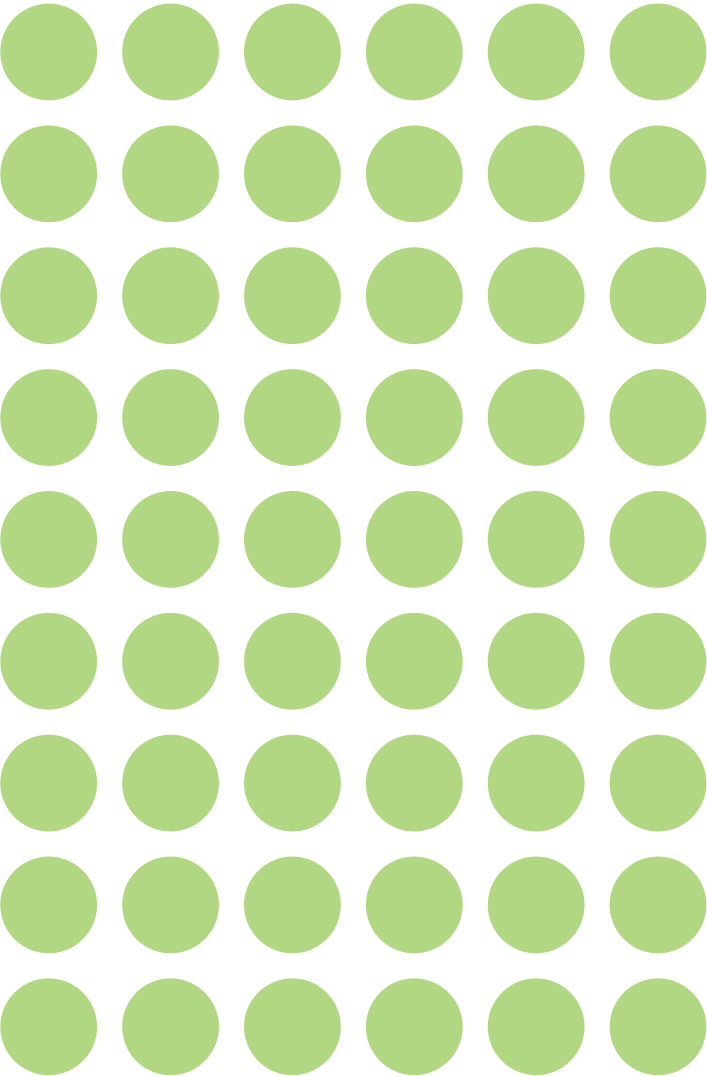


Environmental Report 2001

Aiming to become a responsible and environmentally friendly corporate citizen



Cover photo

The hummingbird is just 7cm in length and 2g in weight. Using honey from flowers as a source of energy, it can fly as far as 2,000 miles by flapping its wings 80 times in a second. Displaying true energy efficiency during flight, the hummingbird is just one example of nature showing us the way. By learning about the interactive, interdependent and complex relationships between plants and animals, Omron looks to develop more innovative environmental technologies for the 21st century.

Published in June 2001



This report is printed on 100% recycled paper (82% bright) using soy-based ink certified by the American Soybean Association in order to reduce air-polluting VOC emissions.

OMRON Corporation
Shiokoji Horikawa, Shimogyo-ku, Kyoto, 600-8530 Japan
For inquiries, contact the Quality and Environment Headquarters.
Phone: (+81) 75-344-7033 Fax: (+81) 75-344-7088
URL: <http://www.omron.com>

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Editorial policy

In June 2000, the Global Reporting Initiative (GRI) published globally applicable guidelines for preparing enterprise-level sustainability reporting. In Japan as well, similar guidelines for environmental reporting were published by the Ministry of the Environment in February 2001.

Omron's Environmental Report 2001 was prepared in reference to these guidelines, in order to introduce Omron's management philosophy, environmental commitment and contribution to environmental protection through its products and technologies as well as a wide range of environmental activities in an easy-to-understand manner.

This report outlines the environmental protection activities that the Omron Group implemented during fiscal 2000 (April 1, 2000 to March 31, 2001). To help strengthen understanding of Omron's environmentally conscious management practice, future plans and targets were partially included. We hope the newly added map that illustrates the environmental burdens of Omron's corporate activities provides a clear overview of those activities for readers.

We will continue publishing the environmental report on an annual basis.

To readers of this report

The Environmental Report 2001 features an 'FY 2000 Highlights' section (page 3-10) that summarizes Omron's environmental activities and future vision. Technological details were covered on page 11-32 and page 35, social activities on page 33 and 34. This will help readers gain a better understanding of Omron's overall corporate activities and environmental commitment. As a special feature, comments from stakeholders regarding Omron's environmental activities are introduced on page 36 and the personal philosophy of Omron Founder Kazuma Tateisi can be found on the final two pages.

What is covered in this report

This report covers environmental activities implemented by Omron Corporation and 12 major domestic affiliates (listed below), and includes some activities carried out by overseas manufacturing subsidiaries. As for corporate data shown on page 2, consolidated figures represent the entire Omron Group and include companies both in and outside Japan.

- Omron Corporation
- Omron Iida Co., Ltd.
- Omron Ichinomiya Co., Ltd.
- Omron Takeo Co., Ltd.
- Omron Nohgata Co., Ltd.
- Omron Sanyo Co., Ltd.
- Omron Matsuzaka Co., Ltd.
- Omron Okayama Co., Ltd.
- Omron Izumo Co., Ltd.
- Omron Aso Co., Ltd.
- Omron Kurayoshi Co., Ltd.
- Omron Kumamoto Co., Ltd.
- Omron Kyoto Taiyo Co., Ltd.

History of Omron's Environmental Activities

1988	1992	1994	1995	1996	1997	1998
CFC Total Abolition Project formulated.	Environmental Conservation Promotion Division established to promote environmental protection activities.	Environmental Charter established.	Omron stops use of CFCs in manufacturing.	Environmental Conservation Promotion Group established along with Head Office reform.	Ayabe Factory and Dutch manufacturing subsidiary receive ISO 14001.	Omron Corporation Environmental Policy established.
					EZE/EZE2 proximity switch receives Chairman's Award from the Japan Machinery Federation for excellent energy-saving feature.	EZE/EZE2 proximity switch receives Chairman's Award from the Japan Machinery Federation for excellent energy-saving feature.
						Environmental Declaration established by renewing Environmental Charter.
						Environmental Activity Committee and four sub-committees established to promote environmentally conscious management.

Corporate Data

Company name OMRON Corporation
Established May 10, 1933
Incorporated May 19, 1948
Capital 64,081.78 million yen
(As of March 20, 2001)

Main Omron Group offices and affiliates

■ Omron Corporation (offices, factories and laboratories)

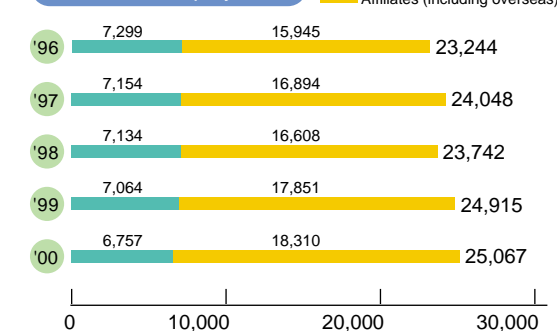
Kyoto Office, Tokyo Office, Osaka Office, Nagoya Office, Osaka Office, Komaki AEC Office, Kusatsu Factory, Mishima Factory, Ayabe Factory, Minakuchi Factory, Kyoto Laboratory, Tsukuba Laboratory, Kumamoto Laboratory

■ 132 subsidiaries (51 domestic, 81 overseas) and 11 associated companies (6 domestic, 5 overseas)

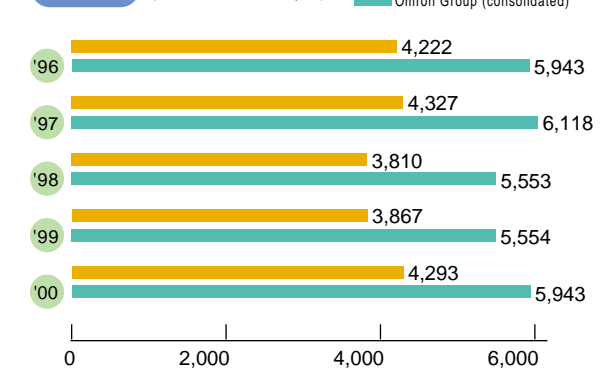


Omron Kyoto Center Building

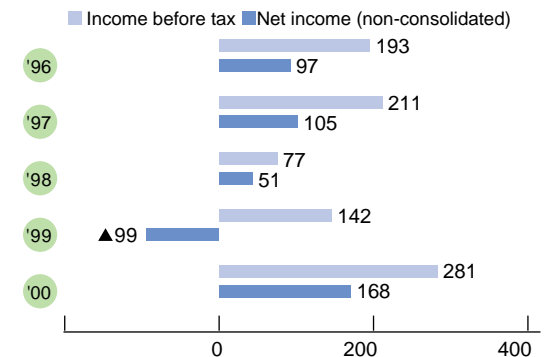
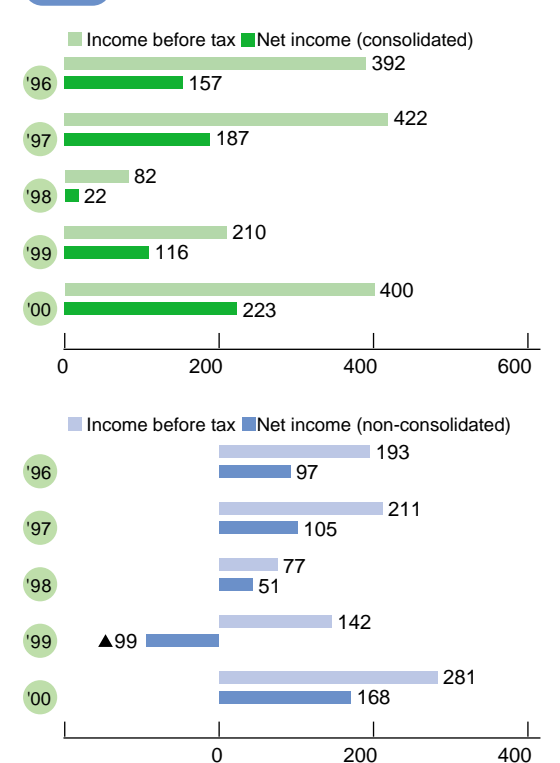
Number of Employees



Net Sales



Profit



Note: A net loss was recorded for FY'99 due to an additional retirement benefit allowance earmarked for the year accompanying the revision of the accounting system.

1999	2000	2001
June: Suppliers are requested to comply with Omron's green procurement system.	June: Adoption of green procurement system disclosed to suppliers.	March: ISO 14001 certification simultaneously acquired for nine offices and labs.
October: Environmental policy revised.	June: 'Eco Grand Prix' awards established.	May: The first 'Eco Grand Prix' awards presented.
October: Omron Aso receives 1999 Chairman's Award from the Recycling Promotion Association.	February: Omron Takeo receives the Director of the Kyushu Bureau of International Trade and Industry Award for energy management excellence.	
November: New Environmental Activity Committee founded.		
May: All Omron production sites (30) both in and outside Japan complete acquisition of ISO 14001 certification.		
Eco-Products Certification System established.		
The first Environmental Report published.		

Contributing to a Better Society for Tomorrow

Message from the CEO



Personal Philosophy Taking pleasure in other's happiness.

Profile	
June 1987	Appointed President of Omron Corporation
June 1997	Appointed Vice Chairman of the Kyoto Association for Employment of Persons with Disabilities
April 1998	Appointed Vice Chairman of the Kyoto Chamber of Commerce and Industry
May 1998	Appointed Vice Chairman of the Kansai Economic Federation
June 1998	Appointed President of the Foundation of Kansai Research Institute

Aiming to achieve Omron's ideal image for 2010

In May 2001, Omron launched its new long-term corporate vision, "Grand Design for the Year 2010" (GD2010). Targeting the first ten years of the 21st century, this grand design portrays the ideal image for the Omron Group that we envision. It also specifies the basic policies and management strategies required to achieve this image. Ultimately, this vision aims to create a truly '21st century company' that can be described as -- 1) a healthy and exciting company, 2) a holonic company, and 3) a multilocal company. Accordingly, the Omron Group mission is to contribute to the development of society, and our prime management objective is to maximize Omron's corporate value on a long-term basis. As we continue to transform ourselves and work to help promote the betterment of our society, environmental considerations will remain one of the most important management objectives for Omron.

Heading for the Optimization Society

Present day environmental problems are directly related to the industrialization and technological development of the previous century. Along with social progress and an advance in science and technology, incalculable harm has been inflicted on the ecological balance of this planet. As a result, our society is experiencing an increasing imbalance between material satisfaction and psychological fulfillment. The SINIC Theory, originally developed by Omron's founder Kazuma Tateisi, is our prediction process for anticipated transformations in society. According to this theory, the early part of the present century will see a shift from an industrialized society to an Optimization Society. In this new society, two fundamental human desires -- the pursuit for material wealth and the need for psychological gratification -- will clash, forcing society to resolve this conflict by striving to merge these two opposing value perceptions into one of perfect balance. Today, the pursuit of efficiency and productivity is being replaced by growing societal needs that emphasize quality and true joy of life, as well as building a social system that enables sustainable development of the environment, economy and of society itself. This in turn requires corporate management to promote growth from a global perspective while at the same time maintaining co-existence and harmony with the environment.

Aware that accepting responsibility for environmental

consequences is essential to achieve this goal, Omron was quick to incorporate and enforce conservation efforts into its management practices. Based on this tradition, we will continue enhancing our corporate value through our unceasing commitment to ecological concerns. In doing so, we aim to make a sizable contribution toward the sustainable development of our society by taking full advantage of Omron's distinctive strengths.

Management that is people-oriented and environmentally conscious

Inherent to Omron's DNA is a people-oriented approach grounded in a corporate philosophy that has been the backbone of Omron since foundation. Central to all our corporate activities, this approach places individuals first when implementing management practices and promoting business operations. This in turn demands that ecological considerations are taken into account and that policies are implemented to preserve and protect the environment. This is the driving force behind our environmentally conscious management system. As a major issue that affects the well-being of people throughout the world, safeguarding the environment should be a common interest shared by all.

Our unique ability to cultivate new markets by accurately anticipating and quickly assessing potential needs is also an essential part of our DNA. And as such, it functions to support a corporate philosophy that stresses social awareness and public responsibility, both of which are absolutely essential to the protection and improvement of our environment. While preserving and revitalizing Omron's DNA, we will promote dynamic and vital business activities by maximizing our intelligence and creativity to realize our goals.

This Environmental Report details Omron's environmentally conscious management practices. Any thoughts or suggestions you may have concerning this report would be greatly appreciated.

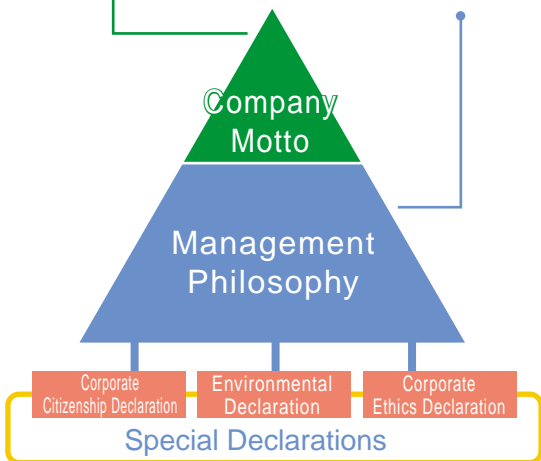
June 2001

Yoshio Tateisi
Representative Director
and Chief Executive Officer

Omron's Corporate Ideals

"At work for a better life,
a better world for all."

- Offer maximum satisfaction to customers.
- Adopt a challenging spirit.
- Focus on gaining our shareholders' trust.
- Respect individuals.
- Become a responsible corporate citizen.
- Maintain corporate ethics while promoting corporate activities.

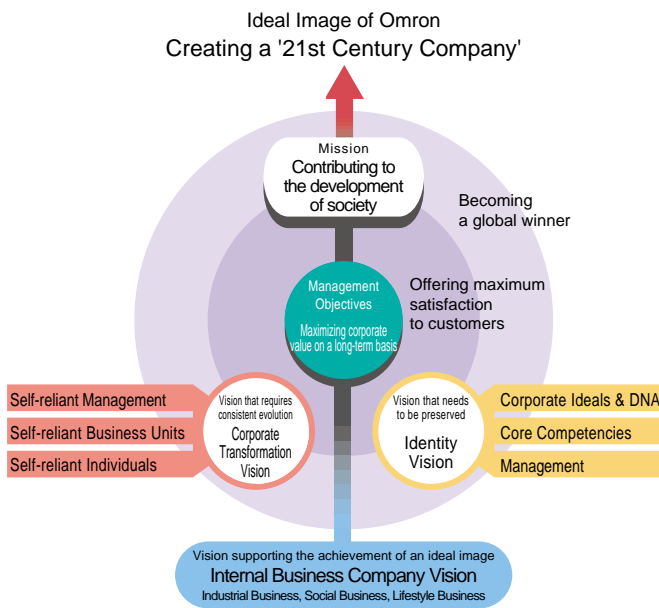


GD2010 Vision Structure

GD2010 is intended to set the course for the Omron Group in the 21st century. As a truly global company, Omron aims to use this grand design to support its contributions toward the development of society. To this end, all the elements that comprise Omron's corporate vision have been classified into those that require consistent transformation and those that should be preserved and carried over to the future.

