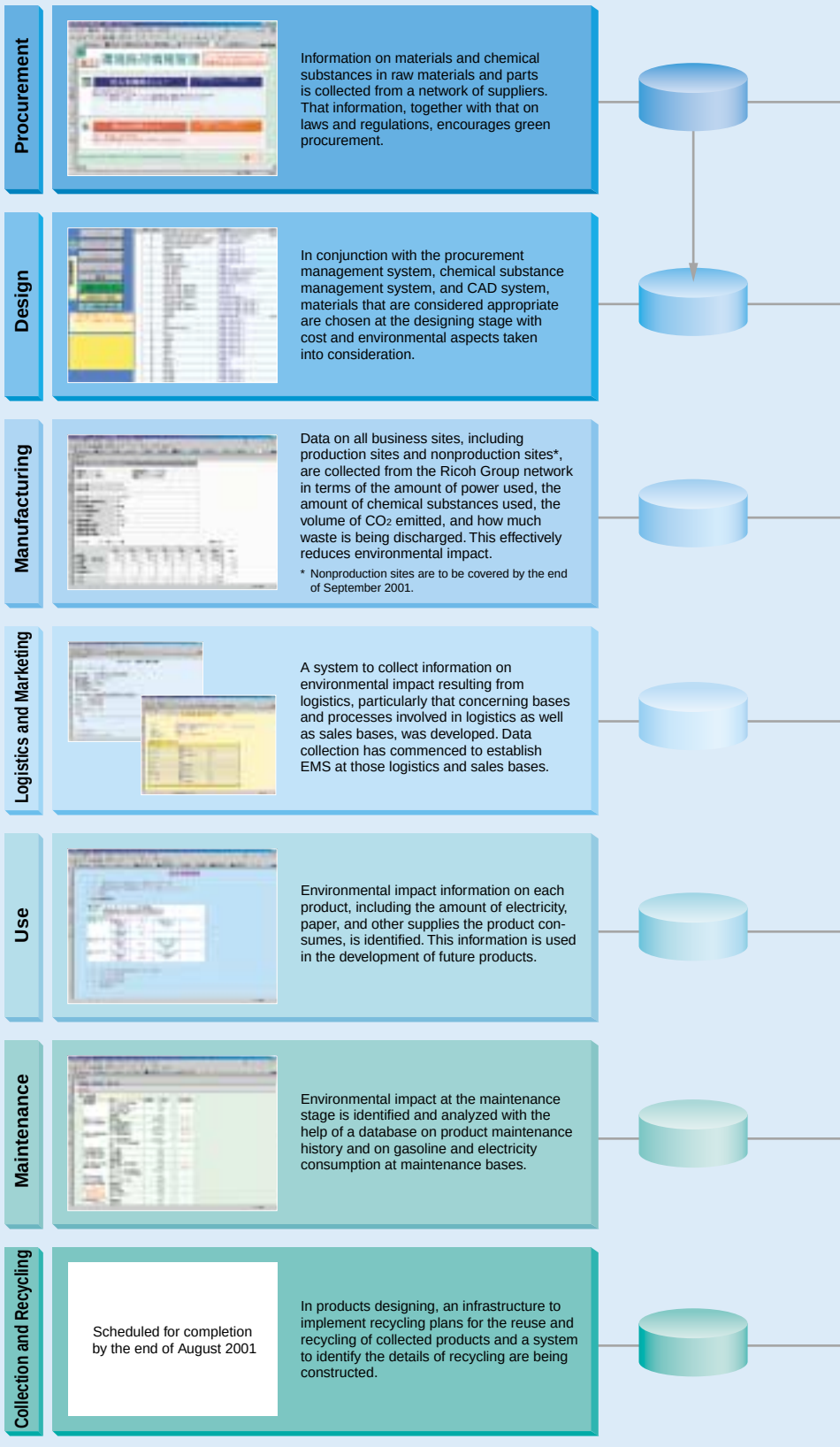
Environmental Accounting Information System

The environmental accounting information system is a part of Ricoh's regular accounting system and is designed to ensure the efficient use of management resources for environmental conservation activities. In the future, we shall endeavor to use Eco Balance to further develop the system so that it will identify all the effects of the Group's environmental investments and environmental conservation activities as well as any economic benefit.

Other Information Systems

Other environmental management information systems in use include one that disseminates case studies from a database for environmental improvement, one that shares information on laws and regulations as well as on environmental labels, and one that responds to inquiries from customers and other organizations.

Environmental Impact Information System



Information collected

Environmental impact information

Information analysis

Information processed

A data collection system for proportional division is established.

- Number of units produced (classified by process)
- Product weight
- Monetary value
- Divisions and facilities involved in production

Data on chemical substances involved, amount of energy consumed, and amount of waste generated in main business activities

Data on substances that make up products

Environmental impact data by division

Environmental impact data by product

Environmental data on recycling

■ Successful environmental management is dependent on how data collected through the environmental impact information system.

1) Management information

The Ricoh Group is able to set more effective goals if the management is provided with information on the progress of environmental action plans and environmental accounting. Such information will help identify the standing of the Ricoh Group as a whole.

2) External communication

The Ricoh Group does not miss the business chances to quickly respond to inquiries from its customers and business partners about the quantity of chemical substances contained in products or LCA data.

3) Recycling activities

The Ricoh Group promotes the efficiency of its recycling activities by more accurately calculating the rates of collection, reuse, and resource recovery.

4) Improvements in divisions/processes

The Ricoh Group makes use of the information to set divisional environmental action plans and goals, promote the use of appropriate materials for its products, and promote green procurement.

Environmental Impact Analysis

The Ricoh Group, using the Comet Circle concept[1], identifies the overall environmental impact of its products and business activities to bring about more effective impact reductions. For this purpose, the Ricoh Group constructed an Eco Balance-based environmental impact information system[2] that makes use of both LCA and Eco Balance methods. The Ricoh Group adopted both methods following a long-term research on LCA, which indicated that LCA was necessary in conjunction with Eco Balance if the Group was to respond to a variety of requests for clarification on the environmental impact of its products and business activities.

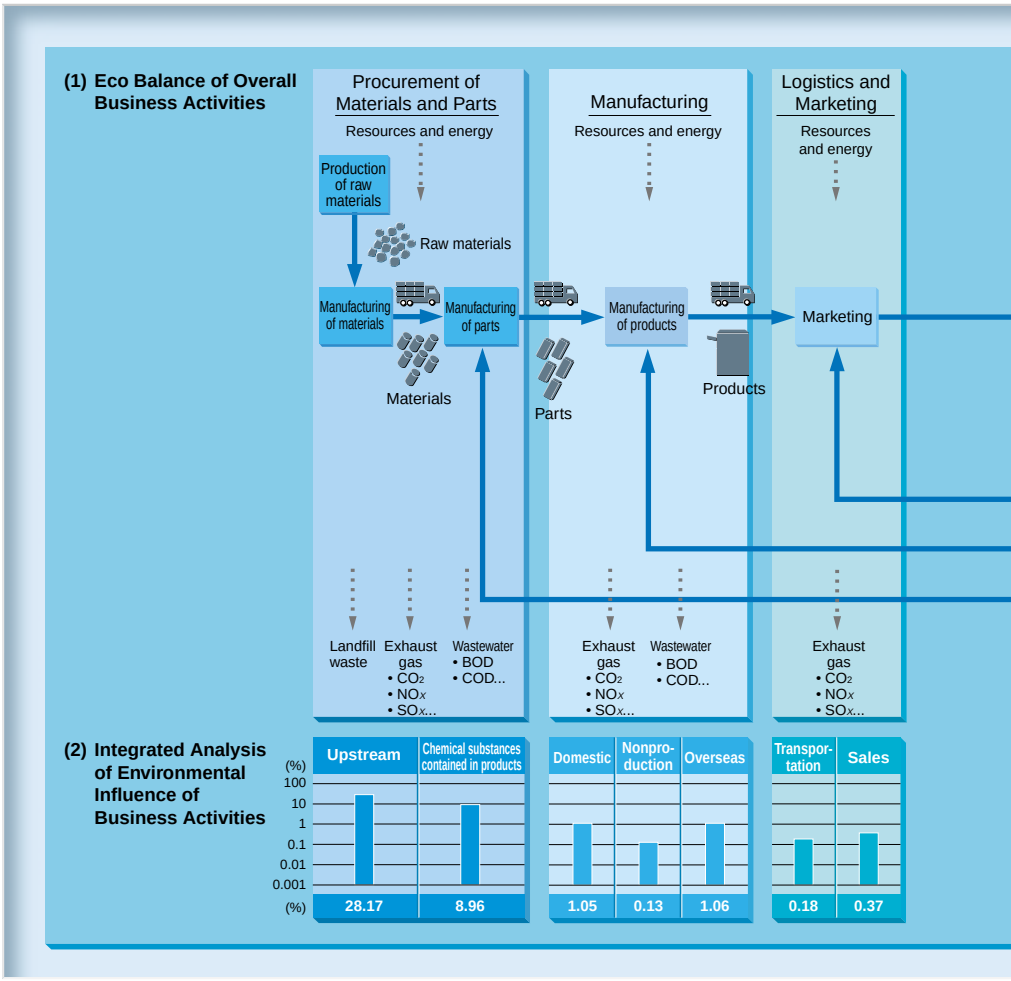
1. See pages 9–10.
2. See pages 19–20.

Eco Balance* Evaluation

The Ricoh Group used an integrated analysis method [See (2) in the figure on the right] to determine which of its business activities had the most environmental impact. It was discovered that upstream activities and chemical substances contained in products had the highest values. This means that the manufacturing of materials and parts and the chemical substances contained in products had the most effect on the environment.

Therefore, the Ricoh Group, according to its fiscal 2001 medium-term action plan, will strive to (1) collect its products for the recycling of materials and parts and (2) reduce chemical substances, especially lead, that have the most effect on the environment.

* See page 19.

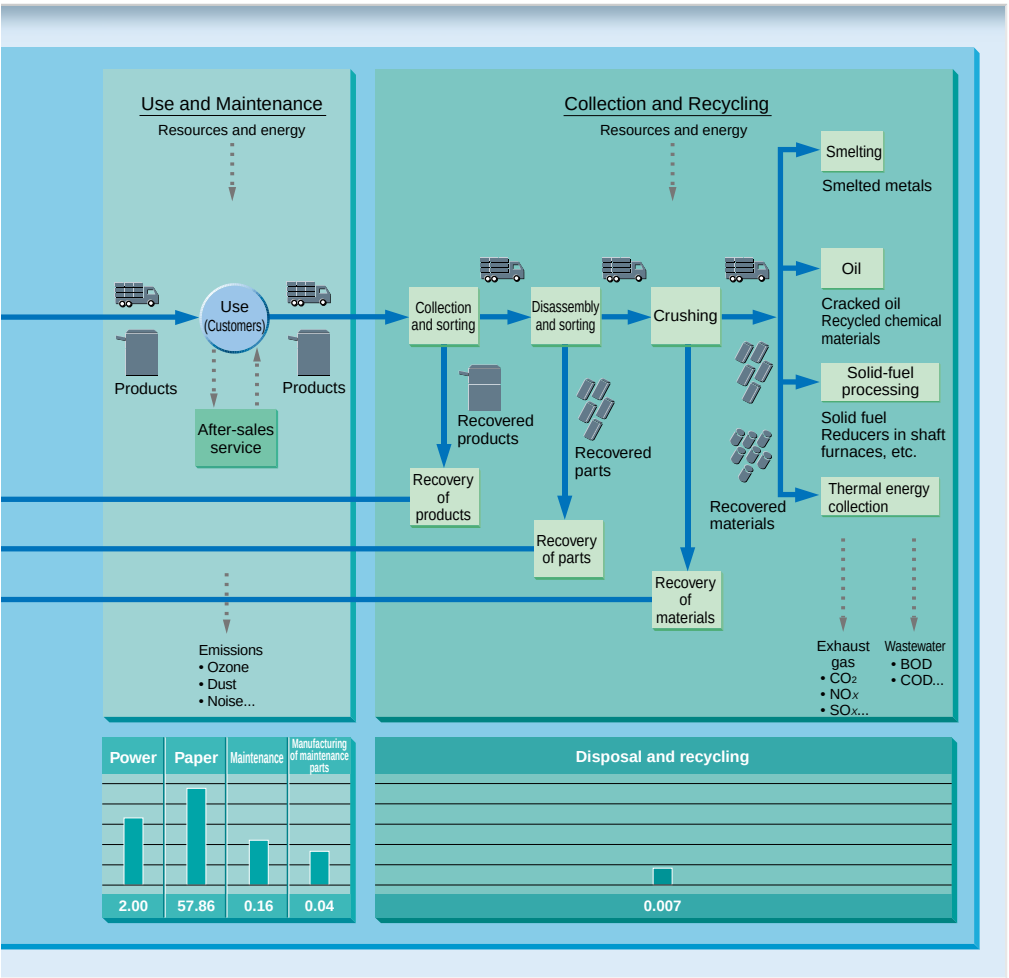


Input

Environmental Impact Item		Preliminary Process	Manufacturing	Transportation
Electric Power (kWh)		7,730 (MJ)	37.9	0
Fossil fuel (MJ)			167	381
Water usage	Tap water (ℓ)	—	3.65	0
	Industrial water (ℓ)	—	0	0
	Underground water (ℓ)	—	0	0
Resource input	Principal resource (kg)	—	Metal 116 Plastic and rubber 38.8 Glass 2.2 Others 45.1	0
	PRTR substances (g)	—	58.4	0
	Volatile organic substances (g)	—	0	0

Output

Environmental Impact Item		Preliminary Process	Manufacturing	Transportation
Emission into air	CO_2 (kg-C) Power consumption/others	250	6.03/3.20	0/7.0
	SO_x (g) Power consumption/others	3,460	10.2/13.3	0/31.5
	NO_x (g) Power consumption/others	711	12.9/8.35	0/79.2
	PRTR substances (g)	—	0	0
	Volatile organic substances (g)	—	0	0
Water discharge	Amount (ℓ)	—	3.65	0
	BOD (g)	6,560	0.255 or less	0
	COD (g)	7,570	0.236 or less	0
	PRTR substances	—	0.00439	0
Waste	Recycled (kg)	—	0.697	14.9
	Incineration (kg)	—	0.0294	0.845
	Landfill (kg)	—	0.0008	0



LCA Information of the imagio MF 7070 (Type III Environmental Impact Disclosure)*

Use and Maintenance	Recycling and Disposal
3,494	13.7
2,569	—
0	0
0	0
2,219	0
Copy paper 12,200 Toner 86.7 Photosensitive materials 3.63 Developer 10.0 Maintenance materials 27.9 Others 27.4	0
1,374	0
73.6	0

Use and Maintenance	Recycling and Disposal
291/45.4	1.11/0
412/3.63	1.23/0
568/20.6	1.78/0
1,374	0
73.6	0
2,219	0
0.31	0
—	0
0	0
11.2	177.4
0.864	8.60
37.9	

* See page 62 and http://www.ricoh.co.jp/ecology/e-/type3/index_e.html

LCA[1]

LCA is used to quantitatively identify the environmental impact made by a product throughout its life cycle and the influences a change in design or manufacturing process would have.

More effective environmental conservation activities will be the result of such assessment. LCA information on copiers was disclosed on Ricoh's Web site[2] in fiscal 2000.

Ricoh participates in government committees and other gatherings to help improve the LCA method and conduct research with scholars and company representatives.

1. LCA is a means of quantitatively determining the level of environmental impact generated throughout a product's life cycle, from resource procurement to manufacturing, transportation, usage, maintenance, recovery, recycling, and disposal. Even a partially determined level of impact can be used.
2. See page 62.

LCA Research

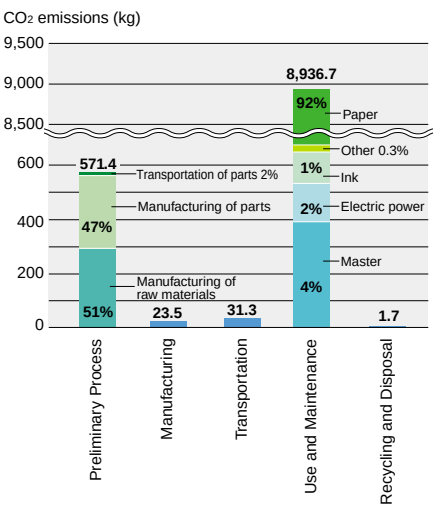
Ricoh established an LCA research team in 1994 to conduct practical research on LCA and has released a variety of case study reports. With more case studies being conducted, such issues as the importance of explaining the usage of LCA and the difficulties of collecting data and setting research conditions are being clarified.

● **Digital duplicator LCA (Tohoku Ricoh)***

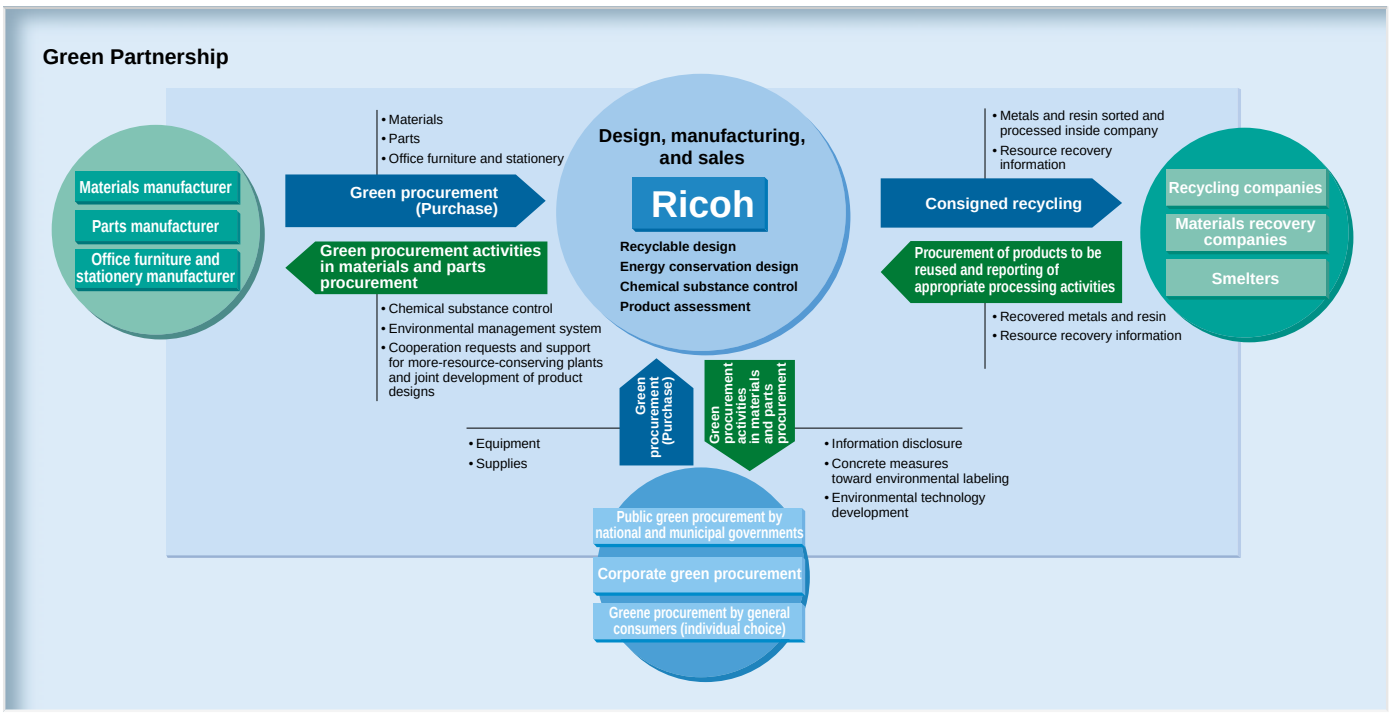
Making use of the knowledge obtained by the LCA research team, manufacturing subsidiaries are also conducting LCA.

* (Japanese only) http://www.ricoh.co.jp/tohoku/lca/datasheet.html

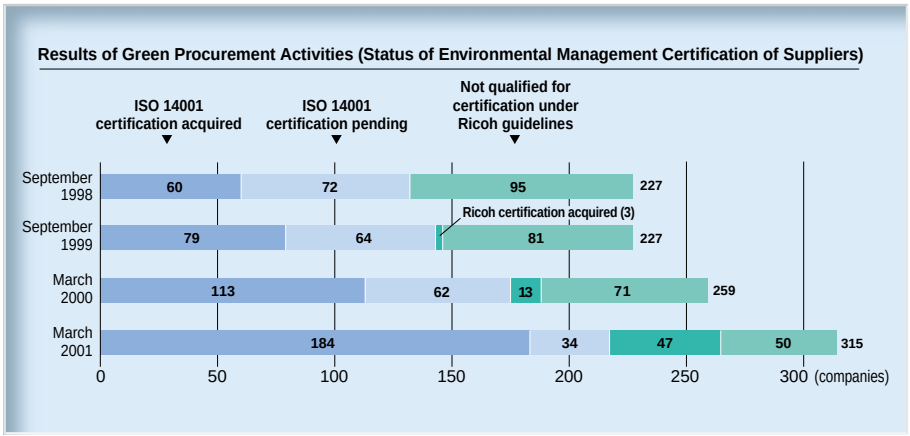
Priport JP5800 Life Cycle Environmental Impact



Green Procurement



In order to provide customers with products that have minimum environmental impact, it is important for the materials that go into those products to not only have minimum environmental impact but also be manufactured at plants that generate minimum environmental impact. The Ricoh Group regards suppliers as green partners and strives to reduce the environmental impact of all business activities, including those conducted by its partners, by supporting the establishment of EMS at its suppliers' places of business and jointly developing materials that have less environmental impact. Accordingly, the Ricoh Group aims to successfully carry out environmental management along with total cost reduction.



Supporting Suppliers

The Ricoh Group issued its *Green Procurement Guidelines* in 1998. It asked suppliers to cooperate by either following the conditions laid out in the guidelines or by acquiring ISO 14001 certification. Rather than merely asking to observe its guidelines, Ricoh sends its internal auditors to suppliers to give advice and inspections free of charge. To spread the concept of green procurement globally, the guidelines were translated into English, French, and Chinese. Furthermore, business sites located in the United States, France, the U.K., and China give support to their suppliers in the same way as those in Japan do.

The Ricoh Group's *Green Procurement Audit Guidelines* (left, issued December 2000) and *Green Procurement Guidelines* (revised December 2000)

Sharing Technologies with Suppliers

To achieve more efficient environmental activities, it is important to share information and know-how with its suppliers. Ricoh shares its technologies with its suppliers through its *Green Procurement News* as well as through seminars that focus on such topics as zero waste plants[1] and energy conservation production lines[2]. Thanks to such sharing, many Ricoh's suppliers[3] are developing their own activities aimed at cost reduction and minimum environmental impact.

1. See pages 25–28.
2. See page 29.
3. See sidebar.

The 5th Green Procurement seminar held in February 2001 to share technologies with suppliers

Reducing Chemical Substances in Materials

Aiming to reduce the environmental impact of chemical substances, Ricoh is working with its suppliers to develop a joint system to eliminate the use of PVC, lead, hexavalent chromium, and PVC-coated wiring. The Company is also doing its best to successfully adopt lead-free solder and chromium-free steel plates for its products. Ricoh first began restricting the use of the above-mentioned chemical substances with its Aficio 1022/1027 (imagio Neo 220/270 marketed in June 2001) and continues its drive toward eliminating them in most of the newly designed parts for these product lines.

These chemical substances do not effect the environment when customers use them, but they may if disposed without appropriate processing. This is also an important issue in recyclable designs* because those substances may limit the reuse and recycling of used products. If PVC is not dechlorinated at recovery, it may produce dioxins when incinerated. The use of lead and chrome, substances that greatly affect the environment, is expected to be limited in the future. Reducing the usage of these chemical substances will temporarily raise costs but will ultimately lessen the environmental impact of a product's life cycle as well as recycling costs. Ricoh thus takes on such challenges as part of its environmental management activities.

* See page 39.

Green Procurement of Office Consumables and Supplies

Ricoh's eight business sites, which are all located in metropolitan areas, and three production sites drafted a "green procurement list" for office automation (OA) equipment, office supplies, stationery, sales promotion giveaways, and gifts. They promote efficient green procurement activities with the use of a computerized ordering system they established. Ricoh is planning to adopt this system nationwide. Ricoh Unitechno established a Green Supplies section that is connected online to suppliers. Ricoh Unitechno's inventory is automatically checked and restocked when needed, thereby eliminating the need to fill out order forms that waste paper.

Green Supplies section at Ricoh Unitechno

■ Supporting Partner Companies

Through activities that support partner companies, the Ricoh Group succeeded in improving the management systems of its partners as well as reducing costs.

Employee Awareness Improves through the Establishment of EMS and Employee Efforts

Haneda Unitech Co., Ltd.

Haneda Unitech is a Tokyo-based press parts manufacturer with approximately 100 employees. Its Fukushima Plant acquired ISO 14001 certification in June 2000. The company, under the slogan "everyone is in charge of environmental activities," strives to establish and improve its EMS by annually reelecting a dozen environmental promotion committee members.

Employee efforts resulted in an 18% reduction in Haneda Unitech's electricity bill for lighting and air-conditioning from the previous year. Such efforts encouraged improvements in employee awareness of environmental activities being their responsibility, too.

Office EMS Invites Favorable Reviews from Customers

Heibon Trading Co., Ltd.

Heibon Trading, located in Ginza, Tokyo, is a paper supplier with about 40 employees. It acquired EMS certification in September 2000 pursuant to Ricoh Group guidelines. The company made thorough efforts to organize internal operations, such as establishing office energy conservation activities and switching to vehicles that have minimum emissions for company use. These efforts received favorable response from customers, who made such remarks as "the change both the company and employees came as a surprise." Heibon Trading is striving to develop and introduce into the market ecology-conscious products that have a higher percentage of used paper.

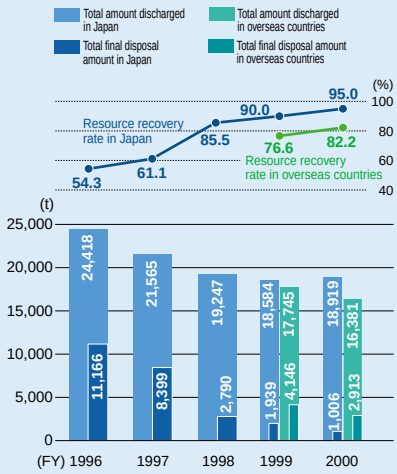
Production (Zero Waste to Landfill)

Most waste generated at plants is excessive raw materials (i.e., resources) that were left over from the manufacturing process. If production sites would use only the amount of raw materials needed to make their target number of products without any left over material, waste would be minimized and there would be no loss in materials, energy, or personnel expenses.

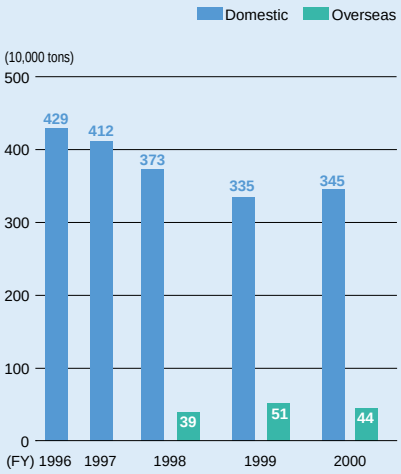
The Ricoh Group's comprehensive "entrance management" at plants for material procurement is based on the idea that waste should be prevented instead of recycled. The Group pays close attention to ways in which it can reduce the environmental impact of the packaging it uses for its finished products while conducting internal management to improve the productivity of its production lines.

In fiscal 2000, the Ricoh Group achieved zero waste at all 16 of its production sites in Japan as well as at all production sites in France, the United States, and Mexico as a result of its global efforts. The Group is expected to achieve zero waste in the U.K. in autumn 2001. As for nonproduction sites, the Aoyama Office and Fukui Ricoh, a sales company, also achieved zero waste. All sites that achieved zero waste not only reduced their costs but also succeeded in improving their management systems. In this way, the Ricoh Group promotes zero waste worldwide, reducing the amount of resources needed and setting a Groupwide goal of achieving more efficient recycling.

Resource Recovery Rate/Total Amount of Waste Discharged/ Amount of Waste Finally Disposed by the Ricoh Group



Volume of Industrial Water Used by the Ricoh Group



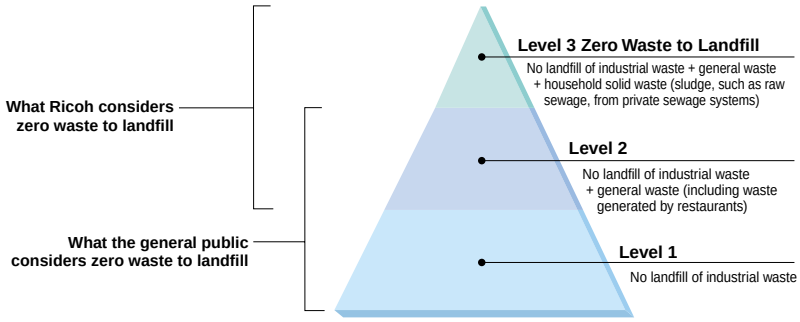
Resource recovery rate: Amount of resources recovered/amount of resources discharged
Amount of waste discharged: Amount of waste discharged from business sites (including residue after onsite processing)
Amount of waste finally disposed: Amount of waste used in landfills and incinerated out of the total amount of waste discharged

Zero Waste to Landfill by the Ricoh Group

The Ricoh Group classifies zero waste (100% resource recovery rate) into three levels. Although zero waste is roughly defined as no industrial waste being generated (level 1), the Ricoh Group aims at also eliminating general waste (level 2) and household solid waste, such as sludge (e.g., raw sewage), from private sewage systems (level 3). In case waste is simply incinerated without utilizing as energy resources, we regard such incineration as just disposal of waste. The Ricoh Group aims at achieving perfect resource recycling by reducing, reusing, recycling resources and thermal recovery of waste. In fiscal 2000, zero waste was achieved at the Ricoh Group's domestic production sites, Ricoh Industrie France, and all production sites of Ricoh Electronics, Inc., (REI) in the United States.

Zero waste promotion staff at Ricoh Industrie France, which achieved zero waste in June 2000

Definition of Zero Waste to Landfill Levels by the Ricoh Group



The Ricoh Group changed its definition of level 3 zero waste to accommodate business sites. In the past, level 2 was regarded as level 3 for business sites that use public sewage systems. However, the Group renewed this definition because it did not feel that the definition was appropriate. The new definition of level 3 requires proof that sludge from public sewage systems is processed and recycled.

Disseminating Know-how

The Ricoh Group is doing its best to ensure that know-how is disseminated among all Group companies and that inner benchmarking is used to achieve more efficient promotion of Groupwide zero waste activities. In 1998, the people in charge of business sites in Japan established the Recycling Committee to share information on their efforts toward setting up environmental activities and improving employee awareness. The Group also strives to disseminate know-how globally by inviting the people in charge of overseas business sites to sites in Japan that have already achieved zero waste. In fiscal 2000, thorough waste quality control resulted in a number of improvements both at home and abroad, including the selling of waste for recycling. These examples of improvements that were made are listed in a case study database on waste that was set up for internal use.

