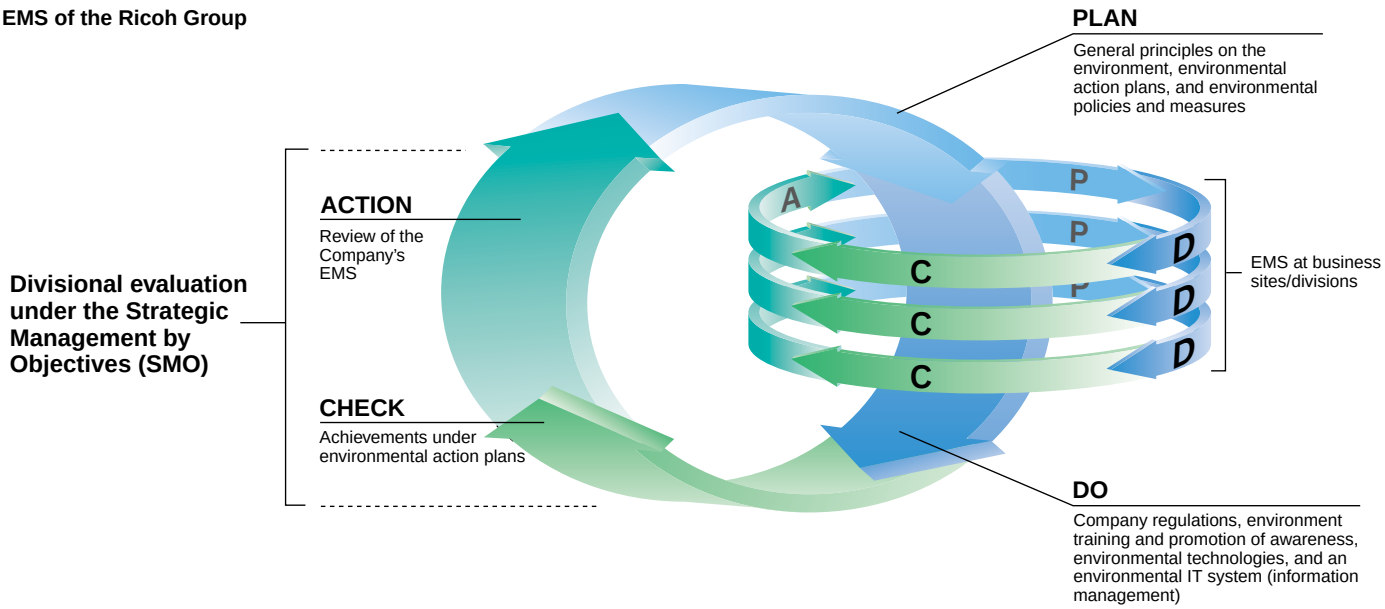
Environmental Management System (EMS)

EMS of the Ricoh Group



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

Groupwide EMS

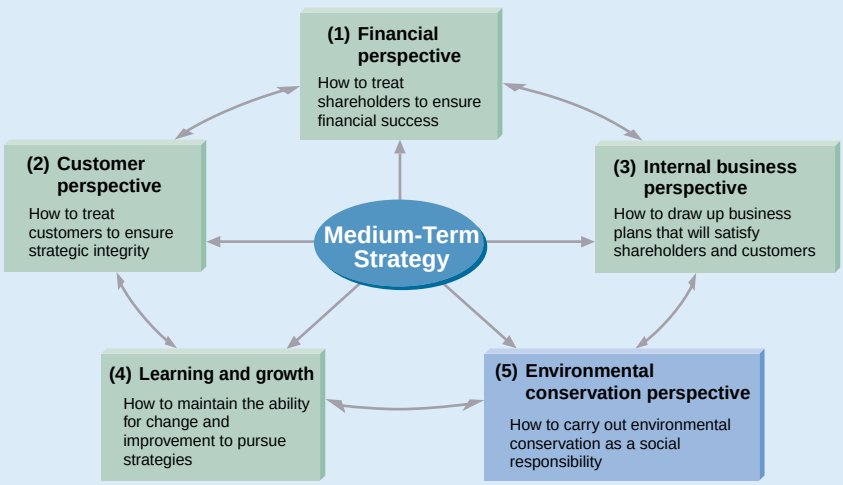
Ricoh regards environmental conservation activities as its duty as a global as well as corporate citizen. The more improvements the Company tries to make, the more managerial resources it has to invest. Ricoh therefore uses an environmental accounting system* to identify environmental cost-effectiveness.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