Ideal Image of Omron Targeting 2010: Creating a '21st Century Company'

- [Healthy and Exciting Company]
 - A company that maintains a perfect balance between existing and new business areas, and also between profit and investment.
 - A company staffed with a variety of talented workers who can fully demonstrate creativity and a challenge-oriented spirit in their work.
- [Holonic Company] A company in which individual business units work to strengthen their respective business operations, but at the same time are integrated and well-coordinated toward a unified Group goal.
- [Multilocal Company] A company that contributes to local communities while making use of their attributes. Its operations are also integrated as a group on a global basis.



➤ **Environmental Declaration:** We pledge to aspire to harmonize with nature and work for a better environment through activities showing a strong sense of public responsibility.

➤ **Environmental Policy:** In accordance with our environmental declaration, we have made environmental issues one of our most important management concerns. All corporate activities, services and products of the Omron Group, including our microelectronics and service operations will be subject to our environmental policy, as outlined below.

1	Basic Law Observance	Observance of the Environmental Basic Law and all related laws as well as maximum response possible prior to the enactment of such legislation and provision of voluntary standards to encourage preservation of the environment.	5	Specific Goals	Each environment-related organization to select relevant goals from listed priorities and promote continual improvement of EMS and reduction of the burden our activities place on the environment. 1) Development of technology and products that contribute to a reduction of the burden our activities place on the environment for our customers. 2) Purchase of environmentally friendly materials, fixtures, fittings. 3) Activities to improve resource productivity. 4) Energy conservation to cut CO ₂ emissions. 5) Pollution reduction and prevention in regional environments.
2	Response to Environmental Issues	Any environmental issue raised by an interested party will be responded to in good faith.	6	Determination and Review	Environmental improvement objectives and targets to be fixed, environmental audits to be conducted over fixed time frames, and environmental management to be reviewed, improved and maintained.
3	Support Structure	Appointment of Senior Environment Officer and establishment of a specialized corporate organization at Omron headquarters. Establishment of overall corporate organization, factory organizations and promotion of cooperative efforts among these organizations.	7	Instruction and Training	All staff to receive instruction on environmental policy and participate in related training activities.
4	System	Establishment of Environmental Management System (EMS) compatible with ISO 14001.	8	Social Contribution	Active participation.
			9	Disclosure	Environmental policy and strategies to be made available for public use in the appropriate form.

<Enacted: April 1, 1996; Reviewed: October 1, 1999>



Omron's Environmental Activities

Executive's Review

Environmentally conscious management to resolve global environmental issues

Mass production and consumption in the 20th century have left a legacy of serious and in some cases irreversible damage to our ecosystem. Where possible this situation must be remedied. To safeguard the environment and achieve sustainable development for our society, companies must make efforts to review past activities and implement new programs. To build a recycling-oriented society, various environmental issues must be thoroughly addressed and effectively solved. These include global warming (caused by escalating CO₂ emissions), exhaustion of natural resources and discharge of harmful toxic chemicals. Along with complete disclosure of environmental information, ecological considerations have been taken in every area of Omron's corporate management system. This has been done with the aim to reduce the environmental impact of our corporate activities and to contribute to the resolution of existing ecological threats. An environmentally conscious management system that fully incorporates environmental conservation efforts into all business strategies has been implemented throughout the Group.

Objectives and progress

During fiscal 2000, Omron's environmental activities concentrated on reducing CO₂ emissions, promoting recycling, developing environmentally sound lead-free products, and obtaining ISO 14001 certification for R&D, administrative and sales sectors. Targets set for the recycling of waste and production of lead-free products were

reached much quicker than anticipated. However, due to production volume increases that surpassed our energy conservation efforts, we failed to reach our CO₂ target. To meet these targets in the future, measures must be implemented far more aggressively and thoroughly.

An environmental accounting practice has also been introduced by Omron on a trial basis for one of its internal companies in compliance with "A Guideline for Developing an Environmental Accounting System" published by the Environment Agency (presently the Ministry of the Environment). Issues that are revealed through the trial run will be resolved and the practice will be implemented on a corporate-wide level during fiscal 2001.

Plus, nine research laboratories, head offices and sales offices received ISO 14001 certification at one time. Prior to this achievement, all Omron production sites both at home and abroad had been ISO-certified. This means that a Group-wide system is now in place that works to accelerate our environmentally conscious management practice in order to reduce the ecological impact of our business activities.

Promoting the development of ecological products

Environmental damage generated by societal systems and activities requires a well-coordinated global effort with everyone taking responsibility. Man-made harm to the environment must be minimized and where possible eliminated. This perspective corresponds to Omron's philosophy that decrees a strong sense of public

responsibility as its key corporate mission.

To improve societal conditions and realize sustainable development without adversely impacting the environment, we are aggressively developing environmentally sound products by drawing on Omron's core Sensing & Control technologies. Examples include products that consume less energy and use less resources (materials), lead-free products and those that help our customers minimize the environmental impact of their business activities.

Since the 1998 introduction of a corporate-wide Eco-Products Certification System, 54 products have received Omron's eco-labels (Eco-Products) in the last three years. Omron will continue to promote and reward product development that takes environmental considerations into account.

Full disclosure of environmental information

Faithful to its corporate motto, Omron is actively involved with corporate citizenship activities that revolve around four main areas — science & technology, social welfare, arts & culture and the global environment. Specific activities range from sponsorship of wheelchair marathon races, local community services such as cleanups and tree-planting projects to a variety of other volunteer services that include assisting foreign students living in Japan. Through these activities, Omron aims to foster a grass roots spirit within the company that operates at every level and in every sphere of our human environment.

To disclose environmental information and strengthen public understanding of Omron's environmental activities,

an annual environmental report has been available since 1998. This was then accompanied by the 1999 launch of an environmental activities page for Omron's corporate website. Plus, cooperation with external organizations is aggressively sought in order to further strengthen Omron's environmental commitment.

Any comments or ideas relating to this environmental report would be most welcome.



Akio Imaizumi
Senior Managing Director
Senior General Manager of
Quality and Environment Headquarters

Our Omron Day* cleanup of the Kamo River in Kyoto stirred my conservationist side and now I realize that my actions have consequences. Whether I'm at the office, at home or strolling in my neighborhood I make every effort to maintain an environmental awareness in everything I do.

* Omron Day: On May 10th (company anniversary), Omron offices around the world participate in volunteer activities in their local communities. Executives and employees actively get involved and support local programs and non-profit organizations as part of a Group-wide effort to give back to the local communities in which Omron operates.

Fiscal 2000 Environmental Targets and Results

Objectives	Fiscal 2000 targets	Fiscal 2000 results
Establish an environmental management system for offices and laboratories	Acquisition of ISO 14001 certification	ISO 14001 certification achieved by nine additional sites (as of March 2001)
Promote Eco-Product development (energy-saving, resource-saving, etc.)	Create 18 Eco-Products	18 Eco-Products developed (accumulated total: 54)
Promote lead-free product development	Develop at least one lead-free product at each internal company	51 lead-free products developed
Launch a green procurement system	Prepare supplier evaluation tools	Tools completed
Promote reduction in CO ₂ emissions	Reduction: 3.7% (compared to FY1995)	Increased 5.7% (compared to FY1995)
Promote recycling of waste	Waste recycling ratio: 75%	Waste recycling ratio of 86.5% achieved
Launch an environmental accounting practice	Trial launch of an environmental accounting system	An environmental accounting system implemented by a single internal company on a trial basis
Launch a chemicals control system	Start survey of supplier data	Survey items decided

Reducing environmental impact of business activities

- Resource conservation and reuse
- Developing and offering environmentally sound products
- Environmentally conscious development, production and offices

<Individual programs>

Recycling, LCA, Eco-Products, control of chemical substances, energy-saving, zero emissions, green procurement, development of environmental technologies

Contributing to environmental solutions

- Offering and using Omron products, services and technologies intended to support customers to tackle environmental issues (energy-saving, resource-saving, zero emissions, etc.)

<Individual programs>

Eco-Products, LCA, development of recycling/environmental technologies, Eco-business, risk management, cooperation with NGOs, tree-planting, environmental accounting book

Environmental information disclosure

- Communicating environmental information
- Adopting corporate evaluation indicators and disclosing data

<Individual programs>

Environmental accounting, environmental report, web communications



Omron Business Activities and Environmental Impact

Fields of business

Omron is a leading manufacturer of various control components, sensing components and systems equipment designed to provide the manufacturing industry with advanced factory automation systems. Omron's control components are also utilized for consumer products such as household appliances and automobiles. Its diversified product range also extends to electronic fund transfer systems and public information systems (including ATMs, ticket gates for train stations and traffic control systems) as well as

healthcare equipment (such as blood pressure monitors) and services among others. Though on the surface they appear to be unrelated, these diversified business fields have one thing in common, that is Sensing & Control technology — Omron's core competency. The individual business units of Omron work independently to accurately meet society's requirements. By doing so, the efforts of these business units are integrated so that the entire Omron Group can continue to contribute toward the enhancement of society.

INPUT/OUTPUT MAP



Environmental impact of corporate activities

Omron's environmental impact is primarily generated from energy and resource consumption when manufacturing products. Current levels of industrial waste, chemical substances and CO₂ emitted during our manufacturing processes have the potential to seriously impact the human environment. Plus, worldwide water shortages and dangerous levels of pollution in water are fast becoming an increasing threat. To reduce the adverse effects of our manufacturing activities we are actively identifying and assessing environmental impact-causing

factors for each manufacturing facility.

In addition, we are concentrating efforts to improve the environmental performance of Omron products. By doing so, we also aim to enhance the environmental performance of equipment either manufactured or used by customers, toward the ultimate goal of minimizing society's overall environmental impact. As of fiscal 2000, a total of 54 Eco-Products have been produced. Encouraged by this success, Omron will continue refining its environmental technologies in order to contribute to the sustainable development of society.

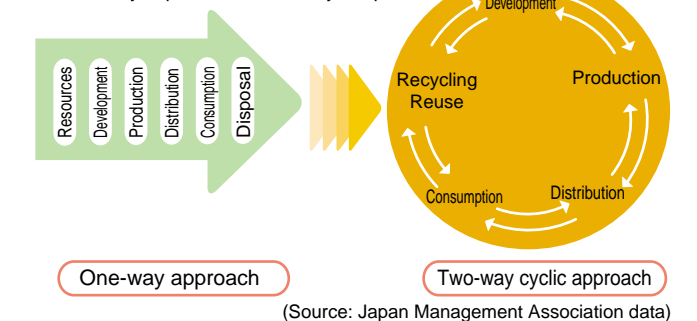
Achieving an Optimization Society

Building a sustainable society

We see around us growing evidence of man-made harm in almost every region of the earth. This is a clear indication that an industrialized society concerned only with the pursuit of material wealth is no longer viable. The 21st century must foster a recycling-oriented society capable of sustaining itself by fully keeping ecology in mind. To this end, business circles must also move away from thinking in terms of a conventional 'one-way' (development, production, consumption, then disposal) approach and take a new two-way cyclic approach intended to recycle and reuse irreplaceable natural resources on a continual basis.

Recycling-oriented structure of industry

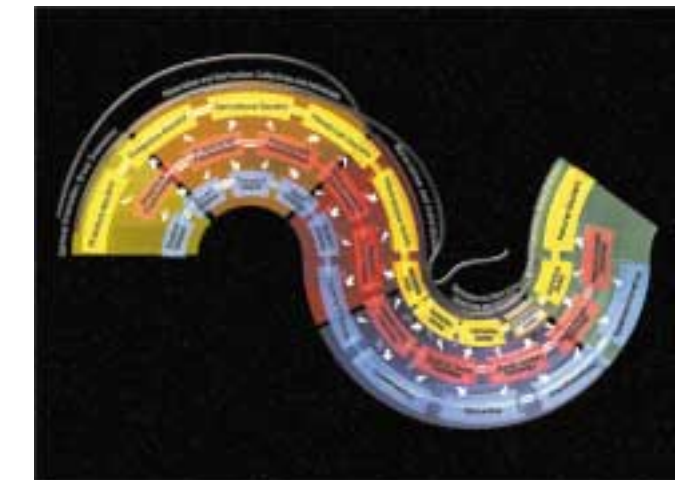
Replace the one-way approach with a new two-way cyclic approach. Adoption of a two-way cyclic way of thinking will radically expand the availability of options.



Anticipation of social transformation

Omron's original future prediction method (SINIC Theory)
In the 1960s, Omron developed a unique future prediction method called the SINIC (Seed-Innovation to Need-Impetus Cyclic Evolution) Theory that has continued to serve as the guiding principle for Omron's corporate management. This theory assumes that the three elements of science, technology and society have a cyclical influence on each other in the process of social development. Assuming this premise, the theory then divides the current industrialized society into five phases — handicraft, industrialization, mechanization, automation and information. As a result of this hypothesis and classification, we anticipate that our present information society will begin a process of transformation. Through this process we will start to see the emergence of an 'Optimization Society' around 2005 that we predict will last about

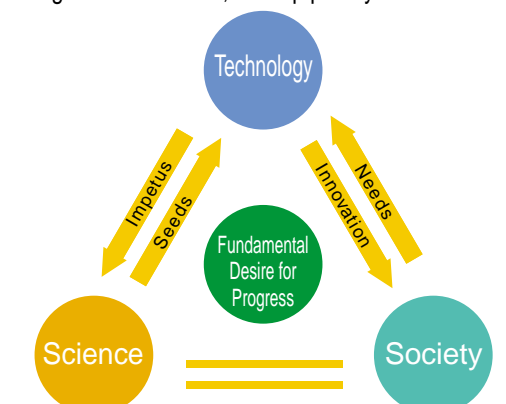
20 years until it in turn is displaced by the arrival of an 'Autonomous Society.'



Realizing the Optimization Society

Omron anticipates the arrival of the Optimization Society (a society that facilitates self-fulfillment and an improved quality of life) in the early part of the present century. For us to co-exist harmoniously with nature, those environmental issues that have been ignored by the previous century must be addressed and resolved in this one. On our part, Omron will remain committed to finding ideal solutions for resource and energy related issues and industrial waste. Having the capability to offer solutions to these issues, along with any others that infringe upon the health, safety

and basic rights of individuals, is a top priority for Omron.



Environmental Activities — Fiscal 2000 Highlights

1 ISO 14001 certification for nine offices/laboratories

By fiscal 1999, all Omron Group factories worldwide had achieved ISO 14001 certification. During fiscal 2000, nine offices and laboratories (Kyoto and Tokyo Head Offices; Osaki, Nagoya, Komaki Automotive, Osaka Offices; Tsukuba, Kyoto and Kumamoto Laboratories) also became ISO 14001-certified. Certifying the non-manufacturing sector enables Omron to build a fully fledged corporate-wide environmental management system. By doing so, our environmental conservation activities can be implemented more effectively and swiftly.



2 Promoting Eco-Product development (54 Eco-Products in total)

From among all the environmentally friendly products developed by the company, Omron certifies those products that fulfill in-house standards as 'Eco-Products.' Once a product receives certification, an Omron designed eco-label is then printed in product catalogs and brochures. By doing so, we aim to accelerate the development of products that consume less energy and conserve resources. As of fiscal 2000, a total of 54 products have been designated 'Eco-Products.'

(see page 15 for details)



3 Aiming for an ATM recycling ratio of 98%

In January 2001, Omron established a recycling test center for end-of-life disposed ATMs. This center collects, disassembles and breaks down end-of-life ATMs for recycling or reuse of parts and materials. Unlike conventional processing that used shredders, sorting is now done manually for more precise classification, resulting in higher-quality recycled materials. Aiming to achieve a recycling ratio for ATMs of 98% (on weight basis) that includes thermal and cascade recycling, the center is planning to make suggestions for more easy-to-disassemble/decompose product designs.

(see page 25 for details)



4 Promoting green procurement

In conformance with company guidelines (formulated in 1999), Omron will launch a green procurement system for the purchase of parts and materials in April 2003. Preference will be given to those suppliers who have been evaluated and rated highly for their active involvement in environmental conservation. Criteria for evaluation was specified in fiscal 2000.

(see page 12 for details)



5 Environmental accounting

During fiscal 2000, Omron's internal company, Industrial Automation Company (IAB), implemented an environmental accounting practice on a trial basis. Consequently, environmental costs (including investments, personnel costs and other related expenditures) totaled 1.1 billion yen. IAB's environmental accounting record is characterized by a large proportion of R&D related expenses (over 60%). Our calculation of environmental activity effectiveness concentrated on direct benefits, which amounted to 150 million yen. Based on an analysis of the trial run results, we will strengthen this environmental accounting system for corporate-wide implementation.