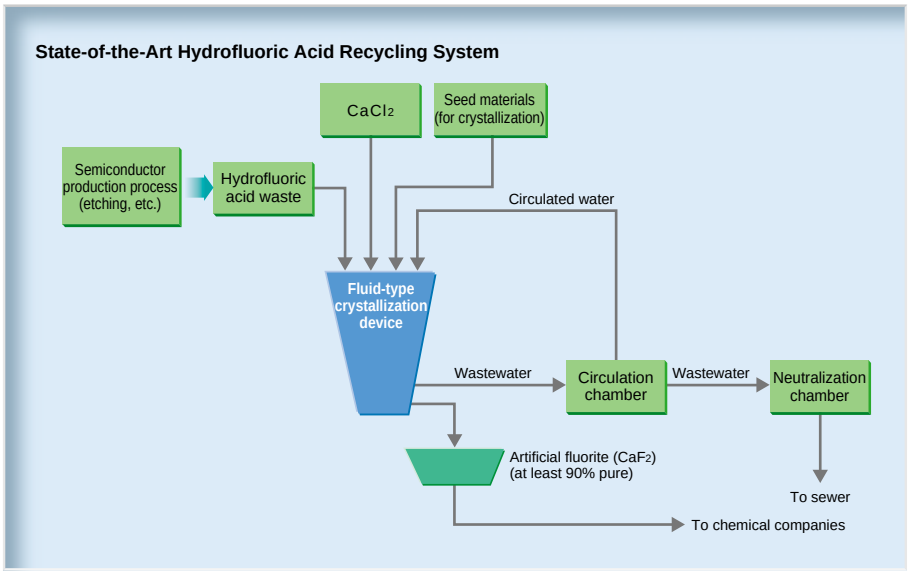
The 13th Recycling Committee Meeting held in Ricoh Microelectronics in November 2000

Hydrofluoric Acid Recycling in a Semiconductor Production Line

The Yashiro Plant, which produces semiconductors, introduced a hydrofluoric acid recycling system. This is the first system in the world that recovers hydrofluoric acid by using a crystallization method to turn the acid into fluorite, which can be reused to make hydrofluoric acid again. This system requires less space than the existing macromolecule coagulant system and enables the generation of artificial hydrofluoric acid of at least 90% purity that can be recycled as chemical ingredients.

Hydrofluoric acid is a chemical substance used in the etching process in semiconductor manufacturing. In the past, this substance was properly processed as sludge, but the introduction of the acid recycling system resulted in zero waste at a higher level by circulating the substance for recycling. This system contributed to modifications in the existing wastewater processing device, resulting in significant energy conservation. The New Energy and Industrial Technology Development Organization (NEDO)* approved a subsidy of this technology because of its innovation and energy conserving capability.

* http://www.nedo.go.jp/english/



Minimum Use of Water Resources

To wash its thermal paper production line, Ricoh Industrie France would use 25,353m^3 of water annually. It succeeded in cutting this volume 43.4% per usage by reviewing its cleaning process and modifying its method of cleaning with water to include air-pressure cleaning using a ball cleaner. Ricoh Industrie France is promoting activities under the belief that simple ideas and innovative action bring about economic benefits from environmental conservation activities.

Pipes being cleaned with a pressing ball cleaner and air pressure (Ricoh Industrie France)

Closed water system (Ricoh UK Products)

Ricoh UK Products, located in the U.K., adopted a closed system to circulate water used in toner manufacturing and cut water usage to 12% of the amount it previously used.

The Atsugi Plant, Ricoh Unitechno, and Taiwan Ricoh have installed wastewater recycling systems to filter and reuse plant wastewater for their sewer systems.

Zero Waste at Nonproduction Sites

The Ricoh Aoyama Office, which is a model for Companywide EMS, achieved zero waste in September 2000. Fukui Ricoh, a sales company in the Ricoh Group, also achieved zero waste as a part of its EMS activities. These achievements resulted in an improvement in employee awareness and a reduction in waste-processing cost.

Five Rs toward Zero Waste to Landfill

Based on the five Rs—refuse → return → reduce → reuse → recycle—the Ricoh Group is taking active steps toward realizing "perfect production=zero waste" in partnership with suppliers and recycling companies.

1. Refuse (Avoid buying anything that may become waste)

Minimum resource exploitation is being embraced by both the Ricoh Group and suppliers by simplifying packaging for parts and raw materials. Ricoh Industrie France reduced waste to 98% and is striving for 100% with thorough entrance control to eliminate such substances as PVC.

2. Return (Return what can be returned to suppliers)

Improvements in delivery containers, such as designing them to be reusable and returning them to suppliers, not only reduces the exploitation of resources, but also reduces costs. Ricoh UK Products in the U.K. returns paper tubes and buffers to suppliers. It has also developed its own transportation containers that are foldable and easy to handle.

Foldable, easy-to-handle containers (Ricoh UK Products)

■ Zero Waste to Landfill Plants around the World

In fiscal 2000, a "zero waste culture" started in Japan and began to spread throughout Ricoh Group companies all around the world. The phrase "Promote Recycling for the Sake of Our Children's Future" was easily understood in countries with cultures different from that of Japan and spread around the world. To improve employee awareness of zero waste promotion activities, as many ideas as possible were encouraged. The following are examples of some of the inventive promotional activities that were given.

Each division has adopted the idea of carrying out the 5 Rs. Divisions, such as personnel, accounting, procurement, and manufacturing, have created their own ideas on how to do it. (U.S.A.)

Employees' questions (e.g., "Can this be recycled?") are answered within three days. Giving answers quickly is an important factor in zero waste activities. (U.S.A.)

Departments have free rein to personalize their sorting carts. This cart is decorated with photographs of the employees' children, which help motivate employees to sort waste for the sake of their children's future. (U.S.A.)

Zero Hero was created to champion zero waste activities. He came from the planet Zeron to Earth to promote environmental conservation activities. He appears on the company's Web site and posters. (U.S.A.)

Posting the plant's environmental policy at the entrance or in the lobby of the plant attracts the attention of suppliers and other visitors in addition to employees. (U.S.A.)

Quizzes on sorting are given throughout the plant. Employees answer questions on how familiar-looking waste should be sorted. Competitions are held among divisions. (U.S.A.)

At this plant, where people from a number of different ethnic origins work, posters written in five languages are put up. Some plants broadcast environmental conservation slogans in four languages. (U.S.A.)

Commitment to environmental conservation of each employee is posted on the wall. (U.S.A.)

3. Reduce (Reduce waste)

"Waste when mixed but resource when sorted." The quality control of waste along with efficient sorting improves the resource recovery rate and can lead to profit if sold as a resource. Several business sites have abolished the use of personal wastebaskets in an attempt to further reduce the amount of waste thrown away and to promote the recovery of resources.

Waste sorting as part of the thorough quality control of waste (REI, U.S.A.)

Several business sites have abolished the use of personal wastebaskets. (REI, U.S.A.)

4. Reuse

Reusing discarded office supplies that had been used only once results in resource conservation and cost reduction. The Ricoh Group sets up used office supplies sections in a number of offices in Japan and abroad, including the Aoyama Office, Ricoh Unitechno, and REI in the United States. Ricoh Industrie France cuts A3 paper (approx. 11 3/4 in. × 16 1/2 in.) used in testing copiers to A4 size (approx. 8 1/4 in. × 11 3/4 in.) and reuses it.

Used office equipment section (REI, U.S.A.)

Cutting A3 copier test paper to be reused as A4 paper (Ricoh Industrie France)

5. Recycle

We are studying resource recovery methods as well as establishing a network with recycling companies. Methods of resource recovery include material recycling, which simply reuses materials without changing their form; chemical recycling, which reuses materials after processing them chemically; and thermal recycling (energy recovery), which reuses materials as fuel to generate heat energy.

A system to mix plastic waste generated in the manufacturing of parts with new materials to manufacture recycled parts (REI, U.S.A.)

Employees who have made outstanding contributions to garbage control, office equipment reuse, and industrial waste control are recognized and elected into the Environmental Hall of Fame. (U.S.A.)

Photos indicating how waste is to be sorted makes it easier for employees to observe rules. (U.K.)

Checking the level of sorting with green cards and red cards makes environmental conservation activities feel more like a game. (U.S.A.)

This mural was painted to increase employee awareness of environmental conservation. The following words were included: "God says, 'I love Mother Nature's green plants, I love the song of birds, I love green jade, and I love the scent of flowers, but most of all, I love the people who love these things." (Mexico)

To reduce the use of paper cups, mugs customized with each employee's name were distributed. (Mexico)

The recycling exhibition area is used to give easy-to-understand demonstrations on how waste is recycled. (U.K.)

Posters show how the 135 kinds of waste generated by the plant are recycled. (Mexico)

A poster of a "waste tree" easily explains how waste is sorted and recycled and how much money such practice earns. (U.K.)

This mural, dubbed the Sea Garden, at the recycling exhibition is of an ideal sea. (U.S.A.)

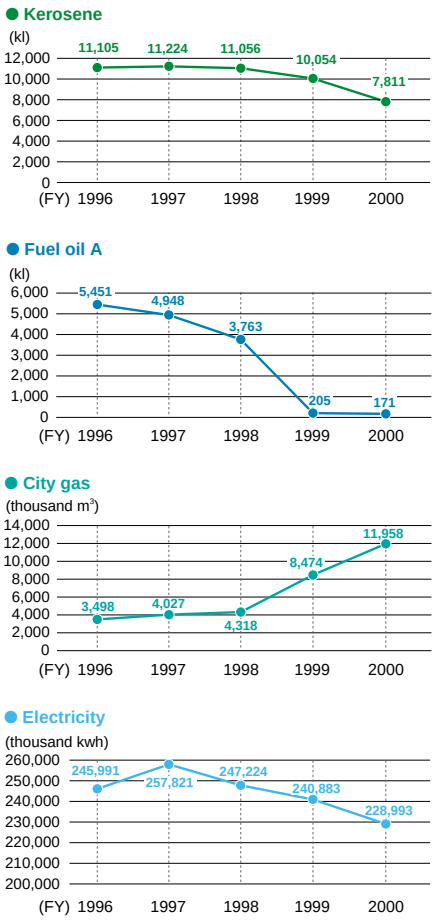
Production (Energy Conservation)

The Ricoh Group conducts a variety of energy conservation activities to reduce the emission of CO_2, which is a greenhouse gas.

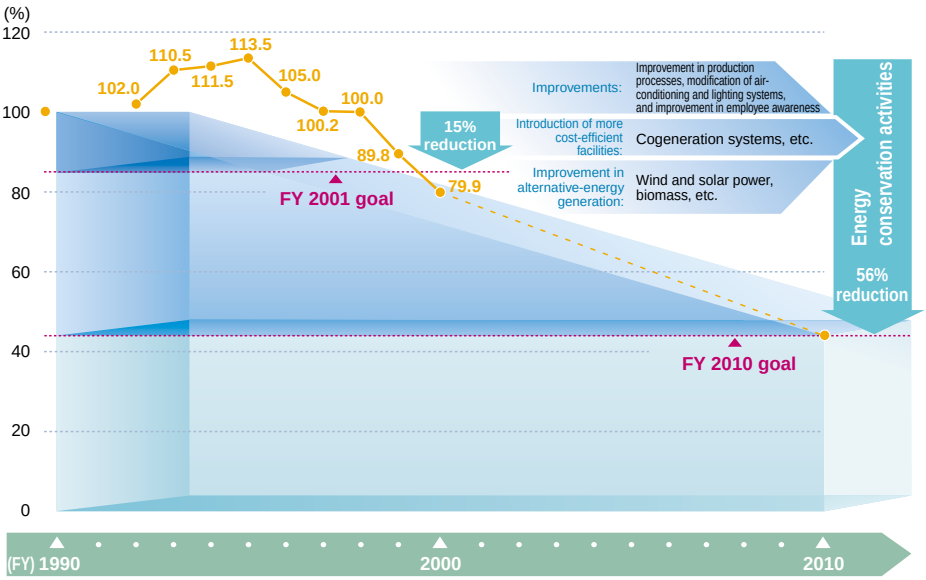
One of its activities includes a Groupwide distribution of case studies on energy conservation at business sites[1] to generate more effective results. Furthermore, using Eco Balance and LCA-based environmental impact analyses[2], more efficient systems, including cogeneration systems, are introduced to business sites that have higher CO_2 emissions as part of their energy conservation activities, taking efficiency and the economic benefits of reducing environmental impact into consideration. These activities were near completion in fiscal 2000, and more improvements are planned for the future. New areas of energy conservation include a solar power generation system[3] and green power generation system[4].

1. See page 30.
2. See pages 21–22.
3. Adopted for the "cart line" in November 2000
4. Scheduled to be introduced in 2002

Changes in Major Energy Consumption in Ricoh



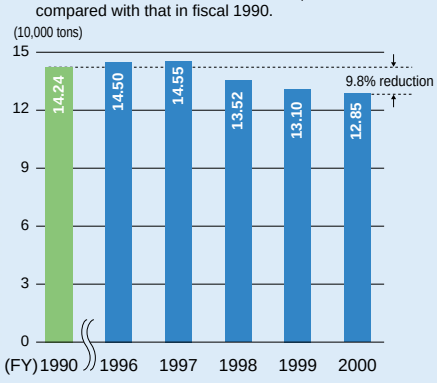
Reducing CO_2 Emissions by 2010



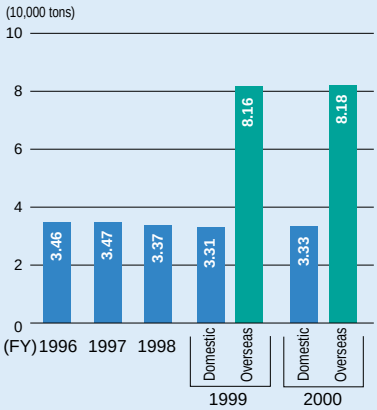
Appropriate for its management scale, Ricoh is aiming for a 56% reduction in CO_2 emission per sales unit in fiscal 2010, compared with that in fiscal 1990. In line with this goal, the environmental action plan established in 1998 aims at a 15% reduction by fiscal 2001. In fiscal 2000, Ricoh achieved a 20.1% reduction. CO_2 emissions per sales unit is calculated using a CO_2 emissions coefficient from an environmental assessment program issued in 1996 by the Environment Agency so that factors other than Ricoh's independent activities are eliminated.

Ricoh's Energy Consumption (CO_2 conversion*)

CO_2 was reduced 9.8% in fiscal 2000, compared with that in fiscal 1990.



Energy Consumption at Production Sites Other than Ricoh's (CO_2 conversion*)



* Calculated using a CO_2 emissions coefficient taken from an examination on greenhouse gas emission calculations issued by the Ministry of the Environment

Cart Line to Achieve Zero CO_2 Emissions

To reduce the amount of energy needed by its production lines, Ricoh Unitechno developed a new manufacturing line consisting of carts chained to one another in a single line. This new system only needs a single 400-W motor to run while conventional lines need one that is in the 5 kW–6 kW range. Ricoh Unitechno aims at reducing the CO_2 emitted from its production lines to zero by introducing a solar power generation system. The company also shares its know-how and offers a consulting service to others.

Green Power Purchased in the Form of Wind

Ricoh concluded an agreement with Japan Natural Energy Company (JNEC) Limited to join JNEC's green power system and purchase 1 million kWh annually for 15 years, starting from 2002. Accordingly, the company's annual CO_2 emissions are to drop approximately 360 tons, or 0.3% of Ricoh's total emissions. The green power system enables any company that wishes to use natural energy to acquire Green Power Certification as a wind power user by paying for a comparatively expensive wind electricity cost to JNEC as a consignment fee.

Green Power Wind logo

Cogeneration Systems

The Numazu Plant, Research Development Center, and other sites that consume copious amounts of electric power began using cogeneration systems. Half the Numazu Plant's power supply, which was once provided solely by power companies, is now complemented by an in-house generation system using city gas. Furthermore, waste-heat produced by the generator is effectively used to cut total annual CO_2 emissions 3,000 tons.

Cogeneration system at the Numazu Plant

■ Examples of Beneficial Energy Conservation Activities at Business Sites

Because the Ricoh Group regards energy as an important resource, the Group's business sites undertake beneficial energy conservation activities, aiming at producing maximum effect using the minimum amount of energy. The Group also believe that sharing the know-how that the business sites have gained will improve the energy conservation efforts of the Group as a whole.

Elimination of Climatic Factors

Most plants in the Ricoh Group apply adiabatic paint to their roofs so that the building can be cooled more efficiently and, in the process, save energy that would have been used for air-conditioning in the summer. Ricoh Optical Industries, which is located in Iwate Prefecture—an area where the temperature can drop to –7°C in winter—adopts double resin window frames that have more efficient adiabatic effect.

Roof painted with adiabatic paint

Double windows with a resin window frame

Energy Conservation of Fluorescent Lighting

Reflective sheets with aluminum evaporating film were attached to fluorescent lamps, making them approximately twice as bright as before. As a result, only half the number of fluorescent lamps is now needed. An inverter control on the lighting system reduced power consumption approximately 20%.

Solar- and Wind-Powered Generators

The Atsugi Plant equipped its parking lot lighting facility with solar- and wind-powered generators. There were no significant costs involved in the installation since no wiring was required. The new system saves ¥480,000 in electricity bills per year. Also, 11.4 tons in CO_2 emissions were cut.

Improve Air-Conditioning Efficiency by Lowering the Ceiling

As part of its plant renovations, Ricoh Optical Industries lowered the ceiling of the building to improve the efficiency of its air-conditioning. This also resulted in the need for fewer fluorescent lamps.

Hybrid Vehicles and Natural-Gas Vehicles

Most Ricoh Group plants use hybrid vehicles as well as natural-gas vehicles. The Atsugi Plant obtained four natural-gas vehicles and six hybrid vehicles. The plant is equipped with its own natural-gas station.

Natural-gas station at the Atsugi Plant

Production (Pollution Prevention)

The Ricoh Group established RECSIS (Ricoh Environmental and Chemical Safety Information System) to control the chemical substances contained in products and used in the manufacturing process. RECSIS categorizes substances that fall under Japan's PRTR* Law as well as substances that are regulated in other parts of the world according to whether they are to be prohibited, reduced, or controlled. In line with its severe self-regulation policies, the Ricoh Group endeavors to control as well as to re-duce the amount used, emitted, and disposed of. The Group is striving to establish a system that will provide answers to inquiries from customers, original equipment manufacturers (OEMs), and civil organizations regarding their usage of chemical substances.

The Ricoh Group has also dealt with soil pollution caused by chloric organic solvents through the use of surveys, improvement planning (since 1992), and the subsequent publication of the *Ricoh Group Soil Improvement Manual* in 1999, which outlines stricter self-regulation measures than the environmental standards set by the Japanese government. The Group is currently conducting surveys and carrying out improvements at Ricoh Group production and research and development sites.

* Under the PRTR (Pollutant Release and Transfer Register) system, the release of potentially harmful environmental pollutants into the air, water, and soil; product contents; and the transfer of waste are assessed by business, among others. The results are totaled and released by a third-party organization. Member countries of the Organization for Economic Cooperation and Development (OECD), such as the United States, Canada, the U.K., the Netherlands, and Japan, have adopted this system. The PRTR Law in Japan was based on this system.
In fiscal 1997, Ricoh participated in the PRTR system that Keidanren (the Federation of Economic Organizations) independently started prior to its legislation by giving it a summary of the PRTR data of all Ricoh business sites. We continued to report the PRTR data of all Group companies in fiscal 1998 and thereafter began reducing the consumption and emission of PRTR substances.

Survey Results on PRTR Substances[1] in the Ricoh Group

(tons/year)

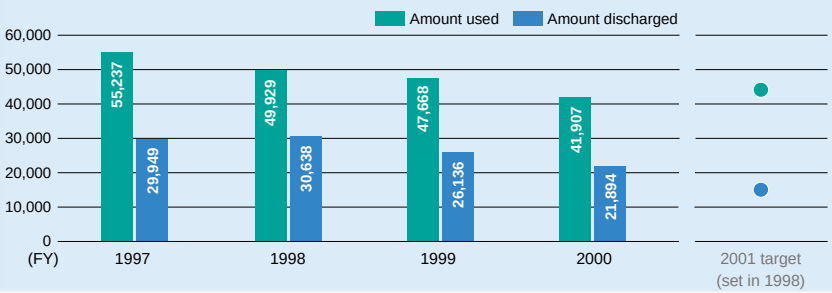
Substance*	Environmental impact coefficient[3]	Amount	Emission into air	Amount consumed	Amount reduced	Amount transported (waste taken off-site)	Amount recycled
Zinc oxide[2]	1	99.8	—	96.9	—	0.8	2.1
Zinc chloride[2]	10	38.2	—	36.3	—	—	1.9
Antimony oxide[2]	100	12.4	—	11.6	—	0.0	0.7
Xylene (mixture)	10	16.4	14.4	0.0	0.2	—	1.8
Dichloromethane	100	199.7	165.7	2.0	—	0.1	32.0
N, N-dimethylformamide	100	24.3	1.3	—	—	—	22.9
Tetrachloroethylene	100	4.2	0.3	—	—	—	3.9
Copper I oxide[2]	10	2.4	—	2.4	—	0.0	—
Copper II oxide[2]	1	76.2	—	73.6	—	0.8	1.8
Toluene	10	1,250.9	291.7	95.4	363.6	1.1	499.2
Nickel sulfate[2]	100	29.5	—	17.5	—	2.9	9.1
Barium sulfate[2]	1	2.4	—	2.2	—	0.1	0.1
4, 4-isopropylidenediphenol	1	23.7	—	21.0	—	—	2.7
Ethylene glycol monoethyl ether	100	7.3	0.6	—	4.6	—	2.2
Glyoxal	10	23.3	0.1	21.2	—	—	2.0
Cellosolve acetate	100	6.6	0.4	—	—	6.2	—
1.3-dichloro-2-propanol	100	9.9	9.9	—	—	—	—
Tetrahydrofuran	10	135.9	54.7	—	25.9	—	55.3
Tetrafluoromethane	100	1.7	1.2	0.5	—	—	—
Hexafluoroethane	100	2.9	2.0	0.9	—	—	—
Lead solder	100	36.8	—	23.3	—	0.9	12.6

* Substances listed are those amounting to at least 1 ton per year. "—" indicates no entry.
Substances discharged into public waterways and sewage systems are not listed because they amounted to less than 0.1 ton annually.

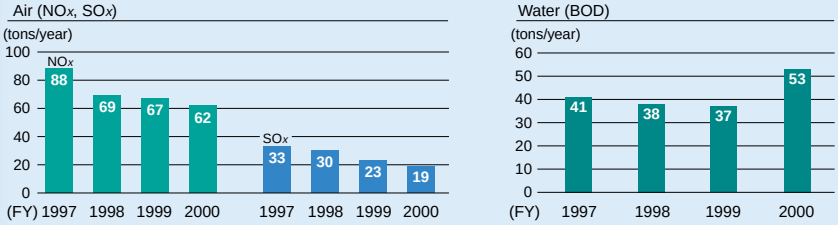
1. PRTR substances are those designated by four electric/electronic organizations surveyed. Technical terms used are also pursuant to guidelines set by the aforementioned organizations. Substances listed may differ slightly from those provided by the PRTR Law.
2. The amount of metallic compounds are converted into metal.
3. The environmental impact coefficient is set by Ricoh taking toxicity, oncogenicity, and ozone destroying possibility into consideration.

The amount of PRTR substances used and discharged is calculated using the following formulas:
Amount used = Σ {(amount – amount consumed) × environmental impact coefficient}
Amount discharged = Σ {(amount treated emitted into the air + amount discharged into water + amount discharged onto the soil) × environmental impact coefficient}

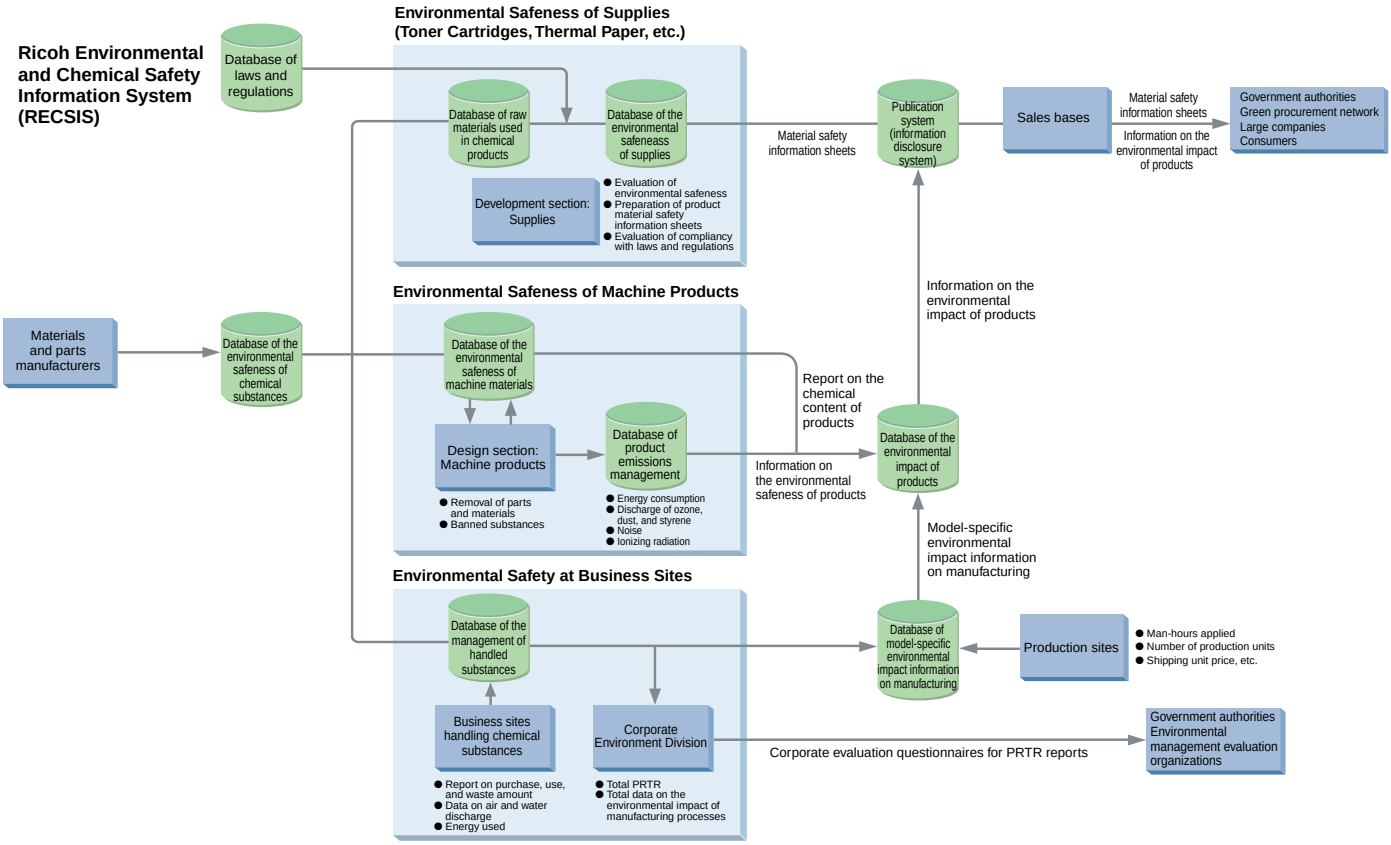
Changes in the Amount of PRTR Substances Used and Discharged by the Ricoh Group



Changes in the Amount of Substances Discharged Following the Ricoh Group's Implementation of Pollution Prevention Measures



Figures for NO_x and SO_x have been changed as a result of a minor revision to the calculation method. Therefore, the figures differ slightly from those in the 2000 report.



RECSIS

There are many substances that, while useful for a product's manufacturing process, have undesirable effects on the environment. The use of these substances needs to be controlled so that they can be properly disposed of, collected, or phased out. RECSIS contains data on 164 ISO-based items, such as those for the more than 2,000 types of chemical substances listed, environmental hazards, toxicity, and emergency procedures. RECSIS also covers laws and regulations, including amendments, concerning the use of these chemicals in other countries. In addition, we have begun collecting data on the chemical contents of parts and materials purchased by the Ricoh Group and managing data on the amount of chemicals used and discharged. We are also monitoring the chemical waste at the manufacturing sites of our suppliers. Through these efforts, we are now able to improve our products and business sites enough to achieve our pollution prevention targets.

Soil Contamination Surveys and Improvements

All domestic production and research and development sites of the Ricoh Group conducted surveys of the presence of chloric organic solvents in soil and underground water and reported their findings to relevant local governments. Business sites that needed improvement conducted more detailed surveys and cleanup activities. As a result, there were no problems in the surrounding areas of any site. Hasama Ricoh completed its cleanup activities in fiscal 2000. Heavy metal pollution surveys are currently underway and there will be detailed follow-ups and cleaning, if necessary.

Response to Chloric Organic Solution Pollution in Soil and Underground Water*

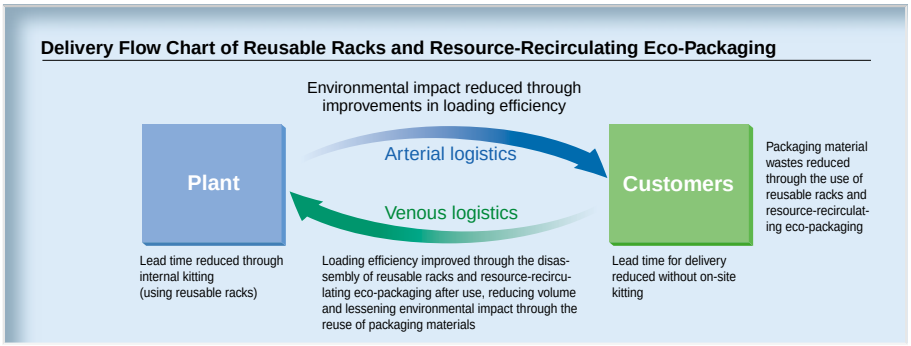
	History of the use of relevant substances	Current status
Gotemba Plant	—	—
Fukui Plant	—	—
Yashiro Plant	—	—
Ikeda Plant	○	No pollution
Atsugi Plant	○	No pollution
Research and Development Center	○	No pollution
Applied Electronics Laboratory	○	No pollution
Hatano Plant	○	Cleaning completed
Numazu Plant, South Plant	○	Cleaning completed
Numazu Plant, North Plant	○	Cleaning completed
Omori Office	○	Cleaning underway
Ricoh Unitechno	—	—
Ricoh Microelectronics	○	No pollution
Ricoh Optical Industries	○	Cleaning completed
Hasama Ricoh	○	Cleaning completed
Tohoku Ricoh	○	Cleaning underway
Ricoh Elemex, Okazaki Plant	○	Cleaning underway
Ricoh Elemex, Ena Plant	○	Cleaning underway
Ricoh Keiki	○	Cleaning underway

○ = Used — = Not used

No pollution: No pollution exceeding environmental standards was detected inside or outside the business site.
Cleaning completed: Pollution exceeding environmental standards was detected, and site was cleaned.
Cleaning underway: Pollution exceeding environmental standards was detected, and site is being cleaned. However the areas surrounding business sites were not affected.

Logistics

Logistics was traditionally separated into arterial logistics, i.e., delivering products to customers, and venous logistics, i.e., collecting packages and products disposed of by customers. To reduce lead-time—from order placement through delivery—the Ricoh Group established a supply chain management (SCM) system, for which it developed and promoted reusable packaging materials to improve the efficiency of collection logistics. The Ricoh Group strives to improve the efficiency of its logistics as a whole and reduce environmental impact by integrating arterial and venous logistics. Ricoh Logistics, a logistics company for the Group, acquired ISO 14001 certification in December 2000.



