TOSHIBA TEC GROUP

Sustainability Report 2004

TOSHIBA TEC CORPORATION

Corporate Profile

The TOSHIBA TEC Group is committed to conducting "solution business" which establishes a link between technologies and people.

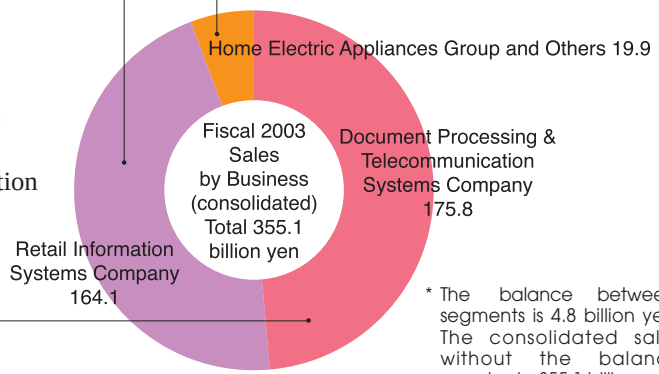
Firm Name:	TOSHIBA TEC CORPORATION	Established:	February 21, 1950
Head Office:	1-1 Kanda Nishiki-cho, Chiyoda-ku, Tokyo, 101-8442 Japan	Number of Employees:	13,673 (total as of the end of March 2004)
President and Chief Executive Officer:	Yoshihiro Maeda	Paid-in Capital:	39.9 billion yen (listed on the First Section of the Tokyo Stock Exchange)
		Net Sales:	355.1 billion yen (consolidated)

Corporate Details

Retail Information Systems Company:
Point of Sale Systems
Electronic Cash Registers
Digital Computing Scales
Bar Code Products
Office Equipment, etc.

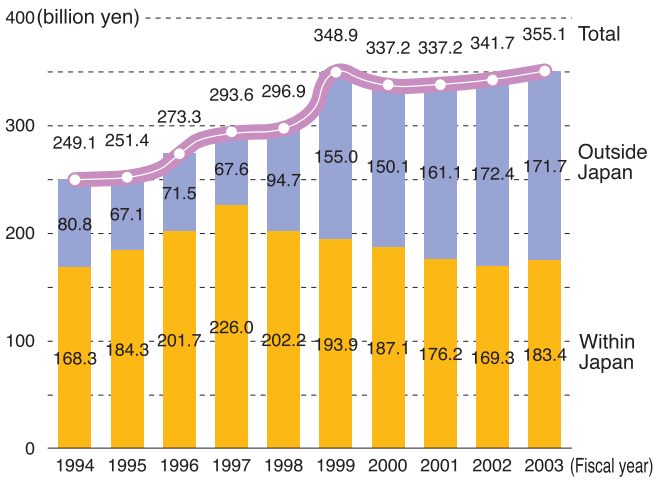
Home Electric Appliances and Others:
Vacuum Cleaners
Health Equipment
Motors
Printed Circuit Boards
Stamped Parts etc.

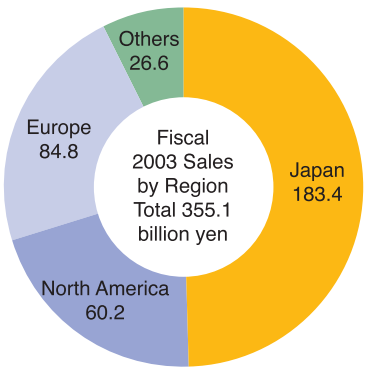
Document Processing & Telecommunication Systems Company:
MFPs (Digital Multi-function Peripherals)
Special Terminals
Inkjet Heads, etc.



* The balance between segments is 4.8 billion yen. The consolidated sales without the balance equates to 355.1 billion yen.

Net Sales (consolidated)





Regarding the issue of "TOSHIBA TEC Group Sustainability Report 2004"

After the first issue of "TOSHIBA TEC Environmental Report 2000" in 2000, TOSHIBA TEC CORPORATION has been issuing "TOSHIBA TEC GROUP Environmental Report" annually since 2001.

This year is the fifth issue and the title has been revised to the "TOSHIBA TEC GROUP Sustainability Report 2004", which was edited to expand economic and social reports in addition to previous environmental reports.

This Report emphasizes "Vision and Strategy" to be defined as clearly as possible, to allow our stakeholders to further understand the TOSHIBA TEC GROUP, as well as "Concepts and Outcomes regarding the Development of Environmentally Conscious Products" are introduced by TOSHIBA TEC CORPORATION.

This Report consists of:

(1) "Vision and Strategy" on the business, environmental and social aspects on a whole
(2) "Management Concept and Outcome" for sustainability and society
(3) "Performance" of economy and environment
(4) "Data"

This report is susceptible to improvement. It contains inadequacies for a substantial and sustainable report. However, we hope to thoroughly study each item throughout the guidelines, such as GRI*, practice activities to meet the expectations of our stakeholders and provide reports to our stakeholders.

* GRI: Global Reporting Initiative

Scope of This Report

- Report Period:
  From April 1, 2003 to March 31, 2004
- Report Scope:
  TOSHIBA TEC Group as shown below
  TOSHIBA TEC CORPORATION (4 business sites)
  Production affiliates in Japan (4 business sites)
  Sales or service affiliates in Japan (6 business sites)
  Production affiliates outside Japan (6 business sites)
  Sales or service affiliates outside Japan (8 business sites)

Reference Guidelines

- GRI Sustainability Reporting Guideline 2002
- The Ministry of the Environment, Environmental Report Guidelines (Fiscal 2003 Version)
- The Ministry of the Environment, Guidelines for Environmental Performance Indicators for Businesses (Fiscal 2002 Version)
- The Ministry of Economy, Trade and Industry, Environmental Reporting Guidelines 2001
  - With Focus on Stakeholders -

CONTENTS

We are committed to contributing to the establishment of a sustainable society from a stakeholder's point of view

To achieve our social mission and play an important role in society

In the background of a rapid global progression and diversification of individual sense of values, there has been a growing worldwide interest in "Corporate Social Responsibility (CSR)". Corporations are asked not only to exercise an economic responsibility but also to achieve their social mission and play an important role in society.
The TOSHIBA TEC Group constructed the CSR Promotion System in January 2004, to meet the expectations and needs of its stakeholders including customers and shareholders, instituted the New Management Policy and revised the Standards of Conduct (SOC).

From a stakeholder's point of view

The New Management Policy presents the intention and determination of the TOSHIBA TEC Group as "Our Five Commitments" for each stakeholder. ""Monozukuri": creating our products with pride and passion, Keeping our customers in mind all the time and everywhere" as a key message. The new policy clearly defines implementation of corporate management from the standpoint of our customers, employees, society, environment and shareholders.
"Environment" is considered equal to stakeholders because we believe environmental protection activities are extremely important for promoting CSR.
When considering the environment, we allot higher priority in every business aspect to protect people's safety and health, as well as global resources.

Commitment to environmental protection is an important factor for corporate management

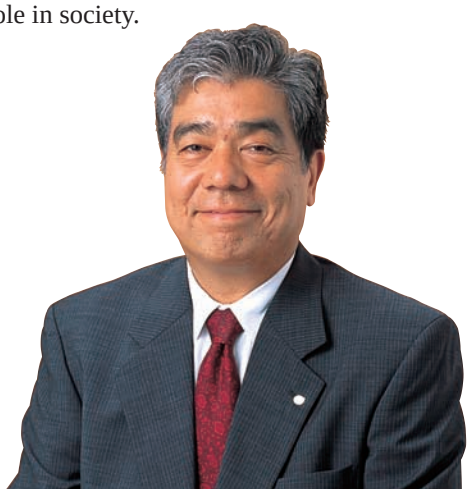
Environmental laws and regulations such as the EU's "The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS Directives)" and the Japanese " The Basic Law for Establishing the Recycling-Based Society" are being improved. We believe a commitment to environmental protection is becoming an important factor for corporate management, in addition to the conventional quality, cost and delivery factors.
The TOSHIBA TEC Group is actively improving environmental protection by constructing the sustainability management system, environmentally conscious products and services (eco products), environmentally conscious production process (eco process) for the production process and environmental communication, as the pillars for sustainability.
We trust promoting the development and distribution of eco products contributes to the reduction of environmental impacts, while simultaneously developing the TOSHIBA TEC Group.

Outcomes and challenges

The TOSHIBA TEC Group successfully launched our major products including color MFPs (multi-function peripherals), POS terminals, vacuum cleaners and our environmentally conscious products, in the 2003 fiscal year.
The IH-type fuser roller equipped color MFP "e-STUDIO3511/4511" has realized warm-up time cutbacks and energy savings. The POS terminal "ST-98" has enhanced the marketability, merchantability by reducing its size and weight, and environmental impacts including energy savings. The vacuum cleaner "VC-R14C" uses the NEW AERO CYCLONE system, which requires no dust bag.
The TOSHIBA TEC Group including the development, design, procurement, manufacturing, logistics, service and service departments, is committed to advancing corporate-wide environmentally conscious activities, while creating further eco products and practicing group-global sustainability in the future.

For readers

This "Sustainability Report 2004" summarizes the TOSHIBA TEC Group focuses on its commitment to environmental protection and positively practices sustainability. We trust this Report will be used as a communication tool to consider the establishment of a sustainable society, together with customers and various stakeholders of the TOSHIBA TEC Group.
We welcome your trusted opinions in order to raise the sustainability level of the TOSHIBA TEC Group, as well as to achieve our social mission, while playing an important role in society.



Yoshihiro Maeda
President and Executive Officer
TOSHIBA TEC CORPORATION
June 2004

Our Five Commitments

"Our Five Commitments" for each stakeholder. ""Monozukuri": creating our products with pride and passion, Keeping our customers in mind all the time and everywhere" as a key message. The TOSHIBA TEC Group continues to challenge the "Creation of Prosperous Values" and contributes to the development of a global society.

TOSHIBA TEC CORPORATION was founded in 1950 and weathered many turbulent years up to the present. During that time, the Company has consistently adhered to the spirit of always thinking about customers first, and providing them with products they are happy with and can rely on, and the principle that strong products are born from proprietary technology. Our motto is "Without fear of failure, let's always try to challenge new ideas!"
In the 21st century, the quest is for a better quality of life, a society with higher ethics, a better natural environment. It is the age in which people of all countries have become increasingly aware of the need to coexist and prosper together.
Against this background, and as a corporate group active worldwide, the TOSHIBA TEC Group continues to challenge the creation of prosperous values. While contributing toward the development of a global society, it continues to grow as a group in tune with the times.

Our Five Commitments -Management Policy of the TOSHIBA TEC Group-

"Monozukuri": creating our products with pride and passion, Keeping our customers in mind all the time and everywhere"

"Monozukuri" is the ongoing process of creating new values realized in quality products and services that exceed customer expectations by applying superior proprietary technology and knowledge nurtured over long years.

1. We aim to provide timely products and services with reliable quality and functions as well as high user-friendliness, creating value with our customer in mind through our superior proprietary technology and in collaboration with the world's best partners.
2. We want to foster an open and healthy corporate culture in which a strong professional team may tirelessly seek new challenges, by respecting the individuality of each employee, striving to enhance each one's abilities, and implementing a fair and appropriate system of evaluation and rewards.
3. We seek to contribute toward the development of a global society as a good corporate citizen, law-abiding and ethical, by fulfilling our responsibilities toward each country and community in which we operate and respecting local culture and history.
4. We put concern for the environment as a priority in all our business activities so as to protect people's safety and health as well as the world's natural resources.
5. We endeavor to maximize our corporate value, and on the basis of sound and transparent management, we strive to achieve appropriate profits and reserves, constantly seek to implement management innovation and energetically invest in research and development, among others, in order to meet the expectations of our shareholders.

- We actively seek to protect a safe and healthy environment in order to hand over in sound condition the Earth's irreplaceable environment to the next generation.
- We strive to conduct research development, product engineering and other activities that help preserve the environment, and actively seek ways to protect the limited natural resources of the Earth.
- Now and in the future, we will make efforts to eliminate substances that may harm the Earth's environment. At the same time, we will incorporate resource saving, energy saving as well as product and parts recycling.

*"Environment" positioned as one of the management policies presents the strong intention and posture of the TOSHIBA TEC Group toward the reinforcement of its commitment to environmental protection.

Standards of Conduct (SOC)

The TOSHIBA TEC Group is committed to advancing business activities and exercising a corporate social responsibility (CSR) based on the TOSHIBA TEC Group Common Standards of Conduct (SOC).

As of January 1, 2004, on the basis of the newly constructed CSR* promotion system, reinforcement and promotion of the Risk Compliance System, the TOSHIBA TEC Group reviewed the positioning of the "Business Standards of Conduct (SOC)" played by each company within the group, and instituted the unified "TOSHIBA TEC Group Standards of Conduct (SOC)" as a group-wide "Common Standards of Conduct (SOC)" which every employee should share.
In addition, we are committed to educating every employee of the TOSHIBA TEC Group to make the "TOSHIBA TEC Group Standards of Conduct (SOC)" known to everyone.

* CSR: Corporate Social Responsibility

Aims of Institution of the TOSHIBA TEC Group Standards of Conduct (SOC)

- **Clear definition of the Group Common SOC**
- **Reflection of the CSR Attitude**

Positioning of Standards of Conduct (SOC)

The TOSHIBA TEC Group is committed to advancing business activities and exercising a corporate social responsibility based on the TOSHIBA TEC Group Common Standards of Conduct (SOC).

Management Policy of the TOSHIBA TEC Group

TOSHIBA TEC Group Standards of Conduct (SOC)

Contents of the TOSHIBA TEC Group Standards of Conduct (SOC)

Environmental Protection

TOSHIBA TEC Group Companies shall:

1. recognize the Earth is an irreplaceable asset, there is a collective obligation to deliver it to future generations in a sound state, and strive to promote a sustainable environment.
2. comply with international, regional and national standards, laws, regulations, agreements, industry guidelines and rules related to environmental protection.
3. contribute to society by developing and offering excellent products that incorporate technologies for environmental protection.

Directors and Employees shall:

1. support environmental protection in research and development activities and product manufacturing, and also work proactively to maximize the effective use of resources and energy, to achieve zero waste emissions, to actively promote the recycling and reuse of products and components, and to minimize activities that contribute to global warming.
2. continually improve environmental protection activities by implementing action plans, at the corporate level and at each place of business, from both a short term and long-term perspective.
3. conduct periodic environmental inspections, and maintain records of the same in accordance with internal regulations, and promptly deal with any deviations or the like through appropriate corrective measures.
4. actively participate in the environmental protection activities of local communities, and maintain good relations with local communities through sufficient information sharing.
5. conduct environmental impact assessments during the planning of new plants and plant relocations investment in production facilities, product planning and design and the purchase of new parts, components or materials.
6. try to avoid the use or emission of any substance that, although not prohibited by applicable laws or regulations, is recognized as a threat to the environment by the government or public environmental authority of any country or region in which the TOSHIBA TEC Group operates. If such a substance should be used by TOSHIBA TEC Group Companies, for whatever reason, every effort shall be made to minimize its environmental impact, through application of the best available technology and know-how.

Handing over this irreplaceable Earth to the next generation in a complete state

We recognize "handing over of this irreplaceable Earth to the next generation, in a complete state, is the basic responsibility of mankind." Therefore, we regard environmental protection as the most important task for the management of our company.

• Management Policy •

"Our Five Commitments"

• Standards of Conduct (SOC) •

"Compliance with Laws and Regulations"
"Social Norms/Corporate Ethics"
"Global Environmental Protection" "Philanthropy"
"Respect for Human Rights"

• Basic Policy for Environmental Protection •

We, the TOSHIBA TEC Group companies, based on the recognition that the basic obligation of existing human beings is to hand down to our next generation, "our irreplaceable Earth" in the sound state.

(1) TOSHIBA TEC Group considers environmental protection to be one of management's primary responsibilities.
(2) TOSHIBA TEC Group specifies objectives and targets for its business activities, products and services to reduce environmental impacts and prevent pollution.
(3) TOSHIBA TEC Group continually strives to improve the environment through vigorous implementation of environmental measures.
(4) TOSHIBA TEC Group complies not only with laws and regulations, and industry guidelines, which it has endorsed, but also its own standards for environmental protection.
(5) TOSHIBA TEC Group contributes to society through its environmental protection activities, which include the development and supply of excellent, environmentally conscious technologies and products in cooperation with the local community.
(6) TOSHIBA TEC Group recognizes that natural resources are finite, and committed to reducing, reusing and recycling in each phase of production covering use of materials, manufacturing, distribution, consumption, collection, and recycling and reusing.
(7) TOSHIBA TEC Group educates all its employees to enhance their consciousness of the environment.
(8) TOSHIBA TEC Group instructs and supports subsidiary companies to advance environmental activities throughout the TOSHIBA TEC Group.
(9) TOSHIBA TEC Group notifies those inside and outside of the group, of implementations of the environmental protection activities as needed.

TOSHIBA TEC Group Revised in February 2004

Aiming to achieve the corporate social mission and play an important role in society

In the background of a rapid global progression and diversification of individual sense of values, there has been a growing interest in Corporate Social Responsibility (CSR).
The TOSHIBA TEC Group constructed the CSR Promotion System to meet the expectations and needs of various stakeholders.

Aiming to be a good corporate citizen

In the background of a rapid global progression and diversification of individual sense of values, corporations are asked to not only exercise an economic responsibility but also achieve their social mission and play an important role in society.
The TOSHIBA TEC Group implemented the following as of January 1, 2004, to meet the expectations and needs of our stakeholders including "customers" and "shareholders", and constructed the new system, which clearly defines CSR:

1) Construction of the CSR Promotion System
2) Institution of the New Management Policy
3) Revision of the Standards of Conduct (SOC)

From a stakeholder's point of view

The TOSHIBA TEC Group considers it highly important for every employee to work on business activities from a stakeholder's point of view. The new system divides stakeholders into five categories.

Categories of stakeholders

Stakeholders	Points of view
Customer	Needs, value creation, confidence
Employee	Individual respect, improvement in ability, pride
Society	Coordination with community, philanthropy
Environment	Protection of resources, environmental protection
Shareholder	Sound management, creation of corporate value

CSR Promotion System

Keeping "Compliance" with laws and regulations, social norms and corporate ethics, the TOSHIBA TEC Group as a good corporate citizen, actively forges ahead with "Global Environment", "Human Rights/Employee Satisfaction", "Philanthropy" and "Customer Satisfaction" to meet the expectations and needs of every stakeholder.
Assigning the president and CEO as the leader and organizer, the CSR Promotion Committee is to have everyone fully understand the basic policy, planning, information gathering, trend survey, Management Policy and Standards of Conduct (SOC).
To root the Management Policy as corporate culture, an attitude survey is conducted on every employee of the TOSHIBA TEC Group, to analyze the difference between "ideal posture" and "present posture", devise and take remedies.
We place five activities under the umbrella of the CSR Promotion Committee, to further advance the CSR promoting activities, as follows:

Corporate Governance

The TOSHIBA TEC Group has adopted the vice-president system and in-house company system since April 1999, as an important management policy to ensure the managerial transparency and practice the agile management.
While separating "functions related to supervision and decision making" from "functions related to task enforcement", the focus should be on improvements in promptness and mobility by correcting (reducing) the number of directors.
By appointing outside directors and outside auditors, the managerial transparency is being ensured.
Regarding the related organizational structure, the Corporate Audit Division was constructed to reinforce the internal control system, including the risk compliance management system.

Risk Compliance Management

The Risk Compliance Committee* was organized on January 1, 2004 to further compliance control from a CSR's point of view. Another side of the president and CEO is CRO (Chief Risk-Compliance Management Officer) appointed as the Committee leader.
The risk hot line is designed through e-mail, for employees of the TOSHIBA TEC Group, to directly provide risk compliance information to the CRO when obtaining such information. Thus, each employee of the TOSHIBA TEC Group can increase their sensitivity to risk compliance information, properly understand and manage risk compliance information during operations of routine tasks.

* Risk Compliance Committee: devises corporate-wide measures and controls the measures regarding risk compliance, reinforces and promotes the maintenance of the risk compliance system.

Compliance education to employees

The TOSHIBA TEC Group educates every employee about the Management Policy and Standards of Conduct (SOC), through VTR and e-learning. Therefore, every employee can perform business activities abiding by laws. In addition, education regarding the "export control program", "protection of individual information" and "information security system" are also provided to each of the employees.
Hence, the TOSHIBA TEC Group works toward laws and regulations, social norms and corporate ethics with high morals and law-abiding spirit.

Compliance education

Minimizing environmental impacts and maximizing environmentally conscious activities

On one hand, we try to minimize absorptions of raw materials and energy from global resources, along with eliminating emissions of pollutants into a global environment. On the other hand, we try to maximize environmentally conscious activities including recycling and creating environmentally conscious products, while making efforts to grasp direct and indirect environmental impacts through the entire business activities.

TOSHIBA TEC Group's commitment to environmental protection

The TOSHIBA TEC Group works toward reducing global environmental impacts through various activities, such as the development of environmentally conscious products, activities to prevent global warming, enhancement control on chemical substances, effective use of resources and recycling of used products.
We carry out environmental education, environmental accounting and environmental audits as the foundation, which support aforementioned activities, as well as work toward disclosing environmental information.
Through these activities, we contribute to promoting the establishment of a sustainable society.

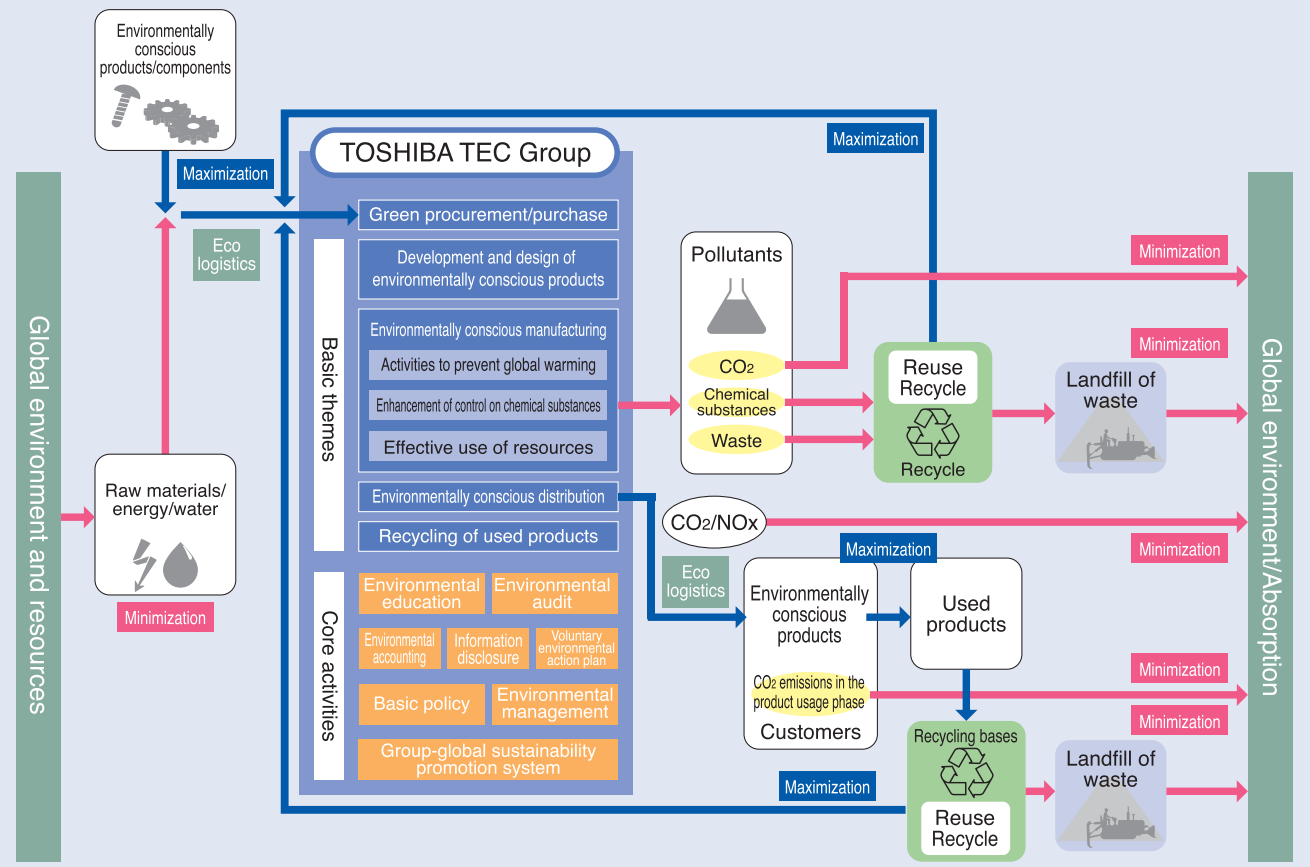
Minimizing environmental impacts

It is inevitable to extract raw materials and energy from global resources and consume them in order to manufacture products. As a result, pollutants such as CO_2 (carbon dioxide), chemical substances and waste are emitted and absorbed into a global environment.
CO_2 and NOx (nitrogen oxides) are also emitted during products procurement and transportation through the usage of fuel for vehicles. Customers also indirectly generate CO_2 as electricity consumption, while using products.
The TOSHIBA TEC Group advances to minimize these environmental impacts.

Maximizing environmentally conscious activities

We make further efforts to maximize environmentally conscious activities such as the development and distribution of environmentally conscious products, recycling of wastes and used products, green procurement and purchase.