(see page 30 for details)

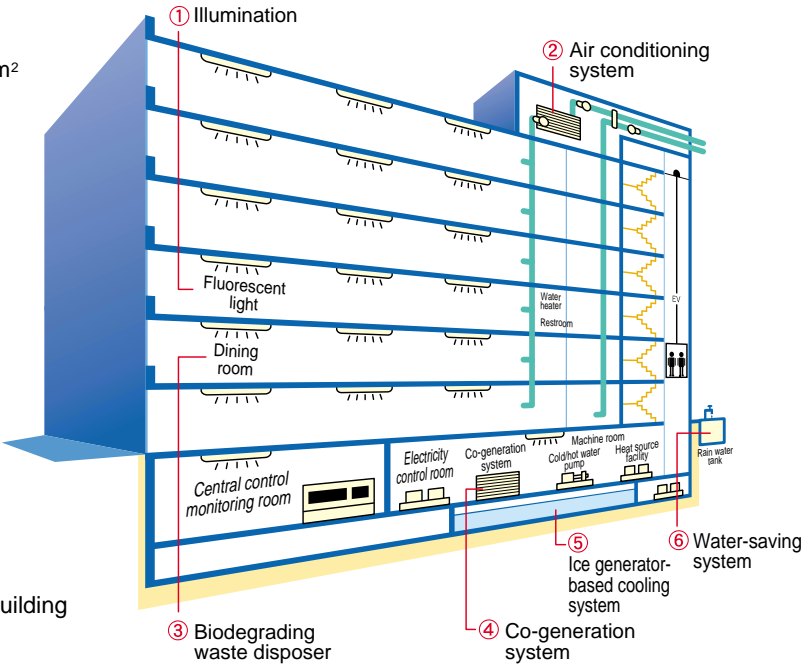
6 'Intelligent' office building with ecology in mind

High-tech design plus numerous environmentally friendly facilities

Completed in August 2000, the Omron Kyoto Center Building serves as the heart of Omron operations by integrating head office administrative functions, as well as the operations of internal companies and R&D laboratories. Allowing for a spacious, open area, this building has been designed to maintain harmony with the surrounding scenery. The building also features a number of advanced technologies to enhance environmental conservation as well as to provide a more comfortable workplace.

- Land area: 4,760m²
- Total floor area: 36,250m²
- Height: 45m

11 floors with two underground levels



Omron Kyoto Center Building

Comprehensive energy-saving measures

This building also features a number of energy-saving measures including inverter control for air conditioning systems. Outside air intake control is also available by detecting CO₂ concentration for a comfortable work environment. The building uses a gas co-generation system (with a maximum 1,040kW electric power-generating capacity) that recovers waste heat for hot water absorption-type freezers. Moreover, a total heat exchanger for the thermal energy recovery system helps minimize waste heat emissions, while an ice generation system uses the supply of low-cost electricity at night for more efficient energy usage. Other energy-saving measures include highly efficient fluorescent lighting fixtures and collected rain water for trees and plants.

A wealth of innovative sensing technologies

For added security, a face recognition system and card gate system are installed for room entry/exit control. Other automated systems that incorporate Omron's advanced sensing technologies include an RFID tag-based fare adjustment system for the dining room and wireless modem-equipped vending machines.

Reducing volume of waste

All-in-one printer/copier/fax machine units and PCs that have been installed within the building are networked. This helps to conserve paper as the network system makes it easy to assess the volume of paper used by each division. Paper that has been classified as recyclable is then shredded for use as toilet paper.

A biodegrading waste disposer is also utilized for the production of organic fertilizer from raw food refuse and leftovers from the dining room. That fertilizer is then supplied to a subcontracted tea farm. Omron in turn purchases tea produced by that farm to help promote the recycling of resources.

7 Development of lead-free solders

In fiscal 1995, Omron launched a study project for lead-free solder technology. Then in fiscal 1999, a corporate-wide specialized committee was established to work on: 1) the selection of lead-free solder/plating materials; 2) the development of lead-free soldering processes and techniques to evaluate lead-free solder reliability; and 3) research for soldering systems. As a result, Omron has been able to choose lead-

free solder materials that satisfy requirements for both reliability and mass-productibility. At the same time, work done through the committee has enabled the establishment of a reliable lead-free soldering process. To accompany this, we have also adopted a laser-welding technology to achieve connections that totally eliminate the use of solders.

(see page 14 for details)

Omron's Commitment to Developing 'Eco-Products'

By making full use of the company's microelectronics technology, Omron is committed to creating a steady stream of Eco-Products that meet in-house standards for reductions in energy consumption and resource use. Moreover, we are actively involved in developing environmentally

friendly products so that we may: 1) support the energy-saving measures of our customers; 2) facilitate energy conservation on the manufacturing lines of our customers; 3) contribute to the creation of new energy sources; and 4) promote recycling toward environmental

Product assessment

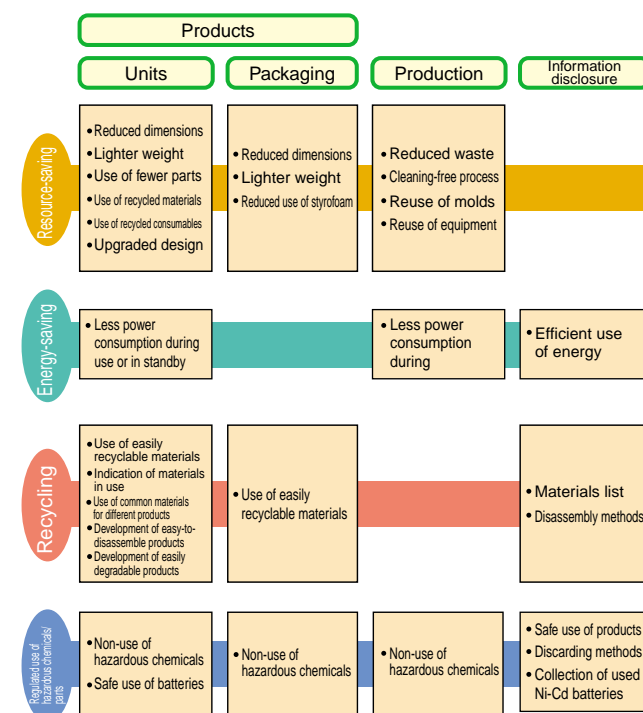
Omron has consistently promoted the development of environmentally friendly products. Our Eco-Products Certification system and 'Eco Grand Prix' awards are intended to accelerate this endeavor and foster environmental awareness among employees. By doing so, we aim to create 'top-runner' products in the arena of environmental conservation. Our product assessment activity and related systems are linked to the company's current development system. This system is designed to accommodate a growing need for inverse manufacturing* and to create more innovative easy-to-recycle products that save energy and are free of hazardous chemicals.

*Inverse manufacturing: A new style of manufacturing (as opposed to the conventional design/production/use/disposal approach) that addresses the entire life cycle of a product from recovery, dismantling, and classification to reuse and remanufacturing.

Product assessment items

To evaluate the possible impact of a product on the environment throughout its life span in a quantified manner, Omron implemented a Life Cycle Assessment (LCA)* system for each internal company on a trial basis during fiscal 2000. After this trial period, we will officially launch (in fiscal 2001) the LCA system for all of Omron's mainstay products. As a basic rule, Omron will conduct assessments for all new products with regard to the items shown on the right.

*Life Cycle Assessment: A methodology for identifying and quantifying resource/energy requirements and emissions across a product's entire life span (from materials procurement to manufacture, usage, recycling, disposal and transportation) while objectively and comprehensively evaluating its impact on the environment.



LCA results for the HEM-601 wrist-type blood pressure monitor

Life cycle assessment for the HEM-601 wrist-type blood pressure monitor revealed that the largest percentage of CO₂ (63%) is emitted during the manufacturing stage. Accordingly, corrective measures that target the manufacturing stage (from material procurement to product assembly) are the most effective way to reduce the environmental impact of this product. Halving the use of ABS (acrylonitrile-butadiene-styrene) resin for parts has also resulted in a 7% reduction in CO₂ emissions across the product's entire life span. It is also estimated that reducing CO₂ emissions during product use by doubling battery durability will result in a further 17% reduction in CO₂ emissions.



Green Procurement

Purchasing green parts and materials

In 1999, Omron Green Procurement Guidelines were established with the aim to officially launch a system (in April 2003) that gives purchasing preference to parts/materials suppliers evaluated highly in terms of their active commitment to environmental conservation. Prior to launch, questionnaire forms were distributed to 130 Omron Suppliers Association (OSA) members and 120 commercial product makers (who belong to Omron's supplier

Key points for procurement

- 1 To make purchase in preference to parts and products that are designed to reduce environmental impact.
- 2 To make purchase in preference to suppliers who show an active commitment to environmental conservation.
- 3 To aggressively seek and use environmental information regarding parts/products to be purchased and their suppliers.

Requirements of suppliers

- 1 ISO 14001 certified.
- 2 Or currently undergoing an ISO 14001 certification procedure by an authorized auditing body and ready for certification within a year.
- 3 If neither of the above requirements is satisfied, Omron's evaluation criteria must be fully met.

ELITE system

ELITE* is Omron's e-procurement system for parts and materials that allows for the exchange of order, schedule and delivery information between Omron and its suppliers via the internet. A browser and special application program enable suppliers to log onto the ELITE web server. Through ELITE, suppliers can connect to Omron's production management and procurement systems, which are linked to the company's intranet.

In addition to 'paper-less' documentation, this system allows suppliers to easily access Omron's production plans and parts/materials requirements (formerly not available to suppliers) so that they can be prepared to produce the right amount of products at the right time. This in turn leads to the enhanced

association in Japan) as part of an Omron survey to fully understand the environmental performance of our suppliers. Determined to advance environmental awareness among our suppliers, we offer a full range of support that includes dispatching instructors for seminars.

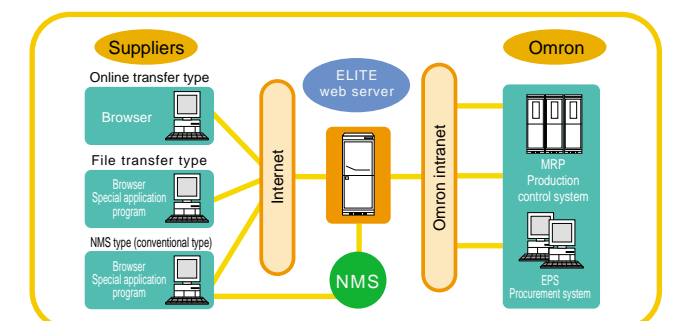
In addition, clear-cut criteria for evaluating our suppliers has been established. This criteria will be distributed to major suppliers so that they are able to prepare for an annual evaluation process.

Evaluation items for Omron's green procurement	
Environmental policy	1 Establishment of an environmental policy
Law observance	2 Control over strict observance of related environmental laws and legislation
Objectives and targets	3 Specification of environmental objectives and targets
Action plans	4 Identification of means for achieving environmental objectives and targets
Organizational system/responsibility	5 Establishment of an organizational system (centering on management) intended to promote environmental conservation
	6 Appointment of personnel in charge of environmental management
Education/training	7 Education and promotion of environmental awareness among employees
Information disclosure	8 Communication of environmental activities and disclosure of related information
Environmental management/control	9 Control and evaluation of chemical emissions in accordance with the Air Pollution Control Law
	10 Control and evaluation of chemical emissions in accordance with the Water Pollution Control Law (or Sewage Law)
	11 Control and evaluation of noise and vibration levels
	12 Control and reduction of CO ₂ emissions (energy consumption)
	13 Control and reduction of industrial waste
	14 Control of chemical substances used (or purchased)
	15 Resource conservation activities
	16 Implementation of a product assessment system necessary to create environmentally friendly products
	17 Reduction of environmental impact in distribution stage
Contingency	18 Establishment of contingency plans for accidents and other emergency situations

efficiency of inventory management so as to minimize excess stock.

For the future, Omron is planning to upgrade the ELITE system to cover information regarding the use of toxic chemicals as well. In doing so a more comprehensive exchange of environmental information is realized.

*ELITE stands for ELectronic procurement by Internet Trading Environment.

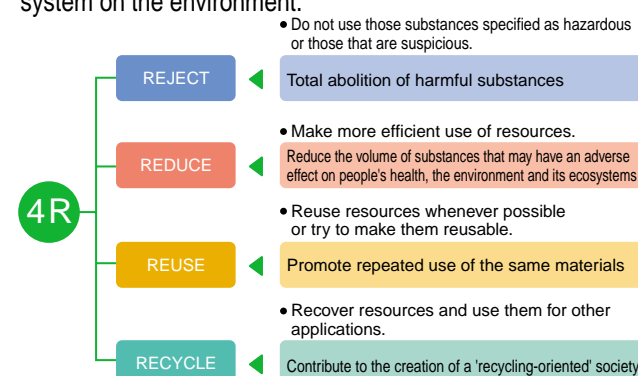


Technological Development

Omron's stance on the development of environmental technologies

Omron is committed to improving its environmental performance by reducing the environmental impact of virtually all its business activities from development and production to distribution. Toward this end, Omron not only integrates its total efforts, but also tries to gain support from concerned public institutes, customers and associates wherever possible. Centering around "4Rs" (Reject, Reduce, Reuse and Recycle), our in-house effort concentrates on developing new technologies and refining existing ones in order to achieve our environmental impact reduction goal. First, our policy is to totally eliminate (Reject) the use of substances specified as hazardous or those that are suspicious (such as carcinogenic substances, chronic toxins and specified chemicals whose use is regulated by international treaties). Second, for substances that may adversely affect human health, the environment and its ecological systems, our policy is intended

to reduce volume and enhance efficiency (Reduce). Third, aiming to improve economy and reduce consumption of resources, we try to make repeated use of materials whenever possible (Reuse). Finally, we promote recycling and recovery of resources in order to advance resource productivity (Recycle). According to this policy, we endeavor to contribute to minimizing the impact of the entire social system on the environment.



■ Micro Lens Array (MLA) — an essential component in downsizing liquid crystal projectors

The current market demand for portable liquid crystal projectors able to be used anywhere is rapidly growing and more compact dimensions and brighter images are demanded. From a conservation point of view, electronics companies are trying to achieve smaller-sized projectors. But to do this involves significant technological difficulty as to reduce the liquid crystal panel's size, a higher definition format (finer picture elements) is needed which tends to darken images displayed. Omron's MLA, developed by the Central R&D Laboratory, is an optical device that solves the problem by causing light beams to condense as they enter the respective picture elements. Using miniaturized lenses achieves the greater light transmissivity required.

Previous MLAs consisted of miniaturized lenses that corresponded to the number of a liquid crystal panel's picture elements (normally 1,024x768). These were stacked on a transparent 0.7-inch chip at 10 microns plus (1mm=1,000 microns) intervals. If liquid crystal projectors are to become even more compact, the MLA must be further miniaturized and have greater precision as even one missing picture element can be a serious product defect with liquid crystal projectors that project enlarged images, unlike

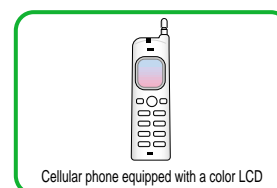
other LCD devices.

Relying on know-how accumulated through various manufacturing processes, Omron's MLA has successfully solved all these problems. Omron's sophisticated micromachining technology has managed to reduce MLA chip size which then cuts power consumption, achieves smaller device dimensions as well as improves the resource productivity of liquid crystal projectors. Omron's MLA will also drive the projector's brightness up by 1.9 times (maximum), while saving 47% power (maximum). This allows projector dimensions to drop by nearly half (just 51% the volume of a conventional unit).

This powerful technology is planned to be used in a wide range of LCD products, helping to conserve power and miniaturizing equipment even further.



Projector with improved resource productivity

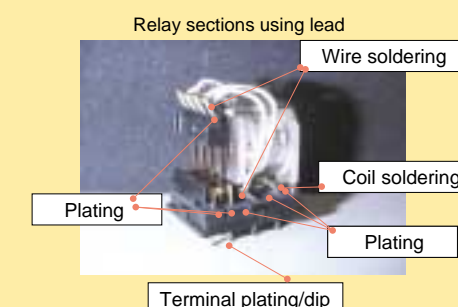


MLA is also used for cellular phone displays

Development of Lead-free Solder Technology

Lead is used for a wide range of applications including battery casings and cable coatings, as well as in solders and plating materials. Soldering is an essential process for the manufacture of electronic products. However, it is standard practice for used solders to be discarded in landfills. This has become a serious environmental concern as lead melted by acid rain causes serious groundwater pollution. Moreover, it is strongly suspected that drinking water contaminated with lead may pose serious health risks. Omron products also use a large amount of lead solders to join electronic components to circuit boards (sensors/timers) as

well as for wire/terminal connection, coil soldering and component terminal plating (relays).



Lead-free soldering process development issues

[From the perspective of an electronic components supplier]

Lead-free soldering requires about a 30 °C higher melting temperature compared to conventional tin-lead soldering. Therefore, all electronic components, molding materials and sealing materials must withstand this high temperature.

Solder must have enough bonding strength for metals to be joined (wettability). Lead-free plating of component terminals results in less wettability so optimum plating materials need to be selected with cost effectiveness in mind.

For relays, coil and wire connection processes need to be lead-free as well.

[From the perspective of an assembly maker]

Lead-free soldering reaches extremely high temperatures that components have to withstand effectively, requiring a reflow furnace that minimizes temperature variations between a circuit board and components.

For flow soldering with its lower specific gravity of lead-free solder compared to conventional eutectic solder, improved fluxes are also needed along with equipment assuring a stable soldering process.

In addition, many other common problems related to long-term solder joint reliability, soldering operational efficiency and higher material cost must be addressed.

Omron's lead-free technology

Omron's research project for lead-free solder started in 1995. In 1999, a specialized project for promoting a corporate-wide effort to develop lead-free soldering technology was established. This project team was tasked with selecting suitable lead-free solder/plating materials, developing lead-free processes and a reliability evaluation technique, as well as reviewing soldering equipment. As a result, Omron has established a lead-free soldering technology that assures finished product reliability and allows for mass-production at currently available facilities. In addition, Omron now has solderless laser welding technology.

1. Selection of lead-free solder materials

Solder material selection had to deliver dependability and mass-production ability for the reflow, flow and robot soldering processes, while avoiding patent issues. We have selected Sn-Ag-Cu (tin-silver-copper), Sn-Cu (tin-copper) and other lead-free alloys containing minuscule amounts of other chemical elements added to the above formulas.

2. Improving thermal resistance

To cope with heat-induced damage when parts are subjected to extreme temperatures during reflow/flow soldering, Omron developed an original sealing material with outstanding heat resistance to assure reliability. A reflow furnace that minimizes soldering temperature variations is also employed to maintain the high quality of components and solder.