Strength Test of Products and Packaging Materials

To reduce the consumption of packaging materials, it is important to ensure that the products themselves are strong enough to withstand damage during shipping. Based on Ricoh's recyclable design policies*, product strength tests are mandatory. Such tests are conducted at the Product Resistance Evaluation (P.R.E.) Laboratory, which is equipped with the latest test devices, such as a horizontal shock tester and a vibration tester. Ricoh's P.R.E. Laboratory was the first facility built by a Japanese manufacturer to have been officially recognized by the International Safe Transit Association (ISTA). Measurements obtained here are internationally recognized.

* See page 39.

A product's strength is being tested against shock.

Development of Reusable Packaging Materials

To reduce the environmental impact of packaging materials, Ricoh developed eco-packaging, which consists mainly of laminated cardboard that is 98% recyclable, in 1994. Furthermore, in 2000 we developed reusable, recycled eco-packaging that contains recycled plastic. Reusable racks with pipe frames are used to deliver large printers. Similar efforts are being made by Group companies all over the world. For example, less bulky packaging is used for toner cartridges to reduce environmental impact at delivery as well as collection.

Eco-packaging (left) developed in 1994 and recycled eco-packaging developed in 2000

Reusable pipe-framed racks

Comprehensive Improvement in Logistics through Reusable Racks

In the past, Ricoh would ship and deliver printers and optional equipment separately and assemble them at each delivery. However, the Company developed pipe-framed reusable racks that can be adjusted in size to accommodate the dimensions of whatever machine is to be delivered. The largest benefit of these reusable racks is that they produce no waste. Ricoh established a database that enables kitting at plants, including the attachment and arrangement of optional equipment; the calculation of estimates; and production planning at the plant according to data entered by sales companies. Thus, Ricoh succeeded in significantly reducing lead time, from order placement through delivery, and environmental impact.

Environmental Impact Reduction during Transportation

Ricoh Logistics, a core company that works on arterial and venous logistics for the Ricoh Group, uses 16 low-polluting natural gas vehicles*. Three of them are equipped with unique turntables to improve efficiency in delivery and collection.

The company is developing activities to promote energy conservation, such as training drivers to improve their awareness of environmental conservation and improve their driving ability, reviewing transportation routes, and preparing rooms so that drivers can rest there instead of in their vehicles with their engines idling.

* As of May 18, 2001. More is scheduled to be introduced in conjunction with improvements in the social infrastructure.

A natural gas vehicle

Marketing

The enforcement of the Green Procurement Law induced customers to buy products with less environmental impact. The Ricoh Group views customers as green partners and does its best to provide them with the environmental impact information of its products. With this information, customers are able to get a proper understanding of the environment-friendly characteristics of the Group's products and make informed decisions on the kinds of products to buy.

Brochures filled with information and used to promote environmental impact reduction among customers

In-house brochures that promote recycling of products (e.g., toner cartridges), packaging materials, containers, etc.

Global Green Marketing (Type I Environment Labels*)

The Ricoh Group globally markets products that have less environmental impact and are certified with such Type I Environment Labels as the Eco Mark, Blue Angel Mark (BAM), and Nordic Swan Mark. By incorporating Type I Environment Label standards into its general design activities, the Group ensures that all of its copiers pass Type I Environment Label requirements.

* Labels certifying that the environmental conservation requirements established by a third party for marketed products have been satisfied

The Ricoh Recycle Label (Type II Environment Labels*)

In order for its products to be easily recognized as having less environmental impact, the Ricoh Group uses the Ricoh Recycle Label, which ensures compliance with Group standards on recyclable designs, the reuse rate of parts, and environmental safety. As of March 2001, five models, including the Spirio 5000RM, Spirio 7210RM series, Spirio 8210RM, and Spirio 105BB, have been sold with this label.

* Labels attached to products that satisfy standards set independently by manufacturers

● Criteria for the Ricoh Recycle Labels (Summary)

Recycle

1. The product satisfies Ricoh's recyclable design standards.
2. Reused* parts account for 40% or more of the product's mass (mass ratio).
3. Toner cartridges used in the product are recyclable, and a system for recycling them has been established.
4. A system for collecting and processing used products as well as collecting used cartridges and containers has been established.
5. At least 90% of the product's mass (mass ratio) can be recovered and recycled in Ricoh's recycling system.
6. Consideration is given to environmental safety, as stipulated in Ricoh's standards.

* Reuse means to use something for the same purpose in its original form.
Reuse rate (%) = Maximum mass of parts reused/mass of products in which reused parts are used

Environmental Impact Disclosure of Products (Type III Environmental Impact Disclosure*)

The Ricoh Group was the first to disclose product LCA information as Type III Environmental Impact Disclosure so that customers are able to choose products with less environmental impact. The product information that the Group discloses to the government for its procurement list and to the Group's green procurement network is highly detailed.

* Quantitative environmental impact information disclosure that helps customers make informed decisions on the kinds of products to buy.
See pages 21–22 and 62.

International Environmental Labels and Ricoh Group Efforts

● Eco Mark/Japan

The Eco Mark is a labeling system the Japan Environment Association has been using since 1989, with applications being extended to copiers in 2000. As of June 2001, 53 types of copiers in 10 series, including the imagio series, had been awarded this mark.

● BAM/Germany

BAM certification standards are specified in detail by the German Federal Environment Agency throughout the production process, from manufacturing to the disposal of applicable products. Most Ricoh products sold in Germany are BAM certified.

● Nordic Swan Mark/Scandinavia

The Nordic Swan Mark is an eco-label system that has been used by five Scandinavian countries—Norway, Sweden, Finland, Iceland, and Denmark—since 1989. In 1997, seven Ricoh copier machines were awarded the label.

● International Energy Star Mark/Japan, the United States, Europe, etc.

Only products with power consumption below a certain level while in standby mode can be sold with the International Energy Star Mark. All of Ricoh's applicable products have been awarded this mark.

● RESY Mark/Germany

The RESY Mark certifies that the packaging used in shipping a product satisfies RESY technical standards. It also guarantees that the packaging materials used will be collected in Germany. Ricoh's packaging material design has met RESY standards since 1993.

● DSD (Green Point) Mark/Germany

The DSD mark certifies that packaging materials collected by DSD-designated companies are for reuse and recycling. The packaging Ricoh uses for its cameras has been awarded this mark.

Usage

OA (Office Automation) equipment, including copiers, facsimiles, and printers, requires electric power, and the CO_2 that is emitted while generating that power is a major environmental pollutant. In order to prevent global warming, Ricoh strives to improve not only the energy conservation capabilities of its products but also their usability so that more people will use them, thereby effectively reducing the total environmental impact of the CO_2 emitted.

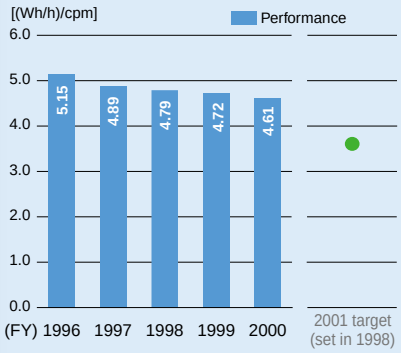
Another important issue is the efficient use of paper. Ricoh is proposing a variety of systems that would reduce paper consumption and use paper more efficiently because a significant amount of energy is required to manufacture paper. Such systems include duplex copying technology.

■ Energy Conservation

It is important for OA equipment, including copiers, to use less energy while in standby mode. Copiers and printers are generally turned on during office hours while facsim-iles turned on 24 hours. Ricoh succeeded in significantly reducing the amount of electric power its Aficio 1035/1045 (imagio Neo 350/450) series, marketed in February 2001, consumes while in standby mode. This success continued in Ricoh's Aficio 1022/1027 (imagio Neo 220/270) series, which was marketed in June 2001.

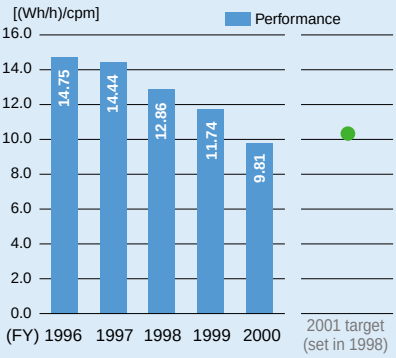
Changes in Energy Consumption of Black-and-White Copiers and Multifunctional Copiers*

Black-and-white plain-paper copiers (PPCs), excluding those that accommodate wider paper



* Negligible reductions in the amount of power consumed by black-and-white copiers and multifunctional copiers were the result of a transition in the market from analog machines to (digital) multifunctional machines that have a higher energy consumption efficiency. We are planning to achieve our goal in fiscal 2001 with the introduction of the Aficio (imagio Neo) series that incorporates quick start-up (QSU) technology.

Changes in Energy Consumption of Color Copiers and Multifunctional Copiers*



* Significant reductions in the amount of power consumed by color copiers and multifunctional copiers are attributed to the large number of Aficio Color 4506 (imagio Color 3100) copiers sold. The Aficio Color 4506 (imagio Color 3100) series has a higher energy consumption efficiency than originally targeted.

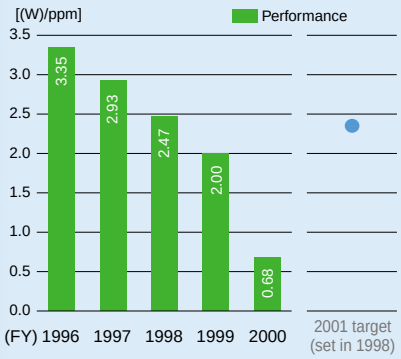
◎ Energy conservation values for copiers are calculated as follows:

Σ [<Energy consumption efficiency (Wh/h)>[1]/<copying speed[2]> × the number of units marketed]/ Σ the number of units marketed

1. Energy consumption efficiency was measured in accordance with the Ministry of Economy, Trade and Industry's Law Concerning the Rational Use of Energy.
2. Copying speed = the number of pages copied per minute (cpm)

Data for multifunctional black-and-white copiers, color copiers and multifunctional copiers are pursuant to the measurement standard for energy consumption efficiency of the Law Concerning the Rational Use of Energy.

Changes in Energy Consumption of Facsimiles (including multifunctional copiers)*



* The energy conservation capabilities of facsimiles are steadily improving due to the adoption of technology developed for the RIFAX BL110. (See page 37.)

◎ Energy conservation values for facsimiles are calculated as follows:

Σ [<Energy Star energy consumption in standby mode[1] (W)>/<printing speed[2]> × the number of units marketed]/Σ the number of units marketed

1. Energy Star energy consumption in standby mode = energy consumption in standby mode pursuant to the standards of the International Energy Star Program.
2. Printing speed = the number of pages printed per minute (ppm)

* Data for the three graphs above is based on the number of units marketed in Japan.

Energy-Saving, User-Friendly QSU Technology[1] Used in the Aficio (imagio Neo)

To lessen the environmental impact of copiers, it is important to reduce the amount of power they consume while in operation and on standby. Furthermore, the machines should be user-friendly when being brought out of standby mode.

Ricoh developed energy-saving, user-friendly QSU (Quick Start Up) technology and used it in the Aficio 1035/1045 (imagio Neo 350/450) series of multifunctional digital copiers, which it marketed in February 2001. In November 1999, Ricoh's Aficio 1035 (imagio Neo 350) won the first Award of Excellence in the world for its energy-conservation technology. The Aficio 1035 (imagio Neo 350) was entered in the Copier of the Future Division in the Demand-Side Management (DSM) Program[2] of the International Energy Agency (IEA) in November 1999. The copier also received the 2000 Minister of Economy, Trade and Industry's Grand Prize for Energy Conservation[3]. Ricoh is applying QSU technology to the rest of its products and is contributing to the reduction of CO_2 emissions by promoting more efficient means of environmental conservation.

The Minister of Economy, Trade and Industry's Grand Prize for Energy Conservation

IEA's Award of Excellence in the Copier of the Future Division, given in recognition of the Aficio 1035's (imagio Neo 350) energy-conservation technology

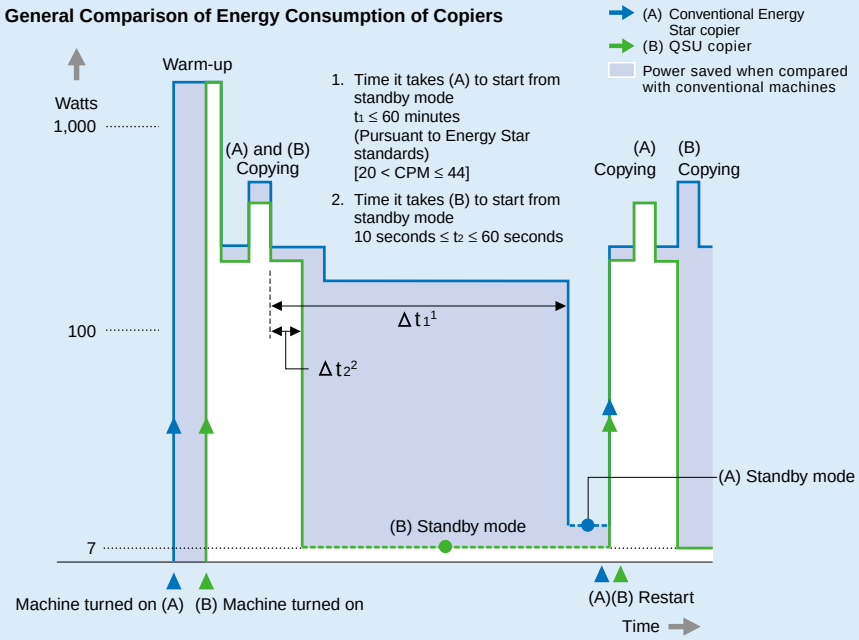
1. Ricoh's unique technology that enables machines to conserve energy and start up quickly when needed
2. A program that promotes the spread of energy conservation products, aiming at global CO_2 reduction
3. In recognition of its superior energy- and resource-saving capabilities, including energy conservation technology, plastic recycling, and parts reuse

Performance Comparison between Aficio 1035 (imagio Neo 350) and the Copier of the Future

	imagio Neo 350	Copier of the Future	Energy Star Program Standards for Copiers
Page/minute	35	30–60	21–44
Watts consumed while in standby mode	7 W	10 W or less	140 W*
Time to recover from standby mode	10 seconds or less	10 seconds or less	30 seconds or less

* This value was calculated using 35 pages per minute. Standard value ≤3.85 × (page/minute) + 5 W.

General Comparison of Energy Consumption of Copiers

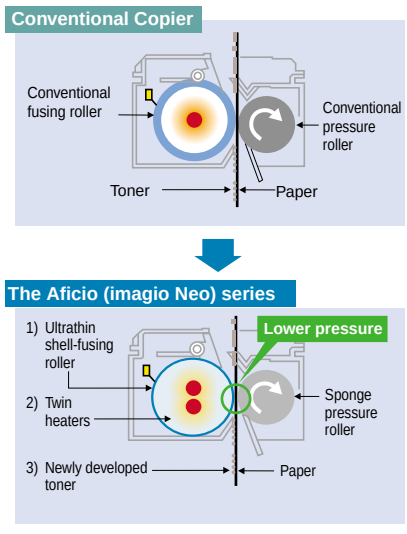


The Aficio 1035 (imagio Neo 350) requires only 7 W while in standby mode and only 10 seconds to begin operating from that mode. This quick-recovery unit realizes low energy consumption while in operation as well.

imagio Neo 350 series

● Ultrathin shell-fusing roller
● Twin heaters

Energy-saving fusing unit for the Aficio 1035 (imagio Neo 350) series



● QSU Technology Incorporated in the Aficio (imagio Neo) series

1) Ultrathin shell-fusing roller
To enable quick recovery from standby, the fusing roller is made as thin as possible to reduce the time needed for the temperature to rise.

2) Twin heaters
The temperature of the roller, which is thinner and easy to cool, carefully regulated by two independently controlled heaters

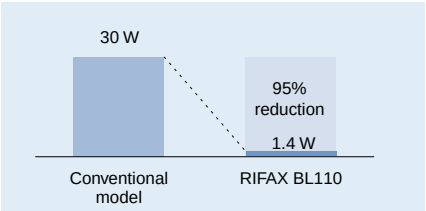
3) Newly developed toner
A new type of toner was developed that can be fixed at a lower temperature and has a fixing capability equal to or greater than that of conventional products. The toner allows the machine to start up faster and it contributes to energy conservation during use.

Standby Mode Energy Conservation Technologies for Facsimiles

In general, all ordinary facsimiles have to be in standby mode to receive transmissions. In 1996, Ricoh developed a CPU dedicated to energy conservation and incorporated it into a hybrid facsimile the Company marketed as the RIFAX BL110. This machine achieved an approximate 1.4 W power consumption, a 95% reduction from the 30 W consumption of Ricoh's conventional machines. Ricoh will be applying this technology to its facsimiles extensively to contribute to global energy conservation efforts.

RIFAX BL110

Comparison of Power Consumption while in Standby Mode



Advanced Technologies for Energy Conservation

Ricoh has developed a small ISDN G4 unit that realizes energy conservation in high-speed G4 facsimiles. G4 facsimiles are superior to conventional G3 machines in terms of transmission speed and image definition. The application of the G4, however, was restricted to high-end business-use due to the need of installing an ISDN line. G4 facsimiles with the newly developed ISDN G4 unit consume 80% less power in standby mode than those without. Moreover, fewer key parts in the G4 translates into a downsizing of the machine and a cost reduction in its manufacture. Consequently, the RIFAX SL3300, a G4 facsimile, achieves a low 2.2 W power consumption in standby mode even with the G4 unit. The worldwide popularity of the Internet has increased the number of ISDN line subscriptions and installations.

Ricoh succeeded in making this high-end technology available to more people while decreasing environmental impact.

RIFAX SL3300 equipped with the newly developed environmental conservation-oriented ISDN G4 unit

■ Efficient Paper Use

The manufacturing of paper consumes a lot of energy and generates a significant amount of CO_2. To do its part in preventing global warming, Ricoh implemented the more efficient use of paper to its energy conservation goals. The new goal includes improving duplex copying technology, marketing recycled paper, developing technology that can erase photocopied paper, and reducing the Company's paper consumption by computerizing its documentation. Ricoh, as a manufacturer of copiers and printers, is thus taking various approaches toward efficient paper use and doing the best it can to succeed.

Improved Duplex Copying

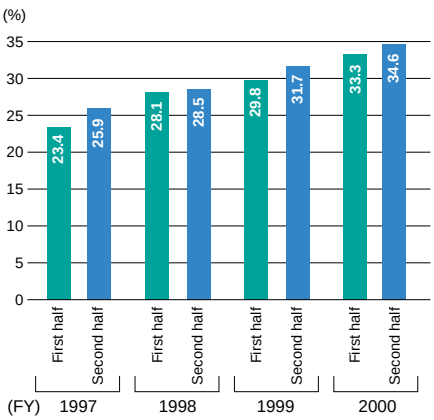
In Japan, approximately 776,000 tons[1] of copier paper are used every year. This is equivalent to roughly 2,328,000 tons[2] of CO_2. These figures cannot be ignored in view of global warming. Therefore, Ricoh is working towards improving the duplex copying performance of its products to help reduce paper consumption. The problems associated with duplex copying include extended operating time and a lack of user-friendliness. To solve these problems, Ricoh has developed a high-speed "switchback" system that speeds up processing by shortening the interval in which paper is fed into the copier. A paper-feeder simulator that eliminates nonfeasible feeding route designs had also been developed. The imagio MF 8570, marketed in 1999, incorporates a "nonstuck interleaf" duplex design to achieve nearly 100% duplex productivity[3] while in continuous operation. Many of our other products have also achieved 100% duplex productivity, and we redesigned the control panel display to improve user-friendliness.

1. Source: *Paper and Pulp Statistical Table,* Ministry of International Trade and Industry, 1997.
2. Source: Ricoh's LCA study in 1997.
3. Duplex copying productivity (%)
   = (Time spent on simplex → duplex copying)/(Time spent for simplex → simplex copying) × 100.
   Time is measured from the moment the desired number of copies is entered and the "Copy" button is pressed to the moment the copier is ready for the next batch of copying.

Marketing Recycled Paper

Ricoh conducts LCA studies on new and recycled paper to identify their environmental impact. Ricoh also markets recycled paper to reduce the amount of energy consumed in manufacturing paper.

Domestic Sales of Recycled Paper

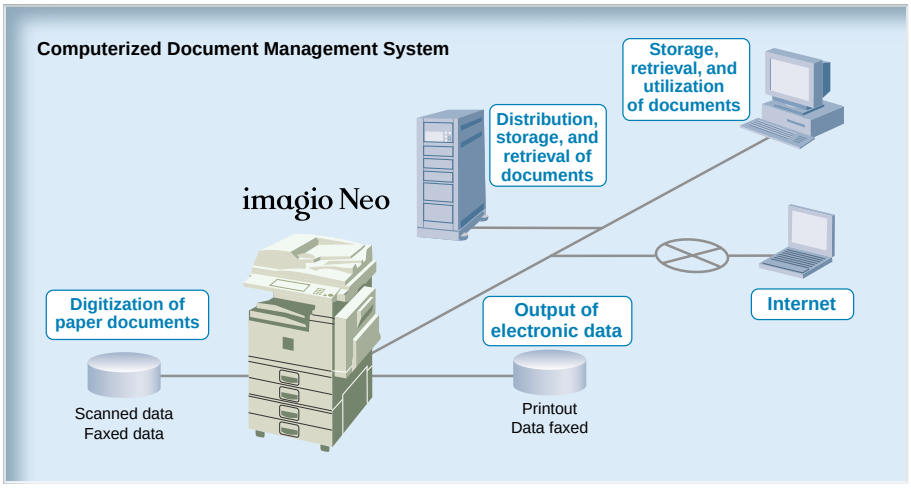


Erasable Photocopies: Technology to Reuse Copier Paper

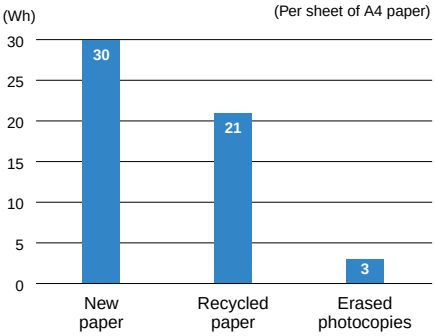
Ricoh Unitechno has developed technology capable of erasing photocopied paper and will market it in 2002. Conventional copiers use heat to fix toner to paper, but Ricoh Unitechno's new machine heats the paper to separate the toner. To get around the problem of toner absorption by the paper, a specially coated paper was developed that can be reused approximately 10 times. This technology makes the in-house reuse of copier paper more efficient and significantly reduces environmental impact because the approximate ¥0.05 cost in

electricity needed to erase photocopies, which is about 14% the energy consumption of recycling paper conventionally, makes reuse a more attractive alternative.

Copier capable of making erasable photocopies



Electric Power Required to Manufacture Paper and Erase Photocopies



Reduction of Paper Consumption by Computer

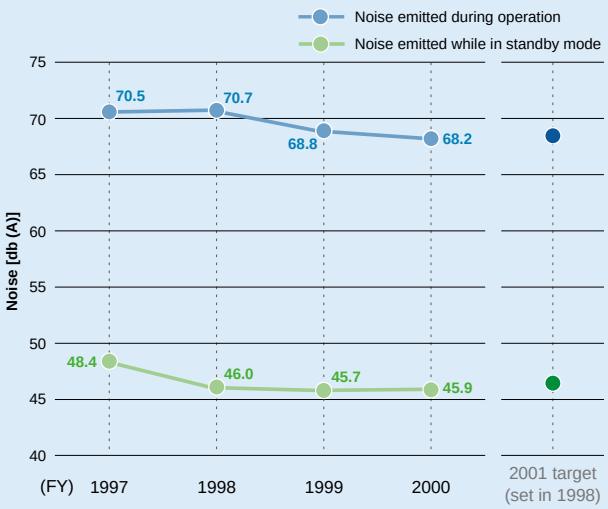
Ricoh provides customers with an ideal printing environment with its high-value-added products, including multifunctional printers, and an efficient computerized document management system. Such a system includes a paperless fax function that displays information on a computer screen, a database function that is incorporated into copiers, and other computer technologies that work with personal computers. Ricoh makes the management of documents more efficient and reduces environmental impact by reducing paper consumption.

■ Reduction of Noise and Chemical Substance Emissions

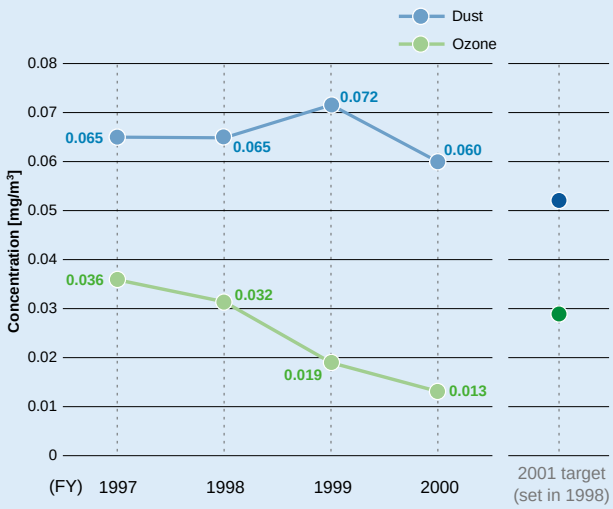
In order to use OA equipment including copiers more comfortably, it is also important to reduce the noise it emits. The emission of ozone and dust, even if very small in amount, are also to be eliminated.

Ricoh is making great efforts to improve its product design so that the noise, ozone, and dust that are emitted are reduced.

Changes in the Level of Noise Emitted by Machines in Operation*



Changes in the Level of Chemical Substances Emitted by Machines in Operation*



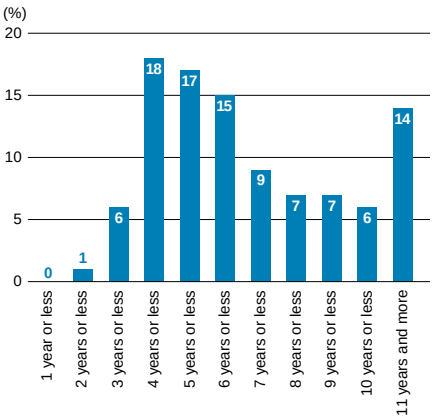
* Calculations are based on the weighted number of copiers, facsimiles, and printers sold and use a copying productivity of 50 sheets per minute for all machines. The figures above have been changed pursuant to the calculation method provided by the Japan Business Machine Makers Association (JBMS) in 1999. Therefore, the figures differ slightly from those in the 2000 report.

Recycling

The recycling of products also causes environmental impact when the products are collected, disassembled, reused, and recovered. In case of reusing or recycling a product, which is to last for four or five years, over and over in a short period of time, its environmental impact would be increased significantly.

It is one of the important issues for the Ricoh Group to make the product lives last longer as well as reuse and recycling. The Group established a nationwide recycling system in fiscal 2000 to collect products after use.

Lifespan of Ricoh Copiers Collected*



* Data based on copiers collected after use
Ricoh copiers are collected and reused or recycled at the end of their lifecycles.

● The Ricoh Group's Concept of Manufacturing and Recycling

Reduce
Environmental impact is reduced if products are made smaller, lighter, and longer lasting.

Reuse
The reuse of products is possible long after the product life has ended thanks to the use of modular designs and more advanced recyclable designs.

Recycle
Recycling with less environmental impact is possible by giving priority to the inner loops of the Comet Circle.

Recyclable Design

More efficient reuse and recycling can be realized by improving the disassembly and sorting of products after collection and choosing materials that are easily recyclable. In 1993, Ricoh announced its policy on recyclable designs, and in 1994 it introduced the Spirio 2700 series, the first line of copiers based on the recyclable design. The Spirio 2700 series was designed to significantly reduce the time and cost it takes to disassemble a copier and sort the materials after collection (e.g., fewer screws used in the machine and more-consistent plastic materials).

The Ricoh Group expanded its policy on recyclable designs and product assessment to cover its entire line of copiers, facsimiles, laser printers, and multifunctional copiers in 1993. The Group is thus improving its recyclable designs year by year.

Comprehensive Recycling Plan

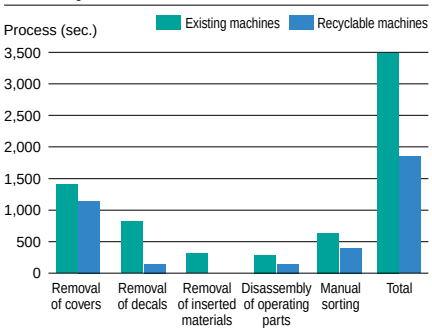
A more efficient level of reuse and recycling requires identifying the parts that are to be recycled for each product line at the concept stage and establishing a reuse and recycling system for the parts collected. Based on this idea, Ricoh introduced its Comprehensive Recycling Plan in fiscal 1998.

An LCA study revealed that preparations done at the design stage could significantly influence a reduction in environmental impact. With the proposed use of modular designs and the making of smaller, lighter products that last longer, environmental impact throughout a product's lifecycle can be reduced.

● Provisions for Recyclable Designs

1. Provision for the reuse of products, units, and parts
2. Provision for the recycling of materials
3. Provision for the recycling of chemicals
4. Provision for the recovery of energy
5. Provision for the reduction in size and weight of products
6. Provision for the reduced use and recycling of packaging materials

Disassembly and Sorting of Existing and Recyclable Machines



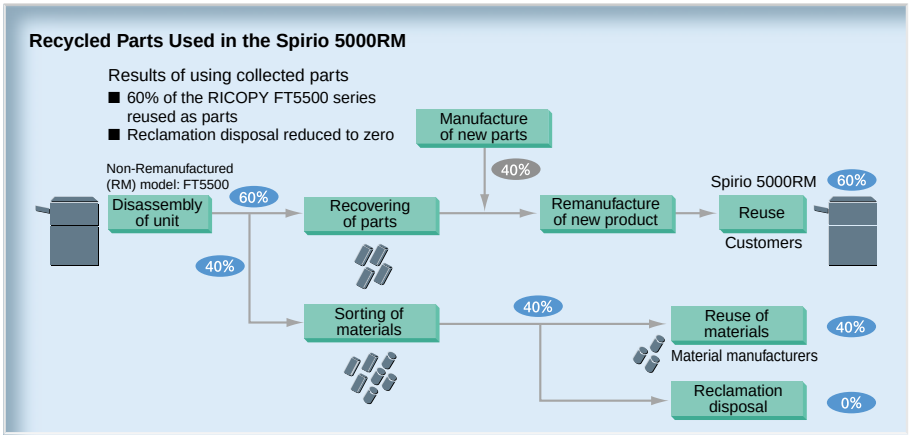
Recyclable Design Policy

● Level 1 (1993)
- The use of insert molding prohibited
- The number of parts and screws to be removed when changing main components set
- The use of E-rings prohibited
- The adhesion of resin materials to different materials prohibited
- The amount of packaging reduced
- The use of heat crimping prohibited
- The use of toxic chemical substances prohibited

● Level 2 (1994)
- Grading for outer packaging set
- Indicating material grades on labels made mandatory
- The use of resin that contains chlorine prohibited (dioxin prevention)
- The number of parts and screws to be removed when changing main components made stricter

● Level 3 (1996)
- New provisions for recycling supplies added
- New provisions for harness layouts added
- New provisions for the restricted use of nitrous resin added
- The use of nylon clamps restricted
- Articles revised, taking economic benefits into consideration

● Level 4 (1999)
- Appropriate design items for process cartridges added
- New provisions for recyclable printed circuit board designs added
- The number of screw types reduced
- The use of nonhalogenous, fire-retardant resin introduced
- Overall set values for acceptable change in speed when machine is jarred revised



Reconditioned (RC) Products (Copiers) and Products Manufactured with Recycled Parts (RM Copiers)

As part of its environmental conservation activities, Ricoh is working toward extending the life of its products—so that customers can benefit from their use for as long as possible—and advocating the appropriate time for the reuse and recycling of products and parts. Used products are collected, disassembled, and either reassembled into RC or RM machines or their parts are reused in new products.