Relationship between TOSHIBA TEC Group's Business Activities and Environmental Protection



Environmental impacts in fiscal 2003

The business activities of the TOSHIBA TEC Group are as follows:

1) procure raw materials and components
2) process and assemble raw materials and components to build products
3) transport finished products to distributors
4) have customers use the products
5) collect used products where possible for reuse and recycling

The following figure shows environmental impacts in each phase of a product life cycle:

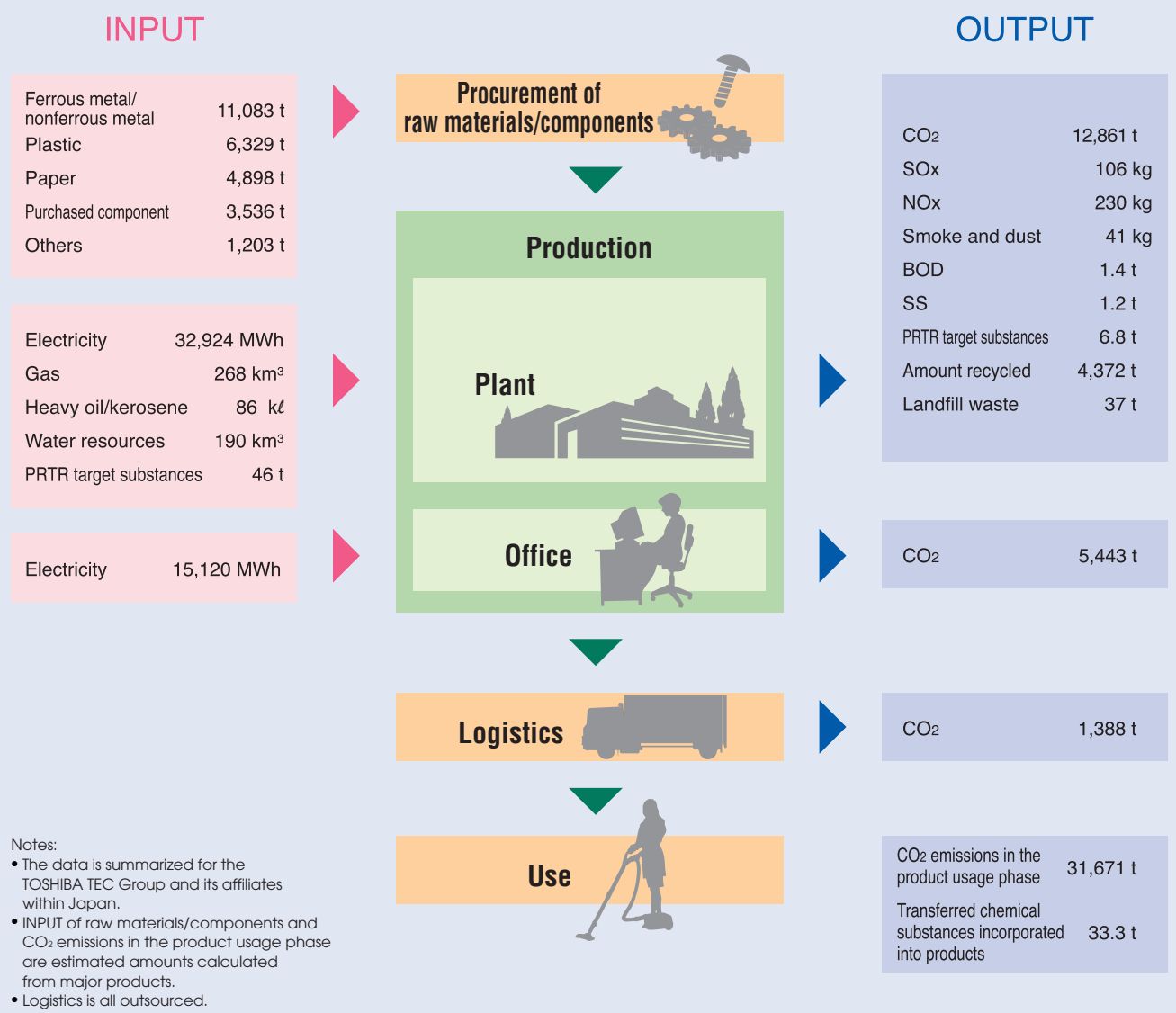
Direct environmental impacts in the production phase contain the following amounts:

- 13,000 tons of CO_2 emitted from plants due to consumption of all energies
- 5,000 tons of CO_2 emitted from offices due to consumption of all energies
- 6.8 tons of chemical substances discharged into the atmosphere and water (PRTR* target substances)
- Finally 37 tons of waste to be landfilled

Indirect environmental impacts indicate 32,000 tons of CO_2 emitted in the product usage phase, and the amount is approximately 2.5 times that in the production phase. Therefore, it is important to take energy-saving measures on products.

* PRTR (Pollutant Release and Transfer Register): Companies disclose the amounts of chemical substance releases and transfers by reporting to the administrative organization.

Input and Output of resources in fiscal 2003



Notes:
- The data is summarized for the TOSHIBA TEC Group and its affiliates within Japan.
- INPUT of raw materials/components and CO_2 emissions in the product usage phase are estimated amounts calculated from major products.
- Logistics is all outsourced.

Mid-term goal and result assessment in fiscal 2003

The TOSHIBA TEC Group is working toward achieving its corporate-wide objectives of the Third Voluntary Plan for Environmental Protection as the mid-term environmental goal.

Outcomes in fiscal 2003

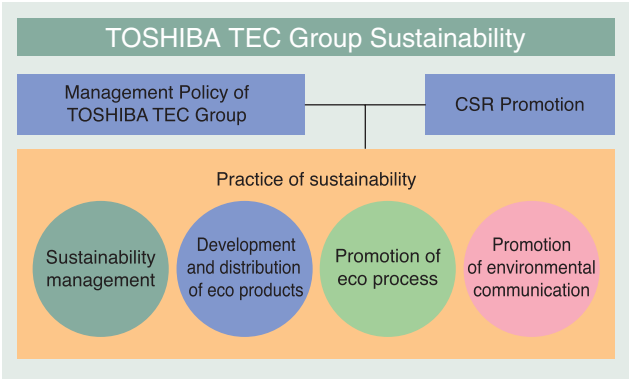
TOSHIBA TEC CORPORATION has started the Third Voluntary Plan for Environmental Protection targeted for the fiscal years from 2001 to 2005. Regarding this Voluntary Plan for Environmental Protection as the mid-term environmental goal, TOSHIBA TEC CORPORATION is working toward achieving its corporate-wide objectives.
Significant outcomes including zero emissions of waste, reducing discharge of chemical substances and environmentally conscious product were achieved in the 2003 fiscal year. Improvements in other items were also successfully yielded. P42～46

Additional objectives to the Third Voluntary Plan for Environmental Protection

While pressing ahead with the Third Voluntary Plan for Environmental Protection, we consider it important to reduce not only the final disposal rate and basic unit but also the total amount of waste and CO_2 emissions. Hence, additional objectives were set. All the TOSHIBA TEC Group production sites in Japan, including its affiliates are targeted, in order to pursue the Plan as the TOSHIBA TEC Group.

Future challenges

The Third Voluntary Plan for Environmental Protection including the additional objectives is being improved.
Our goals are to receive ISO14001 certification and reduce environmental impacts at the non-production sites related to sales and services, to enhance the sustainability management system, while actively promoting group-global eco products and process in cooperation with the affiliates.



Third Voluntary Plan for Environmental Protection (mid-term environmental goal) outcomes in fiscal 2003

Items 1 to 4 and 8 are related to TOSHIBA TEC production sites, and others related to its products

	Items	Objectives	Outcomes in fiscal 2003	Assessment
1	Zero emissions of waste	Started implementation in fiscal 2001 and the final disposal amount to be 1% or less of total discharge by the end of fiscal 2003	0.3%	Excellent
2	Reduce discharge of chemical substances	30% reduction by the end of fiscal 2005 relative to fiscal 2000	71% reduced	Excellent
3	Reduce CO_2 emissions	25% reduction of CO_2 per basic unit of net sales by the end of fiscal 2010 relative to fiscal 1990	14% reduced	Good
4	Green procurement	Achievement of 100% green ratio by the end of fiscal 2005	91%	Good
5	Provide product information	50% of products to be in compliance with the Voluntary Environmental Standards by the end of fiscal 2005	49%	Good
6	Reduce electricity consumed per product function	30% reduction by the end of fiscal 2005 relative to fiscal 2000	•POS: 29% •Vacuum cleaner: 28% •Copier/MFP: 50%	Good
7	Apply lead-free solder	Application of lead-free solder to all products distributed in April 2003 or later	Lead-free solder is applied to new products	Good
8	Abolish HCFCs	Abolition by the end of December 2004	Abolition completed	Good

Additional Objectives to the Third Voluntary Plan for Environmental Protection (added in August 2003)

Related to productions sites in Japan of TOSHIBA TEC and its affiliates.

	Items	Objectives	Outcomes in fiscal 2003	Assessment
1	Zero emissions of waste	20% or more reduction of the total amount of discharge by the end of fiscal 2010 relative to fiscal 2000	8% reduced	Good
2	Reduce discharge of chemical substances	50% reduction by the end of fiscal 2010 relative to fiscal 2000	71% reduced	Excellent
3	Reduce CO_2 emissions	40% reduction of the total amount of emissions by the end of fiscal 2010 relative to fiscal 1990	29% reduced	Good
4	Green purchase (stationeries/ office automation equipment)	50% or more purchase amount to be green purchase items by fiscal 2005	42.5%*	Good

* It indicates the results between March 1 and April 20, 2004 at TOSHIBA TEC non-production sites.

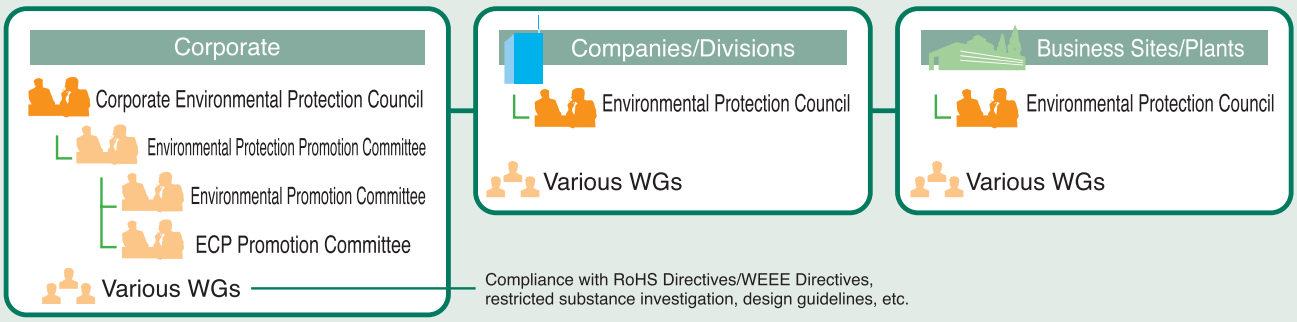
Practicing sustainability as a group-integrated system

TOSHIBA TEC CORPORATION designed the Corporate Environmental Protection Council, to discuss and determine policies regarding group-wide commitments to environmental protection. The Environmental Protection Department is set up in each Company, to advance integrated-group activities for environmental protection, in conformance with individual products and regions.

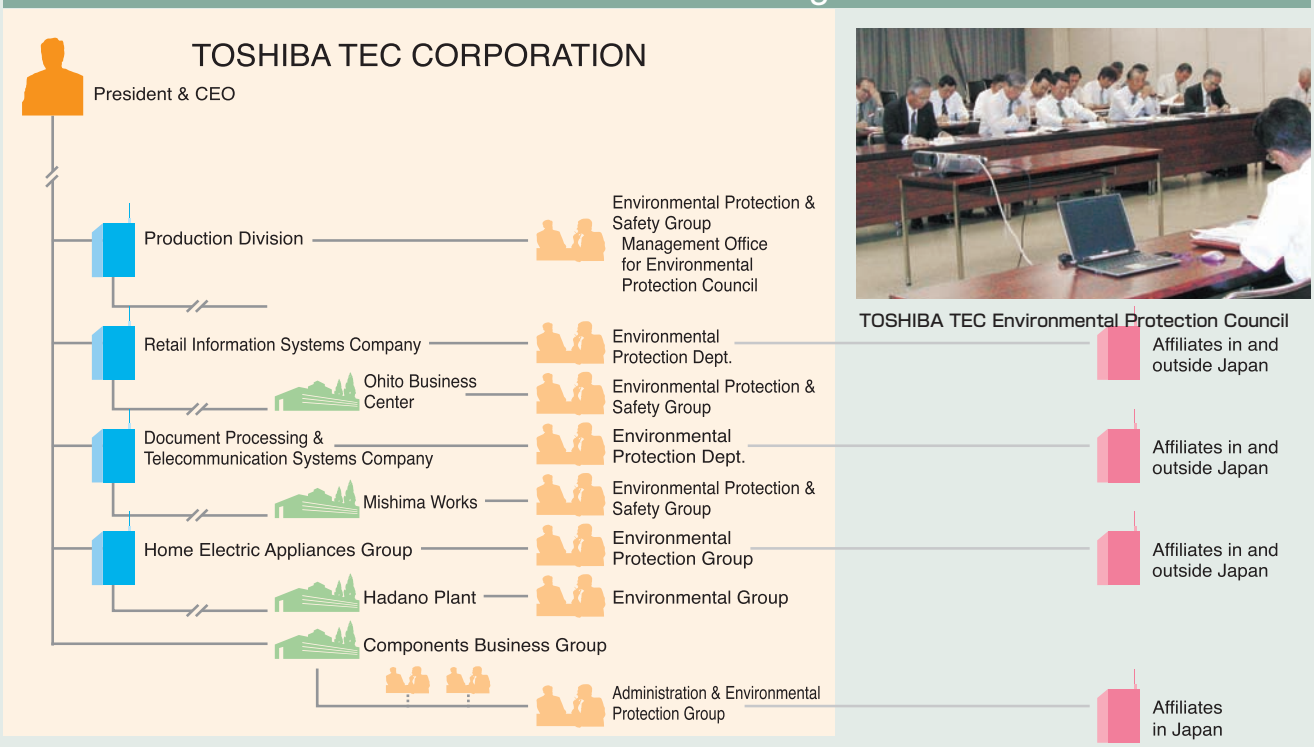
With aims of enhancing group-wide commitments to environmental protection and making it integral to the operation of every TOSHIBA TEC Group Company, TOSHIBA TEC CORPORATION designed the Corporate Environmental Protection Committee in 1989 (renamed as Corporate Environmental Protection Council in 1994). The group is responsible for environmental protection; the Council discusses and determines policies and orientates commitments to environmental protection through the business activities. The Environmental Protection Promotion Committee and ECP* Promotion Committee are set up as subordinate organizations, and to advance the study of specific solutions. The Environmental Protection Council is also set up in each Company and business site, to promote environmental protection in conformance with individual products and regions. The environmental promotion organization assigned the Environmental Protection & Safety Group in the Production Division, and the Environmental Protection Dept. in each Company, Division, business site and plant, to advance integrated-group activities.

* ECP: Environmentally Conscious Products

Environmental Promotion System



Environmental Promotion Organization



Understanding environmental protection costs and expenses to use as guidelines for corporate activities

Active investments were made in the reduction of drain water pollution risk and energy-saving measures in the fiscal 2003 year. Management activity costs were increased through the enhancement of the Environmental Management System and environmental education.

Concepts regarding environmental accounting

The TOSHIBA TEC Group adopts the environmental accounting system, to quantitatively understand environmental protection costs and benefits, as well as use as guidelines for corporate activities.
Classification of environmental protection costs and the calculation criteria are in accordance with the Environmental Accounting Guidelines 2002 edition issued by the Ministry of the Environment, Japan.
Regarding benefits, since no unified standards have been established, environmental impact reduction benefits are indicated quantitatively and also calculated in monetary value in TOSHIBA TEC Group's environmental accounting.

Aggregated results in fiscal 2003

For environmental protection costs, capital investments of about 200 million yen and expenses of approximately 1.2 billion yen were made on a consolidated basis. Active investments were made in the reduction of drain water pollution risk and energy-saving measures. Expenses were increased by about 80 million yen compared with the fiscal 2002 year. Major reasons were to enhance the Environmental Management System and environmental education.
Benefits in the fiscal 2003 year were approximately 1.6 billion yen. Greater benefits arose from the reduction of environmental impacts in the product usage phase, as well as the reduction of drain impacts on the sites outside Japan, for actual benefits and risk reduction benefits.
We are improving the precision of aggregation to use as a tool for sustainability.

Costs and Benefits

Aggregated: TOSHIBA TEC CORPORATION, its 4 affiliates in Japan and 5 affiliates outside Japan
Period: April 1, 2003 - Mach 31, 2004

Environmental protection costs

Unit: million yen

Classification		Content	Expenditure		Current expenses		Differences from fiscal 2002	
			Consolidated	Non - consolidated	Consolidated	Non - consolidated	Consolidated	Non - consolidated
(1) Business area costs		Reduction of environmental impacts 1)~3)	192.7	151.1	262.9	229.1	-18.5	-16.5
Content	1) Pollution prevention costs	Atmosphere, water, soil, etc.	102.2	78.4	63.3	48.5	6.5	2.1
	2) Global environmental protection costs	Prevention of the greenhouse effect, etc.	87.1	69.3	116.5	111.2	-12.4	-13.7
	3) Resource circulation costs	Recycling of waste, etc.	3.40	3.4	83.1	69.4	-12.6	-4.9
(2) Upstream/downstream costs		Green procurement, collecting and recycling of products, etc.	0.0	0.0	214.3	198.6	-7.0	0.4
(3) Management activity costs		Construction of EMS, environmental education, tree-planting/clean-up campaigns, etc.	3.7	3.7	536.1	495.9	249.8	234.3
(4) R&D costs		Technical development for ECP	0.0	0.0	204.0	168.1	-95.0	-92.3
(5) Social activity costs		Contribution and support to groups/organizations, etc.	0.0	0.0	5.4	5.0	-47.5	-45.7
(6) Environmental damage costs		Recovery from soil pollution, etc.	0.0	0.0	0.4	0.4	0.4	0.4
		Total	196.4	154.8	1,223.1	1,097.1	82.2	80.6
		Total expenditure during the period	6,223	5,054				
		Total R&D expenditure during the period	24,465	23,605				

Environmental protection benefits

Unit: million yen

Classification	Content	TOSHIBA TEC	Affiliates	Total
Actual benefits	Benefits which can be directly converted into monetary value	14	20	34
Assumed benefits	Benefits concerning reduction of environmental impacts	89	592	681
Customer benefits	Reduction of environmental impacts in the product usage phase	921	0	921
Risk prevention benefits	The extent to which risks are reduced after the investment compared with before the investment is calculated	48	0	48
	Total	1,072	612	1,684

Breakdown of actual benefits

Unit: million yen

Item		Environmental impact reduction*	Monetary value of benefits
Energy	TOSHIBA TEC	-6,985 GJ	-6.8
	Affiliates	2,049 GJ	14.8
	Total	-4,936 GJ	8.0
Final disposal of waste	TOSHIBA TEC	10.3 t	21.0
	Affiliates	72.4 t	8.8
	Total	82.7 t	29.8
Water	TOSHIBA TEC	16.1 thousand m³	-0.5
	Affiliates	12.1 thousand m³	-3.3
	Total	28.2 thousand m³	-3.8
	Grand total		33.9

Breakdown of assumed benefits

Unit: million yen

Item		Environmental impact reduction*	Monetary value of benefits
Benefits from reduce discharge of chemical substances	TOSHIBA TEC	1.6 t	89.3
	Affiliates	33.2 t	591.7
	Total	34.8 t	681.0

Breakdown of customer benefits

Unit: million yen

Item		Environmental impact reduction*	Monetary value of benefits
Environmental impact reduction benefits in the product usage phase	Electricity	2,087 t-CO_2	133.3
	Roll paper	1,336 t	788.0

*Indicated in the above table are the differences in volumes of environmental impacts between the fiscal 2002 and 2003 years. Minus figures indicate an increase in environmental impacts exceeding reduction in benefits.

•Basis for calculation of assumed benefits
Monetary values were calculated by giving each substance, calculated in terms of cadmium, a weighting based on environmental standards and ACGIH-TLV (allowable concentration of each substance as determined by the American Conference of Governmental Industrial Hygienists) and multiplying the result by the amount of compensation in the case of cadmium pollution. Reduction of environmental impacts on atmosphere, water and soil is indicated quantitatively and the environmental impact reduction volumes are compared with the previous year's results and reduction of environmental impacts is calculated in terms of monetary value to enable comparisons of various environmental impacts on the same basis.

•Basis for calculation of customer benefits
Benefits of reducing environmental impacts throughout a product life cycle are calculated in terms of physical quantity units and monetary units. A life cycle comprises several phases: 1) procurement of raw materials, 2) manufacturing, 3) transportation, 4) usage, 5) collection, 6) recycling and 7) appropriate processing. TOSHIBA TEC's environmental accounting focuses on the benefits of reducing environmental impacts at the use phase. Energy-saving benefits are calculated using the following formula:

Benefits (yen) = Σ(electricity consumption per year of the former model – Electricity consumption per year of the new model) x Number of units sold per year x Benchmark unit price of electricity charge

•Basis for calculation of risk prevention benefits
Benefits of investment in environmental structures, such as dikes, for the purpose of preventing pollution of soil and groundwater are evaluated as benefits to prevent risks, which may otherwise occur in the future. Risk prevention benefits for each capital investment item are calculated according to the following formula:

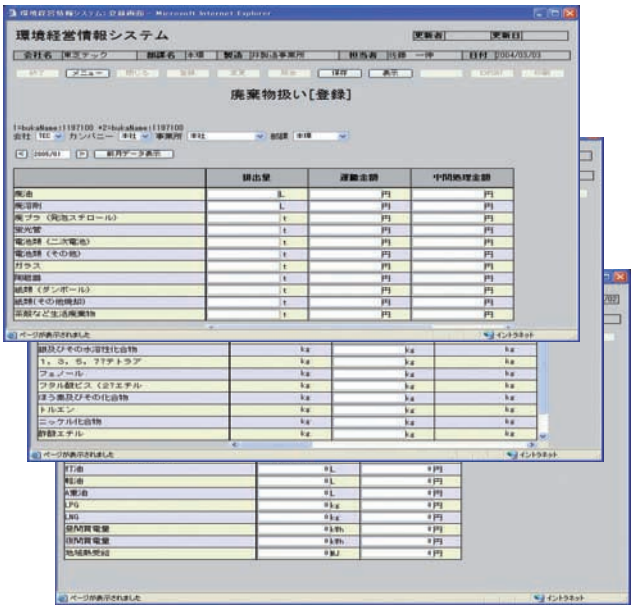
Risk prevention benefits = Amount of chemical substances stored x Basic amount (monetary value) x Impact coefficient x occurrence coefficient

Where the basic amount and the impact coefficient are those used for assumed benefits and the occurrence coefficient is a value unique to the TOSHIBA Group.

Gathering environmental information on each business site to promote the reduction of environmental impacts

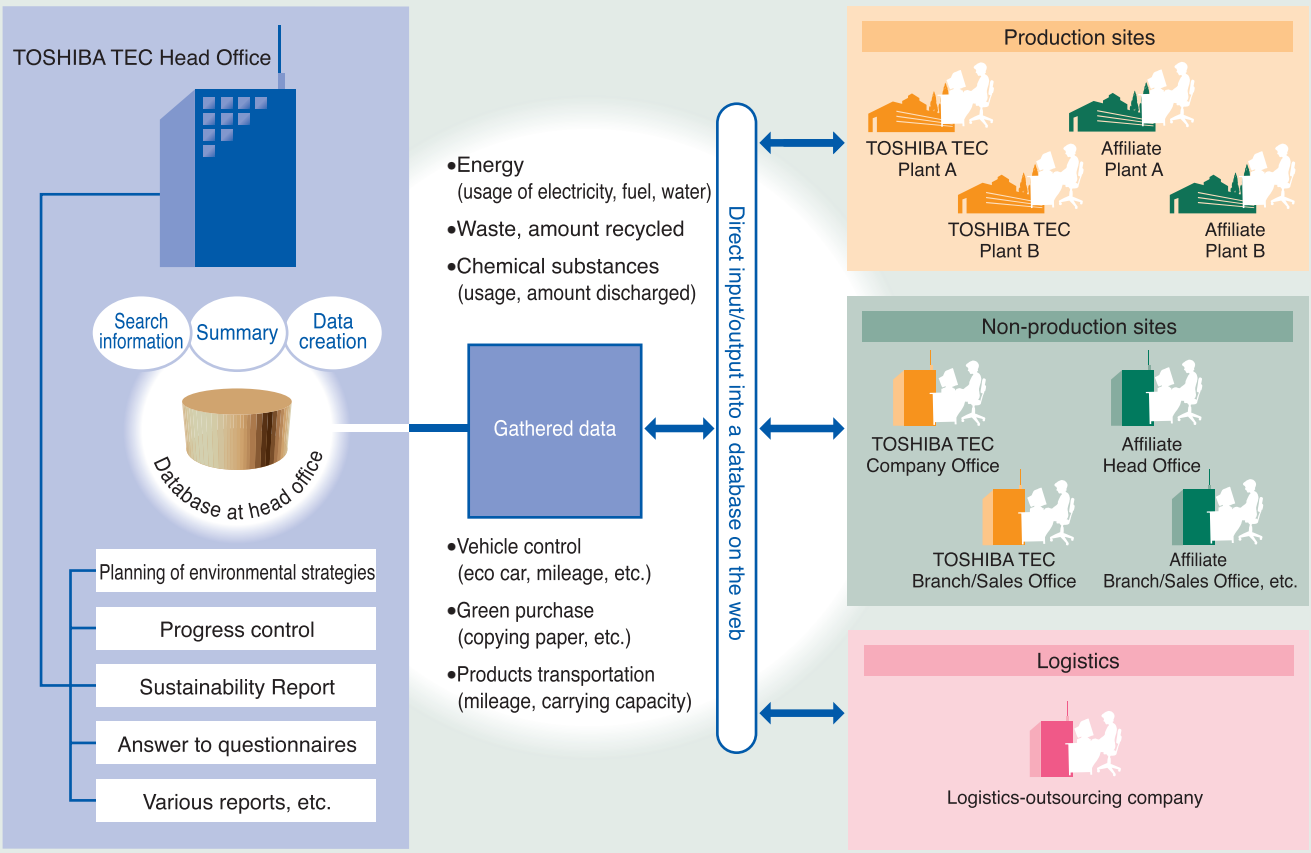
Environmental information on the production, sales and service sites including affiliates of TOSHIBA TEC CORPORATION in Japan are centralized in the database at head office, to promote the reduction of environmental impacts of each business site.

It is necessary to reduce environmental impacts through all business activities including procurement of materials/components, manufacturing, distribution, sales, service and collection/recycling, to practice environmental management.
The TOSHIBA TEC Group developed the "Sustainability Information System," which gathers environmental information from its production sites including affiliates, non-production sites related to sales and services, and logistics-outsourcing companies in Japan, then launched the system in April 2004.
This system creates a database from environmental information gathered in conventional e-mail or review forms, on the corporate intranet. Each business site inputs information and the head office is able to grasp the group-wide environmental information.
Under present circumstances, the scope of information gathering is narrow because only 8 production sites, 155 non-production sites and 6 logistics-outsourcing companies all in Japan are targeted. We are going to broaden information-gathering activities by encompassing affiliates outside Japan from now on.



Example of the screen of the Sustainability Information System

Overview of Sustainability Information System



Green procurement

TOSHIBA TEC CORPORATION conducts the environmental protection assessment on suppliers and environmental performance survey on procured products.
The design, production and procurement departments use the environmental performance information data.

Commitment to green procurement

TOSHIBA TEC CORPORATION moves forward with green procurement of raw materials related to products, in order to provide environmentally conscious products. We aim to procure environmentally conscious raw materials from suppliers, who are actively undertaking environmental protection measures.
We have been conducting the "environmental protection assessment on supplies" and "environmental performance survey on procured products", according to the "Green Procurement Guidelines for Materials."

Environmental protection assessment on suppliers

Suppliers are ranked by scores according to the following criteria. Giving priority to procurement from high ranked suppliers, TOSHIBA TEC CORPORATION requests lower ranked suppliers to improve their operations or provide them with instructions and assistance.
Defining the percentage of high-ranked suppliers to all suppliers as the green ratio, TOSHIBA TEC CORPORATION aims to achieve a 100% level.