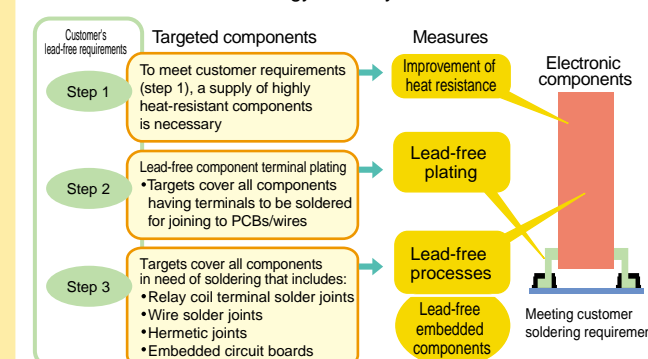
3. Improving wetting

Selecting lead-free plating materials requires superior wetting and long-term solder joint reliability. We have improved wettability by choosing optimal solder/flux materials and soldering equipment as well specifying the best control parameters for soldering.

4. Lead-free internal connection of components

We have also replaced tin-lead solders for coil terminal and wire joints with Sn-Ag-Cu and Sn-Cu formulas. As part of our effort to develop solder-free connection processes, we also use laser welding for power relays.

Lead-free technology for relays and switches



Introducing Omron Eco-Products

Development concept

In 1998, Omron introduced an Eco-Products Certification System that meets the requirements of the ISO 14021 Environmental Label Assertion by Self-Declaration standards. This system certifies and awards an Omron eco-label* to products that satisfy the company's in-house environmental standards. By doing so, Omron aims to promote the incorporation of energy- and resource-saving features as well as eco-friendly functions into Omron products. As of fiscal 2000, a total of 54 products have received eco-labels.

* Eco-label

ISO distinguishes three types of Eco-labels: Type I labels awarded to products certified for environmental performance by a third-party (conformity assessment body) such as the Japanese Eco-mark and German Blue Angel; Type II self-selected, self-certified labels; and Type III labels with self-quantified, self-selected, third party-certified life cycle information. Omron's Eco-Products Certification System conforms to Type II standard.



Designed by Omron, this label is printed on the catalogs/brochures of products that satisfy Omron's in-house environmental standards. An eco-label may also be directly attached to the product for easy identification.

Industrial Products

Surface-mounted Relay Model G6K

Energy consumption:
Down 30%

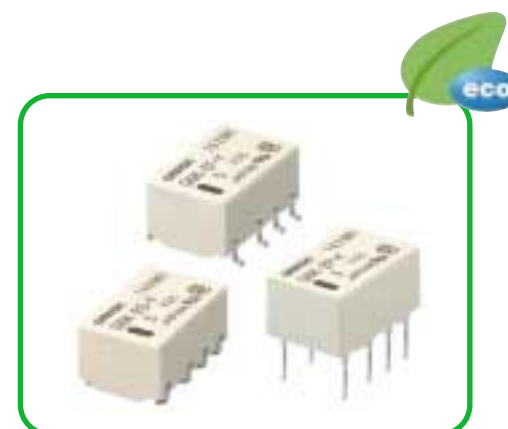
Relays are used in facsimiles, telephones, modems, terminal adaptors and many other telecommunications equipment. With a power consumption rating of 100mW, the G6K is approximately 30% more energy-efficient. With the world's smallest* mounting area of 65mm², this relay helps miniaturize equipment. Its low-profile (5.2mm high) cuts mounter operation distance to enhance mounting efficiency. These features will allow the G6K to significantly contribute to reducing the environmental impact of rapidly developing telecommunications equipment.

* The surface-mounting terminal type unit features the smallest mounting area among all SMD relays in the world (according to Omron survey conducted in March 1999).

Promoting product development that minimizes environmental harm — essential for creating a 'recycling-oriented' society.

Eco-products are chosen in accordance with the environmental assertion factors as specified in ISO 14021 Type II standards. Eco-labels will be awarded to products that are evaluated in terms of relative comparison or the level of theoretical value attainment.

Environmental factor category	Sub-category	Requirements
1 Energy conservation	Power consumption during use or standby	Reduction of 30% or greater in energy consumption when compared to Omron's previous
2 Resource conservation	Use of main materials	Reduction of 30% or greater in use of main materials, in a way that provides customers with additional benefits
3 Products originally developed for contributing to environmental conservation (such as solar inverters), provided that the degree of contribution can be demonstrated clearly and in a quantified manner		



Compact Power Sensor Model KM20

Energy consumption:
Down 70%

The KM20 measures the amount of power consumed by each section of machinery and equipment in the form of pulses and analyzes the data to assist energy-saving measures. The product itself is exceptionally energy-efficient, consuming 70% less energy compared to previous Omron models. Unit conversion of pulse output is possible with a rotary switch, while a dedicated split-type current transformer simplifies wiring work. Its compact size (30mm wide) takes up less installation space and is easy to attach to existing control boards. Precise, thorough energy management is easier and more economical than ever.



Digital Temperature Controller Model E5CN

Energy consumption:
Down 40%

Packaging, component-mounting, molding and semiconductor manufacturing equipment all require precise temperature control. Omron's E5CN temperature controller features compact dimensions (48x48mm) for greatly reduced installation space requirements. The E5CN also consumes 40% less power compared to the former model. By incorporating high-speed data communications capability, this product sets a new standard for general-use temperature controllers. It is easy to maintain and suited for use under severe operating conditions.



Self-contained Amp-type Photoelectric Switch Model E3Z

Energy consumption:
Down 30%

Photoelectric switches often used on manufacturing lines detect defective products. Compared to the previous Omron model, the E3Z saves 30% more energy. This product's extensive environmental conservation measures include: 1) using 0.5m of cable as opposed to the conventional 2m (standard version); 2) saving packaging materials by using a single packaging box for 10 units; 3) minimizing dioxin emissions by employing polyethylene for packaging; and 4) reducing the use of harmful chemicals through the lead-free soldering process.



Programmable Logic Controller Model CJ1

Resource use:
Down 67%

As factory automation technology progresses, instrumentation equipment becomes increasingly compact, requiring miniaturization and power saving for PLCs as well. By separating the motherboard (PLC brain) from the base and reviewing the heat radiation structure, the CJ1 achieves a much smaller design (67% less volume compared to former model), while offering enhanced energy and resource efficiency.



Public-use Products

Circulating-type Paper Note Stacker/Dispenser Model NN-ABIO

Energy consumption:
Down 39-49%

Although not designed for direct access by consumers, paper note stackers/dispensers used at bank counters are essential for banking operations. The principal feature of this product is its exceptionally low power consumption — saves 39% and 49% (compared to conventional models) while in use and standby mode, respectively. By reducing paper note conveyer paths, the driving power has been reduced by approximately 30%. Pulse motors that consume a great deal of power have also been reduced from 11 to 4. Energy conservation during standby was achieved by turning off the sensor lamp, putting the paper note recognition unit in a sleep mode and refining the technology for power supply. Its streamlined, compact (width reduced from 400mm to 340mm) and lightweight (weight reduced from 185kg to 130kg) configuration means less use of resources. This product passed Omron's assessment and has been on the market since the end of 1999.



Consumer Products

Wrist-type Blood Pressure Monitor Model HEM-632

Resource use:
Down 90%

Along with growing consumer concern for health management, home-use blood pressure monitors are enjoying increasing demand. Its easy-to-attach cuff and low-noise (45dB) design make the wrist-type HEM-632 usable virtually anywhere. Plus, it uses 90% less materials when compared to former models. Other improvements include an auto measurement memory that can store as many as 7 measurements as well as the simultaneous display of blood pressure and pulse readings. All these improvements have been incorporated into an extremely compact design for resource conservation. It also consumes less power and can be used approximately 400 times with alkaline batteries.



Environmentally Sound Products

Solar Power Conditioner Model KP40E

Ecology:
Direct contribution

As they use a natural energy source, solar cell-based photovoltaic power generation systems are becoming increasingly popular. Designed for efficient control of photovoltaic power generation systems, Omron's KP40E solar power conditioner features a compact and lightweight design (nearly half that of former models both in volume and weight). With a power conversion efficiency as high as 95%, the KP40E assures efficient use of solar power. Its extended operation time and refined power startup system enhance the unit's total operational efficiency. Plus, up to six units can be connected in parallel (4kW x 6 = 24kW). This product was certified by the Electrical Safety & Environment Technology Laboratories (certification number P-0056).



Environmental considerations concerning packaging and logistics

Omron Logistic Create Co., Ltd. (OLC) is now implementing the following environmental protection measures related to packaging and physical distribution.

- Building a packaging-free system
- From suppliers to purchase dept.: Developing standard containers for different component packaging forms in order to switch from a one-way disposable package system to a returnable container system.
- From purchase dept. to production site: Building a system to use special containers (replacing plastic bags, etc.) for distribution of parts from warehouses to manufacturing lines.
- From production sites to customers: Promoting use of returnable containers (to replace corrugated cardboard packaging) for product delivery.

A packaging-free system has been completed at the Mishima Factory (fiscal 1998), is now being implemented at the Kusatsu Factory (since fiscal 1999) and will soon be adopted by Omron Nohgata Co., Ltd. (fiscal 2001).

● Ongoing activities

- Packaging-free product transportation
Development of a system to use returnable special containers (mainly for industrial products) is underway for transportation from factories to logistics centers to distributors and then finally to customers.
- Eliminating use of environmentally harmful materials for packaging
Discontinued use of vinyl chloride and styrofoam for packaging is now being promoted. The use of styrofoam has been totally eliminated for packaging buffer materials by switching to air cushions.
- Accelerating resource conservation by using/reusing NECA standard corrugated cardboard boxes.
Establishment of an industry standard for packaging is now being promoted among the Nippon Electric Control Equipment Industries Association (NECA) members.
- Changing the pallet material for marine container transportation
To use earth's limited resources more efficiently, wooden pallets are being replaced with corrugated cardboard pallets.

R&D Challenge for the Future

Developing innovative environmental technologies

Soil sensing system

Scientific research in the context of environmental problems is aggressively promoted at Omron. One undertaking includes a challenging project headed by Kizo Yamazaki of Omron's Central Research Laboratory and Shinichi Hirako from the Omron Institute of Life Science. This team of scientists is seeking new methods for adopting Omron's proprietary sensing technology in agricultural fields.

Developer of this system
Shinichi Hirako, PhD.
Omron Institute of
Life Science Co., Ltd.



"Crop growth varies according to location. This even applies to crops that are grown in the same field. Farmers used to rely on their experience and instinct to determine crop conditions in different areas. With this sensor, they can make decisions based on the analysis of scientific data and that is a definite advantage with this system," noted Dr. Hirako. Conventional methods for analyzing soil are both time-consuming and costly. The soil sensing system can create a high-density distribution map of soil constituents on a real time basis. Dr. Hirako in remarking on the popularity of the sensor said, "Some farmers that saw this product were so excited by its potential they volunteered their land for testing." Unlike sensing used for factory automation according to Dr. Hirako, "Sensing for soil is very complicated. Being organic in nature, soil is a living substance that varies hugely depending on the geographical region or place. Consequently, commercial production of this product presents us with various technological challenges. Even so, we're determined to perfect this sensor as it has great potential to provide numerous benefits for farmers." With this in mind, Omron is concentrating sensing research not only in the area of factory automation but also in the field of agriculture so that Omron products will be able to assume a central role in the farming industry.

Utilizing sensing technology and IT for 'Precision Farming'

As the growth of the world population continues to escalate, activities that can redress food shortages without recourse to agricultural chemicals and fertilizers are aggressively being sought. "A new style of farming that can improve crop yield in an environmentally sound manner (by minimizing chemical and fertilizer use) is required. 'Precision farming' can do that," remarked Shinichi Hirako. As a next-generation agriculture system, 'precision farming' is intended to assess and manage information on soil conditions and crop yield. This system allows farmers to take appropriate measures at the right time to assure that farming operations are performed under optimum conditions. Omron's powerful sensing, positioning and information technologies are key to achieving this style of farming.

A 'mole-like' sensor investigates soil conditions

According to Dr. Hirako, "The sensor is attached to the tip of a pole. That pole acts just like a mole — it makes a tunnel for itself to move underground. The sensor uses light to detect and examine the constituents of soil. This research really is one of the most advanced and exciting scientific projects happening now." Omron's soil sensing system is intended to detect water content, organisms, electrical conductivity as well as pH and nitrate nitrogen content. While obtaining positioning information from a global positioning system (GPS), the system analyzes spectrum of reflected light by applying light beams with wavelengths of 0.4-1.7 μ m.

Research for this project started in April 1998 in cooperation with the Shibusawa Lab of the Tokyo University of Agriculture and Technology. This system presented at international conferences in Europe (leader in environmental activities) and the United States (country dominated by large-scale agriculture), succeeded in attracting a great deal of attention.



A soil sensor loaded on the rear part of a tractor



Data obtained by a soil sensor (water content, organisms)

Hothouse cultivation management system

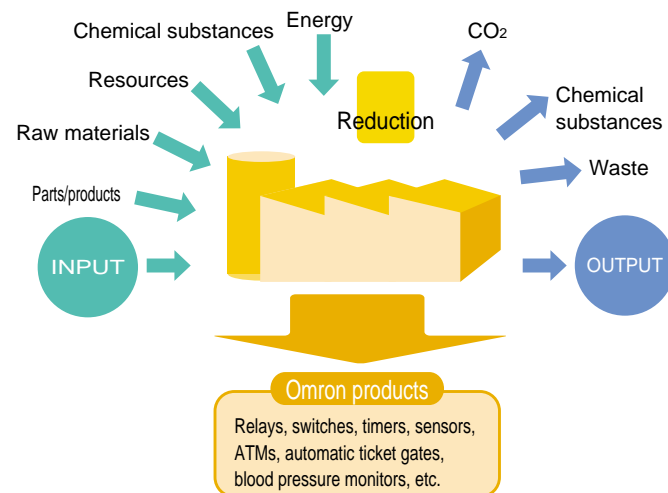
Agriculture and livestock industries are witnessing a growing disinterest among the children of farming families to continue in the family business. Evidence of this can be found in the area of hothouse cultivation where fewer people are available to run operations. As hothouse cultivation requires a lot of work, labor-saving measures are needed. With Omron's telephone line-based alarm system, a sensor on detecting changes in interior temperature and humidity will automatically send a warning signal. Since this signal can be sent to even distant locations, less labor is required making farming operations more efficient.



Eco-Factory

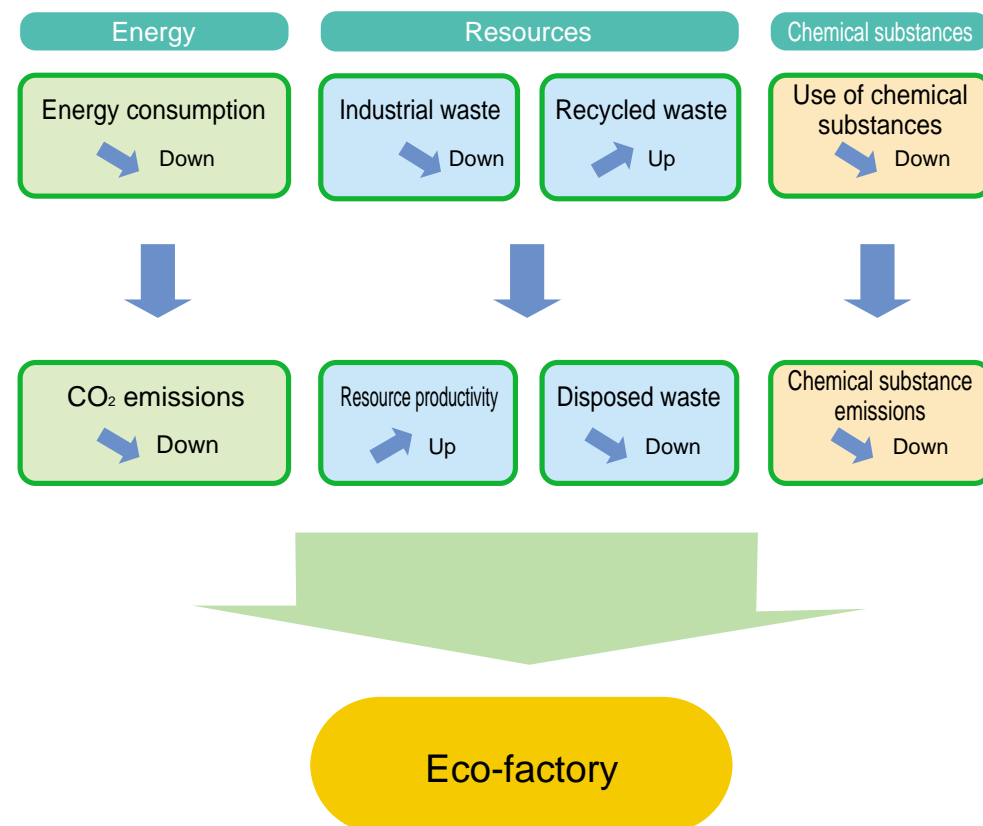
Concept of eco-factory

To realize a truly ecological factory, both the artery process (from product design to use) and vein process (from discarding/collection to recycling) concerning the life cycle of a product must be fully addressed. In other words, it is essential that we reduce the potential environmental impact of a product throughout its life span and cut the use of resources down to an absolute minimum. Omron has been concentrating on energy conservation measures and reducing waste through zero emissions (100% recycling of industrial waste)-oriented activities. As a further effort to build Omron 'eco-factories,' the use of toxic chemicals is minimized as much as possible.