● RC Copiers

Ricoh replaces all the necessary parts in the used products it collects and rents the RC machines out to customers with a guarantee on their quality. The Company rents out analog RC copiers, including the Spirio 5000RC, 6000RC, and 7000RC. Ricoh is planning to start mass-producing digital RC copiers in December 2001.

● RM Copiers

In October 1997, Ricoh marketed the Spirio 5000RM copier, the first to incorporate recycled parts. More than 60% (mass ratio) of the RICOPY FT5000 series, the Spirio 5000RM's predecessor, was reused as parts in the 5000RM. All 5000RM units are manufactured using recycled parts, including the inner cover, which is made from recycled plastic. Performance of the copier was enhanced by making the liquid crystal panel easier to see. Following the Spirio 5000RM, Ricoh marketed other RM models, such as the Spirio 7210RM series and the Spirio 8210RM series.

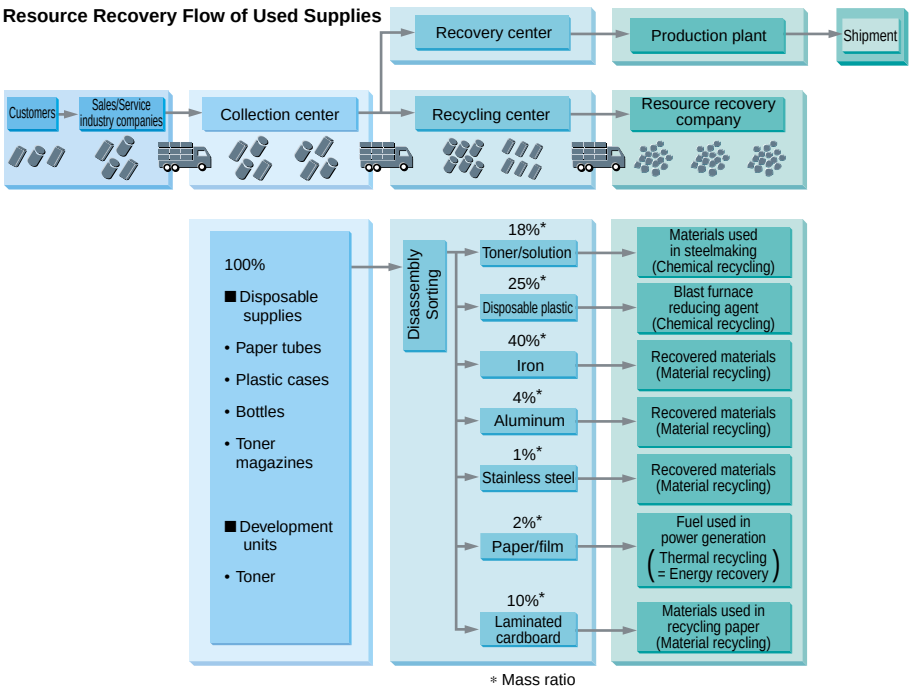
Spirio 5000RM made of recycled parts

Collection, Recovery, and Recycling of Copier Toner Cartridges

Full-scale collection of all office supplies, such as toner cartridges, started in 1998. Ricoh's new nationwide recovery and recycling network is scheduled for completion in fiscal 2001. Toner cartridges are disassembled, sorted, cleaned, and inspected before their parts are reused in production lines. Product quality standards for some of the cartridges were revised to include recovered and recycled parts.

Aiming at improving the resource recovery rate to 100%, Ricoh is working with NK Kankyo Corporation and Mansei Corporation to develop technologies that can be applied to all kinds of supplies, including toner, ink cartridges, and bottles.

Recycled toner cartridge



* Mass ratio

Recycling of Plastic Parts

Plastic parts account for approximately 20% of the weight of such OA equipment as copiers. The quality of plastic drops when different types or grades of plastic are mixed and, because such plastic materials cannot be reused for copier parts, plastics are difficult to recycle. For this reason, Ricoh began indicating, in 1994, the exact type and grade of materials used in each part according to the Company's recyclable design policies. Ricoh established certain grades of plastic to help improve the recycling rate of collected products. Plastic parts removed from products collected at recycling centers are sorted, graded, and crushed. They are then mixed with virgin plastic to be reused in Ricoh product parts. Ricoh's recovered plastic parts contain a relatively high rate of collected plastic, up to 30%. The average amount of recovered plastic in any given part is 20%–25%.

In fiscal 2000, Ricoh used about 300 tons of recycled plastic parts. With enhanced partnerships with resin manufacturers, Ricoh is aiming at switching 30% of 10,000 tons of plastic parts used for external covers to recycled plastic parts.

Plastic parts material grading

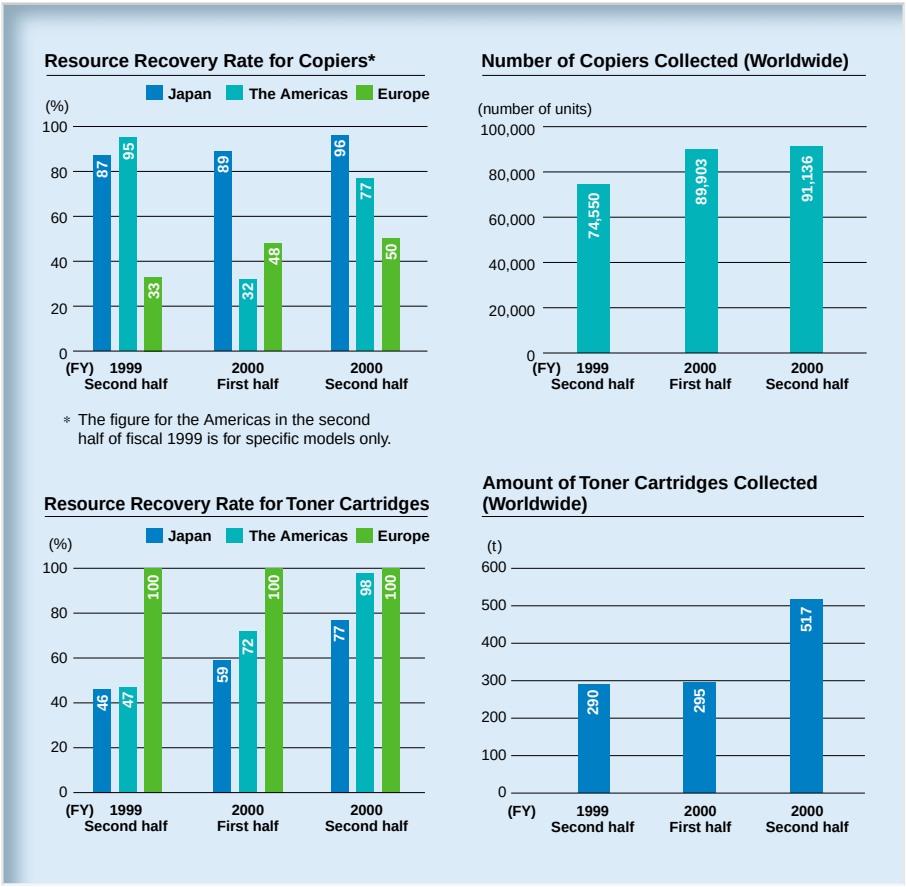
■ Establishment of a Global Recycling System

The Ricoh Group, in developing its business worldwide, conducts recycling activities at business and production sites all over the world to reduce environmental impact from a global point of view.

Improving the recovery rate and establishing a recycling system is important for efficient recycling. In Japan, the collection rate for office equipment, including copiers, is relatively high because old machines are collected at the customers' offices when the new machines are delivered. To make recycling and collection more efficient, the Ricoh Group established a network of product collection and recycling systems in Japan in fiscal 2000. The reuse and recycling rate for copiers reached 96.3%.

The Group is making efforts to establish a similar network of systems overseas to recycle and remanufacture copiers. To improve the collection rate of toner cartridges, the Group is developing extensive activities in business and production sites all over the world. Examples include asking customers to cooperate in the collection of toner cartridges through video presentations and on its Web site as well as by including collection-promoting prepaid labels in product packages. In Japan, the Ricoh Group is aiming to make the recycling business profitable by fiscal 2004 by developing recycling activities that focus on the inner loops of the Comet Circle* so that products and parts are recirculated at the appropriate time.

*** See pages 9–10.**



Nationwide Recycling System

A well-run nationwide recycling system for collecting and recycling Ricoh products is needed to efficiently reduce total environmental impact. In fiscal 1998, Ricoh started collaborating with collection centers, recycling centers, recovery centers, and plastic part manufacturers to establish a nationwide network that would facilitate the more economically efficient recovery and recycling of used products collected from all over Japan. The Company started collecting and recycling supplies and parts, such as toner cartridges, as well as the products themselves.

● Collection Centers

Used products are collected from sales companies, shops, and consumers at collection centers throughout Japan. To improve the efficiency and quality of collection operations, Ricoh established a vehicle-dispatching system linked with the customer collection order information. Products collected at collection centers are forwarded to recovery centers or recycling centers according to sorting standards.

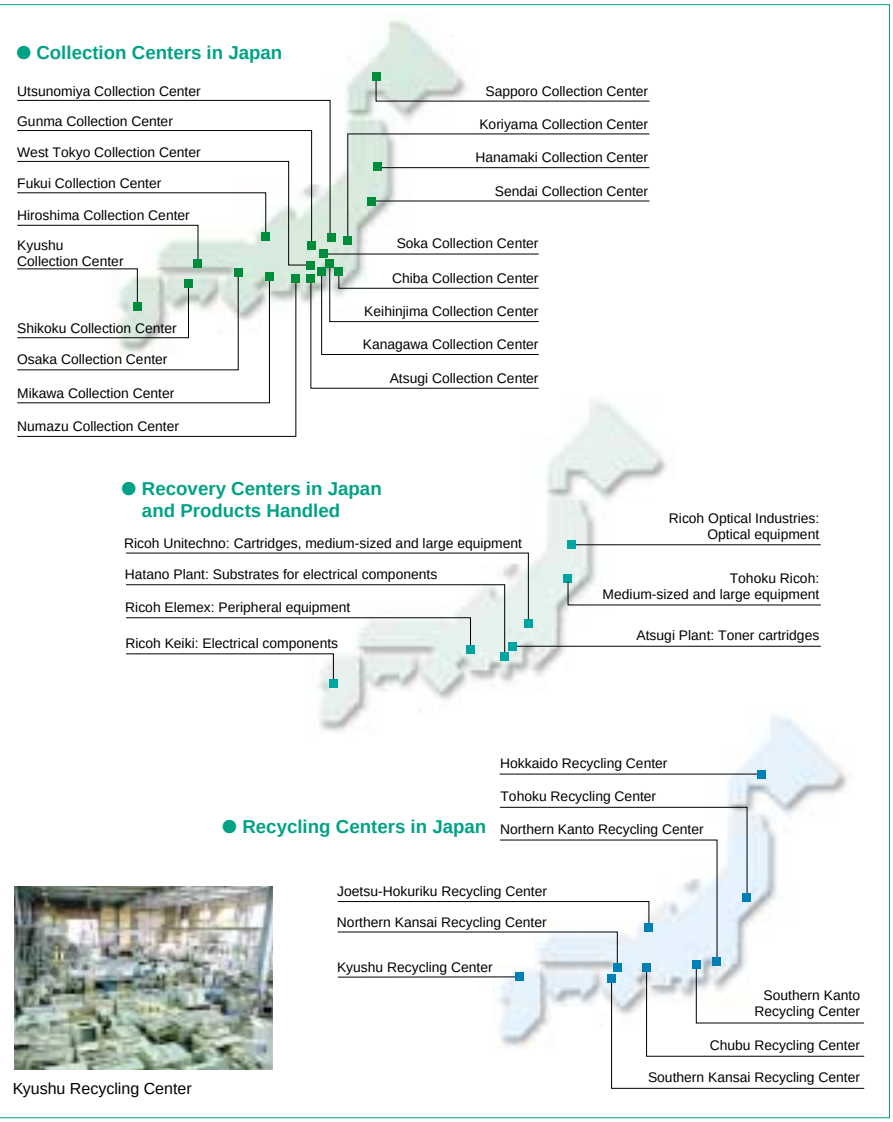
● Recovery Centers

Products forwarded to recovery centers are disassembled, cleaned, reassembled (with some parts being replaced), and inspected before going out as RC copiers*, RM copiers*, recycled parts, or recycled units. Ricoh plants and Ricoh Group companies that have production lines capable of such processing act as recovery centers.

* See page 40.

● Recycling Centers

Products forwarded to recycling centers are disassembled, and the parts and units that can be reused or recycled are sorted out. Those that can be reused are sent to recovery centers to be remanufactured. The material recycling rate for copiers improved to 99.7 % thanks to the cooperation of NKK Corp. in experiments with the company's thermo-bath technology. This technology made it possible to recover metal and plastic from shredder dust.

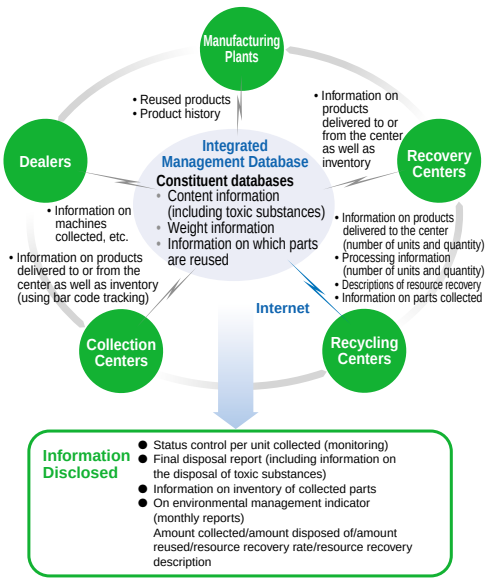


Kyushu Recycling Center

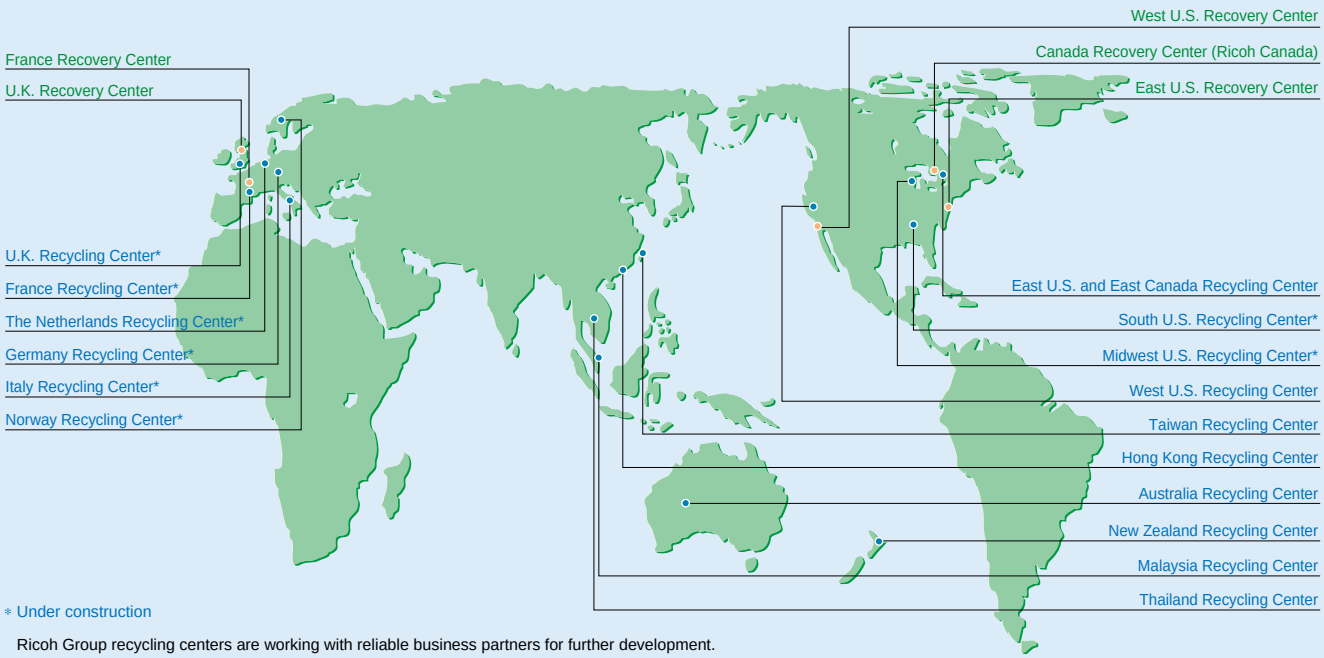
● Recycling Information Sharing System

Under this system, recovery and recycling centers can share information on the amount and rate of used products collected. Precise information can be obtained simply by entering the model code of the desired product. Ricoh is planning to use this system as part of its environmental impact information system*.

* See pages 19–20.



Recovery and Recycling Centers around the World



* Under construction

Ricoh Group recycling centers are working with reliable business partners for further development.

Global Recycling Activities

The Ricoh Group is expanding its business globally in five regions: Japan, the Americas, Europe, China-Taiwan, and the Asia-Pacific region. In 1999, the Ricoh Group began establishing its recycling system in four of the regions overseas to improve collection and recycling rates. In fiscal 2001, the Group aims to further improve those rates by making use of the recycling information system* developed in Japan.

* See page 42.

● The Americas

Through partnerships with courier companies, a toner cartridge collection system was established in 1995. Collection has expanded to include all models, thus achieving a high rate of collection. To gain the cooperation of customers in collecting toner cartridges, Group companies are actively promoting customers awareness by preparing videos and materials for their Web sites.

Group companies are also making intense efforts to collect, recover, and resell rented copiers. REI (Ricoh Electronics, Inc.) is acting as a recovery center in the United States under Ricoh's quality standards to recover copiers and toner cartridges. Resource recovery companies that satisfy Ricoh's quality standards achieve a high resource recovery rate.

Toner cartridge recovery line at REI

● Europe

Environment-related laws and regulations have long been enforced in European countries. Municipal governments and industry organizations were in charge of collecting and disposing toner cartridges and other parts. To further encourage the collection of toner cartridges, the Ricoh Group established a collection system in Europe in early 2000. Relevant companies sent direct mail and distribution stickers to promote customer awareness of the collection system.

As for recovery, Ricoh UK Products and Ricoh Industrie France have been designated as recovery centers for both machine units and toner cartridges according to Ricoh's quality standards. Waste that is difficult to recover is sent to designated resource recovery companies under the Ricoh quality standards modified for each country because there are legal difficulties in some European countries in transporting waste. By the end of fiscal 2001, some of the leading countries will have selected resource recovery companies in their continuing efforts towards resource recovery.

Toner cartridge recovery and recycling line in Ricoh Industrie France

RM copier production line in Ricoh UK Products

● China-Taiwan

Pursuant to the China-Taiwan collection program, Hong Kong started collecting toner cartridges in 2000. Focusing on the reuse of products, some regional plants also started the recovery of collected toner cartridges in the first half of fiscal 2001. Coverage of models that are to be collected and recovered is scheduled to be expanded in the future. To promote customer awareness of the collection system, Ricoh Group companies in the region spread their corporate views through brochures and stickers.

Waste that is difficult to recover is sent to designated resource recovery companies under the Ricoh quality standards modified for each country because there are legal difficulties in some countries in transporting waste.

Product units that are traded are to be recovered for resale pursuant to the internal quality standards of each dealer. Waste that is difficult to be recovered is carefully disassembled and sorted manually to achieve a higher resource recovery rate.

● Asia-Pacific Region

Pursuant to country-specific collection programs, the collection of toner cartridges started in autumn 2000. Collected products and parts are recovered at resource recovery companies that satisfy Ricoh's quality standards modified for each country. The reuse of products will be a future issue, taking into consideration recovery at plants outside the region. To attract customers' attention to the efforts of the companies involved, stickers are distributed and information on collection activities is provided on their Web sites.

Similar approaches as those in China-Taiwan for the recycling of product units are being taken.

■ New Approaches to Resource Conservation

In addition to its reuse and recycling activities, Ricoh has introduced modular designs to reduce the amount of resources used.

Modular Designs: Extending Product Life

Products that no longer satisfy the ever-changing customer needs are cast aside. Most of those products, although still usable, cease to be used only because they are outdated.

If product performance is able to change and keep pace with customer needs, the life of a product may be significantly extended. Following this line of thought, if copiers are divided into several modules, such as for paper loading, paper feeding, and ink fixing, then, after setting module size and intermodule interface, new copiers can be developed and designed so as to be upgradeable and able to respond to more demanding customer needs by simply exchanging old modules for newer ones. In the future, such upgrading may be done at the customer's office rather than having the products collected to exchange modules.

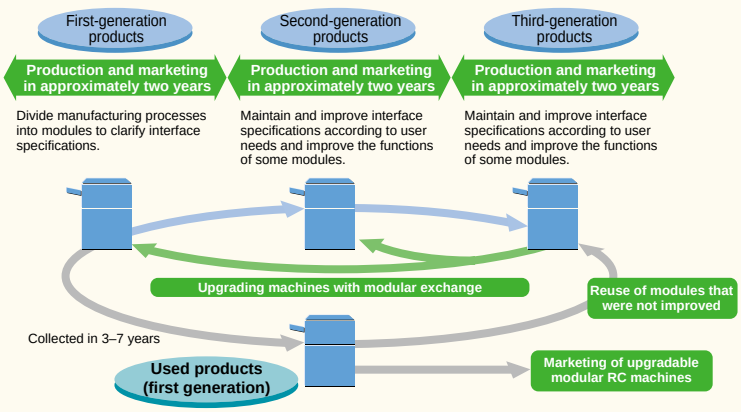
Design Improvement from an LCA Point of View

It is important for more efficient recycling to also reduce costs. LCA studies show that improvements in design would significantly affect recycling costs. Ricoh, based on its recyclable design policy, checks materials as well as design methods at the design stage. Ricoh will, in the future, endeavor to make product lives longer through such means as modular designs in efforts to reduce environmental impact as well as relevant costs throughout a product's life cycle.

Modular Designs Will Change the Way Manufacturers Think

If the idea of modular designs spreads throughout the world, products provided by manufacturers will no longer be static but rather dynamic, ever evolving. As a result, manufacturers will have to change their strategies from recycling-oriented (how to reuse products) to life cycle-oriented (how to deal with products throughout their life cycles). Thus, modular designs will change us from being manufacturers to life cycle service providers.

Modular Designs and Life Cycle Business Strategies



Review of Environmental Impact Reductions Achieved in Fiscal 2000

Business Sites

Resource Conservation and Recycling

Results for Fiscal 2000

The total final disposal amount of waste was reduced by 35.6% from the fiscal 1999 level.

- Total amount of waste discharged: ····· 35,300 tons
- Total final disposal amount of waste: ····· 3,919 tons

(See pages 25–28.)

All 16 production sites in Japan achieved zero waste, as did production sites in France, the United States, and Mexico. The Ricoh Group is now promoting activities to achieve zero waste at production sites in the U.K., Taiwan, and China. The Aoyama Office and Fukui Ricoh, one of Ricoh's sales companies, also achieved zero waste. The Group will make further improvements to its recycling activities while restricting the amount of waste generated and the amount of resources used.

Zero waste activities are essential in promoting the efficient use of resources, to create a resource-recirculating society. Such activities are also important in encouraging all employees to participate in environmental conservation activities. Through zero waste activities, many employees become more aware of environmental conservation and better understand the importance of environmental conservation activities as a whole. The Group will continue to promote the voluntary activities of employees, thereby helping them to become more environmentally conscious.

Energy Conservation

Results for Fiscal 2000

- CO_2 emissions: ····· 243,586 tons
- Decrease in CO_2 emissions from the fiscal 1999 level: ····· 0.85%

* Ricoh reduced total CO_2 emissions by 9.8% and CO_2 emissions per sales unit by 20.1% from fiscal 1990 levels.

(See pages 29–30.)

The Ricoh Group drew up an action plan in 1998 using an index of CO_2 emissions per sales unit to reduce CO_2 emissions. According to the action plan, by fiscal 2010 the Group is to have reduced CO_2 emissions per sales unit output by 56% from the fiscal 1990 level while aiming for a favorable expansion of the Group's business scale and a reduction in total CO_2 emissions in accordance with the Kyoto Protocol. In fiscal 2001, the Ricoh Group plans to decrease sales unit CO_2 emissions by 15%. Ricoh, however, already attained this target in fiscal 2000, and most of its affiliates achieved a 15% decrease in the same year. Ricoh also reduced total CO_2 emissions by 9.8% from the fiscal 1990 level.

New measures taken to achieve the final goal by fiscal 2010 include using new energy sources, such as solar and wind power. Ricoh is already using solar power, albeit on a limited scale, in the transportation of products as part of its manufacturing process. In addition, we participated in the Green Power Certification System implemented by JNEC. We will endeavor to attain our goal by taking versatile measures in addition to those mentioned above.

Pollution Prevention

Results for Fiscal 2000

The Ricoh Group reduced the use of PRTR substances by 12% and the discharge of PRTR substances by 16% from fiscal 1999 levels.

- Amount of PRTR substances used: ····· 41,907 tons
- Amount of PRTR substances discharged: ····· 21,894 tons

(See pages 31–32.)

In order to reduce the environmental impacts of the chemical use and discharges from the sites, the Ricoh Group aims at reducing the use of PRTR (Pollutant Release and Transfer Register) substances by 20% and the discharge of such substances by 50% from fiscal 1997 levels by fiscal 2001.

The most efficient way to reduce the environmental impact of harmful chemical substances is to use alternatives that have less impact on the environment. However, for chemicals that have no alternatives, coefficients based on the degree of environmental impact are assigned to each substance to control their use and discharge. The total use/discharge of PRTR substances is calculated by multiplying the use/discharge of each chemical by the environmental impact coefficient assigned to it and totaling the product of all chemicals. Ricoh has already attained the fiscal 2001 target for total use. As for the total amount discharged, we have made significant achievements from the beginning of our activities. By the end of fiscal 2001, we will have attained the target for that term by implementing such measures as totally stopping the use of dichloromethane used in cleaning parts.

Products

Resource Conservation and Recycling

Results for Fiscal 2000

- Number of copiers collected worldwide: 181,039 units
- Amount of toner cartridges collected worldwide: 812 tons
- Resource recovery rate (Second half of fiscal 2000)
  Copiers: 96% in Japan, 77% in the Americas, 50% in Europe
  Cartridges: 77% in Japan, 98% in the Americas, 100% in Europe

(See pages 39–44.)

The Ricoh Group believes that for resources to be used effectively, it is most important that consumers be able to use products for a long period. However, the life of any product is limited. Therefore, the Group is building a system to recover and recycle used products on a global scale to conserve resources. In fiscal 2000, the Ricoh Group recovered and recycled 181,039 used copiers and 812 tons of toner cartridges worldwide. In the future, the Group will strengthen this activity, especially in the Americas and Europe. In fiscal 2001, the Group expects to achieve higher recovery and recycling rates for used copiers and toner cartridges.

Collection and recycling costs are currently higher than the profits obtained from the reuse of products and the sale of recycled materials. Ricoh, by recovering used copiers and toner cartridges, aims to create an environmental management system that reduces the environmental impact of business operations while making acceptable profit. To this end, we will promote more environmentally friendly products and the more profitable reuse of used products.

Energy Conservation

Results for Fiscal 2000

The Ricoh Group reduced the energy consumption of the following products from fiscal 1996 levels.

- Color copiers and multifunctional copiers: 33.5%
- Black-and-white copiers and multifunctional copiers: 10.5%
- Facsimiles: 79.7%

(See pages 35–37.)

The Ricoh Group already attained its fiscal 2001 energy conservation target for color copiers thanks to the remarkable advancements made in energy consumption efficiency, mainly those found in the highly energy-efficient products introduced in fiscal 2000. One in particular was a user-friendly black-and-white copier that boasted the energy consumption of approximately one-fourth that of a traditional copier. Copiers based on the Group's QSU technology* were introduced at the end of the fiscal year and, therefore, did not contribute much to the amount of energy conserved in fiscal 2000. The machines are expected to play a major part in energy conservation in fiscal 2001, however.

Ricoh believes it is possible to increase energy conservation by developing technologies that provide both energy-saving and user-friendly functions. For black-and-white copiers, we developed QSU technology, which enables quick start up (10 seconds) from standby mode (which consumes 7 W of power). The reduced startup time makes users more willing to take advantage of the standby mode.

Thanks to the development of QSU technology, we have already achieved the quantitative target for fiscal 2006 as stipulated in the Law concerning the Rational Use of Energy for products with printing speeds under 50 sheets per minute.

* See page 36.

Pollution Prevention

Results for Fiscal 2000

- Ozone emissions per imaging device: 0.013 mg/m^3
- Dust emissions: 0.060 mg/m^3
- Noise emitted while in standby mode: 45.9 dB (A)
- Noise emitted during operation: 68.2 dB (A)

(See pages 31–32, 38.)

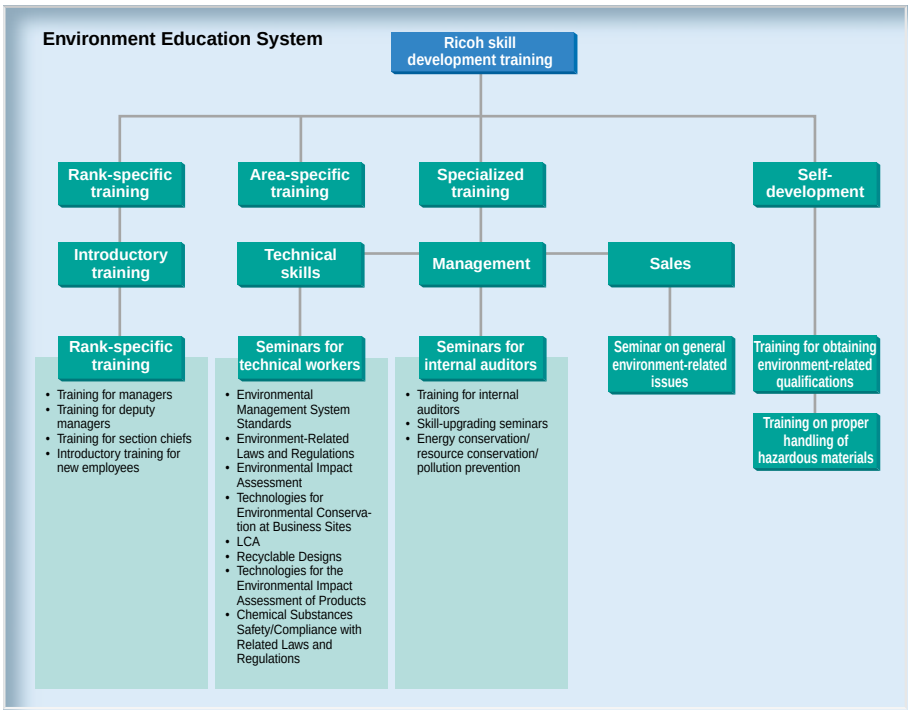
To reduce the environmental impact of chemical substances contained in products, the Ricoh Group made efforts to reduce the lead, vinyl chloride, and hexavalent chromium contents of its products by at least 50% from the fiscal 1997 level. In June 2001, the Group will introduce products that contain smaller amounts of these substances.