Environmental assessment criteria on suppliers
(1) Receiving ISO 14001 certification
(2) Promoting green procurement
(3) Commitment to environmental protection measures (22 items)

Environmental performance survey on procured products

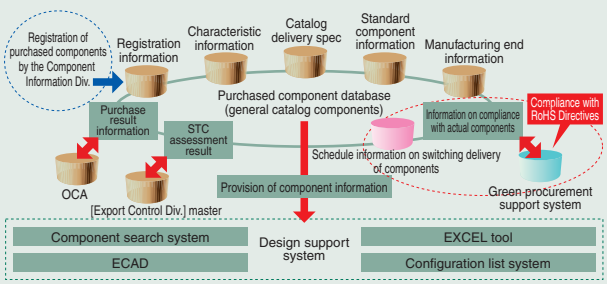
TOSHIBA TEC CORPORATION conducts the environmental performance survey on procured products according to the following criteria, and converts the results into a database.

Environmental performance survey criteria on procured products	
(1) Resource savings	(4) Use of recycled materials
(2) Reusability	(5) Ease of disposal
(3) Recyclability	(6) Environment-related substance content

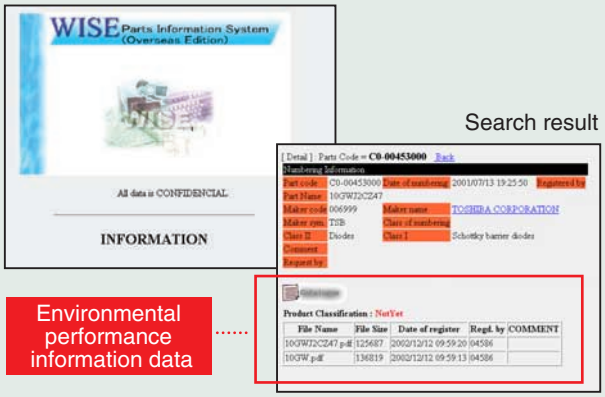
Data utilization

The green procurement support system provides environmental performance information data to various in-house systems through the purchased component database. The design, production and procurement departments use the data.

Purchased component database and design support system



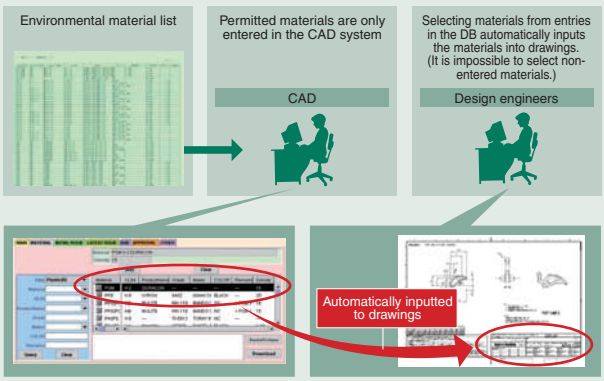
Examples of component search system screen and research result



Commitment in the design phase

The design department adopts the system to prevent components and raw materials containing restricted substances from being specified in drawings.
For example, Mishima Works adopts the chemical substance control CAD system, which specifies materials selected only from environmentally conscious materials.

Chemical substance control CAD system (Mishima Works)



Efforts for RoHS Directives

The EU's "the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)" Directives (2002/95/EC) are enacted in February 2003.
These directives are facilitating the legislation in the Member States. Consequently, electrical and electronic equipment, which contains certain hazardous substances (lead, mercury, cadmium, hexavalent chromium, PBB and PBDE) may not be able to be sold in the EU countries in and after July 2006.
The TOSHIBA TEC Group is planning to abolish certain hazardous substances contained in new products to be marketed not only for EU but also for all destinations in April 2005 or later, in accordance with RoHS Directives.
By voluntarily conducting incoming inspections on components and raw materials, we are improving the system to abolish the use of components and raw materials, which contain certain hazardous substances, on products.

Reducing environment-related chemical substances

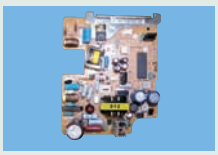
TOSHIBA TEC CORPORATION is working toward expanding components, which generate no environment-related chemical substances when disposed of by landfill or when incinerated.

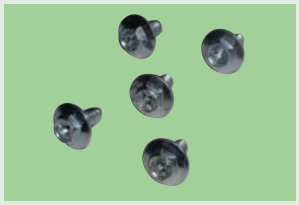
Reducing environment-related chemical substances contained in products

Heavy metals, including lead, mercury, cadmium and hexavalent chromium may pollute groundwater when disposed of by landfill. Plastics containing halogenated fire retardants and polyvinyl chloride may generate toxic gas when incinerated.
TOSHIBA TEC CORPORATION is working toward expanding components, which contain no aforementioned environment-related chemical substances.
Lead Free is applied to solders used for joining, wire insulation materials and lens. Chromium Free plating is applied to steel plates and screws, and used for various products.
Halogen Free is applied to printed circuit boards of MFPs and POS terminals, as well as the external plastic covers of MFPs and bar code printers. Polyvinyl Chloride Substitute is applied to the material of the frame for electronic meeting boards.

Commitments	Applied components	Adopted products
Lead Free	Solder for joining	MFP, POS terminal, bar code printer, electronic meeting board, business card/postcard printer, card terminal, vacuum cleaner, and health equipment
	Wire insulation material	MFP, POS terminal, bar code printer, electronic meeting board, business card/postcard printer, and card terminal, vacuum cleaner, and health equipment
	Lens	MFP (Optical system)
Chromium Free	Steel plate	MFP, POS terminal, bar code printer, electronic meeting board, card terminal and vacuum cleaner
	Screws	MFP (Hexavalent chromium-free)
Halogen Free	Printed circuit board	MFP and POS terminal
	External plastic cover	MFP and bar code printer
Polyvinyl Chloride Substitute	Parts	Electronic meeting board (The material of the frame and the back board of the electronic meeting boards has been changed from polyvinyl chloride to extrusion formed aluminum.)
	Wire insulation material	(Substitution for polyvinyl chloride used as insulation for internal wiring and power cord is under review.)


Lead-free printed circuit board for MFP


Printed circuit board for vacuum cleaner VC-R9C


Hexavalent chromium-free steel plate for MFP


POS terminal printed circuit board


Electronic meeting board TB-9101

Developing environmentally conscious products to reduce environmental impacts throughout the product life cycle

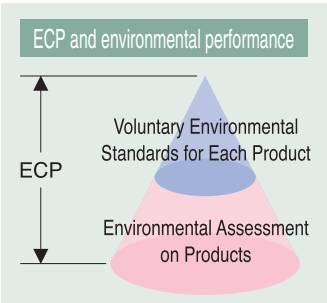
TOSHIBA TEC CORPORATION constructed the "Voluntary Environmental Standards for Each Product", which prescribes the industry's top-level requirements for environmental considerations regarding each product. Thus, TOSHIBA TEC CORPORATION works on the 3R (Reduce, Reuse and Recycle) conscious design, energy-saving design and design for reducing environment-related substances.

Efforts to develop Environmentally Conscious Products (ECPs*)

TOSHIBA TEC CORPORATION strives to create "Environmentally Conscious Products (ECPs)" where environmental impacts are minimized at every stage of product life cycle - from materials procurement, manufacturing and transportation, through to usage, recycling and disposal.
To create ECPs, TOSHIBA TEC CORPORATION created the "Voluntary Environmental Standards for Each Product", which prescribes the industry's top-level requirements for environmental considerations regarding each product, in addition to the Environmental Assessment on Products. Thus, TOSHIBA TEC CORPORATION focuses on the 3R conscious design, energy-saving design and design for reducing environment-related substances.

*ECP: Environmentally Conscious Products

We are forging ahead to obtain a 50% product compliance with the Voluntary Environmental Standards, by the fiscal 2005 year. For products, which have reached the target ratio, we aim to have all new products comply with the Voluntary Environmental Standards.



Products in compliance with the Voluntary Environmental Standards

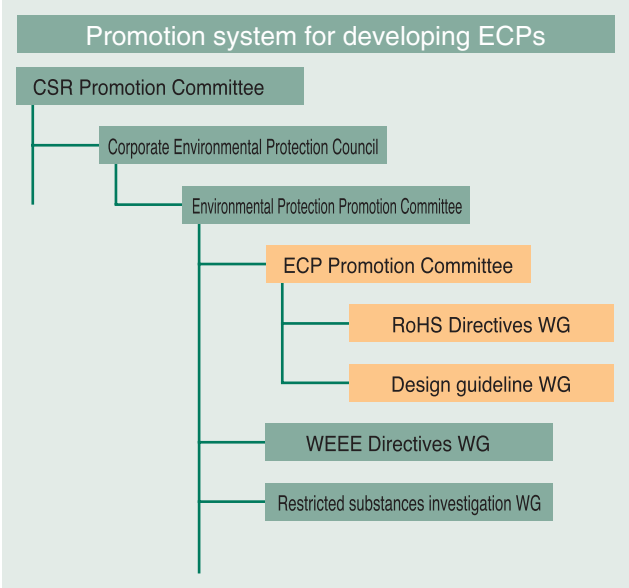
Copier and MFP	POS terminal
Bar code printer	POS peripheral equipment
Electronic cash register	JIMCOM (office computer)
Electronic meeting board	Vacuum cleaner

Promotion system for developing ECPs

The ECP Promotion Committee, established under the Corporate-wide Environmental Protection Promotion Committee in 1997, has been solving corporate issues to promote the creation of ECPs. This Committee has been acting according to the following basic policies:

- Comply with laws and regulations in and outside Japan
- Facilitate disclosure of environmental information
- Carry out the Voluntary Plan for Environmental Protection (product-related items)
- Provide education

The "3R Design Manual" was issued and used to provide education to the ECP design engineers in the fiscal 2003.



Voluntary Environmental Standards for Each Product for the Retail Information Systems Company's line-up of products

Life cycle	Environmental considerations
Components procurement	Recyclable plastics*1 make up 80% or more.
	Voluntarily restricted substances (asbestos, dioxins, CFCs) and the specified fire retardant bromides (PBDEs and PBBs) are not contained.
	Green procurement is implemented.
Manufacturing	ODSs (ozone-depleting substances)*2, which the Montreal Protocol prescribes to reduce or restrict are not used.
	Lead-free is used for joining.
Logistics	Collected (recycled) paper is used for packing materials.
	Styrofoam is not used.
	Polyvinyl chlorides (PVCs) are not used for packing materials.
Usage by customers	Electricity consumption per function is reduced compared with the conventional products.
	An energy-saving feature is incorporated.
Recycling used products	Recyclable materials defined by TOSHIBA TEC CORPORATION make up 75% or more.
	Environmental considerations are disclosed on web sites and manuals.
	It is easy to dismantle the product. The product can be disassembled into units with general tools.
	The material name of plastics having a mass of 25 g or more is indicated.
Other environmental considerations	The amount of CO_2 emissions is understood, with the LCA method.
	The product is designed on the assumption of longevity: Service parts and items to be inspected are identified.
	Paperless manuals are adopted or recycled paper is used for manuals.
	Environmental Assessment on Products is conducted.

The following Retail Information Systems Company's line-up of products have satisfied all environmental considerations:

- POS terminal
- POS peripheral equipment
- Electronic cash register
- JIMCOM (office computer)
- Bar code printer
- Electronic meeting board

(However, an energy-saving feature is not incorporated into electronic cash registers.)

*1: PP, PS, PE, OC, SAN and ABS *2: CFCs, halon, carbon tetrachloride, 1.1.1-trichloroethane, HCFCs, HBFCs, methyl bromides

Disclosing information by environmental labeling

TOSHIBA TEC CORPORATION discloses information to people all over the world, by actively using environmental labels. Many of its products comply with the standards for various environmental labels.

Disclosing information by environmental labeling

TOSHIBA TEC CORPORATION discloses environmental considerations to people all over the world, by actively using environmental labels for its products.

Environmental labeling

Type I

Labeling requiring certification by a third party organization

Eco Mark

The Eco Mark is a Japanese representative environmental label established by the Japan Environment Association in 1989. It is attached to products, which are judged to generate less environmental impacts from the production to disposal stages and to be useful for environmental protection. Seven models of the TOSHIBA TEC copiers and MFPs are certified at present.

International ENERGY STAR® Program

Standby electricity makes up most electricity consumed by OA equipment (personal computers, displays, printers, copiers and facsimile machines). The ENERGY STAR label can be attached to OA equipment whose standby electricity consumption is less than the prescribed criteria. This program has been implemented as an optional registration system certified with both the Japanese and US governments, since October 1995. TOSHIBA TEC CORPORATION participates in the International ENERGY STAR Program, and presently 117 models of the copiers, bar code printers and facsimile machines comply with the criteria.

Environmental Labeling outside Japan

The TOSHIBA TEC copiers and MFPs comply with the environmental labeling such as the EcoLogo™ symbol (Canadian environmental labeling) and the Chinese environmental labeling program (HJBZ40-2000).

EcoLogo™ symbol

Chinese environmental label

Type II

Labeling based on criteria that a company voluntarily sets up

TOSHIBA Group Earth Protection Mark

TOSHIBA TEC CORPORATION set up the Voluntary Environmental Standards for Each Product, which prescribes the industry's top-level requirements for environmental considerations regarding each product, and this mark appears in catalogs and on web sites for the products in compliance with the standards.
Five models from the POS terminals, three models from the POS peripheral equipment, two models each from the electronic cash registers and the JIMCOM (office computer), one model from the bar code printers, four models from the electronic meeting boards and seven models from the copiers/MFPs are permitted to use this mark.

Application example of POS terminal

Type III

Labeling based on consumers' judgment after disclosing environmental impact information through LCA*

* LCA: Life Cycle Assessment P20

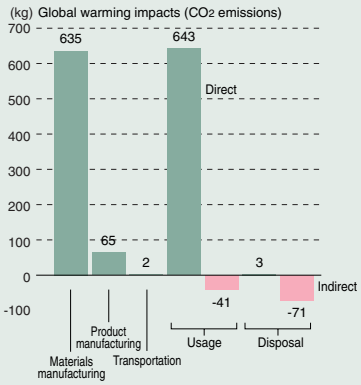
ECO LEAF labeling

The ECO LEAF labeling program started in June 2002. According to this program, the environmental impacts output from every stage covering raw materials procurement, manufacturing, transportation, usage, disposal and recycling, are calculated with LCA method. This label indicates the calculated environmental impacts as quantitative data. Five models of the copiers and one model of the facsimile machine are certified.
The environmental impact data for the certified products are available on the Japan Environmental Management Association for Industry (JEMAI)'s web site (URL: http://www.jemai.or.jp).

No. AA-02-002 (e-STUDIO550)
No. AA-02-003 (e-STUDIO650)
No. AA-02-004 (e-STUDIO810)
No. AA-03-019 (e-STUDIO350)
No. AA-03-020 (e-STUDIO450)

No. AH-03-001 (COPIX TF-3200)

e-STUDIO450's global warming impacts



Constructing concepts regarding environmentally conscious products in the planning phase

TOSHIBA TEC CORPORATION extracts ideas for improving environmentally conscious products, such as defining product life cycle conscious environmental specifications, by devising the Life Cycle Planning (LCP), which effectively uses the Life Cycle Assessment (LCA) and data regarding quality function deployment. LCA is being deployed in all its line-up of products.

Eco-efficiency/Factor T

The TOSHIBA Group adopts its own eco-efficiency indicator "Factor," which assesses products functions and environmental considerations in a comprehensive manner. The eco-efficiency is determined by dividing product value by product environmental impact. The less environmental impact and the greater product value, the more eco-efficiency is calculated. The product value is assessed and calculated from product functions/performance based on customer evaluations and recommendations. The environmental impact of a product is calculated by integrating various environmental impacts throughout the product life cycle.
Factor is a value, which is determined by dividing the environmental impact of a target product for assessment by the environmental impact of a standard product.

The higher the environmental impact of a target product for assessment, the greater the factor value is calculated. The TOSHIBA Group named its creating activities of environmentally conscious products (ECPs) by calculating factors as "Factor T" from the firm name, and is working toward further creating ECPs.

■ **Definition of "Eco-efficiency":**

$$\text{Eco-efficiency} = \frac{\text{Product value}}{\text{Environmental impact}}$$

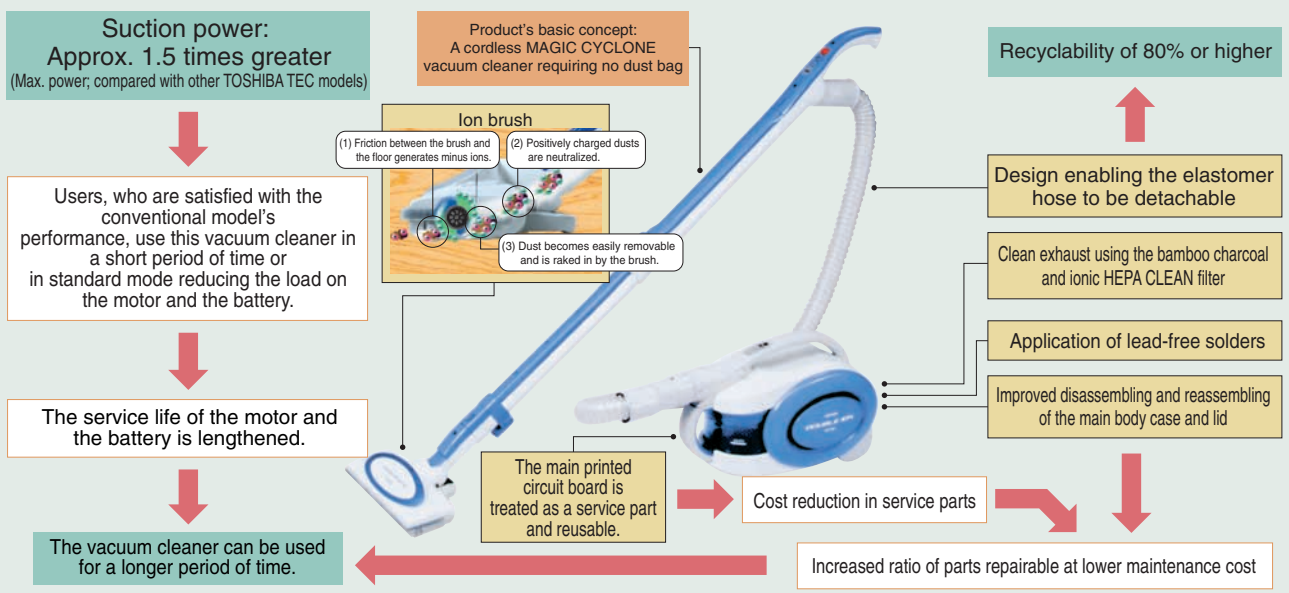
■ **Definition of "Factor":**

$$\text{Factor} = \frac{\text{Eco-efficiency of target product for assessment}}{\text{Eco-efficiency of standard product}}$$

LCP (Life Cycle Planning)

LCP is a method of concepts regarding environmentally conscious products, satisfying quality and cost requirements in the planning phase, as well as effectively reducing environmental impacts throughout the product life cycle. It is possible to define environmental specifications throughout the product life cycle, and extract ideas for improving maintainability and reusability of parts, by effectively using data regarding the Life Cycle Assessment (LCA) and Quality Function Deployment (QFD).
TOSHIBA TEC CORPORATION surges forward with devising and planning for environmentally conscious vacuum cleaners, using the LCP method. The LCP will be transferred to other products.
The LCP method is a result of joint research between the TOSHIBA Corporate Research & Development (R&D) Center and TOSHIBA TEC CORPORATION. The LCP method was highly recognized and TOSHIBA TEC CORPORATION received the Windows Digital Engineering System Award of Excellence 2003 from Nikkei Digital Engineering. P51

Example of environmentally conscious design concept created through LCP (vacuum cleaner VC-P8X)



Environmental Assessment on Products

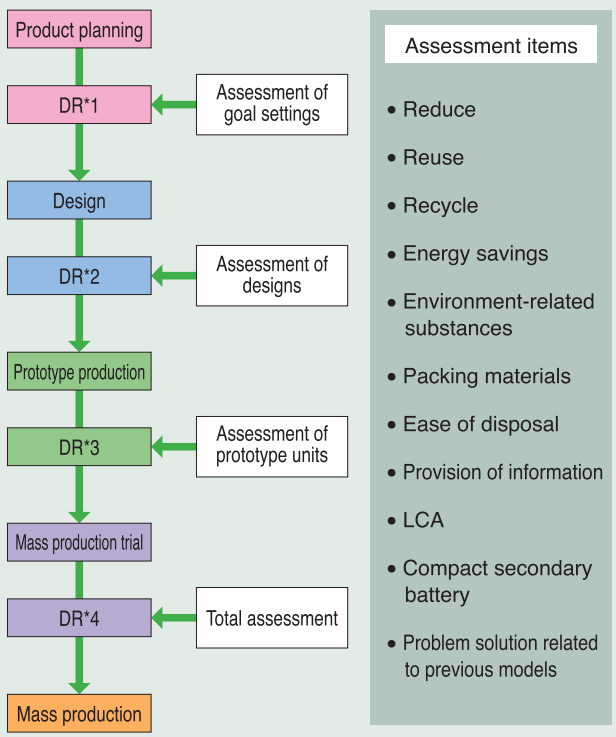
The Environmental Assessment on Products is extremely strict regarding the environmental impact that a product exerts at every life-cycle stage, covering raw materials procurement, manufacturing, transportation, usage, recycling and disposal, from the planning/design phases in advance.

TOSHIBA TEC CORPORATION started the Environmental Assessment on Products in the Home Electric Appliances Division in 1991, and has conducted the assessment on all products manufactured in all divisions since the fiscal 1995 year. Each division instituted its regulations in compliance with the corporate business plans. It considers the corporate guidelines as a standard, and evaluates the environmental effects at each stage of product planning, design, prototype production and mass production trial.

The environmental assessment items of products are such as the 3R (Reduce, Reuse and Recycle), energy savings, environment-related substances, packing materials and LCA. The confirmation of compliance with laws and regulations, Voluntary Environmental Standards and environmental labeling programs, and degree of achievement on the Third Voluntary Plan for Environmental Protection are to be made simultaneously.

The final evaluation results are fed back in order to develop next models.

Example of the implementation flowchart regarding Environmental Assessment on Product



*DR: Design Review

LCA (Life Cycle Assessment)

LCA is a quantitative assessment regarding the environmental impact a product exerts at every stage, covering raw materials procurement, manufacturing, transportation, usage, recycling and disposal, used as a tool to reduce its environmental impact, based on the evaluation result.

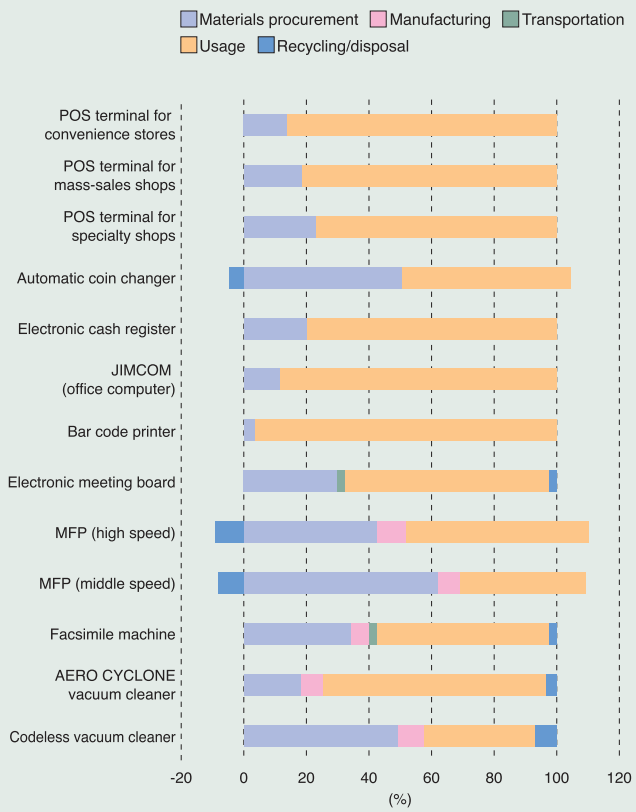
TOSHIBA TEC CORPORATION has expanded the scope of its target line-up regarding the products and completed the deployment of its line-up in the fiscal 2003 year, since the introduction of LCA in 1997.

The figure as shown at right indicates the ratio of CO_2 emissions at each life-cycle stage. TOSHIBA TEC CORPORATION focuses on the energy-saving design and 3R conscious design due to the high environmental impacts in the usage and materials procurement stages throughout its products. The following is an example of the outcomes:

Design system	Outcome
Electronic journal system in POS terminal	Reduced usage of roll paper and energy savings
IH conventional system in MFP	Energy savings and warm-up time cutbacks
Cyclone system in vacuum cleaner	No dust bag required

TOSHIBA TEC CORPORATION focuses on not only the inventory analysis of CO_2 emissions but also the impact assessment, which assesses the environmental impact.

Ratios of CO_2 emissions at each life-cycle stage for major products



Products of the Retail Information Systems Company

The Retail Information Systems Company devised the Voluntary Environmental Standards for Each Product, which prescribes the industry's top-level requirements for environmental considerations. Thus, the Retail Information Systems Company has been launching products as "Products in compliance with the Voluntary Environmental Standards" into the market.

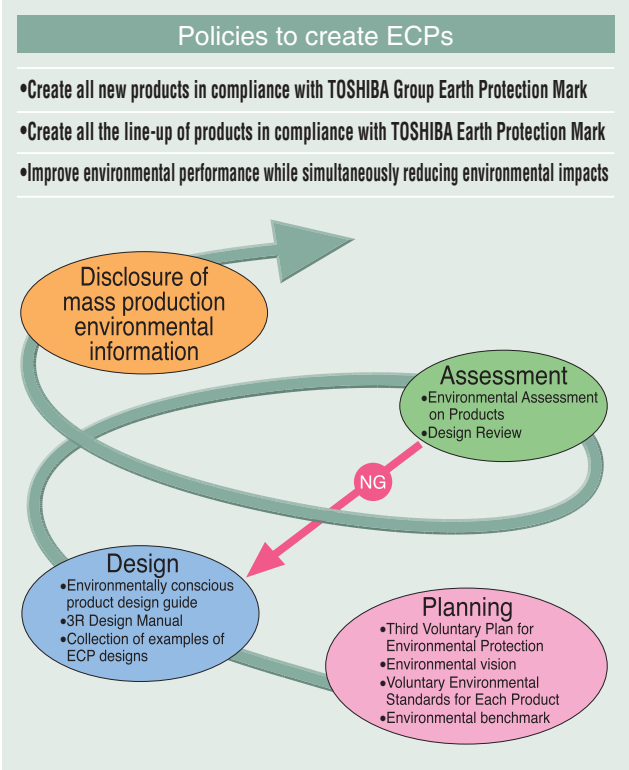
Developing environmentally conscious products for the Retail Information Systems Company

The Retail Information Systems Company set up the **"Voluntary Environmental Standards for Each Product (ECP Standards)"**, which prescribes the industry's top-level requirements for environmental considerations, in order to create the **"Environmentally Conscious Products (ECPs)"**. The ECPs have not only improved product performance but also reduced environmental impacts.