Input/output flow diagram for environmental impact of business activities

Conceptual drawing of eco-factory

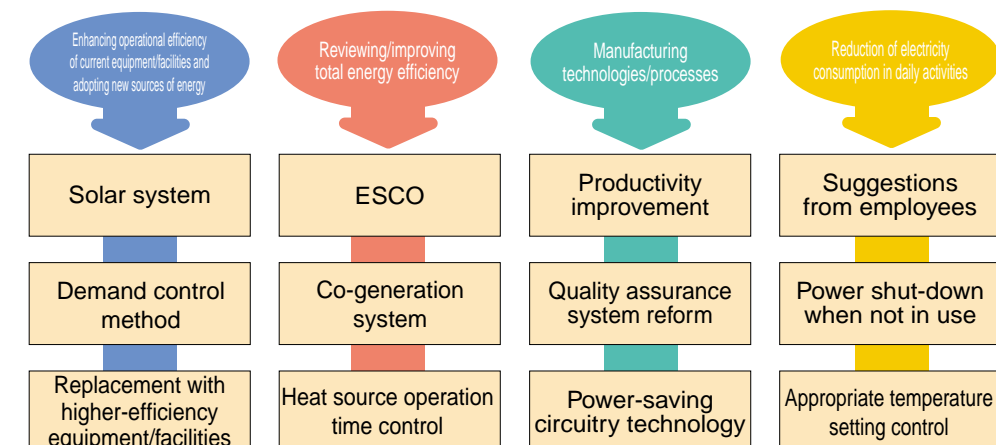


Global Warming

Four approaches to reduce global warming

The generation of carbon dioxide, nitrogen suboxide, and other gases increase ground and air temperature creating a warming or greenhouse effect. This in turn substantially interferes with the ecological balance of the biosphere. Once disturbed, this damage to the ecosystem plays havoc with the human environment. We are now seeing the aftermath of that damage in worldwide abnormal climatic conditions and rising sea levels, as well as in collapsing arctic glaciers. If left untouched, these greenhouse gases will cause critical and irreversible damage to the environment

by the mid part of the present century. Therefore, we are now required more than ever to control and regulate the use of energy, chemicals and fossil fuels. As a manufacturer, Omron is tackling this problem aggressively in all aspects of our corporate activities. By making extensive use of the company's proprietary manufacturing technologies and processes and maximizing our creative ideas, we are addressing the issue of greenhouse gases from four main angles. Specifically, we are working on the following projects.



Case report of energy-saving activities

■ Door shutter

Automated shutter installed at a warehouse entrance. By preventing outside air from entering, the shutter reduces load on air conditioners.



■ Reed covering sheets

Reed sheets placed on ceiling windows to prevent interior temperature from rising in the dining room due to direct sunlight. This has resulted in a 35% reduction in energy consumption.



■ Co-generation system

Gas co-generation systems installed at the Omron Kyoto Center Building and Kusatsu Factory. Use of waste heat for air conditioning contributed to reducing CO₂ emissions and enhancing economy.

■ Inverter

Inverter adopted to control air blowers for air conditioners and cold/hot water generating units that together represent approximately 30% of the factory's total energy consumption. Air conditioning capabilities were optimized and substantial energy conservation



■ Heat-insulation coating

Heat-insulation coating applied to factory ceiling and windows to prevent interior temperature from rising due to direct sunlight. This served as an effective energy-saving measure with greater cooling efficiency.



■ Double-layer roof

Stainless steel covering placed over a 1,200m² roof and white coating added for a double-layer configuration effectively prevent room temperature from increasing.



Reducing CO₂ Emissions through Energy Conservation

Energy-saving activities

■ Fluctuations in CO₂ emissions

Omron has been working to reduce total CO₂ emissions by 11% by the end of fiscal 2010 (when compared to the fiscal 1995 level). However, due to a sharp increase in the volume of production (that surpassed our energy conservation effort), total CO₂ emissions during fiscal 2000 were 3.2% greater than our initial target set for the year.

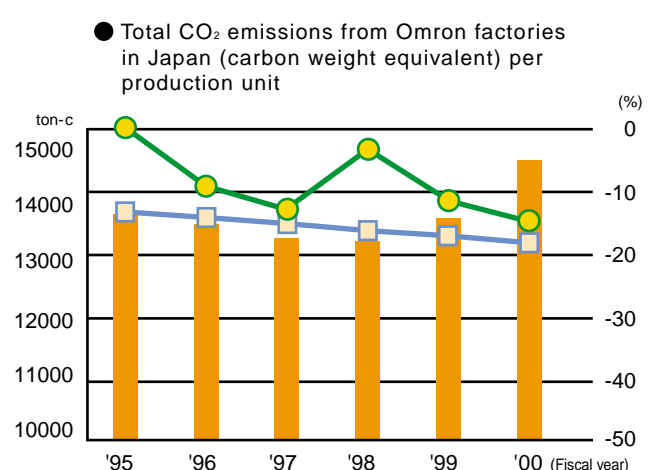
● Main activities conducted during fiscal 2000

- Inverter motor control employed for air conditioning system air blowers and cold/hot water generators.
- Inverter-controlled fluorescent lights with electronic-type stabilizers employed.
- Energy source used for air conditioning system changed from electricity to gas.
- Heat-insulation measures incorporated for building roofs and windows.
- Number of air compressors used limited.
- Former air conditioners and cold/hot water generators replaced with energy-saving type units.
- Simulations of co-generation system installation carried out at five factories.

● Main plans for fiscal 2001

- Employ inverter motor control for air conditioning system air blowers and cold/hot water generators.
- Employ inverter-controlled fluorescent lights and replace current stabilizers with electronic type units.
- Add heat-insulation measures for roofs and windows.
- Replace air conditioners and cold/hot water generators with energy-saving type units.
- Employ LCDs for PCs.
- Conduct construction work for effective use of air.
- Conduct construction work for use of waste heat.
- Install power monitors.

On the other hand, our energy conservation measures proved effective in terms of energy use efficiency (CO₂ emissions per production unit) which improved approximately 16% during fiscal 2000 compared to the fiscal 1995 level. In our efforts to realize eco-factories, we will continue to work even harder to attain our target.



CO₂ emission target CO₂ emission results CO₂ emissions-to-production unit ratio

(Note) Calculation method

1. 1.15 ton-c/10,000kWh was used for the CO₂ conversion coefficient for purchased electricity. This figure was obtained by converting the power transmission end value for fiscal 1990 announced by the Federation of Electric Power Companies into the power receiving end value.
2. A reduction in CO₂ emissions through the use of co-generation systems was determined through the comparison of energy consumption against thermal power generation systems.

Energy-saving activities at the Ayabe Factory

Omron's Ayabe Factory is primarily engaged in the development and production of sensors and sensing equipment for factory automation. Encouraged by the successful acquisition of ISO 14001 certification in November 1996, the Ayabe Factory launched full-scale energy conservation measures.

Initially, energy conservation activities concentrated on measures that do not require considerable investment and mainly rely on employee ideas. Examples included limiting light use, shutting off PCs when not in use, shortening solder reflow preheating time, setting the air conditioner 1°C higher during summer and cutting its operating time, integrating and consolidating clean rooms and working space, and preventing air leakage among others.

The next step involved replacing air blowers for air conditioning systems and pumps for absorption-type cold/hot water

generators with inverter type units (December 1999). Combined with fuzzy logic, the inverter technology contributed considerably to the conservation of energy and creation of a comfortable workplace environment. Owing to these measures, the Ayabe Factory was able to reduce CO₂ emissions by 14.6% during fiscal 2000 compared to the previous year. It achieved this reduction even with a 10% increase in production volume.

Other energy-saving measures implemented included the employment of inverter-controlled fluorescent light stabilizers, heat-insulation coating for windows and a solar cell power generation system. For fiscal 2001, the Ayabe Factory aims to strengthen its energy-saving effort even further by introducing LCD PC monitors and installing a power monitor at each department to stimulate environmental awareness among employees.

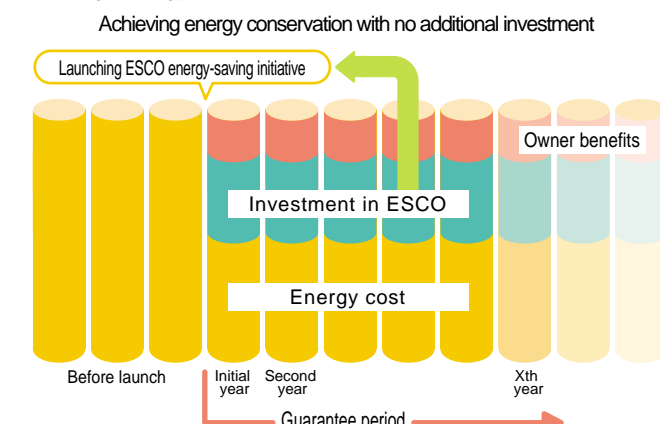
ESCO Initiative

What is the ESCO initiative?

■ E S C O (Energy Service C O mpany) system

The ESCO (Energy Service C O mpany) system is designed to comprehensively survey and analyze usage of light, heat, water, electricity and other forms of energy, offering a methodology for drafting and implementing energy-saving measures optimized for each company. Formerly most companies' energy-saving measures were not fully implemented and thus they were unable to obtain clear data as to the effectiveness of these measures. Recently, the need for companies to continually reduce energy consumption through the implementation of an Environmental Management System (EMS) is steadily growing along with acquisition of ISO 14001 certification. To meet this need, implementation of more comprehensive energy-saving measures and accurate assessment of their effectiveness is essential. The ESCO system provides an effective means to achieve this by undergoing a sequence of processes. Involved steps start from diagnosis for the facility's energy conservation effort, moving to drafting of repair/improvement plans, design, construction management, operation management and then to final verification

of the plan's effectiveness. Omron has been promoting the adoption of this system for the Mishima Factory and other currently available manufacturing facilities in order to implement more thorough energy conservation measures.



Case report for ESCO system implementation

Mishima Factory

The Mishima Factory received ISO 14001 certification in 1997. Since then, as part of its effort to continue reducing the environmental impact of its activities, the factory has been working diligently to conserve energy. In 1998, the Mishima Factory became the first Omron Group company to undergo a total energy-saving diagnosis with the ESCO system. Based on the results, various improvement projects have been carried out. The air conditioning system installed in the facility now employs an inverter to control its air blowers and other drive units. An energy management system has also been utilized for automatic air conditioner control. By creating optimum control parameters based on air conditioner operation data that has been gathered, analyzed and verified by the ESCO system, the Mishima Factory succeeded in promoting energy conservation while maintaining and improving workplace comfort. Moreover, assessment of energy consumption for each floor/block is now possible, allowing each department to bear energy cost according to their usage. This encourages all departments to promote energy conservation measures more independently. As a result of these measures, the Mishima Factory has already achieved its goal to reduce CO₂ emissions by 13% from the fiscal 1995 level — a target initially set by the factory for 2010.

Mishima Factory



< Facility outline >
Total floor area: 33,000m²
Floors: 5

Energy consumption:

	Before launch of ESCO	After launch of ESCO (estimates)
Electricity	4,740,000kWh/yr.	4,200,000kWh/yr.
Gas	320,000Nm ³	230,000Nm ³

- #### ■ Main energy-saving measures
- Secondary pump flow control for cold/hot water
 - Air flow control for air conditioning units
 - Use of high-efficiency fluorescent lamps
 - Replacement of incandescent lamps with fluorescent lamps
 - Installation of human presence sensors
 - Employment of an energy management system (EMS)

Customer facilities

Kyoto Hospital



< Facility outline >
Total floor area: 16,800m²

Floors: eight floors with two underground levels

Energy consumption:

	Before launch of ESCO	After launch of ESCO (estimates)
Electricity	3,050,000kWh/yr.	2,720,000kWh/yr.

- #### ■ Main energy-saving measures
- Secondary pump flow control for cold/hot water
 - Use of high-efficiency fluorescent lamps
 - Installation of human presence sensors
 - Employment of an energy management system (EMS)

Reducing Waste through Promotion of Recycling

Reduction of industrial waste

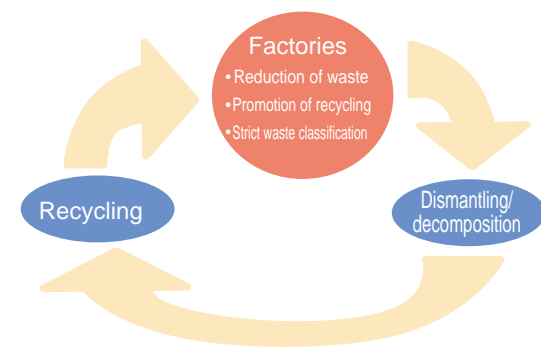
The rapid progress of industrialization during the past century has caused a tremendous increase in the volume of waste from manufacturing facilities. As a result, the demand for a complete shift from high-volume production, consumption and discarding-oriented approaches is on the rise. Moreover, we are facing a growing need to treat waste not as useless items to be discarded but as recyclable materials. Therefore, it is essential to effectively recycle waste materials collected instead of discarding them in landfills or through incineration in order to enhance the productivity of resources.

Pollution is primarily caused by waste and an inefficient use of resources that in turn lead to a major loss for the company. As such, Omron has been implementing various strategies and measures to reduce the volume of waste (see chart on the right). In addition to this effort, Omron eliminated formerly used in-house incinerators during fiscal 1999.

In-line recycling	Recycling waste generated in manufacturing processes and reusing them as materials.
Classification of waste	Precisely separating and classifying waste into different categories to be recycled.
Primary waste volume control	Measuring volume of waste generated from each factory.
Reuse promotion	Promoting direct reuse of materials without modifications.
Improvement of productivity and yield	Regulating the volume of waste generated from factories.
Expansion of recyclable resources	Promoting the use of recyclable materials for more efficient utilization of resources.
Enhancing ease of dismantling	Making products easier to dismantle/disassemble to promote recycling of parts and materials.
Others	Exchanging information with recycling service companies, etc.

Zero emissions

The goal of Omron's Zero Emissions project is to achieve a 100% waste recycling rate at its manufacturing sites by 2010. Presently, we are concentrating our efforts on the recycling of waste already generated. Although complete recycling of waste has yet to be achieved for the Omron Group as a whole, we are promoting the creation of easily recyclable products. Moreover, by strengthening cooperation with our suppliers, we are working hard to achieve the ultimate goal of zero emissions throughout the Omron Group as quickly as possible.

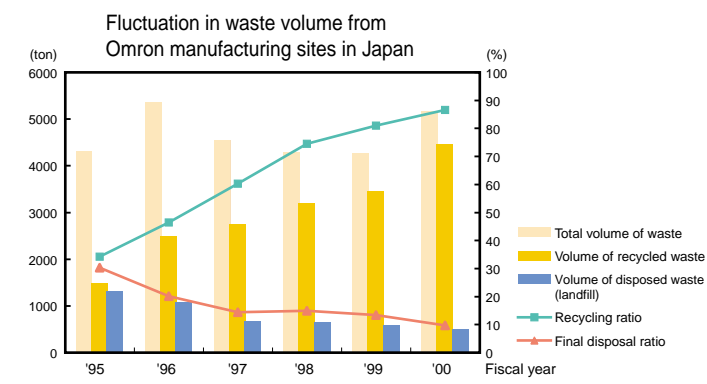


- Main activities conducted during fiscal 2000
- 1 More precise classification of waste materials implemented.
 - 2 New recycling channels exploited for waste materials not yet recycled at factories.
 - 3 Corrugated cardboard used as buffer materials.
 - 4 Packaging materials and distribution methods reviewed.
 - 5 Biodegrading waste disposer employed.
 - 6 Waste classification patrol conducted.

Future plans
Continuing from fiscal 2000, we will work on developing new recycling channels for waste materials not yet recycled. We will also review and revise delivery styles and packaging specifications in order to further reduce waste volume.

Waste volume and recycling ratio fluctuations

The chart on the right shows waste volume changes from Omron factories as well as their recycling and final disposal ratios. During fiscal 2000, Omron achieved a recycling ratio of 86.5% and a final disposal ratio of 9.7%, already meeting the targets set for fiscal 2001 (80% recycling ratio and 13% final disposal ratio). Among all Omron Group manufacturing sites, the Mishima Factory became the first one to realize zero emissions.