The costs of properly handling the above-mentioned substances are predicted to increase. The Ricoh Group calculates that in five years the overall cost for the substances, including collection and recycling costs, will be at its highest. While promoting cost efficiency based on this calculation, the Group intends to further reduce the use of such substances. As for the small quantities of ozone and dust that are emitted during the operation of products and the noise pollution that is created, the Ricoh Group has set targets for their reduction and is striving to attain them. We have already made far more improvements than expected for ozone emissions, and will be able to achieve the targets also for dust and noise.

The Ricoh Group established limits for noise pollution in 1992 and for the amount of substances emitted from products in 1993. Since then, the Group has regularly lowered the limits and improved its technologies to comply with the standards. The Ricoh Group will continue to conduct environmental activities in consideration of customer needs as part of its efforts to improve customer satisfaction.

Environmental Education and Awareness Promotion

In successfully implementing environmental management, the aggressive promotion of environmental conservation activities by each division is needed, as are statements from top management on the need for perseverance in carrying out such activities. Urging employees to become more aware of environmental issues is equally important. Environmental conservation activities may appear to be a corporate responsibility, but employees are the ones who actually conduct the activities. The success or failure of any activity depends upon the extent to which employees understand its importance. The Ricoh Group is promoting employee awareness of environmental issues in a variety of ways, such as by providing environmental education, sharing relevant know-how, supporting the volunteer activities of employees, commending such activities, and conducting surveys on the environmental awareness of employees.



Environmental Education

The Ricoh Group established an education system to help employees better understand the Group's environmental activities and become more environmentally aware professionals. Under this system, a variety of seminars and training are held, including those for new employees, designers, and internal auditors under Ricoh's environmental management system. Furthermore, employees are encouraged to obtain official qualifications for pollution control managers and for work environment inspectors under an internal system established to award employees who have achieved any level of performance in environmental conservation.

Environment-Related Seminars and Number of Participants

Name of Seminar	FY 1998	FY 1999	FY 2000
Recyclable Designs	18	21	32
Technologies for the Environmental Impact Assessment of Products	22	22	26
Environment-Related Laws and Regulations	52	81	66
Environmental Management System Standards	69	8	30
LCA	20	46	—
Chemical Substances Safety/ Compliance with Related Laws and Regulations (Beginner's)	19	29	25
Chemical Substances Safety/ Compliance with Related Laws and Regulations (Advanced)	18	26	16
Technologies for Environmental Conservation at Business Sites	16	—	10
Environmental Impact Assessment at Business Sites	36	—	13
Total Number of Participants	270	233	218

Promoting Awareness Using In-house Newsletters and Environmental Information Journals

Ricoh's in-house newsletter carries news about the Group's environmental activities and social standing, citing such achievements as awards and commendations won.

The Ricoh Group's environmental information journal *ECO TODAY*

These articles not only convey information, but they also show employees Ricoh's strong determination to tackle environmental issues as a company. The Ricoh Group publishes an environmental information journal called *ECO TODAY*, in which it introduces the environmental conservation measures of each division as well as the opinions of environmental NPOs. Thus, the Group promotes employee environmental awareness from a broad perspective.

Concurrent Development of Know-how Using the Ricoh Group's Network

Ricoh has built a database of the latest environmental information that all Ricoh Group companies can access for reference or to enter new information. The database allows the divisions of each Group company to refer to the latest examples of environmental conservation and use them as benchmarks, put the stored information into practical use, and further improve it from different points of view.

Company Environment Competition

The Ricoh Group has held a Company Environment Competition every year since 1995. Starting from the sixth competition, which was held in 2000, the scope was expanded to cover the entire Group. At the seventh competition, held in January 2001, REI presented the activities it conducted to promote zero waste, and Ricoh Industrie France exhibited what it did to conserve water resources. In addition, the top management had the opportunity to introduce its policies on environmental management, which clearly illustrates how important global environmental management has become to the entire Ricoh Group.

In November 2000, Ricoh Unitechno held an event called Environmental Communication 2000, in which the environmental activities of its plants were introduced and the company's ideas on environmental conservation at the home were proposed. At the event, Ricoh Unitechno also commended the students of neighboring elementary schools on the pictures they painted regarding the environment. Thus, the event provided an opportunity for the company to communicate with the local community.

The Seventh Company Environment Competition

Environmental Communication 2000 held by Ricoh Unitechno

Nurturing Environmental Volunteer Leaders

A system to promote employee awareness of environmental issues is also important. The Ricoh Group deems environmental volunteer activities important not only as a means of contributing to society but also as a means of making employees more environmentally conscious. The Group's leadership-training program* provides employees with opportunities to participate in volunteer activities. Employees can truly understand the importance of environmental conservation more by actually taking part in volunteer activities than by simply reading about it in books.

* See pages 53–54.

Commending Environmental Activities

Ricoh has a system to commend Ricoh Group employees for their outstanding activities. The Minori Prize is given under this system in recognition of various activities, including those for environmental conservation. In fiscal 2000, the prize was given to commend activities that promoted energy saving at plants, the reuse of recycled cartridges for business purposes, and the implementation of recycling at plants.

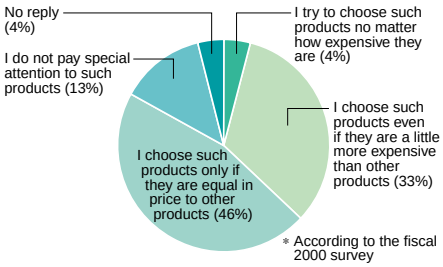
Awareness Survey

Ricoh conducts surveys to estimate the effects of the environmental education it aggressively aims at employees. According to the latest results, 1,916 employees (15.6%) responded to the fiscal 2000 survey, an increase from the 1,266 respondents to the fiscal 1999 survey. This shows that more employees are interested in environmental issues. Of the respondents that answered, 88% said that they carry out activities that reduce environmental impact, such as saving electricity, sorting waste, and saving paper. Regarding suggestions for environment- and user-friendly devices, respondents listed erasable photocopies*, copying machines that can start up quickly from standby mode*, and toners that can be fixed at low temperatures, among others.

* The fiscal 2000 survey was conducted in June 2000, when Ricoh had not yet marketed erasable photocopies or copying machines that can start up quickly from standby mode.

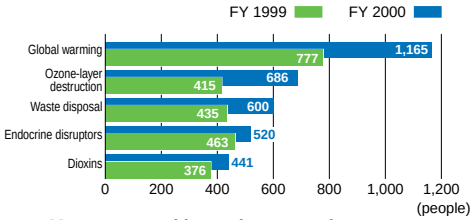
For more information on erasable photocopies, see pages 37–38, and for more information on QSU copying machines, see page 36.

Employee Evaluation of Environment-Friendly Products in Their Personal Lives

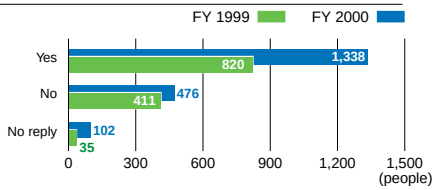


* According to the fiscal 2000 survey

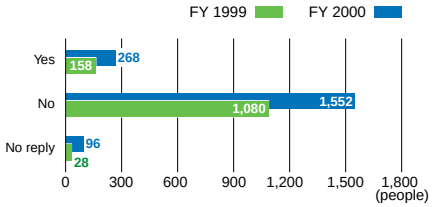
Top Five Environmental Issues That Employees Are Interested in (Multiple answers allowed)



Are You Interested in Environmental Volunteer Activities?

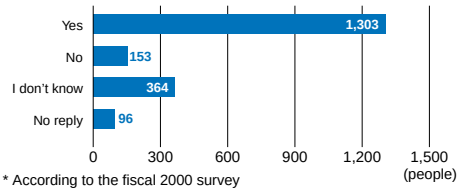


Participation in Environmental Volunteer Activities



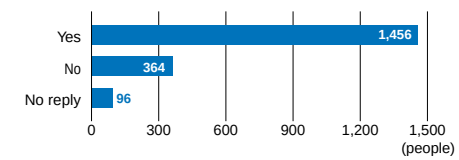
Like in fiscal 1999, the number of employees who participated in environmental volunteer activities was small compared with the number of employees interested in such activities, even though there was a higher level of interest. This shows that Ricoh needs to develop more environmental volunteer leaders and do more to support their activities.

Do You Think Environmental Conservation Activities Will Lead to an Increase in Corporate Profit and Value?



* According to the fiscal 2000 survey

Do you Think that Companies Should Give First Priority to the Environment in the 21st Century?



Respondents who answered "No" listed "employment and human rights," "technological innovation," etc., as the most important issue to be tackled by companies.

* According to the fiscal 2000 survey

Personnel-Related Measures

Ricoh promotes, as its corporate philosophy since its foundation, the Spirit of Three Loves*: love your neighbor, love your country, love your work. This philosophy is clearly reflected in the Company's management philosophy* and action guidelines. Based on this philosophy, we constantly strive to create new value by taking proactive measures based on a clear understanding of problems and objectives, to further motivate ourselves through the satisfaction of contributing to customers and society, and to enrich ourselves both as a Company and as individuals.

* See page 5.

Systems That Encourage Employees to Tackle Challenges Wholeheartedly and Creatively

Ricoh takes the desires and aptitudes of employees into consideration when allocating business tasks and allows employees to set their own goals, thus ensuring that the work will be done wholeheartedly and creatively. To support this practice, the Company implemented a system in 1996 in which employees set their own objectives at the beginning of each term based on the Company's strategies and measures and align their objectives with those of the Company through discussions with their managers. Then, at the end of the term, employees review their achievements with their managers. The Company evaluates employees based on term-end reviews.

Ricoh introduced an in-house staff recruitment system in 1991 and a system to promote ventures within the Company in 1993 called The Man Project.

Improving the Work Environment to Help Employees Develop More Skill

Ricoh believes that the secret to improving employee skills is to encourage self-development. Therefore, the Company needs to support employees in developing their abilities, utilizing those abilities in their jobs, and getting satisfaction and enjoyment out of the self-development process. In this way, Ricoh is improving the work environment for employees to develop and use more skill. More specifically, the Company introduced an internal qualification system called the Basic License Assessment (BLA), which encourages new employees to select a field in which they wish to specialize and to develop the skills needed to become an expert in that field. There is also a program called the Professional Development Program (PDP) that promotes and supports the self-development of employees by helping them set their objectives through discussions with managers. In addition, a system called the Development Program for Innovative Leaders (DPI)* was implemented in 1998 that targets all managers. Under this system, managers are evaluated by their subordinates and those they work closely with, and the results are analyzed and given to the managers to strengthen their leadership abilities.

* See figure below.

Improving the Work Environment to Benefit Employees

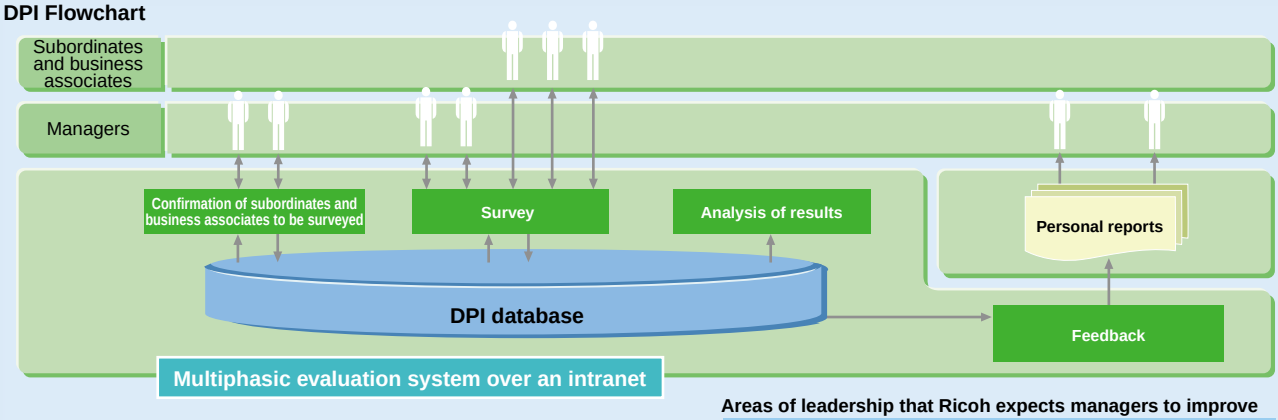
Ricoh has introduced innovative measures to improve the work environment and benefit employees.

Ricoh introduced the five-day workweek in 1971 (at a time when six-day workweeks were the norm), the Family Bonus System (giving employees special holidays and bonuses in the form of travel coupons according to the number of years of service) in 1979, and flextime in 1990. Also in 1990, a system to support childcare was implemented, giving female employees childcare leave or shorter work-hours up until the end of the month of the child's second birthday. At present, male employees can also take advantage of this system. In addition, the Company has set up a system to support employees who must commute long-distance by bullet train.

Simultaneously Achieving Corporate Growth and Employee Well-being

The opinions and wishes of employees have long been reflected in Ricoh's improvements in the work environment as well as in its personnel-related measures. This was accomplished by finding out what employees think and what they want through daily contact and meetings.

DPI Flowchart



- Following a list of questions, the daily behavior of a manager is evaluated by the manager's subordinates and those he/she works closely with.
- The results of the evaluation are given to the manager after being analyzed, and the manager makes efforts to improve his/her leadership abilities based on those results.

Areas of leadership that Ricoh expects managers to improve

Area of leadership	
Vision (Showing the right direction)	Empowerment (Giving motivation)
Change (Striving for improvement)	Development of human resources (Helping employees develop their abilities)
Pursuit of goals (Persevering in attempts to attain goals)	Basic attitude (Leading by example)

Note: Three to five specific examples of behavior are given for each of the elements shown above, and questions on them are asked.

As a comprehensive method of finding out what employees think and what they want, Ricoh introduced the Opinion Survey* in 1997. About one out of four employees are chosen at random and given the survey, which contains questions on their jobs and their work, efforts toward achieving customer satisfaction (CS), bosses, the workplace, the development of abilities, and the Company's management of personnel. The results of the survey are then taken into consideration when the Company creates countermeasures to the problems identified.

In as early as the 1960s, Ricoh incorporated the idea of sharing profits with employees, calculating bonuses to clearly reflect the Company's financial achievements. Also, the Company makes certain that employees are deeply aware of the importance of thinking of the Ricoh Group as a whole and that improving corporate value as a group is one of its management principles. To emphasize this idea of "groupness" to employees so that they will act in a way that is congruent to this principle, the Company incorporated an index that reflects the financial achievements of the entire Ricoh Group into a formula used to calculate bonuses for employees. The revised formula was used in the second half of fiscal 2000 to calculate summer bonuses for fiscal 2001.

* See figure below.

Personnel-Related Measures to Promote Environmental Management and Social Contributions

Acknowledging the importance of environmental management and social contributions as a corporate citizen, Ricoh is implementing the following personnel-related measures.

● **Clearly Stipulating Ricoh's Code of Conduct and Encouraging Employees to Follow It**

Brochure stating Ricoh's Code of Conduct

Ricoh clearly stipulates its Code of Conduct* and distributes brochures stating it to employees to encourage them to follow it.

* See page 6.

● **Evaluating the Environmental Conservation Activities of Divisions**

Ricoh adds the concept of environmental conservation into the criteria it uses to evaluate the business achievements of its divisions*. Moreover, the Company has created a system that considers achievements made in environmental conservation to determine the amount of bonus to be given to individual employees.

* See page 16.

● **Rewarding Social Contribution Activities with the Minori Prize**

Ricoh evaluates social contributions made by employees and promotes efforts in this area by rewarding the best with the Minori Prize*. The prize was given for the design and development of a Braille plotter in 1996 and for participation in the cleanup of heavy oil after the Nakhodka oil spill accident in 1997, among others.

* See page 48.

● **Supporting Volunteer Activities**

Employees can take time off to volunteer for activities, take care of family members, or to recover from non-work-related injuries or diseases. Moreover, employees can take time off from the Company for a certain period of time for volunteer activities under the leave of absence system for volunteer activities.

● **Employing the Physically Challenged**

Ricoh's employment rate of the physically challenged was 1.85% in June 1998, 1.89% in June 1999, and 1.94% in June 2000, exceeding the employment rate required by law. The Company holds sign language training seminars to help the hearing impaired lead more comfortable social lives, and employees voluntarily participate in a club for learning sign language.

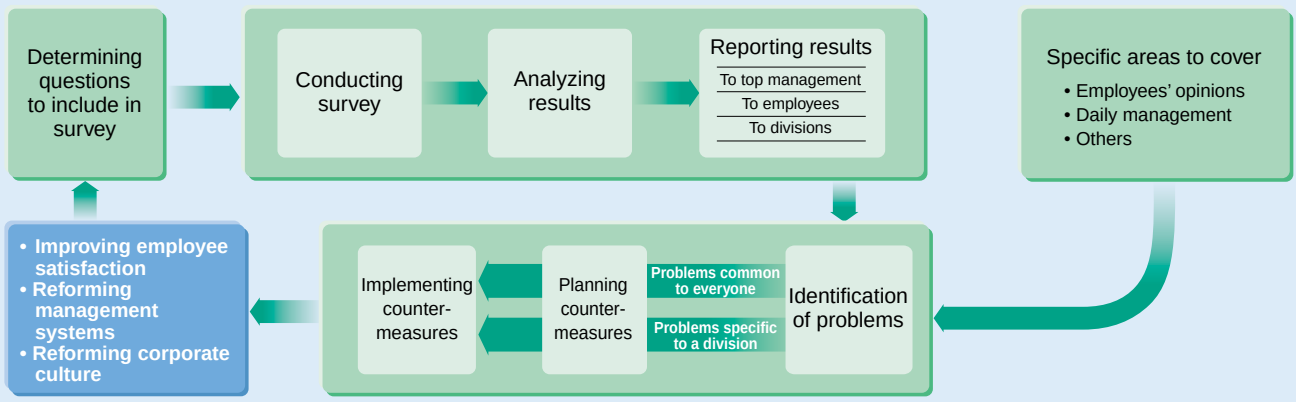
Ricoh Espoir

One of Ricoh's special subsidiaries, Ricoh Espoir, was established to promote the employment of people who are severely physically or mentally challenged. The facilities of the company were constructed with employee needs in mind in order to provide a work environment in which each employee can work comfortably. In 1996, Ricoh Espoir received a prize in excellence from the Japan Association for the Employment of Persons with Disabilities.

● **Making Efforts to Provide Equal Employment Opportunities for Men and Women**

Since the 1997 revision to the Equal Employment Opportunity between Men and Women Law, Ricoh has been making efforts to prevent sexual harassment in the workplace by making employees more aware of this issue. The Company established the Secretariat of the Human Rights Promotion Committee within the Company for employees and set up a consulting service outside the Company where employees can go. Thus, employees can easily consult with the Company on human rights-related issues. In the event employees infringe on the rights of others, Ricoh, after reviewing all findings, will take the most appropriate action, which may involve counseling, warning, transferring, or firing the employee accused.

Opinion Survey



- The Opinion Survey is conducted to understand the degree of willingness and satisfaction employees have and, by analyzing the results, to identify problems that need to be solved, improving employee satisfaction and reforming management systems and the corporate culture.
- The results of the Opinion Survey are given not only to top management but also to each division and all employees through in-house newsletters.
- Based on the results of the Opinion Survey, both common and division-specific problems are identified and taken into consideration in determining corporate principles or in examining and implementing corporate measures.

Social Contribution Activities (Forest Preservation and the Youth Education)

Ricoh's mission as a corporate citizen is to communicate with the public and contribute to the creation of a more affluent society through the unified efforts of management, employees, and shareholders. To ensure that our efforts will continue, we established a social contribution fund. Every year, with the approval of shareholders at the general meeting, 1% of the difference between annual profit and annual dividends up to ¥200 million is added to the fund. The fund is used in activities dealing with global issues, such as global environmental conservation, sound education of the youth, the promotion of culture and sports, and the promotion of science and technology. The fund is also used in activities that respond to social needs and continuously contribute to local communities.

Forest Preservation Activities

The global rate of deforestation is increasing. Between 1980 and 1990, 154 million hectares of tropical forests around the world disappeared, an area four times the size of Japan itself*.

Deforestation is the cause of such serious problems as deteriorated ecosystems, loss of water resources, soil erosion, air pollution, and decreased CO_2 absorption. Japan has maintained a relatively high percentage of forested area at approximately 67%, while that of the entire Asian region has decreased to as low as about 16%. This decrease was caused in part by lumber from tropical regions being exported, 50% or more of which was destined for Japan and other industrialized countries in Europe and the Americas.

Ricoh established its social contribution program in fiscal 1999 to restore and preserve forests as well as to conserve biodiversity, which is being threatened worldwide. The program focuses on the preservation of virgin forests and the restoration of natural forests, including *satoyama* (community forests), in the Asian region, including Japan.

* *State of the World's Forest 1999*, FAO

● Importance of Forest Preservation and Restoration

At present, various companies and national governments are engaged in afforestation activities around the world, planting eucalyptus trees or pine trees. Although such activities are beneficial to an extent in terms of preventing certain kinds of natural disasters and reducing greenhouse gases through the absorption of CO_2, there are some doubts as to the extent of those benefits to the ecosystem. To restore the ecosystem and prevent the global environment from deteriorating further, it is important to create ideal forests by planting different native trees. Of course, it is also important to preserve the original forests that are naturally ideal.

● Promotion of Activities through Partnerships

Forest preservation activities are almost impossible to carry out without the understanding and cooperation of local communities. Therefore, it is important to help those communities become more environmentally aware, because once they are, they will gladly help out as much as they can. In poorer regions, it is also important to offer jobs to the local community in the areas of forest restoration, afforestation, forest management, and resource recirculation. With this in mind, Ricoh started six projects under its social contribution program in fiscal 1999 to restore and preserve forests. In fiscal 2000, two projects were added to the program. The projects take the local ecosystem and community into careful consideration and work together with environmental NPOs, which are pioneers in forest preservation and restoration activities. Ricoh promotes partnerships with its overseas Group companies as well. Hideki International, for example, donated a printing machine to Colombo University through Ricoh's forest preservation project. Hideki International is one of Ricoh's agents in Sri Lanka, and Colombo University is home to the Field Ornithology Group of Sri Lanka. The donation was reported in major newspapers in Sri Lanka. Ricoh Philippines, as another example, offered prizes for a poster contest as one of its activities related to Ricoh's forest preservation project. Ricoh

Restoration of *satoyama* (Bangladesh)

Restoration of riverhead forests (Malaysia)

Conservation and restoration of environmental hot spots (Sierra Madre, the Philippines)

Ricoh supported NPOs

Country	Project	NPO		
		Name	Description	Web site
Sri Lanka	Conservation and restoration of forests in world heritage areas	Field Ornithology Group of Sri Lanka	Research of birds in Sri Lanka and domestic and international environmental conservation activities through the protection of wild birds	—
Philippines	Conservation and restoration of forests in environmental hot spots	Conservation International	Using funds and human resources for the conservation of biodiversity (1,200 members in 32 countries)	http://www.conservation.org
Brunei	Preservation of virgin mangrove forests	Ramsar Center Japan	Conducting activities to promote the ratification of the Ramsar Convention (on Wetlands) in Asia and the appropriate utilization of wetlands	http://www.museum-japan.com/rcj/
Madagascar	Survey of tree crowns in forests	Pro Natura	International NPO conducting forest preservation activities in Asia and Africa	—
Bangladesh	Restoration of *satoyama*	Bangladesh Poush	Providing environmental education, especially to children, and promoting afforestation activities in Bangladesh	—
Japan	Preservation and restoration of *satoyama*	Wild Bird Society of Japan	Conducting activities to protect wild birds and to preserve their habitats based on the idea that humans must share the earth with wild birds	http://www.wbsj.org/
Malaysia	Restoration of natural forests	WWF	The world's largest environmental conservation NGO conducting a wide range of activities to conserve biodiversity, including conserving the ecosystem and preventing global warming	http://www.wwf.or.jp/ (WWF Japan)
Malaysia	Restoration of riverhead forests	OISCA	Promoting the independence of local communities and environmental conservation through rural development and greenery activities in the Asian-Pacific region	http://www.oisca.org/english/index.htm

Philippines is also independently supporting forest preservation activities conducted by Conservation International. Through these activities, local communities become more environmentally aware, which greatly promotes social and environmental contribution. Local communities become more aware of the importance of the natural environment when they observe how concerned Japanese companies are about preserving it. In Japan, Ricoh stresses the importance of forest preservation through advertisements in magazines and plans "eco-tours" to help bring this fact to the Japanese people even further.

Ichimura School of Nature

Ricoh's social contribution activities are especially focused on promoting the sound education of Japan's youth. In fiscal 2000, the Company started a project to open the Ichimura School of Nature, commemorating the 100th anniversary of the birth of Kiyoshi Ichimura, the founder of Ricoh. At the Ichimura School of Nature, children from the 4th grade of elementary school to the 2nd grade of junior high school will spend every two weekends in a month plus summer vacation together to grow crops and take care of livestock. The school's basic aim is to help children learn how to earn a living from mother earth through experience and community living. The school will also teach them to cherish the natural environment, to be considerate of others, and to obey rules as a member of society as well as how to take care of themselves and how to discern safe activities from risky ones. The school will be opened in the Kanto Region (Yadoriki in Ashigarakamigun) in March 2002 and in Saga Prefecture, the birthplace of Kiyoshi Ichimura, in fiscal 2002.

Ricoh Kids Workshop

Ricoh completely supports the Ricoh Kids Workshop organized by the New Technology Development Foundation*. At the workshop, children from the 4th grade of elementary school to the 3rd grade of junior high school enjoy getting hands-on experience disassembling facsimiles and laser printers to see how they work. The workshop was held three times in fiscal 2000.

One of the children at the workshop said, "I had a great time taking the machines apart! It was neat to see what the inside of a machine was like." Another child said, "To be honest, I don't like science very much, but the experiment we got to do changed my mind. It was the first time I was really interested in doing a science experiment. I have a lot of friends who don't like science either, and I want them to participate in the workshop." The parents of the participants also appreciated the event. One parent was quoted as saying, "Usually, my child returns home from this kind of an event with nothing in particular to say about it. This time, however, as soon as he returned home he told me that he had a great time. The experiment he got to do seemed like a wonderful experience for him, especially when given enough time for explanations."

* See side bar.

Promoting Children's Awareness of Environmental Issues

Ricoh created ECO TODAY[1], a Web site for elementary and junior high school students, in cooperation with students from Yokohama Digital Arts School. Through a series of dialogues between a boy, Osamu, and a girl, Hikaru, the site presents global environmental problems using easy-to-understand examples from daily life and describes what can be done to solve the problems. The Web site also introduces Ricoh's environmental activities. In fiscal 2000, Ricoh received first prize from Eco goo[2], an environmental portal site.

1. See page 61.
2. http://eco.goo.ne.jp/

■ The New Technology Development Foundation (Ichimura Foundation)

In 1968, Kiyoshi Ichimura, founder of Ricoh, established the New Technology Development Foundation to commend and support technological development and research that contributes to society. After his death and in accordance with his will, all the securities that Ichimura owned (worth approximately ¥3 billion at that time) were donated to the foundation to finance the following.

1) New technology development
The foundation supports domestic researchers working on practical uses for scientific technologies. The criteria used to determine whether a particular researcher gets support include the originality of the technology and the degree of economic benefit expected from the technology.

2) The Ichimura Industrial Prize
The foundation awards a ¥10 million prize to business managers and technology developers who have contributed to the technical progress of scientific technologies, the development of industries, the promotion of culture, or the welfare of the people. At the 32nd Ichimura Industrial Prize Presentation Ceremony (held on April 28, 2000), the prize, which was being presented for the first time in three years, was awarded to Toshiba for its development of a large-capacity NAND flash memory and for its pioneering research into application fields.

3) The Ichimura Academic Contribution Prize
The foundation presents the Ichimura Academic Contribution Prize to researchers or research groups that have contributed to the progress of academic fields through the development of practical technologies. Winning research projects are chosen from among those being conducted at universities and research institutes. In addition to the prize money, the winners are subsidized for travel expenses to international research seminars, etc.

4) Promotion of the creativity of children
The foundation gives the Ichimura Idea Prize to encourage elementary and junior high school students to be creative and organizes the Ricoh Kids Workshop to help them enjoy learning about science and to raise their interest in scientific technologies.

5) Plant research
The preservation and nurturing of plants are a worldwide responsibility. To this end, the foundation manages plant research facilities and supports plant researchers by providing them with buildings and fields in which to conduct research.

Environmental Volunteer Leaders

The Ricoh Group believes that in addition to conducting environmental conservation activities as a group, it is important for employees to volunteer for both company-run and outside environmental conservation and social contribution activities. In June 1999, Ricoh launched a leadership-training program to promote employee environmental activities. In fiscal 2000, the program was expanded to include the Group's environmental conservation facilitators.

By April 20, 2001, as many as 107 Ricoh employees and directors became environmental volunteer leaders. The leadership-training program consists of training sessions, called Ricoh nature seminars, and meetings, called Ricoh Company Meetings for Environmental Volunteer Leaders. Following the training, each leader takes the initiative in developing environmental volunteer activities in close cooperation with relevant divisions or with the community. Ricoh provides support in promoting these activities.

● **Top Executives Also Participate in Ricoh's Environmental Volunteer Activities.**

Executive managing director Haruo Kamimoto (third from right) planting rice

Managing director Masaaki Iida (fifth from left) in a *satoyama* preservation activity

Director Takashi Nakamura (center) cultivating a paddy field

Ricoh Nature Seminars

The Ricoh nature seminar program aims at turning employees into environmental volunteer leaders by teaching them how to enjoy the natural environment and implement environmental conservation activities. Each seminar lasts for two days and is attended by approximately 15 participants. In fiscal 2000, the seminar was held three times. Members of the Wild Bird Society of Japan, an environmental NPO, were invited to give lectures at the seminar. From them, participants learned how to preserve *satoyama* (community forests), which has a good system to follow when creating a recycling society, and how to participate in environmental conservation activities, beginning with bird watching. Participants also made "eco soap" from used edible oil and took part in bamboo grass cropping.

Ricoh Company Meetings for Environmental Volunteer Leaders

The aim of Ricoh Company Meetings for Environmental Volunteer Leaders is to update environmental volunteer leaders on each other's activities. Employees who have registered as leaders at Ricoh nature seminars participate in the meetings to report on their environmental volunteer activities, to exchange information, and to learn how to improve the quality of their activities. Three Ricoh Company Meetings for Environmental Volunteer Leaders were held in fiscal 2000.

■ Activities of Environmental Volunteer Leaders

Environmental volunteer leaders conduct different activities with the company divisions and communities they belong to as well as with their friends and families. In fiscal 2000, there were 21 activities and a total of 600 participants. Leaders often form groups for ongoing activities. One group was formed by five volunteer leaders in November 2000 to protect the thickets of Hadano. The group is also planning joint events with local elementary schools. Yadorigi Shinbokukai (a social gathering) has been helping with the afforestation of the Kanagawa riverhead since January 2001. Ricoh has continuously given contributions to Kanagawa Prefecture as the prefecture's "riverhead forest partner."

A group was formed to protect the thickets of Hadano and the natural environment in that area. The group takes care of thickets in an approximate10,000 square meter area around Lake Shinsei and organizes "nature walk" seminars.

The Hadano thicket protection group carries out many activities, including clearing thickets in autumn and winter. The photo above shows wood being prepared for the growing of shiitake mushrooms. The mushrooms will be ready to harvest in one and a half years.

In January 2001, Ricoh and Kanagawa Prefecture concluded an agreement concerning Ricoh's participation in the prefecture's forest preservation project at a riverhead in Kanagawa. In March, Yadorigi Shinbokukai put up a handmade sign announcing the start of activities.