The environmental objectives satisfy the achievement standards for the **"Third Voluntary Plan for Environmental Protection"** and **"Voluntary Environmental Standards for Each Product (ECP Standards)"**. All objectives are determined in the product-planning phase. The Retail Information Systems Company refers to the **"Environmentally Conscious Product Design Guide"** and **"3R Design Manual"** to cultivate the design in the product-design phase.

The degree of achievement is assessed by the **"Environmental Assessment on Products"** P20 in the assessment phase. It is one of the certification factors of the **"Design Review"** to conduct this Environmental Assessment on Products. Hence, unless the assessment is completed, no products can proceed to the product-development phase.

The Retail Information Systems Company has aimed to create all its products as **"Products in Compliance with the Voluntary Environmental Standards"**, **"Products in Compliance with TOSHIBA Group Earth Protection Mark"**, along with all its products, including POS terminals as "Products in Compliance with TOSHIBA Group Earth Protection Mark" since April 2003.

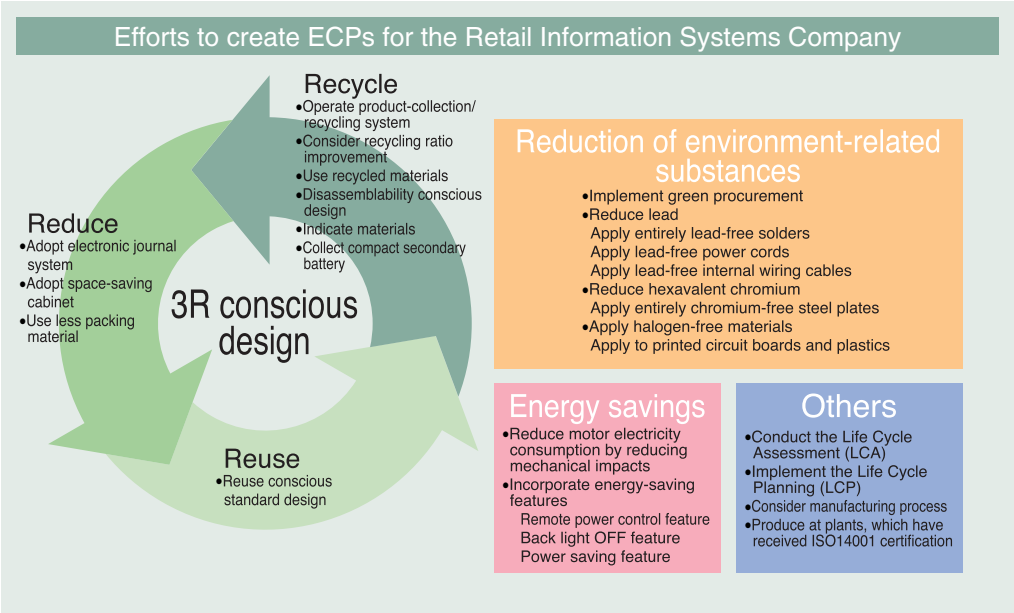


In terms of the **"Environmentally Conscious Product (ECP)"**, the 3R* design, energy savings and reduction of environment-related substances, are all promoted.

The Retail Information Systems Company is working on reducing the usage of roll paper, due to high environmental impacts in the product usage phase of its life cycle, by applying the electronic journal system, as a result of the LCA analysis.

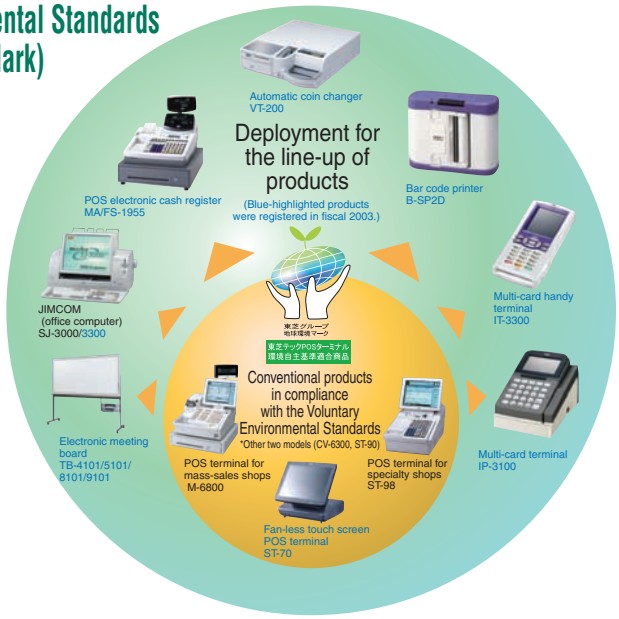
*3R: Reduce, Reuse and Recycle

*LCA: Life Cycle Assessment P20



Deploying products in compliance with "the Voluntary Environmental Standards (Products in compliance with TOSHIBA Group Earth Protection Mark)

The Retail Information Systems Company launched the POS terminals as the **"Products in Compliance with the Voluntary Environmental Standards"** and has deployed the compliance in POS peripheral equipment, including JIMCOM (office computer), bar code printers, electronic meeting boards, electronic cash registers and automatic coin changers.
Currently, a total of seventeen models; five models from the POS terminals, one model from the automatic coin changers as well as two models from the electronic financial terminals (POS peripheral equipment), two models each from the electronic cash registers and JIMCOM (office computer), one model from the bar code printers, and four models from the electronic meeting boards, are the **"Products in Compliance with the Voluntary Environmental Standards"**.
Six out of the nine **"Products in Compliance with TOSHIBA Group Earth Protection Mark"** (as of April 2004) were developed by the Retail Information Systems Company.



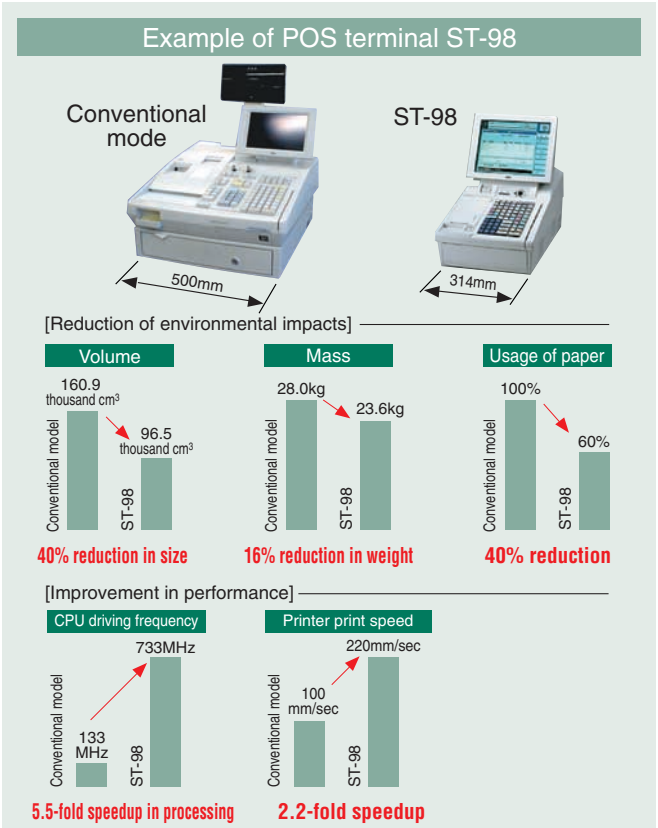
Examples of compatibility between reduction of environmental impact and improvement in merchantability

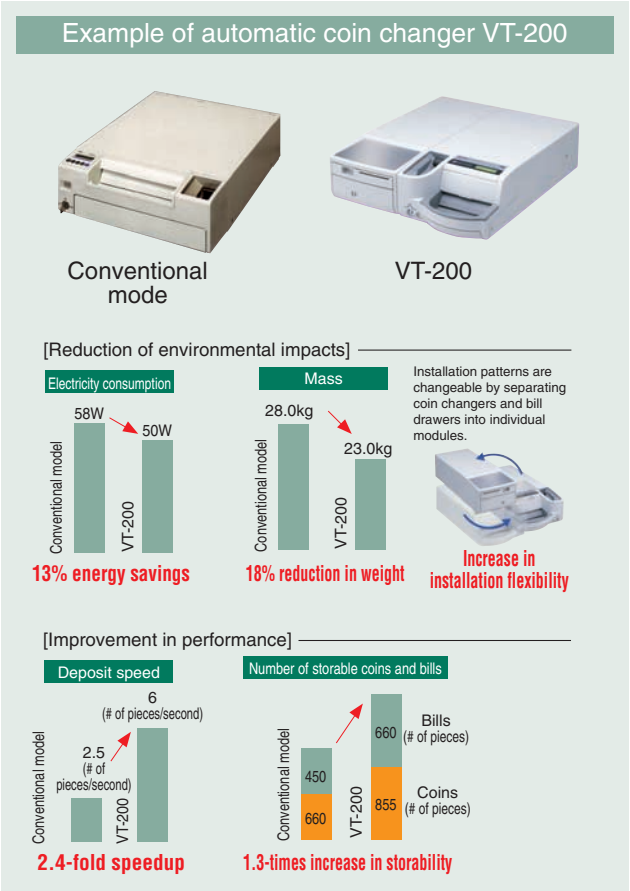
Reduce

The Retail Information Systems Company is working on reducing the size and weight of products, aiming to improve the products performance and reduce-conscious design.
For the POS terminal ST-98, reduction in size of the cabinet and reduction in usage of roll paper have been realized, by applying the electronic journal system.
For the automatic coin changer VT-200, reducing the weight and improving the number of storable coins and bills have been achieved by simplifying its mechanism.

Energy savings

The Retail Information Systems Company is moving forward reducing electricity consumption, aiming to save energy and improve the product performance.
For the automatic coin changer VT-200, reviewing the coin identification sensor and simplifying the coin-carrying mechanism have achieved reductions within the driving loads. Energy savings have been realized by intermittently operating the belt drive.



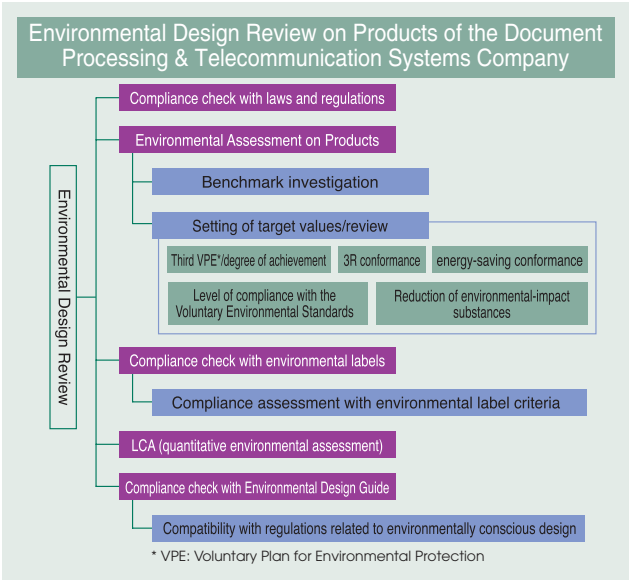


Products of the Document Processing & Telecommunication Systems Company

The Document Processing & Telecommunication Systems Company conducts the Environmental Design Review within each department from the planning phase during the development of new products, including the confirmation of compliance with laws and regulations, Environmental Assessment on Products, environmental labels, LCA and Environmental Design Guide.

Developing environmentally conscious products for the Document Processing & Telecommunication Systems Company

The Document Processing & Telecommunication Systems Company is making efforts to create ECPs through the "Environmentally Conscious Design."
The in-house standards makes it obligatory for the related departments to conduct the Environmental Design Review, during development of new products from the product-planning phase, the basic environmental design specifications review, as well as conformance to laws and regulations and various environmental labels are specifically defined in the product-planning phase.
The Document Processing & Telecommunication Systems Company confirms compliance and compatibility with each of the "laws and regulations", "Environmental Assessment on Products", "environmental labels", "LCA" and "Environmental Design Guide" as shown in the figure, in three steps of the functional trial (conceptual design), prototype production and mass production trial in the development design phase. The target values are also specified in this phase.
Higher target values are set by studying the environmental specifications of updated products during development instead of drawing up universal guidelines, in order to pursue commitments, which reflect rapid improvement under the current environmental specifications.



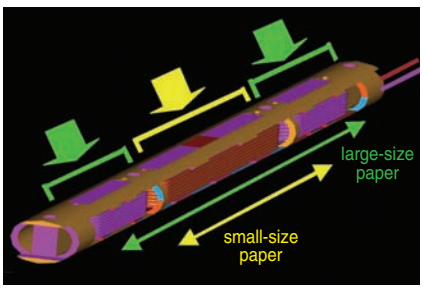
Color MFP e-STUDIO3511/4511 requiring shortest warm-up periods

Energy savings by incorporating IH*-type fuser roller

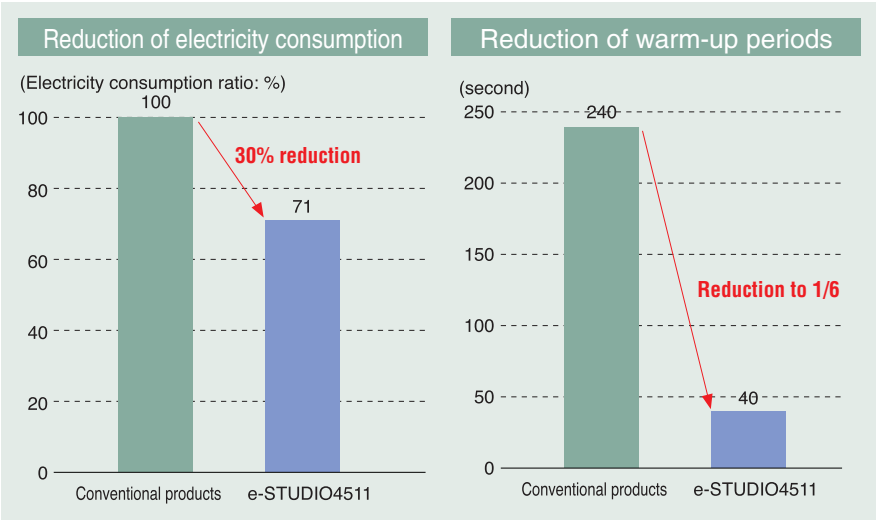
The color MFP e-STUDIO3511/4511 has achieved the same-level warm-up periods and energy savings as the black-and-white models.
This was achieved by expanding the IH fusing technology, which for the first time in the world, has been adopted in the mid- and high-speed black-and-white MFPs. That is, the Twin IH Fusing System was first realized for the color MFP models.
As a result, the Document Processing & Telecommunication Systems Company has achieved the shortest warm-up periods for the color MFP models compared with its conventional products.


e-STUDIO3511/4511

* IH: Induction Heating



Twin IH coil



Reducing environment-related chemical substances

The Document Processing & Telecommunication Systems Company is actively working on the design development, with the aim of adopting Lead Free, Chromium Free and Halogen Free.
For the color MFP e-STUDIO3511/4511 and black-and-white e-STUDIO350/450, such chemical substances have been sharply reduced.
Lead-free solders have been 100% applied to printed circuit boards. Halogen Free has been 100% applied to (in-house manufactured) printed circuit boards and covers. Steel plates and screws are hexavalent chromium-free.

Efforts to 3R conscious design

The 3R conscious designs such as unit design, improvement in dismantling and ease of extraction regarding target components for reuse are implemented in the color MFP e-STUDIO3511/4511.
Reduction of environmental chemical substances is further promoted. The Document Processing & Telecommunication Systems Company focuses on reuse by fostering the use of common components between the current and previous models or standardization of components between the e-STUDIO3511/4511 and black-and-white MFP e-STUDIO350/450, as well as between the e-STUDIO3511/4511 and next developing models.
The reduction of hard-to-recycle substances is proceeding.

Application of hexavalent chromium-free screws

Application of lead-free solder to printed circuit board

Application of hexavalent chromium-free steel plate

Universal design

Leading the industry, the e-STUDIO3511/4511/350/450 offers the adjustable control panel tilting 5 to 45 degrees. This tilt range is determined through tilt evaluations by sampling nine types of tilts, allowing various users to properly manipulate the control panel in a standing or sitting position (in a wheelchair).
The e-STUDIO3511/4511/350/450 provides users with visual impairments or those who operate in a dark environment, to easily manipulate the control panel as follows:

- Concave ten keys and main keys for fingers to easily fit in to press
- Tactile marks next to the main keys
- Touch-panel reverse display mode, which inverts letters and background colors to easily recognize letters
- Easy-to-read big letters with high contrast

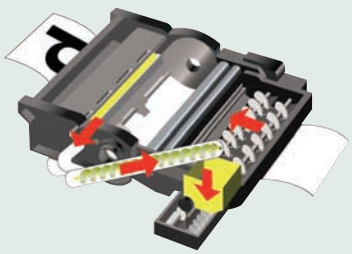
In addition, universal design has been pursued for not only users with visual impairments but also general users to easily use with the different shapes of the main keys and clear allocation of key groups depending on functions.

Tilt-type control panel

Application of easy-to-see large display panel and large buttons

Toner recycling system

The TOSHIBA TEC original toner recycling system is applied to the developer unit of the high-speed MFP e-STUDIO550/650/810.
This system transfers the used toner collected at the cleaner section to the recycling toner hopper and mixes it with the new toner in the mixer unit. As a result, about 90% of the collected toner can be reused and the amount of waste is reduced.



Products of the Home Electric Appliances Group

The Home Electric Appliances Group conducts the Environmental Assessment on Products in each phase of product planning, design prototype production and mass production trial, in order to reduce environmental impacts, throughout the vacuum cleaner life cycle. The Life Cycle Planning (LCP) is used to plan and devise environmentally conscious products.

In accordance with the business criteria specified by the Home Electric Appliances Group, the Environmental Assessment on Products is conducted on the vacuum cleaners in each phase of product planning; design prototype production and mass production trial, in order to reduce environmental impacts throughout the vacuum cleaner life cycle (a lifespan covering raw materials procurement, manufacturing, transportation, usage, recycling and disposal).
The Environmental Assessment on Products was first introduced in the vacuum cleaners at TOSHIBA TEC CORPORATION, concurrently with the execution of the Law for Promotion of Utilization of Recycled Resources in 1991 (currently called the Law regarding Promotion of the Effective Use of Resources). The Environmental Assessment on Products has been improved by adding assessment items to the LCA (Life Cycle Assessment) and Voluntary Environmental Standards for Each Product.
The Home Electric Appliances Group is planning and devising the "Environmentally Conscious Product" (ECP) by using the LCP (Life Cycle Planning) from the upper product development phase.

Keywords into ECP creation

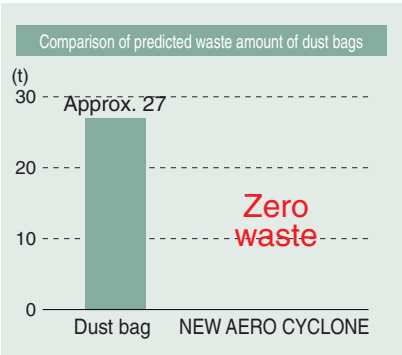
Design	•3R (Reduce, Reuse and Recycle) conscious design •Energy-saving design •Reduction of environment-related chemical substances (RoHS Directives, etc.)
Assessment	•Environmental Assessment on Products (including the Voluntary Environmental Standards for Each Product) •LCA (Life Cycle Assessment) •LCP (Life Cycle Planning)
Disclosure	•Disclosure of environmental information (Opening of a web site, Environmental Report of Hadano Plant)

Efforts to 3R conscious design

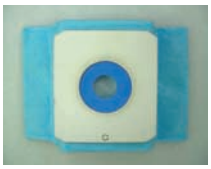
Abolition of "dust bags"

The AERO CYCLONE vacuum cleaner "VC-R14C" was launched in September 2003. It functions on the NEW AERO CYCLONE system, which controls two airflows inside the cleaner "straight" and "circulating", abolishing the dust bag and providing high dust collection efficiency, in spite of the compact body. The abolition of dust bags, which possessed high environmental impacts, contributes to resource savings and reduction of waste.

AERO CYCLONE vacuum cleaner VC-R14C



Annual waste amount of dust bags
(in accordance with TOSHIBA TEC criteria)



Dust bag

NEW AERO CYCLONE

Dust compression and ease of disposal

Use of recycled materials

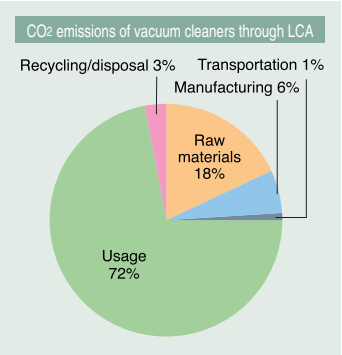
Recycled materials are used for packing materials and user's manuals of vacuum cleaners. Recycled paper is 100% used for user's manuals.

Packing material

User's manual

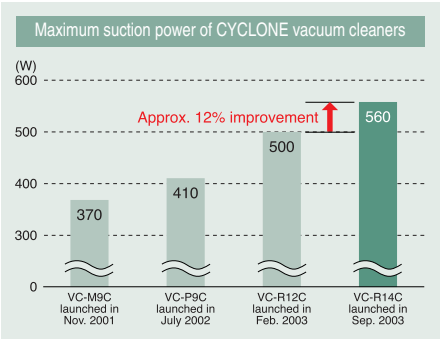
Efforts to energy savings

According to the LCA results, environmental impacts (CO_2 emissions) of vacuum cleaners account for about 72% in the usage phase. Recognizing high dust collection efficiency realizes energy savings, the Home Electric Appliances Group develops vacuum cleaners with excellent suction performance.



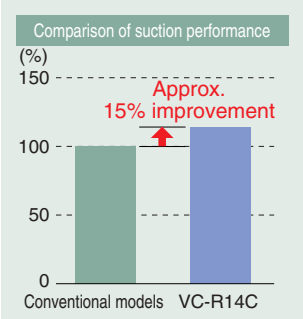
Improving suction performance in AERO CYCLONE vacuum cleaners

The vacuum cleaner VC-R14C is the industry's first vacuum cleaner, which has achieved the maximum suction power of 560W, using the CYCLONE system. This vacuum cleaner VC-R14C has achieved approximately 12% improvement in the suction performance with the conventional models.



Improvement in suction performance by incorporation of DSP

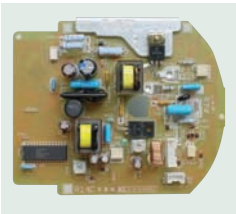
Leading the industry, the vacuum cleaner VC-R14C is equipped with the brushing power head, which incorporates the DSP (Digital Signal Processor) control. This vacuum cleaner VC-R14C, optimally controlled by adjusting the spinning power to the floor surface, has achieved approximately a 15% improvement in the suction performance compared with the conventional models.



(in accordance with TOSHIBA TEC criteria)

Reducing environment-related chemical substances

The Home Electric Appliances Group is expanding lead-free solders for vacuum cleaners into the production outside Japan, in addition to the production within Japan.

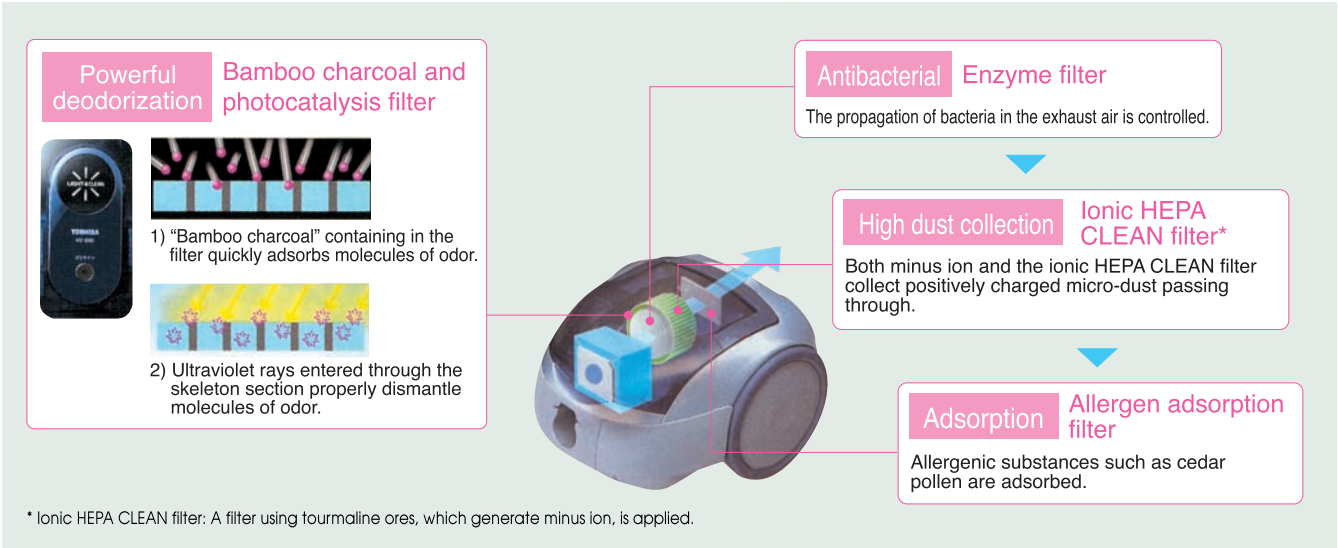


Printed circuit board

Other environmental considerations

Four types of filters (bamboo charcoal and photocatalysis filter, enzyme filter, ionic HEPA CLEAN filter and allergen adsorption filter) are incorporated into the vacuum cleaner VC-S9D, which was launched in January 2004, to block out dust, pollen and disagreeable exhaust odors, and to maintain the environmental considerations for improving the air.

Vacuum cleaner VC-S9D



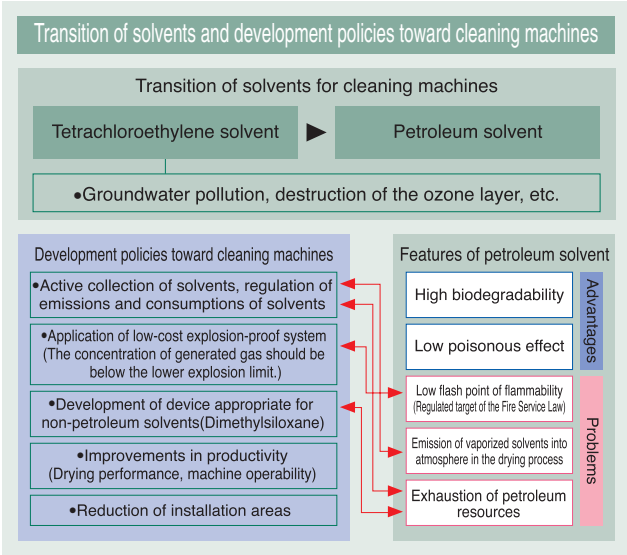
* Ionic HEPA CLEAN filter: A filter using tourmaline ores, which generate minus ion, is applied.