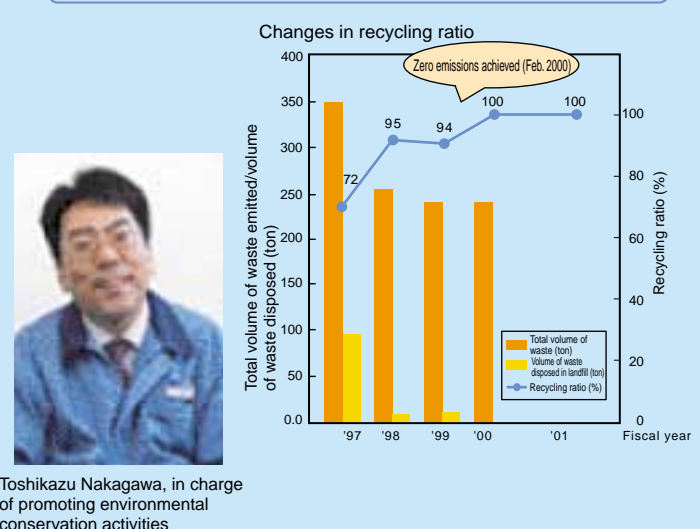
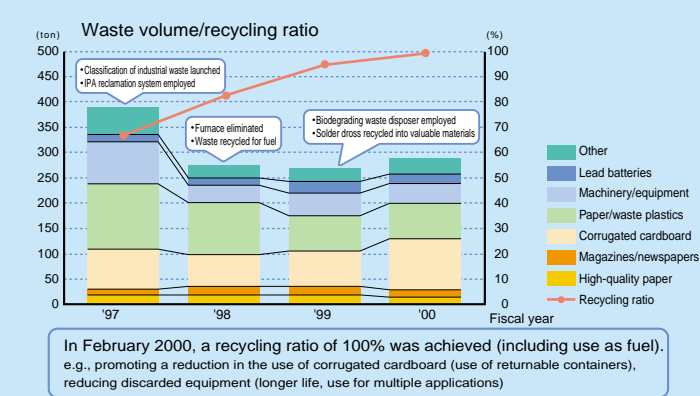


Case Report

Mishima Factory

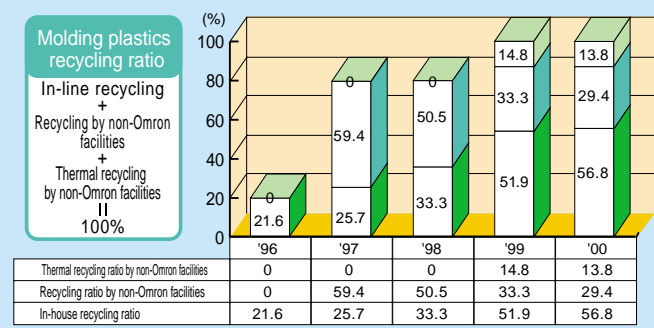
Zero emissions factory

The Mishima Factory has been working hard to reduce waste and minimize the environmental impact of its manufacturing activities. To this end, various improvement programs were carried out including the adoption of returnable containers (instead of former corrugated cardboard boxes) for transportation. Other improvements included the employment of an IPA (isopropyl alcohol) reclamation system and solder dross separation/recovery system. In addition, waste generated by each department is weighed for more precise waste volume management. This has also helped raise employee environmental awareness. In accordance with strict classification procedures, waste materials are recycled whenever possible. These efforts allowed the Mishima Factory to become the first among all Omron Group sites to achieve zero emissions in 2000.

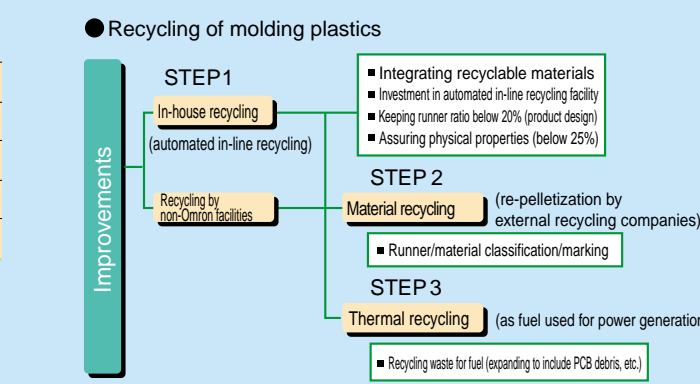


Recycling of molding plastic materials

Specialized in the production of timers, counters, temperature controllers and power supply units, Omron Okayama conducts injection molding for plastics, mainly polycarbonate materials. As part of the company's efforts to reduce and reuse waste, in-line recycling for molding plastics is carried out. Emitted runners are broken down to recyclable pieces with a crusher and mixed with unused materials. The ratio of recycled runners is kept below 25%



to maintain end product quality. The final material is then dried before being sent to a molding machine. Since fiscal 1999, Omron Okayama has maintained a recycling ratio of 100% (in-house and outside). The company would now like to further strengthen its in-line recycling facility on an annual basis. In fiscal 2000, 56.8% of the company's total waste plastics were recycled in-line.



Recycling of End-of-Life ATMs

» Launching ATM recycling with the aim to achieve 98% recycling

In January 2001, Omron established a recycling test center to collect, disassemble and decompose end-of-life discarded ATMs for the recycling of materials and reuse of parts.

Omron's stance on recycling

The establishment of environment-related laws and legislation (i.e., the Law for Promotion of Effective Utilization of Resources — Recycle Law) reflects society's increasing orientation toward a "3R" mentality. Activities that reuse parts and reduce and recycle waste to produce raw materials are now regular practice. By launching in-house voluntary environmental conservation activities even before the enactment of such laws and legislation, Omron aims to clearly demonstrate its environmental commitment to the public and enhance its presence in the marketplace. The newly launched project of collecting, disassembling and recycling end-of-life ATMs further strengthens Omron's position as an environmentally responsible corporate citizen.

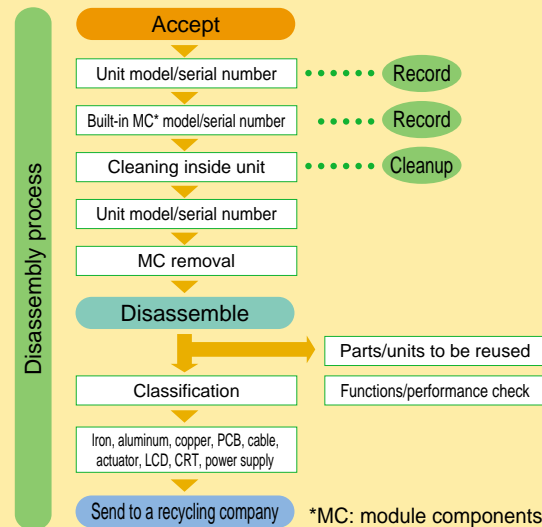
Fiscal 2001 goal: recycling ratio of 98% (based on weight)

Formerly, end-of-life discarded equipment was crushed using a shredder for recycling. However, this method had a drawback — it generates low-quality materials full of impurities. To solve this problem, Omron's recycling test center disassembles equipment through manual operation, which results in a more exact classification of materials to assure greater quality of end products. Our ultimate goal is of course a 100% recycling ratio, but for the current test stage a 98% recycling ratio is aimed at for end-of-life ATMs (combining cascade* and thermal recycling).

*Cascade recycling: Recycling high-grade materials collected for production of lower-grade materials.

Recommending the development of easy-to-disassemble products

Most of the end-of-life ATMs now being collected are seven to ten years old. As considerations for recycling were not incorporated when these ATMs were first manufactured, various problems have come to light. These include the use of non-uniform materials, a disassembly process that requires too many steps and no identification for resins. Moreover, removal of tapes attached to the parts and materials proved difficult. These flaws are recorded during the disassembly process for recycling so that they can be corrected for future developments. At present, we are concentrating on recycling ATMs and money changers. This practice will gradually be expanded to include train ticket vending machines, ticket gates and POS systems.



End-of-life ATMs collected



Manual disassembly and classification processes



Classification into aluminum, iron, copper, plastics, PCB, and hard disk units, etc.

Model Factory

Ayabe Factory

Established in 1986, the Ayabe Factory specializes in the development and manufacture of factory automation sensors and sensing equipment. A top-runner for the Omron Group, the factory promotes a number of progressive activities.

Achievements

During fiscal 1999, the Ayabe Factory's total CO₂ emissions amounted to 1,006 tons. Despite a 10% increase in production volume during fiscal 2000, the factory was able to significantly reduce this figure to 952 tons. Specific programs that have led to achieving this reduction are detailed on page 21. The factory's fiscal 2010 target is to reduce CO₂ emissions by 11% compared to the fiscal 1995 level. To this end, the Ayabe Factory plans to install a power monitor at each department to raise employee awareness of environmental conservation.

For waste reduction, the factory's ultimate goal is to achieve a 100% recycling ratio by fiscal 2002. During fiscal 2000, waste volume was reduced by 17.5% when compared to the fiscal 1995 level. As for water pollution control, the Ayabe Factory has specified and met in-house standards that are even stricter than national and prefectural regulations.

Integrated management system

Following acquisition of ISO 9001 (quality) and ISO 14001 (environmental management) certifications in 1993 and 1996 respectively, the Ayabe Factory received OHSAS (Occupational Health and Safety Assessment Series) 18001 certification in 2000. As these three systems possess items and requirements that are at times repeated and in some cases contradictory, efficiency is compromised in terms of management practices. Today, when speed is the most important management concern, this has resulted in critical issues such as: 1) the necessity of repeated steps for coordinating; 2) time-consuming procedures that must be undergone for auditing and approval; 3) difficulty in accurately responding to organizational and product changes; and 4) hard-to-understand intricate relationships between different system tasks due to the complexity of the system structure. Faced with this situation, the Ayabe Factory formulated a project team in July of 2000 to integrate these three systems to build a single system that is easier to understand and implement. As a result, unnecessary repetitions have been eliminated and correlations between systems strengthened. Review of procedures has also allowed for streamlining system configuration and visualization of operations. Consequently, the Ayabe Factory was able to cut the number of requirements and procedures by 40% and 70% respectively. Encouraged by this success, the Ayabe Factory is determined to continually strengthen its management system by repeating the cyclical plan-do-check-action (PDCA) process.



Norio Onji, General Manager of Ayabe Factory



Ayabe Factory

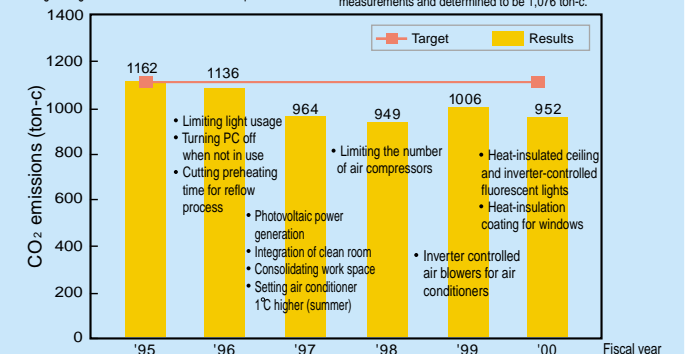
Water quality measurements (Water Pollution Control Law or Waterworks Law/prefectural regulations)

Item	Unit	Japanese standard	Prefectural standard	Voluntary standard	Measurements
Waste water emitted from factory					
BOD	mg/L	160	160	50	2.0
COD	mg/L	160	160	50	2.1
Nitrogen	mg/L	120	120	30	1.7
Phosphorus	mg/L	16	16	3	2.6
General items					
PCB	mg/L	0.003	0.003	0.003	0.0005
Total mercury	mg/L	0.005	0.005	0.005	0.0005
Cadmium	mg/L	0.1	0.1	0.1	0.005
Arsenic	mg/L	0.1	0.1	0.1	0.005
Lead	mg/L	0.1	0.1	0.05	0.01
Hexavalent chromium	mg/L	0.5	0.5	0.5	0.02
Cyanogen	mg/L	1	1	1	0.1
Organo phosphorus	mg/L	1	1	1	0.01
Dichloromethane	mg/L	0.2	0.2	0.1	0.0001

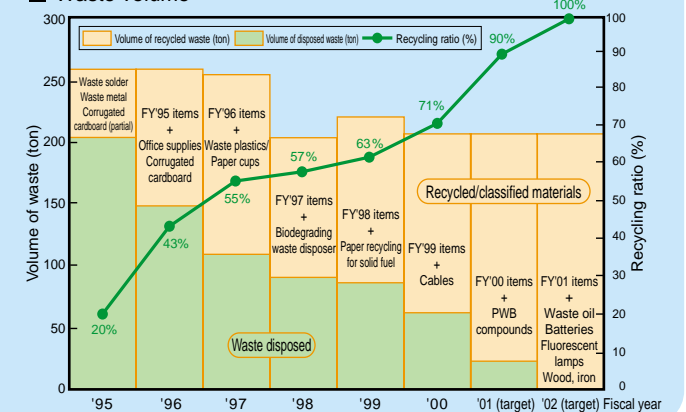
Aside from those listed above, 10 general items were measured and all were found to be below our voluntary standard values.

CO₂ emissions

Long-term goal: 6% reduction in FY2010 compared to FY1990 measurements and determined to be 1,076 ton-c.



Waste volume



Information regarding the environmental activities of each Omron site can soon be found at :

URL: <http://www.omron.com>

Control of Chemical Substances

Reducing environmentally harmful chemicals

Conforming to various related legislation/regulations and in view of industrial trends, Omron has established in-house regulations for harmful chemicals. These regulations are also incorporated into in-house guidelines for product development so as to strictly control the use of harmful substances. During fiscal 2000, along with the enforcement of the Law Concerning Reporting, etc. of Release of Specific Chemical Substances to the Environment and Promotion of the Improvement of Their Management (the PRTR System Law), our in-house standards

1 Specification of chemicals subject to regulated use

Omron has specified the following in-house regulations for the use of chemicals.

Category	Definition	Action
Substances subjected to prohibited use (category A)	119 chemical categories, use of which is prohibited by laws and regulations both in and outside Japan	Usage to be terminated
Substances subject to future prohibition (category B)	5 chemical categories currently in use and expected to be prohibited in the upcoming five years	Use allowed until related laws and regulations are put into effect (alternative materials to be studied/developed)
Substances subject to voluntary regulation (category C)	123 chemical categories, use of which is allowed but whose environmental impact is noted	Reduction and switch to alternative materials to be promoted voluntarily wherever technically and financially possible, according to specified priorities

were reviewed to expand the scope of chemicals to be regulated.

In addition, we have completely discontinued the use of chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), asbestos and bromine-based nonflammable materials. We are now working hard to reduce the volume of lead, cadmium and styrofoam materials used. Moreover, aiming to cut the volume of harmful chemicals incorporated into products, a database is now being built for parts and raw materials to be purchased.

2 Control over usage and storage of chemicals

MSDS* control: Promoting control to assure safe use and storage of chemical substances

*Material Safety Data Sheet that contains substance names, suppliers, categories, potential risks, measures of safety and contingency measures, necessary to safely handle chemical substances.

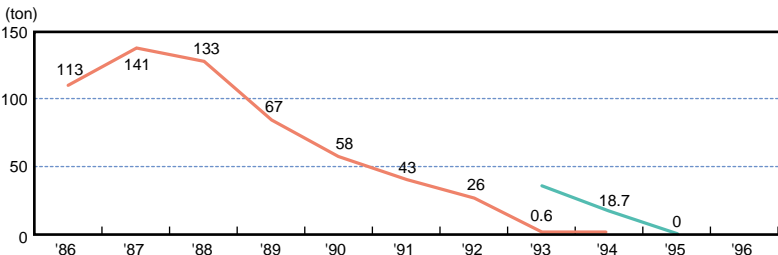
3 Control over amount of chemicals to be used and discharged from factories

PRTR control: Control of chemical substances in compliance with the PRTR System Law

4 Promotion of 'Reject' and 'Reduce' steps

Checking during the product assessment stage: Confirming that packaging materials, parts and raw materials used for products as well as manufacturing processes strictly comply with related regulations/standards

Total abolition of CFCs and HCFCs



CFC 113
HCFC 141b

1988 : CFC total abolition project formulated
1994 : Use of CFCs terminated
1995 : Use of HCFCs terminated
1998 : Use of other organochlorine solvents terminated

Pollutant Release and Transfer Register (PRTR)

In April 2001, the Law Concerning Reporting, etc. of Specific Chemical Substances to the Environment and Promotion of the Improvement of Their Management (the PRTR System Law) was enforced. Since fiscal 1997, Omron has been conducting voluntary surveys regarding the usage of chemicals in accordance with Electrical and Electronic Industry Guidelines. In fiscal

2000, we conducted PRTR surveys for Omron's domestic manufacturing sites concerning 354 substance categories and reported six substance categories*¹ as shown below. We aim to strengthen our in-house control system and organization structure even further in order to accelerate our effort to regulate or where possible terminate the usage of harmful chemical substances.

(Unit: ton)

Substance name	Amount used	Amount released to the environment	Amount transferred as industrial waste	Amount consumed	Amount removed and treated	Amount recycled
Antimony and antimony compound ²	3.28	0.00	0.05	3.03	0.00	0.20
Bisphenol A epoxy resin (liquid)	10.67	0.00	0.97	6.70	0.00	3.00
Xylene	3.50	1.83	0.00	0.00	0.00	1.67
Toluene	3.41	0.15	0.04	2.79	0.00	0.42
Lead and lead compound ²	33.91	0.03	0.53	19.30	0.00	14.06
Hydrogen fluoride and its water-soluble salts ²	1.27	0.07	0.21	0.00	0.99	0.00
Total	56.04	2.08	1.80	31.82	0.99	19.35

PRTR (Pollutant Release and Transfer Register)
This system is designed to collect and report data concerning the release and transfer of chemical substances suspected to cause environmental pollution. The data should cover the amount of such substances released to the atmosphere, water systems and ground as well as the amount transferred to waste disposal companies as industrial waste, etc.

* 1: With the total amount handled per year at each site amounting to 0.1 tons or more.
* 2: Compound amount calculated through conversion into metal.

Preservation of Soil and Groundwater

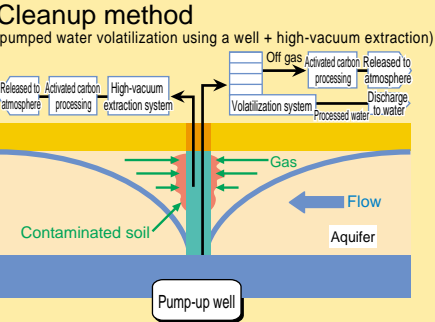
Water pollution by volatile organochlorine compounds

Since July 1998, Omron has been conducting voluntary surveys for 24 domestic offices, laboratories and factories (including affiliated companies) regarding groundwater pollution by volatile organochlorine compounds. These surveys were based on past records of volatile organochlorine compound usage. Survey results identified pollution sources that exceeded environmental standard values at two sites: the former grounds of our Shijo Factory and our affiliate Omron Sanyo facility. These findings were immediately reported to the Kyoto Municipal Government (on December 13, 2000) and Okayama Prefectural Government (on December 18, 2000) respectively. These problems were primarily caused by a lack of awareness between the 1950s and 1970s when these potentially harmful substances were originally used. As for the control of volatile organochlorine compounds, Omron totally eliminated use of trichloroethylene in March 1994 and 1,1,1, trichloroethane in November of the same year.