It is difficult to build sandsculptures if the sand is filled with litter, even small amounts. Volunteers became well aware of this fact when they tried to build sandsculptures on a beach in Kamakura, which filled them with a desire to clean it up.

Participants cleaned up Hakata Bay, which extends as far as 1,500 meters. The garbage that was collected filled up two light trucks. After the cleanup, the participants enjoyed a barbecue at the beach.

Yadorigi Shinbokukai cleared bamboo from the forest as one of the riverhead forest preservation activities. The bamboo was later used to make handicrafts.

Ricoh environmental volunteer leaders helped plant 3,000 trees in a project created by the Organization for Industrial, Spiritual and Cultural Advancement (OISCA) in hopes of restoring a forest in Kajikazawa, Yamanashi Prefecture.

Ricoh environmental volunteer leaders helped pick up fallen leaves in Nanasawa Forest Park. After the activity, they enjoyed baking "Christmas cakes," cakes that are often found at Christmas celebrations throughout Japan.

Ricoh environmental volunteer leaders worked with a citizen group called the Green, River, and Wind Group in cleaning up the Tsurumi River, inspecting its water quality, and making bamboo flutes.

Ricoh environmental volunteer leaders regularly hold "nature seminars" at a kindergarten located next to the Fukui Plant to help children feel the importance of the nature.

Ricoh environmental leaders worked with the Gunma Aruking Club in cleaning up the streams and surrounding areas of Kawaba Village to provide places where children can experience the outdoor activities.

Ricoh environmental volunteer leaders volunteered to distribute garbage bags to spectators at the Tamagawa Fireworks Festival organized by Setagaya Ward and to clean up the site after the display.

Fifth graders from neighboring elementary schools participated in a seminar on the making of paper from kenaf at the Fukui Plant. "We will use the paper for letters to the graduating class above us," said one student.

To enable more employees to participate in the cleaning up of the sidewalk along Loop Road No. 7, which the Omori Office faces, the activity was planned for after office hours on a weekday. The participants were dismayed by the great number of discarded cigarette butts they found.

Cooperation with Administrations and Local Communities

To realize a resource-recirculating society, it is important for all global citizens —countries, companies, citizen groups, and individuals—to cooperate together to reduce environmental impact. For this to happen, administrations, companies, and citizens (including NPOs) need to establish deeper relationships and promote mutual dialogue. For the creation of a better society, companies are strongly urged to take on leadership roles in their local areas to promote, based on appropriate information disclosure, mutual communication of trust among stakeholders to form better partnerships. The Ricoh Group, using the concept of Green Partnership and the Comet Circle*, is aggressively promoting communications with administrations and citizens all over the world to realize a resource-recirculating society.

* See pages 9–10.

Partnerships between administrations, companies, and citizens

Partnerships with Administrations

Masamitsu Sakurai, president of Ricoh, was chosen to attend the Conference on the Creation of Wa no Kuni*, in which the administration and the private sector examine environmental administration. The first meeting of the conference was held at the official residence of the prime minister of Japan on March 1, 2001.

In the making and implementing of plans for the national environmental administration based on field surveys, Yoriko Kawaguchi, Minister of the Environment, visited the Numazu Plant on January 24, 2001.

* http://www.kantei.go.jp/foreign/policy/wanokuni/summary_e.html

Partnerships with NPOs

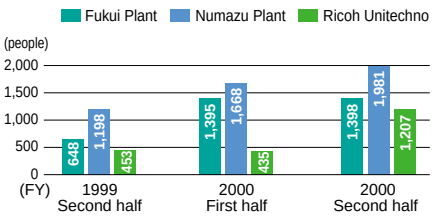
In a partnership program with NPOs to protect the natural environment, Ricoh is conducting social contribution programs to preserve forests (see page 51). The Company also makes contributions to various organizations, such as the Nature Conservation Society of Japan[1], the Wild Bird Society of Japan, WWF Japan, the Green Earth Network[2], and the Ecosystem Conservation Society— Japan[3]. We also invited WWF Japan to hold its Global Warming Prevention Business Workshop on our premises.

1. http://www.nacsj.or.jp/introduction-e/1-profile.html
2. http://member.nifty.ne.jp/gentree/
3. http://www.ecosys.or.jp/eco-japan/simple/english/index.html

Partnerships with Local Communities and Other Companies

The Ricoh Group achieved zero waste at all plants in Japan, France, the United States, and Mexico and is actively disclosing how it was achieved, approving plant visits for those wanting to study how to achieve similar results.

Number of people approved to visit major plants



Organizing Activities Worldwide in Close Cooperation with Local Communities

The Ricoh Group, in addition to activities aimed at reducing environmental impact, is aggressively encouraging member companies to promote communications with local communities. Thus, the Group is expanding its network in its bid to build a society that recirculates resources.

● Ricoh UK Products

Ricoh UK Products is a founding member of the Business Environmental Support Scheme for Telford (BEST), which conducts environmental activities in the local Telford area. The members of BEST are local companies, which facilitate good relationships between companies and the local community. Ricoh UK Products also participated in Local Agenda 21, which is composed of diverse local companies, and promoted communications with local citizens.

● REI

In the United States, schools often search for business partners under the School Business Partnership Program. Under this program, REI supports seven schools that are near its plant. In addition to annual contributions of $4,000 to each of these schools, the employees of REI visit the schools to tell the students of the job opportunities that can be found in their community or read books to them. In addition, the company traditionally donates $20,000 to the Red Cross annually.

● Ricoh Thailand

Through a partnership with the Material Recycle Center, an NPO, Ricoh Thailand recycles used products. The center's mission is to help those who collect used goods to earn enough money to live and to save children from being involved with illegal drugs because of poverty. The collected items are separated into aluminum, iron, plastics, and other categories and sold. The money earned from the sale is appropriated to a fund that is used to protect children from being involved with illegal drugs.

● Fukui Plant

Old newspapers and used cooking oil from households are recycled at the Fukui Plant. Employees living in areas where recycling routes have not been established bring the newspapers and oil to the plant. The plant has expanded its biotope and continuously invites local students to visit to help them become more aware of environmental issues. In fiscal 2000, 305 elementary school students, 105 senior high school students, and 54 kindergarten or elementary school teachers visited the plant.

Supporting the Volunteer Activities of Each Employee

Ricoh supports the volunteer activities of each employee through its leadership-training program* and its "Free Will" Social Contribution Club. The Company hopes that more employees become aware of their roles and understand what is expected of them as global and corporate citizens when actively involved with local communities.

* See pages 53–54.

● Free Will Social Contribution Club

For the purpose of promoting social contribution activities by employees, Ricoh established a social contribution club in January 1999 called Free Will. Employees voluntarily donate a fraction of their salaries for social contribution activities. The club is managed by employees chosen by the other members of the club, and those employees determine the themes of club activities and to whom the club will make contributions. Ricoh supports those activities under a gift-matching program, in which the Company matches the amount of contributions made by employees. The final amount to be donated is thus doubled.

● H·O·P·E

At REI's California plant, a team called Helping Others & Protecting Our Environment (H·O·P·E) was formed to improve the environment of neighboring elementary schools and nursing facilities. Employees are asked to propose themes for team activities based on the principle of "social contributions for the environment." The team also raises funds for local NPOs by selling barbecued food and ice cream. The company supports these activities under a gift-matching program, in which it matches the amount of contributions made by employees. The final amount to be donated is thus doubled.

A wall that was painted to improve the school environment

■ Activities by the Free Will Social Contribution Club

The club celebrated its third anniversary in January 2001. It gave financial or manpower support to 40 or more organizations. The following are some examples of the club's activities.

Group for Hearing Guide Dogs

In the United States, approximately 2,000 dogs are working as hearing guide dogs. In Japan, however, there is no public support for such dogs, and the role they play is not well known. A welfare group is training dogs to be hearing guides and is promoting the use of such dogs. Free Will made contributions to the group in September 1999 and organized a lecture in March 2001. Haruko Matsuda, a representative of the group, said, "Because of financial restraints, we had only one dog for demonstrations at lectures. We will use the contributions kindly made by Ricoh to train one more dog to be a hearing guide dog and used in demonstrations. We would like to visit many places to make more people aware of the existence of hearing guide dogs."

Chuchu Group

The Chuchu Group is a volunteer group that supports events for children in wheelchairs. In May 2000, Free Will supported an event that gave such children a chance to experience ballooning. Masako Uchida, the group's representative, said, "For children who have little chance of participating in outdoor activities, the event was a wonderful experience. Thanks to the many volunteers and the financial support, the ballooning event was a success."

Japanese Retinitis Pigmentosa Society

Retinitis pigmentosa is a progressive disease that atrophies retinas. The disease is designated as intractable by the national government. It is estimated that approximately 50,000 people suffer from this disease in Japan. A method of treatment and the provision of full information and emotional support to the patient is urgently required. Misako Kamamoto, president of the society, said, "In August 2002, we will organize a world conference on World RP Day in Japan. We are planning to utilize the precious contributions made by Ricoh to prepare and manage the conference."

Requiem Road Committee

The "Requiem Road" movement was started by Michiyo Shirai, a singer/songwriter who has organized planting activities all over Japan for the past 10 years. The movement aims at planting cherry trees along roads as a requiem for the victims of the Great Hanshin-Awaji Earthquake. Ricoh helped finance the purchasing of saplings, and the members of Free Will planted them with other volunteers. According to Shirai, "Leaves will appear on the saplings in April. I hope the trees will grow tall. We will plant more trees and expect further support for this activity."

Health and Safety

Ricoh was founded under the Spirit of Three Loves[1]: love your neighbor, love your country, love your work. One of the principles given under the section of Our Principles[2] in the Management Philosophy is “to find personal value in our work.” Ricoh promotes the health and safety of employees and is always trying to ensure the safety of all employees and to provide them with a healthy and comfortable work environment based on the Spirit of Three Loves and on the principles in its management philosophy.

1. See page 5.
2. See page 5.

Basic Policy

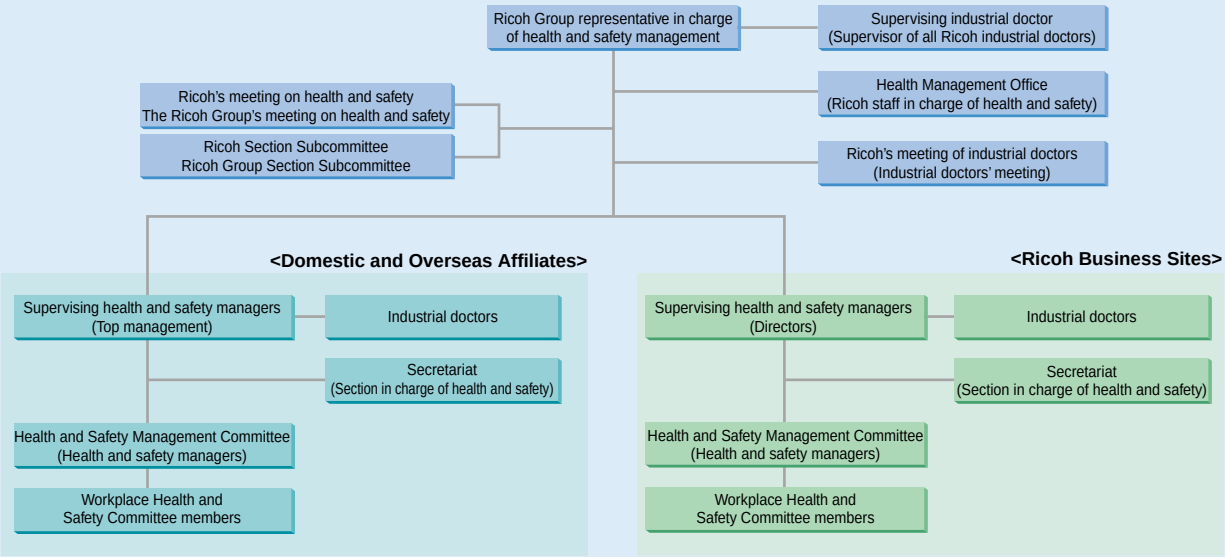
By putting our management philosophy into practice, we are more aware of the need to secure employee health and safety, and we earnestly strive to achieve this as well as to establish a comfortable work environment Companywide.

Action Guidelines

- Not only do we comply with all domestic and overseas health and safety regulations, but we also set our own goals for employee health and safety and endeavor to achieve those goals.
- We shall continue to maintain and improve an independent health and safety promotion system to secure employee health and safety and to establish a comfortable work environment.
- By providing education in health and safety, we strive to raise the awareness of all our employees and support and encourage them to be interested in and to observe health and safety practices in all activities in society.
- In every country and region where we conduct business, we maintain close ties with local communities and widely contribute to their society by publicly disclosing our activities and assisting in health and safety activities.

Note: The policy and guidelines given here are under development and may be subject to change.

The Ricoh Group Health and Safety Management Organization Chart (Tentative)



Characteristics of Activities

The most important aspect of Ricoh’s health and safety activities is their equal application to both production and nonproduction sites. In the manufacturing industry, health and safety activities are apt to be emphasized more at production sites. Ricoh, however, attaches the same weight to its nonproduction sites as it does to its production sites, equally holding health seminars, providing counseling, and promoting mental and physical health at both.

Ricoh characteristically took advantage of the digital network technology it has become so good at creating in its business to establish a database and network to disseminate information on health and safety. The database and network allows the Company to quickly spread relevant information to employees, to promptly take needed measures at business sites, and to promote the sharing of know-how throughout the Company.

Health and Safety Database

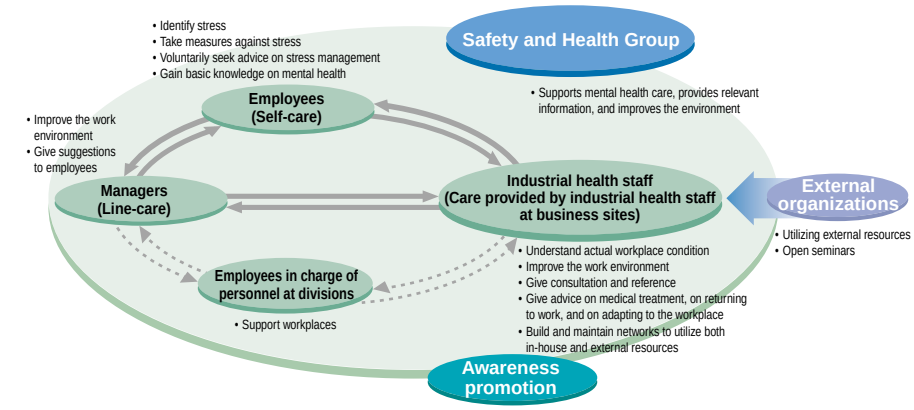
Mental Health Care

Mental health has gained a considerable amount of public attention. Accordingly, companies are required by such government policies as Measures to Deal with Mental Health at the Workplace or those announced in *Health Japan 21* (published by the Ministry of Health, Labour and Welfare) to establish a system and infrastructure for employee mental health care.

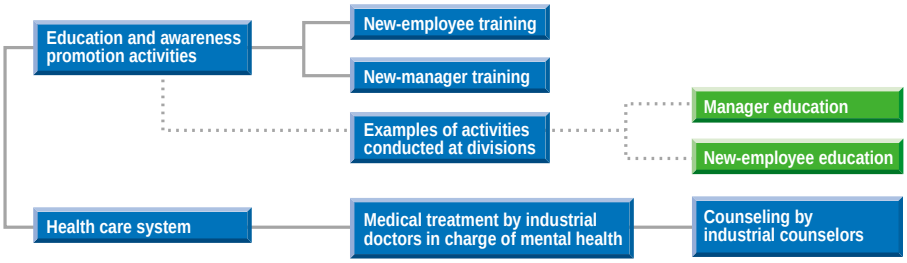
In 1975, Ricoh, in consideration of the mental health of its employees, established a system in which industrial counselors visit the Company's business sites. In 1986, psychiatrists joined the counselors. Furthermore, since fiscal 2000 the Company has reviewed and strengthened its current mental health care system, regarding compliance with governmental policy on mental health as an urgent task that needed to be completed. Ricoh is also aggressively conducting mental health promotion activities outside the Company, such as giving presentations on mental health care at an academic society*.

* The presentation was made at the 8th meeting of the Japan Industrial Mental Health Society on June 22–23, 2001.

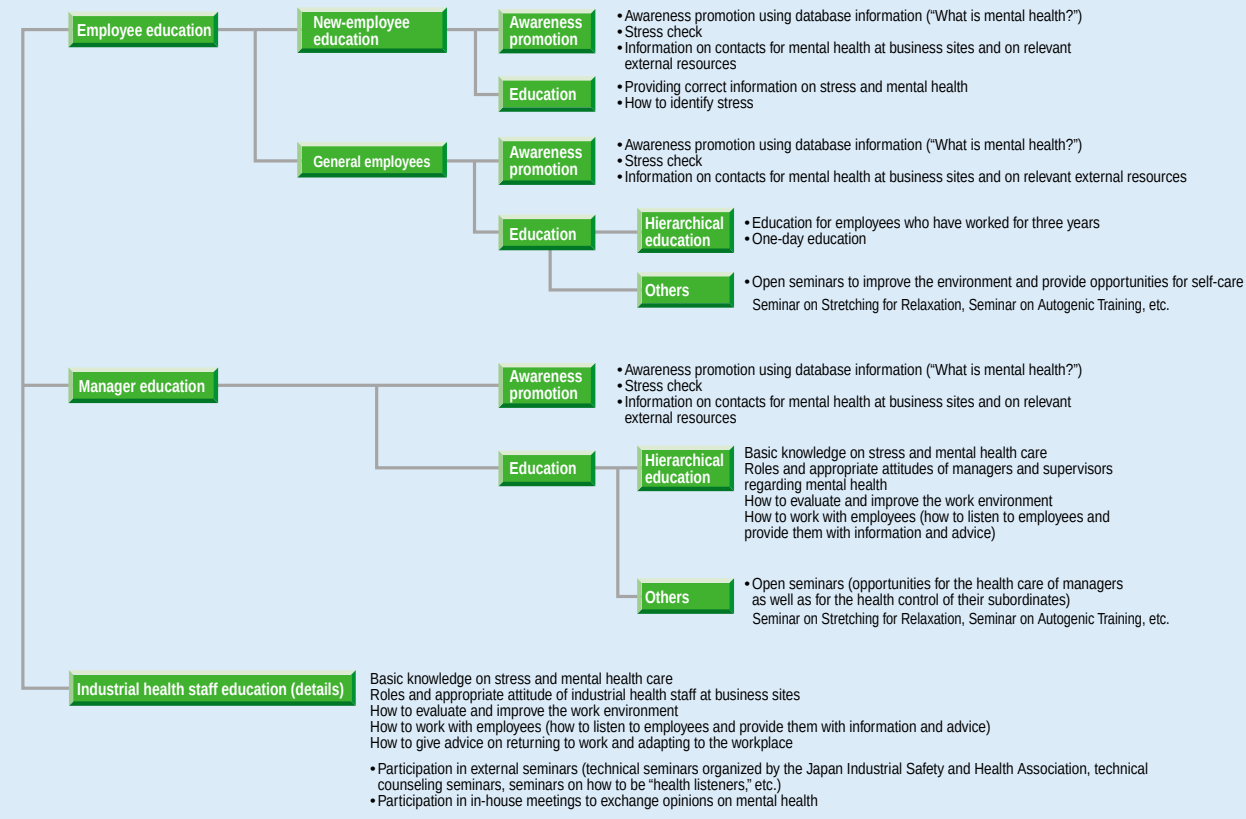
Ricoh's Mental Health Care System (Tentative)



Current Mental Health Care System



Mental Health Care Education Curriculum* (Tentative)

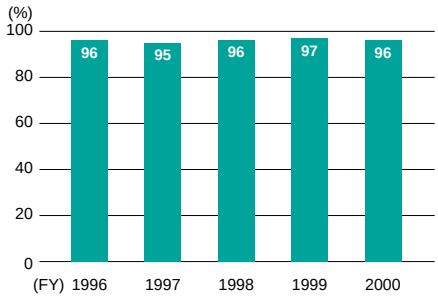


* Only a part of the curriculum is shown.

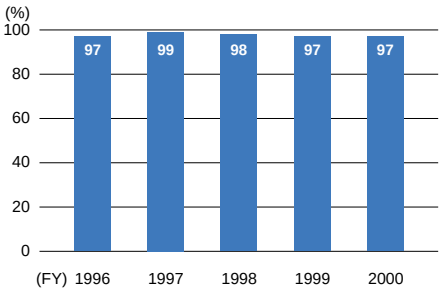
Health Checkups and Complete Medical Examinations

Ricoh offers health checkups and summary medical examinations to employees under the age of 40 (summary medical examinations to employees between the ages of 35 and 40) for the prevention and early diagnosis of diseases. As a health management measure for aging employees and for a more detailed health management scheme, Ricoh requires a complete medical examination for employees of 40 years old or older and for those in managerial positions. Furthermore, for employees whose checkups or examinations have revealed health problems, the Company established a follow-up system for reexaminations, detailed examinations, continued observation, and medication treatment. Thus, the Company's efforts toward the prevention, early diagnosis, and treatment of diseases are ongoing. Ricoh's health management system also covers the family members of employees, with complete medical examinations offered to employees' spouses.

Health Checkup Rate



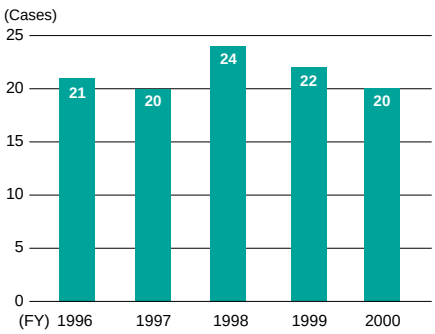
Complete Medical Examination Rate



Safety Management Activities

To reduce occupational hazards, Ricoh is promoting on-site voluntary safety activities for employees, especially at its production sites. Such activities include visits by industrial doctors to workplaces, examining accident prevention measures based on the near-accident experiences of employees, providing introductory training on safety to new employees, and promoting employee awareness of safety. Moreover, should an accident occur, a careful examination will be made to establish measures to prevent reoccurrence. The site where the accident occurred will then be notified of the newly established measures to prevent recurrence in future.

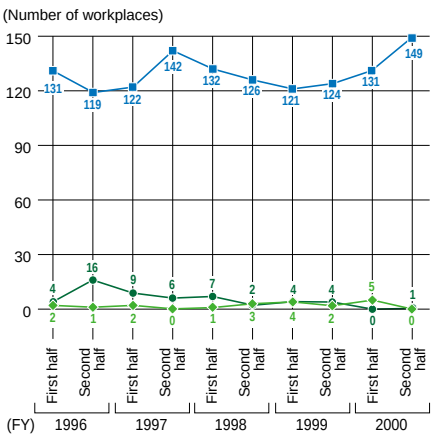
Changes in the Number of Occupational Hazards at Ricoh



Work Environment Measurement

The Ricoh Group continues to measure its work environment to prevent work-related health problems. The Group endeavors to improve the work environment by measuring not only those substances that are required to be measured by law but also those substances that are not required to be measured by law but may be hazardous to employees' health.

Work Environment Measurement (Ricoh and its domestic affiliates)



■ 1st control area: In most of the workplaces (95%), the concentration of toxic substances in the atmosphere does not exceed the controlled density.

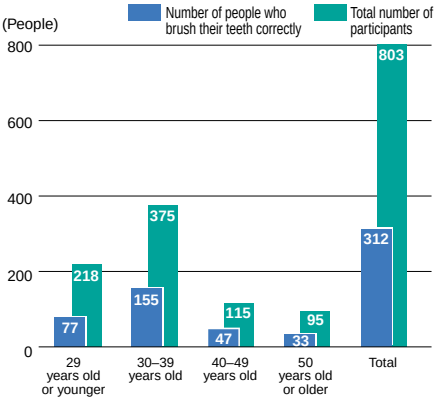
● 2nd control area: The average concentration of toxic substances in the atmosphere of the workplaces does not exceed the controlled density.

◆ 3rd control area: The average concentration of toxic substances in the atmosphere of the workplaces exceeds the controlled density.

Health Care Seminars

To help prevent and relieve lifestyle diseases, Ricoh Health Care Seminars are held regularly, inviting specialists in relevant areas of health. According to data provided by the Ricoh San-Ai Group Health Insurance Union, the cost of dental care is the highest medical expense. Accordingly, a series of seminars on dental health was held from July 2000 to January 2001. Employees who participated at the seminars were taught how to perform a self-dental health check and brush their teeth so that they will be able to eat using their own teeth even at the age of 80.

Number of People Who Brush Their Teeth Correctly



Activities Promoting Health and Safety Awareness

Ricoh uses in-house brochures and a health management newsletter distributed through its internal network to improve each employee's awareness of health and safety. With different themes addressed quarterly, the health management newsletter carries such information as basic physiology and tips for disease prevention.

Health management newsletter distributed through Ricoh's internal network

Customer Communication

One of Ricoh's management principles is to put itself in the other person's place[1]. However, for CS (Customer Satisfaction) this is not enough. It is also important for the Company to objectively evaluate its CS and competitive levels and to check whether its activities and goals for improving CS and strengthening competitiveness are appropriate.

To meet the requirements described above, Ricoh's top management made it clear that they would review the quality of their management from the customer's point of view. The results of their efforts were objectively examined for the fiscal 1999 Japan Quality Award[2], which they won. We will continue to review our daily business practices from the customer's point of view to see if there is anything that can be improved or added for CS.

1. See page 5.
2. The Japan Quality Award was established in 1995, modeled after the Malcolm Baldrige National Quality Award in the United States.

The Ricoh Group receives the fiscal 1999 Japan Quality Award.

Customer Service Center

In 1981, Ricoh established a customer service center and a quality assurance center as its planning headquarters long before CS began attracting people's attention.

It is important to listen to customers' opinions and provide services and information that are in line with them while providing customers with advanced solutions. Customers who complain to the customer service center are often loyal users of our products. The complaints indicate the high expectations these customers have towards our products. Ricoh has a database of customers' opinions that top management and those related to product planning divisions can reference. Any opinion can be retrieved the day after it is made. For serious complaints, directors themselves visit the customer who made the complaint to personally look into the problem and to find a solution.

Phone (toll-free): 0120-000475
(In Japan)

Level of Service at the Customer Service Center (targeted values based on actual results)

Telephone connection rate	How often calls make it through to the center (no busy signal)	85% or more
Immediate solution rate	How often problems are solved on the first call	90% or more
Waiting time	How long the caller is kept waiting on the phone	Under 20 seconds
E-mail response time	Number of days to answer e-mail	Within two days
CS (Customer Satisfaction)	Questionnaire on CS*	90 points or more

* Questionnaires are sent twice a year via fax and e-mail to approximately 270 customers.

Ricoh's customer service center

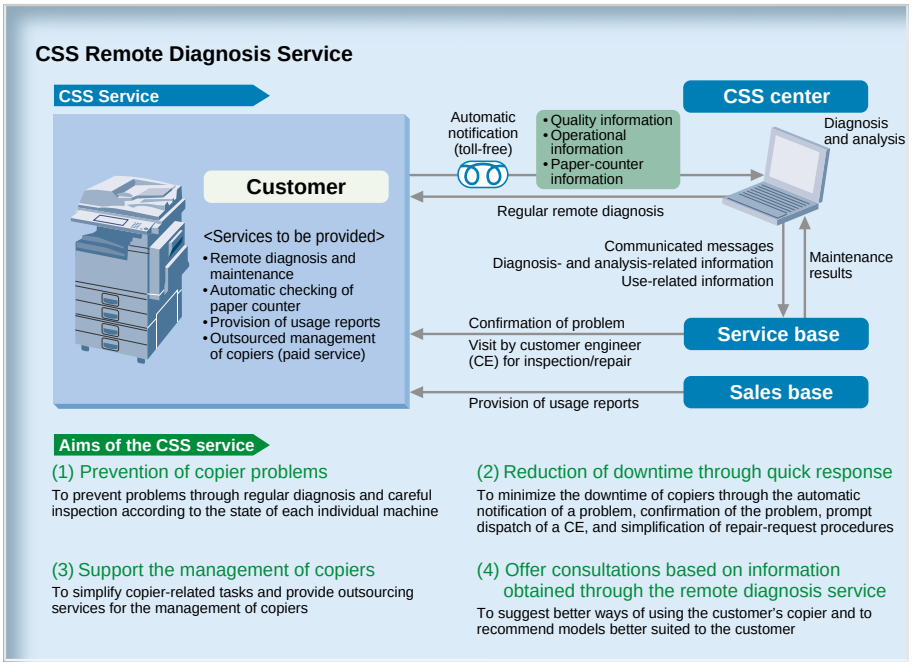
Network Call Center

Office networks are getting more and more complicated in a multivendor environment in which machines of diverse brands coexist. Accordingly, the need for troubleshooting is increasing. To meet this need, Ricoh established the Network Call Center, which specializes in providing customers with office network support services. Based on an advanced computer technology integration (CTI) system, the center is providing high-level customer support services.

Network Call Center

Remote Diagnosis System

In 1995, Ricoh launched a remote diagnosis system for its customer support service (CSS). Under this system, the customer's copiers are constantly being monitored through Ricoh's network, and maintenance information, such as regular inspection schedules and the kinds of problems encountered (paper jams, etc.), is remote managed by the CSS center. This service relieves the customer of the burden of maintenance and minimizes the downtime of machines.



Environmental Communication

The Ricoh Group, based on the concept of Green Partnership, is promoting more efficient environmental impact reduction by keeping in touch with as many partners as possible. Environmental impact is caused even by the issuance of environmental reports and the preparation and posting of environmental advertisements. The Ricoh Group, therefore, endeavors to disclose information that is useful for our green partners to reduce environmental impact as well as to provide interactive communication. The Group also makes use of opinions from its green partners to improve environmental conservation activities.

Relationship between Stakeholders and Information Disclosure Measures

Items to be Disclosed= ●		Environmental Reports	Web Site	Environmental Labels	Environmental Advertisements
Global environmental conservation	Contents and results	●	●		●
	Know-how	●	●		●
Communities		●	●		
Customers		●	●	●	●
Investors and shareholders		●	●		●
Employees	Policies, health and safety information	●	●		
	In-house promotional activities on awareness	●	●		

Environmental Reports

The Ricoh Group's environmental report has been issued annually since its first publication in April 1998, which disclosed fiscal 1996 data. An English version of the Japanese-language report has been published since the fiscal 1998 edition, which was released in January 1999, to disclose information to our diverse green partners as well as to promote interactive communication through a facsimile questionnaire system*.

Ricoh business sites and affiliates began issuing similar reports in 1999. The Fukui Plant issued its report to let readers know it was safe to live in near the Fukui Plant and to use Ricoh products. This report received the Prize for Site Report at the Green Reporting Award 2000.

* See page 73.