Laundry products for business use

The TOSHIBA TEC affiliate, TOSEI DENKI CO., LTD. is working on environmental considerations for cleaning machines for business use. TOSEI DENKI CO., LTD. aims to collect solvents, regulate emissions and consumptions, improve the drying performance and operability, reduce costs and save space, as its development policies.

Development background of cleaning machines

TOSEI DENKI CO., LTD. produces and distributes cleaning machines of water and/or solvent type.
Regarding solvent dry cleaning, tetrachloroethylene solvent causes environmental impacts including groundwater pollution and destruction of the ozone layer due to chlorofluorocarbon. In terms of petroleum solvent, the poisonous effect is lower, biodegradability is higher compared with other organic solvents even though the flash point of flammability is lower, allowing the petroleum solvent to be a regulated target of the Fire Service Law. Thus, currently petroleum solvent has become a mainstream. Critical problems including global warming due to an increase in CO_2 into the atmosphere and exhaustion of petroleum resources are indicated.
It is an important challenge for manufacturers to actively collect solvents to regulate emissions and consumptions, in order to reduce such environmental impacts.



Development policies toward cleaning machines

TOSEI DENKI's cleaning machines use the system, which safely controls the concentration of generated gases below the lower explosion limit instead of the explosion-proof system, which encapsulates high-cost inert gases and regulates the concentration of oxygen, to take safety measures against ignition explosion and fire.

Simultaneously, the development policies are as follows:
- High collection performance minimizing emissions of vaporized solvents into the atmosphere in the drying process.
- Improvements in productivity such as drying performance and machine operability
- Low costs
- Space savings

Reducing environmental impacts generated from new dry cleaning machines

The new dry cleaning machines are environmentally conscious products, which greatly reduce consumptions of solvents and emissions of gases.

They are cold dry cleaning machines adaptable to silicone solvents (dimethylsiloxane), which are receiving attention as new dry cleaning solvents instead of petroleum solvents.

Reduction of environmental impacts generated from new dry cleaning machines

No.	New product names	Design features	Improvement in energy-savings, efficiency and performance	Reduction of environmental impacts	Remarks
1	22 kg compact auto dry cleaning machine [DMI-221] 	•Installation area: 60% of conventional models •Development of new balancing system Vibration: 70% or less	•20 % or more improvement in motor impacts •Additional cleaning mode	•Reduction of usage of solvents in the new solvent circulating system: 400 ℓ → 300 ℓ (Tank capacity)	
2	22 kg high-collection dryer [HRD-221]	•Application of the new control system for dry air temperature •Improvement in collection performance by closed cycling	•Increase in drying efficiency •Small capacity of the cooler	•Collection ratio: 75 % → 95 % •Emissions of solvents (22 kg standard impact): 0.76 ℓ → 0.15 ℓ	•Multi-use machine for drying/laundry
3	Continuous vacuum distillation system [DD-100]	•Improvement in distillation efficiency adapting to silicone solvents	•Distillation speed (/h): 70 ℓ → 100 ℓ	•Reduction of distillation temperature through improvement in vacuum performance: supply vapor pressure 0.5 MPa → 0.3 MPa	

Conformance to Lead Free

The Components Business Group is actively promoting lead-free solders used for joining electronic components to printed circuit boards. Lead-free solders have been applied to various printed circuit boards by evaluating soldering materials and adopting new facilities.

Efforts to lead-free solders

The Components Business Group is working on the manufacturing of major components associated with the POS terminals or MFPs (Digital Multi-function Peripherals) as TOSHIBA TEC's major products, as well as the development of new manufacturing technologies.
It is required to use materials, which have no certain hazardous substances contained in compliance with RoHS Directives (the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment) enacted in Europe.
In this background, the Components Business Group, at an early stage, embarked on a basic research evaluation of lead-free solders used for joining electronic components to printed circuit boards.
The know-how and accumulation of wide-ranging technologies covering the evaluation of soldering materials, review of construction methods, adoption of new facilities and changes in target components are required in order to apply lead-free solders to products. The Components Business Group has realized the application of lead-free solders to various printed circuit boards. (See the figure shown right.)
Thanks to such efforts, the TOSHIBA TEC Group's objective of the Third Voluntary Plan for Environmental Protection (applying lead-free solders to new products launched in April 2003 or later) has been successfully achieved.

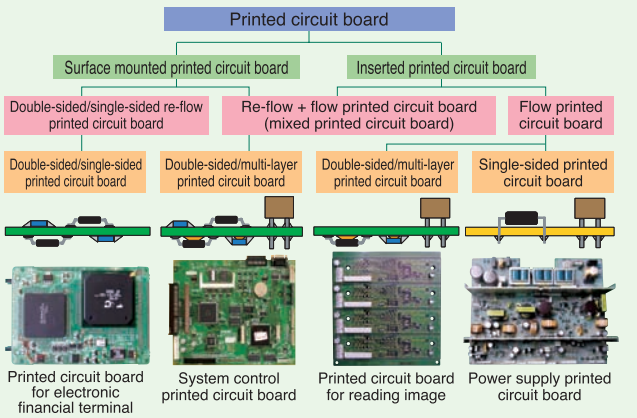
Plan for applying lead-free solders

Fiscal year	2000	2001	2002	2003	2004	2005
Solder	Sn-Pb eutectic solder			Sn-Ag-Cu lead-free solder		
				Sn-Ag low-temperature lead-free solder		
Component	Conventional models		Lead-free solders to higher heat-resistant terminal			
Purchased unit	Conventional models				Lead-free unit	

Plan for applying halogen-free printed circuit board

Fiscal year	2000	2001	2002	2003	2004	2005
Printed circuit board	Normal materials				Halogen-free printed circuit board	

Examples of printed circuit boards applying lead-free solders



Products applying lead-free solder printed circuit board

	2001	2002	2003 (Fiscal year)
Products of the Retail Information Systems Company	CPU board for bar code printer POS engine board	CPU board for electronic financial terminals BCP CPU board	CPU board for office automation equipment
Products of the Document Processing & Telecommunication Systems Company	Every printed circuit board for MFP		

Collecting and recycling used products

TOSHIBA TEC branches are responsible for collecting used retail equipment.
Copiers are collected and recycled at the nine bases in Japan.
Collected products are manually dismantled and separated into each material for reuse.

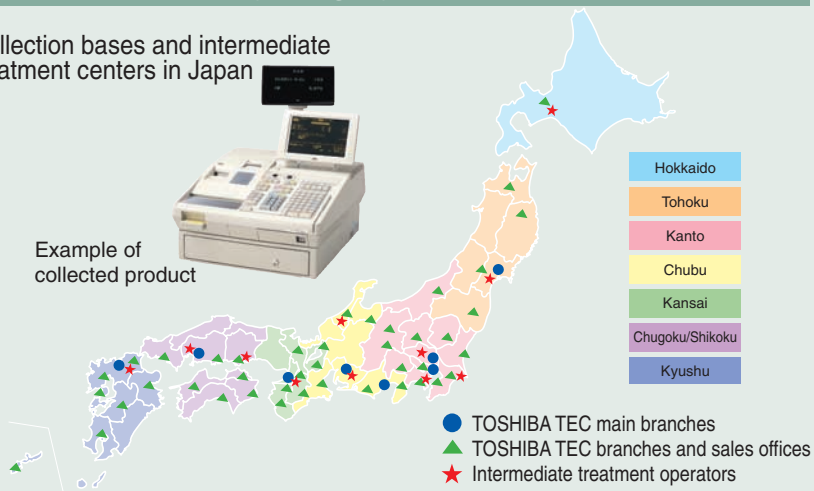
Collection and recycling of products supplied by the Retail Information Systems Company

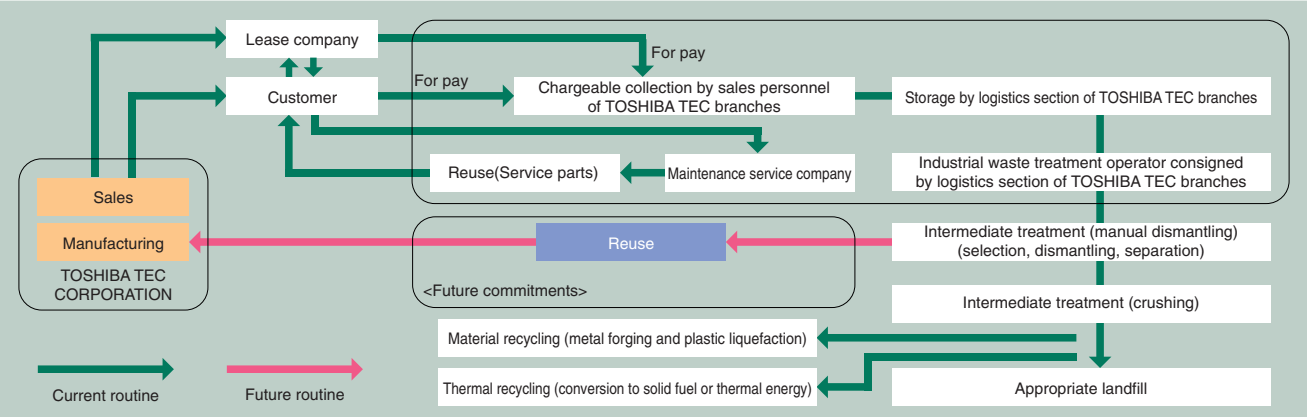
As a responsibility of a top manufacturer of POS systems, TOSHIBA TEC CORPORATION works on collecting and recycling used products from customers.
The collection/recycling system started on a trial basis in January 2002, and expanded its target regions throughout Japan, to conduct full-scale operations in October 2002.
Furthermore, intermediate treatment centers were expanded in the Chugoku, Shikoku and Tohoku Districts of Japan.
Recycling is implemented, with the aim of manually dismantling collected equipment, separating the equipment into each material and expanding recycling materials.
Approximately 1,200 tons of used products were collected and its recycling ratio was about 93% in the fiscal 2003 year.

Features of collection/recycling system

- TOSHIBA TEC branches in 52 areas are responsible for collecting products from customers.
- Any used retail equipment is collected, regardless of manufacturers.
- Disposal consignment at the request of customers is fostered for pay.
- High recycling efficiency is achieved through manual dismantling.

Manual dismantling





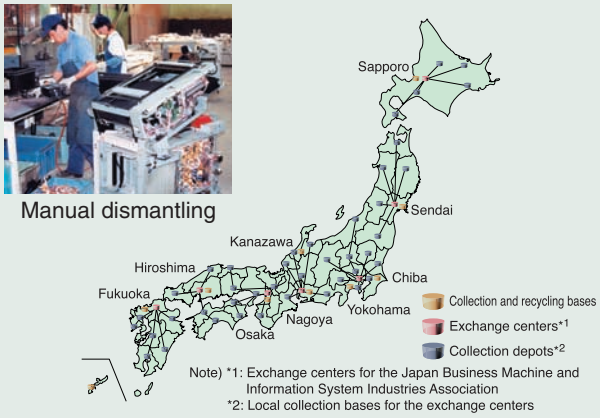
Recycling of portable secondary batteries

Rechargeable batteries are used in some products, such as POS terminals, portable printers and cordless vacuum cleaners. They include nickel-cadmium batteries, nickel-hydrogen batteries, lithium-ion batteries and compact valve-regulated lead-acid storage batteries, which use cadmium, cobalt, nickel or lead as the main materials. To make effective use of precious resources, they need to be collected and recycled.
TOSHIBA TEC CORPORATION is affiliated with the "Japan Battery Recycling Center (JBRC)" for collecting and recycling. Approximately 12.4 tons of portable secondary batteries were collected for recycling in the fiscal 2003 year.

Collection/recycling of copiers

TOSHIBA TEC CORPORATION promotes the collection and recycling of copiers in cooperation with its customers, TOSHIBA INFORMATION EQUIPMENTS CO., LTD., the distribution source, and TERM CORP., the recycling firm.
In 1998, TOSHIBA TEC CORPORATION started collecting and recycling used products in the Tokyo and Kanagawa areas, and expanded its geographic coverage to nine bases throughout Japan.
TOSHIBA TEC CORPORATION participates in the Recycled Equipment Exchange System of the Japan Business Machine and Information System Industries Association (JBMIA), to take back the used products of TOSHIBA TEC CORPORATION, which other companies collected. To increase the efficiency of collection of products, TOSHIBA TEC CORPORATION participates in the exchange system of local collection bases, where the used products are brought. The used products are manually dismantled into each material in order to facilitate the recycling.

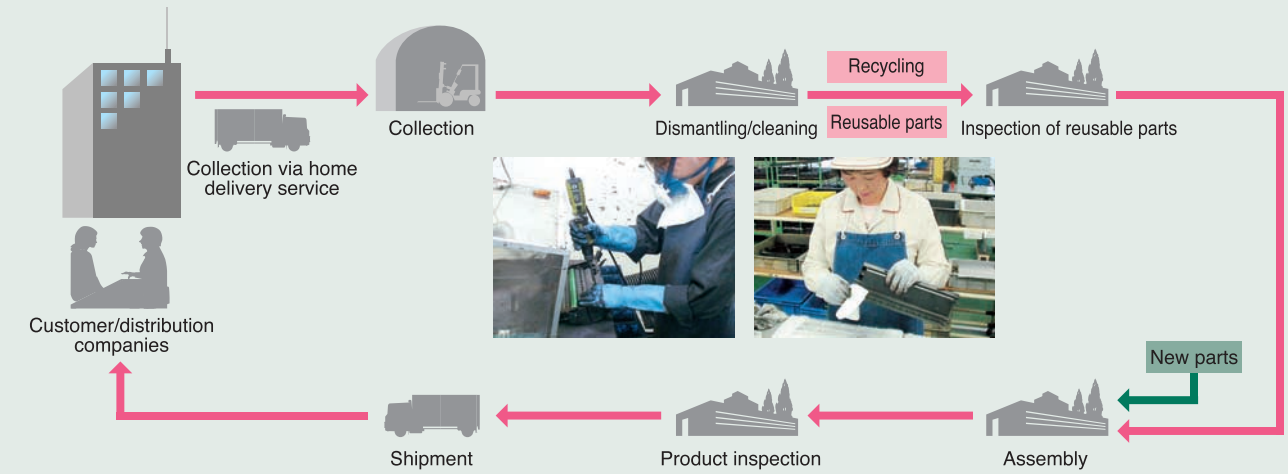
Collection and recycling bases for copiers



Reuse of parts

TOSHIBA TEC CORPORATION started reusing and recycling consumable process units for MFPs within the Japanese market in October 2003, in addition to the conventional process units for facsimile machines.
The circulation system is well rooted. It collects used process units from customers, selects reusable parts, and supplies the recycled parts to the market again.
The quality of such recycled parts is ensured equally to new parts based on the strict quality control, to meet customer needs.

Reuse system for process unit



Reuse of parts from previous models into new models

TOSHIBA TEC CORPORATION has been advancing its activities, to extract useful parts from used old-type models and reuse them for current models, since the fiscal 2003 year (in compliance with Basic Policy on Promoting Green Purchasing considerations).
Collected models are manually dismantled and useful parts are extracted, in partnership with the recycling cooperation company. The extracted parts are cleaned, inspected for quality, and reused for current models.

Examples of parts to be reused

Remanufacturing models

In April 2001, TOSHIBA TEC CORPORATION introduced the PREMAGE651RM to the Japanese market. This product is the first remanufacturing (RM) digital copier in the industry, which incorporated reused parts.
The reused parts ratio is 60% or more in mass. The PREMAGE651RM is an environmentally conscious product contributing to the establishment of a resource-circulation society.
This product is shipped based on the equal quality criteria of TOSHIBA TEC CORPORATION of regular products.

PREMAGE651RM
incorporating reused parts

Increasing logistics efficiency and promoting environmentally conscious packages

All transportations of TOSHIBA TEC products are outsourced to outside forwarding agents. TOSHIBA TEC CORPORATION works on improving the carrying efficiency, environmentally conscious packages and package-less transportation, in order to reduce environmental impacts in logistics.

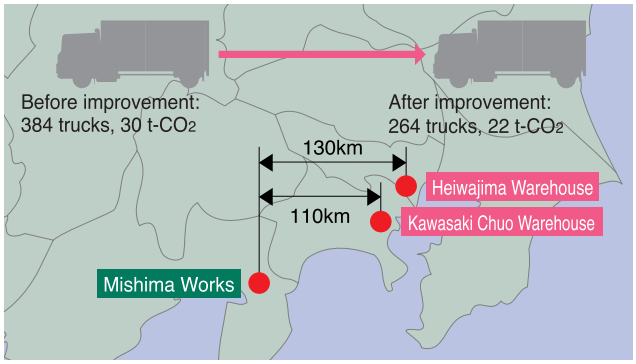
Improvement in carrying efficiency

Transportations of TOSHIBA TEC products are outsourced to outside forwarding agents.
The Document Processing & Telecommunication Systems-related products such as MFPs are manufactured at Mishima Works in Shizuoka and transported to Kawasaki Chuo Warehouse in Kanawaga or Heiwajima Warehouse in Tokyo. Then, they are delivered through the branches and sales offices to customers in Japan.

TOSHIBA TEC CORPORATION made efforts to increase its carrying efficiency during truck transportation from Mishima Works to Kawasaki Chuo and Heiwajima Warehouses in the fiscal 2003 year. 120 trucks for transportation were decreased by eliminating unfilled spaces, and eight tons of CO_2 emissions were reduced in the fiscal 2003 year.

before improvement


after improvement



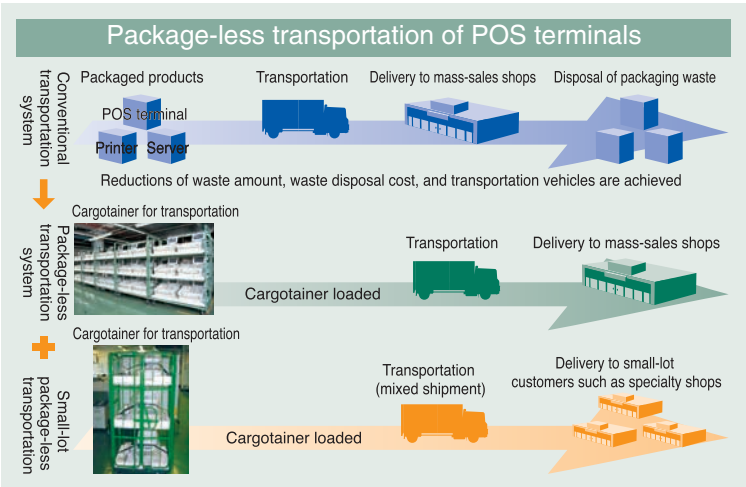
Returnable container package for copiers

The copier business division is making efforts to reuse product packages. The packing for remanufactured machines for the Japanese market was changed from "one-way" packages using corrugated cardboards and pallets, to returnable container packages, enabling zero emissions of packing waste after unpacking and allowing easier delivery.
TOSHIBA TEC CORPORATION is promoting environmentally conscious packages in the environmental, operational efficiency and cost aspects.


Returnable container for copier

Package-less transportation of POS terminals

Extensive reductions of packing materials and logistics capacity are achieved through package-less transportation by assembling the products in an operable state. Packing waste is also reduced at delivered sites.
In addition to package-less transportation for mass-sales shops, package-less transportation for small-lot customers is implemented using cargotainers.
By transporting the products set up in the plant on the cargotainer, mixed shipment is available, and transportation efficiency is increased.



Environmental load reduction check at business sites through ISO14001 and workplace audit

The TOSHIBA TEC Group is receiving ISO14001 certification at production sites in and outside Japan. Environmental improvements are fostered in business sites in and outside Japan, through the TOSHIBA Group's own environmental audit system (EASTER), which audits the progress of workplace control and degree of achievements regarding the Voluntary Plan for Environmental Protection.

Environmental Management System audit and workplace audit

The TOSHIBA TEC Group is receiving ISO14001 certification at production sites in and outside Japan. Six out of the eight production sites in Japan and all six sites outside Japan have received ISO14001 and are implementing the Environmental Management System.
On the other hand, the TOSHIBA Group's own environmental audit system, EASTER* has been implemented since the fiscal 1993 year. EASTER is implemented every year, with the aim of complying with laws and regulations, reducing environmental risks, and raising the environmental protection level. The principal objective of EASTER is to check the progress of workplace control.
The TOSHIBA TEC Group is pressing ahead with the eco process, by holding fast to ISO14001 and implementing EASTER interdependently for the business site sustainability.

* EASTER: Environmental Audit System in TOSHIBA on basis of Eco-Responsibility

Relationship between ISO14001 and EASTER

ISO is system-based and EASTER is workplace control-based.

Environmental Management System audit

ISO audit (the third-party audit)

- Perform the Environmental Management System audit in compliance with international standards.
  (Partially including workplace audit)
- Verify compatibility and effectiveness toward ISO14001 (Environmental Management System) requirements.

Interdependent with each other for environmental protection

Workplace audit

EASTER (TOSHIBA Group's environmental audit)

- Perform the workplace-level audit in compliance with TOSHIBA Group standards.
  (Partially including the systems and evaluation of degree of achievement on top-priority policies)
- Workplace viewpoints
  1) Clearly define responsibilities
  2) Organize and clean
  3) Visually control
  4) Verify preventions of scattering, outflow and penetration into underground

Management of ISO14001

The production sites in Japan performed periodic audits and update audits toward ISO14001, managed by the outside audit organizations in the fiscal 2003 year. As a result, both audits were valued as "improved," and verified the Environmental Management System was effectively functioning at the business sites.
The affiliated TOSEI DENKI CO., LTD. and FUJIKEN CO., LTD. are planning to receive ISO14001 by the end of the fiscal 2004 year. Once those companies have obtained ISO14001, all the production sites in and outside Japan are to obtain the certification.

Audit results in fiscal 2003

Date audited	Target site	Audited by	Result
June 11-13, 2003	•Ohito Business Center •Components Business Group •TEC PRECISION, INC.	JQA (Japan Quality Assurance Organization)	Registration renewed
Feb. 23-25, 2004	•Mishima Works •TEC KASHIYA DENKI CO., LTD.	JQA (Japan Quality Assurance Organization)	Registration continued
Mar. 11-12, 2004	•Hadano Plant	JACO (Japan Audit and Certification Organization for Environment and Quality)	Registration continued

TOSHIBA Group's environmental audit (EASTER)

EASTER is the environmental audit system developed by TOSHIBA CORPORATION and has been implemented at each production site of the TOSHIBA Group since the fiscal 1993 year. The features of EASTER are workplace principles and evaluations of the levels. Environmental risks at workplaces should be strongly recognized. 17 environmental facilities and training for accidents and emergency situations are the audit targets. The criteria are defined at each facility, evaluated by score and level.
In addition to the workplace audits, the degree of achievement regarding the TOSHIBA Group's Third Voluntary Plan for Environmental Protection is determined and an audit on the product development/engineering departments is performed. The management progress of the Environmental Management System is checked.

EASTER Audit items and evaluations

Audit item	Evaluation
Environmental Management System	Evaluate all items defined in the specifications in addition to the internal audit items determined in the specifications.
Workplace facility control	Evaluate training for accidents and emergency situations at the important facilities for the on-site actual status check and risk reduction of environmental accidents.
Degree of achievement on the Voluntary Plan for Environmental Protection	Evaluate the degree of achievement in the appropriate fiscal years toward the Voluntary Plan for Environmental Protection.
Creation of environmentally conscious products	Evaluate from both perspective engineering-planning/control conditions at the development/engineering departments and the outcomes of environmentally conscious products.

Training for accidents and emergency situations

Each business site established the criteria in response to emergency situations at environmental facilities, organized the system to take proper action and regularly provides training.
Also for EASTER, training is provided in the presence of the audit group. It is verified, if activities conform to the criteria, as well as if emergency measures are safely and exactly performed. For instance, in the assumption about an abnormal outflow of vehicle fuel on the premises, the security room or trained action team is notified, the action team rushes to the scene and securely blocks the surrounding rainwater openings to prevent the fuel from flowing out. Thus, the team prevents the fuel from being scattered with containment booms and removes fuel oil with absorbent pads to return to status quo.

Training for accidents and emergency situations during the implementation of EASTER (at Hadano Plant in Jan. 2004)

Environmental activities collectively

The TOSHIBA TEC Group has people in various positions understand its responsibility to environmental issues in a global society and advances environmental activities together and improves communication with those people throughout various media.

Concepts regarding communication

The TOSHIBA TEC Group defines in its Management Policy; "We put concern for the environment as a priority in all our business activities so as to protect people's safety and health as well as the world's natural resources". Therefore, the TOSHIBA TEC Group always faces environmental issues with a sincere attitude, to build a sustainable society. However, it is important not only for the TOSHIBA TEC Group but also for people in various positions to understand the responsibility to environmental issues in a global society and advance environmental activities together. The TOSHIBA TEC Group is improving communication with those people throughout various media, for the posture and activities of the TOSHIBA TEC Group.

Environmental public relations

Environmental Report

TOSHIBA TEC CORPORATION has been annually issuing English and Japanese editions of the environmental report since 2000. P51

Ohito Business Center, Mishima Works and Hadano Plant have been issuing their environmental reports in Japanese, to disclose information to local communities and administrations.

Environmental Report 2003 TOSHIBA TEC CORPORATION Ohito Business Center

Environmental Report 2003 TOSHIBA TEC CORPORATION Mishima Works

Environmental Report 2003 TOSHIBA TEC CORPORATION Hadano Plant

Public relations on the web site

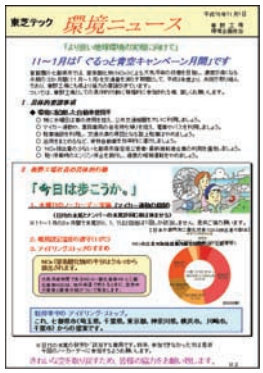
The updated information on environmental reports, commitments of each Company and Division to environmental protection, and introduction of environmentally conscious products are posted in the web site:
http://www.toshibatec.co.jp/enviro/measure.htm
The inquiry contact is also established for environmental protection and philanthropy:
E-mail: environment@toshibatec.co.jp

In-house public relations

In-house public relations are conducted by various means including an electronic bulletin board. Here are examples:

Environmental news (Hadano Plant)

Environment-related topics such as environmental months or no-car days are introduced. Environmental news is used as a means of in-house public relations through the "environment area" bulletin board or electronic bulletin board.



ECP display area (Ohito Business Center)

As examples regarding the development of environmentally conscious products, actual packing materials and improved parts are displayed.
The aim is to provide inspiration to the design engineers not only by showing the pictorial examples posted, but also by having the engineers touch the actual things.