Omron has been promoting environmentally conscious management practices to fulfill its social responsibility for effectively resolving environmental issues. Therefore, we take these recent findings very seriously and are now implementing appropriate cleanup measures. Accepting complete responsibility, Omron is committed to assuring maximum safety for inhabitants in neighboring areas and accordingly will look for the quickest possible remedy. To this end, we are also cooperating with local governmental offices. Cleanup techniques being used are: the groundwater pumping method designed to pump up polluted water and purify it using activated carbon; and the high-vacuum extraction method based on vacuum adsorption of soil contaminants. We will continue researching and developing innovative technologies to complete the cleanup process at the earliest date possible.

Legislation regarding volatile organochlorine compounds and Omron's actions

Year	Legislation/industry trends	Measures taken at Omron
'50s	Introduction of organochlorine compounds for cleaning of electrical and mechanical parts.	—
'80	Serious groundwater pollution occurs in the U.S. due to effluent leakage.	—
'81	The Environment Agency begins an investigation and discovers nation-wide pollution and the carcinogenicity of pollutants.	—
'83	—	An attempt to replace trichloroethylene with 1,1,1, trichloroethane initiated.
'84	Provisional regulations regarding the discharge of organochlorine compounds established by the Environment Agency. Organochlorine compounds specified as substances to be regulated by the Law concerning the Examination and Regulation of Manufacturing, etc. of Chemical Substances.	—
'89	Amendments to the Water Pollution Control Law (concerning the prohibition of underground penetration of organochlorine compounds and monitoring, etc.).	—
'92	—	A company policy of ending the use of organochlorine solvents including CFCs established (July).
'93	Amendments to the Environmental Quality Standards for Water Pollution (14 substances specified including trichloroethylene).	—
'94	Provisional standards for pollution surveys established (November).	The use of trichloroethylene terminated (March). The use of CFCs and 1,1,1, trichloroethane terminated (November).
'95	—	—
'96	Amendments to the Water Pollution Control Law (concerning purification regulations, directives and countermeasures).	Soil and water quality surveys conducted as part of ISO project.
'97	Environmental Quality Standards for Groundwater established (March). Amendments to the Water Pollution Control Law (April).	Soil and water quality surveys conducted as part of ISO project.
'98	Announcements by the Director-General of the Environment Agency and Minister for International Trade and Industry (June 30) and requests made to JEMA.	Corporate-wide surveys conducted and an environmental measures project established.
'99	Guidelines for investigations and counteractions concerning soil contamination and groundwater pollution as well as related standards established (January).	Detailed survey conducted.
'00	—	Survey findings (identified pollution sources) reported to respective governmental offices and cleanup activities conducted.



Alternative materials and cleaning methods aiming at total abolition of organochlorine solvents

Item/process	Material	Conventional solvents	Alternative substances/methods
IC parts	Flux	Trichloroethylene	Alcohol, water, hydrocarbon-based cleaning
PCBs	Flux	Dichloromethane	Cleaning-free process, water-based cleaning
Solder printing masks	Solder paste	1,1,1, trichloroethane	Hydrocarbon, glycol/ether-based cleaning
Pressing	Press lubricants	—	Water, air, hydrocarbon-based cleaning
Molding	Mold release agents	—	Hydrocarbon-based cleaning
Tools	Liquid agents	—	Alcohol, hydrocarbon-based cleaning

The Ideal Style of Environmentally Conscious Management that Omron Envisions

Omron is striving to implement a truly environmentally conscious management system that can enhance economic value by promoting corporate-wide efforts to minimize environmental harm through recycling-oriented corporate activities. Basic requirements for Omron's environmentally conscious management practices are: 1) compliance with environmental laws and regulations; 2) development of a recycling-oriented structure that covers all corporate activities; 3) balance with business activities; and 4) full disclosure of related information. Looking at these requirements from a management perspective, they can be translated into risk management, resource management, business management and information management. Full implementation of these four management practices will lead to distinctive strengths rated highly by stakeholders.

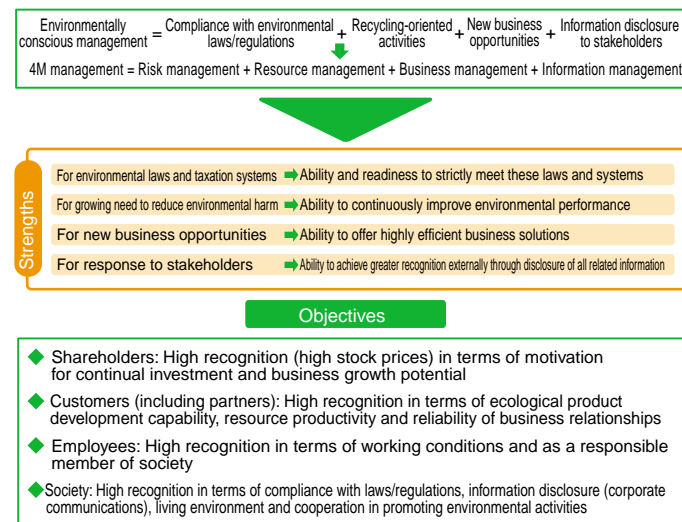
Environmental conservation promotion system

At Omron we believe that to effectively address environmental issues, management and employee corporate-wide efforts must be totally integrated and cooperation with suppliers and partners must be sought. Based on this belief, Omron has built a corporate-wide system intended to promote environmental conservation. Responsible for coordinating corporate-wide environmental strategies with those of each internal company, the Environmental Activity Committee consists of members representing each internal company and is chaired by the director responsible for corporate-wide environmental protection. Each business unit/division is also working hard toward meeting individually set quantitative targets for environmental conservation, while clearly identifying its own environmental issues.

Commitment to the international environmental standard

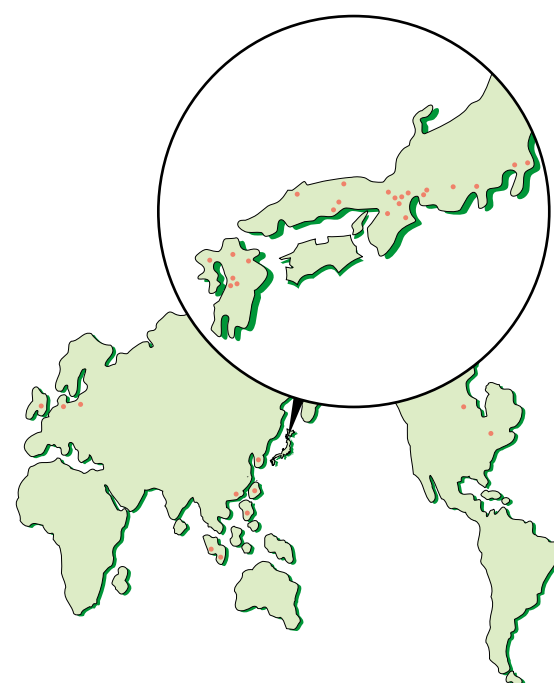
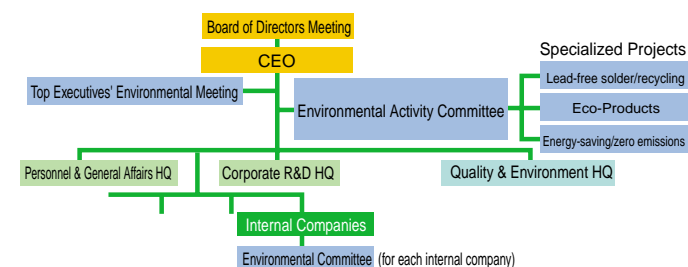
ISO environmental standards were originally established to advocate the continual improvement and protection of the environment with the purpose of creating ecological balance for a safe and secure society. At Omron we consider the acquisition of ISO 14001 certification as an absolute 'must' for the company and accordingly established a corporate policy in September 1995 that stresses Omron's total commitment to the ISO project. Our aim is to meet the requirements of all other international standards that have been established or that are now being formulated (ISO 14020 series, ISO 14031 and ISO 14040 series). Since 1997, we have been in the process of establishing internal systems as a way to effectively collect information.

By September 2000, a total of 32 Omron Group sites (17 in Japan and 15 overseas) have received ISO 14001 certification. This means that all manufacturing facilities outside Japan have become ISO 14001 certified. In fiscal 2000, Omron also achieved ISO 14001 certification for its nine sales and administrative offices and laboratories. This achievement strengthens Omron's drive to build a fully fledged Group-wide environmental management system even further.



Environmental organizational structure

Reflecting the decisions made at the Top Executives' Environmental Meeting, the Environmental Activity Committee reviews and decides on main projects to be promoted and then encourages their implementation throughout the Omron Group.



Environmental Audit System

Omron's environmental audit system for each site is two-faceted: self-auditing and corporate-wide auditing. This system is intended to monitor whether the environmental policy is followed correctly in the implementation of an environmental management system. At Omron, environmental auditing is considered one of the most important management tasks. Auditing is essential for effectively investing corporate resources in environmental performance improvements and for identifying essential factors required to strengthen an environmental management system.

Self-auditing covers checks for EMS implementation and the level of environmental objective/target attainment. It also includes identification of problem-

causing sources and confirmation of observance to related laws and in-house regulations. For the future, we will work on preparing corporate-wide auditing tools and establishing rules necessary to accurately evaluate our capability to continually improve our environmental performance. By doing so, we also aim to make Omron's management practices more eco-conscious.



Environmental Accounting

The environmental accounting practice is intended to monitor and survey the expenditures associated with environmental activities (investments in equipment/facilities and costs related to R&D, environmental education, environmental impact reduction effort and other related costs) and resulting benefits (effectiveness of activities) converted into value. It serves as an important management tool to evaluate the effectiveness of environmental conservation activities and facilitates the decision-making process for future investments. As part of its drive to implement an environmentally conscious management system, Omron intends to use this practice to promote the continual improvement of its environmental performance. This practice also ensures that investments in environmental conservation activities are made more efficiently.

Fiscal 2000 environmental accounting results (trial basis)

Omron's environmental accounting practice is still in the test stage and has yet to be implemented on a

corporate-wide level. During fiscal 2000, the Industrial Automation Company (IAB), an Omron internal company, implemented an environmental accounting practice for all of its six sites. Results were compiled according to "A Guideline for Developing an Environmental Accounting System (2000 Report)" published by the Environment Agency (presently the Ministry of the Environment).

IAB's environmental accounting results are listed in the table shown below. Environmental protection costs totalled 1.1 billion yen (including investments, personnel expenses and other costs). The most noteworthy point was that R&D costs represented over 60% of total expenditures. For estimation of effectiveness, only direct benefits were calculated, amounting to 150 million yen. As well-established accounting methods have yet to be developed for indirect benefits such as those of R&D activities, they were excluded from the report. Based on the results of this trial run, we strive to expand the scope of Omron's environmental accounting practice to cover the entire Omron Group.

Fiscal 2000 environmental accounting results (in conformance to Environment Agency guidelines established in March 2000)

(Unit: millions of yen)

Category		Investment	Cost	Personnel expenses	Total	Effectiveness
Costs incurred for reducing environmental impact of production and services within a business area	Pollution prevention costs	1.3	35.4		36.7	0.0
	Global environment protection costs	4.1	33.1		37.2	2.6
	Resource circulation costs	16.0	56.8		72.8	56.3
Costs of reducing environmental impact before and after the production/service stage		5.8	109.1	2.0	116.9	59.2
Environmental management activity costs			28.4	106.5	134.9	28.7
R&D costs			718.2		718.2	*
Social activity costs			10.0	0.9	10.9	0.0
Total		27.2	991.0	109.4	1127.6	146.8

*Excluded from report

- Pollution prevention costs** Total costs incurred for activities intended to reduce and prevent air pollution, water pollution and soil contamination.
- Global environment protection costs** Total costs incurred for activities intended to reduce and prevent the emissions of global warming and ozone depleting substances as well as energy conservation activities.
- Resource circulation costs** Total costs incurred for activities intended to conserve resources and reduce waste.
- Costs of reducing environmental impact before and after the production/service stage** Total costs incurred for reducing environmental impact caused before and after the production/service stage.
- Environmental management activity costs** Total costs incurred for environmental management activities.
- R&D costs** Total costs incurred for environment-related R&D activities.
- Social activity costs** Total costs incurred for environment-related social activities.





Promotion of Environmental Awareness

To quickly and effectively promote environmental protection at a corporate level, all employees must fully understand the essential issues and be equipped with techniques to initiate necessary actions to solve them. As such, Omron provides its employees with educational opportunities to raise environmental awareness.

Environmental activity bulletin board

In 1996, Omron launched an environmental activity bulletin board for its in-house WINE network system. This system encourages employees to exchange opinions and information regarding environmental conservation and corporate citizenship activities via e-mail and online forums.



'Omron News' publication

This regular internal publication introduces Omron's strategies, business activities and other corporate information. Also covering current topics concerning business, environmental protection and social contribution, 'Omron News' helps employees keep up-to-date with management direction while encouraging environmental awareness. For overseas employees, e-ONR (Omron news in English) is available online.



'Environmental conservation month' activities

Omron has designated June of every year 'environmental conservation month' and invites environmental experts to hold seminars. With Omron executives and employees in attendance, presentations of exemplary environmental efforts are held. Publication of an environmental accounting book is also planned for 2001 to encourage employees to keep a home record of personal energy-saving measures.



'Eco Grand Prix' awards

Established in fiscal 2000, these awards are divided into two categories: environmentally friendly products and contribution to environmental solutions. Each year, exceptionally innovative products and exemplary activities (in terms of reducing environmental harm) are selected. In fiscal 2000, a programmable logic controller and Mishima Factory's energy-saving and zero emissions activities became the first 'Eco Grand Prix' award recipients.



'Eco News'

The Kusatsu Factory publishes its own 'Eco News' to help employees share information concerning the progress of ongoing environmental conservation programs and concerned issues. Similar publications are also available at other sites, contributing to improved employee awareness for ecology.



Overseas Activities

Omron Group companies outside Japan are also actively involved with the ISO project. In 1996, Omron Manufacturing of the Netherlands B.V., a Dutch manufacturing company, became the first overseas site to receive ISO 14001 certification, with other facilities gradually following. Consequently, a total of 14 overseas

manufacturing facilities had achieved ISO 14001 certification by May 1999. A newly established Filipino manufacturing company was also ISO 14001 certified in August 2000, marking the completion of ISO 14001 acquisition for all Omron Group manufacturing sites outside Japan.

Omron Automotive Electronics, Inc. (OED-C) — Automotive electronic components manufacturer

Based in the United States, OED-C has recently succeeded in securing an order from Honda for the G8HN automotive relay as a replacement for the former G8H. The new product was developed jointly with Honda of America Manufacturing and Honda of Canada Manufacturing. The G8HN relay can reduce usage of epoxy resin (a source of volatile organochlorine compound emissions) by 35% a year. This joint development project also reduced lead solder use by 80% for the production of

relays supplied to Honda. By strengthening this partnership even further, OED-C has pledged to work harder to minimize the environmental harm of Omron products in order to contribute to the sustainable development of society.

Furthermore, OED-C is concentrating efforts on recycling and reducing waste from defective products. It also aims to reduce waste discarded in landfills by promoting the use of returnable containers.

Omron (Shanghai) Co., Ltd. (OMC) — Control components manufacturer

OMC is committed to clearly defining environmental improvement targets and incorporating them into its business strategies. During fiscal 2000, the company concentrated on improvement oriented programs intended to: 1) reduce the effect of smoke emitted from the soldering process on the human body; 2) encourage staff to

make environmental conservation suggestions to enhance awareness; 3) advocate tree-planting and other volunteer activities; and 4) aggressively promote paper and energy conservation as well as the reduction of waste. Along side these efforts, OMC also intends to strengthen its internal auditing system.

Shanghai Omron Control Components Co., Ltd. (OMR) — Control components manufacturer

Ever since its achievement of ISO 14001 certification on February 5, 1999, OMR has been organizing an annual tree-planting campaign as part of its effort to strengthen ties with

the local community. OMR also conducts neighborhood cleanups on a regular basis and aggressively promotes energy and water conservation activities as well.

Volunteer activities

Brazil



On Omron Day 2000, employees of Omron Elettronica do Brasil Ltda. (OEB) volunteered to paint neighborhood houses and buildings.

Netherlands



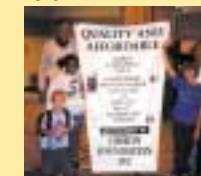
On Omron Day 1999, Omron Electronics B.V. (OEE-NL) staff volunteered to help Sarepat B.V., an NGO dedicated to sending relief items to regions suffering from natural disasters and regional disputes, pack donation goods. These items were sent to Albania through the Red Cross.

Germany



On Omron Day 1999, employees from Omron Electronics G.m.b.H. (OEE-D) visited a senior citizens' home to give back to the community. Activities were organized for the residents and featured in local newspapers.

U.S.A.



Omron's regional headquarters for the Americas, Omron Management Center of America (OMCA), is currently supporting the Outer School Program through Omron Foundation, Inc. Omron volunteers care for children of working parents who for financial reasons are unable to send their children to day care centers.