Environmental Web Site

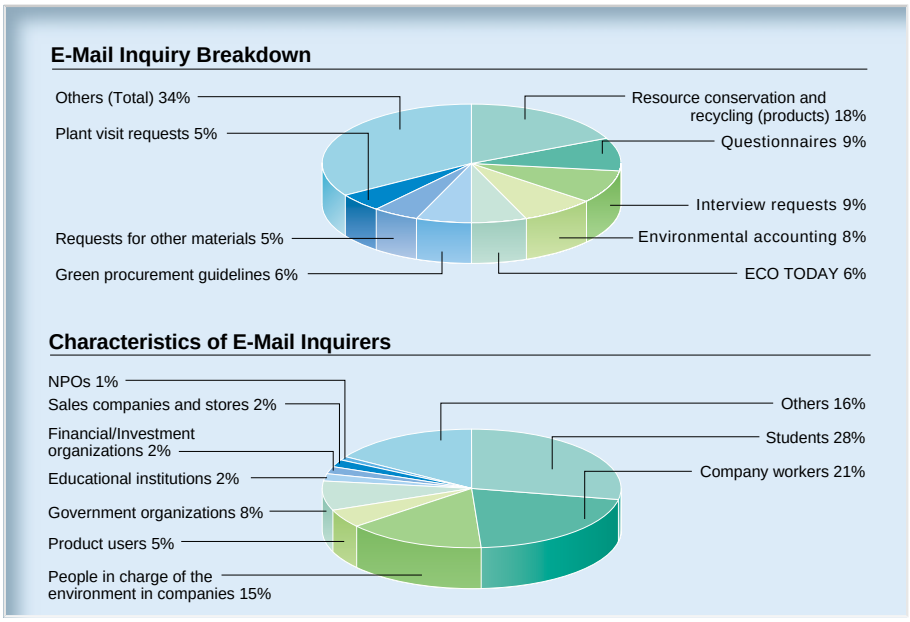
Ricoh's environmental Web site includes information on a variety of topics, such as the Ricoh Group's environmental report and activity updates as well as links to ECO TODAY*, a Web site aimed at elementary and junior high school students. ECO TODAY was created jointly by Ricoh and students from vocational schools. ECO TODAY presents familiar examples of global environmental issues and introduces countermeasures adopted by Ricoh. In fiscal 2000, 661,738 visitors visited Ricoh's Environmental Web site, and there were 1,009 requests and inquiries for the Company's environmental report and environmental brochure. We also promoted interactive communication with university and high school students in the form of meetings that were the result of the 302 e-mailed inquires we received.

* See page 52.

ECO TODAY Web site
http://www.ricoh.co.jp/ecology/e-/ecotoday/index.html

Home page

ECO TODAY



Disclosing the Environmental Impact Information of Products

The environmental impact information of products is indispensable for customers wishing to choose products that have less environmental impact. In fiscal 1999, the Ricoh Group disclosed quantitative information through Type III Environmental Impact Disclosure on the environmental impact its imagio MF 6550 digital copier has throughout its life cycle*, based on third-party certification (BVQI, Sweden). This was the first such disclosure made in Japan. We were also planning to disclose information on our facsimiles and printers through Type III Environmental Impact Disclosure by the end of fiscal 2000, but this attempt will be carried over to fiscal 2001.

In fiscal 2000, according to the JEMAI program of the Japan Environmental Management Association for Industry, the Ricoh Group disclosed the environmental impact information on one of its lines of digital copiers (the imagio MF 7070 series) as did other copier manufacturers. The Ricoh Group is planning to disclose the environmental impact information on five of its major printer lines by October 2001.

* http://www.ricoh.co.jp/ecology/e-/type3/index_e.html

Type III Environmental Impact Disclosure

Environmental Advertisements

Ricoh produces advertisements to improve the awareness of green partners about environmental conservation. Examples include the explanation of an environment-friendly function of a product to municipal authorities and companies, which promotes green procurement activities, and the introduction of case studies that should be regarded useful to people engaged in the promotion of environmental conservation activities from diverse standpoints. In fiscal 2000, along with existing series of advertisements, Ricoh created and posted magazine advertisements that describe the importance of biodiversity protection and give examples of forest conservation activities, which Ricoh conducts in partnership with NPOs.

Magazine advertisement describing biodiversity and forest conservation

Advertisement explaining an environment-friendly function of a product

Magazine advertisement describing the idea of biodiversity and forest conservation

Magazine advertisement outlining environmental activities

Lectures

The Ricoh Group has given a number of lectures and released several papers in the past. In fiscal 2000, top executives from Ricoh themselves participated in promotional activities by providing information on how to establish a society that recirculates resources and how to engage in environmental conservation activities. One example was President Sakurai's speech at the Conference on the Creation of Wa no Kuni, which was a private government-industry discussion on environmental policies. In addition, we actively joined corporate lectures, academic societies, and symposiums for the purpose of contributing to society. We are thus creating more opportunities to open communications with green partners.

President Sakurai gives a lecture at a Nikkei BP seminar.

Major Environmental Lectures (Ricoh)*

FY	Number of lectures
1999	43
2000	66

* Summary of major products in which the Corporate Environment Office was involved
Activities have also been conducted by internal divisions.

Exhibitions

Ricoh actively takes part in environmental activities at such exhibitions as Eco-Products to bring attention to the environmental performance of its products. At Eco-Products 2000, Ricoh attracted the audience's attention with such exhibitions as the Aficio (imagio Neo)[1], erasable copying technology[2], and recyclable eco-packaging[3].

1. See page 36.
2. See pages 37–38.
3. See page 33.

Eco-Products 2000

Economic Performance

The Ricoh Group, by always trying to create new value and win trust from customers and society, aims to become an influential global company in the industry through its businesses and a dominant market share.

As part of its organizational restructuring, the Group improved management by reforming the board of directors and introducing operating officers (which it did in June 2000). By reforming the board of directors through such measures as placing external appointees to the post of director, the Ricoh Group is strengthening its comprehensive competency as a unitary whole, setting clear management strategies and promoting the optimal use of managerial resources. Moreover, by introducing operating officers and greatly empowering them to run businesses, the Group is strengthening the competitiveness of each business and speeding up business operations.

For further business development, the Ricoh Group will position its image processing-related business, including copiers and printers, at the forefront, while aggressively promoting its solution business. Based on the principle of providing appliances that enable the use of highly advanced technologies in a friendlier manner, the Ricoh Group will meet customer needs in an age of IT and broadband by providing them with the latest solutions*.

* See the Ricoh Group securities report (http://www.ricoh.co.jp/IR/e/results/a_05.html) for details.

Increasing Sales for Seven Consecutive Years and Increasing Net Profit for Nine Consecutive Years

The Ricoh Group's sales in fiscal 2000 (April 2000 to March 2001) amounted to ¥1,538.2 billion (US$12,208 million), up 6.3% from the previous fiscal year (April 1999 to March 2000). This was the seventh consecutive year the Group increased its sales.

Domestic sales increased 6.6% from that in the previous fiscal year while a 5.9% increase in overseas sales reflected a rising yen. The growing sales of high-speed digital copiers and the dramatically increasing sales of printing systems, such as laser printers and multifunctional printers that also provide copying and faxing functions, as well as expansions in the optical disk and semiconductor businesses contributed to an increase in total sales.

Operating profit for the fiscal year under review increased 18.2% from that in the previous year thanks to increased sales of such high-value-added products as high-speed digital copiers and multifunctional printers, cost reductions, and higher profitability in the semiconductor business. Pretax profit also increased 38.9% from that in the previous year due to a reduction in nonoperating loss balance.

As a result, net profit increased as much as 27.0% from that in the previous year, making the fiscal year under review the ninth consecutive year the Ricoh Group recorded an increase in net profit.

Promoting CS (Customer Satisfaction) Management

In order to become a reliable and attractive global company, the Ricoh Group is making efforts to provide better solutions and improve CS.

In Japan, Ricoh was ranked No. 1 for the sixth consecutive year in the field of PPCs and for the second consecutive year in the field of facsimiles in a fiscal 2000 CS survey[1] conducted nationwide, targeting smaller business establishments with 30 to 99 employees.

In North America and Europe, the Ricoh Group has also been providing a wide range of digital devices and support in response to the need for multifunctional machines for business applications and for seamless networking. As a result, the Group's office digital copiers were ranked No. 1[2] in terms of market share. In the European market, the Group was ranked No. 1[3] for fourth consecutive year with a 23.7% share for both digital and analogue black-and-white office copiers.

1. Survey conducted by J.D. Power Asia Pacific.
2. In a survey conducted by Dataquest, the number of units the Ricoh Group sold comprised sales of digital copiers under the Ricoh brand as well as those under the brand of its affiliates Savin and Gestetner.
3. In a survey conducted by InfoSource S.A., the number of units the Ricoh Group sold comprised sales of black-and-white copiers under the Ricoh, Gestetner, Nashuatec, and RexRotary brands plus those sold under other brands on an OEM basis.

Acquisition of U.S. Lanier Worldwide, Inc.

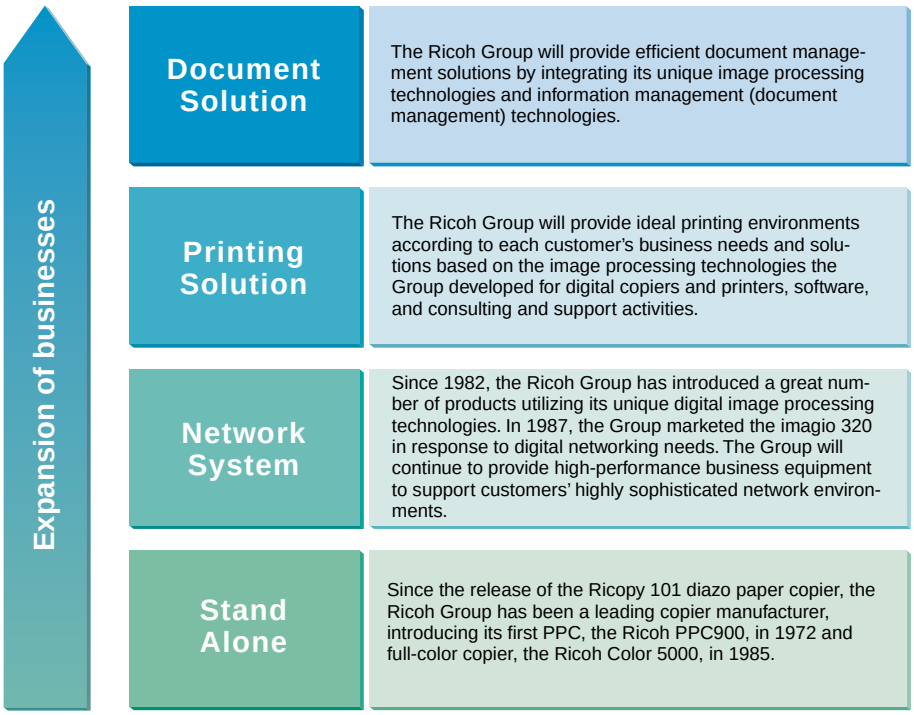
On January 26, 2001, Ricoh acquired U.S. Lanier Worldwide, Inc., in a takeover bid in order to expand its direct-sales network for large companies in the United States. Lanier, with 106 direct-sales branches throughout the country, has long traded with Fortune 500 companies. Dealing directly with customers is especially important in finding potential needs they may have and making proposals in anticipation of such needs. The acquisition of Lanier enabled Ricoh to strengthen its direct-sales network and promote more customer-oriented solution businesses.

Lanier has 1,600 sales and service bases in 100 countries around the world, and sells OA equipment, such as copiers, facsimiles, and printers, and provides after-sales services, mainly in the European and U.S. markets. Ricoh started trading with the company in the latter half of the 1980s and has been supplying them with digital copiers and digital multifunctional copiers on an OEM basis since 1996.

Receiving first prize from J.D. Power at the awards ceremony

Signing ceremony for the acquisition of Lanier

Expansion of Ricoh Group Businesses



Development of the Solution Business

The requirements that Ricoh's products need to fulfill have changed from simple copying and printing to a multiple of functions: more efficient printing over a network, improved efficiency to reduce cost, and more user friendliness. Ricoh meets such new requirements in its solution business by providing total printing solutions. Utilizing the superior image processing technologies we have accumulated in the areas of digital copiers and printers, software development, and customer-oriented consulting and support activities, we will provide customers with ideal printing environments in response to their business needs.

In another area of its solution business, Ricoh provides efficient document data management systems, integrating its image processing technologies and information management technologies. By expanding business in this area, we will gain a strong position in the world of information technology (IT).

Ranked No. 1 in an IT Management Level Survey

For a company to provide customers with excellent IT systems, it is necessary for that company to be able to use IT itself. Ricoh was ranked No. 1 in a comprehensive evaluation made in the first survey[1] on the corporate IT management level of 500 Japanese companies conducted by the Management Science Institute (MSI), a management consulting company. The companies were ranked based on six criteria: top management's ideas and behavior regarding IT; link between corporate strategies and IT; IT development ability; IT-related equipment; results of IT management; and potential to maximize IT use. Ricoh was highly evaluated, especially in the results it gained from IT management, because of the increasing benefits the Company derived from its investments into IT and its recognition that IT has the potential to improve customer satisfaction. Ricoh's improvements in IT management can be said to be a result of the Company's efforts to improve the quality of its management[2].

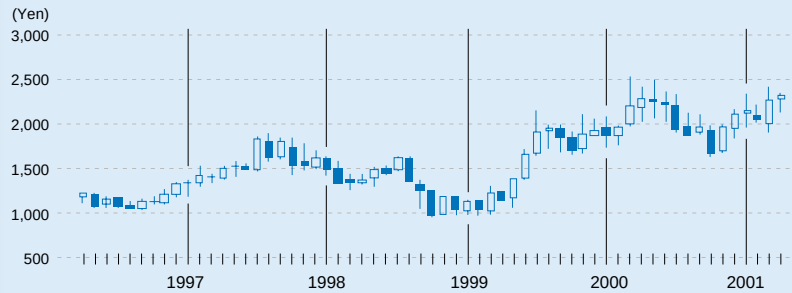
1. Conducted in March 2000
2. See page 60.

Promoting Investor Relations (IR) through Communication

Ricoh facilitates communication with shareholders and investors through the regular publication of annual reports and business reports. In October 2000, the Financial Affairs page of Ricoh's Web site was expanded, and the Ricoh IR Website was reconstructed to provide more information, including messages from top management, operational information, financial data, stock quotes, Q&A, and links to the IR sites of Ricoh's affiliates. We will further improve the contents of our Web site.

Ricoh IR Website (http://www.ricoh.co.jp/IR/e/)

Fluctuations in Ricoh Stock Prices



Environmental Accounting

Corporate Environmental Accounting of the Ricoh Group for Fiscal 2000

Item	Costs			Economic Benefits		
	Environmental Investments	Environmental Costs	Main Costs	Monetary Effects	Category	Item
Business area costs	¥1,100 million	¥1,690 million	Pollution prevention cost ····· ¥499 million Global environmental conservation cost ····· ¥257 million Resource circulation cost····· ¥936 million	¥1,710 million	a	Energy savings and improved waste processing efficiency
				¥5,910 million	b	Contribution to value-added production
				¥1,480 million	c	Avoidance of risk in restoring polluted environment and avoidance of lawsuits
Upstream/ Downstream costs	¥50 million	¥3,300 million	Cost for collection and reassembly and for recycling used products	¥1,570 million	a	Sales of recycled products, etc.
				[¥1,760 million]	S	Reduction in society's waste disposal cost
Managerial activity costs	¥150 million	¥3,140 million	Cost for the division in charge of environmental measures; cost to establish and maintain the environmental management system	¥170 million	b	Improved efficiency in environmental education and establishment of the environmental management system
Research and development costs	¥60 million	¥1,550 million	Research and development costs for environmental impact reduction	¥20 million	a	Cost reduction through eco-packaging
				¥2,100 million	b	Contribution to value-added research and development
				[¥390 million]	S	Reduction in user's electricity expenses thanks to the improved energy saving function and performance of products
Social activity costs	¥0 million	¥470 million	Costs for preparation of environmental reports and advertisements	¥200 million	b	Publicity from environmental advertisements, etc.
Environmental damage costs	¥180 million	¥160 million	Costs for restoration of soil pollution and for environment-related reconciliation	—	—	None
Other costs	¥0 million	¥30 million	Other costs for environmental conservation			
Total	¥1,540 million	¥10,340 million		¥13,160 million	Internal effects (within the Ricoh Group)	
Total capital investment	¥32,130 million			[¥2,150 million]	Social effects (outside the Ricoh Group, i.e., society)	

a = Substantial effect (actual gains from cost and energy reduction as well as sales of recycled products)

b = Expected effect (amount to which the environmental measures contributed)

c = Incidental effect (Pollution- and lawsuit-related costs avoided)

S = Social effect (Reduction in electricity expenses due to the use of energy-saving products or reduction in society's waste disposal cost; Japan only)

The Ricoh Group is establishing an environmental accounting system to be used as a management tool. The Group regards the following as essential to completing this task.

Using Environmental Accounting as a Management Tool

1. Overall/Individual areas targeted for environmental accounting should be set in compliance with corporate/segmental managerial decisions.
2. Environmental costs and economic benefits should be compared on a full scale.
3. Efficiency in environmental management should be specifically expressed in terms of investment efficiency in environmental impact reduction or management resulting in smaller environmental impact.

The Ricoh Group's environmental accounting system comprises corporate environmental accounting, to optimize environmental action plans, and segment environmental accounting, to measure the effects of action plans. Because these two are not yet at an acceptable level, the Ricoh Group will make every effort to improve them until the entire system works like an actual management system, e.g., financial accounting, and will provide relevant information to stakeholders.

■ Deepening Corporate Environmental Accounting

Extending Coverage

The Ricoh Group extended the coverage of its environmental accounting system so that it can be used as a management tool for the entire Group. In fiscal 2000, Ricoh Group companies engaged in after-sales services (Parts Component System and Ricoh Techno Systems) and logistics (Ricoh Logistics) were included for environmental accounting. The system's coverage will be further extended to include the Group's sales companies.

Identifying Social Effects

Companies, through their environmental conservation activities, contribute to restoring the environment. The effects of environmental conservation investments made by companies also include social effects, such as reductions in electricity expenses due to the use of energy-saving products by customers. Such social effects have not been much referred to in traditional environmental accounting, but identifying the effects that environment-friendly products can bring about would be useful in making managerial decisions regarding R&D investments in such products.

Fiscal 2000 Environmental Accounting Results

According to the Ricoh Group's fiscal 2000 environmental accounting results, environmental conservation costs increased, and the eco-index (value-added through business/total environmental impact) doubled over the past three years. Judging by the value-added through the Group's business, which increased 1.2 times over the same period, the Group's environmental conservation activities were highly efficient.

Looking at individual cost items, more substantial effects were obtained from business area costs as a result of past capital investments, including increased energy

● Data collection points: Ricoh and 15 Ricoh Group manufacturing, after-sales service, and logistics companies in Japan and abroad (See page 4.)
● Data collection period: from April 1, 2000, to March 31, 2001 (for costs and total environmental impact)
* Environmental impact reduction shows the difference of the fiscal 2000 performance from the fiscal 1999 performance.

Effect on Environmental Conservation				Environmental Impact			
Environmental Impact Reduction (t)	Reduction Rate	EE Value[1]	Converted quantity of reduction	Total (t)	Eco-ratio[2] (¥100 million/t)	Converted value of reduction	Conversion Coefficient[3]
Environmental impact reduction at business sites							
CO_2 ····· 2,275.0	0.9%	22.00	2,275	CO_2 ····· 246,065	0.01	246,065	1.0
NO_x ····· 5.1	6.7%	0.05	101	NO_x ····· 72	47.59	1,411	19.7
SO_x ····· 3.6	14.7%	0.03	109	SO_x ····· 21	164.22	629	30.3
BOD ····· -16.0	-43.8%	-0.16	-0	BOD ····· 53	64.70	1	0.02
Final waste disposal amount ····· 2,689.8	36.4%	26.01	279,739	Final waste disposal amount ···· 4,699	0.73	488,654	104.0
PRTR substances (178 substances, including toluene and dichloromethane)			42,413	PRTR substances* (178 substances, including toluene and dichloromethane) * See page 31.		218,943	(Ricoh standards per substance)
Environmental impact reduction through products CO_2 ····· 6,026.0 (t) NO_x ····· 4.9 (t) SO_x ····· 3.9 (t) Final waste disposal amount ····· 22,033.0 (t) Calculation for companies in Japan only							
			324,637			955,704	
			0.0314			356.6	
			EE index[4]			Eco-index[5]	

1. Eco-efficiency (EE) value (unit: ton/¥100 million) = Environmental impact reduction amount/total amount of environmental expenses
2. Eco-ratio (unit: ¥100 million/ton) = Gross profit/total environmental impact amount
3. Conversion coefficients are based upon literature related to LCA impact evaluations. (Fiscal 2000 coefficients are based on EPS Indicator Ver. 2000, and fiscal 1999 coefficients are based on EPS Indicator Ver. 1995.) Conversion coefficients for final waste disposal amounts and PRTR substances are set according to Ricoh's internal standards.
4. EE index (EEI) = Total environmental impact reduction in terms of CO_2/total environmental costs (thousands of yen)
5. Eco-index = Gross profit (thousands of yen)/total environmental impact in terms of CO_2

Note: Fiscal 2000 calculations are based on the Ministry of the Environment's *List of Emission Coefficients Defined in Enforcement Regulations*, published in September 2000.

savings and a reduction in waste disposal cost. Upstream/Downstream costs (product recycling costs) are still a minus factor for business, although some improvements have been made. There should be more improvements in costs over the long term. Collecting used products contributes to society, and a cost-effectiveness analysis, taking the social effects of such collection into consideration, revealed that cost and effectiveness are in balance. As for managerial activity costs, no direct effects have been identified because managerial activity costs include the personnel cost of all cost items. It can be assumed that such cost has indirectly contributed to the effects of other cost items. Regarding social activity costs, focus was on the social responsibilities actually fulfilled by the Ricoh Group, namely, the Group's social contributions and accountability. The effects of these costs have yet to be calculated.

Concerning the specific results of the Ricoh Group's environmental conservation activities, CO_2 emissions were greatly reduced at all business sites in fiscal 2000, as in fiscal 1999, in terms of emission per sales unit. However, due to an increase in energy consumption that resulted from expanding production, total CO_2 emissions were only slightly reduced. The final waste disposal amount decreased as much as 36% compared with that in the previous fiscal year. On the other hand, there are some quantitative objectives for which no further improvements were made, and the Group must invest more effort into ensuring that ongoing improvements are made as a whole.

The Ricoh Group will continue striving towards controlling waste at its business sites and further promote the development of environment-friendly products to increase the effectiveness of its environmental conservation activities both for itself and for society.

Evaluation of the Environmental Accounting System in Fiscal 2000

The Ricoh Group's framework for environmental accounting was evaluated highly enough to be adopted as a benchmark by other companies. Within the Group, the introduction of environmental accounting made more employees aware of the importance of understanding the cost efficiency (for both environmental and economic improvements) of their environmental conservation activities. At two of the Group's business sites, the criteria for calculating the efficiency of environmental investments is already established. In addition, new environmental accounting methods are being developed. Although it has been traditionally difficult to calculate the effectiveness of research and development costs, it might be possible if the calculation is based on the conjoint analysis used in segment environmental accounting* for the development of energy-saving products. The Group will further improve its environmental accounting system, making it more accurate through the development of new methods, etc.

* See page 67.

■ Implementation of Segment Environmental Accounting

Corporate environmental accounting targets corporate environmental activities as a whole but can be used in decision making only in limited cases. However, segment environmental accounting, in which corporate environmental activities are examined by segment, can be used in decision making in many cases. Segment environmental accounting is especially useful in predicting the effects of environmental activities. The following shows a few examples of segment environmental accounting the Ricoh Group companies carried out in fiscal 2000 to predict the effects of their environmental measures. In all examples, the measures were predicted to be sufficiently effective both in terms of economic benefits and environmental impact reduction and would contribute to the implementation of environmental management.

Business Area Costs

● Estimating the Effects of Environmental Conservation Costs for an Energy-Saving Manufacturing Line

Ricoh Unitechno, faced with the need to manufacture a wider variety of products in small quantities, developed a manufacturing line consisting of carts joined together and pulled by a chain* to replace its traditional conveyor belt-type lines. Although the capital required for its development was only about one-twentieth the amount invested in traditional conveyor belt-type lines, the new cart line was more energy efficient and used only one-eightieth of the power used before. The company estimated that this reduction would, in turn, lead to a considerable reduction in CO_2 emissions.

Ricoh Unitechno was also successful in improving its utilization of space by promoting more space-saving manufacturing methods and increasing productivity by simplifying the process of rearranging the manufacturing operation.

* See page 29.

Research and Development Costs

● Estimating the Effects of Environmental Conservation Costs by an Energy-Saving Product

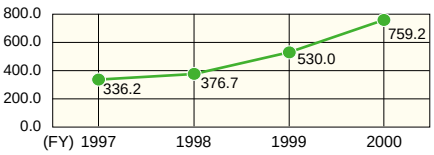
In February 2001, Ricoh released the Aficio 1035/1045 (imagio Neo 350/450), a more energy-efficient digital copier. Research and development costs for this new product were divided into the cost of developing the energy-saving toner fixing unit (QSU technology*) that is to be incorporated into the Aficio 1035/1045 (imagio Neo 350/450) and other costs required to develop the product. The effects of these costs were then estimated. The company paid considerable environmental conservation costs for developing the product, and both corporate effects and social effects of the spending were estimated.

In making the estimates, product development costs and costs for producing and marketing the number of units expected to be sold were regarded as environmental conservation costs. For economic benefits, the social effects of reduced electricity consumption due to the use of the product and internal effects for Ricoh were estimated. Internal effects were estimated using a marketing method called conjoint analysis, which is typically used in market research. As a result, the development of an environment friendly product was confirmed to generate considerable both internal and social effects.

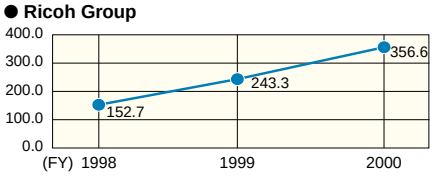
* See page 36.

Changes in the Eco-Index*

● Ricoh



● Ricoh Group



* Eco-indexes in fiscal 1999 and earlier were revised following a revision to conversion coefficients.

Penalties and Fines for Noncompliance with Environmental Laws and Regulations* (Ricoh Group)

	FY 1998	FY 1999	FY 2000
Number of cases	0	0	0
Amount	0	0	0

* A detailed review of Chinese laws and regulations revealed that costs recorded as penalties in the past were actually processing costs. Therefore, such costs were not recorded as penalties and fines in fiscal 2000, and related data in previous fiscal years were revised accordingly.

Estimated Costs and Effects of Introducing a Cart Line

Costs*			Effects*	
Item	Main costs	Amount	Economic benefits	Effect on environmental conservation
Business area costs	Facility investment, facility cost, etc.	¥9.25 million	Reduced heat and light expenses ——— ¥4.04 million Reduced personnel and maintenance costs — ¥15.50 million Improved productivity– ¥89.55 million	Reduced CO_2 emissions 108.7 t

* Calculated using the statutory depreciation period for equipment

Estimated Costs and Effects of Developing an Energy-Saving Machine

Costs[1]			Effects[2]		
Item	Main costs	Amount	Economic benefits		Effect on environmental conservation
			Corporate effects	Social effects	
Research and development costs	Costs for developing an energy-saving unit	¥400 million	Total amount to be paid by customers ¥2,683 million	Reduced electricity expenses ¥2,544 million	Reduced CO_2 emissions 39,481 t
	Cost of dies, jigs, parts, etc.	¥205 million			

1. Estimated based on a specific number of units to be marketed in Japan
2. Estimated based on the number of units expected to be sold and on the assumption that the units sold would be used for five years

Estimated Costs and Effects of Building an Environmental Impact Information System

Costs*			Effects*	
Item	Main costs	Amount	Economic benefits	Effect on environmental conservation
Managerial activity costs	System investment	¥196 million	Reduced personnel costs for data collecting, analysis, etc. — ¥1,550 million Reduced electricity expense thanks to a power monitoring system ——— ¥25.6 million	Reduced CO_2 emissions 655.6 t
	Personnel, maintenance, etc.	¥361 million		

* Estimated based on the assumption that the system's depreciation period would be five years

Managerial Activity Costs

● Estimating the Effects of Environmental Conservation Costs by Building an Environmental Impact Information System

Because of the importance it places on eco-balance, the Ricoh Group built an environmental impact information system to be used as a tool to recognize the environmental impact of its business activities and reduce environmental impact efficiently. The system allows the environmental impact of each business activity process to be controlled centrally on a global scale and is indispensable in the collection of information required for environmental accounting.

The economic benefits gained from investing in the building of the system, including personnel costs, were estimated based on the assumption that personnel costs for collecting data for Type III Environmental Impact Disclosure and for managing the environmental performance of the manufacturing process would be reduced over five consecutive years with the introduction of the system. Environmental conservation effects were estimated based on improvements that would be achieved through the use of the system, such as improvements in the operation of air compressors thanks to the environmental performance management under the system.

Future Tasks and Challenges

To use environmental accounting as a management tool, the Ricoh Group needs a better environmental accounting system not only to disclose corporate environmental activities to the public (external use) but also to promote environmental management (internal use). In fact, for product recycling, internal environmental accounting revealed that environmental considerations at the product planning and designing stages would considerably reduce environmental impact and costs. Accordingly, an environmental cost management system is currently under development. In the near future, the Group will look into introducing life cycle costing (LCC) into cost planning and improving resource productivity at the manufacturing stage. Ultimately, the Ricoh Group will incorporate environmental accounting into its divisional performance evaluations* under the Strategic Management by Objectives (SMO).

* See page 16.

■ Investors' Evaluation of Ricoh's Environmental Conservation Activities

According to a survey of personal investors, the effects of Ricoh's environmental conservation activities were estimated to total ¥6.6 billion, against the Company's environmental costs of ¥5.9 billion[1]. Through corporate environmental conservation activities, the environmental impact caused by a company's business activities is reduced, which, in turn, reduces the environmental impact on society. It is therefore important for a company to not only estimate the effects of its environmental conservation activities but also have the effects evaluated by external stakeholders. According to a questionnaire the Ricoh Group sent out to private investors, the Group's environmental conservation activities was evaluated as having profound social effects.

Survey Method

Ricoh's efforts to establish environmental accounting as a management tool for the entire Ricoh Group included research[2] in a method that would have the Company's environmental conservation activities evaluated by investors and the evaluation results analyzed. Based on the research results, a conjoint analysis of the questionnaire mentioned above was decided, using the hypothetical estimation method often used in surveys for public works. (For example, residents are sent a questionnaire asking how much money they think the city should be allowed to spend to increase the greenery in the city, and their opinions are taken into considerations when determining the investment amount.) At the end of January 2001, Ricoh sent a questionnaire by e-mail to 1,000 personal investors and analyzed the answers of the 368 that were returned.

Analysis Results

Based on the results of the questionnaire, the maximum amount of money that investors will pay per share for each of the following four items was calculated: reduction of greenhouse gases, reduction of air pollution, reduction of water pollution, and reduction of waste. By multiplying the results of the calculation by actual reduction amounts and the number of stocks issued, the total effect of Ricoh's environmental conservation activities was approximately ¥6.6 billion.

Evaluation of Social Effects

The calculated effects were subdivided into corporate effects that were estimated by investors to have directly contributed to the profits of the Company and into social effects that were estimated to not have directly contributed to the profits of the Company but to have contributed to society. As a result, the total amount of social effects was calculated to be ¥3.8 billion or more of the ¥6.6 billion, showing that personal investors expect companies to conduct activities not only for their own profit but also for the benefit of society.

1. Ricoh'Ricohs total environmental conservation costs in fiscal 1999
2. The research was conducted jointly with Assistant Professor Koichi Kuriyama of Waseda University as part of an Environmental Accounting Committee activity managed by the Japan Environmental Management Association for Industry and entrusted by the Ministry of Economy, Trade and Industry.