ECP display area

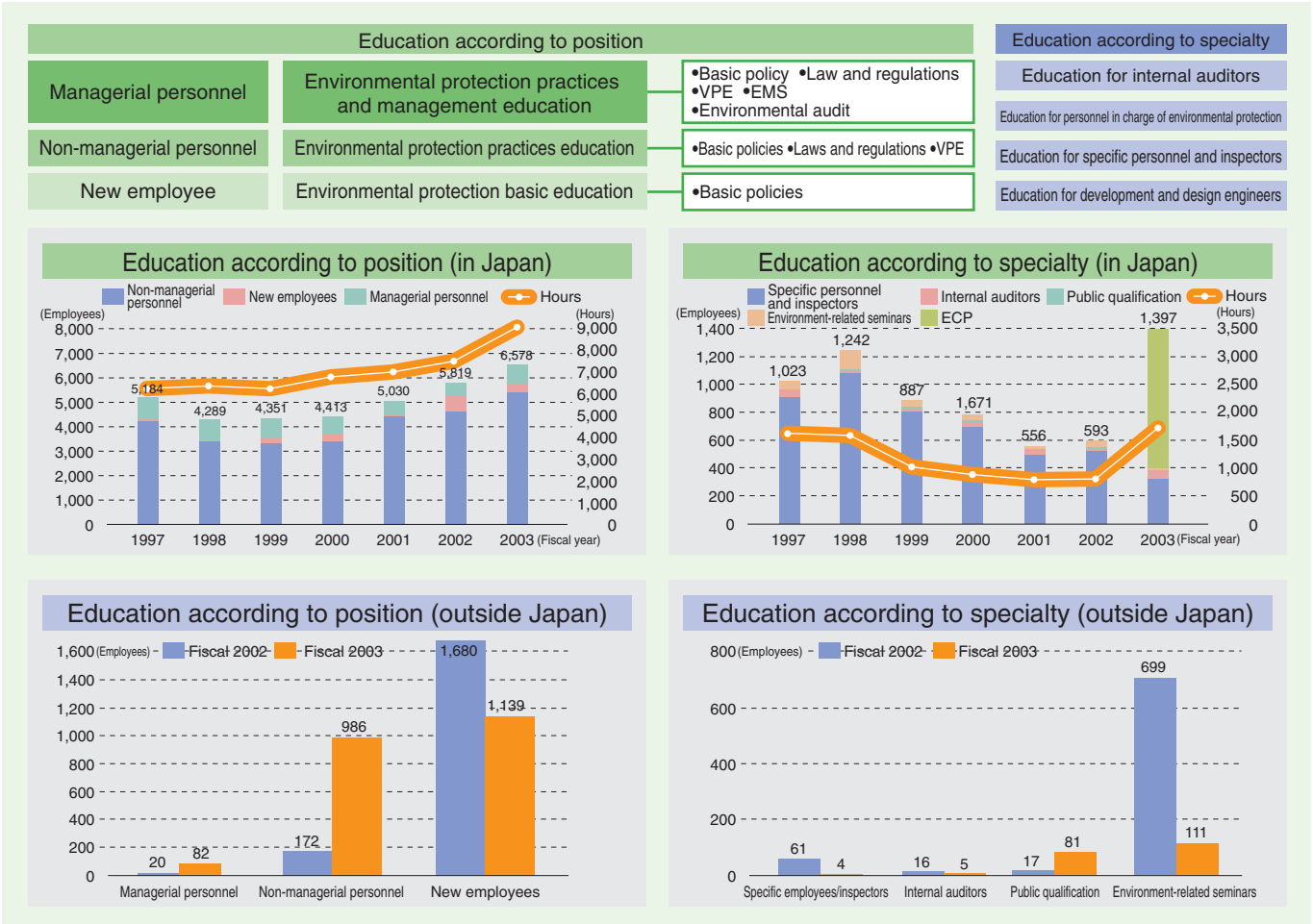
Environment display area and electronic bulletin board (Mishima Works)

The policy, organization, progress of the plan and environmental news are posted on the in-house display area. In addition, textual information is also provided with the use of an electric bulletin board. Electricity used for this electric bulletin board is covered by in-house wind power generation.

Environment display area and electric bulletin board

Environmental education

Education according to position and specialty is offered to personnel at every level from new employees to senior management, to enhance the environmental protection consciousness and expertise. The curriculum includes basic policies for environmental protection, laws and regulations concerning the Voluntary Plan for Environmental Protection (VPE), Environmental Management System (EMS) and environmental audit. Not only TOSHIBA TEC personnel but also personnel of its group companies and affiliates stationed in business sites in and outside Japan receive environmental education. Education according to position was provided to 8,000 personnel, while education according to specialty was provided to 1,500 in and outside Japan in the fiscal 2003 year. e-learning is used to increase the efficiency in accordance with the curriculum and target personnel.



Exhibiting products and equipment in events

The TOSHIBA TEC Group considers participation in various environmental events as a setting for communication with people, and actively works on participation in such events.
The TOSHIBA TEC Group participated in "Shizuoka Environment Welfare and Technology Exhibition" in September 2003, where the concept regarding waste reduction was proposed.
The TOSHIBA TEC Group also introduced its environmentally conscious products at "Eco Products 2003".

4th Shizuoka Environment Welfare and Technology Exhibition
(at Shizuoka Twin Messe in Sep. 2003)
The TOSHIBA TEC Group exhibited its environment-related products to introduce commitments to environmental protection. The TOSHIBA TEC Group's proposed waste reduction received attention.

Eco Products 2003
(at Tokyo Big Sight in Dec. 2003)
The TOSHIBA TEC Group introduced POS systems, MFPs and AERO CYCLONE vacuum cleaners, which comply with the Voluntary Environmental Standards.

13th TOSHIBA Group Environment Exhibition
(at TOSHIBA head office building in Mar. 2004)

Promising prompt support in response to the voice of customers

TOSHIBA TEC CORPORATION timely provides products and services, with reliable quality, functions, as well as high user-friendliness and communication with customers, to accurately provide services required by customers.

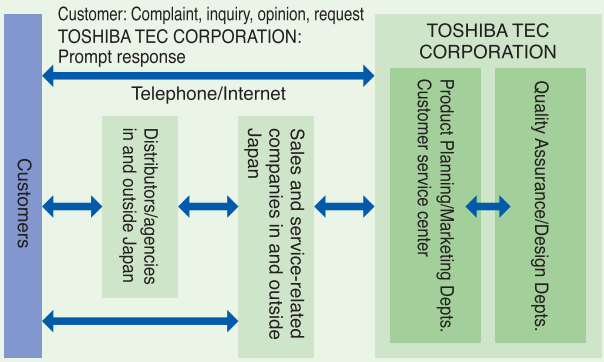
Concepts regarding response to customers

The TOSHIBA TEC Group defines in its Management Policy; "We aim to provide timely products and services with reliable quality and functions as well as high user-friendliness, creating value with our customer in mind".
By having each employee ask him or herself what customers want, what values are important to the customer, by always thinking from the customer's viewpoint, we can provide products and services to satisfy and please the customer. Customer confidence is built by responding to the fundamental questions: Do the functions of our products satisfy customer expectations? Do they perform in a satisfactory way for the customer? Do our products have the quality required to maintain their performance?
Throughout the development, manufacturing, sales, maintenance and services, we want to put the superior proprietary techniques, know-how we have been refining over the years, and state-of-the-art technology to full use by providing our customers with products and services, which embody values exceeding even their own expectations.

Sales/service system promising prompt support

The voice of customers is solicited at the customer service center of TOSHIBA TEC CORPORATION, directly through its distributors, agencies and distribution service companies. Local staff promptly responds to customer requests through the nationwide sales/service network.
TOSHIBA TEC CORPORATION communicates accurately to provide services required by customers; such as the distribution of products; consultation including the provision, operation and installation of systems; post-installation education, provision of various information and after-sales service.

Reception of the voice of customers



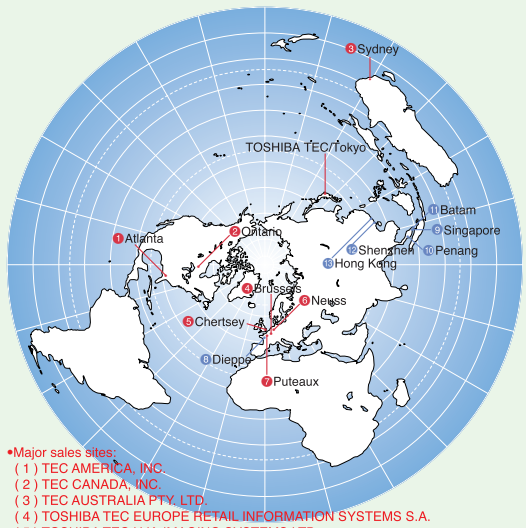
Global line promptly providing high-quality products

TOSHIBA TEC CORPORATION is a global corporation contributing to the world through its products. It also considers the business customs of each partner's country and customer's intentions, to expand community-based product development, manufacturing, sales and services.

Reliability supported by high quality control technologies

Based on the policy "products supplied by TOSHIBA TEC CORPORATION must pass strict tests and be qualified", its products are repeatedly inspected in every production process. New products are continuously tested under extreme conditions from the prototype production phase and only completely satisfied products are provided to the market. The quality control technologies, which admit to, "no compromise even for one part", are necessary for product reliability.

Major sales/production sites outside Japan



•Major sales sites:
(1) TEC AMERICA, INC.
(2) TEC CANADA, INC.
(3) TEC AUSTRALIA PTY. LTD.
(4) TOSHIBA TEC EUROPE RETAIL INFORMATION SYSTEMS S.A.
(5) TOSHIBA TEC U.K. IMAGING SYSTEMS LTD.
(6) TOSHIBA TEC GERMANY IMAGING SYSTEMS GmbH
(7) TOSHIBA TEC FRANCE IMAGING SYSTEMS S.A.
•Major production sites, etc.:
(8) TOSHIBA TEC EUROPE IMAGING SYSTEMS S.A.
(9) TEC SINGAPORE ELECTRONICS PTE. LTD.
(10) TIM ELECTRONICS SDN.BHD.
(11) P.T. TEC INDONESIA
(12) TOSHIBA COPYING MACHINE (Shenzhen) CO., LTD.
(13) TOSHIBA TEC (H.K.) LOGISTICS & PROCUREMENT LIMITED

Cultivating a free, broad-minded and sound organizational culture

The TOSHIBA TEC Group respects every employee and practices fair and proper evaluation and reward. The TOSHIBA TEC Group's education and training systems are designed to enable employees to acquire sophisticated expertise in line with their own goals and aspirations.

Basic policy regarding human resources

The TOSHIBA TEC Group respects every employee and makes efforts to improve each employee's capabilities. All human resources reward systems are constructed based on the basic policies. The TOSHIBA TEC Group practices fair and proper evaluation and reward, as well as creates a free, broad-minded and sound organizational culture, to form a powerful professional group who keeps challenging.

Human resources system

The human resources system is designed to ensure each of all employees achieve satisfaction and fulfillment through their tasks, as well as to practice proper reward, by linking individual outcomes with organizational outcomes.
The TOSHIBA TEC Group is devoting its energies to creating a free, broad-minded and sound organizational culture to form a professional group who can accentuate its organizational strengths, while having each of its employees acquire more advanced capabilities to become independent.

Education and training systems

The TOSHIBA TEC Group's education and training systems consist of several training courses such as, to enable employees to acquire sophisticated expertise in line with their own goals and aspirations, to provide education such as compliance education for every employee through enlightenment activities, and to provide education according to position at every level throughout corporate life.
Various training courses are provided in response to each employee and task needs.

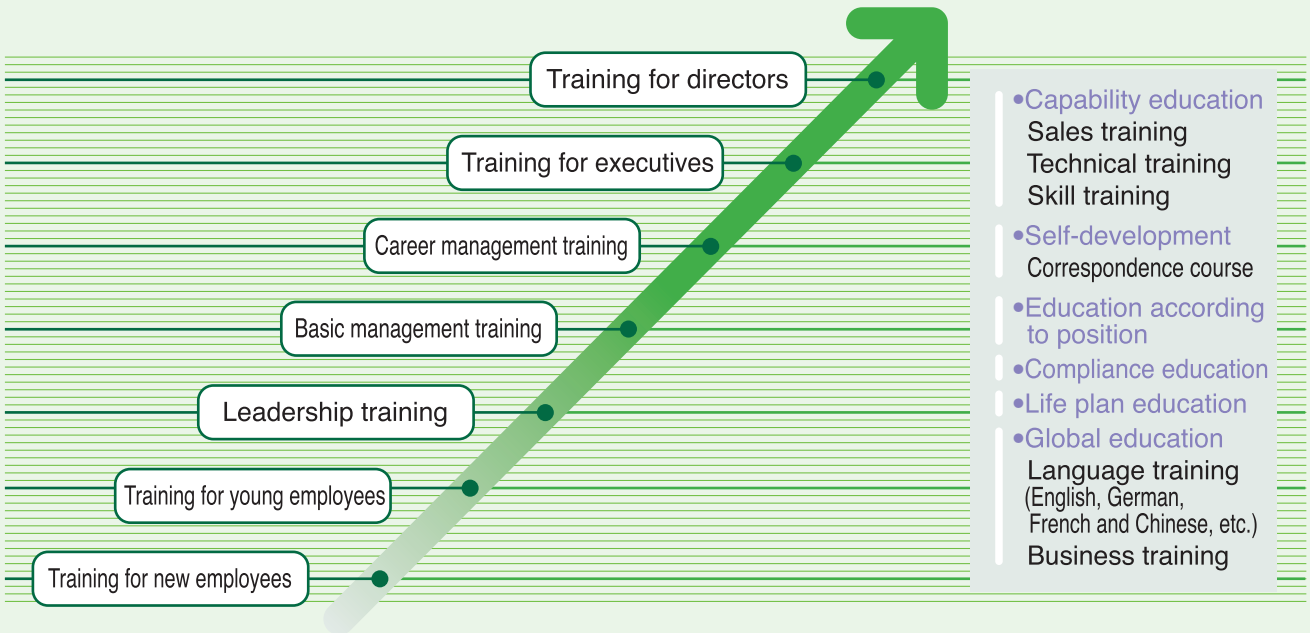
Human resources utilization and development systems

Target attribution system
The corporate goal is broken down and each employee's target is set. Reward is based on results, by linking the achievement of each employee's target with the realization of the corporate goal.

Expertise development evaluation system
The expertise of each employee is evaluated. Reward is based on manifest advances in skills applied to the task performed.

Role assignment system
The role assignment is set up depending on variations in capability. Reward is based on variations in the degree of role-based responsibility and complexity of work.

Education and training systems



Employee's safety and health provides a platform for corporations to survive

The TOSHIBA TEC Group advances safety and health activities in accordance with "Occupational Safety and Health Management Systems (OSHMS)" enacted by the Ministry of Health, Labor and Welfare, in order to provide a safe and comfortable work environment, maintain and promote the physical and mental health of its employees.

The TOSHIBA TEC Group places commitment on safety and health as the most important challenge for management, "to provide a safe and comfortable work environment conducive to the physical and mental health of everyone in a body with its employees from the viewpoint of respect for the individual".

Safety control

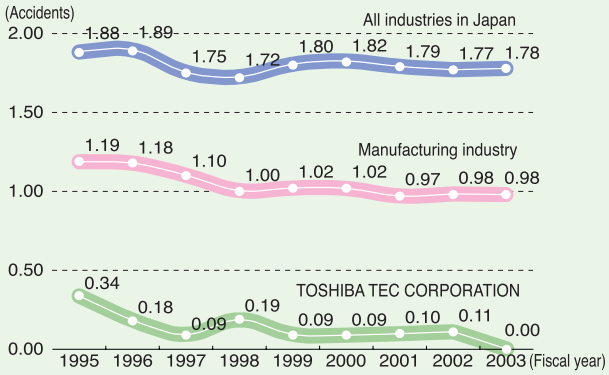
The TOSHIBA TEC Group advances safety and health-related activities in accordance with "Occupational Safety and Health Management Systems (OSHMS)" enacted by the Ministry of Health, Labor and Welfare.

The TOSHIBA TEC Group has long been seeking to eliminate accidents in the workplace. With regard to the overall rate, the TOSHIBA TEC Group is considerably lower than average for the entire industry and also in the manufacturing industry in Japan.

Top management conducts safety patrol and the Health and Safety Committee members conduct workplace safety patrol periodically. Thus, the TOSHIBA TEC Group works on accident preventive measures, with the aim of "Zero Accident".

In addition, the employees are encouraged to be more conscious of danger in their daily action to achieve "Zero Accident" and "Zero Risk", by conducting "Danger Prediction Training".

Occurrence of accidents at work (per a million man-hours)



Occupational health care

Promoting work environment control, work control and health care; thoroughness of preventive measures against medical problems associated with occupations

In the event of periodic medical check-ups indicating problems, employees have an opportunity for personal consultations with medical professionals to seek advice in order to cultivate healthy lifestyles. The check-up results are standardized to ensure data availability, on a continuous basis, even after a personnel reshuffle.

Outdoor recreation

Periodic medical check-up

Mental health measures

The TOSHIBA TEC Group is vigorously working to enhance the awareness of maintaining good mental health, by examining the mental health of employees, as well as providing education to employees and supervisors, while encouraging employees to consult with medical professionals via e-mail.

A hot line has been opened for employees and their families, as members of the TOSHIBA Group, where they can receive advice from health-care professionals.

The TOSHIBA TEC Group also makes efforts to maintain and promote the mental health of employees through outdoor recreation.

Central Health and Safety Committee

The Health and Safety Committee to ensure the safety and well being of employees at every TOSHIBA TEC operation

The Central Committee as a setting for common recognition between employers and employees, consisting of TOSHIBA TEC managers and members of the labor union, semiannually meet to discuss matters concerning accident prevention and the promotion of well being of employees, throughout the TOSHIBA TEC Group. The agenda includes reporting on safety and health, explanations on basic policies for the following year, preventive measures against traffic accidents, etc.

Health and safety commendation

The TOSHIBA TEC Group commends excellent groups and individuals for their health and safety activities on its founding anniversary. There are other commendation systems related to health and safety to encourage employees to advance their activities.

Ohito Business Center and the Components Business Group won the Class 3 Zero Accident Record (15.8 million man-hours) in the fiscal 2003 year.

Cooperation and contribution to local communities

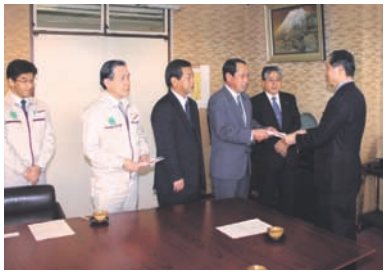
The TOSHIBA TEC Group aims to fulfill its responsibilities as a member of the community through cooperation with local communities and by maintaining good relations.

Basic policy regarding the relationship with a local community

The TOSHIBA TEC Group's basic policy is "to fulfill its responsibilities as a member of the community through cooperation with local communities and by maintaining good relations with communities".

"TOSHIBA TEC Philanthropy Fund"

"TOSHIBA TEC Philanthropy Fund" is established with the aim of contributing to social welfare, as a good corporate citizen.
This fund is reserved consisting of donations from employees, including fractions less than 100 yen or amounts in response to numbers of shares generated from their salaries and bonuses. Every year on the founding anniversary, these donations are given to the local and nationwide social welfare and environmental protection groups, accompanied by corporate donations.



Mr. Domon, General Manager and the related parties of Mishima Works, who hand donations to Mr. Koike the Mayor of Mishima (at Mishima City Hall)

Employee's volunteer activities

Holiday system

The TOSHIBA TEC Group supports its employees to use the reserved holiday system (20 days maximum) to perform volunteer activities. This system allows the employees to annually reserve up to 4 paid days. Every employee needs to file an application for the reserved holiday system.

Examples of volunteer activities

Building a small dam in a forest
The volunteers from Mishima Works built a small dam from felled trees. The dam recharges groundwater to prevent landslides and floods.

Annei no sato
The volunteers from Ohito Business Center participated in "Annei no sato" (elderly care services) clean-up operation sponsored by Shizuoka "Small Kindness Movement".

Illegal dumping prevention campaign
The volunteers from Hadano Plant participated in the Hadano Region illegal dumping prevention campaign sponsored by Shonan Region Administration Center. Illegally dumped waste was separated and collected.

Efforts to universal design

The universal design is to provide easy-to-use products, services and environments that many people can utilize regardless of age, gender, race or handicap. The feature is to design an idea considering physical characteristics and using environments by various users.
TOSHIBA TEC CORPORATION surges forward with the universal design expanded from the barrier-free concept.

e-STUDIO 3511/4511 incorporating an optional angle-adjustable control panel

GRI Content Index

GRI Guidelines and appropriate pages in TOSHIBA TEC Group Sustainability Report 2004 are as follows:

1. Vision and Strategy

1.1 P.3,11 Entire report
1.2 P.3,11 Entire report

2. Profile

Organisational Profile
2.1 P.1
2.2 P.1
2.3 P.1,12,50
2.4 P.50
2.5 P.50
2.6 P.1
2.7 P.1,29-30,40
2.8 P.1,40
2.9 P.33-34

Report Scope
2.10 P.54
2.11 P.2
2.12 P.51
2.13 P.2,50
2.14 P.50
2.15 P.50
2.16 No major changes

Report Profile
2.17 GRI is referred
2.18 Entire report (especially P.40-46)
2.19 No major changes
2.20 P.8,9-10,12
2.21 P.52 (Third Party Opinion)
2.22 P.54 (spine)

3. Governance Structure and Management Systems

Structure and Governance
3.1 P.8,12
3.2 Omitted
3.3 Omitted
3.4 P.8,12
3.5 Omitted
3.6 P.8,12,32
3.7 P.4-8
3.8 P.8

Stakeholder Engagement
3.9 P.7,33
3.10 P.33-34,35-38
3.11 P.33-34,35-38
3.12 P.15-16,33-34

Overarching Policies and Management Systems
3.13. P.8,32
3.14 Omitted
3.15 P.51
3.16 P.10,15-27
3.17 Entire report
3.18 P.50
3.19 The following items are individually described throughout the report:
- Priority and target setting: P.3-11
- Major programmes to improve performance: P.12-38
- Internal communication and training: P.8,32,36
- Performance monitoring: P.11,42-49
- Internal and external auditing: P.8,32
- Senior management review: P.8,11

3.20 P.32,37,41

4. GRI Content Index

4.1 P.39

5. Performance Indicators

Integrated Indicators
Cross-cutting indicators
P.11

Economic Performance indicators
Direct Impacts
Customers
EC1. P.1,40
EC2. Omitted
Suppliers
EC3. Omitted
EC4. Omitted
Employees
EC5. Omitted
Providers of Capital
EC6. Omitted
EC7. Omitted
Public Sector
EC8. Omitted
EC9. Omitted
EC10. Omitted

Environmental Performance Indicator
Materials
EN1. P.10
EN2. P.21-27,49
Energy
EN3. P.10
EN4. P.10,44
Water
EN5. P.10,49
Biodiversity
EN6. Omitted
EN7. Omitted
Emissions, Effluents, and Waste
EN8. P.44
EN9. P.46
EN10. P.49
EN11. Omitted
EN12. Omitted
EN13. P.49
Products and Services
EN14. P.10
EN15. Omitted
Compliance
EN16. Omitted

Social Performance Indicators
Labour Practice and Decent Work
Employment
LA1. P.40
LA2. Omitted
Labour/Management Relations
LA3. Omitted
LA4. P.37
Health and Safety
LA5. P.37
LA6. P.37
LA7. Omitted
LA8. Omitted
Training and Education
LA9. P.36
Diversity and Opportunity
LA10. Omitted
LA11. Omitted
Human Rights
Strategy and Management
HR1. P.36
HR2. Omitted
HR3. Omitted
Non-discrimination
HR4. Omitted
Freedom of Association and Collective Bargaining
HR5. Omitted
Child Labour
HR6. Omitted
Forced and Compulsory Labour
HR7. Omitted
Society
Community
SO1. Omitted
Bribery and Corruption
SO2. Omitted
Political Contributions
SO3. Omitted
Product Responsibility
Customer Health and Safety
PR1. P.35
Products and Services
PR2. Omitted
Respect for Privacy
PR3. P.8

Note: Terms are excerpted from the GRI Guidelines.

Economic Performance

Review of fiscal 2003

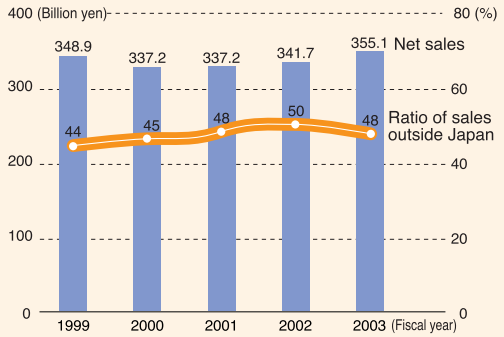
During the fiscal 2003 year, the Japanese economy continued to suffer from severe unemployment and a high-yen trend. However, the earnings showed signs of an economic recovery, in the background were a restoring U.S. economy and economic growth in Asia, especially in China. Corporate profits improved, exports and capital investments were on an upward trend, while individual consumption remained stagnant.

Under such circumstances, the TOSHIBA TEC Group developed and introduced competitive products for the market, focusing on its growing business fields, as well as made efforts to reinforce the sales force, improve sales efficiency, reduce procurement costs, carefully select products to re-input to resources, increase resource efficiency and enhance the group management force, with the aim of achieving the basic policy of the mid-term plan; "Structural Change for a Highly Profitable Group".

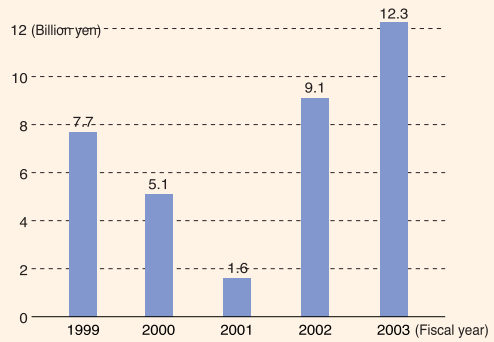
Net sales reached 355.112 billion yen, a 4% increase over the previous year, in consequence of steady growth of net sales in the Retail Information Systems Company and Document Processing & Telecommunication Systems Company. Regarding profit and loss, incomes were increased and costs were reduced, the sales profit reached 15.034 billion yen, an 18% increase compared with the previous year, making it a record high. Ordinary profit reached 12.252 billion yen, a 34% increase compared with the previous year, and profits for the fiscal 2003 year reached 7.99 billion yen, an increase of 4.043 billion yen over the previous year.