Taiwan



For the past 14 years, Omron Taiwan Electronics Inc. (OTE) has been supporting the flower/tree-planting program for Taipei parks. This long-term activity keeps in line with the company's policy of maintaining a strong relationship with the local community.



Corporate Citizenship Activities

Commitment to serving as a responsible corporate citizen

In 1956, Omron established a corporate motto, "At work for a better life, a better world for all," that clearly stresses social awareness as a corporate entity. Since that time, this philosophy has consistently remained a guiding principle for our management practices. Omron is committed to contributing to society from two angles — through business operations and corporate citizenship activities.

Science & Technology

■ Tateisi Science and Technology Foundation

This foundation supports research and international exchanges in the areas of electronics and information engineering, while also disseminating research results in Japan. The ultimate aim of the foundation is to achieve harmony between people and machinery.



Social Welfare

■ Contributing to Japan Sun Industries

Japan Sun Industries run rehabilitation/vocational training facilities for physically challenged people in Oita, Aichi and Kyoto Prefectures. In addition to financial support, Omron established two wheelchair factories through joint efforts with the organization — Omron Taiyo in 1972, and Omron Kyoto Taiyo in 1985.

■ Co-sponsoring the Oita International Wheelchair Marathon

Since 1981, the year designated as the International Year of Disabled Persons, this event has been steadily growing in status, with leading athletes from Japan and overseas participating. Since 1988, Omron has been an annual co-sponsor of this event and employees have also participated as volunteers.



Global Environment

In addition to the development of environmentally sound products utilizing Omron's advanced sensing and control technologies, Omron, as a responsible corporate member of society, is active in community services such as cleanups, beautification projects and tree-planting campaigns.

■ Supporting cleanup expeditions

Omron supports cleanup expeditions in Qomolangma and Mt. Fuji as part of its effort to conserve the natural environment.



As part of its effort to directly contribute to society, a Social Service Committee was formulated in 1959 to promote community service. Then in 1991, a Corporate Citizenship Group was established to promote philanthropy and social contributions on a corporate level. Presently, Omron's corporate citizenship activities concentrate on four areas — science and technology, social welfare, arts and culture, and the global environment.

Community Activities

■ Kyoto Omron Community Foundation

Through this organization Omron is actively providing support in the areas of social welfare, youth education, improving the status of women and environmental conditions as well as sponsoring cultural seminars.

■ Omron Day

Since 1991, a variety of Omron Day volunteer activities have been annually organized throughout the world, including neighborhood cleanups, visits to senior citizens' homes and blood donation drives among others.



Volunteer Activities

Omron is providing employees with opportunities to experience volunteer activities. To support these activities, an in-house electronic bulletin board and other media forms are available for staff to exchange information and ideas.

Arts & Culture

■ Co-sponsoring Omron Kyoto and Keihanna Cultural Forums

These cultural forums are held in cooperation with NHK (Japan's public TV/radio broadcasting body) Kyoto Culture Center. Many leading speakers from various fields are invited by the Center to give specialized lectures for broadcasting on NHK Radio.



■ Co-sponsoring Pipe Organ Concerts

Omron donated a pipe organ to the Kyoto Concert Hall in autumn of 1995. To provide people with the opportunity to enjoy and listen to pipe organ music, Omron also co-sponsors concerts for the Hall.



Occupational Health and Safety

As employees are the most important corporate asset, Omron is actively working on the promotion of occupational health and safety management. By doing so, Omron aims to create a safer and more comfortable workplace.

Obtaining OHSAS 18001 certification

In March 2000, the Ayabe Factory received OHSAS 18001 (Occupational Health and Safety Assessment Series) certification. OHSAS 18001 is a highly recognized international standard for occupational health and safety management systems. It is designed to analyze and evaluate the potential risks of manufacturing equipment/machinery and operations, and manage and promote continued improvements for employee safety and health in order to attain specified targets. With this achievement, Omron became the first control component manufacturer to be OHSAS 18001 certified in Japan.

Health management center

Recently, lifestyle-induced diseases are becoming increasing prevalent not only among the aged but among younger people as well. Concerned for employee health, Omron established a health management center in March 2000. All employees receive standard medical checkups regardless of the office or factory they work in. The center uses Omron's health management system (HMS) to provide employees with appropriate medical advice. Results from lifestyle surveys or psychological consultations are also taken into consideration when giving advice. The WINE system, an in-house electronic bulletin board, has been implemented in an effort to make health-related information available to all employees.

Reducing occupational accidents

To strengthen health and safety activities, Omron has made a detailed study of accidents (frequency/causes) that took place during a workday commute or at an Omron business site. Based on statistical analysis, preventive measures are being formulated in an effort to completely eliminate all occupational accidents.

Long-term refreshment vacations

Launched in 1988, this program is intended to supplement standard employee holidays so as to promote healthier and fuller lifestyles. Managers who have spent five years in a managerial position are given a 1-3 month vacation, employees who are 45 years old are given 4 weeks and those who are 53 years old are encouraged to take 2 weeks. Employees are very enthusiastic about this program as it allows them to spend more time with their family and to pursue other pastimes they find rewarding.



The book, "Nishiki-no-Kyujitsu" (Glorious Vacations), published by PHP Institute, Inc. features some of the unique experiences gained by Omron employees during their long-term refreshment vacation.

Omron Taiyo and Omron Kyoto Taiyo factories

On September 29, 2000, Omron Taiyo Co., Ltd. (a factory run by physically challenged people) received the Minister of Labour Award (award of excellence) at the fifth Workplace Improvement Competition. This honor was given in recognition of Omron Taiyo's aggressive promotion of activities intended to expand job opportunities for the disabled. The company also worked on building a production system that can flexibly accommodate the requirements of an increasing client list. Moreover, Omron Taiyo encourages the self-reliance of individual workers by creating a workplace that provides employees with a sense of achievement. At the competition, Omron Kyoto Taiyo Co., Ltd. also received a Merit Award.



Technological support for JAHDS in demining efforts

It is estimated that more than 100 million antipersonnel mines have been laid throughout the world. Omron has been supporting a Japanese non-profit organization, Japan Alliance for Humanitarian Demining Support (JAHDS), by participating in the development of a new mine detector, "Mine Eye." Using Omron's proprietary wave sensing technology, this mine detector can accurately detect and visualize buried mines. It also eliminates drawbacks found in conventional metal detectors to allow for the safer, more efficient removal of landmines. This product, which will be implemented this summer in Thailand, is attracting a great deal of attention internationally for its sizable contribution towards solving this serious problem.



Promoting Communication through the Disclosure of Environmental Information

To communicate a corporate philosophy that supports Omron's environmentally conscious management practices, the company actively discloses information concerning environmental conservation activities through seminars, events and annual environmental reports.

■ Endowment lecture at Ritsumeikan University

On December 14, 2000, Omron CEO Yoshio Tateisi spoke on the endowment lecture series, entitled "Global Environment and Corporate Management" at the Ritsumeikan University in Kyoto. This lecture series was organized by the Business Leaders' Inter-Forum for Environment 21 (B-LIFE 21). In this lecture, CEO Tateisi analyzed current environmental conditions and detailed the recycling-oriented society and environmental business that Omron aims to promote. Other topics included the philosophy behind Omron's environmentally conscious management system and the company's ongoing environmental conservation activities. Students showed a high level of interest in environmental practices by actively asking questions.



CEO Tateisi giving a lecture at the Ritsumeikan University

■ Shiga Environmental Business Messe 2000

With a theme of the 'Future of Global Environment,' the Environmental Business Messe was held in October 2000 in Shiga Prefecture. Some 200 local and overseas companies/organizations participated in the three-day event, which attracted over 40,000 visitors.

For the event, Omron introduced its environmental vision, Eco-Products Certification System and proprietary developments in lead-free solder technology. A variety of Omron's environmentally friendly products were displayed, including safety relays, compact inverters and displacement sensors, along with new business projects such as ITS (Intelligent Transport Systems) and the ESCO initiative.



Omron Booth at Shiga Environmental Business Messe 2000

■ Eco-Products 2000

It is essential that a transition from a mass-production/consumption-oriented society to a recycling-oriented society take place. This was the theme behind Eco-Products 2000, an environmental exposition held in Tokyo from December 14-16, which introduced many ecological products that ranged from consumer products to new energy sources and industrial materials. The Omron booth showcased a full line of environmentally sound products that feature reduced energy consumption, space conservation and enhanced safety. Also demonstrated was the ESCO energy-saving initiative adopted by Omron.



Omron Booth at Eco-Products 2000

■ Publication of the environmental report

Since 1998, Omron has annually published an environmental report that details the company's environmental policy and environmental protection activities. The 2001 environmental report will be distributed widely among investors and customers. A website dedicated to Omron's environmental activities is also available.



Omron environmental reports

Stakeholder Comments

Chizuko Morita Head of the Furoshiki (Wrapping Cloth) Study Group

As head of a small grass roots non-profit organization dedicated to ecology, I'm glad to see Omron doing its share. Last year's 52-page Environmental Report was very impressive and clearly portrayed Omron's strong environmental commitment. Much like a giant country situated next to a small island sinking from the effects of global warming, Omron has the financial and human resources to effectively protect the environment. With that in mind, I do believe that Omron should fully communicate its activities and participation in ecoprojects not only to customers and business associates but to consumers as well.



Mika Yamamoto Leader of the Universal-use Study Group

Our group is now looking for ways that would allow ordinary people, not only 'green elites,' to easily live eco-friendly lives. To this end, we believe it is essential to disseminate information and raise environmental awareness so that everyone can work towards reducing energy consumption and waste as much as possible. I sincerely hope that Omron continues to develop eco-products and that it safely and efficiently operates environmentally conscious factories. In regard to these facilities, I believe that a full demonstration of their capabilities to the public is also necessary.



Toyoji Yamanaka General Manager of ATC Green Eco Plaza Office

Omron was quick to address global environmental issues, launching environmental protection programs even before the establishment of environmental ISO standards. The company is also energetic in minimizing the environmental harm of their activities. Their environmentally conscious management systems are at an advanced level, including environmental auditing, environmental performance evaluation and Omron's unique eco-labelling system. For the future, I hope that Omron plays a more progressive role in tackling issues that are unavoidable for manufacturers, like control over harmful chemical substances (such as those subject to PRTR control).



Hiroshi Tomita Secretary General of the Japan Alliance for Humanitarian Demining Support (JAHDS)

More than 100 million anti-personnel mines and a far greater number of dud bombs are left buried in some 60 countries worldwide. This is truly a global-scale problem. Our organization was originally set up in 1998 for the purpose of supporting local associations dedicated to the removal of land mines by integrating commercially available technologies. For the development of a new mine detector "Mine Eye" designed to improve demining efficiency, Omron assumed an essential role by developing its core sensor and making prototypes. With field-testing already completed, this device is scheduled to be put into actual use sometime this year. I express my sincere appreciation for the dedicated work of Omron engineers and ask for the company's continued support.



Takehiko Murayama Professor of the Division of Multidisciplinary Studies at the School of Science and Engineering, Waseda University

In terms of activities at individual sites, I evaluate Omron's Environmental Report highly. For green procurement and recycling activities, however, more specific descriptions are recommended. More detailed explanations are also necessary concerning greenhouse gases, including an explanation of factors that caused the increase of these emissions. As the degree of environmental impact largely depends on production volume, a ratio against production volume may be worth considering as an environmental performance indicator. PRTR control data for individual sites should also be included.



Keiji Mori Manager of Environmental Management Section, Capacitor Business Unit, LCR Device Company, Matsushita Electronic Components Co., Ltd.

Omron's Environmental Report clearly shows that Omron's activities are guided by a strong determination on the part of top management to promote environmentally conscious management practices based on recycling-oriented corporate activities. Presentation of environmental performance data is easy to understand and inclusion of activities promoted by individual sites makes the report more friendly to us. The only thing that perhaps I'd like to see revised is the table format for the newly established Environmental Policy. For this type of information, I believe that form of presentation lacks strength. I look forward to seeing Omron exert even more effort to grow into a company that leads in environmentally conscious management.



Kohei Yamashita Fourth year student at the College of International Relations, Ritsumeikan University

From CEO Tateisi's lecture, I have the impression that Omron's environmental activities are very broad in scope. The company is concentrating effort on conserving the environment both from a macro perspective (Mishima Factory's achievement of zero emissions) and a micro perspective (design of energy-saving components). I found their attempt to promote environmental commitment not only in-house but also for suppliers and partners through the green procurement system especially progressive. This practice makes Omron an exemplary model of environmentally conscious management in the 21st century.



Akihiko Kotera Environmental Adviser, Freelance Science Writer

The first impression I had when I read last year's Environmental Report was that it was quite technical in nature. I also noted that Omron's environmental activities are both comprehensive and extensive, most likely due to early ISO 14001 certification. However, I felt that it was far too technical, almost impossible for the average person to comprehend (probably due to the nature of the company's business). I believe that environmental reports should be organized and written in as straightforward and simple manner as possible so that everyone can easily and fully understand a company's environmental conservation efforts.



● Stakeholders include Omron's customers, business associates, shareholders, investors, governmental officers, NGO/NPO members, students, local community inhabitants and all others who have an interest and association with Omron's corporate activities. Omron actively listens to the opinions and comments of stakeholders, as they prove to be a valuable tool for reviewing Omron's ongoing environmental activities and for guiding future activities.



Preserving Founder's Philosophy— Ecology and People-centered Approach

Omron Founder Dr. Kazuma Tateisi's Philosophy and Omron's Environmentally Conscious Management System

People who make others the happiest are the happiest themselves

In 1930, Kazuma Tateisi without a penny in his pocket built Saikosha — the cornerstone of today's Omron. He was often heard saying that "People who make others the happiest are the happiest themselves." This idea completely embodied his people-centered approach, which even now remains Omron's guiding principle. This personal philosophy has also directed Omron toward developing an environmentally conscious management system. To provide some insight into the company's vision as it heads toward the Optimization Society, this section will briefly cover the history of Omron.



Non-wasteful approach

In the midst of a worldwide recession, Kazuma Tateisi founded an independent company by perfecting a trouser press using a patented utility design he personally acquired. Although he worked tirelessly to develop sales channels, it was very difficult due to a lack of brand recognition. As he had no way to advertise the product, stock was piling up and he was quickly overtaken by poverty. From this experience, he learned the importance of not being wasteful — an essential point of view for an environmentally conscious management system.



Establishment of Tateisi Electric Manufacturing Co.

While still experiencing financial difficulty, Dr. Tateisi made a bold decision to move from Kyoto to Osaka after receiving orders for an X-ray timer he developed. He made that move on May 10, 1933, a date that is now considered Omron's foundation day. Along with the move, his company was renamed Tateisi Electric Manufacturing Co. and commenced production of wall- and stand-type X-ray timers.

Since then business grew steadily. But this came to an abrupt stop with World War II. Everything he had built was gone and he was forced to move back to Kyoto in an effort to recover his business. He chose to start production in small district called 'Omuro,' from which the company name Omron was derived.

At work for a better life, a better world for all

After the WWII, Tateisi Electric succeeded in perfecting Japan's first precision switch. This breakthrough made a huge impact on the industry, and the company gained a reputation as a technological pioneer in Japan's transition to the so-called 'Automation Era.' When business had stabilized, Kazuma Tateisi made his first overseas trip to the United States where he was able to view automated factories and transistors. During his 35-day stay, he also studied the management styles and production and quality control systems adopted by U.S. firms. On returning home, he decided to try and incorporate what he had learned into the management practice of his own company. This marked a turning point for Tateisi Electric.

Having made affirmative changes on the side of business, he was also aware that as his company grew so did his responsibility to the community in which he operates. After a three-year compilation process to find the most appropriate philosophical concept to communicate this idea, the corporate motto, "At work for a better life, a better world for all," was decided on and established in 1959.

Communicating with people enriches my life

In addition to being a corporate leader of enormous entrepreneurial spirit, Kazuma Tateisi was also a man of refined tastes. He loved singing, painting and writing poetry. He could recite Noh literature, write calligraphy and could even perform tea ceremonies. His distinctive writing style further showed his unique character. It was in his paintings though that Tateisi's talent could truly be seen. Many pieces of his work still remain including "Mt. Fuji" and "A Moment in the Morning," both of which give off a feeling of warmth and love. "Painting allows me to communicate my feelings with many different people at one time, which I find enriches my life." His personal view is preserved in Omron's people-centered management practice.



SINIC Theory for predicting the future

In responding to questions concerning his personal philosophy, Kazuma Tateisi liked to say that it embraces a "future-oriented way of thinking." As he believed a progressive approach is essential, he developed a unique future prediction method called the SINIC Theory in 1970. This theory was to function as a guideline for steering corporate activities in the right direction so as to meet the requirements of future societies.

This theory represents the development of science, technology and society from prehistoric ages to the present along with the causal factors that spurred on progression in the form of a numerical model. This in turn allows us to predict the direction and scale of future developments and transformations. According to the SINIC Theory, Omron anticipates the arrival of an Optimization Society in the early part of the current century. From an ecological point of view, this society will allow people and the environment to co-exist in harmony, by realizing sustainable development. This perspective exactly conforms to Omron's vision of an environmentally conscious management system.



Personal life of Founder

Narutaki — Kazuma Tateisi's hometown

Narutaki in Kyoto City was the place Omron Founder Kazuma Tateisi spent his life. Surrounded by breathtaking natural scenery that changed with each season, Narutaki calmed and relaxed Tateisi's mind and body after busy days at work.

Cherry blossoms in the spring, singing cicadas in the summer, tinted leaves in the autumn and tranquility in the winter all helped him foster energy and sharpen his sensibilities. At Omron today, our respect for our founder's love of the outdoors is shown in our commitment to environmental conservation and reflected in the individual efforts of each employee.