Effects of Ricoh's Environmental Conservation Activities	Total Effects (¥100 million)	Percentage (%) of Social Effects
Reduction of greenhouse gases	5.72	86
Reduction of air pollution	10.81	55
Reduction of water pollution	6.72	61
Reduction of waste	42.73	55

The Ricoh Group's Environmental Conservation Activities (1976–March 2000)

The Ricoh Group's Activities		Society's Recognition of Ricoh Group's Activities		Worldwide Trends	
1976	Establishes Environmental Promotion Section			1971	Environment Agency set up Ramsar Convention adopted
1978	Establishes Environment Measurement Center			1977	United Nations Conference on Desertification held UNEP conference held
1980	Starts manufacturing aluminum ingots at Tohoku Ricoh as part of its recycling system			1987	Adopts Montreal Protocol
1989 April	Establishes the Committee to Address Chlorofluorocarbons			1990	London meeting (set phase-out of CFCs and HCFCs)
1990 March	Discontinues use of styrene foam plastic packaging material that contains ozone-depleting substances				
July	Markets Shigen recycled paper in Japan				
September	Markets Ricoh Recycling Copy recycled paper in Germany				
September	Proposes used paper collection and recycling system using Risapost (Ricoh in-house collection system)				
December	Sets up Environment Administration Office				
1991 July	Markets the imagio MF 530 Series copier with energy-saving features			1991	Recovered Resource Use Promotion Law enacted
1992 February	Establishes Ricoh's General Principles on the Environment			1992	UN Conference on Environment and Development (Earth Summit) held
March	FT5570 copier awarded the BAM (initial version)				
October	Announces the Ricoh Environment Symbol				
1993 March	Achieves total elimination of ozone-depleting substances (specific kinds of chlorofluorocarbons (CFCs), specific kinds of halon, carbon tetrachloride, etc.)			1993	Energy Saving Law revised
May	Announces the recycled product design basic policy and implements recyclable design level 1	1993 May	Ricoh UK Products' copier photosensitive drum recycling technology receives the Queen's Award in the U.K.		
May	Launches material labeling on plastic parts				
December	The Ricoh Group achieves total elimination of ozone-depleteing substances (specific kinds of CFCs, specific kinds of halon, carbon tetrachloride, etc.).	September	Ricoh UK Products' Power Consumption Reduction Activities receives the Business Energy Award's Grand Prize.		
1994 January	Creates the Ricoh Environmental Management System Committee	1994 January	Awarded the Kanto Trade and Industry Bureau Director's Prize for activities to rationalize electricity use at Ricoh Gotemba		
March	FT6655 copier awarded the BAM (second version)	May	Copier photosensitive drum recycling technology of Ricoh UK Products receives European Better Environment Awards for Industry.		
August	The Comet Circle concept is completed.				
October	Presents a case of LCA of toner cartridge buffer material at RECY '94 in Germany				
November	Markets resource-saving and energy-saving copiers around the world (marketed as the Spirio 2700/3500 series in Japan)				
November	Implements labeling of materials and grade on plastic parts				
November	Implements recyclable design level 2				
1995 February	Holds First Ricoh Company Environment Competition	1995 February	Ricoh Central Research Center receives Kanto Electricity Use Rationalization Committee Director Award for its cogeneration system.	1995	The First Conference of Parties to the United Nations Framework Convention on Climate Change (COP1) held Container Packaging Recycle Law implemented International Energy Star Program implemented
February	Publishes first edition of *Ricoh Environmental Management System Guidelines*	March	Ricoh product environmental assessment and recyclable design promotion activities receive a Resource Recovery Development Business Commendation: the Minister of International Trade and Industry Prize.		
March	Markets the FT4000/5000 Series resource-saving and energy-saving copier in Japan and Europe				
June	Holds First Tohoku Ricoh Environment Fair				
August	Wastewater treatment closed system starts operations at Ricoh Yashiro.				
October	Announces International Energy Star certified products				
December	Ricoh Gotemba acquires ISO 14001 certification (the first certification given by a Japanese certification organization).				

The Ricoh Group's Activities		Society's Recognition of Ricoh Group's Activities		Worldwide Trends	
1996 February	Holds Second Ricoh Company Environment Competition				
March	Chemical substances management system RECSIS starts operations.				
July	Ricoh UK Products acquires BS 7750/ISO 14001 certification.	1996 June	Ricoh Corporation (United States) wins Energy Star Office Equipment Prize.	1996	ISO Environmental Auditing Standards of Environmental Management System established International Energy Star Award launched by EPA COP2 held
November	Implements recyclable design level 3				
1997 February	Holds Third Ricoh Company Environment Competition				
February	Opens Ricoh Kanto Recycling Center				
March	Sets 79 types of management chemical substances	1997 March	Ricoh Corporation wins Energy Star Copier Prize.	1997	COP3 held
September	Announces eco-packaging LCA case at the Eco-Material International Symposium	June	Ricoh UK Products receives UK BSI-QA Prize.		
October	Six copier models awarded the Nordic Swan Mark (Scandinavian environmental label)				
1998 March	Holds Fourth Ricoh Company Environment Competition	1998 February	Combined copier/facsimile device RIFAX BL110 acclaimed as a "superior device for saving energy" and received the Chairman's Prize of the Japan Machinery Federation	1998	COP4 held Eco Partnership Tokyo Conference held Law Promoting Countermeasures against Global Warning established
March	Draws Ricoh Environmental Action Plan				
April	Reorganizes Environment Administration Office to Corporate Environment Office				
April	Ricoh establishes the Recycling Division.	March	Ricoh Corporation wins Energy Star Imaging Device Prize.		
April	Revises Ricoh's General Principles on the Environment	June	Ricoh Atsugi recognized for its environmental conservation activities in Kanagawa Prefecture		
May	Issues *Ricoh Group Green Procurement Guidelines*				
September	Ricoh Omori's Noise Testing Center receives first NIST (National Institute of Standards and Technology) international certification in Japan.				
October	Ricoh Fukui achieves a 100% resource recovery rate (zero waste).	October	Ricoh Numazu toner cartridge recycling system receives Westec Award Environment Agency Director-General Prize.		
October	Starts Ricoh Recycle Label System				
October	Holds European Environment Conference sponsored by European region unification company Ricoh Europe B.V.	October	Ricoh Microelectronics awarded 1998 Best Green Plant Award		
October	Announces external cabinet plastic material recycling case at the Eco Balance International Symposium	November	Ricoh ranked top of the electric and electronics industry by German environmental survey specialist company Ökom GmbH		
December	Holds the 1st Global Warming Prevention Business Workshop, organized by WWF Japan, at Ricoh Aoyama Head Office	December	Evaluated as number one in Second Corporate Environmental Management Level Survey by the *Nippon Keizai Shimbun newspaper*		
1999 January	Issues the *Ricoh Group Environment Report 1998*	1999 February	Ricoh Gotemba receives the Director-General of the Agency of Natural Resources and Energy Award from the Ministry of International Trade and Industry for promoting office energy savings.	1999	Revised Energy Saving Law enforced PRTR Law established Special Law on Countermeasures against Dioxin established COP5 held
January	Holds the Fifth Ricoh Company Environment Competition				
February	Ricoh Numazu achieves a 100% resource recovery rate (zero waste).	March	Ricoh and Tohoku Ricoh recognized by the director-general of the Industrial Location and Environmental Protection Bureau, Ministry of International Trade and Industry, for their development of a copier remanufacturing system		
		March	Ricoh Fukui receives the Best Experience Prize for its 100% waste-recycling presentation at the QC Circle National Contest.		
April	Constructs Kyushu Recycle Tech, the new Kyushu Recycling Center	April	Ricoh Corporation receives the Energy Star Award.		
May	Opens Green Cycle Systems, Northern Kanto Recycling Center	April	*Ricoh Group Environmental Report 1998* receives the Second Prize at the Green Reporting Awards.		
		May	Fukui Plant receives the Fukui Environmental Activity Promotion Council's Chairman Prize for environmental conservation promotion activities.		

The Ricoh Group's Environmental Conservation Activities (1976–March 2000)

The Ricoh Group's Activities	Society's Recognition of Ricoh Group's Activities	Worldwide Trends
1999 June Implements recyclable design level 4	1999 May Ricoh receives the Environmental Protection Prize in the Ninth Corporate Contribution to the Society Survey held by the Asahi Shimbun Cultural Foundation.	
June Ricoh introduces its environmental volunteer leader training program.	May Ricoh receives the Minister of International Trade and Industry Prize at the Eighth Global Environmental Awards held by the *Japan Industrial Journal*.	
June Holds First Ricoh Nature Seminar	June Ricoh is awarded the grand prize at the Green Procurement Awards organized by Green Procurement Networks.	
July Holds Environmental Management System Screening Standards Seminar pursuant to the Ricoh Group's green procurement guidelines	July Hatano Plant is recognized by Kanagawa Prefecture as a superior plant in terms of self-regulation activities in the area of pollution prevention.	
August Ricoh Aoyama Head Office is listed in the Eco-Improvement Office Tokyo Declaration (Type I).	August Fukui Plant is recognized for its contributions to the promotion of recycling by the governor of Fukui Prefecture for fiscal 1999.	
September Ricoh announces results of its first environmental accounting.	September Ricoh Electronics is declared WRAP Winner by the California state government.	
September Gotemba Plant achieves 100% resource recovery rate (zero waste).	September Atsugi Plant receives Type 5 certification for its accident-free operations.	
October Opens Northern Kansai and Southern Kansai recycling centers	October Ricoh Italy receives the Ecohitech Award (an environmental conservation award).	
October Ricoh discloses information on the environmental impact of the imagio MF6550 through Type III Environmental Labels.	October The Spirio 5000RM copier receives the Fiscal 1999 G Mark for its ecological design.	
November Ricoh Unitechno achieves 100% resource recovery rate (zero waste).	October Numazu Plant receives the Japan Recycling Promotion Council Chairman Award.	
December Ricoh enters one of its machines in Eco-Products 1999, Japan's first comprehensive exhibition for environment-friendly products.	October Taiwan Ricoh wins the 1999 Superior Plant in Equipment Operations Award for the Promotion of Pollution Prevention by the Taiwanese government.	
December Holds First Company Meeting for Environmental Volunteer Leaders	October Numazu Plant receives the 1999 Most Technologically Advanced Office Award.	
December Hatano Plant achieves 100% resource recovery rate (zero waste).	November Ricoh wins the IEA's Demand-Side Management Award of Excellence in the recently created Copier of the Future Division for its energy-saving technology.	
	November *Ricoh Group Environmental Report 1999* wins the Global Environmental Forum President's Prize at the Environmental Report Awards.	
	December Evaluated as No. 1 in the Third Corporate Environmental Management Level Survey by *Nihon Keizai Shimbun* for the second consecutive year	
2000 January Ricoh acquires Eco-Mark certification for 28 copier models.	2000 February Ricoh Unitechno receives Fiscal 1999 Kanto Trade and Industry Bureau Director's Prize for its superiority in energy management.	2000 Law Concerning the Promotion of the Procurement of Eco-Friendly Goods and Services by the State and Other Entities promulgated Basic Law on Establishing a Recycling-Based Society established Waste Disposal and Public Cleansing Law revised Law Concerning the Promotion of the Utilization of Resources for Recycling established Law on Promoting Green Purchasing established Food Waste Recycling Law established COP6 held
January Atsugi Plant achieves 100% resource recovery rate (zero waste).	February Numazu Plant receives the Minister of International Trade and Industry Prize for its energy conservation activities.	
February Ricoh's digital multifunctional copier, the imagio MF6550, acquires Type III Environmental Impact Disclosure from BVQI (Sweden).	February Ricoh receives the Energy-Saving Award's Energy Conservation Center Chairman's Prize (Special Corporate Prize).	
March Holds Sixth Ricoh Company Environment Competition.	February Ricoh is given a "B" by Ökom, making Ricoh the top ranking company in the IT & Appliance Division.	
March Sagamino Plant Part Component System achieves 100% resource recovery rate (zero waste).	February Ricoh Optical Industries' Sweet Pea Circle receives Grand Prize in the Corporate Division of the Iwate Prefecture Recycling Competition.	
March Holds Five-Party Environment Meeting	March Ricoh Corporation receives three awards from the Energy Star Program: 1) 2000 Energy Star Excellence in Consumer Education Award, 2) Labeling Partners of the Year Award, and 3) Office Equipment Partner of the Year Award (for the fifth consecutive year, the Energy Star Award).	
March Holds First Global Recycling Conference		2001 Ministry of the Environment established The first Conference on the Creation of Wa no Kuni held

The Ricoh Group's Social and Environmental Activities in Fiscal 2000 (April 2000–May 2001)

	Environmental	Social	The Ricoh Group's Activities
2000 May	●	●	Ricoh begins overseas virgin forest restoration projects.
May	●		GR Advanced Materials (U.K.) obtains ISO 14001 certification.
May	●	●	Holds Fourth Ricoh Nature Seminar
June	●		Ricoh Keiki, Tohoku Ricoh, Ricoh Microelectronics, and Ricoh Industrie France achieve 100% resource recovery rate (zero waste).
July		●	Ibaraki Ricoh promotes the voluntary collection of aluminum cans and donates ¥500,000 to a cultural and welfare foundation established by *Ibaraki Shimbun*.
August	●		Hasama Ricoh achieves 100% resource recovery rate (zero waste).
September	●	●	Holds Fifth Ricoh Nature Seminar
September	●		*Ricoh Group Environmental Report 2000* published
September	●		Aoyama Office achieves 100% resource recovery rate (zero waste), the first of Ricoh's nonproduction sites achievement.
September	●		Ricoh Techno Systems obtains ISO 14001 certification, the first of the Ricoh Group's support and after-sales service division to do so.
September	●		Ricoh Elemex's Ena Plant and Ricoh Optical Industries achieve 100% resource recovery rate (zero waste).
October	●		Ricoh's 11 nonproduction sites obtain ISO 14001 certification.
October			Ricoh IR Website set up on Ricoh's Web site to promote public relations activities targeting investors.
October	●		Fukui Plant achieves 100% resource recovery rate (zero waste), the first of the Ricoh Group's general sales companies to do so.
November	●		Tohoku Recycling Center is opened, completing the Ricoh Group's recycling system in Japan.
November	●		Ricoh Unitechno holds Environmental Communication 2000 convention.
November		●	The Ichimura Idea Prize Awards Ceremony held for the 31st time
November			The Ricoh Minori Prize Awards Ceremony for fiscal 2000 held
December	●		The second European Environment Meeting held
December	●	●	The sixth Ricoh Nature Seminar is held and the number of Ricoh environmental volunteer leaders reaches 91 in total
December	●		Third American Environment Meeting held
December	●		Ricoh Electronics' (U.S.) Georgia Plant and Ricoh Electronic Devices' Ikeda Plant achieve 100% resource recovery rate (zero waste).
December	●		Gestetner Management obtains ISO 14001 certification.
December	●		Gestetner Büromaschinen Verkaufsges.m.b.H. (Austria) obtains ISO 14001 certification.
December		●	Ricoh Kids Workshop is held at Numazu Plant to encourage children to be imaginative.
December	●		Ricoh Logistics obtains ISO 14001 certification.
2001 January	●		Ricoh Logistics starts using recyclable eco-packages.
January	●		Holds Seventh Ricoh Company Environmental Competition
January	●		Minister of the Environment, Yoriko Kawaguchi, visits Numazu Plant.
January	●		Holds Second Five-Party Environment Meeting
January			Ricoh acquires Lanier Worldwide (U.S.) by a takeover bid.
February		●	Numazu Plant donates wheelchairs to Numazu City following the previous year.
February		●	Ricoh's social contribution club Free Will holds its first seminar.
March	●		Ricoh's President Sakurai attends the first meeting of the Conference on the Creation of Wa no Kuni.
March	●		Ricoh Elemex's Okazaki Plant, Ricoh Electronics plants in Mexico and California, and Yashiro Plant achieve 100% resource recovery rate (zero waste).
April			Ricoh's Corporate Environment Office reorganized into Corporate Environment Headquarters.
April	●		Ricoh holds a business workshop on the prevention of global warming, which is held by WWF Japan.
April	●		Ricoh Corporation (San Jose) obtains ISO 14001 certification.
April	●	●	Holds Seventh Ricoh Nature Seminar
May	●	●	Ricoh Hong Kong plants trees in a park located in Saikung, Hong Kong, as part of its greening activities.
May	●	●	Holds the Ricoh Nature Seminar's intermediary course for the first time

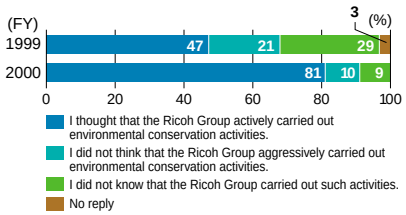
	Society's Recognition of Ricoh Group's Activities
2000 April	Ricoh is awarded the Keidanren Chairman's Prize at the Ninth Global Environmental Awards.
April	Ricoh's environmental advertisement receives the Nikkei Ecology Award at the Nikkei BP Ecology Advertisement Awards.
April	*Ricoh Group Environmental Report 1999* wins First Prize at the third Green Reporting Awards.
May	Ricoh Unitechno receives the First Saitama Environment Award.
May	Ricoh, Tohoku Ricoh, and Fuji Research Institute Corporation work together to study an LCA case on the Quantitative Assessment of Environmental Impact Reduction Activities, which receives the Research and Development Prize in the Foundation Division of the 14th Japan MH Awards.
May	Ricoh is ranked among the top of 39 companies worldwide by Ökom in the IT/Electronics Industry Division.
June	Ricoh receives the grand prize in the 10th Corporate Contribution to Society Survey held by the Asahi Shimbun Cultural Foundation.
June	Ricoh Corporation receives the Environmental Stewardship Award from the Council on Economic Priorities (CEP), the first Japanese-affiliated company in the U.S.
June	Ricoh is ranked No. 1 in a customer satisfaction survey conducted by J.D. Power on PPCs and facsimiles.
July	Numazu Plant is officially commended by the director general of the Fire-Defense Agency for the plant's promotion on safety.
October	Ricoh is ranked No. 1 in the First IT Management Level Survey.
October	Fukui Plant is officially commended by the Minister of Labour for its efforts to promote the health of its employees during the Fiscal 2000 National Labor Safety Week.
October	Ricoh Microelectronics is officially commended by the director of the Chugoku Bureau of International Trade and Industry for the company's superiority in promoting greenery.
October	Ricoh Unitechno receives the Fiscal 2000 Recycle Promotion Council Chairman's Award for its recycling promotion activities.
November	*Ricoh Group Environmental Report 2000* wins the Global Environmental Forum President's Prize at the Environmental Report Awards 2000.
November	Ricoh receives the Enterprise Activity Award for the100% resource recovery rate of its copiers at the WASTEC Awards 2000.
December	Ricoh is evaluated as being No. 1 in the Fourth Corporate Environmental Management Level Survey by *Nihon Keizai Shimbun* for the third consecutive year.
December	Ricoh's environmental conservation Web site, ECO TODAY, wins first prize from ECO goo.
2001 February	Ricoh receives the Minister of Economy, Trade and Industry's Award at the Energy-Saving Awards for its imagio Neo 350 series, the first for the Company's information devices.
February	Ricoh Elemex's Ena Plant is officially commended by the director of the Chubu Bureau of International Trade and Industry for the plant's superiority in efficient energy use.
February	Fukui Plant receives the Fukui Prefectural Governor's Prize and Hokuriku Electricity Association Chairman's Prize for its superiority in energy management.
March	Ricoh receives the Eco Reduce Award from Ecology Symphony.
March	Ricoh is selected as one of 43 companies having excellent IR Web sites.
May	*Ricoh Group Environmental Report 2000* receives the Third Prize at the Green Reporting Awards 2001.
May	Fukui Plant's fiscal 2000 environmental report wins the Prize for Site Reports at the Green Reporting Awards 2001.
May	Numazu Plant is officially commended by the governor of Shizuoka Prefecture for the plant's contributions to environmental conservation.

Responses from the *Ricoh Group Environmental Report 2000* Questionnaire

Beginning with the 1998 issue, the Ricoh Group has included questionnaires (only Japan) in its environmental report to collect comment and opinion from the readers on creating a better environmental report and improving its environmental conservation activities, and 106 readers returned the questionnaire (as of March 2001).

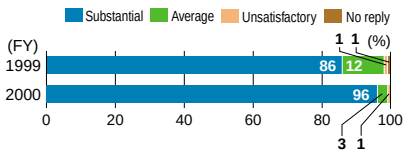
Questionnaire Results

(1) What was your impression of the Ricoh Group's environmental conservation activities before reading this report?



(2) What was your impression of this report?

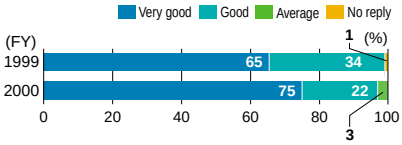
a) Contents



Comments from readers

- The difficulty to read due to small font size.
- It is great that the Ricoh Group is aggressively promoting environmental management and conducting diversified environmental activities. I hope the Group will go far beyond the attainment of ISO 14001-based objectives.
- The report objectively summarizes the Group's efforts to reduce environmental impact both within and outside the Group.
- The most satisfactory corporate information disclosure I have read. Compared with other companies' reports I have obtained for reference, the Ricoh Group's report is superior both in quality and quantity.
- It would have been better if it included a comprehensive analysis of environmental conservation activities, including a comparison of activities conducted in the previous year, and problems to be dealt with in the future.
- Both the text and sidebars are well organized, making the report easy to understand.

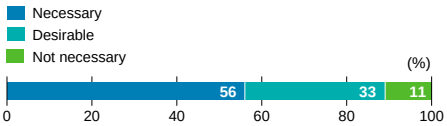
b) How would you rank the Ricoh Group's environmental conservation activities described in the report?



Comments from readers

- It is truly wonderful that the Ricoh Group is using other side of paper already copied.
- Some of the Ricoh Group's activities need to be explained in more detail.
- Through the development of environmental volunteer leaders, the Ricoh Group is clearly expanding its environmental conservation activities from internal activities conducted only by employees to activities involving the entire society.
- How about attributing more importance to making more people aware of the Ricoh Group's environmental conservation activities, especially housewives and younger children?
- I was impressed when I read that the affiliates were also included in the environmental activities.

c) We had our fiscal 2000 environmental report reviewed by an independent party. What is your opinion on an independent party reviews?



Comments from readers

- Because there are no established standards for environmental accounting, an independent party review is meaningless.
- An independent party reviews are necessary to ensure information transparency and accuracy.
- It is difficult to set objective criteria for evaluating environmental conservation activities, but it is great for the Ricoh Group to have their report reviewed by an independent party to ensure the objectivity of their report.
- Because there are no clear criteria for evaluating environmental conservation activities, the reliability of an environmental report could increase if reviewed by an independent party.

d) Which section(s) of the report were you most interested in?

No. 1……Environmental Accounting
No. 2……Social Contribution toward Environmental Conservation
No. 3……Green Partnership
No. 3……Pollution Prevention (Business Sites)
No. 5……Environmental Impact Analysis by Eco Balance
No. 5……Resource Conservation and Recycling (Products)
No. 5……Resource Conservation and Recycling (Business Sites)

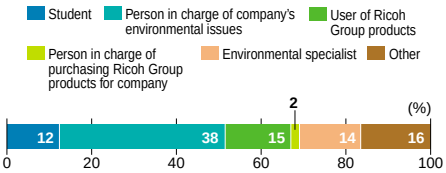
e) What do you think about the sidebars (pages 22, 34, 42, 46, and 50)?

- They are easy to understand and provide satisfactory information on actual improvements made.
- They are great because they show actual examples that complement the formal explanations.
- The sidebars introduce actual onsite activities, and the less-formal "onsite reports" elicit sympathy.
- Sidebars are a wonderful inclusion to an environmental report, which tends to be very formal, especially those in which specific activities are introduced, keywords are explained, and internal and external examples are shown.
- Sidebars are not necessary.
- I think that the sidebars are designed to be "coffee breaks" for readers.

Please write down any opinions you may have about our report or activities.

- The font size needs to be a little larger.
- I wish there was an editor's postscript describing editing difficulties.
- The level of the report is high enough for other companies to refer to in preparing their own environmental reports.
- It is difficult for smaller businesses to make such a voluminous report. It is therefore not useful as a reference.
- For me, it is quite a useful report. However, I do not think that everyone needs that much information. It might be nice to have a summarized version.
- The report is well structured and easy to understand. In the 2000 issue, examples of actual onsite improvements were given, which made the report stand apart from those of other companies.
- The report could have been better if it described what measures the Ricoh Group took against buried waste.
- For whom was this report written? How about inserting more interesting and relatable illustrations and figures so that the users of Ricoh Group products who are indifferently turning the pages of the report will pay more attention to the details?

In what capacity did you read the report?



Number of Copies Issued

	Ricoh Group Environmental Report 1998	
Language	Japanese	English
Date of issue	January 1999	January 1999
Number of copies	26,200	500
Number of pages	30	

	Ricoh Group Environmental Report 1999	
Language	Japanese	English
Date of issue	September 1999	September 1999
Number of copies	51,300	8,375
Number of pages	32	

	Ricoh Group Environmental Report 2000	
Language	Japanese	English
Date of issue	September 2000	December 2000
Number of copies	40,700 (as of June 15, 2001)	6,800
Number of pages	60	

Ricoh Group Sustainability Report 2001 was published in December 2001.

Ricoh Group Sustainability Report 2002 will be published in the autumn of 2002.

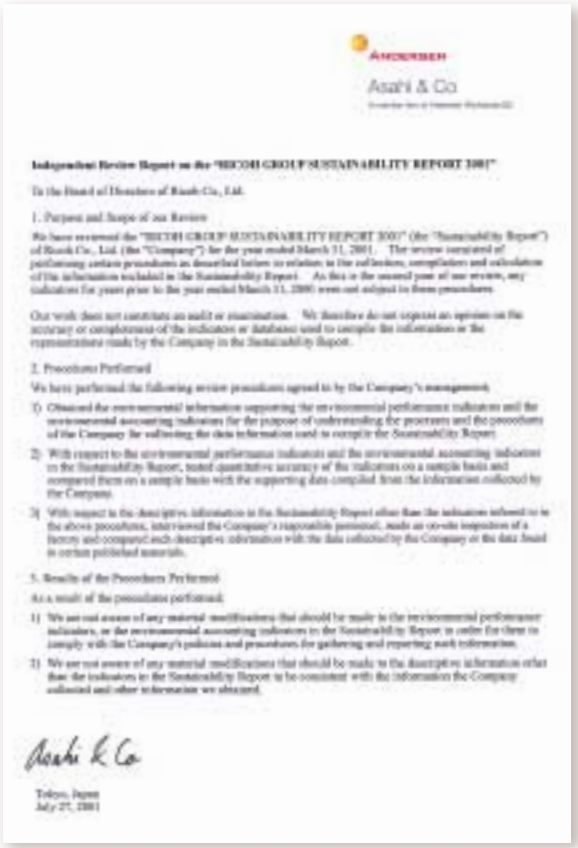
Editor's Postscript

The Ricoh Group's 2001 environmental report was based on GRI Guidelines and included new sections on the social and economic effects of the Ricoh Group's environmental conservation activities. Accordingly, the report's title was changed from *Ricoh Group Environmental Report* to *Ricoh Group Sustainability Report*. In addition, descriptions on environmental accounting, the progress of LCA research, and global examples were greatly expanded after carefully examining the necessity of including such information. As a result, the 2001 report contains 74 pages, whereas the 2000 report contained only 60 pages.

In a questionnaire on the 2000 report, 16 respondents commented that the report was useful as a reference while five criticized the report for being too long and technical. In future versions, improvements will be made in the amount of information given and the understandability of the content.

To make the Ricoh Group's environmental report more accurate and more substantial, the Group collected data itself for almost all examples shown in past reports. For the 2001 report, new data was collected directly from overseas affiliates in France, the U.K., the U.S., and Mexico as well as sites where Ricoh Group forest preservation programs were being implemented. Also for future reports, data that is useful to more people in carrying out environmental conservation activities will continue to be collected, and information based on data that the Group carefully collects by itself will be disclosed.

Independent Review



ANDERSEN

Asahi & Co

Independent Review Report on the "RICOH GROUP SUSTAINABILITY REPORT 2001"

To the Board of Directors of Ricoh Co., Ltd.

1. Purpose and Scope of our Review

We have reviewed the "RICOH GROUP SUSTAINABILITY REPORT 2001" (the "Sustainability Report") of Ricoh Co., Ltd. (the "Company") for the year ended March 31, 2001. The review consisted of performing certain procedures as described below in relation to the collection, compilation and calculation of the information included in the Sustainability Report. As this is the second year of our review, any indicators for years prior to the year ended March 31, 2000 were not subject to these procedures.

Our work does not constitute an audit or examination. We therefore do not express an opinion on the accuracy or completeness of the indicators or database used to compile the information or the representations made by the Company in the Sustainability Report.

2. Procedures Performed

We have performed the following review procedures agreed to by the Company's management:

1) Obtained the environmental information supporting the environmental performance indicators and the environmental accounting indicators for the purpose of understanding the processes and the procedures of the Company for collecting the data or information used to compile the Sustainability Report.

2) With respect to the environmental performance indicators and the environmental accounting indicators in the Sustainability Report, tested quantitative accuracy of the indicators on a sample basis and compared them on a sample basis with the supporting data compiled from the information collected by the Company.

3) With respect to the descriptive information in the Sustainability Report other than the indicators referred to in the above procedures, interviewed the Company's responsible personnel, made an on-site inspection of a factory and compared such descriptive information with the data collected by the Company or the data found in certain published materials.

3. Results of the Procedures Performed

As a result of the procedures performed:

1) We are not aware of any material modifications that should be made to the environmental performance indicators, or the environmental accounting indicators in the Sustainability Report, in order for them to comply with the Company's policies and procedures for gathering and reporting such information.

2) We are not aware of any material modifications that should be made to the descriptive information other than the indicators in the Sustainability Report to be consistent with the information the Company collected and other information we obtained.

Asahi & Co

Tokyo, Japan
July 27, 2001

Ricoh Group Sustainability Report 2001 was reviewed by Asahi & Co., an audit firm as per above to ensure the credibility of the environmental performance data and environmental accounting data included in the report. Asahi & Co. was the independent party reviewer of the 2001 report as well as the 2000 report in the previous year.

Comments from Asahi & Co., apart from its official independent party review, are as follows.

Mr. Ryuta Uozumi, Ms. Naoko Kawahara, and Ms. Noriko Irie of Asahi & Co. inspecting the Fukui Plant

The Ricoh Group has made efforts to promote environmental management and has regarded environmental conservation as an important management principle.

- **Reference to GRI Guidelines**
  The 2001 report is structured based on GRI Guidelines, which includes descriptions on the social and economic effects of the Group's environmental conservation activities.
- **Promotion of an environmental action plan throughout the Ricoh Group**
  An environmental action plan was made for the entire Ricoh Group, including overseas affiliates, and each Group company is sincerely implementing it.
- **Sophisticated environmental management**
  Ricoh made efforts to ensure that all of its affiliates and domestic business sites obtain ISO 14001 certification within fiscal 2001.
- **Promotion of environmental accounting and building of environmental information systems**
  Ricoh promotes environmental accounting and builds environmental information systems at all of its domestic and overseas affiliates and domestic business sites.
- **Further contributions to society through environmental conservation activities**
  The Ricoh Group contributes to the creation of a resource-recirculating society by conducting environmental volunteer activities and holding lectures on environmental issues.

Asahi & Co. expects the Ricoh Group to achieve further improvement of environmental management.

Our earth, Our tomorrow

Please send all comments and inquires regarding this report to:

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http://www.ricoh.co.jp/ecology/e-/

● Asahi & Co. conducted an independent review of this report.

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