Progress of achievements (consolidated)

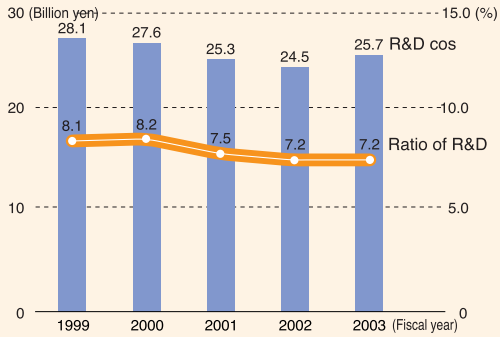
Net sales and ratio of sales outside Japan



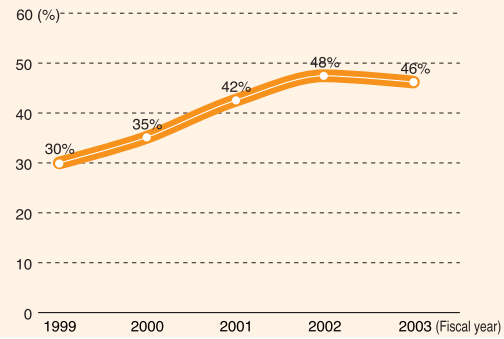
Ordinary profit



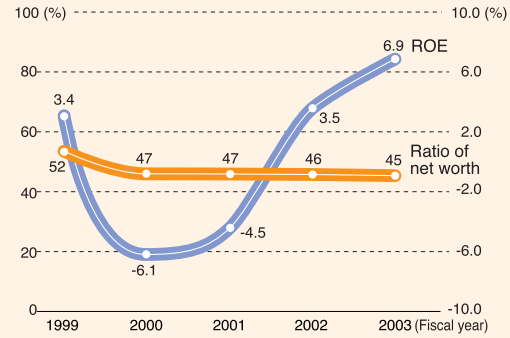
Research and development (R&D) cost and ratio of R&D



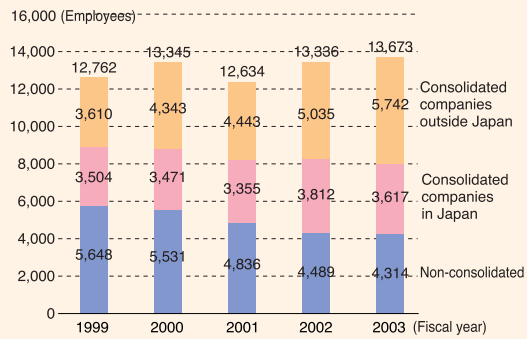
Ratio of output outside Japan



Ratio of net worth and ROE



Number of employees



Environmental audit

ISO14001 certification

Business site *1	Date received
Japan	
Ohito Business Center	June 1997
Mishima Works	Mar. 1997
Hadano Plant	Mar. 1997
Components Business Group *2	June 1997
TOSEI DENKI CO., LTD.	(Scheduled) Aug. 2004
FUJIKEN CO., LTD.	(Scheduled) Mar. 2005
TEC KASHIYA DENKI CO., LTD. *2	Mar. 2003
TEC PRECISION, INC. *2	June 1997
North America	
TOSHIBA AMERICA BUSINESS SOLUTIONS, INC.	Apr. 1999
Europe	
TOSHIBA TEC EUROPE IMAGING SYSTEMS S.A.	Feb. 1997
Asia	
TOSHIBA COPYING MACHINES (Shenzhen) CO., LTD.	May 1999
TEC SINGAPORE ELECTRONICS PTE. LTD.	Apr. 1998
P.T. TEC INDONESIA	Aug. 1998
TIM ELECTRONICS SDN. BHD.	Apr. 1998

*1: Corporate and business site names are as of the fiscal 2003 year.
*2: Components Business Group and TEC PRECISION, INC. belong to Ohito Business Center, and TEC KASHIYA DENKI CO., LTD. belongs to Mishima Works.

ISO14001 audit results in fiscal 2003

Date audited	Target site	Audited by	Audit category	Result
June 11-13, 2003	• Ohito Business Center • Components Business Group • TEC PRECISION, INC.	• JQA (Japan Quality Assurance Organization)	Renewed audit	Registration renewed • Category B nonconformity: 2 items • Improvement opportunity: 16 items
Feb. 23-25, 2004	• Mishima Works • TEC KASHIYA DENKI CO., LTD.	• JQA (Japan Quality Assurance Organization)	Surveillance	Registration continued • Nonconformity: None • Improvement opportunity: 7 items
Mar. 11-12, 2004	• Hadano Plant	• JACO (Japan Audit and Certification Organization for Environment and Quality)	Surveillance	Registration continued (improving) • Nonconformity: None • Monitor: 2 items • Recommend: 4 items

Internal auditors in Japan (fiscal 2003)

Qualification	Training organization	Head office	Ohito Business	Center Mishima	Works Hadano	Plant Affiliates	Total
ISO14001 auditor	Outside	0	0	0	1	0	1
ISO14001 sub-auditors	Outside	4	2	1	3	0	10
Chief internal auditor	Outside	4	0	3	2	0	9
	Internal training	0	0	3	4	0	7
Internal auditor	Outside	1	5	5	4	2	17
	Internal training	0	9	11	14	14	48
No. of qualifications		9	16	23	27	16	91
No. of auditors		4	9	18	23	14	68

Internal auditors outside Japan (fiscal 2003)

Qualification	Training organization	Singapore	Indonesia	China	France	U.S.A.	Malaysia	Total
ISO14001 sub-auditors	Outside	0	0	0	0	0	1	1
Chief internal auditor	Outside	0	0	3	0	1	5	9
	Internal training	0	0	0	1	0	0	1
Internal auditor	Outside	36	28	31	9	0	17	121
	Internal training	0	0	0	0	2	0	2
No. of qualifications		36	28	34	10	3	22	133
No. of auditors		36	28	31	9	3	17	124

TOSHIBA Group Environmental Audit (EASTER*)

The TOSHIBA Group has been annually performing in-house audits, on the business sites based on its original environmental audit system (EASTER) since the fiscal 1993 year.
The TOSHIBA TEC Group performs in-house audits on the business sites including its affiliates, based on the EASTER criteria.

* EASTER: Environmental Audit System in TOSHIBA on basis of Eco-Responsibility

EASTER audit items and evaluations

Audit item	Evaluation
Environmental Management System	Evaluate all items defined in the specifications in addition to the internal audit items determined in the specifications.
Workplace facility control	Evaluate training for accidents and emergency situations at the important facilities for the on-site actual status check and risk reduction of environmental accidents.
Degree of achievement on the Voluntary Plan for Environmental Protection	Evaluate the degree of achievement in the appropriate fiscal years toward the Voluntary Plan for Environmental Protection.
Creation of environmentally conscious products	Evaluate from both perspective engineering-planning/control conditions at the development/engineering departments and the outcomes of environmentally conscious products.

EASTER audit results in fiscal 2003

Date audited	Target site	Audit items				
July 17, 18, 2003	Ohito Business Center		Workplace control	VPE progress *1	Engineering EMS *2	ECP engineering *3
		Currently	B+	A	A+	B
		Previously	A	A-	A	B-
		Major pointed out item: Positively deal with scattering/outflow of chemical substances/oils				
July 17-18, 2003	Components Business Group		Workplace control	VPE progress	Engineering EMS	ECP engineering
		Currently	A-	B	-	-
		Previously	Included in the Ohito Business Center			
		Major pointed out item: Deal with increased usage of electricity due to facility transfer				
Dec. 9-10, 2003	TOSEI DENKI		Workplace control	VPE progress	Engineering EMS	ECP engineering
		Currently	C+	B-	-	-
		Previously	C+	C+	-	-
		Major pointed out item: Positively deal with scattering/outflow of paint/thinner				
Jan. 14-15, 2004	Mishima Works		Workplace control	VPE progress	Engineering EMS	ECP engineering
		Currently	A	A	A+	B
		Previously	A	A-	A+	B
		Major pointed out item: Continuously perform correct control on cleaning equipment and plated device				
Jan. 29-30, 2004	Hadano Plant		Workplace control	VPE progress	Engineering EMS	ECP engineering
		Currently	A-	B	A	B
		Previously	A-	B+	A	C+
		Major pointed out item: Deal with incomplete work environment arrangement and visual control				

* 1: VPE progress: Degree of achievement on the Voluntary Plan for Environmental Protection
* 2: Engineering EMS: Progress of planning control of development/engineering departments
* 3: ECP engineering: Outcomes of ECP and engineering

Reduction of product environmental impacts

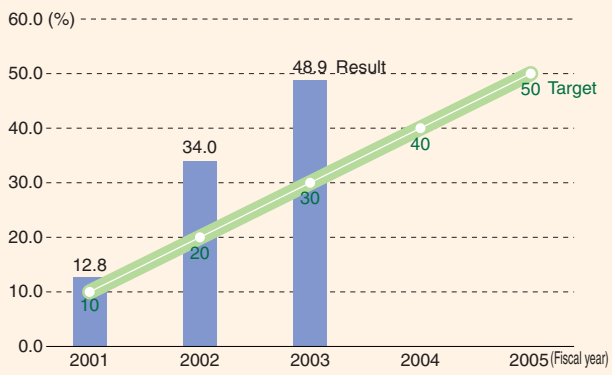
Progress of the Third Voluntary Plan for Environmental Protection

Provision of environmental information

Target for fiscal 2005	50% of products to be in compliance with the Voluntary Environmental Standards
Result in fiscal 2003	48.9%

Regarding the result until the fiscal 2003 year, 23 out of 47 models in total; 7 out of 16 models from the POS terminals, 10 out of 12 models from the copiers/MFPs, 6 out of 19 models from the vacuum cleaners complied with the Voluntary Environmental Standards, compatibility was 48.9%.

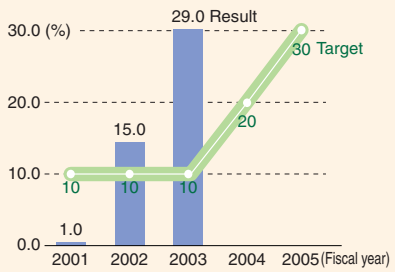
Progress of ratio of product models in compliance with the Voluntary Environmental Standards



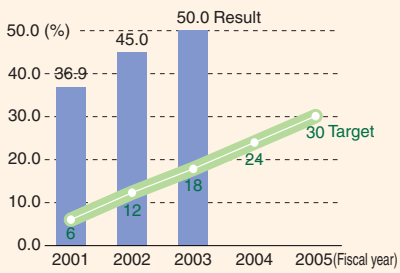
Reduction of electricity consumption per function

Target for fiscal 2005	30% reduction relative to fiscal 2000 (Target products: POS terminal, copier/MFP, vacuum cleaner)
Result in fiscal 2003	POS terminal: 29% reduction Copier/MFP: 50% reduction Vacuum cleaner: 28% reduction

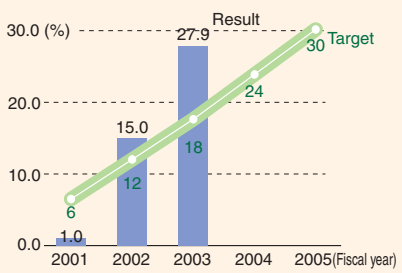
Reduction of electricity consumption per product function (POS terminal)



Reduction of electricity consumption per product function (copier/MFP)



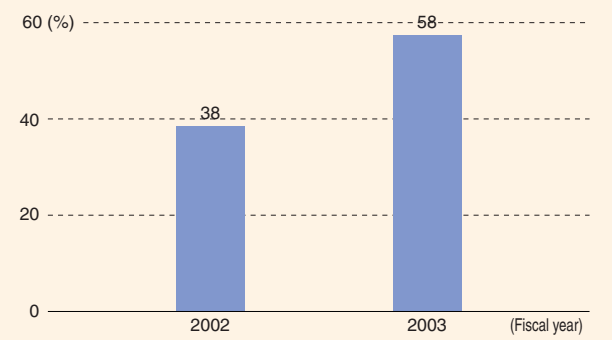
Reduction of electricity consumption per product function (vacuum cleaner)



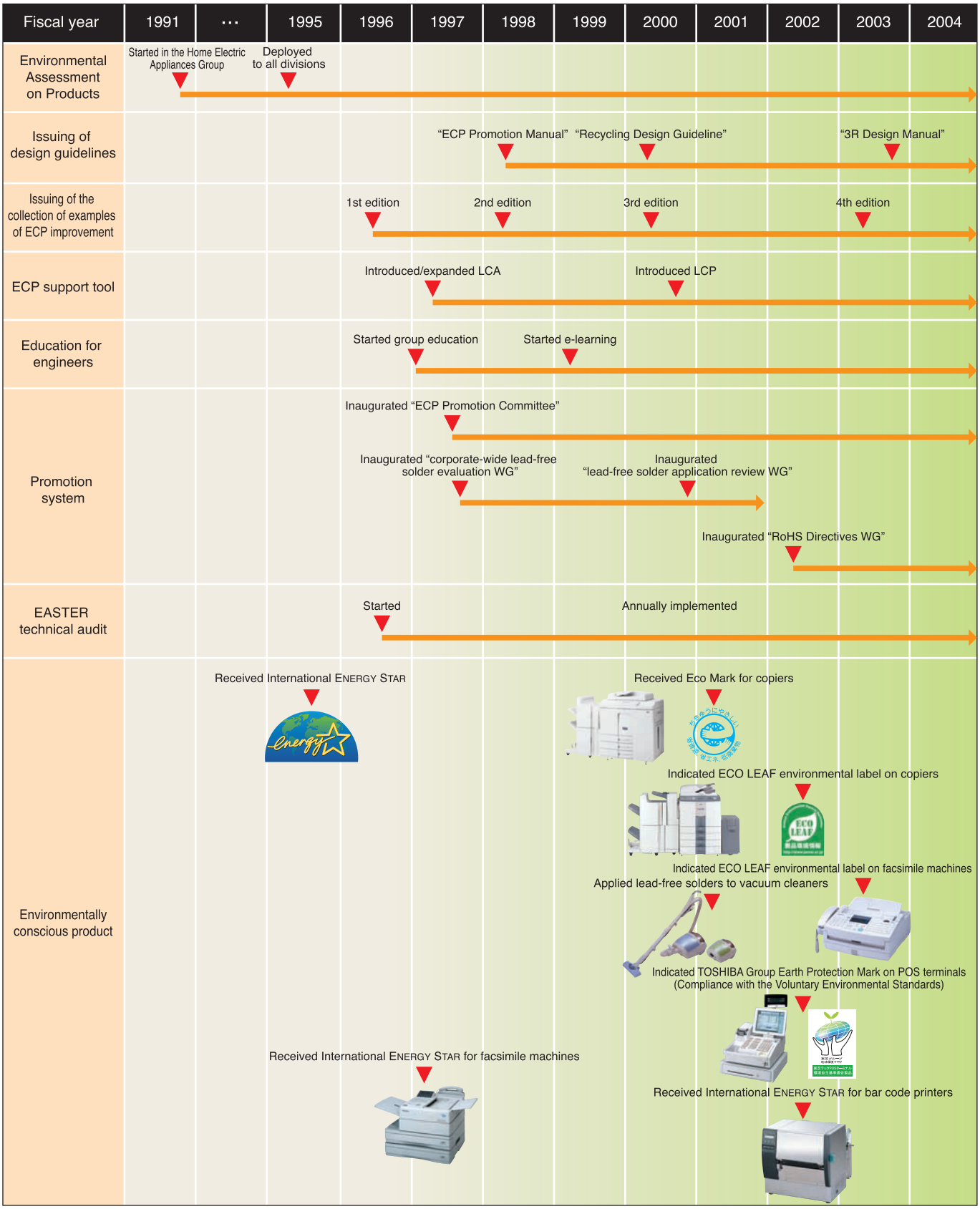
Application of lead-free solders

Target	Lead-free solders to be applied to new products launched in Apr. 2003 or later.
Result	Lead-free solders are applied to new products launched in Apr. 2003 or later as scheduled.

Ratio of output of lead-free solders applied to products



Environmentally conscious products creating activities



Prevention of global warming and energy savings

Progress of the Third Voluntary Plan for Environmental Protection

Target	25% reduction of CO_2 per basic unit of net sales by fiscal 2010 relative to fiscal 1990 (Target sites: TOSHIBA TEC production sites in Japan)	
Result in fiscal 2003	CO_2 per basic unit of net sales	10.69 t-CO_2/100 million yen 3.8% reduction compared with fiscal 2002 13.8% reduction compared with fiscal 1990
	CO_2 emissions	11,465 t-CO_2 2.5% increase compared with fiscal 2002 27.6% decrease compared with fiscal 1990

In terms of the result regarding the Third Voluntary Plan for Environmental Protection in the fiscal 2003 year, the CO_2 per basic unit of net sales targeted for TOSHIBA TEC production sites in Japan resulted in a 3.8% reduction over the previous year and a 13.8% reduction compared with the fiscal 1990 year. CO_2 emissions are on an upward trend and CO_2 per basic unit has leveled off due to an increase in business activities. Thus, further energy-saving activities are advanced to eliminate CO_2 emissions.

CO_2 emissions at the TOSHIBA TEC Group

CO_2 emissions at the TOSHIBA TEC Group production sites worldwide were 22,882 t-CO_2 in the fiscal 2003 year, resulted in a 1% increase over the previous year and a 15% increase compared with the fiscal 1999 year.

CO_2 emissions at the production sites outside Japan has recorded an increase in the past few years, accounting for 45% of the entire TOSHIBA TEC Group, due to their expanding production.

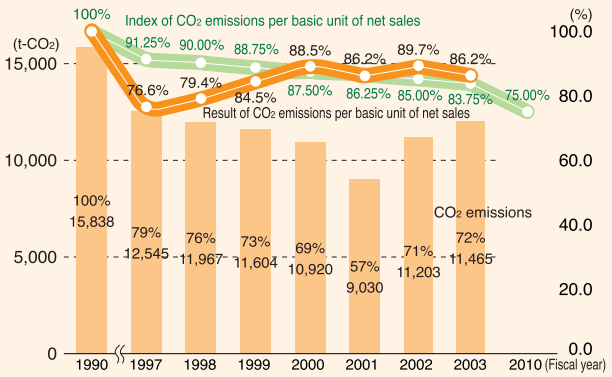
Thus, the energy-saving activities are advanced at the productions sites outside Japan, mainly in managerial terms through the operation of the Environmental Management System (ISO14001).

Major energy-saving measures in fiscal 2003

Unit: investment (million yen), reduced amount of CO_2 (t-CO_2)

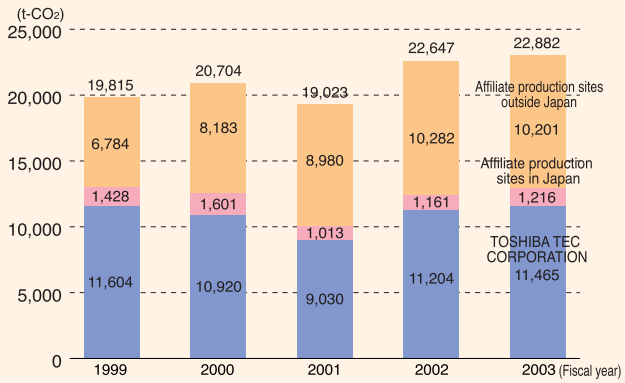
Date implemented	Business site	Item	Overall measures	Investment	Reduced amount of CO_2
July 2003	Mishima Works	Gas engine compressor	Renewed the old electric compressor for the purpose of reducing the usage of electricity and eliminating the peaked electricity	8.8	51.8
Aug. 2003	Mishima Works	Inverter control of air conditioner in the clean room	Reduced the volume of air and fan power through inverter control of air blower fans	9.7	107.3
Sep. 2003	Ohito Business Center	Ice storage system for air conditioning facility in training center	Adopted the ice storage system, which uses electricity at night instead of the air conditioning system, which uses the cooling tower and boiler	14.0	23.7
Feb. 2004	Ohito Business Center	Energy-saving lighting fixture	Replace 832 lighting fixtures with inverted energy-saving lighting fixtures	17.6	30.0

CO_2 emissions per basic unit of net sales



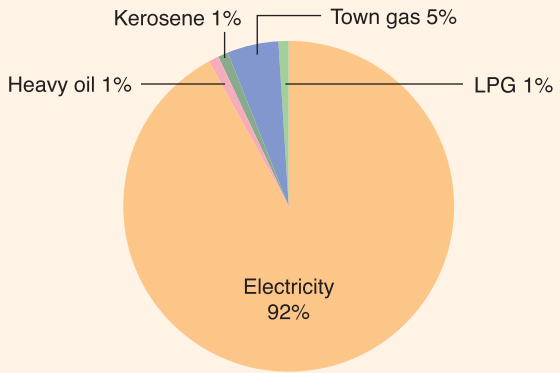
Note: CO_2 conversion factor for electricity (unit: t-CO_2/10 thousand kWh): fiscal 1990 = 3.6, fiscal 1997 = 3.3, fiscal 1998 = 3.2, fiscal 1999 = 3.3, fiscal 2000/2001 = 3.4, fiscal 2002/2003 = 3.4

Progress of CO_2 emissions at TOSHIBA TEC Group production sites



Note: The same CO_2 conversion factor for electricity is used for productions sites outside Japan.

CO_2 emissions per energy in fiscal 2003 (production sites including affiliates in Japan)



The TOSHIBA TEC Group does not use any greenhouse effect gases other than CO_2.

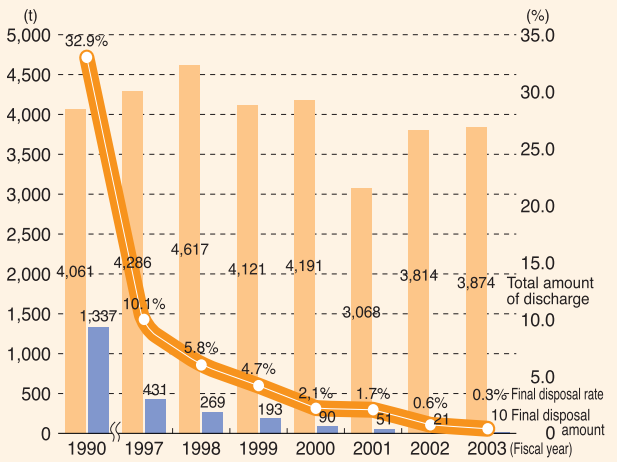
Reduction of waste and resource savings

Progress of the Third Voluntary Plan for Environmental Protection

Target	The final disposal amount to be 1% or less of total discharge by fiscal 2003 (Target sites: TOSHIBA TEC production sites in Japan)	
Result in fiscal 2003	Total amount of discharge	3,874 t (1.6% reduction compared with fiscal 2002)
	Final disposal amount	10 t (90% reduction compared with fiscal 2002)
	Final disposal rate	0.3% (87% reduction compared with fiscal 2002)

The final disposal rate targeted for TOSHIBA TEC production sites in Japan in the fiscal 2003 year was 0.3%, which has attained the target of 1% or less of the total discharge.

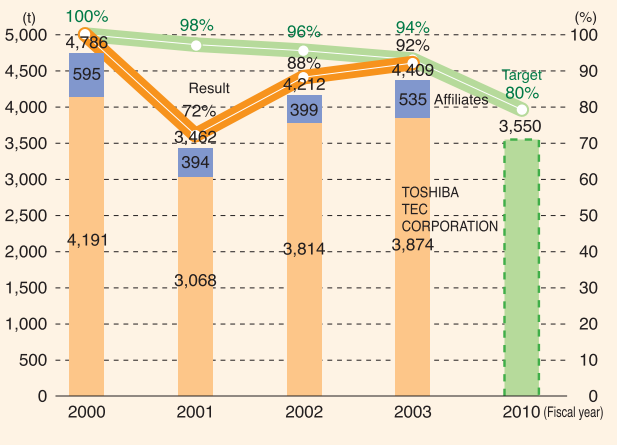
Progress of final disposal rate (TOSHIBA TEC production sites in Japan)



Total amount of discharge at the TOSHIBA TEC Group production sites in Japan

The total amount discharged at the TOSHIBA TEC Group production sites including its affiliates in the fiscal 2003 year is 4,409 tons.
This results in a 4.7% increase over the previous year and an 8% decrease compared with the fiscal 2000 year.
They share the TOSHIBA TEC Group's know-how to reduce the total amount of discharge, with the aim of attaining the target for the fiscal 2010 year.

Total amount of discharge at TOSHIBA TEC Group production sites in Japan



Replacement for vinyl chloride packing materials for recycling

Mishima Works replaces the vinyl chloride packing materials with other recyclable resins, and has achieved 2.4 tons of the annual recycling.
First, Mishima Works explained its commitment to environmental protection to the material suppliers, and conducted a survey through questionnaires.
As a result, 10 out of 53 items were found to be replaceable, and they have been replaced since the fiscal 2003 year.

Field investigation on waste treatment operators

TOSHIBA TEC business sites conduct periodic field investigations at the intermediate treatment and final disposal operators, from the viewpoint of illegal dumping prevention.
This investigation verifies the conditions regarding legal permissions, retention of manifest slips, operation of processing facilities, as well as the remaining disposable amount and remaining years at the final disposal sites.

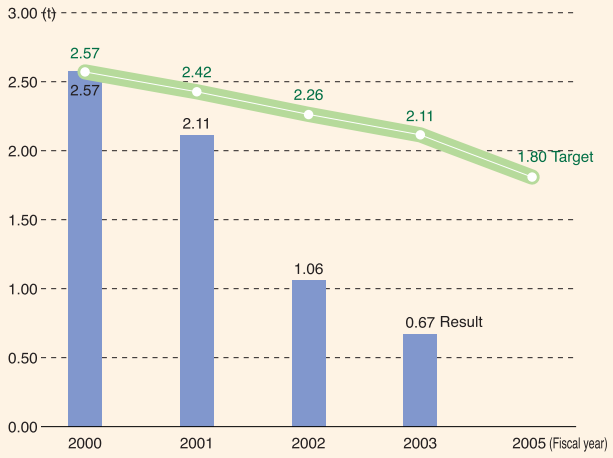
Chemical substances control

Progress of the Third Voluntary Plan for Environmental Protection

Target	**30% reduction of discharge of chemical substances by fiscal 2005 relative to fiscal 2000** Note: Target sites: TOSHIBA TEC production sites in Japan Target substances: 24 types of substances specified by the TOSHIBA Group
Result in fiscal 2003	**Amount of discharge: 0.67 t (37% reduction compared with fiscal 2002, 74% reduction compared with fiscal 2000)**

The amount discharged in the fiscal 2003 year was 0.67 tons, which attained the target for the fiscal 2005 year.
The breakdown of the amount discharged is as follows:
Methanol: 0.6 tons
Ethyl acetate: 0.05 tons
Toluene: 0.02 tons
The reduction and replacement of methanol and reduction of ethyl acetate including adhesives are being worked on.

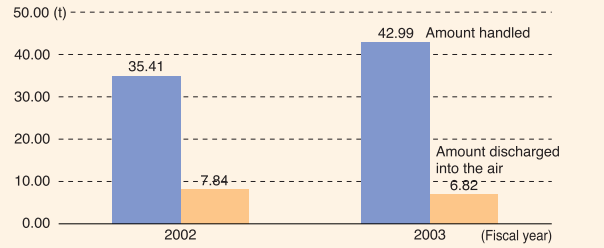
Progress in reduction regarding the discharge of chemical substances



PRTR result in fiscal 2003 (production sites in Japan)

21 substances out of the class 1 specified chemical substances (354 substances) in the PRTR Law, 0.01 tons or more of which are used in the fiscal 2003 year total 42.99 tons, a 21% increase compared with the previous year.
The amount discharged is 6.82 tons, a 13% decrease compared with the previous year.

