The Sustainable Environmental Management Information System supports the decision-making process concerning sustainable environmental management and promotes environmentally conscious design.

The Sustainable Environmental Management Information System is designed to identify and promote the progress of sustainable environmental management. The system utilizes the Environmental Impact Information System to collect and process data about environmental impact and the Environmental Accounting System to collect and process data on environmental costs and effects. The collected data are processed and analyzed to identify the Eco Balance[1] of overall operations; draw up environmental action plans[2]; support decision-making in sustainable environmental management; promote environmentally conscious designs[3]; improve activities by each division; process Corporate Environmental Accounting[4]; and disclose information to the public.

1. See page 51. 2. See page 11.
3. See page 15. 4. See page 55.

Environmental Impact Information System

This system collects and processes data on environmental impact caused by each operational process, including procurement, design, manufacturing, transportation/sales, use, maintenance/services, and collection/recycling, as well as by overall operations.

Besides identifying the environmental impact of overall operations, the system automatically collects environmental data from the operational flow of each process, and such data is used to support PDCA in environmental improvement activities carried out at each process.

Environmental Accounting System

This system enables “Corporate Environmental Accounting” in a timely manner by collecting data on environmental conservation effects obtained from the Environmental Impact Information System and environmental cost data obtained from the accounting system, and processing this into sustainable environmental management indicators.*

*See page 54.

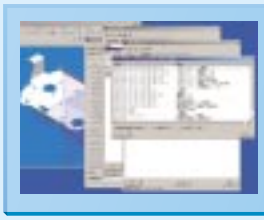
Sustainable Environmental Management Information System

Environmental Impact Information System

Procurement

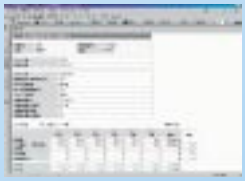
This system promotes green procurement in accordance with environmental action plans and information on laws and regulations. The system collects information on weight, component substances, and chemical substances in raw materials and parts by utilizing a network of suppliers. In fiscal 2004, this system was completed at major production sites in China.

Design



This is a system to select the most suitable materials and parts from the viewpoint of environmental conservation and costs in order to promote environmentally conscious design. This CAD system works in tandem with the procurement management system and the chemical substance management system.

Manufacturing



This system identifies the environmental impact caused by operations. It collects data on power consumption, the quantity of chemical substances used, CO_2 emissions, and waste discharged by all offices and sites, including production sites and non-production sites, such as Ricoh Head Office. In fiscal 2004, major production sites outside Japan completed the building of this system.

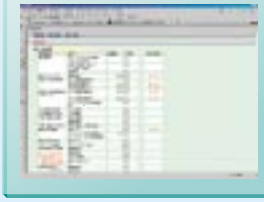
Transportation/Sales

This system collects data on power consumption as well as the amount of gasoline used and waste generated in order to reduce the environmental impact caused by logistics sites, transportation processes, and sales sites. The collected data are used to support the PDCA cycle of EMS at each site. In fiscal 2004, all logistics sites in Japan completed the building of this system.

Use

This is a system to share data about environmental performances by product (power consumption, duplex copying productivity, recyclable design, etc.) and use such data for environmentally conscious design and information disclosure in catalogs. This system compiles environmental impact information by product based on design data.

Maintenance/Services



This is a system to identify and analyze environmental impacts caused by maintenance work on products. This system collects related information from the database of product maintenance records and the database of power and gasoline consumed in the maintenance sites.

Collection/Recycling

This system provides an information infrastructure to utilize plans that were prepared at the design stage for the reuse or recycling of collected products and to store detailed information on the resource recovery process.

Data to process information collected

• Number of units produced (by process) • Weight of products • Value of sales
• Allocation information (relations between divisions/facilities and products)

Environmental impact information

Environmental accounting information

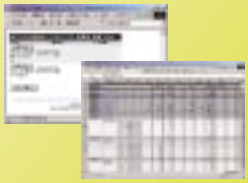
Integrated database

Analysis of information

Processing of information

Information needed for promoting PDCA (Plan-Do-Check-Action)* is output.

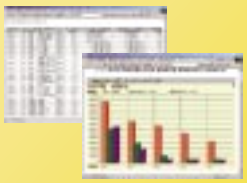
*See page 47.



Identifying Eco Balance

Using a sustainable environmental management information system, we collect extensive and diversified data covering all the operations of the Ricoh Group, allowing us to calculate the integrated environmental impact to determine the eco balance.

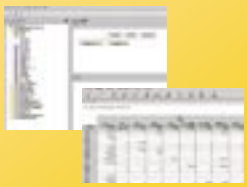
See page 51.



Preparing and Managing Environmental Action Plans

An action plan is drawn up based on the integrated environmental impact calculated by the sustainable environmental management information system. Reduction targets are also established in the plan. We identify problems early by introducing automatic aggregation and continuously monitoring the results, allowing us to take actions to address them.

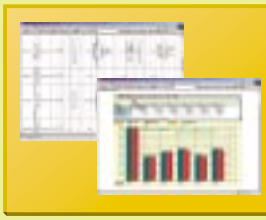
See page 11.



Sustainable Environmental Management Indicator

The cost effectiveness of our environmental improvement activities is calculated and used as an indicator to help promote sustainable environmental management.

See page 54.



Environmentally Conscious Design

The sustainable environmental management information system is used together with our product lifecycle management tool to enable designers to incorporate environmental performance into product design in areas such as energy/resource conservation, controlling and improvement of chemical reduction targets, and reduction of integrated environmental impact through designs based on LCA (life cycle assessment).

See page 15.

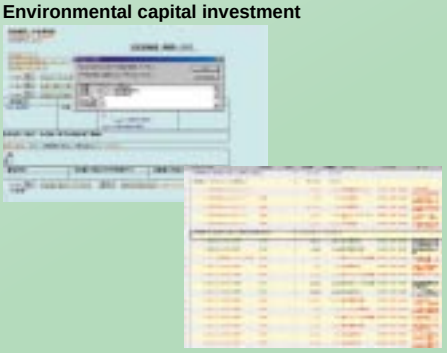
Environmental Accounting System

Accounting System

A space to enter the environmental accounting code was added to the accounting system to determine the cost of environmental conservation. Using information compiled on a daily and hourly basis makes it possible to calculate the cost of environmental conservation.

Environmental expenses

Environmental capital investment



Aggregate Database of Environment Accounting

Data on the economic benefits of environmental conservation activities and the environmental conservation costs/economic benefits for each company in the Ricoh Group are input to the aggregate database of environmental accounting on a quarterly or biannual basis to calculate these figures every six months.