The Sustainable Environmental Management Information System supports the decision-making process for sustainable environmental management and promotes environmentally-friendly 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 on 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 integrated environmental impact[1] of overall operations; draw up environmental action plans[2]; support decision-making in sustainable environmental management; promote environmentally-friendly design; improve activities by each division; process Corporate Environmental Accounting[3]; and disclose information to the public.

1. See pages 56 and 57. 2. See pages 21 and 23. 3. See page 59.

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. Efforts are being made to improve the system so that it can be used more easily for data analyses and improvement activities as well as for the expansion of the items and range of collected data and improvement in precision. In fiscal 2007, a tool for the business division itself to evaluate environmental impact of procurement information was developed, a system to obtain information on the CO_2 emissions in transportation[1] was established, and preparation for the REACH Regulation[2] was promoted.

1. See page 42. 2. See pages 34 and 36.

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 8.

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.

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-friendly design. This CAD system works in tandem with the procurement management system and the chemical substance control 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.

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.

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-friendly 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 impact 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 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 basis makes it possible to calculate the cost of environmental conservation.

Environmental expenses

Environmental impact information

Integrated database

Environmental accounting information

Environmental capital investment

Analysis of information

Processing of information

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

* See page 51.

Understanding Integrated Environmental Impact
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.

See pages 55 to 58.

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 and take actions to address them as soon as possible by introducing automatic aggregation, continuously monitoring the results, and improving the precision of the data colleted in each process.

See pages 21 and 23.

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.

Environmentally-Friendly 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, the controlling of chemical substances, and LCA design.

See page 25.

環境会計集計DB
Environmental Accounting Database

Information Disclosure
Environmental information on products is disclosed to customers, suppliers, recycling companies and so forth on our web site and environmental labels.

See page 26.