Progress in reduction regarding the discharge of chemical substances



PRTR in fiscal 2003 at TOSHIBA TEC Group production sites in Japan

No.	Substance number *	Chemical substance name	Amount handled	Amount discharged into the air	Amount transferred as waste	Amount consumed	Amount recycled
1	25	antimony and its compounds	3.84	0.00	0.19	3.65	0.00
2	30	polymer of 4,4'-isopropylidenediphenol and 1-chloro-2,3-epoxypropane (liquid)	18.49	0.04	0.23	17.88	0.34
3	40	ethylbenzene	1.14	1.14	0.00	0.00	0.00
4	43	ethylene glycol	0.03	0.03	0.00	0.00	0.00
5	44	ethylene glycol monoethyl ether	0.10	0.10	0.00	0.00	0.00
6	63	xylene	2.51	2.51	0.00	0.00	0.00
7	64	silver and its water-soluble compounds	0.15	0.00	0.00	0.06	0.09
8	68	chromium and chromium(III) compounds	0.03	0.03	0.00	0.00	0.00
9	198	1,3,5,7-tetraazatricyclo [3,3,1,1 (3,7)] decane	0.73	0.00	0.00	0.69	0.04
10	202	tetrahydromethylphthalic anhydride	8.00	0.00	0.02	7.98	0.00
11	224	1,3,5-trimethylbenzene	0.10	0.10	0.00	0.00	0.00
12	227	toluene	2.81	2.78	0.03	0.00	0.00
13	230	lead and its compounds	3.82	0.00	0.09	1.98	1.75
14	231	nickel	0.01	0.01	0.00	0.00	0.00
15	232	nickel compounds	0.05	0.00	0.05	0.00	0.00
16	251	bis(hydrogenated tallow)dimethylammonium chloride	0.01	0.01	0.00	0.00	0.00
17	266	phenol	0.29	0.00	0.00	0.28	0.01
18	270	di-n-butyl phthalate	0.02	0.02	0.00	0.00	0.00
19	272	bis(2-ethylhexyl) phthalate	0.01	0.00	0.00	0.01	0.00
20	304	boron and its compounds	0.75	0.00	0.00	0.71	0.04
21	307	poly(oxyethylene)=alkyl ether (alkyl C=12-15 and its mixture)	0.09	0.05	0.01	0.03	0.00
		Total	42.99	6.82	0.62	33.27	2.28

* Substance number specified by the law (Unit: t)
Notes: No emissions to public water systems or soil, or no landfill in applicable site. Also, no transfer to sewage or removal treatment.
The list contains the substances the amount of which handled are 0.01 tons or more per year.

The TOSHIBA TEC Group has already abolished all ozone depleting substances.

Environmental considerations outside Japan

United States TOSHIBA AMERICA BUSINESS SOLUTIONS, INC. Toner Product Division (TABS-TPD)

TABS-TPD received ISO14001 in 1999 and has promoted various environmental measures such as energy savings, by installing the latest equipment and system, waste reduction, along with numerous noise and dust control measures. These improvements are applied to the toner production process.

Automatic mixing system for toner materials

Since 1999 TABS-TPD has been utilizing an automatic mixing system, "AZO System" to make batches of toner. This system has improved productivity and operator's safety, as well as distinguished the types and mass of toner materials.

In addition, the new automatic mixing system developed by the TABS-TPD engineers was installed in the fall 2003, to increase functionality and operability.

This system installs not only the functions including operator's safety, automatic distinction of toner materials, measurement of mass and lot verification, but also various functions such as the exhaust system and isolation room for measuring toner materials.

Raw material bag hoist

Toner material feeder units

Engineering staff involved in the new automatic mixing system:
Mr. Kelly Pfaff
Mr. Wayne Haag
Mr. Jeff Clark
Mr. John Moen
(from left)

China TOSHIBA COPYING MACHINE (Shenzhen) CO., LTD. (TCOS)

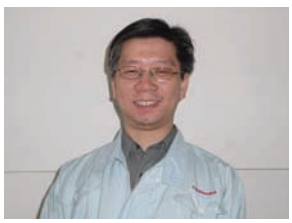
Investigation of suppliers regarding chemical substances

TCOS is investigating whether or not its suppliers use the following environment-related substances:

- Restricted substances specified by TOSHIBA TEC CORPORATION
- Substances regulated by RoHS Directives
- Substances prohibited by Chinese environmental laws

Waste control

According to Chinese environmental laws, industrial wastes generated by TCOS are disposed of at the Shenzhen Hazardous Waste Treatment Station, which is the only organization to perform such process in the Shenzhen district.



Mr. Rick Chan
Senior Manager of QA Dept., TCOS

Environmental education

Reduction of usage of electricity

TCOS has been reducing the electricity usage since the summer 2003, by using one or two line fluorescent lamps instead of three-line structured block fluorescent lamps. Also, the air-conditioning/heater is minimally used even in winter.

Reduction of water usage

Water usage varies depending on the season. Education regarding water usage is provided to every employee and the results have become evident.

Plans for environmental activities until 2005

- **Participate in the legislating activities related to recycling of toners and toner cartridges/bottles in China**
- **Continuously support suppliers to meet requirements for ISO14001 and RoHS Directives**
- **Provide education to all employees to comply with environmental laws to be instituted in the future**
- **Foster in-house voluntary recycling activities**
- **Reduce the usage of electricity and water**

Germany TOSHIBA TEC GERMANY IMAGING SYSTEMS GmbH (TGIS)

A comprehensive part of the environmental protection program is the collection and recycling of service parts and consumables. This program is implemented to effectively use the resources and significantly reduce waste.

It has been expanded throughout Europe for all service parts and consumables, including photo conductors, toner cartridges/bottles, fuser rollers and blades.

In Germany, dealers collect used parts with special recycling boxes. The parts are brought together to the main sorting center in Germany and sorted according to the purpose of reusing those parts.

The photo shows the red recycling boxes for collecting toner cartridges/bottles. Photo conductors, fuser rollers and blades are collected in the yellow recycling boxes.

Fuser rollers are sent back to the roller manufacturer and re-coated. Only the rollers, which have passed a comprehensive quality inspection, are delivered to the customers as new fuser rollers.

Recycling boxes
Red boxes for collecting cartridges/bottles

Facility to re-coat fuser rollers and quality inspection

France TOSHIBA TEC FRANCE IMAGING SYSTEMS S.A. (TEIS)

Reuse of recycled toner*

TEIS has been reusing recycled toner adopting the Six Sigma methods since 2003. This special facility, which pelletizes the recycled fine-grained toner into about 5 mm particles, was set up to resolve toner jams in the transportation tube of the production process. This facility improves fluidity of raw materials, prevents them from jamming, and increases the toner reuse rate from a previous 5 or 10% to 23%. As a result, recycled toners in stock have been significantly reduced.

* Recycled toner: Fine particles are sorted to even up the diameters in the toner particle sort process. These fine particles are mixed into raw materials again for reuse.

Improvement in the crushing machine for toner cartridges/bottles

TEIS collects used toner cartridges/bottles from customers in order to recycle plastics. The existing machine requires extended periods of time to crush large toner cartridges/bottles. The adoption of a higher efficiency machine is under review.

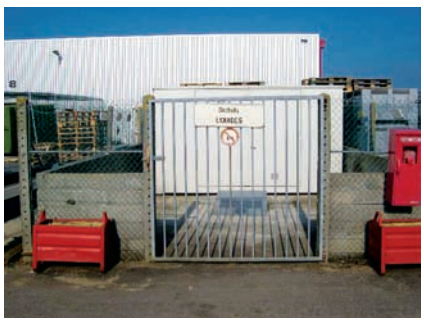
This new crushing machine installs the shredder in the pre-process of the crushing machine. The shredder cuts the toner cartridges/bottles into 4 to 5 cm chips, and the crushing machine breaks the chips into 3 to 4 mm pieces. The installation of a magnetic unit, which sorts metal parts such as springs, is also under review.

Waste control and improvement

Liquid wastes were stored outside in designated locations. Currently, liquid wastes are stored in containers at a specially constructed warehouse, to thoroughly prevent underwater and soil pollution. This warehouse is designed to control liquid wastes from seeping out, even when containers are broken.

Used parts for copiers were also stored outside. The used parts are now being stored at indoor designated locations since September 2003, to prevent soil pollution.

(Before measures)
Liquid wastes were stored outside



(After measures)
Liquid wastes are stored in a special warehouse

Business Site Information in Fiscal 2003

TOSHIBA TEC Group PRTR Site Data

* The list contains the substances the amount of which handled are 0.01 tons or more per year.

(Unit: t)

Site	Substance number *1	Chemical substance name	Amount handled	Amount discharged into the air	Amount transferred as waste	Amount consumed	Amount recycled
Ohito Business Center	30	polymer of 4,4'-isopropylidenediphenol and 1-chloro-2,3-epoxypropane (liquid)	0.01	0.00	0.00	0.01	0.00
	25	antimony and its compounds	3.66	0.00	0.17	3.49	0.00
Mishima Works	227	toluene	0.04	0.04	0.00	0.00	0.00
	232	nickel compounds	0.05	0.00	0.05	0.00	0.00
	30	3-epoxypropane (liquid)	0.03	0.00	0.00	0.03	0.00
	230	lead and its compounds	0.44	0.00	0.03	0.41	0.00
	307	poly(oxyethylene)=alkyl ether (alkyl C=12-15 and its mixture)	0.04	0.00	0.01	0.03	0.00
Hadano Plant	30	3-epoxypropane (liquid)	6.74	0.03	0.00	6.37	0.34
	304	boron and its compounds	0.75	0.00	0.00	0.71	0.04
	272	bis(2-ethylhexyl) phthalate	0.01	0.00	0.00	0.01	0.00
	198	1,3,5,7-tetraazatricyclo [3,3,1,1 (3,7)] decane	0.73	0.00	0.00	0.69	0.04
	266	phenol	0.29	0.00	0.00	0.28	0.01
	230	lead and its compounds	0.08	0.00	0.00	0.08	0.00
Components Business Group *2	230	lead and its compounds	2.88	0.00	0.00	1.13	1.75
	64	silver and its water-soluble compounds	0.15	0.00	0.00	0.06	0.09
TOSEI DENKI	227	toluene	2.52	2.52	0.00	0.00	0.00
	63	xylene	2.51	2.51	0.00	0.00	0.00
	40	ethylbenzene	1.14	1.14	0.00	0.00	0.00
	30	3-epoxypropane (liquid)	0.01	0.01	0.00	0.00	0.00
	224	1,3,5-trimethylbenzene	0.10	0.10	0.00	0.00	0.00
	44	ethylene glycol monoethyl ether	0.10	0.10	0.00	0.00	0.00
	270	di-n-butyl phthalate	0.02	0.02	0.00	0.00	0.00
	307	poly(oxyethylene)=alkyl ether (alkyl C=12-15 and its mixture)	0.05	0.05	0.00	0.00	0.00
	43	ethylene glycol	0.03	0.03	0.00	0.00	0.00
	251	bis(hydrogenated tallow)dimethylammonium chloride	0.01	0.01	0.00	0.00	0.00
	68	chromium and chromium(III) compounds	0.03	0.03	0.00	0.00	0.00
	231	nickel	0.01	0.01	0.00	0.00	0.00
FUJIKEN	30	3-epoxypropane (liquid)	11.70	0.00	0.23	11.47	0.00
	202	tetrahydromethylphthalic anhydride	8.00	0.00	0.02	7.98	0.00
	227	toluene	0.25	0.22	0.03	0.00	0.00
	25	antimony and its compounds	0.18	0.00	0.02	0.16	0.00
	230	lead and its compounds	0.42	0.00	0.06	0.36	0.00
TEC PRECISION	Included in the Components Business Group						
TEC KASHIYA	No chemical substances						
Total			42.99	6.82	0.62	33.27	2.28

*1: Substance number specified by the law *2: Data of the Components Business Group includes that of TEC PRECISION, INC. *3: No emissions to public water systems or soil, or no landfill in applicable site. Also, no transfer to sewage or removal treatment.

Other environmental data

Environmental impact data

(Unit: kg)

Site	Location (Prefecture)	Emissions to air *1			Emissions to water *2									
		Flyash	NOx	SOx	BOD	SS	n-hexane (Mineral oil)	Copper	Zinc	Dissolved iron	Dissolved manganese	Total chromium	Fluorine	Total nitrogen
Ohito Business Center	Shizuoka	1.7	17.4	5.5	1.68	4.57	0.72	-	-	-	-	-	-	-
Mishima Works	Shizuoka	0	0	0	137.5	297.3	9.3	3.7	3.7	7.4	7.4	3.7	3.7	-
Hadano Plant	Kanagawa	38.9	212.1	100.4	5.7	11.1	0	-	-	-	-	-	-	-
Components Business Group	Shizuoka	0	0	0	1,138	900	2.86	-	-	-	-	-	-	-
TOSEI DENKI	Shizuoka	N/A	N/A	N/A	35.36	16.45	8.22	0	0.46	-	-	-	10.14	-
FUJIKEN	Shizuoka	N/A	N/A	N/A	-	-	-	-	0.33	-	-	-	-	-
TEC KASHIYA	Shizuoka	0	0	0	51	-	0.98	-	-	-	-	-	-	-
TEC PRECISION	Shizuoka	Included in the Components Business Group												

*1: Emission to air = Annual average value of measured concentration x total gas discharge for the year

*2: Emission to water = Annual average value of measured concentration x total drain discharge for the year

Note: N/A indicates Not Applicable, dash (-) indicates Not Used.

Environmental investments

(Unit: thousand yen)

Site	Air	Water quality	Soil	Noise and vibration	Prevention of global warming, energy savings	Waste disposal	R&D	Others	Total
Ohito Business Center	0	13,170	0	0	18,900	0	0	18,975	51,045
Mishima Works	0	7,623	0	0	41,128	2,200	0	0	50,951
Hadano Plant	0	752	0	973	0	1,200	0	0	2,924
Components Business Group	0	21,770	0	0	0	0	0	12,930	34,700
TOSEI DENKI	0	0	0	0	6,200	0	0	1,400	7,600
FUJIKEN	19,220	1,397	0	0	0	0	0	0	20,617
TEC KASHIYA	0	0	0	0	0	0	0	0	0
TEC PRECISION	Included in the Components Business Group								
Total	19,220	44,712	0	973	66,228	3,400	0	33,305	167,837

Environmental impacts at production sites outside Japan

Site	Location	Power consumed (thousand kW/h)	Water consumed (m^3)	Water discharged to
TSE	Singapore	3,706.0	28,261	Sewer
TIE	Indonesia	4,164.0	20,901	Sewer
TIM	Malaysia	2,660.0	27,540	Sewer, river
TEIS	France	11,583.2	4,683	Sewer
TCOS	China	6,130.0	248,213	Sewer, river

There were no oil spill incidents or contraventions to the laws in the fiscal 2003 year.

Scope of TOSHIBA TEC CORPORATION Sustainability Report 2004

This report includes activities of TOSHIBA TEC CORPORATION and its affiliates listed below:

* Names listed below are as of Dec. 1, 2003. No major changes were made during the applicable report period.

Company or Site	Location	Business Area
TOSHIBA TEC CORPORATION		
Head Office	Tokyo	Administration and others
Core Technology Development Center	Shizuoka	
Retail Information Systems Company	Tokyo	•POS systems (for head office of mass-sales shops, stores, shopping centers, convenience stores, department stores, specialty shops, restaurants, e-business solution) •Electronic cash registers (for specialty shops, general retail stores) •Digital Computing Scales (commercial digital computing scales, label printers equipped with electronic scales, small automatic wrapping machines) •Bar code systems, office automation equipment
Document Processing & Telecommunication Systems Company	Tokyo	•Document processing & telecommunication systems (digital MFPs, digital full color MFPs, analog copiers, plain-paper facsimile machines, thermal paper facsimile machines) •Special terminals, etc.
Home Electric Appliances Group	Tokyo	•Home electronic appliances (vacuum cleaners, health equipment, etc.)
Ohito Business Center	Shizuoka	Manufacturing of POS systems, electronic cash registers, and digital computing scales, etc.
Component Business Group	Shizuoka	Manufacturing of printed circuit boards, stamped parts, etc.
Mishima Works	Shizuoka	Manufacturing of digital MFPs, facsimile machines, on-line terminals, etc.
Hadano Plant	Kanagawa	Manufacturing of vacuum cleaners, health equipment, etc.

Company or Site	Location	Business Area
Production affiliates in Japan		
TOSEI DENKI CO., LTD.	Shizuoka	Manufacturing and distribution of cleaning machines for business use, vacuum packaging machines, metal cleaning equipment
FUJIKEN CO., LTD.	Shizuoka	Manufacturing and distribution of lighting fixtures, capacitors for household electrical appliances, power supply units, electronic application systems, and air cleaners
TEC KASHIYA DENKI CO., LTD.	Shizuoka	Manufacturing and equipment repairs for business use and communication equipment
TEC PRECISION, INC.	Shizuoka	Manufacturing of stamped sheet metal, molded and cutting parts, molded jigs and tools. Manufacturing and unit assembly of drawers, switching power supply and wire harnesses
Sales or service affiliates in Japan		
TEC ENGINEERING CO., LTD.	Tokyo	Service and support of hardware and software in the expanding solution business field of TOSHIBA TEC Group Retail Information Systems Company
TEC APPLIANCE CORPORATION	Tokyo	Distribution of electronic equipment, general industrial machinery, etc. Design, execution, supervision and contract, etc. of construction works
TEC INFORMATION SYSTEMS CORPORATION	Shizuoka	Development of software and hardware for retail information systems and document processing and telecommunication systems. Creation, printing and translation of technical materials. Planning, production and distribution, etc. of CD-ROMs, computer graphics and videos
TER CO., LTD.	Saitama	Repair, maintenance, program installation and contract control of retail information systems and related parts, etc.
TOSHIBA TEC DOCUMENT PROCESSING SYSTEMS CO., LTD.	Shizuoka	Development, design, system engineering, software development, maintenance and service, etc. of copiers, document processing and telecommunication systems and communication equipment, etc.
T. T. BUSINESS SERVICE CO., LTD.	Shizuoka	Contract of services including distribution, welfare and payroll, etc. Dispatch of human resources

Company or Site	Location	Business Area
Production affiliates outside Japan		
TEC SINGAPORE ELECTRONICS PTE. LTD.	Singapore	Development, manufacturing and distribution of printers and electronic equipment
TIM ELECTRONICS SDN. BHD.	Malaysia	Manufacturing and distribution of communication equipment
TOSHIBA TEC EUROPE IMAGING SYSTEMS S.A.	France	Manufacturing and distribution of digital MFPs, copiers, and toners
TOSHIBA COPYING MACHINE (Shenzhen) CO., LTD.	China	Manufacturing, distribution and service of digital MFPs and copiers
P.T. TEC INDONESIA	Indonesia	Manufacturing of printers and electronic equipment
TOSHIBA AMERICA BUSINESS SOLUTIONS, INC.	U.S.A.	Manufacturing of toners
Sales or service affiliates outside Japan		
TEC AMERICA, INC.	U.S.A.	Export/import, distribution and service of POS systems, electronic cash registers, bar code systems, digital computing scales, etc.
TOSHIBA TEC EUROPE RETAIL INFORMATION SYSTEMS S.A.	Belgium	Export/import, distribution and service of POS systems, electronic cash registers, bar code systems, digital computing scales, etc.
TEC AUSTRALIA PTY. LTD.	Australia	Export/import, distribution and service of POS systems, electronic cash registers, bar code systems, digital computing scales, etc.
TEC CANADA, INC.	Canada	Export/import, distribution and service of POS systems, electronic cash registers, bar code systems, digital computing scales, etc.
TOSHIBA TEC U.K. IMAGING SYSTEMS LTD.	United Kingdom	Distribution and service of digital MFPs, copiers, facsimile machines
TOSHIBA TEC GERMANY IMAGING SYSTEMS GmbH	Germany	Distribution and service of digital MFPs, copiers, facsimile machines
TOSHIBA TEC FRANCE IMAGING SYSTEMS S.A.	France	Distribution and service of digital MFPs, copiers, facsimile machines
TOSHIBA TEC (H.K.) LOGISTICS & PROCUREMENT LIMITED	Hong Kong	Material procurement for Toshiba TEC Group. Export of goods produced by manufacturers in China

History of TOSHIBA TEC Group's Environmental Protection Activities and Other Information

History of TOSHIBA TEC Group's environmental protection activities

Environmental Promotions and Organizations		Measures and Activities
•Established the CSR Promotion Committee	2004	•Issued TOSHIBA TEC Group Sustainability Report 2004
•Established the Environment Protection Group in the Retail Information Systems Company •Established the Environment Protection Group in the Home Electric Appliances Group	2003	•Issued TOSHIBA TEC Group Environmental Report 2003
•Integrated the production sites of the Document Processing & Telecommunication Systems Company	2002	•Achieved zero emissions of waste •Started using chromium-free steel plates and halogen-free printed circuit boards •Started using lead-free soldering equipment •Issued TOSHIBA TEC Group Environmental Report 2002
	2001	•Announced the Environmental Accounting regarding production sites including affiliates in and outside Japan •Announced the Third Voluntary Plan for Environmental Protection •Started using lead-free solders •Issued TOSHIBA TEC Group Environmental Report 2001
•Appointed the in-house company presidents and general managers to Environmental Protection Administrators •Renamed as TOSHIBA TEC CORPORATION •Acquired copier business from TOSHIBA CORPORATION •Transferred lighting business to TOSHIBA LIGHTING & TECHNOLOGY CORPORATION	2000	•Issued TOSHIBA TEC Environmental Report 2000 •Announced the Environmental Accounting regarding production sites including affiliates in Japan
	1999	•Completed sewer connecting construction at production sites in Japan •Accredited with ISO 14001 (Yanagicho Works) •Completed construction of visible industrial wastewater plumbing at production sites in Japan
	1998	•Dismantled waste incinerators from all production sites in Japan •Accredited with ISO 14001 (all 3 production sites in Japan)
•Established the ECP Promotion Committee	1997	•Set up Recycle Centers at production sites in Japan •Announced the Second Voluntary Plan for Environmental Protection
	1996	•Established the Environmental Policy
•Established the TEC Philanthropy Fund system •Changed the name from Corporate Environmental Protection Committee to the Corporate Environmental Protection Council	1995	
•Renamed as TEC CORPORATION •Acquired the facsimile business and laser printer business from TOSHIBA CORPORATION	1994	•Implemented the Environmental Audit System (EASTER) at production sites including affiliates in Japan •Abolished use of chlorofluorocarbons and 1.1.1-trichloroethane at all production sites and affiliates in Japan
•Established the Corporate Environmental Protection Committee	1993	•Announced the First Voluntary Plan for Environmental Protection
•Appointed the director responsible for environmental protection as Environmental Protection Administrator	1992	•Established the Basic Environmental Protection Guidelines
	1989	•Abolished use of trichloroethylene at all business sites
	1986	
•Established the Material Analysis Group in Mishima Works	1977	
•Established the Environmental Protection Department in Ohito Business Center and Hadano Plant	1975	
•Established the Environmental Protection Department in Mishima Works	1974	
•Renamed as TOKYO ELECTRIC CO., LTD.	1952	
•Founded as TOKYO ELECTRIC APPLIANCES CO., LTD.	1950	

Awards

- Reduce, Reuse and Recycle Promotion Council of Chairman's Prize:
  Received by Hadano Plant in October 2003
- Windows Digital Engineering System Award of Excellence 2003:
  Received from Nikkei Digital Engineering in November 2003
- Good Design Award 2003 (G-Mark):
  Five products including POS terminals were selected by Japan Industrial Design Promotion Organization (JIDPO) in November 2003

Cooperation with communities regarding environmental protection activities

- Japan Electronics and Information Technology Association (JEITA):
  Japan Green Procurement Survey Standardization Initiative (JGPSSI)
- Japan Business Machine and Information System Industries Association (JBMIA):
  Policy Committee, Environment Committee
- Communications and Information Network Association of Japan (CIAJ):
  Environment Policy Committee (EPOC) for Facsimile Machines

Previous environmental reports

First issue "TOSHIBA TEC Environmental Report 2000"

Oct. 2000 Nov. 2000

"TOSHIBA TEC Group Environmental Report 2001"

Sep. 2001 Nov. 2001

"TOSHIBA TEC Group Environmental Report 2002"

Sep. 2002 Nov. 2002

"TOSHIBA TEC Group Environmental Report 2003"

June 2003 Aug. 2003

TOSHIBA TEC Group Sustainability Report

It is apparent TOSHIBA TEC CORPORATION is increasing efforts to review not only the environmental aspect but also the managerial aspect this year, compared with the previous report. However, the previous report was easy to understand because it focused on two major topics; "Environmental Management" and "To Supply Environmentally Conscious Products".

This report consists of five major topics with attention to "Management". The Social Report and Data are adopted as two of the topics but insufficiency remains especially on the Data. Regarding the Social Report, only a few companies have reached a point where they can arrange the style of the Social Report, thus, TOSHIBA TEC CORPORATION is recommended to improve its Social Report every year. Although the Data is detailed to a certain extent in "4. Performance", it may be better to find new ways to specifically disclose general environmental data contributing to analyses, such as separately creating a chapter of Data.

Therefore, according to the contents of Fiscal 2004 Report, the following suggestions may be considered as the framework to create the Sustainability Report:
"1. Management Policy" instead of "1. Vision and Strategy"
"2. Environmental Management (or Sustainability)" instead of "2. Sustainability Report"
"3. Performance (or Management Result) {based on a chapter of Data}" instead of "4. Performance"
In addition, it would be appropriate to divide each of these three topics into the "economic aspect", "environmental aspect" and "social aspect" for explanation.

In closing, here are the virtues and improvements regarding details on this Sustainability Report as follows:

Virtues

1) Input and output of resources divided into plants and offices are understood.
2) Costs divided into consolidated and non-consolidated are calculated and reported for environmental accounting.
3) The sustainability information system is developed and utilized.
4) The criteria for green procurement are disclosed.
5) The environmental labeling is used and information is disclosed.
6) Environmental impacts from material procurement to usage/disposal of major products are understood and disclosed, as well as data regarding environmental properties of products are substantial.
7) Corporate environmental education is actively provided.

Improvements

1) Criteria are not clearly stated regarding efforts towards the environmental objectives (P.11).
2) Efforts in other aspects (improvement in the production process, etc.) related to economic activities are inadequately reported, compared with substantial efforts in the environmental aspect or environmental impacts.
3) It is difficult to see the outcomes after education is provided.

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[Attached Group]
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[Current Research Topic]
Social Experiments, Environmental Ratings, Environmental Performance Evaluations, and The Establishment of Low Entropy Society with Material Cycling and Happiness

TOSHIBA TEC CORPORATION

TOSHIBA Group Earth Protection Mark

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