* See pages 65–68.

EMS's for Business Sites and Divisions

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

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



● Development of Environment-Oriented Activities

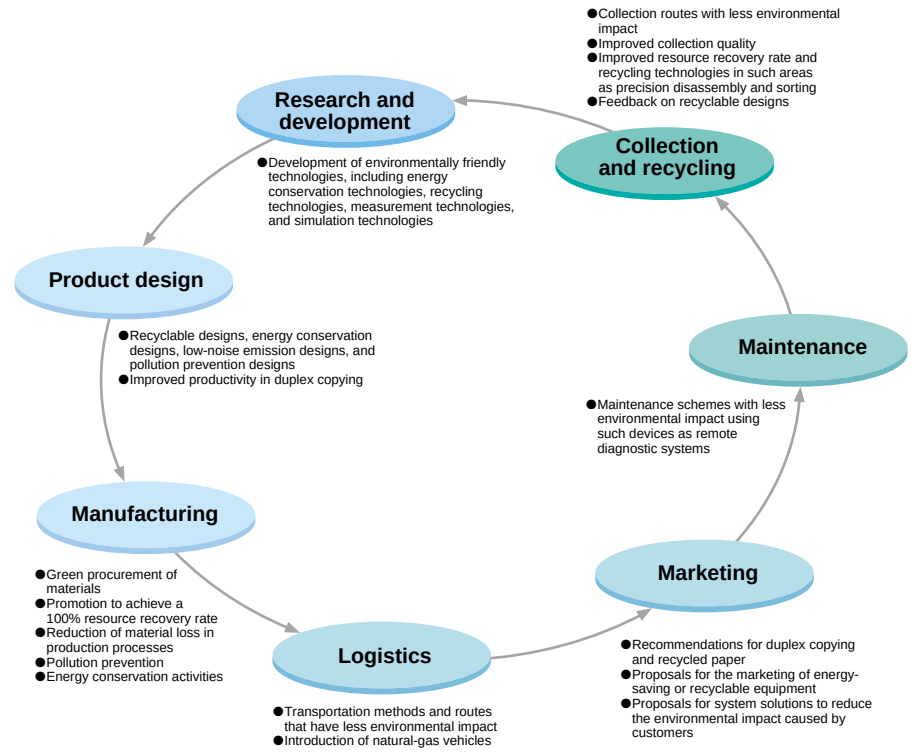
The Ricoh Group is establishing divisional EMS, taking division-specific environmental aspects into account. For example, nonproduction sites engage in activities focusing on indirect environmental impact reduction, such as designing products with less environmental impact and recommending them to customers,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

● Environmental Audits

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

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

Divisional Activities for Environmental Impact Reduction



Risk Management (Pollution and Disaster Prevention)

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

■ Examples of Risk Management from around the World

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

Abolishment of Solvent-Based Paint

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

Solvent Gas Collection and Disposal Device

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


Direct solvent gas burner

* PRTR: Pollutant Release and Transfer Register

ISO 14001 Certified Divisions and Business Sites of the Ricoh Group

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

Storing Chemical Substances

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

Preventing Pollution During a Fire

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

Comprehensive Monitoring to Ensure Safety

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

Checking Water Quality

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

Gas Sensor Units

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

Training to Prevent Pollution and Deal with Emergencies

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